



Full wwPDB X-ray Structure Validation Report

Aug 6, 2014 – 02:14 PM EDT

PDB ID : 4P70
Title : Crystal Structure of Unmodified tRNA Proline (CGG) Bound to Codon CCG
on the Ribosome
Authors : Maehigashi, T.; Dunkle, J.A.; Dunham, C.M.
Deposited on : 2014-03-25
Resolution : 3.68 Å(reported)

This is a full wwPDB validation report for a publicly released PDB entry.
We welcome your comments at validation@mail.wwpdb.org
A user guide is available at <http://wwpdb.org/ValidationPDFNotes.html>

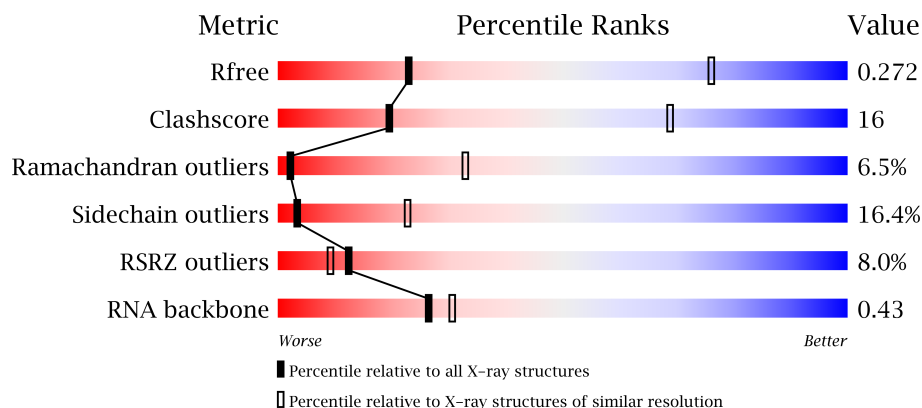
The following versions of software and data (see [references](#)) were used in the production of this report:

MolProbity : 4.02b-467
Mogul : 1.16 November 2013
Xtriage (Phenix) : dev-1439
EDS : stable23489
Percentile statistics : 21963
Refmac : 5.8.0049
CCP4 : 6.3.0 (Settle)
Ideal geometry (proteins) : Engh & Huber (2001)
Ideal geometry (DNA, RNA) : Parkinson et. al. (1996)
Validation Pipeline (wwPDB-VP) : stable23489

1 Overall quality at a glance

The reported resolution of this entry is 3.68 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}	66092	1013 (3.96-3.40)
Clashscore	79885	1006 (3.92-3.44)
Ramachandran outliers	78287	1218 (3.96-3.40)
Sidechain outliers	78261	1216 (3.96-3.40)
RSRZ outliers	66119	1013 (3.96-3.40)
RNA backbone	1838	1008 (4.52-2.80)

The table below summarises the geometric issues observed across the polymeric chains and their fit to the electron density. The red, orange, yellow and green segments on the lower bar indicate the fraction of residues that contain outliers for ≥ 3 , 2, 1 and 0 types of geometric quality criteria. The upper red bar (where present) indicates the fraction of residues that have poor fit to the electron density.

Mol	Chain	Length	Quality of chain
1	QA	1522	
1	XA	1522	
2	QB	256	
2	XB	256	
3	QC	239	
3	XC	239	
4	QD	209	
4	XD	209	
5	QE	162	
5	XE	162	
6	QF	101	

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Mol	Chain	Length	Quality of chain
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	
15	XO	89	
16	QP	88	
16	XP	88	
17	QQ	105	
17	XQ	105	
18	QR	88	
18	XR	88	
19	QS	93	
19	XS	93	
20	QT	106	
20	XT	106	
21	QU	27	
21	XU	27	
22	RA	2916	
22	YA	2916	
23	RB	122	
23	YB	122	
24	RD	276	
24	YD	276	
25	RE	206	
25	YE	206	
26	RF	210	
26	YF	210	
27	RG	182	

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Mol	Chain	Length	Quality of chain
27	YG	182	
28	RH	180	
28	YH	180	
29	RI	148	
29	YI	148	
30	RN	140	
30	YN	140	
31	RO	122	
31	YO	122	
32	RP	150	
32	YP	150	
33	RQ	141	
33	YQ	141	
34	RR	118	
34	YR	118	
35	RS	112	
35	YS	112	
36	RT	146	
36	YT	146	
37	RU	118	
37	YU	118	
38	RV	101	
38	YV	101	
39	RW	113	
39	YW	113	
40	RX	96	
40	YX	96	
41	RY	110	
41	YY	110	
42	RZ	206	
42	YZ	206	
43	R0	85	
43	Y0	85	
44	R1	98	
44	Y1	98	
45	R2	72	
45	Y2	72	
46	R3	60	
46	Y3	60	
47	R4	71	
47	Y4	71	
48	R5	60	

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Mol	Chain	Length	Quality of chain
48	Y5	60	
49	R6	54	
49	Y6	54	
50	R7	49	
50	Y7	49	
51	R8	65	
51	Y8	65	
52	R9	37	
52	Y9	37	
53	QV	77	
53	XV	77	
54	QX	25	
54	XX	25	
55	QY	17	
55	XY	17	
56	Z6	3	
56	Z8	3	

2 Entry composition

There are 59 unique types of molecules in this entry. The entry contains 291730 atoms, of which 0 are hydrogen and 0 are deuterium.

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

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

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

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

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

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

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

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
4	QD	208	Total	C	N	O	S	0	0	0
			1703	1066	339	291	7			
4	XD	208	Total	C	N	O	S	0	0	0
			1703	1066	339	291	7			

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

- Molecule 22 is a RNA chain called 23S rRNA.

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

- Molecule 23 is a RNA chain called 5S rRNA.

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

- Molecule 24 is a protein called 50S ribosomal protein L2.

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

- Molecule 25 is a protein called 50S ribosomal protein L3.

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

- Molecule 26 is a protein called 50S ribosomal protein L4.

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

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

- Molecule 27 is a protein called 50S ribosomal protein L5.

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

- Molecule 28 is a protein called 50S ribosomal protein L6.

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

- Molecule 29 is a protein called 50S ribosomal protein L9.

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

- Molecule 30 is a protein called 50S ribosomal protein L13.

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

- Molecule 31 is a protein called 50S ribosomal protein L14.

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

- Molecule 32 is a protein called 50S ribosomal protein L15.

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

- Molecule 33 is a protein called 50S ribosomal protein L16.

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

- Molecule 34 is a protein called 50S ribosomal protein L17.

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

- Molecule 35 is a protein called 50S ribosomal protein L18.

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

- Molecule 36 is a protein called 50S ribosomal protein L19.

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

- Molecule 37 is a protein called 50S ribosomal protein L20.

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

- Molecule 38 is a protein called 50S ribosomal protein L21.

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

- Molecule 39 is a protein called 50S ribosomal protein L22.

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

- Molecule 40 is a protein called 50S ribosomal protein L23.

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

- Molecule 41 is a protein called 50S ribosomal protein L24.

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

- Molecule 42 is a protein called 50S ribosomal protein L25.

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

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

- Molecule 43 is a protein called 50S ribosomal protein L27.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
43	R0	82	Total	C	N	O	S	0	0	0
			648	401	138	108	1			
43	Y0	82	Total	C	N	O	S	0	0	0
			648	401	138	108	1			

- Molecule 44 is a protein called 50S ribosomal protein L28.

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

- Molecule 45 is a protein called 50S ribosomal protein L29.

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

- Molecule 46 is a protein called 50S ribosomal protein L30.

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

- Molecule 47 is a protein called 50S ribosomal protein L31.

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

- Molecule 48 is a protein called 50S ribosomal protein L32.

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

- Molecule 49 is a protein called 50S ribosomal protein L33.

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

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

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

- Molecule 51 is a protein called 50S ribosomal protein L35.

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

- Molecule 52 is a protein called 50S ribosomal protein L36.

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

- Molecule 53 is a RNA chain called P-site tRNA fMET.

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

- Molecule 54 is a RNA chain called mRNA.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
54	QX	8	Total	C	N	O	P	0	0	0
			173	77	33	55	8			
54	XX	8	Total	C	N	O	P	0	0	0
			173	77	33	55	8			

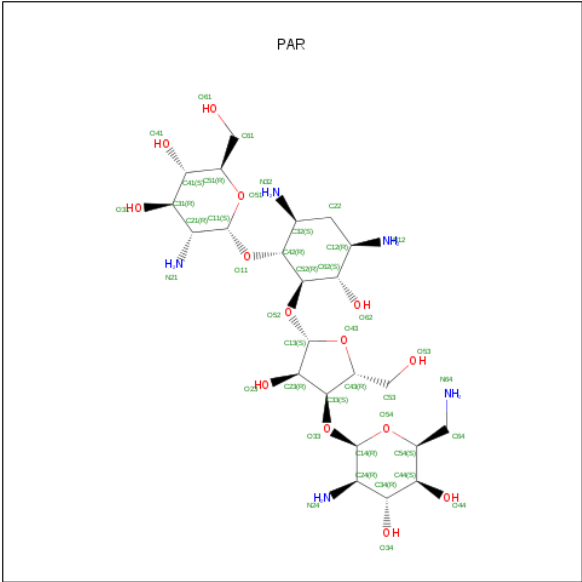
- Molecule 55 is a RNA chain called A site ASL of tRNA-Proline CGG (unmodified).

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
55	QY	8	Total	C	N	O	P	0	0	0
			174	77	33	56	8			
55	XY	8	Total	C	N	O	P	0	0	0
			174	77	33	56	8			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
56	Z6	3	Total	C	N	O	P	0	0	0
			74	40	13	19	2			
56	Z8	3	Total	C	N	O	P	0	0	0
			74	40	13	19	2			

- Molecule 57 is PAROMOMYCIN (three-letter code: PAR) (formula: C₂₃H₄₅N₅O₁₄).



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

- Molecule 58 is MAGNESIUM ION (three-letter code: MG) (formula: Mg).

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
58	QA	76	Total	Mg	0	0
			76	76		
58	RP	2	Total	Mg	0	0
			2	2		
58	YA	265	Total	Mg	0	0
			265	265		
58	QM	1	Total	Mg	0	0
			1	1		
58	YD	2	Total	Mg	0	0
			2	2		
58	QV	1	Total	Mg	0	0
			1	1		
58	XA	82	Total	Mg	0	0
			82	82		
58	R0	1	Total	Mg	0	0
			1	1		
58	Y0	1	Total	Mg	0	0
			1	1		
58	YQ	1	Total	Mg	0	0
			1	1		

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Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
58	R8	2	Total 2	Mg 2	0	0
58	YX	1	Total 1	Mg 1	0	0
58	RD	1	Total 1	Mg 1	0	0
58	XB	1	Total 1	Mg 1	0	0
58	QF	1	Total 1	Mg 1	0	0
58	R5	1	Total 1	Mg 1	0	0
58	RA	247	Total 247	Mg 247	0	0
58	YP	2	Total 2	Mg 2	0	0
58	Y5	1	Total 1	Mg 1	0	0
58	RE	2	Total 2	Mg 2	0	0
58	YB	3	Total 3	Mg 3	0	0
58	XV	2	Total 2	Mg 2	0	0
58	RB	2	Total 2	Mg 2	0	0
58	RF	1	Total 1	Mg 1	0	0
58	XM	1	Total 1	Mg 1	0	0

- Molecule 59 is ZINC ION (three-letter code: ZN) (formula: Zn).

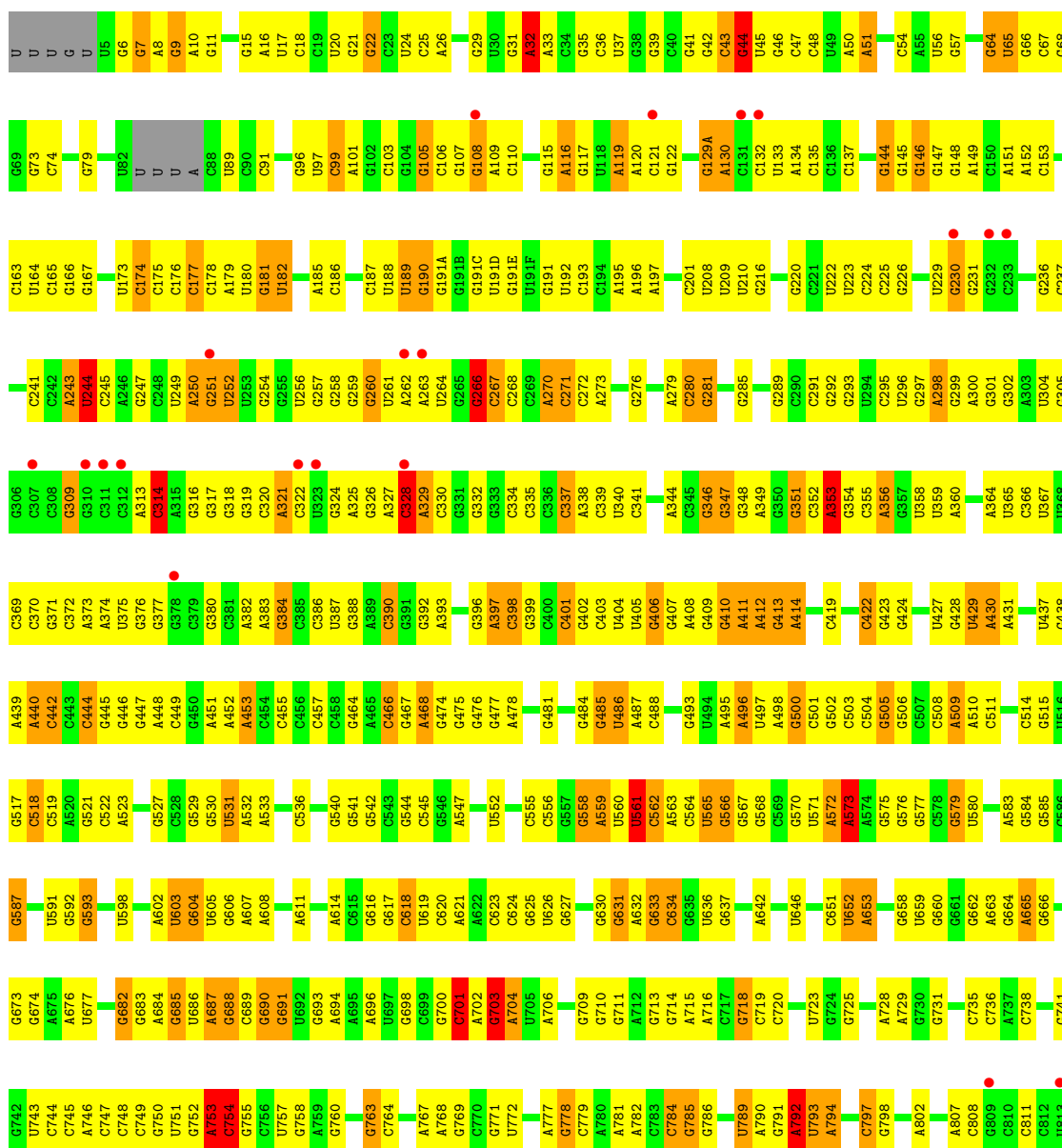
Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
59	XD	1	Total 1	Zn 1	0	0
59	QD	1	Total 1	Zn 1	0	0
59	QN	1	Total 1	Zn 1	0	0
59	XN	1	Total 1	Zn 1	0	0

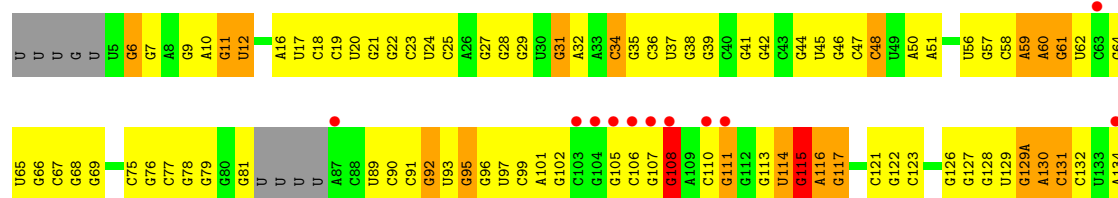
3 Residue-property plots

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

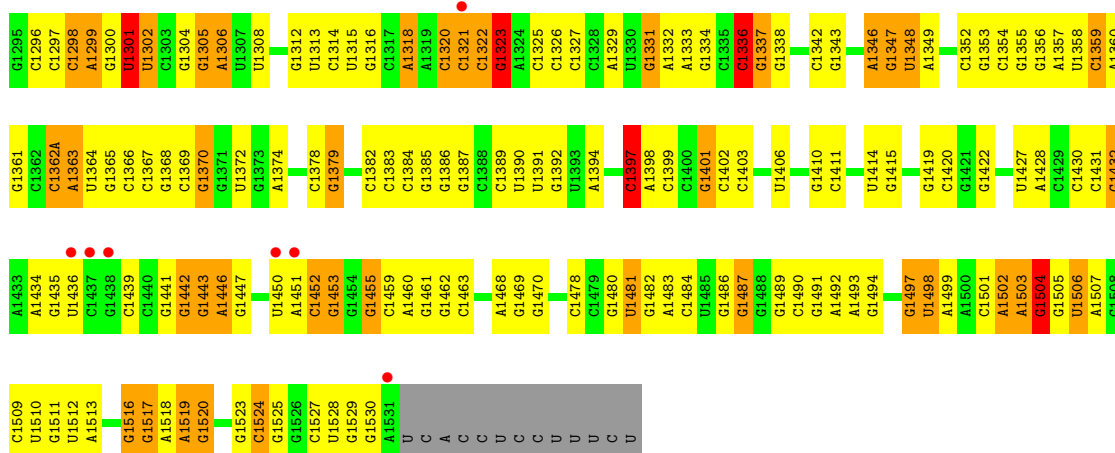
• Molecule 1: 16S rRNA

Chain QA: 



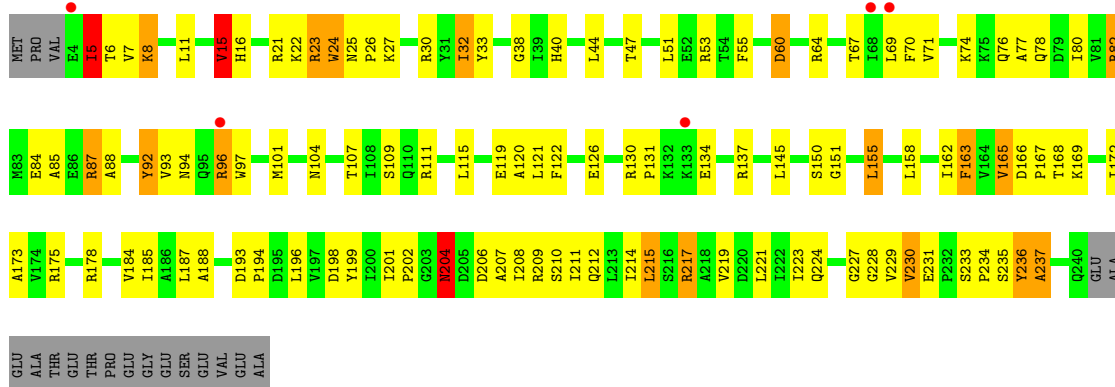






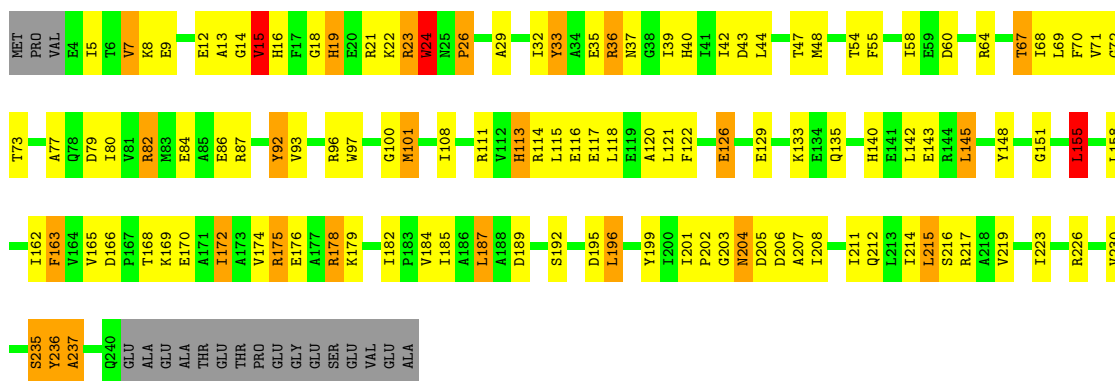
• Molecule 2: 30S ribosomal protein S2

Chain QB:



• Molecule 2: 30S ribosomal protein S2

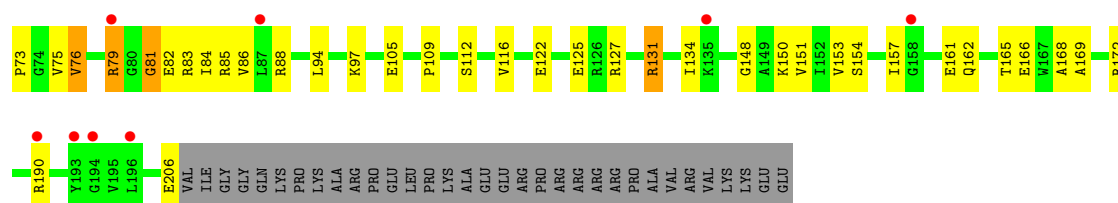
Chain XB:



• Molecule 3: 30S ribosomal protein S3

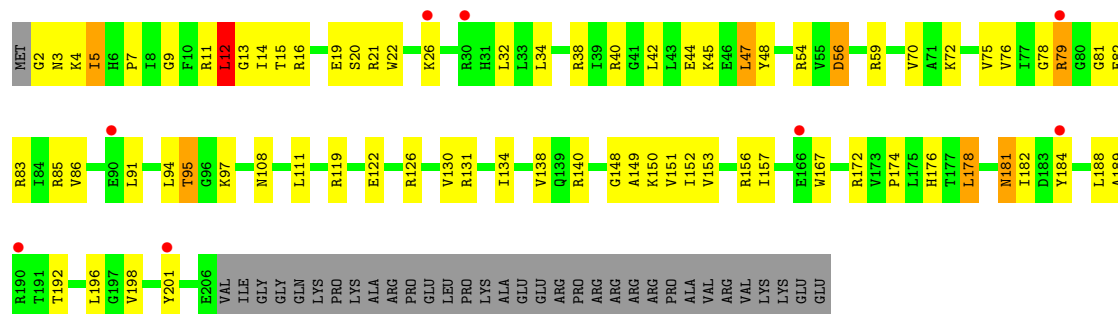
Chain QC:





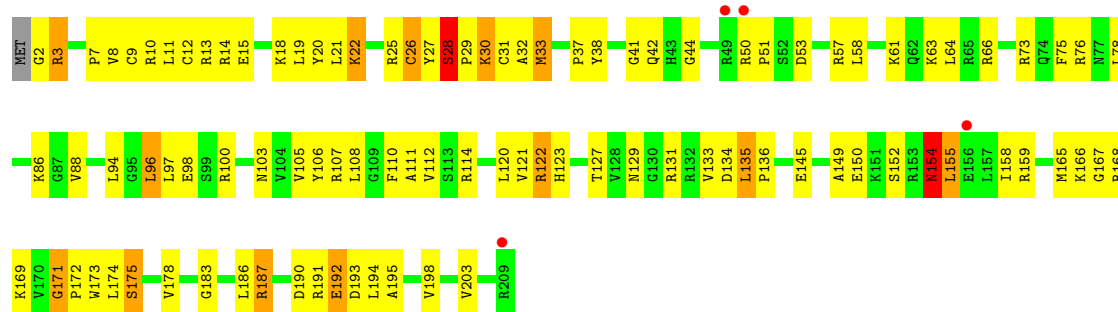
• Molecule 3: 30S ribosomal protein S3

Chain XC:



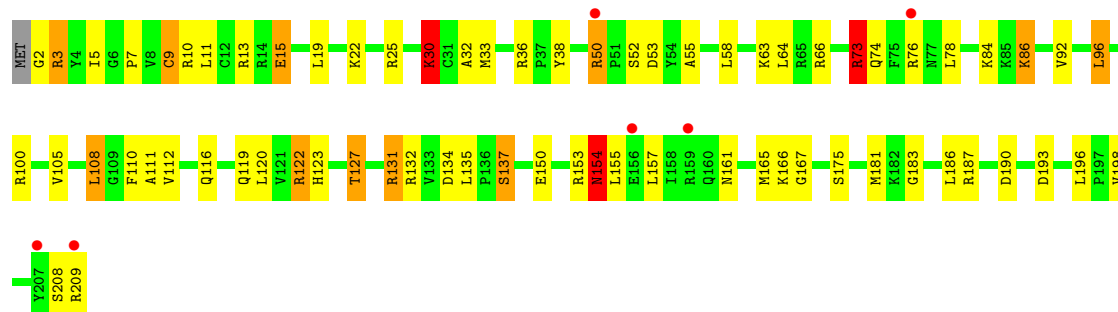
• Molecule 4: 30S ribosomal protein S4

Chain QD:



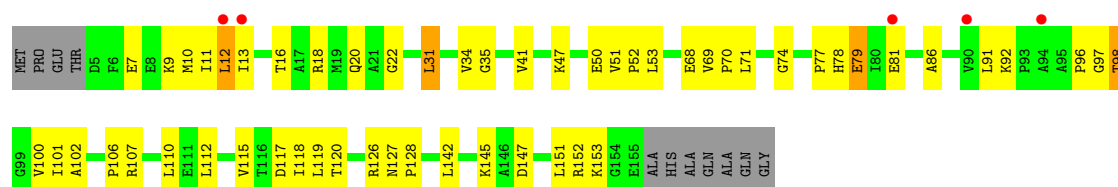
• Molecule 4: 30S ribosomal protein S4

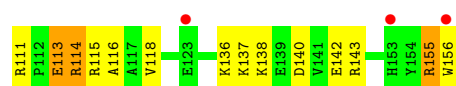
Chain XD:



• Molecule 5: 30S ribosomal protein S5

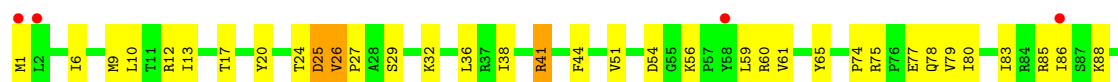
Chain QE:





- Molecule 8: 30S ribosomal protein S8

Chain QH:



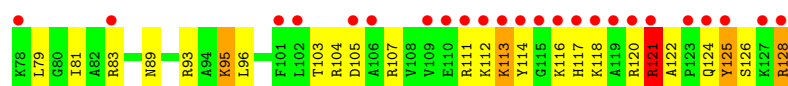
- Molecule 8: 30S ribosomal protein S8

Chain XH:



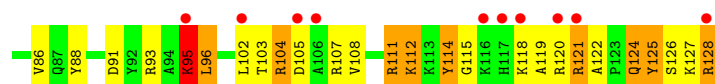
- Molecule 9: 30S ribosomal protein S9

Chain QI:



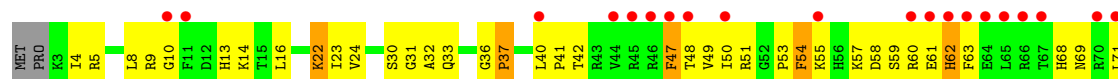
- Molecule 9: 30S ribosomal protein S9

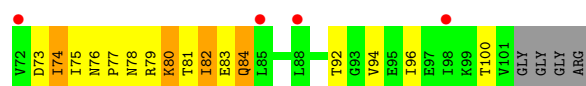
Chain XI:



- Molecule 10: 30S ribosomal protein S10

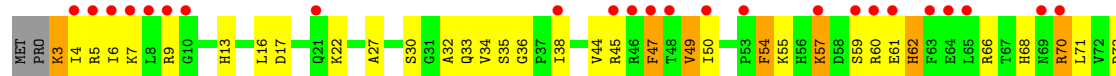
Chain QJ:





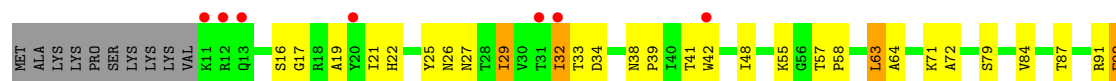
- Molecule 10: 30S ribosomal protein S10

Chain XJ:



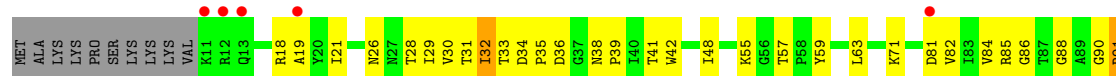
- Molecule 11: 30S ribosomal protein S11

Chain QK:



- Molecule 11: 30S ribosomal protein S11

Chain XK:



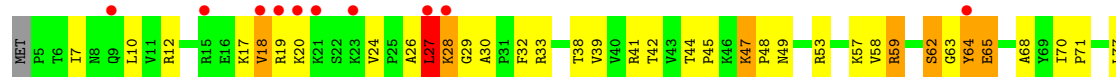
- Molecule 12: 30S ribosomal protein S12

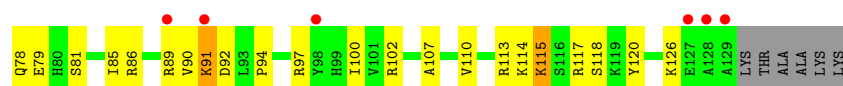
Chain QL:



- Molecule 12: 30S ribosomal protein S12

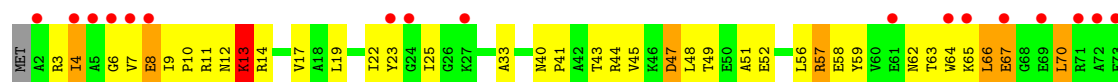
Chain XL:





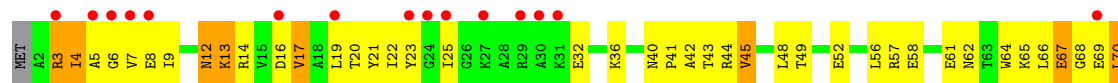
- Molecule 13: 30S ribosomal protein S13

Chain QM:



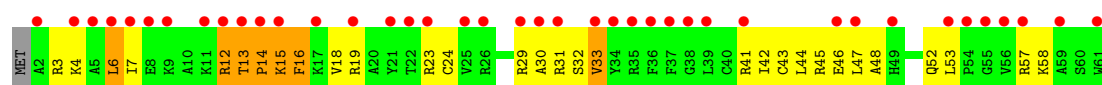
- Molecule 13: 30S ribosomal protein S13

Chain XM:



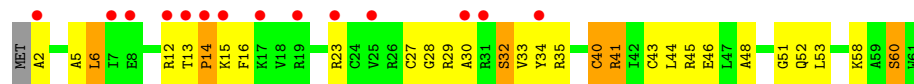
- Molecule 14: 30S ribosomal protein S14 type Z

Chain QN:



- Molecule 14: 30S ribosomal protein S14 type Z

Chain XN:



- Molecule 15: 30S ribosomal protein S15

Chain QO:

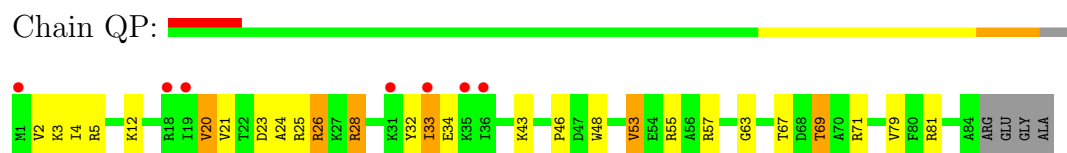


- Molecule 15: 30S ribosomal protein S15

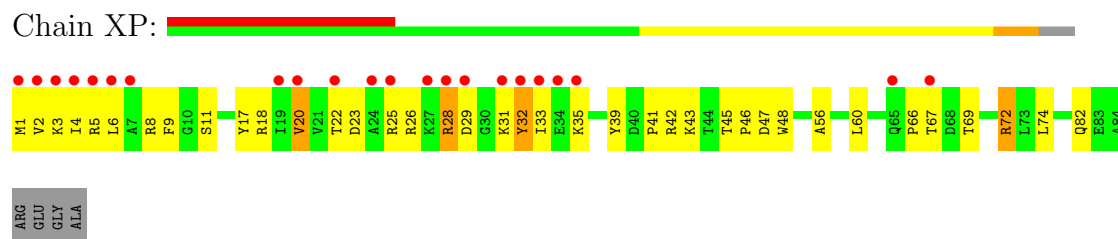
Chain XO:



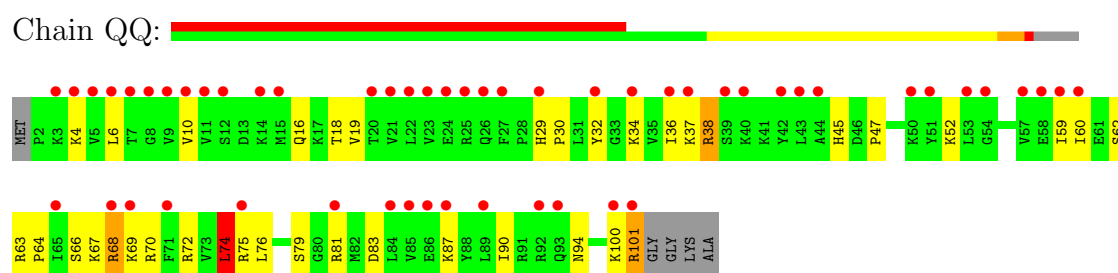
- Molecule 16: 30S ribosomal protein S16



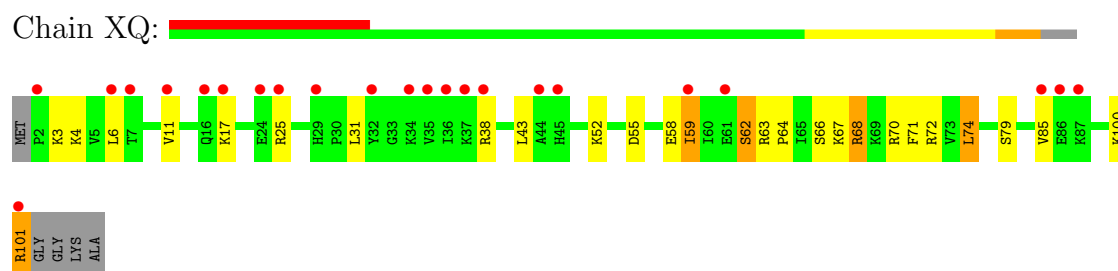
- Molecule 16: 30S ribosomal protein S16



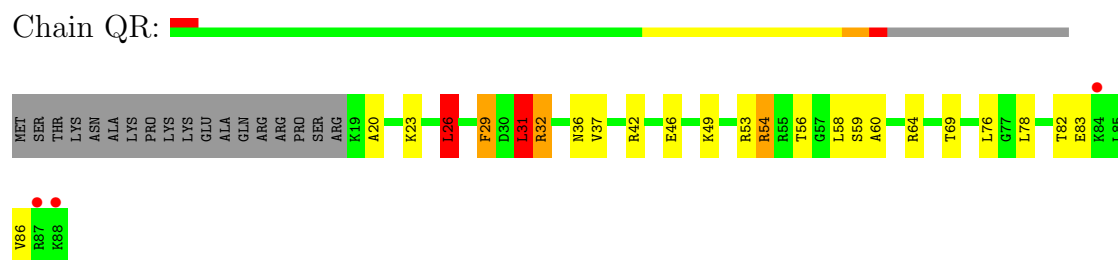
- Molecule 17: 30S ribosomal protein S17



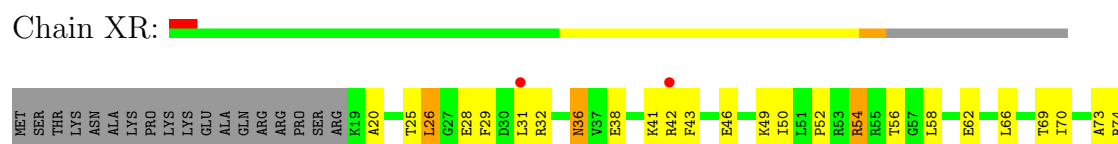
- Molecule 17: 30S ribosomal protein S17



- Molecule 18: 30S ribosomal protein S18



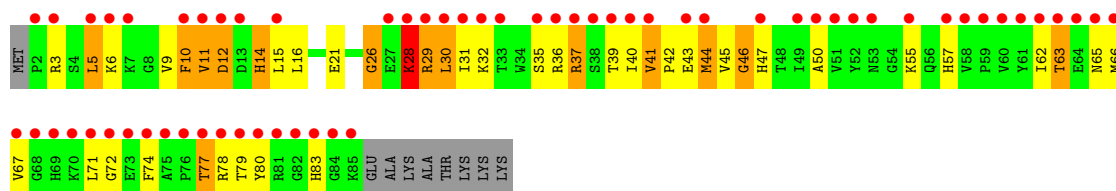
- Molecule 18: 30S ribosomal protein S18





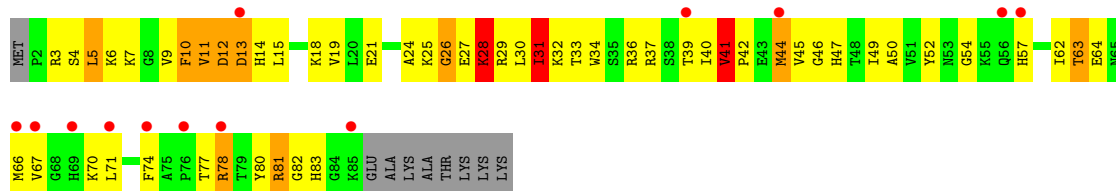
- Molecule 19: 30S ribosomal protein S19

Chain QS:



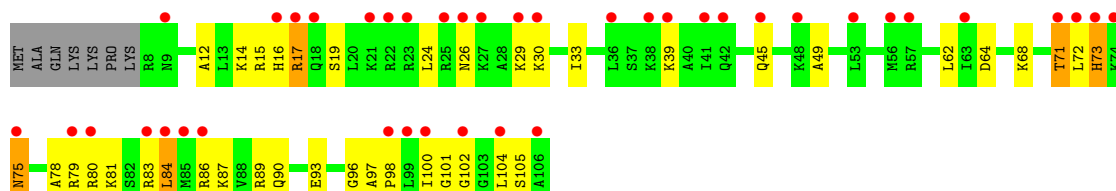
- Molecule 19: 30S ribosomal protein S19

Chain XS:



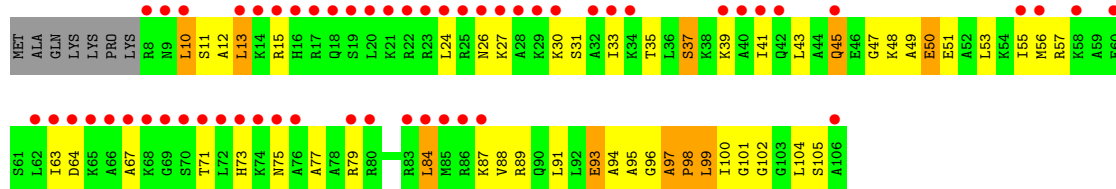
- Molecule 20: 30S ribosomal protein S20

Chain QT:



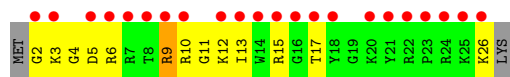
- Molecule 20: 30S ribosomal protein S20

Chain XT:

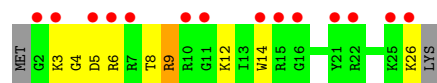


- Molecule 21: 30S ribosomal protein Thx

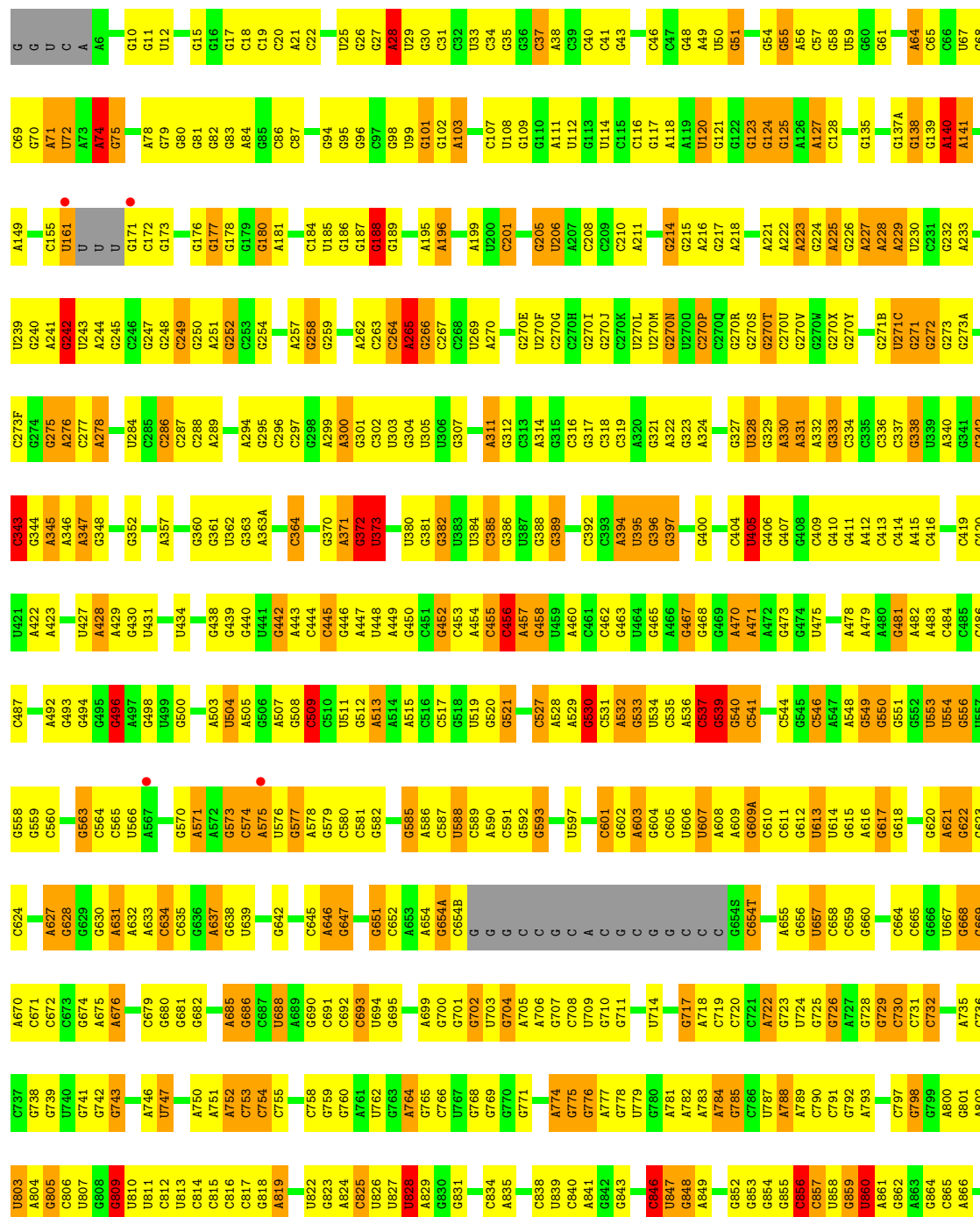
Chain QU:



- Molecule 21: 30S ribosomal protein Thx

Chain XU: 

• Molecule 22: 23S rRNA

Chain RA: 

C1800	G1728	G1643	C1577	A1507	C1432	A1359	A1284	A1210	G1136	G1068	C1006	U871
G1801	G1728	G1644	U1578	A1508	U1433	A1360	G1285	U1211	G1137	A1069	C1007	A872
A1802	A1729	G1645	U1579	A1509	U1433	A1360	A1286	G1212	G1138	A1070		G873
C1803	U1730	G1646	A1580	A1510			A1287	A1213	G1139	G1071	A1010	G879
C1804	G1731	G1647	G1581	C1513	G1440	A1365	U1288	A1214	C1140	C1072	G1011	G880
U1805	A1732	C1648	C1582	U1514	G1441	A1366	C1289	G1215	U1141	A1073	U1012	G881
C1806	G1733	G1649	C1585	C1515	G1442	A1367	C1290					G882
A1810	C1734	G1650	A1586	C1515			C1291	G1219	U1142	G1074	U1013	G883
G1811	C1741	G1651	A1587	G1519	A1444A	C1370	U1292	C1221	A1143	A1077	G1016	G884
G1814	G1742	G1653	C1588	U1520	C1445	G1371	C1293	C1222	A1148	U1078	G1017	G885
A1815	G1746	A1654	C1589	G1521		U1372		G1223	G1149	C1079	U1018	C886
G1816		A1655	U1590	G1522	G1448		C1297	C1224	G1149	C1079		A887
C1817	C1751	C1656	U1523	U1523	A1449	G1377	G1298	C1225	G1150	C1079	C1019	C888
G1818	G1752	C1657	G1591	A1524	G1449A	A1378	U1299	C1226	G1151	U1081	A1020	C889
A1819	G1753	C1658	C1593	G1525	C1451	A1379	A1300	G1227	C1152	U1082	A1021	A890
U1820	C1754	C1663	G1594	G1526	A1453	G1380	A1301	A1227	U1083	U1083	G1022	G892
A1755	A1755	A1664	C1595	G1527	U1454	G1381	A1302	G1228	G1154	A1084	U1023	A896
G1822	U1756	A1664	G1598	A1528	G1455	G1382	G1303	G1229	A1155	A1085	G1024	C961
U1757	U1757	G1667	C1598	A1529		C1383	C1304	G1229A		A1086	G1025	G962
A1825	A1668	G1667	U1602	G1530	A1460	A1384	C1305		C1158	G1087	U1026	A896
G1826	A1669	A1668	C1603	C1531	G1461	G1385	C1306	A1236	C1161	G1087	U1026	A897
C1827	A1762	A1669	C1604	C1532	G1462	C1386		G1237	G1162	A1088	A1027	C898
A1828	C1672	C1672	C1605	G1534	C1464	G1389	G1309	G1238		G1089	U1028	A899
G1765	G1673	C1673	U1606	U1536	C1465	U1390	G1310	U1239	U1167	C1092	G1030	A900
U1766	G1674	C1674	C1607	A1536	G1466	A1391	U1312	A1241	G1168	C1093	U1033	A901
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A1834	A1676	A1676	A1609	G1538	C1468	U1393	C1314	G1245	G1170	A1095	U1035	C903
G1835	A1677	G1678	A1610	G1539	A1469	A1395	U1316	A1246	G1171	A1096	G1036	U905
C1836	G1770		C1611	U1540	G1470	A1396	U1317	A1247	G1173		G1037	C906
G1837	U1771		C1612	G1541	A1471	U1397	A1318	G1248	A1174		G1038	U907
C1838	G1772	G1681	G1613	G1542	A1472	C1398	G1319		U1175	C1100	C1039	
	U1773	A1614	A1614	A1543	G1473		C1320	A1253	C1176	C1102	C1040	A910
G1840	C1774	C1684	C1615	C1544	C1474	G1401	A1321	A1254	A1177	C1102	C1041	
C1843	U1775	C1685	A1616	A1545		C1402	A1322	U1255	C1178	A1103	G1042	C914
G1846	G1776	C1686	C1617	A1546	G1480	C1403	U1323	C1257	C1179	C1104	C1043	C915
A1847	U1777	G1687	A1618	C1547	U1482	C1404		C1258	C1181	G1106	G1044	C916
C1848	U1778	U1688	G1619	C1547	G1483	U1405	G1328	G1259	A1182		A980	C917
U1780	A1689	A1690	C1548	C1548	G1484	U1406	U1329	G1260	G1184	G1110	G1047	G919
C1781	U1621	A1690			G1485	C1407	C1330	C1261	G1185	G1112	A1048	G920
G1849	G1622		A1553	A1553	A1486	G1408	A1331		C1186	G1113	C1049	C921
G1850	G1623	U1693	A1554	A1554	G1487	C1409	C1332	A1262	G1186	G1114	G1050	U922
	C1783	C1694	G1555	G1555	G1488	G1410	C1333	U1263	G1187	G1114	G1051	U923
A1853	A1784	C1695	C1556	C1556	U1489	C1411	G1334	G1264	U1188	G1115	C1052	C924
G1854	A1785	G1696	G1626	C1557	A1490	A1412	U1335	A1265	A1189	C1116	G1053	C925
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G1856	A1787	A1698	G1627	G1559	C1492	A1416	G1337	U1267	G1191	G1120	G1055	G928
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G1858	A1789	A1701	C1630A	G1561	A1494	G1418	C1338	U1269	G1195	G1122	A1057	U930
A1859	C1790	G1702	A1562	A1562	A1495	A1419	U1341	G1270	G1196	C1123	G1058	G931
G1860	A1791	G1703			A1496	U1420	A1342	G1271	C1196	C1123	G1059	G932
	G1792		G1635	G1568	U1497	G1421	G1343	A1272		A1126	G1060	A933
U1864	C1793	C1708	C1636	A1569		G1422	G1344	U1273	C1201	A1127	U1061	G934
G1869	U1794	U1637	A1637	A1570	C1501	G1423	G1423		G1202	A1128	G1062	C935
C1870	C1795	U1716	C1638	A1571	C1502	G1424	A1349	A1278	G1203	A1129	G1063	C936
A1871	U1796	G1717	U1639	A1572	U1503	G1425	G1426	G1279	A1204	G1130	G1064	U937
A1872	C1797	G1718	C1640	G1573	G1504	G1426	G1426		U1205	G1131	G1001	G938
U1798	U1798	G1725	A1641	G1575	C1505	A1427	A1352	U1282	G1206		G1003	
C1799	C1799	C1726	C1642	U1576	C1506	C1428	A1354	U1283		C1136	U1066	A941

G	A	C	C	C	C	U	U	C	
A2823	C2755	U2689	C2612	G2544	C2474	C2402	A2320	G2246	C2105
C2828	U2756	C2690	U2613	G2545	C2475	C2403	G2321	A2247	G2106
C2829	A2757		A2614	U2546	C2476	C2404		U2248	C2107
G2830	A2758	A2693	U2615		C2477	C2405	G2325	U2249	C2108
C2831	C2759	G2694	C2616	G2549		C2406	C2326	G2250	U2109
U2832	C2760	C2695	C2617		G2481	C2407	A2327	G2251	G2110
C2833	G2761	U2696		U2552	G2482		A2328	C2254	C2111
U2834		G2697	C2620	G2553	G2483	G2410	G2329	U2257	U2112
C2835	A2764	U2698	A2621	U2554		A2411	G2330	U2258	U2113
A2836	A2765	C2699	G2622	U2555	G2486	G2415	G2331	C2259	A2114
U2837	G2766	C2700	G2623	U2556	G2487	C2416	U2332	C2258	G2115
G2838	C2767			G2557	G2488	C2417	A2333	G2259	G2116
C2839		U2702	A2629	G2558	G2489	A2418	G2334	C2260	U2117
	G2770	C2703	G2630	G2559	G2490		A2335	C2261	U2118
G2842	C2771	G2704	A2631	C2560	U2491	U2419	A2336	U2262	A2119
G2843	C2772	A2705	A2632	A2561	U2492	C2420		U2263	G2120
G2844	G2773	G2706	G2633	U2562	U2493	G2421	C2343	A2266	U2121
G2845	C2774		G2634	U2563	U2494	A2422	U2344	A2267	G2122
	A2775	G2707	G2635	A2564	G2495	U2423	G2345	A2268	G2123
			U2636	A2565	G2496	C2424	A2346	U2269	U2124
U2849	A2776	C2710	U2637	A2566		A2425	C2347	A2270	G2125
A2850	G2777	A2711	G2638	C2567	C2499	G2429	C2350	A2273	G2126
A2851	U2778	U2712	A2639	A2568	U2500	A2430	G2351	A2274	A2127
C2852	A2779	A2712A	A2639	C2569	C2501	U2431	A2352	A2275	C2128
C2853	G2780	G2713	G2640	G2570	G2502	A2432	G2353	G2276	U2129
G2854	A2781	G2714	G2641	G2571	U2503		G2354	U2197	U2130
C2855	G2782	C2715	G2642	A2572	U2504	A2435	C2355	A2198	
C2856	G2783	U2716		C2573	U2505		G2356	A2199	C1999
G2857	U2784	G2717	C2646	G2574	U2506		G2357	C2063	C1996
C2858	G2785	G2718	U2647	C2575	U2506		G2358	C2064	
G2859	U2786	G2719	C2648	G2576			C2359	C2065	
	G2787	U2720	U2649	A2577	G2509	C2440	A2360	C2066	G2002
	A2788	U2721		G2578	C2510	C2441		C2067	C2003
G2862	G2789	G2722	U2653	G2579	U2511	C2442	C2364	U2068	G2004
A2867	U2790	C2723	A2654	C2580	U2512	C2443	G2365	G2069	G1929
G2868	C2791	G2724	G2655	U2580	C2513	C2444	A2366	G2070	A2005
G2869	G2792	A2725		G2581	G2513	G2445		A2071	C2007
G2870	U2793	U2726	A2662	G2582	G2516		G2371		G1933
C2871			G2663	U2583	C2517	A2448	G2372	U2074	G1934
G2872	U2797	G2729	U2664	U2584	A2518	U2449	G2373	U2075	G1935
			C2665	C2585	U2519			U2076	A1936
	C2798	G2732	C2666	C2586	C2520		A2376	A2077	A1937
	A2799	A2733	C2667	A2587	G2521	C2452	A2377	C2078	A2014
		A2734	G2668	G2588	G2525	U2453	A2378	U2079	A1938
C2803	C2804	G2735	G2669	A2589	G2526	U2454	G2379	G2080	U1939
C2804	G2805			A2590	G2527	G2455		C2081	U1940
G2807	G2807	A2740	G2673	C2591	U2528	G2456	G2383	A2082	U1944
A2810	G2810	A2741	A2675	G2592	U2529	U2457	G2384	G2083	G1945
C2811	G2811	C2742	G2676	U2593	A2530	G2458	C2385		C2021
G2812	G2812	G2743	C2677	C2594	A2531	A2459	C2386	G2087	G1947
U2813	A2813	G2744	U2678		G2532	U2460	U2387	G2088	G1948
G2814	G2679	C2745	C2678	A2602	U2533	C2461		U2089	G1949
C2815	U2604	U2746	C2680	U2603	G2534	U2462	G2387	G2093	G1950
C2816	G2747	A2748	U2605	U2604	U2537	C2463	C2391	G2099	A1951
G2817	C2817	G2749	C2606	U2605	C2538	C2464	G2392	U2099	A1952
G2818	G2818	A2750	G2607	C2607	C2539	C2465	G2393	G2100	A1953
C2819	G2819	G2751	G2608	G2608	C2540	C2466	U2397	G2101	G1954
A2820	A2820	C2752	G2609	U2609	A2541	G2467	U2398	G2102	U1955
A2821	U2687	A2753	C2610	G2610	A2542	C2468	G2399	U2103	
U	G2822	U2754	U2688	U2611	G2543	G2470	U2401	G2104	C1968

• Molecule 22: 23S rRNA

Chain YA: 

G	G	U	C	A	A6	G7	A8	U9	G10	G11	U12	A13	G15	C18	G24	U25	G26	A28	U29	G30	C31	C34	G35	C36	C46	A49	U50	G51	G54	G55	A56	C57	G58	G61	G62	U63	A64	C65	G66	U67	G68	C69	A71	U72	A73	A74	G75	C76	C77																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																								
A78	G79	G83	G88	G89	G94	G95	G96	C97	G98	U99	G101	A103	C107	U108	U114	C115	C116	G117	A118	A119	U120	G121	C122	G125	C128	G129	C130	C134	G135	G136	C137	G137A	G138	G139	A140	A141	C141A	G142	G146	U147	C148	C153	G154	U155	C156	U161	U162	U	G																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																								
G171	C172	C174	G175	G176	G179	G180	A181	C184	G185	G188	G189	A190	G194	A195	A196	C197	C198	A199	U200	C201	A207	U210	C209	C210	A213	G214	G215	A216	G217	A218	G219	G220	A221	A222	G223	G224	A225	G226	A227	A228	U229	U230	C231	A233	C234	U235	C236	C237	U238	C239	G240																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																						
A241	G242	U243	A244	C245	C246	G247	G248	G249	G250	A251	G252	C253	G254	A257	G258	G259	G260	G261	A262	C263	C264	A265	G266	U269	A270	A270A	G270F	G270G	C270H	G270I	G270J	U270K	U270L	U270M	G270N	U270O	C270P	C270Q	G270R	G270S	G270T	G270X	G270Y	U270Z	C271A	U271C	G271D	G271E	G271F	G271G	G271H	G271I	G271J	G271K	G271L	G271M	G271N	G271O	G271P	G271Q	G271R	G271S	G271T	G271U	G271V	G271W	G271X	G271Y	G271Z	G272A	G272B	G272C	G272D	G272E	G272F	G272G	G272H	G272I	G272J	G272K	G272L	G272M	G272N	G272O	G272P	G272Q	G272R	G272S	G272T	G272U	G272V	G272W	G272X	G272Y	G272Z	G273A	G273B	G273C	G273D	G273E	G273F	G273G	G273H	G273I	G273J	G273K	G273L	G273M	G273N	G273O	G273P	G273Q	G273R	G273S	G273T	G273U	G273V	G273W	G273X	G273Y	G273Z	G274A	G274B	G274C	G274D	G274E	G274F	G274G	G274H	G274I	G274J	G274K	G274L	G274M	G274N	G274O	G274P	G274Q	G274R	G274S	G274T	G274U	G274V	G274W	G274X	G274Y	G274Z	G275A	G275B	G275C	G275D	G275E	G275F	G275G	G275H	G275I	G275J	G275K	G275L	G275M	G275N	G275O	G275P	G275Q	G275R	G275S	G275T	G275U	G275V	G275W	G275X	G275Y	G275Z	G276A	G276B	G276C	G276D	G276E	G276F	G276G	G276H	G276I	G276J	G276K	G276L	G276M	G276N	G276O	G276P	G276Q	G276R	G276S	G276T	G276U	G276V	G276W	G276X	G276Y	G276Z	G277A	G277B	G277C	G277D	G277E	G277F	G277G	G277H	G277I	G277J	G277K	G277L	G277M	G277N	G277O	G277P	G277Q	G277R	G277S	G277T	G277U	G277V	G277W	G277X	G277Y	G277Z	G278A	G278B	G278C	G278D	G278E	G278F	G278G	G278H	G278I	G278J	G278K	G278L	G278M	G278N	G278O	G278P	G278Q	G278R	G278S	G278T	G278U	G278V	G278W	G278X	G278Y	G278Z	G279A	G279B	G279C	G279D	G279E	G279F	G279G	G279H	G279I	G279J	G279K	G279L	G279M	G279N	G279O	G279P	G279Q	G279R	G279S	G279T	G279U	G279V	G279W	G279X	G279Y	G279Z	G280A	G280B	G280C	G280D	G280E	G280F	G280G	G280H	G280I	G280J	G280K	G280L	G280M	G280N	G280O	G280P	G280Q	G280R	G280S	G280T	G280U	G280V	G280W	G280X	G280Y	G280Z	G281A	G281B	G281C	G281D	G281E	G281F	G281G	G281H	G281I	G281J	G281K	G281L	G281M	G281N	G281O	G281P	G281Q	G281R	G281S	G281T	G281U	G281V	G281W	G281X	G281Y	G281Z	G282A	G282B	G282C	G282D	G282E	G282F	G282G	G282H	G282I	G282J	G282K	G282L	G282M	G282N	G282O	G282P	G282Q	G282R	G282S	G282T	G282U	G282V	G282W	G282X	G282Y	G282Z	G283A	G283B	G283C	G283D	G283E	G283F	G283G	G283H	G283I	G283J	G283K	G283L	G283M	G283N	G283O	G283P	G283Q	G283R	G283S	G283T	G283U	G283V	G283W	G283X	G283Y	G283Z	G284A	G284B	G284C	G284D	G284E	G284F	G284G	G284H	G284I	G284J	G284K	G284L	G284M	G284N	G284O	G284P	G284Q	G284R	G284S	G284T	G284U	G284V	G284W	G284X	G284Y	G284Z	G285A	G285B	G285C	G285D	G285E	G285F	G285G	G285H	G285I	G285J	G285K	G285L	G285M	G285N	G285O	G285P	G285Q	G285R	G285S	G285T	G285U	G285V	G285W	G285X	G285Y	G285Z	G286A	G286B	G286C	G286D	G286E	G286F	G286G	G286H	G286I	G286J	G286K	G286L	G286M	G286N	G286O	G286P	G286Q	G286R	G286S	G286T	G286U	G286V	G286W	G286X	G286Y	G286Z	G287A	G287B	G287C	G287D	G287E	G287F	G287G	G287H	G287I	G287J	G287K	G287L	G287M	G287N	G287O	G287P	G287Q	G287R	G287S	G287T	G287U	G287V	G287W	G287X	G287Y	G287Z	G288A	G288B	G288C	G288D	G288E	G288F	G288G	G288H	G288I	G288J	G288K	G288L	G288M	G288N	G288O	G288P	G288Q	G288R	G288S	G288T	G288U	G288V	G288W	G288X	G288Y	G288Z	G289A	G289B	G289C	G289D	G289E	G289F	G289G	G289H	G289I	G289J	G289K	G289L	G289M	G289N	G289O	G289P	G289Q	G289R	G289S	G289T	G289U	G289V	G289W	G289X	G289Y	G289Z	G290A	G290B	G290C	G290D	G290E	G290F	G290G	G290H	G290I	G290J	G290K	G290L	G290M	G290N	G290O	G290P	G290Q	G290R	G290S	G290T	G290U	G290V	G290W	G290X	G290Y	G290Z	G291A	G291B	G291C	G291D	G291E	G291F	G291G	G291H	G291I	G291J	G291K	G291L	G291M	G291N	G291O	G291P	G291Q	G291R	G291S	G291T	G291U	G291V	G291W	G291X	G291Y	G291Z	G292A	G292B	G292C	G292D	G292E	G292F	G292G	G292H	G292I	G292J	G292K	G292L	G292M	G292N	G292O	G292P	G292Q	G292R	G292S	G292T	G292U	G292V	G292W	G292X	G292Y	G292Z	G293A	G293B	G293C	G293D	G293E	G293F	G293G	G293H	G293I	G293J	G293K	G293L	G293M	G293N	G293O	G293P	G293Q	G293R	G293S	G293T	G293U	G293V	G293W	G293X	G293Y	G293Z	G294A	G294B	G294C	G294D	G294E	G294F	G294G	G294H	G294I	G294J	G294K	G294L	G294M	G294N	G294O	G294P	G294Q	G294R	G294S	G294T	G294U	G294V	G294W	G294X	G294Y	G294Z	G295A	G295B	G295C	G295D	G295E	G295F	G295G	G295H	G295I	G295J	G295K	G295L	G295M	G295N	G295O	G295P	G295Q	G295R	G295S	G295T	G295U	G295V	G295W	G295X	G295Y	G295Z	G296A	G296B	G296C	G296D	G296E	G296F	G296G	G296H	G296I	G296J	G296K	G296L	G296M	G296N	G296O	G296P	G296Q	G296R	G296S	G296T	G296U	G296V	G296W	G296X	G296Y	G296Z	G297A	G297B	G297C	G297D	G297E	G297F	G297G	G297H	G297I	G297J	G297K	G297L	G297M	G297N	G297O	G297P	G297Q	G297R	G297S	G297T	G297U	G297V	G297W	G297X	G297Y	G297Z	G298A	G298B	G298C	G298D	G298E	G298F	G298G	G298H	G298I	G298J	G298K	G298L	G298M	G298N	G298O	G298P	G298Q	G298R	G298S	G298T	G298U	G298V	G298W	G298X	G298Y	G298Z	G299A	G299B	G299C	G299D	G299E	G299F	G299G	G299H	G299I	G299J	G299K	G299L	G299M	G299N	G299O	G299P	G299Q	G299R	G299S	G299T	G299U	G299V	G299W	G299X	G299Y	G299Z	G300A	G300B	G300C	G300D	G300E	G300F	G300G	G300H	G300I	G300J	G300K	G300L	G300M	G300N	G300O	G300P	G300Q	G300R	G300S	G300T	G300U	G300V	G300W	G300X	G300Y	G300Z	G301A	G301B	G301C	G301D	G301E	G301F	G301G	G301H	G301I	G301J	G301K	G301L	G301M	G301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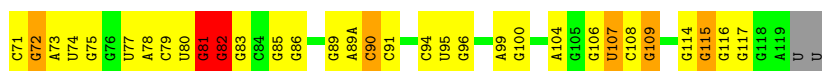
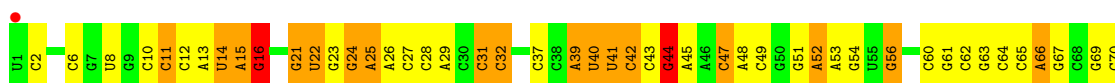






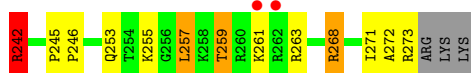
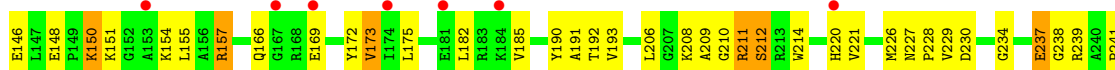
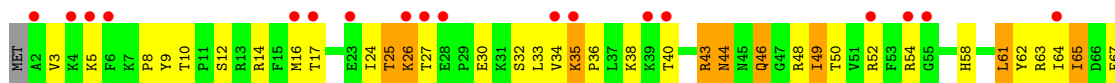
• Molecule 23: 5S rRNA

Chain YB:



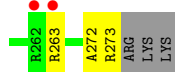
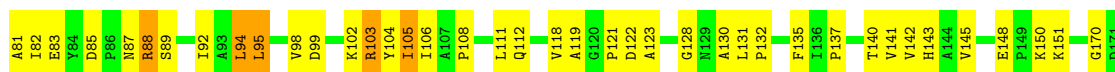
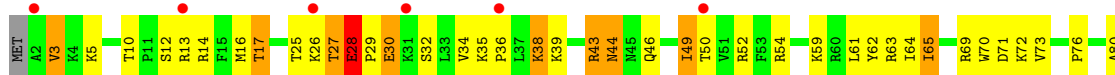
• Molecule 24: 50S ribosomal protein L2

Chain RD:



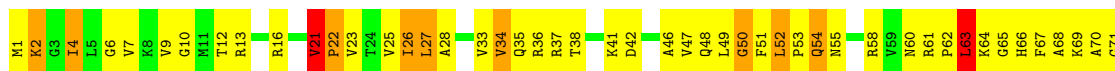
• Molecule 24: 50S ribosomal protein L2

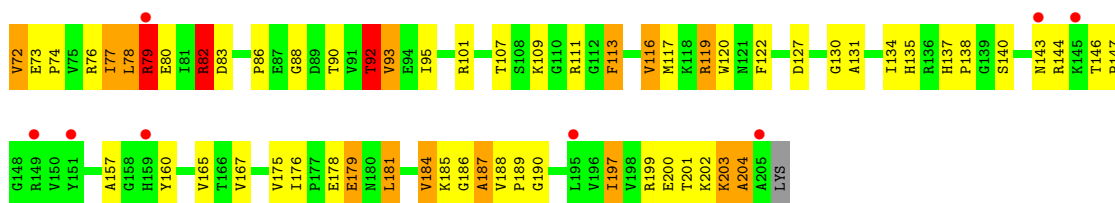
Chain YD:



• Molecule 25: 50S ribosomal protein L3

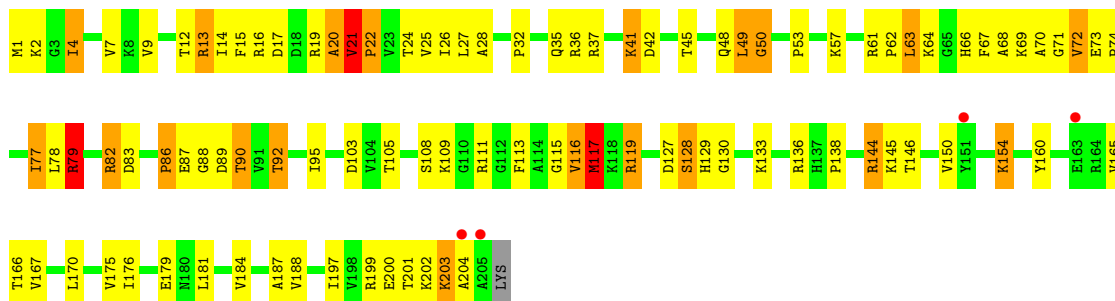
Chain RE:





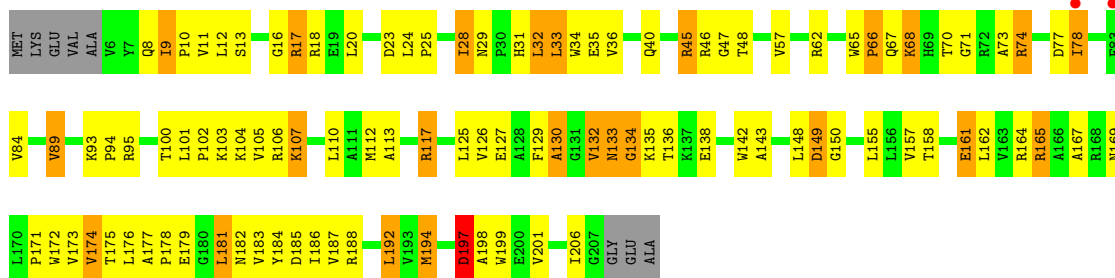
• Molecule 25: 50S ribosomal protein L3

Chain YE:



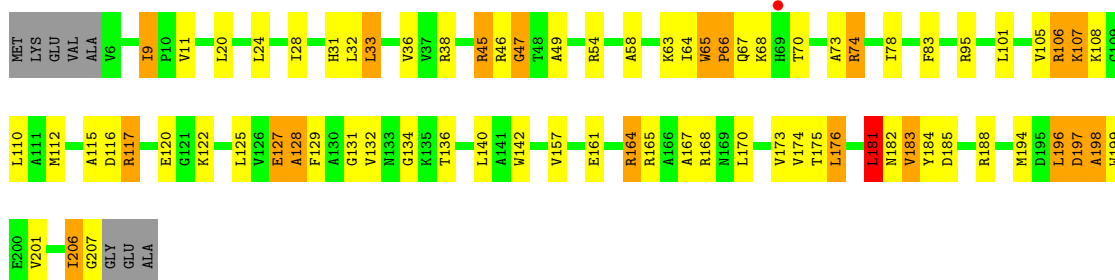
• Molecule 26: 50S ribosomal protein L4

Chain RF:



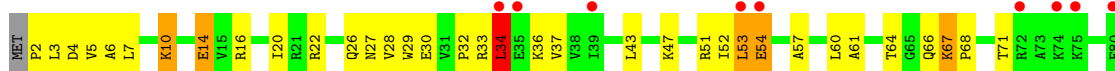
• Molecule 26: 50S ribosomal protein L4

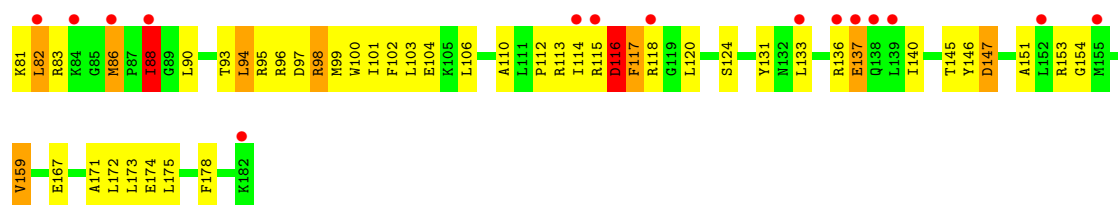
Chain YF:



• Molecule 27: 50S ribosomal protein L5

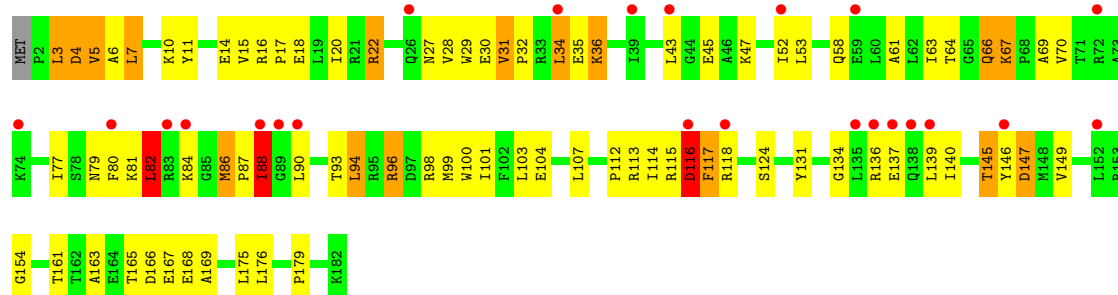
Chain RG:





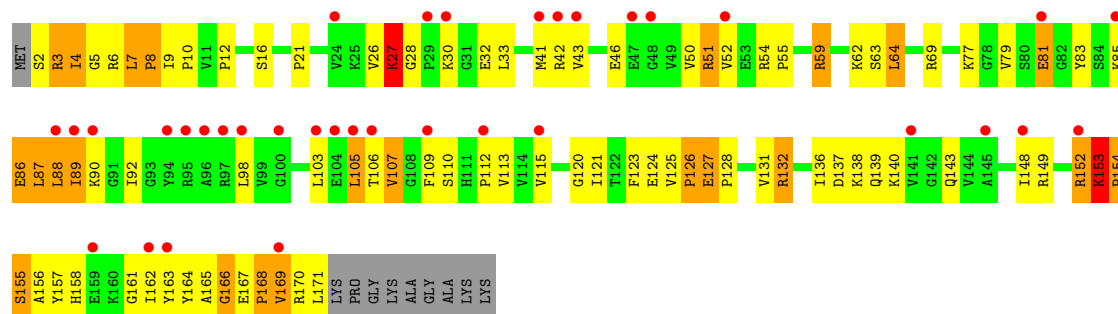
- Molecule 27: 50S ribosomal protein L5

Chain YG:



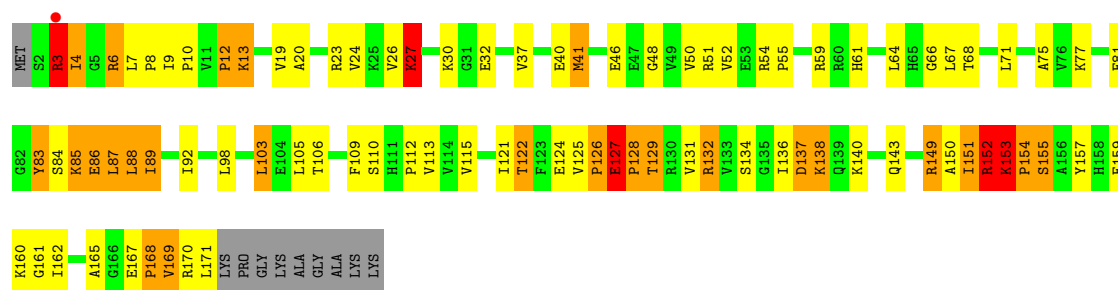
- Molecule 28: 50S ribosomal protein L6

Chain RH:



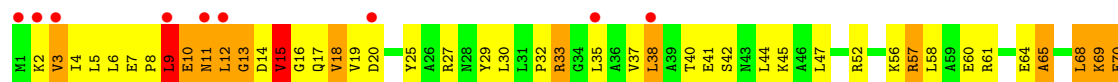
- Molecule 28: 50S ribosomal protein L6

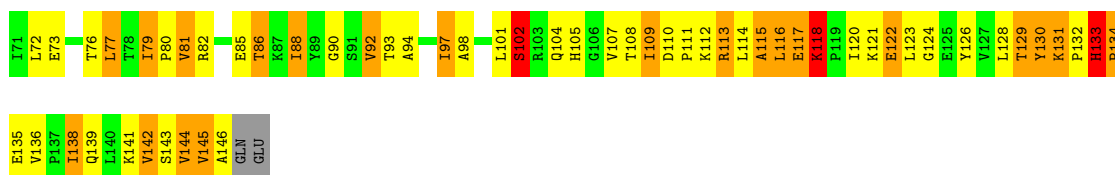
Chain YH:



- Molecule 29: 50S ribosomal protein L9

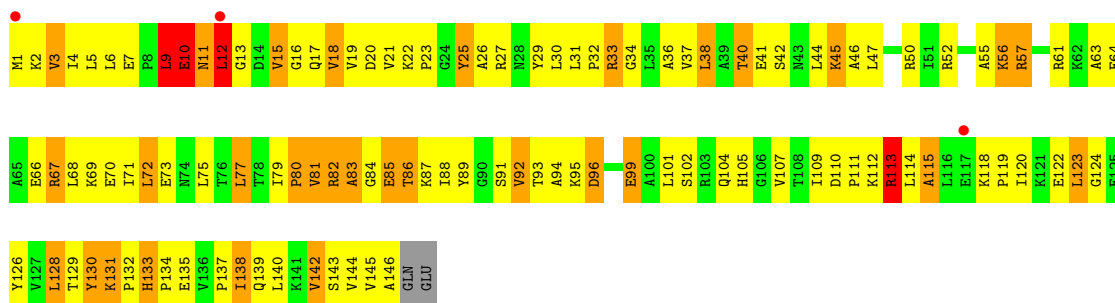
Chain RI:





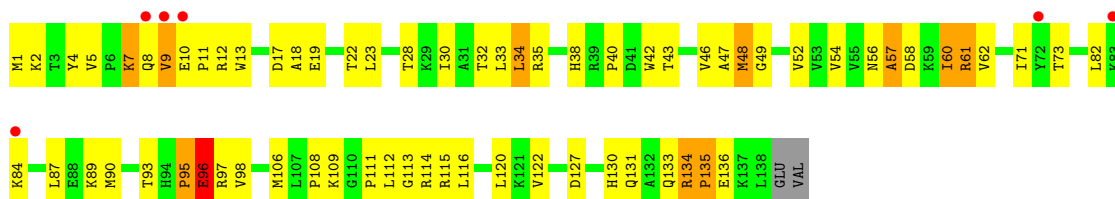
- Molecule 29: 50S ribosomal protein L9

Chain YI:



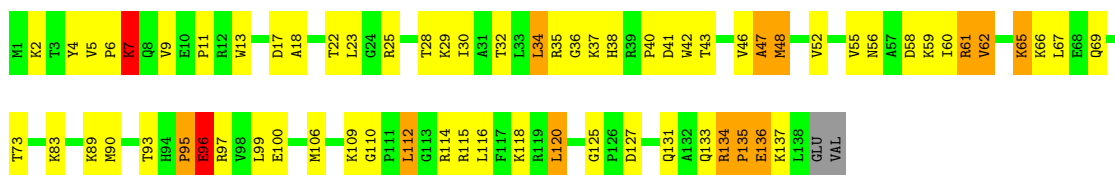
- Molecule 30: 50S ribosomal protein L13

Chain RN:



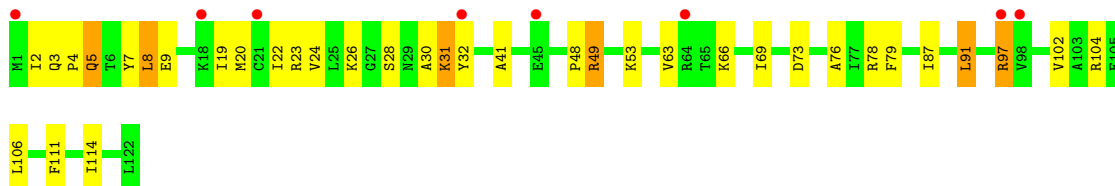
- Molecule 30: 50S ribosomal protein L13

Chain YN:



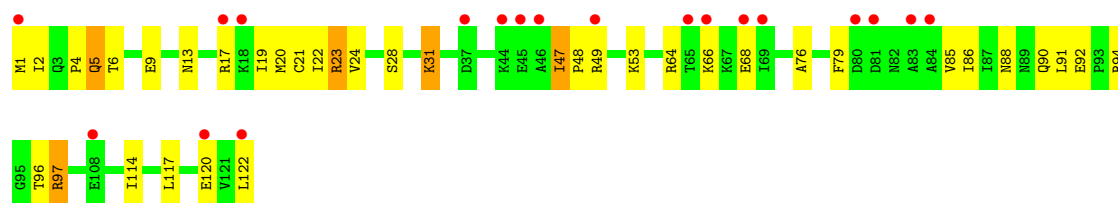
- Molecule 31: 50S ribosomal protein L14

Chain RO:



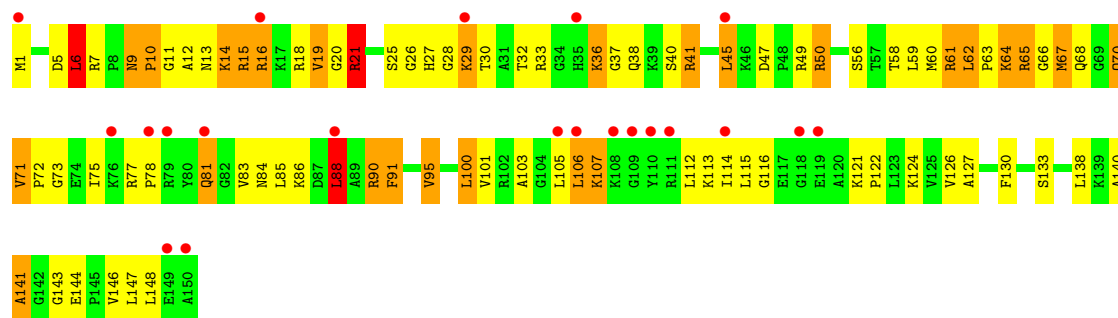
- Molecule 31: 50S ribosomal protein L14

Chain YO:



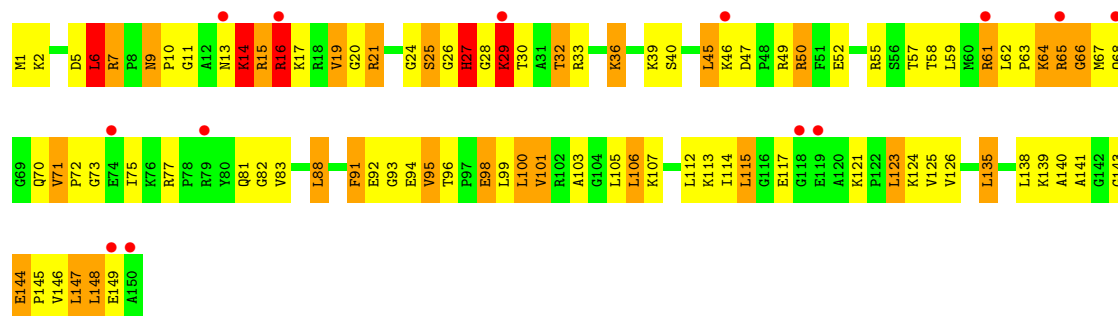
- Molecule 32: 50S ribosomal protein L15

Chain RP:



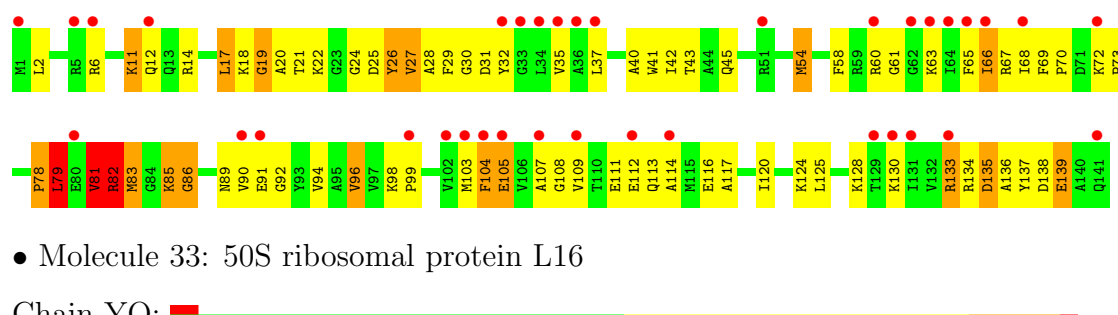
- Molecule 32: 50S ribosomal protein L15

Chain YP:



- Molecule 33: 50S ribosomal protein L16

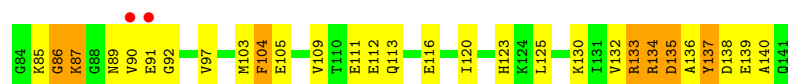
Chain RQ:



- Molecule 33: 50S ribosomal protein L16

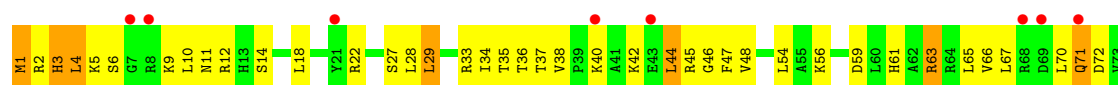
Chain YQ:





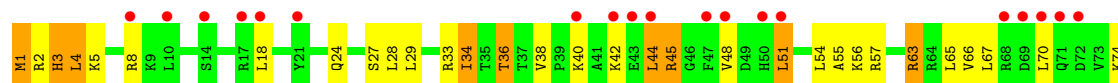
• Molecule 34: 50S ribosomal protein L17

Chain RR:



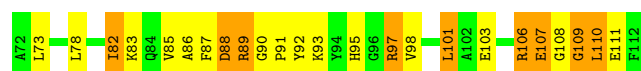
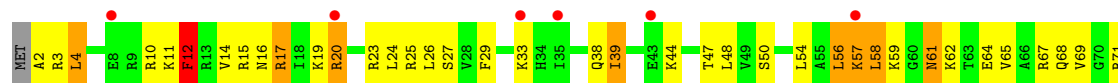
• Molecule 34: 50S ribosomal protein L17

Chain YR:



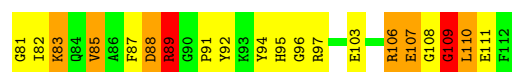
• Molecule 35: 50S ribosomal protein L18

Chain RS:



• Molecule 35: 50S ribosomal protein L18

Chain YS:



• Molecule 36: 50S ribosomal protein L19

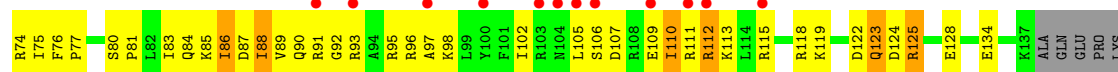
Chain RT:





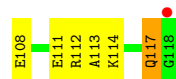
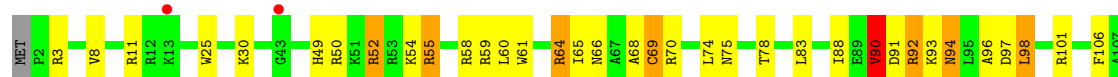
- Molecule 36: 50S ribosomal protein L19

Chain YT:



- Molecule 37: 50S ribosomal protein L20

Chain RU:



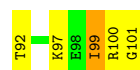
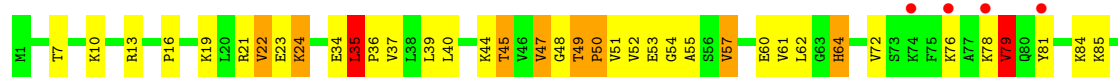
- Molecule 37: 50S ribosomal protein L20

Chain YU:



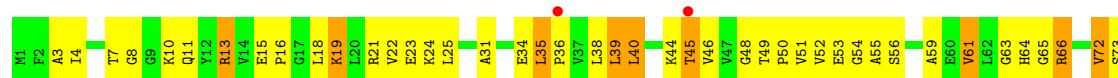
- Molecule 38: 50S ribosomal protein L21

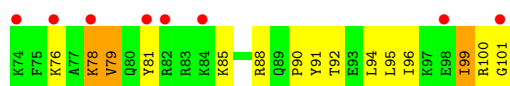
Chain RV:



- Molecule 38: 50S ribosomal protein L21

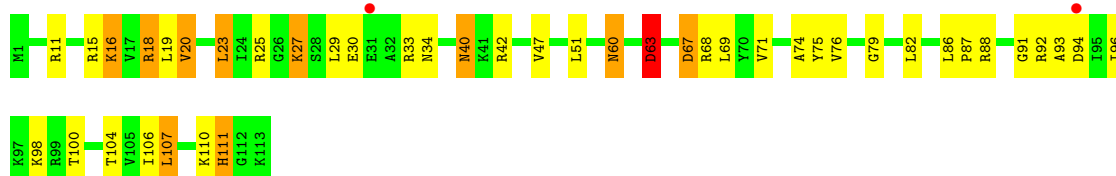
Chain YV:





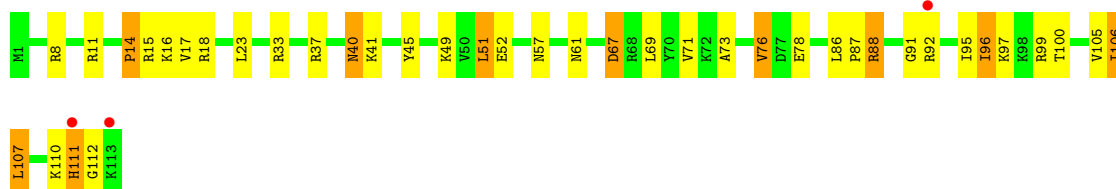
- Molecule 39: 50S ribosomal protein L22

Chain RW:



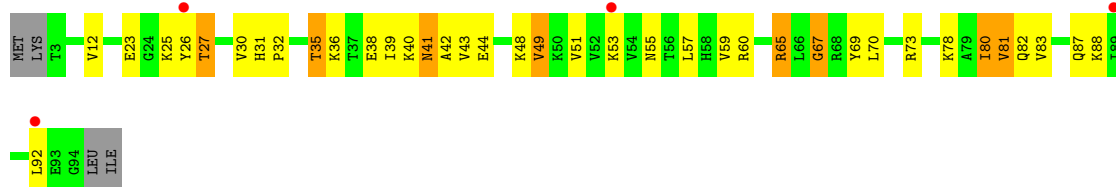
- Molecule 39: 50S ribosomal protein L22

Chain YW:



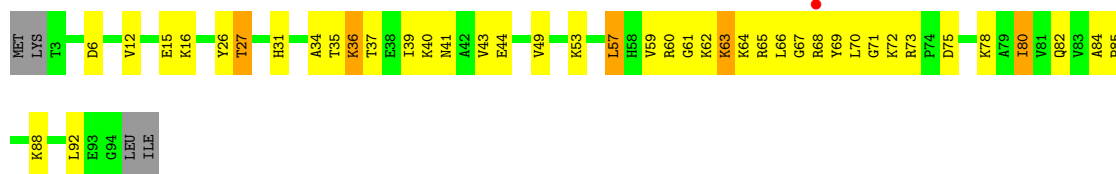
- Molecule 40: 50S ribosomal protein L23

Chain RX:



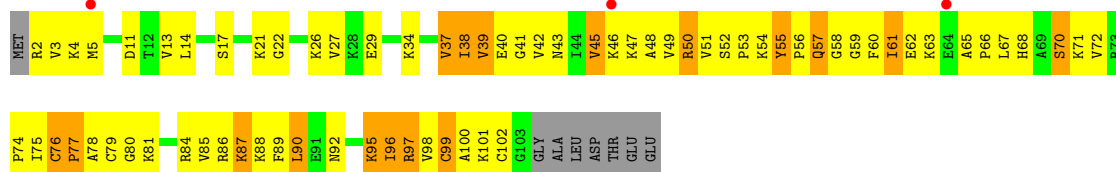
- Molecule 40: 50S ribosomal protein L23

Chain YX:

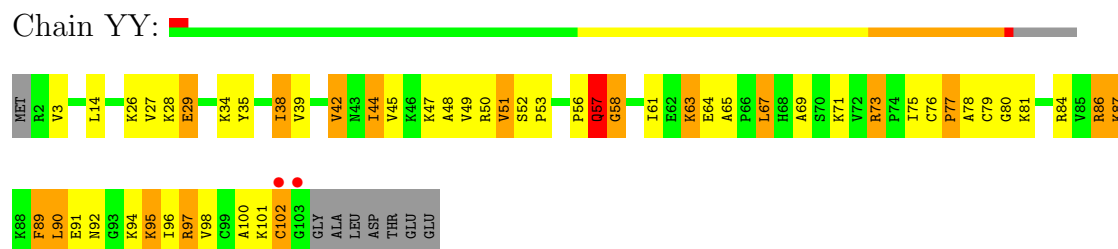


- Molecule 41: 50S ribosomal protein L24

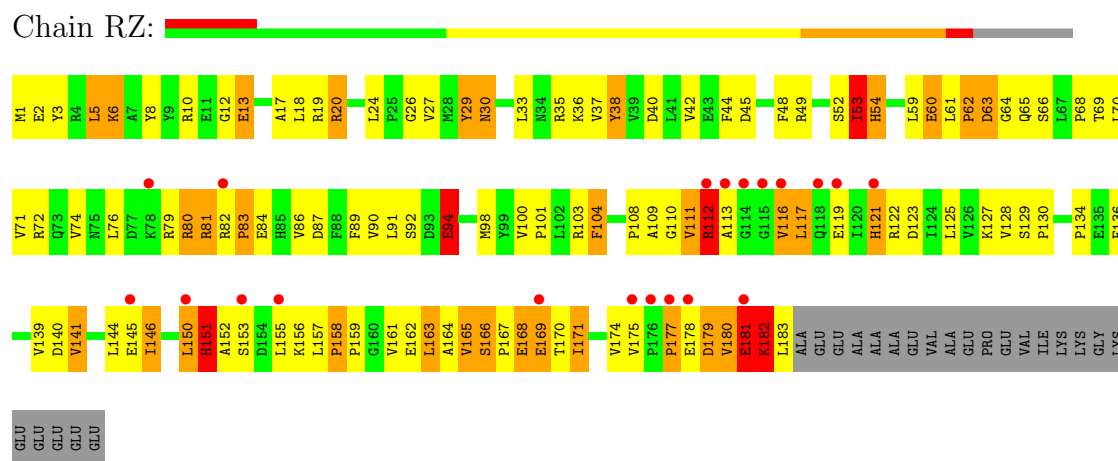
Chain RY:



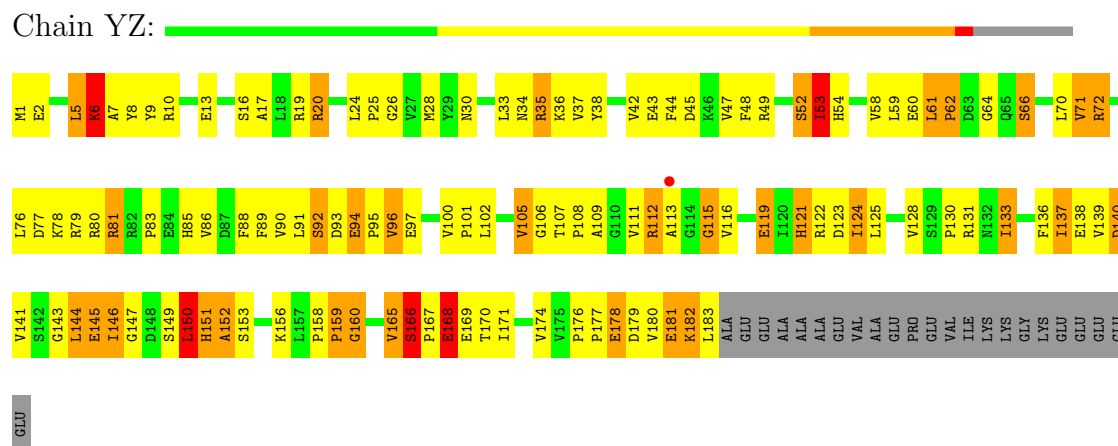
- Molecule 41: 50S ribosomal protein L24



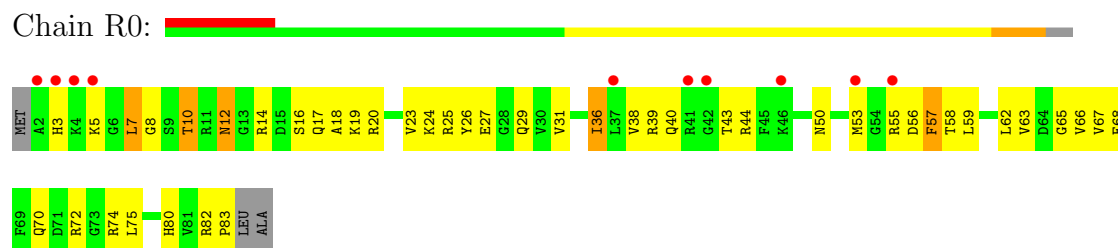
- Molecule 42: 50S ribosomal protein L25



- Molecule 42: 50S ribosomal protein L25

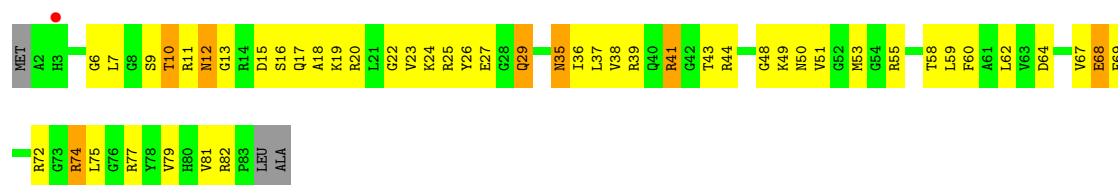


- Molecule 43: 50S ribosomal protein L27



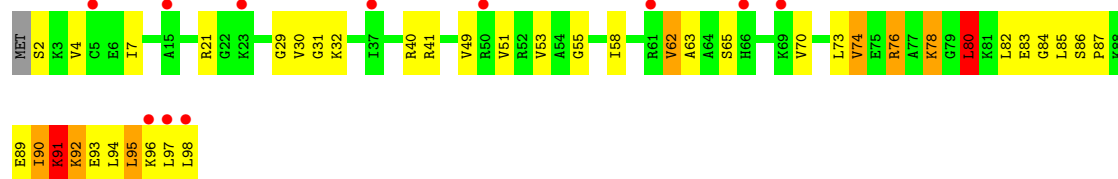
- Molecule 43: 50S ribosomal protein L27

Chain Y0:



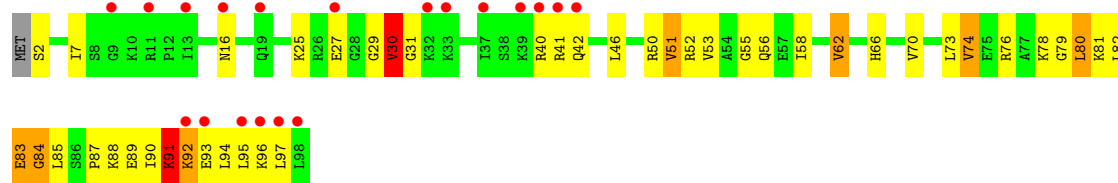
- Molecule 44: 50S ribosomal protein L28

Chain R1:



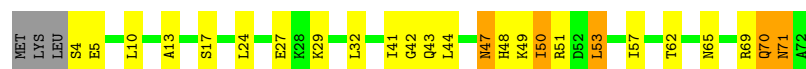
- Molecule 44: 50S ribosomal protein L28

Chain Y1:



- Molecule 45: 50S ribosomal protein L29

Chain R2:



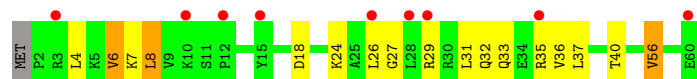
- Molecule 45: 50S ribosomal protein L29

Chain Y2:



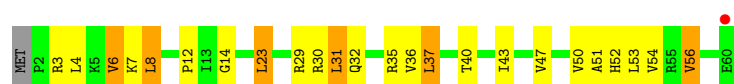
- Molecule 46: 50S ribosomal protein L30

Chain R3:



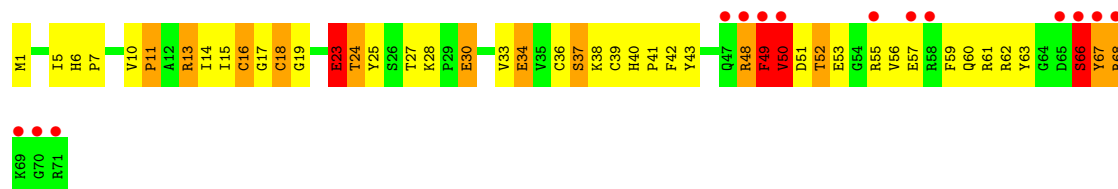
- Molecule 46: 50S ribosomal protein L30

Chain Y3:



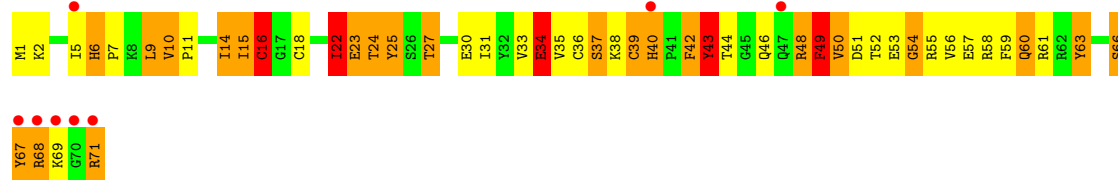
- Molecule 47: 50S ribosomal protein L31

Chain R4:



- Molecule 47: 50S ribosomal protein L31

Chain Y4:



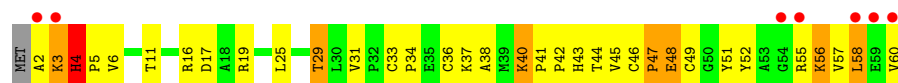
- Molecule 48: 50S ribosomal protein L32

Chain R5:



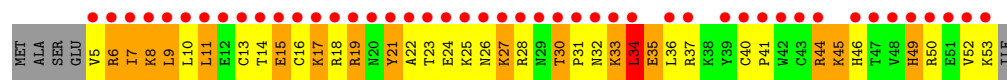
- Molecule 48: 50S ribosomal protein L32

Chain Y5:



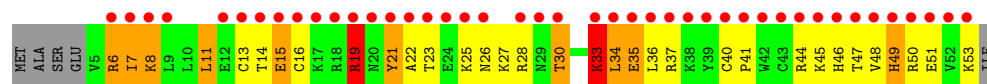
- Molecule 49: 50S ribosomal protein L33

Chain R6:



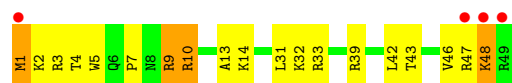
- Molecule 49: 50S ribosomal protein L33

Chain Y6:



- Molecule 50: 50S ribosomal protein L34

Chain R7:



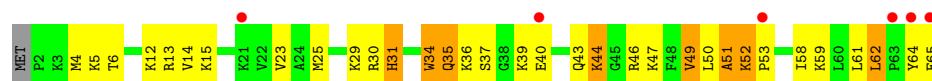
- Molecule 50: 50S ribosomal protein L34

Chain Y7:



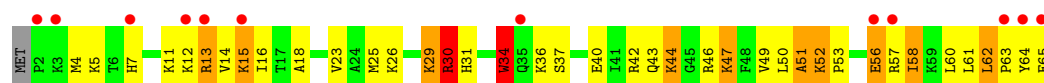
- Molecule 51: 50S ribosomal protein L35

Chain R8:



- Molecule 51: 50S ribosomal protein L35

Chain Y8:



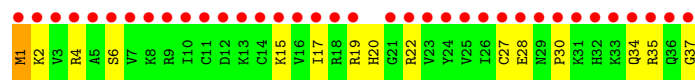
- Molecule 52: 50S ribosomal protein L36

Chain R9:



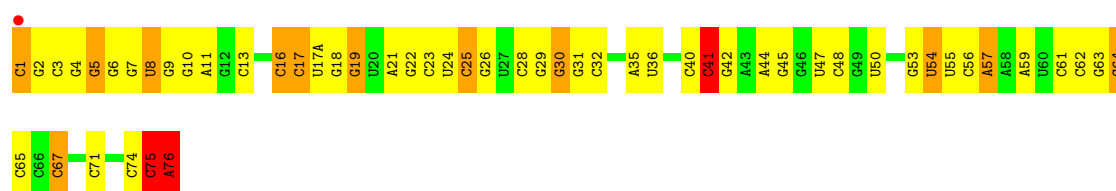
- Molecule 52: 50S ribosomal protein L36

Chain Y9:



- Molecule 53: P-site tRNA fMET

Chain QV:



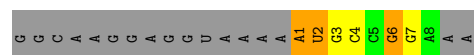
- Molecule 53: P-site tRNA fMET

Chain XV:



- Molecule 54: mRNA

Chain QX:



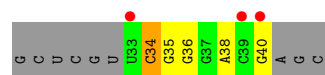
- Molecule 54: mRNA

Chain XX:



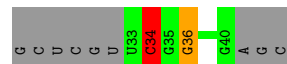
- Molecule 55: A site ASL of tRNA-Proline CGG (unmodified)

Chain QY:



- Molecule 55: A site ASL of tRNA-Proline CGG (unmodified)

Chain XY:



- Molecule 56: tRNA acceptor end mimic

Chain Z6:



- Molecule 56: tRNA acceptor end mimic

Chain Z8:



4 Data and refinement statistics

Property	Value	Source
Space group	P 21 21 21	Depositor
Cell constants a, b, c, α , β , γ	209.82Å 447.39Å 619.86Å 90.00° 90.00° 90.00°	Depositor
Resolution (Å)	187.58 – 3.68 189.96 – 3.54	Depositor EDS
% Data completeness (in resolution range)	99.1 (187.58-3.68) 99.2 (189.96-3.54)	Depositor EDS
R_{merge}	0.34	Depositor
R_{sym}	(Not available)	Depositor
$\langle I/\sigma(I) \rangle$ ¹	1.37 (at 3.58Å)	Xtriage
Refinement program	PHENIX (phenix.refine: 1.8.3_1479)	Depositor
R, R_{free}	0.212 , 0.272 0.212 , 0.272	Depositor DCC
R_{free} test set	27977 reflections (4.51%)	DCC
Wilson B-factor (Å ²)	83.8	Xtriage
Anisotropy	0.184	Xtriage
Bulk solvent k_{sol} (e/Å ³), B_{sol} (Å ²)	0.28 , 31.6	EDS
Estimated twinning fraction	No twinning to report.	Xtriage
L-test for twinning	$\langle L \rangle = 0.40$, $\langle L^2 \rangle = 0.23$	Xtriage
Outliers	0 of 696967 reflections	Xtriage
F_o, F_c correlation	0.85	EDS
Total number of atoms	291730	wwPDB-VP
Average B, all atoms (Å ²)	71.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 1.79% of the height of the origin peak. No significant pseudotranslation is detected.*

¹Intensities estimated from amplitudes.

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, PAR, PPU

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	0.59	3/36098 (0.0%)	1.21	155/56341 (0.3%)
1	XA	0.65	1/36101 (0.0%)	1.27	208/56346 (0.4%)
2	QB	0.31	0/1959	0.52	0/2642
2	XB	0.32	0/1959	0.54	0/2642
3	QC	0.31	0/1629	0.53	0/2195
3	XC	0.37	0/1629	0.56	0/2195
4	QD	0.38	0/1733	0.58	1/2318 (0.0%)
4	XD	0.40	0/1733	0.60	0/2318
5	QE	0.35	0/1171	0.56	0/1576
5	XE	0.39	0/1171	0.59	0/1576
6	QF	0.38	0/856	0.54	0/1154
6	XF	0.38	0/856	0.58	0/1154
7	QG	0.33	0/1276	0.50	0/1709
7	XG	0.34	0/1276	0.50	0/1709
8	QH	0.33	0/1136	0.55	0/1527
8	XH	0.38	0/1136	0.58	0/1527
9	QI	0.31	0/1029	0.55	0/1379
9	XI	0.34	0/1029	0.58	0/1379
10	QJ	0.33	0/814	0.54	0/1095
10	XJ	0.35	0/814	0.60	0/1095
11	QK	0.36	0/900	0.57	0/1213
11	XK	0.39	0/900	0.58	0/1213
12	QL	0.37	0/991	0.61	0/1327
12	XL	0.45	0/991	0.74	1/1327 (0.1%)
13	QM	0.32	0/974	0.59	0/1303
13	XM	0.37	0/974	0.63	0/1303
14	QN	0.41	0/501	0.60	0/664
14	XN	0.42	0/501	0.66	0/664
15	QO	0.35	0/745	0.54	0/992
15	XO	0.39	0/745	0.54	0/992
16	QP	0.36	0/721	0.57	0/970
16	XP	0.35	0/721	0.57	0/970

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z >5	RMSZ	# Z >5
17	QQ	0.35	0/847	0.54	0/1131
17	XQ	0.35	0/847	0.54	0/1131
18	QR	0.35	0/579	0.64	1/768 (0.1%)
18	XR	0.37	0/579	0.59	0/768
19	QS	0.33	0/689	0.61	0/926
19	XS	0.38	0/689	0.69	1/926 (0.1%)
20	QT	0.36	0/765	0.64	0/1007
20	XT	0.31	0/765	0.59	0/1007
21	QU	0.31	0/221	0.54	0/288
21	XU	0.31	0/221	0.62	0/288
22	RA	0.72	8/69521 (0.0%)	1.34	555/108529 (0.5%)
22	YA	0.80	28/69543 (0.0%)	1.43	823/108563 (0.8%)
23	RB	0.58	0/2878	1.22	15/4490 (0.3%)
23	YB	0.63	0/2878	1.28	17/4490 (0.4%)
24	RD	0.51	0/2165	0.70	0/2919
24	YD	0.58	0/2165	0.78	1/2919 (0.0%)
25	RE	0.43	0/1601	0.73	3/2160 (0.1%)
25	YE	0.46	0/1601	0.75	2/2160 (0.1%)
26	RF	0.42	0/1620	0.62	0/2194
26	YF	0.48	0/1620	0.71	1/2194 (0.0%)
27	RG	0.31	0/1499	0.57	1/2016 (0.0%)
27	YG	0.40	0/1499	0.60	0/2016
28	RH	0.29	0/1332	0.58	0/1802
28	YH	0.45	0/1332	0.73	0/1802
29	RI	0.52	0/1151	0.79	1/1558 (0.1%)
29	YI	0.55	0/1151	0.80	0/1558
30	RN	0.41	0/1131	0.62	0/1525
30	YN	0.43	0/1131	0.64	0/1525
31	RO	0.41	0/943	0.62	1/1269 (0.1%)
31	YO	0.50	0/943	0.65	0/1269
32	RP	0.44	0/1162	0.81	1/1544 (0.1%)
32	YP	0.49	0/1162	0.90	2/1544 (0.1%)
33	RQ	0.47	0/1143	0.74	2/1527 (0.1%)
33	YQ	0.57	0/1143	0.80	1/1527 (0.1%)
34	RR	0.42	0/982	0.69	0/1312
34	YR	0.44	0/982	0.73	0/1312
35	RS	0.36	0/892	0.65	0/1187
35	YS	0.40	0/892	0.75	1/1187 (0.1%)
36	RT	0.42	0/1155	0.63	0/1542
36	YT	0.44	0/1155	0.67	0/1542
37	RU	0.40	0/982	0.65	0/1306
37	YU	0.50	0/982	0.68	0/1306
38	RV	0.38	0/790	0.61	1/1057 (0.1%)

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z >5	RMSZ	# Z >5
38	YV	0.45	0/790	0.73	1/1057 (0.1%)
39	RW	0.49	0/911	0.67	0/1220
39	YW	0.45	0/911	0.68	0/1220
40	RX	0.47	0/739	0.62	0/993
40	YX	0.49	0/739	0.66	0/993
41	RY	0.44	0/798	0.68	0/1064
41	YY	0.46	0/798	0.70	0/1064
42	RZ	0.58	1/1493 (0.1%)	0.77	0/2026
42	YZ	0.56	0/1493	0.79	1/2026 (0.0%)
43	R0	0.65	0/657	0.80	0/874
43	Y0	0.74	1/657 (0.2%)	0.90	1/874 (0.1%)
44	R1	0.44	0/770	0.66	0/1022
44	Y1	0.46	0/770	0.69	0/1022
45	R2	0.39	0/583	0.65	0/771
45	Y2	0.52	0/583	0.73	0/771
46	R3	0.35	0/474	0.57	0/635
46	Y3	0.41	0/474	0.59	0/635
47	R4	0.33	0/594	0.68	0/795
47	Y4	0.37	0/594	0.68	0/795
48	R5	0.44	0/473	0.73	0/639
48	Y5	0.43	0/473	0.77	1/639 (0.2%)
49	R6	0.35	0/431	0.69	0/575
49	Y6	0.37	0/431	0.67	0/575
50	R7	0.49	0/438	0.68	0/575
50	Y7	0.57	0/438	0.71	0/575
51	R8	0.55	0/525	0.79	0/691
51	Y8	0.58	0/525	0.82	0/691
52	R9	0.26	0/310	0.45	0/407
52	Y9	0.32	0/310	0.48	0/407
53	QV	0.85	1/1836 (0.1%)	1.45	24/2859 (0.8%)
53	XV	0.89	1/1836 (0.1%)	1.54	25/2859 (0.9%)
54	QX	0.95	0/193	1.91	7/299 (2.3%)
54	XX	1.12	0/193	1.83	4/299 (1.3%)
55	QY	0.68	0/194	1.53	0/301
55	XY	0.72	0/194	1.25	1/301 (0.3%)
56	Z6	0.74	0/40	1.58	1/60 (1.7%)
56	Z8	0.92	0/40	1.50	0/60
All	All	0.64	44/316105 (0.0%)	1.20	1861/472575 (0.4%)

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

Mol	Chain	#Chirality outliers	#Planarity outliers
12	QL	0	1
12	XL	0	1
25	RE	0	1
25	YE	0	1
26	YF	0	1
28	RH	0	2
28	YH	0	2
29	RI	0	1
35	YS	0	1
42	YZ	0	2
45	Y2	0	1
47	R4	0	1
51	R8	0	2
51	Y8	0	2
All	All	0	19

All (44) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
53	QV	1	C	OP3-P	-10.81	1.48	1.61
53	XV	1	C	OP3-P	-10.09	1.49	1.61
22	YA	783	A	N9-C4	-8.12	1.32	1.37
22	YA	2542	A	N9-C4	-7.43	1.33	1.37
22	YA	1966	A	N9-C4	-7.42	1.33	1.37
22	RA	1918	A	N9-C4	-6.88	1.33	1.37
1	QA	1227	A	N9-C4	-6.86	1.33	1.37
22	YA	1938	A	N9-C4	-6.62	1.33	1.37
22	YA	2082	A	N9-C4	-6.52	1.33	1.37
22	YA	1142(A)	A	N9-C4	-6.52	1.33	1.37
22	RA	471	A	N9-C4	-6.35	1.34	1.37
22	YA	774	A	N9-C4	-6.31	1.34	1.37
22	YA	783	A	C5-C6	-6.04	1.35	1.41
22	YA	783	A	N7-C5	-6.04	1.35	1.39
22	YA	783	A	N3-C4	-5.83	1.31	1.34
22	YA	2712(A)	A	N7-C5	-5.81	1.35	1.39
22	RA	2589	A	N9-C4	-5.73	1.34	1.37
22	YA	2764	A	N9-C4	-5.67	1.34	1.37
1	QA	1434	A	N9-C4	-5.66	1.34	1.37
22	YA	2518	A	N9-C4	-5.65	1.34	1.37
22	RA	1677	A	N9-C4	-5.56	1.34	1.37
43	Y0	68	GLU	CG-CD	5.51	1.60	1.51
22	YA	917	A	N9-C4	-5.50	1.34	1.37
22	YA	528	A	N9-C4	-5.46	1.34	1.37

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
22	YA	793	A	N7-C5	-5.44	1.35	1.39
1	QA	32	A	N9-C4	5.42	1.41	1.37
22	YA	2251	G	N3-C4	-5.39	1.31	1.35
22	YA	2060	A	N9-C4	-5.33	1.34	1.37
22	YA	2032	G	N9-C4	-5.30	1.33	1.38
22	YA	917	A	N3-C4	-5.28	1.31	1.34
42	RZ	54	HIS	CG-ND1	-5.27	1.27	1.38
22	YA	2251	G	C6-N1	-5.26	1.35	1.39
22	RA	2062	A	N9-C4	5.18	1.41	1.37
22	YA	2826	A	N9-C4	-5.15	1.34	1.37
1	XA	1468	A	N9-C4	-5.15	1.34	1.37
22	RA	397	G	N9-C4	-5.13	1.33	1.38
22	YA	71	A	N9-C4	-5.11	1.34	1.37
22	RA	1931	U	N3-C4	-5.09	1.33	1.38
22	YA	676	A	N9-C4	-5.09	1.34	1.37
22	YA	957	A	N9-C4	-5.05	1.34	1.37
22	YA	140	A	N7-C5	-5.03	1.36	1.39
22	YA	2430	A	N3-C4	-5.02	1.31	1.34
22	YA	142	G	N9-C4	-5.01	1.33	1.38
22	RA	74	A	N7-C5	-5.01	1.36	1.39

All (1861) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
53	QV	75	C	O5'-P-OP2	-13.28	93.75	105.70
22	YA	774	A	C2-N3-C4	-12.25	104.47	110.60
22	RA	1931	U	N3-C2-O2	-12.05	113.77	122.20
22	YA	1332	G	C6-C5-N7	-11.94	123.24	130.40
22	YA	450	G	C5-C6-N1	-11.37	105.81	111.50
22	YA	783	A	C2-N3-C4	-11.03	105.08	110.60
22	RA	28	A	C8-N9-C4	-10.75	101.50	105.80
22	YA	783	A	N1-C6-N6	10.53	124.92	118.60
22	YA	2573	C	N1-C2-O2	10.33	125.10	118.90
22	YA	917	A	C2-N3-C4	-10.11	105.55	110.60
22	YA	570	G	C5-C6-N1	-10.10	106.45	111.50
22	YA	140	A	N7-C8-N9	9.96	118.78	113.80
22	RA	140	A	C8-N9-C4	-9.94	101.82	105.80
22	RA	1931	U	C5-C4-O4	9.85	131.81	125.90
22	YA	783	A	C5-N7-C8	-9.85	98.98	103.90
22	YA	805	G	N3-C4-N9	9.81	131.89	126.00
22	RA	774	A	C2-N3-C4	-9.80	105.70	110.60
22	RA	28	A	N7-C8-N9	9.79	118.69	113.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	XA	1054	C	C2-N1-C1'	9.70	129.47	118.80
22	YA	189	G	C6-C5-N7	-9.69	124.59	130.40
1	XA	812	C	N1-C2-O2	9.58	124.65	118.90
53	XV	67	C	C6-N1-C2	-9.58	116.47	120.30
22	YA	2573	C	N3-C2-O2	-9.58	115.19	121.90
22	YA	140	A	C8-N9-C4	-9.56	101.97	105.80
22	YA	1332	G	C4-N9-C1'	9.56	138.92	126.50
1	QA	1301	U	N3-C2-O2	-9.51	115.54	122.20
53	QV	17	C	N1-C2-O2	9.47	124.58	118.90
22	RA	791	C	C6-N1-C2	9.40	124.06	120.30
22	YA	783	A	C6-C5-N7	-9.32	125.77	132.30
22	RA	828	U	C5-C4-O4	9.32	131.49	125.90
22	YA	2712(A)	A	N7-C8-N9	9.31	118.45	113.80
1	XA	328	C	C6-N1-C2	-9.30	116.58	120.30
53	XV	17	C	N1-C2-O2	9.26	124.45	118.90
22	YA	1216	G	N1-C6-O6	9.21	125.42	119.90
22	YA	1899	G	C2-N3-C4	-9.16	107.32	111.90
53	XV	74	C	C5-C4-N4	-9.13	113.81	120.20
22	YA	2542	A	C2-N3-C4	-9.10	106.05	110.60
1	XA	1054	C	C6-N1-C1'	-9.08	109.91	120.80
22	YA	528	A	N1-C2-N3	9.05	133.82	129.30
22	RA	140	A	N7-C8-N9	9.04	118.32	113.80
22	YA	671	C	N3-C2-O2	-8.99	115.61	121.90
22	YA	1662	C	C6-N1-C2	8.89	123.86	120.30
22	RA	2544	G	N1-C6-O6	8.86	125.21	119.90
22	RA	2519	U	O5'-P-OP1	-8.85	97.73	105.70
22	RA	1931	U	N1-C2-N3	8.82	120.19	114.90
22	YA	1786	A	N1-C6-N6	8.82	123.89	118.60
1	XA	812	C	N3-C2-O2	-8.79	115.75	121.90
1	XA	963	G	N3-C4-N9	8.78	131.27	126.00
22	YA	1929	G	C4-C5-N7	8.77	114.31	110.80
22	YA	2681	C	C6-N1-C2	-8.77	116.79	120.30
22	YA	450	G	C4-C5-C6	8.75	124.05	118.80
1	XA	1108	G	C5-C6-N1	-8.74	107.13	111.50
22	YA	1942	C	C6-N1-C2	-8.69	116.83	120.30
1	XA	518	C	C6-N1-C2	-8.68	116.83	120.30
53	XV	17	C	C2-N1-C1'	8.61	128.27	118.80
22	YA	2681	C	P-O3'-C3'	8.55	129.97	119.70
22	YA	679	C	C5-C4-N4	-8.55	114.22	120.20
22	YA	2712(A)	A	C8-N9-C4	-8.55	102.38	105.80
23	YB	47	C	C6-N1-C2	8.54	123.72	120.30
22	YA	2058	A	N1-C6-N6	8.53	123.72	118.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
22	YA	2036	C	O5'-P-OP2	-8.52	98.03	105.70
22	RA	2712	U	O4'-C1'-N1	8.52	115.01	108.20
22	YA	1942	C	N1-C2-O2	8.52	124.01	118.90
22	RA	449	A	O5'-P-OP1	-8.51	98.04	105.70
1	QA	1200	C	N1-C2-O2	8.49	123.99	118.90
22	YA	1970	A	O5'-P-OP2	-8.48	98.07	105.70
1	QA	1301	U	N1-C2-O2	8.40	128.68	122.80
22	YA	1950	G	N7-C8-N9	8.40	117.30	113.10
1	XA	963	G	C4-N9-C1'	8.37	137.37	126.50
1	QA	1336	C	C6-N1-C2	-8.33	116.97	120.30
22	YA	783	A	C4-C5-N7	8.33	114.87	110.70
22	RA	1786	A	C5-N7-C8	-8.31	99.75	103.90
22	YA	528	A	C2-N3-C4	-8.31	106.44	110.60
22	YA	1332	G	C8-N9-C1'	-8.31	116.20	127.00
53	QV	8	U	C6-N1-C2	-8.31	116.01	121.00
22	RA	2612	C	N1-C2-O2	8.30	123.88	118.90
22	RA	1204	A	O4'-C1'-N9	8.29	114.83	108.20
22	RA	2611	U	O5'-P-OP2	-8.29	98.24	105.70
22	YA	1786	A	C5-C6-N1	-8.28	113.56	117.70
22	YA	2612	C	N1-C2-O2	8.28	123.87	118.90
1	XA	963	G	N3-C4-C5	-8.28	124.46	128.60
22	YA	142	G	N3-C4-C5	8.26	132.73	128.60
1	XA	789	U	C6-N1-C2	-8.21	116.08	121.00
22	YA	2513	G	N1-C6-O6	8.18	124.81	119.90
1	QA	1322	C	C2-N1-C1'	8.15	127.76	118.80
53	QV	17	C	C2-N1-C1'	8.14	127.76	118.80
22	YA	1198	U	N3-C2-O2	-8.14	116.50	122.20
22	YA	1130	U	P-O3'-C3'	8.13	129.45	119.70
22	RA	828	U	N3-C2-O2	-8.10	116.53	122.20
1	XA	963	G	C8-N9-C1'	-8.10	116.47	127.00
22	YA	2430	A	C2-N3-C4	-8.07	106.56	110.60
22	RA	1130	U	P-O3'-C3'	8.07	129.39	119.70
22	RA	1653	G	N3-C4-C5	-8.05	124.57	128.60
22	RA	1377	G	N3-C4-C5	-8.03	124.58	128.60
22	RA	791	C	N3-C4-C5	8.01	125.10	121.90
22	YA	783	A	C5-C6-N1	-8.00	113.70	117.70
22	YA	2430	A	C5-C6-N1	-7.99	113.70	117.70
22	YA	792	G	C5-C6-O6	7.98	133.39	128.60
22	YA	2388	A	C8-N9-C4	7.97	108.99	105.80
22	RA	1786	A	C6-C5-N7	-7.96	126.73	132.30
22	RA	2439	A	C8-N9-C4	-7.95	102.62	105.80
22	RA	74	A	N1-C6-N6	7.94	123.36	118.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	QA	1397	C	C6-N1-C2	-7.93	117.13	120.30
1	XA	299	G	C5-C6-N1	-7.93	107.54	111.50
1	XA	1197	G	O5'-P-OP2	-7.92	98.57	105.70
22	YA	774	A	C5-C6-N1	-7.91	113.74	117.70
22	YA	2036	C	C6-N1-C2	-7.89	117.14	120.30
22	YA	265	A	O4'-C1'-N9	7.89	114.51	108.20
22	YA	828	U	C2-N1-C1'	7.88	127.16	117.70
22	YA	2430	A	N1-C2-N3	7.84	133.22	129.30
22	RA	1786	A	N1-C6-N6	7.84	123.30	118.60
22	YA	1992	G	P-O3'-C3'	7.83	129.09	119.70
22	YA	1786	A	C6-C5-N7	-7.83	126.82	132.30
22	YA	1786	A	C2-N3-C4	-7.82	106.69	110.60
1	QA	932	C	N1-C2-O2	7.79	123.58	118.90
1	QA	1302	U	C2-N1-C1'	7.78	127.04	117.70
22	YA	982	C	C6-N1-C2	-7.78	117.19	120.30
1	QA	401	C	C6-N1-C2	-7.77	117.19	120.30
54	QX	6	G	N1-C6-O6	7.77	124.56	119.90
1	QA	1336	C	N1-C2-O2	7.75	123.55	118.90
22	YA	1942	C	N3-C2-O2	-7.74	116.48	121.90
1	QA	1336	C	C2-N1-C1'	7.73	127.31	118.80
22	YA	1786	A	C5-N7-C8	-7.72	100.04	103.90
22	YA	676	A	C5-N7-C8	-7.70	100.05	103.90
22	YA	582	G	N1-C6-O6	7.68	124.51	119.90
22	YA	676	A	C2-N3-C4	-7.67	106.76	110.60
22	RA	1627	G	N1-C6-O6	7.66	124.49	119.90
22	YA	1332	G	C4-C5-N7	7.65	113.86	110.80
22	YA	2518	A	N1-C6-N6	7.64	123.19	118.60
22	YA	1906	G	C5-C6-N1	-7.62	107.69	111.50
22	RA	860	U	C4-C5-C6	7.61	124.27	119.70
22	RA	1647	G	N3-C4-C5	7.60	132.40	128.60
1	XA	1336	C	C6-N1-C2	-7.60	117.26	120.30
22	RA	783	A	C5-N7-C8	-7.58	100.11	103.90
22	RA	1930	G	N7-C8-N9	-7.58	109.31	113.10
22	RA	2782	G	C8-N9-C4	-7.58	103.37	106.40
22	YA	2595	G	C6-C5-N7	-7.57	125.86	130.40
22	RA	382	G	N1-C6-O6	7.57	124.44	119.90
22	RA	74	A	C6-C5-N7	-7.57	127.00	132.30
22	YA	372	G	C8-N9-C4	7.57	109.43	106.40
1	XA	1301	U	C2-N1-C1'	7.56	126.78	117.70
53	XV	67	C	N3-C2-O2	-7.56	116.61	121.90
22	RA	385	C	N1-C2-O2	7.55	123.43	118.90
22	RA	2318	G	O4'-C1'-N9	7.55	114.24	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
22	RA	205	G	P-O3'-C3'	7.55	128.76	119.70
1	XA	812	C	C2-N1-C1'	7.54	127.09	118.80
22	RA	2063	C	O5'-P-OP2	-7.54	98.92	105.70
22	RA	406	G	O5'-P-OP1	-7.54	98.92	105.70
22	RA	1899	G	N1-C2-N2	-7.54	109.42	116.20
1	QA	932	C	C2-N1-C1'	7.53	127.08	118.80
22	RA	2577	A	N1-C6-N6	7.52	123.11	118.60
1	XA	1108	G	C4-C5-N7	-7.50	107.80	110.80
22	YA	805	G	C6-C5-N7	-7.50	125.90	130.40
22	RA	1644	C	C2-N1-C1'	7.50	127.05	118.80
22	RA	2782	G	N3-C4-C5	-7.49	124.85	128.60
22	YA	1598	C	C6-N1-C2	-7.49	117.30	120.30
1	XA	690	G	C5-N7-C8	-7.47	100.56	104.30
22	YA	828	U	N3-C2-O2	-7.46	116.98	122.20
22	RA	1930	G	C8-N9-C4	7.45	109.38	106.40
54	QX	6	G	C4-C5-N7	7.45	113.78	110.80
22	RA	1786	A	N7-C8-N9	7.43	117.52	113.80
22	RA	2506	U	N1-C2-O2	7.43	128.00	122.80
22	YA	2062	A	N9-C4-C5	-7.43	102.83	105.80
1	XA	812	C	C6-N1-C2	-7.42	117.33	120.30
22	YA	752	A	C8-N9-C4	7.41	108.76	105.80
22	YA	1950	G	C5-N7-C8	-7.40	100.60	104.30
22	RA	1496	A	N7-C8-N9	7.39	117.50	113.80
22	YA	2542	A	N3-C4-C5	7.39	131.97	126.80
22	RA	1786	A	C4-C5-N7	7.39	114.39	110.70
1	QA	337	C	C6-N1-C2	-7.38	117.35	120.30
53	QV	17	C	N3-C2-O2	-7.37	116.74	121.90
22	RA	2712(A)	A	C8-N9-C4	-7.37	102.85	105.80
22	RA	1840	G	N1-C6-O6	7.37	124.32	119.90
22	YA	1377	G	N1-C6-O6	7.37	124.32	119.90
54	QX	6	G	C6-C5-N7	-7.37	125.98	130.40
22	YA	1332	G	N7-C8-N9	7.36	116.78	113.10
22	RA	2544	G	C5-C6-N1	-7.36	107.82	111.50
22	YA	1358	G	N3-C4-C5	-7.36	124.92	128.60
22	YA	142	G	N3-C4-N9	-7.35	121.59	126.00
1	QA	789	U	C6-N1-C2	-7.35	116.59	121.00
22	YA	1786	A	C4-C5-N7	7.35	114.37	110.70
22	YA	2311	A	C2-N3-C4	-7.34	106.93	110.60
53	QV	74	C	C6-N1-C2	-7.32	117.37	120.30
22	YA	1929	G	N1-C6-O6	7.31	124.28	119.90
22	YA	1950	G	O4'-C1'-N9	7.29	114.03	108.20
22	RA	2032	G	C4-C5-N7	7.29	113.72	110.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
22	YA	2573	C	C6-N1-C2	-7.26	117.39	120.30
1	XA	558	G	C6-C5-N7	-7.26	126.05	130.40
22	YA	2439	A	P-O3'-C3'	7.26	128.41	119.70
22	RA	2083	G	C8-N9-C4	7.25	109.30	106.40
22	YA	1929	G	C5-N7-C8	-7.24	100.68	104.30
22	YA	2682	U	OP1-P-OP2	-7.24	108.74	119.60
22	RA	2779	U	O4'-C1'-N1	7.24	113.99	108.20
22	YA	1187	G	C5-C6-N1	-7.24	107.88	111.50
22	YA	1425	G	C8-N9-C4	-7.24	103.51	106.40
22	RA	2490	G	C8-N9-C4	-7.23	103.51	106.40
22	YA	508	G	C8-N9-C4	-7.22	103.51	106.40
22	RA	676	A	N7-C8-N9	7.22	117.41	113.80
1	XA	1195	C	C6-N1-C2	-7.22	117.41	120.30
22	YA	1799	G	P-O3'-C3'	7.21	128.35	119.70
22	YA	1829	A	O5'-P-OP1	-7.21	99.21	105.70
22	RA	2490	G	N7-C8-N9	7.21	116.70	113.10
22	YA	2250	G	O5'-P-OP2	-7.21	99.21	105.70
22	RA	783	A	N7-C8-N9	7.21	117.40	113.80
22	YA	140	A	C6-C5-N7	-7.21	127.25	132.30
22	RA	1931	U	N3-C4-O4	-7.20	114.36	119.40
1	QA	894	G	N3-C4-N9	-7.20	121.68	126.00
25	YE	21	VAL	C-N-CD	-7.20	104.76	120.60
22	RA	1142	U	N1-C2-O2	7.20	127.84	122.80
22	YA	1820	U	C5-C6-N1	-7.19	119.10	122.70
1	QA	1158	C	N1-C2-O2	7.19	123.22	118.90
22	RA	2583	G	N3-C4-C5	-7.19	125.01	128.60
22	YA	1262	A	C5-C6-N1	7.18	121.29	117.70
22	YA	2032	G	N3-C4-C5	7.18	132.19	128.60
22	YA	1678	G	C4-C5-N7	7.17	113.67	110.80
1	XA	766	A	C8-N9-C4	7.17	108.67	105.80
22	YA	572	A	C8-N9-C4	-7.15	102.94	105.80
12	XL	47	LYS	C-N-CD	-7.15	104.88	120.60
22	YA	1358	G	N3-C4-N9	7.13	130.28	126.00
1	XA	1108	G	C5-C6-O6	7.13	132.88	128.60
22	RA	74	A	N7-C8-N9	7.12	117.36	113.80
22	RA	1606	G	N1-C6-O6	7.12	124.17	119.90
1	XA	1128	C	C6-N1-C2	-7.12	117.45	120.30
22	RA	1950	G	O4'-C1'-N9	7.11	113.89	108.20
1	QA	449	C	C6-N1-C2	-7.10	117.46	120.30
1	QA	1322	C	C6-N1-C1'	-7.09	112.29	120.80
22	YA	674	G	C5-C6-O6	-7.08	124.35	128.60
22	RA	2448	A	N1-C6-N6	-7.08	114.36	118.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
22	YA	917	A	N1-C6-N6	7.08	122.84	118.60
22	YA	140	A	C5-N7-C8	-7.07	100.36	103.90
22	YA	1332	G	N1-C6-O6	7.07	124.14	119.90
22	RA	1688	U	C6-N1-C2	-7.07	116.76	121.00
1	QA	1297	C	P-O3'-C3'	7.06	128.18	119.70
22	RA	124	G	C5-C6-N1	-7.06	107.97	111.50
22	RA	1992	G	P-O3'-C3'	7.06	128.17	119.70
22	YA	958	U	N3-C2-O2	-7.05	117.26	122.20
1	QA	117	G	N9-C4-C5	-7.05	102.58	105.40
22	RA	1930	G	C4-N9-C1'	-7.04	117.34	126.50
22	RA	2011	U	N3-C2-O2	7.04	127.13	122.20
1	XA	186(A)	C	C6-N1-C2	-7.04	117.48	120.30
22	YA	945	A	N1-C6-N6	7.04	122.83	118.60
22	YA	813	U	N3-C2-O2	-7.04	117.27	122.20
22	YA	1544	C	N1-C2-O2	7.02	123.11	118.90
22	YA	2713	A	C2-N3-C4	-7.02	107.09	110.60
22	YA	2032	G	N1-C6-O6	7.02	124.11	119.90
22	YA	298	G	C4-C5-C6	-7.01	114.59	118.80
22	YA	1662	C	C5-C6-N1	-7.00	117.50	121.00
1	QA	328	C	C2-N1-C1'	7.00	126.50	118.80
22	RA	530	G	O4'-C1'-N9	7.00	113.80	108.20
22	YA	2430	A	C4-C5-C6	7.00	120.50	117.00
22	YA	2318	G	O4'-C1'-N9	7.00	113.80	108.20
22	YA	2271	G	C6-C5-N7	-6.99	126.20	130.40
22	YA	783	A	N7-C8-N9	6.99	117.30	113.80
1	QA	634	C	N1-C2-O2	-6.99	114.71	118.90
22	YA	2218	G	N1-C6-O6	6.99	124.09	119.90
1	XA	690	G	N7-C8-N9	6.99	116.59	113.10
22	RA	2287	A	C2-N3-C4	-6.97	107.11	110.60
22	YA	572	A	N1-C6-N6	-6.96	114.42	118.60
22	RA	265	A	O4'-C1'-N9	6.96	113.77	108.20
22	YA	1678	G	C6-C5-N7	-6.96	126.22	130.40
23	RB	44	G	C4-N9-C1'	-6.95	117.47	126.50
22	YA	828	U	C6-N1-C2	-6.95	116.83	121.00
22	RA	1528	A	N7-C8-N9	6.94	117.27	113.80
22	YA	2532	G	C6-C5-N7	-6.94	126.24	130.40
22	YA	2388	A	N7-C8-N9	-6.94	110.33	113.80
1	XA	1054	C	N1-C2-O2	6.92	123.06	118.90
1	XA	117	G	N1-C6-O6	6.92	124.05	119.90
22	YA	74	A	C2-N3-C4	-6.92	107.14	110.60
22	RA	1528	A	O4'-C1'-N9	6.92	113.73	108.20
22	YA	28	A	N7-C8-N9	6.92	117.26	113.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
22	YA	1204	A	O4'-C1'-N9	6.92	113.73	108.20
1	XA	254	G	O5'-P-OP1	-6.92	99.48	105.70
22	YA	576	U	N3-C2-O2	6.91	127.04	122.20
22	RA	774	A	N1-C6-N6	6.91	122.74	118.60
22	YA	1814	G	C5-C6-N1	-6.91	108.05	111.50
22	YA	1635	G	OP2-P-O3'	6.90	120.39	105.20
22	YA	912	C	C2-N1-C1'	6.90	126.39	118.80
22	YA	508	G	N3-C4-C5	-6.89	125.15	128.60
22	YA	1977	A	C8-N9-C4	6.89	108.56	105.80
22	YA	1184	G	N3-C4-C5	-6.88	125.16	128.60
22	YA	1626	G	C8-N9-C4	-6.88	103.65	106.40
22	RA	1930	G	C6-C5-N7	6.87	134.52	130.40
1	XA	749	C	C6-N1-C2	-6.87	117.55	120.30
22	YA	2518	A	C2-N3-C4	-6.87	107.17	110.60
1	XA	731	G	N1-C6-O6	6.87	124.02	119.90
22	YA	2439	A	N7-C8-N9	6.86	117.23	113.80
1	QA	754	C	N1-C2-O2	6.86	123.02	118.90
22	YA	1842	G	C5-C6-N1	-6.86	108.07	111.50
22	RA	1811	G	C8-N9-C4	6.85	109.14	106.40
22	YA	2249	U	N3-C4-C5	-6.85	110.49	114.60
22	RA	1989	G	N3-C2-N2	-6.85	115.10	119.90
1	QA	1322	C	N1-C2-O2	6.85	123.01	118.90
22	YA	189	G	N1-C6-O6	6.84	124.01	119.90
22	YA	805	G	N9-C4-C5	-6.84	102.66	105.40
22	YA	2258	C	C2-N1-C1'	6.84	126.33	118.80
1	QA	328	C	N1-C2-O2	6.84	123.00	118.90
22	YA	1332	G	C4-C5-C6	6.84	122.90	118.80
22	RA	205	G	OP2-P-O3'	6.84	120.25	105.20
53	QV	71	C	C6-N1-C2	-6.83	117.57	120.30
22	RA	1979	C	C6-N1-C2	-6.83	117.57	120.30
22	YA	2242	G	C5-C6-O6	-6.83	124.50	128.60
22	YA	2392	A	C8-N9-C4	-6.83	103.07	105.80
22	RA	54	G	N1-C6-O6	6.82	123.99	119.90
1	XA	529	G	C5-C6-O6	-6.82	124.51	128.60
22	YA	1198	U	N1-C2-N3	6.82	118.99	114.90
22	YA	2058	A	C6-C5-N7	-6.82	127.53	132.30
1	QA	786	G	C8-N9-C4	6.82	109.13	106.40
22	RA	395	U	O4'-C1'-N1	6.81	113.65	108.20
1	QA	1158	C	N3-C2-O2	-6.80	117.14	121.90
1	XA	481	G	C4-C5-N7	-6.80	108.08	110.80
22	RA	1624	G	C8-N9-C4	6.80	109.12	106.40
22	YA	2837	G	N1-C6-O6	6.79	123.98	119.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
22	RA	856	C	C6-N1-C2	-6.79	117.58	120.30
1	QA	1336	C	C5-C6-N1	6.79	124.40	121.00
22	RA	2067	G	N1-C6-O6	6.79	123.97	119.90
1	XA	518	C	N1-C2-N3	6.79	123.95	119.20
22	RA	1790	C	C2-N1-C1'	-6.79	111.33	118.80
1	XA	353	A	O5'-P-OP1	-6.78	99.60	105.70
22	RA	1950	G	C4-N9-C1'	6.76	135.29	126.50
1	XA	1336	C	N3-C2-O2	-6.76	117.17	121.90
22	YA	1022	G	P-O3'-C3'	6.76	127.81	119.70
22	YA	140	A	N1-C6-N6	6.76	122.65	118.60
22	YA	621	A	C2-N3-C4	-6.75	107.22	110.60
22	RA	2430	A	N1-C2-N3	6.75	132.68	129.30
22	YA	592	G	N3-C4-N9	6.74	130.04	126.00
22	YA	2250	G	C8-N9-C4	-6.74	103.70	106.40
22	YA	2392	A	N7-C8-N9	6.74	117.17	113.80
22	RA	385	C	C2-N1-C1'	6.74	126.21	118.80
22	RA	1314	C	N1-C2-O2	6.74	122.94	118.90
22	RA	1602	U	N3-C4-C5	-6.74	110.56	114.60
22	YA	508	G	P-O3'-C3'	6.74	127.79	119.70
22	RA	676	A	C5-N7-C8	-6.74	100.53	103.90
22	YA	654	A	O5'-P-OP2	-6.73	99.65	105.70
1	QA	328	C	N3-C2-O2	-6.72	117.19	121.90
1	QA	1322	C	C5-C6-N1	6.72	124.36	121.00
22	YA	1950	G	C4-N9-C1'	6.71	135.23	126.50
22	YA	1568	G	C4-N9-C1'	-6.71	117.78	126.50
22	RA	664	C	N3-C2-O2	-6.71	117.20	121.90
22	RA	1980	G	P-O3'-C3'	6.71	127.75	119.70
53	QV	41	C	N3-C2-O2	-6.70	117.21	121.90
22	YA	621	A	C6-C5-N7	-6.70	127.61	132.30
22	RA	2542	A	C8-N9-C4	6.70	108.48	105.80
23	YB	44	G	C8-N9-C4	6.70	109.08	106.40
22	YA	471	A	C2-N3-C4	-6.70	107.25	110.60
22	YA	1214	A	N7-C8-N9	-6.70	110.45	113.80
22	YA	1698	A	N1-C2-N3	6.70	132.65	129.30
22	YA	1698	A	C4-C5-C6	6.69	120.35	117.00
1	QA	913	A	P-O3'-C3'	6.69	127.73	119.70
1	QA	1528	U	P-O3'-C3'	6.69	127.73	119.70
22	RA	2083	G	N3-C4-C5	6.69	131.94	128.60
22	RA	2452	C	C6-N1-C2	-6.68	117.63	120.30
22	RA	2755	C	C5-C6-N1	6.68	124.34	121.00
1	XA	529	G	C4-C5-N7	6.68	113.47	110.80
1	XA	558	G	N1-C6-O6	6.68	123.91	119.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
22	YA	1901	A	N1-C6-N6	-6.68	114.59	118.60
22	YA	1708	C	C6-N1-C2	6.67	122.97	120.30
22	YA	1607	C	C5-C6-N1	6.67	124.33	121.00
22	YA	450	G	C4-N9-C1'	6.67	135.17	126.50
22	YA	556	G	N3-C4-C5	-6.67	125.27	128.60
22	RA	1811	G	N3-C4-C5	6.67	131.93	128.60
53	XV	74	C	N3-C4-N4	6.67	122.67	118.00
1	QA	117	G	C4-C5-N7	6.67	113.47	110.80
22	YA	2532	G	N1-C6-O6	6.66	123.90	119.90
1	XA	792	A	O4'-C1'-N9	6.66	113.53	108.20
53	XV	23	C	C6-N1-C2	6.66	122.96	120.30
1	QA	117	G	N1-C6-O6	6.65	123.89	119.90
22	RA	396	G	C6-C5-N7	-6.65	126.41	130.40
22	YA	2573	C	C2-N1-C1'	6.65	126.11	118.80
1	XA	558	G	N9-C4-C5	-6.64	102.74	105.40
1	XA	913	A	P-O3'-C3'	6.64	127.67	119.70
22	YA	446	G	N3-C4-N9	6.64	129.98	126.00
22	YA	848	G	N9-C4-C5	-6.64	102.74	105.40
22	YA	1671	U	C5-C6-N1	6.64	126.02	122.70
53	QV	11	A	C8-N9-C4	6.64	108.45	105.80
22	RA	2439	A	N7-C8-N9	6.63	117.12	113.80
22	RA	2032	G	N9-C4-C5	-6.63	102.75	105.40
22	YA	1358	G	C6-C5-N7	-6.62	126.43	130.40
1	XA	652	U	C2-N1-C1'	6.62	125.64	117.70
22	RA	1258	C	C6-N1-C2	6.62	122.95	120.30
22	RA	2392	A	N7-C8-N9	6.62	117.11	113.80
53	QV	74	C	C2-N1-C1'	6.62	126.08	118.80
1	XA	789	U	N1-C2-N3	6.62	118.87	114.90
53	XV	61	C	C6-N1-C2	-6.62	117.65	120.30
22	YA	1678	G	N1-C6-O6	6.61	123.87	119.90
22	YA	2281	C	O5'-P-OP2	-6.61	99.75	105.70
1	QA	785	G	N1-C6-O6	6.61	123.87	119.90
1	XA	690	G	N3-C4-N9	-6.61	122.03	126.00
22	YA	2335	A	O4'-C1'-N9	6.61	113.49	108.20
22	RA	258	G	C6-C5-N7	-6.61	126.44	130.40
22	YA	974	G	N3-C4-C5	-6.61	125.30	128.60
22	RA	1377	G	N3-C4-N9	6.60	129.96	126.00
1	QA	792	A	O4'-C1'-N9	6.60	113.48	108.20
22	YA	298	G	N3-C4-C5	6.60	131.90	128.60
22	YA	1835	G	N3-C4-C5	-6.60	125.30	128.60
22	YA	2713	A	C5-C6-N1	-6.59	114.41	117.70
22	YA	1950	G	C6-C5-N7	-6.59	126.45	130.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
22	YA	298	G	C4-N9-C1'	-6.58	117.94	126.50
22	RA	1543	A	O4'-C1'-N9	6.58	113.47	108.20
53	XV	57	A	N1-C2-N3	6.58	132.59	129.30
22	RA	372	G	O4'-C1'-N9	6.58	113.46	108.20
22	RA	2722	G	C4-N9-C1'	6.57	135.04	126.50
22	YA	140	A	O4'-C1'-N9	6.57	113.45	108.20
22	YA	2702	U	C2-N1-C1'	6.56	125.58	117.70
53	XV	61	C	N3-C2-O2	-6.56	117.31	121.90
22	RA	389	G	N9-C4-C5	-6.56	102.78	105.40
22	RA	1319	G	N1-C6-O6	6.56	123.83	119.90
22	YA	1358	G	C4-N9-C1'	6.56	135.02	126.50
1	QA	1301	U	C2-N1-C1'	6.55	125.56	117.70
22	RA	1627	G	C5-C6-N1	-6.55	108.22	111.50
22	YA	945	A	C6-C5-N7	-6.55	127.71	132.30
35	YS	56	LEU	CA-CB-CG	6.55	130.37	115.30
22	YA	2495	G	C8-N9-C4	-6.55	103.78	106.40
1	QA	690	G	N3-C4-N9	-6.55	122.07	126.00
1	XA	1370	G	C5-C6-N1	-6.55	108.23	111.50
1	XA	812	C	P-O3'-C3'	6.54	127.55	119.70
1	QA	1302	U	N1-C2-O2	6.54	127.38	122.80
22	RA	527	C	N1-C2-O2	6.54	122.82	118.90
22	YA	958	U	C6-N1-C2	-6.54	117.08	121.00
1	XA	619	U	C2-N1-C1'	6.53	125.54	117.70
22	YA	1616	A	O4'-C1'-N9	6.53	113.42	108.20
1	XA	1498	U	P-O3'-C3'	6.53	127.53	119.70
22	YA	1992	G	N3-C4-C5	-6.53	125.34	128.60
22	YA	2271	G	N1-C6-O6	6.53	123.82	119.90
25	RE	21	VAL	C-N-CD	-6.53	106.25	120.60
22	RA	664	C	N1-C2-O2	6.52	122.81	118.90
1	XA	1204	A	N1-C6-N6	6.52	122.51	118.60
1	QA	117	G	C6-C5-N7	-6.52	126.49	130.40
22	RA	676	A	O4'-C1'-N9	6.51	113.41	108.20
22	RA	1930	G	C4-C5-N7	-6.51	108.19	110.80
22	YA	860	U	N3-C2-O2	-6.51	117.64	122.20
22	RA	2506	U	N3-C2-O2	-6.51	117.64	122.20
22	YA	530	G	O4'-C1'-N9	6.51	113.41	108.20
22	YA	2058	A	C5-C6-N6	-6.51	118.49	123.70
22	YA	805	G	C8-N9-C1'	-6.50	118.55	127.00
53	QV	25	C	C6-N1-C2	-6.50	117.70	120.30
22	YA	69	C	C6-N1-C2	-6.50	117.70	120.30
22	YA	83	G	N3-C4-C5	6.49	131.85	128.60
22	YA	382	G	C2-N3-C4	-6.49	108.66	111.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	QA	685	G	N3-C4-C5	6.49	131.84	128.60
22	RA	2490	G	C4-N9-C1'	6.48	134.92	126.50
22	YA	1950	G	C8-N9-C4	-6.48	103.81	106.40
1	XA	690	G	C8-N9-C4	-6.48	103.81	106.40
22	RA	2499	C	C6-N1-C2	-6.48	117.71	120.30
1	XA	1301	U	N1-C2-O2	6.47	127.33	122.80
22	RA	2067	G	C6-C5-N7	-6.46	126.52	130.40
1	QA	496	A	N1-C6-N6	-6.46	114.72	118.60
22	RA	1786	A	C2-N3-C4	-6.46	107.37	110.60
22	YA	1698	A	O4'-C1'-N9	6.46	113.37	108.20
22	YA	621	A	N7-C8-N9	6.46	117.03	113.80
22	RA	242	G	P-O3'-C3'	6.46	127.45	119.70
22	YA	582	G	C5-C6-O6	-6.45	124.73	128.60
22	YA	2046	G	N3-C4-C5	-6.44	125.38	128.60
1	QA	701	C	P-O3'-C3'	6.44	127.42	119.70
1	QA	785	G	C5-C6-N1	-6.44	108.28	111.50
22	RA	2686	G	C6-C5-N7	-6.44	126.54	130.40
22	YA	2584	U	C6-N1-C2	-6.43	117.14	121.00
22	YA	1607	C	C2-N3-C4	6.43	123.11	119.90
22	YA	2070	G	N1-C6-O6	-6.43	116.04	119.90
22	RA	2688	U	N3-C2-O2	-6.43	117.70	122.20
22	YA	51	G	N1-C6-O6	-6.43	116.05	119.90
22	RA	613	U	N3-C2-O2	-6.42	117.70	122.20
22	RA	676	A	C8-N9-C4	-6.42	103.23	105.80
1	XA	1297	C	P-O3'-C3'	6.41	127.40	119.70
1	QA	690	G	C8-N9-C4	-6.41	103.84	106.40
22	YA	1568	G	C8-N9-C1'	6.41	135.33	127.00
22	YA	142	G	C4-N9-C1'	-6.41	118.17	126.50
1	XA	960	U	C2-N1-C1'	6.40	125.38	117.70
22	RA	465	G	C5-C6-N1	-6.40	108.30	111.50
22	RA	1840	G	C6-C5-N7	-6.40	126.56	130.40
1	XA	1503	A	P-O3'-C3'	6.40	127.38	119.70
1	XA	1484	C	C6-N1-C2	6.39	122.86	120.30
22	YA	1966	A	N3-C4-C5	6.39	131.28	126.80
22	YA	1790	C	C6-N1-C2	6.39	122.86	120.30
22	YA	792	G	N1-C6-O6	-6.39	116.07	119.90
22	YA	1620	G	C6-C5-N7	-6.39	126.57	130.40
22	RA	1698	A	C6-C5-N7	-6.38	127.83	132.30
22	RA	2251	G	C4-N9-C1'	6.38	134.80	126.50
22	YA	1314	C	N1-C2-O2	6.38	122.73	118.90
22	YA	114	U	C2-N1-C1'	6.38	125.36	117.70
22	RA	1377	G	C4-N9-C1'	6.38	134.79	126.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	XA	1370	G	N1-C6-O6	6.38	123.73	119.90
22	RA	74	A	P-O3'-C3'	6.38	127.36	119.70
22	YA	74	A	C5-C6-N1	-6.38	114.51	117.70
22	YA	1183	G	N1-C6-O6	6.38	123.73	119.90
22	RA	1192	G	N1-C6-O6	6.38	123.72	119.90
22	YA	1287	A	O5'-P-OP2	-6.38	99.96	105.70
1	QA	932	C	N3-C2-O2	-6.37	117.44	121.90
22	YA	1781	C	C2-N1-C1'	6.37	125.81	118.80
22	YA	2010	G	N1-C6-O6	6.37	123.72	119.90
22	YA	1258	C	C6-N1-C2	6.37	122.85	120.30
22	RA	1142	U	C2-N1-C1'	6.37	125.34	117.70
22	YA	179	G	C5-C6-N1	-6.37	108.32	111.50
22	YA	1858	G	C8-N9-C4	-6.37	103.85	106.40
22	YA	1781	C	O4'-C1'-N1	6.37	113.29	108.20
22	YA	1425	G	C4-N9-C1'	6.36	134.77	126.50
22	YA	2698	U	O5'-P-OP2	-6.36	99.98	105.70
22	YA	446	G	C6-C5-N7	-6.35	126.59	130.40
1	QA	1435	G	C5-C6-N1	-6.35	108.32	111.50
22	YA	1311	G	N9-C4-C5	-6.35	102.86	105.40
22	YA	270(Y)	G	C5-C6-N1	-6.34	108.33	111.50
22	YA	1781	C	C6-N1-C1'	-6.34	113.19	120.80
22	RA	860	U	N3-C2-O2	-6.34	117.76	122.20
1	XA	749	C	C5-C6-N1	6.34	124.17	121.00
22	YA	1425	G	C4-C5-C6	6.34	122.61	118.80
22	RA	338	G	C6-C5-N7	-6.34	126.60	130.40
22	YA	1929	G	N9-C4-C5	-6.34	102.86	105.40
1	XA	1128	C	C5-C6-N1	6.34	124.17	121.00
22	RA	1762	A	N1-C6-N6	-6.33	114.80	118.60
22	YA	2242	G	N1-C6-O6	6.33	123.70	119.90
1	QA	244	U	P-O3'-C3'	6.33	127.30	119.70
22	YA	222	A	P-O3'-C3'	6.32	127.29	119.70
22	RA	848	G	N3-C4-C5	-6.32	125.44	128.60
22	RA	1310	G	C6-C5-N7	-6.32	126.61	130.40
22	YA	1332	G	C5-N7-C8	-6.32	101.14	104.30
22	RA	1568	G	N1-C6-O6	-6.32	116.11	119.90
22	YA	2712	U	C5-C4-O4	6.32	129.69	125.90
22	YA	676	A	N7-C8-N9	6.32	116.96	113.80
1	QA	401	C	C5-C6-N1	6.31	124.16	121.00
22	YA	760	G	N1-C6-O6	6.31	123.69	119.90
22	YA	2439	A	C8-N9-C4	-6.31	103.28	105.80
1	XA	449	C	C6-N1-C2	-6.31	117.78	120.30
22	YA	674	G	C4-C5-N7	6.31	113.32	110.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
22	YA	1510	A	C2-N3-C4	6.31	113.75	110.60
22	YA	572	A	N9-C4-C5	6.30	108.32	105.80
22	YA	805	G	N3-C4-C5	-6.30	125.45	128.60
22	YA	1786	A	N7-C8-N9	6.30	116.95	113.80
22	YA	1830	C	N3-C4-C5	6.30	124.42	121.90
1	QA	337	C	C5-C6-N1	6.30	124.15	121.00
1	QA	818	G	N3-C4-N9	-6.30	122.22	126.00
22	YA	2318	G	C4-C5-N7	6.29	113.32	110.80
1	QA	1227	A	C2-N3-C4	-6.29	107.46	110.60
1	XA	1195	C	C2-N1-C1'	6.29	125.72	118.80
22	YA	2234	G	N1-C6-O6	6.29	123.67	119.90
22	RA	783	A	N1-C6-N6	6.28	122.37	118.60
1	XA	690	G	N3-C4-C5	6.28	131.74	128.60
22	RA	2439	A	P-O3'-C3'	6.28	127.24	119.70
22	YA	1950	G	C4-C5-N7	6.28	113.31	110.80
1	XA	328	C	C2-N1-C1'	6.28	125.71	118.80
1	QA	701	C	N3-C2-O2	-6.28	117.51	121.90
22	RA	2311	A	N7-C8-N9	6.28	116.94	113.80
1	XA	890	G	O4'-C1'-N9	6.27	113.22	108.20
22	YA	2832	U	P-O3'-C3'	6.27	127.23	119.70
22	YA	2702	U	O4'-C1'-N1	6.27	113.21	108.20
22	YA	2712(A)	A	C5-N7-C8	-6.26	100.77	103.90
22	YA	88	G	N3-C4-N9	6.26	129.76	126.00
22	RA	783	A	C8-N9-C4	-6.26	103.30	105.80
22	RA	1799	G	P-O3'-C3'	6.26	127.21	119.70
22	YA	1905	C	C2-N1-C1'	6.26	125.68	118.80
1	QA	1158	C	C2-N1-C1'	6.25	125.68	118.80
22	RA	1496	A	C5-N7-C8	-6.25	100.77	103.90
1	QA	422	C	C6-N1-C2	-6.25	117.80	120.30
22	RA	1319	G	C6-C5-N7	-6.25	126.65	130.40
22	YA	811	U	N1-C2-N3	6.25	118.65	114.90
22	YA	1493	C	C6-N1-C2	6.25	122.80	120.30
22	YA	811	U	C5-C4-O4	6.24	129.65	125.90
22	YA	910	A	C8-N9-C4	6.24	108.30	105.80
22	YA	2032	G	C2-N3-C4	-6.24	108.78	111.90
22	RA	2782	G	C4-N9-C1'	6.24	134.61	126.50
22	RA	2401	U	N3-C2-O2	-6.24	117.83	122.20
22	RA	2251	G	C8-N9-C1'	-6.23	118.90	127.00
53	XV	67	C	C2-N1-C1'	6.23	125.66	118.80
1	XA	1397	C	C6-N1-C2	-6.23	117.81	120.30
22	YA	83	G	N3-C4-N9	-6.23	122.26	126.00
22	YA	1407	C	N1-C2-O2	6.23	122.64	118.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
22	YA	285	C	C6-N1-C2	6.22	122.79	120.30
22	YA	566	U	C5-C6-N1	-6.22	119.59	122.70
1	QA	328	C	C6-N1-C2	-6.22	117.81	120.30
1	QA	44	G	C4-N9-C1'	6.22	134.58	126.50
22	YA	1929	G	N3-C4-C5	6.21	131.71	128.60
1	XA	102	G	N3-C4-C5	-6.21	125.50	128.60
22	YA	142	G	C2-N3-C4	-6.21	108.80	111.90
22	RA	74	A	C5-N7-C8	-6.21	100.80	103.90
22	YA	1130	U	N3-C2-O2	-6.21	117.86	122.20
1	XA	413	G	O4'-C1'-N9	6.20	113.16	108.20
22	RA	809	G	C4-N9-C1'	6.20	134.56	126.50
22	RA	1049	C	C6-N1-C2	-6.20	117.82	120.30
22	YA	1201	C	N3-C2-O2	6.20	126.24	121.90
22	RA	2345	G	C4-C5-N7	-6.20	108.32	110.80
22	YA	671	C	C6-N1-C2	-6.20	117.82	120.30
53	QV	32	C	N1-C2-O2	6.19	122.61	118.90
22	RA	28	A	C4-C5-C6	6.18	120.09	117.00
22	YA	1675	C	N1-C2-O2	-6.18	115.19	118.90
22	YA	1906	G	N1-C6-O6	6.18	123.61	119.90
1	XA	1501	C	C6-N1-C2	6.18	122.77	120.30
22	YA	446	G	N9-C4-C5	-6.18	102.93	105.40
1	XA	1406	U	N3-C2-O2	-6.18	117.88	122.20
22	YA	397	G	C2-N3-C4	-6.17	108.81	111.90
22	YA	729	G	C4-N9-C1'	6.17	134.52	126.50
23	YB	82	G	C5-C6-N1	-6.17	108.42	111.50
22	YA	679	C	N3-C4-C5	6.17	124.37	121.90
22	YA	2056	G	C4-C5-N7	6.17	113.27	110.80
26	YF	74	ARG	NE-CZ-NH1	6.17	123.38	120.30
1	QA	328	C	P-O3'-C3'	6.17	127.10	119.70
22	RA	2062	A	C2-N3-C4	6.17	113.68	110.60
22	RA	1792	G	C2-N3-C4	6.16	114.98	111.90
22	YA	270(X)	G	C8-N9-C4	-6.16	103.94	106.40
22	RA	1653	G	N3-C4-N9	6.16	129.70	126.00
22	YA	1021	A	C2-N3-C4	-6.16	107.52	110.60
22	RA	1890	A	C4-C5-C6	-6.16	113.92	117.00
22	YA	570	G	C6-N1-C2	6.16	128.79	125.10
22	YA	1427	A	P-O3'-C3'	6.16	127.09	119.70
22	RA	1982	C	C6-N1-C2	6.15	122.76	120.30
22	YA	774	A	N3-C4-C5	6.15	131.10	126.80
22	YA	2516	G	C5-C6-O6	-6.15	124.91	128.60
22	RA	776	G	C4-N9-C1'	6.15	134.49	126.50
1	XA	299	G	C5-C6-O6	6.15	132.29	128.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	XA	1516	G	C5-C6-N1	-6.15	108.43	111.50
1	QA	444	C	C6-N1-C2	6.15	122.76	120.30
22	YA	537	C	C2-N1-C1'	6.15	125.56	118.80
22	YA	621	A	O4'-C1'-N9	6.14	113.11	108.20
22	RA	1142(A)	A	C2-N3-C4	-6.14	107.53	110.60
22	YA	556	G	N3-C4-N9	6.14	129.69	126.00
22	YA	2468	G	O4'-C1'-N9	6.14	113.11	108.20
54	QX	1	A	C2-N3-C4	-6.14	107.53	110.60
1	QA	1511	G	C5-C6-N1	-6.14	108.43	111.50
22	YA	1028	A	N1-C6-N6	-6.14	114.92	118.60
1	QA	119	A	P-O3'-C3'	6.14	127.07	119.70
22	RA	570	G	N3-C4-C5	-6.14	125.53	128.60
22	YA	2558	C	C6-N1-C2	6.14	122.75	120.30
22	RA	601	C	C6-N1-C2	-6.14	117.84	120.30
22	YA	1764	G	N1-C6-O6	-6.14	116.22	119.90
22	YA	554	U	O5'-P-OP1	-6.13	100.18	105.70
22	RA	271(B)	G	P-O3'-C3'	6.13	127.06	119.70
22	RA	2777	G	N1-C6-O6	6.13	123.58	119.90
1	XA	956	U	C6-N1-C2	-6.13	117.32	121.00
1	XA	299	G	C4-C5-N7	-6.13	108.35	110.80
22	YA	792	G	N9-C4-C5	6.13	107.85	105.40
22	YA	788	A	N1-C6-N6	6.13	122.28	118.60
53	QV	32	C	N3-C2-O2	-6.12	117.61	121.90
22	YA	944	G	C4-N9-C1'	6.12	134.46	126.50
23	YB	25	A	C8-N9-C4	-6.12	103.35	105.80
22	RA	915	C	C6-N1-C2	-6.12	117.85	120.30
1	XA	1114	C	C6-N1-C2	-6.12	117.85	120.30
22	RA	1762	A	N9-C4-C5	6.12	108.25	105.80
22	YA	265	A	N1-C6-N6	-6.12	114.93	118.60
22	YA	298	G	C6-C5-N7	6.12	134.07	130.40
22	YA	1763	G	O5'-P-OP2	-6.12	100.20	105.70
22	YA	1834	U	N3-C2-O2	-6.11	117.92	122.20
53	XV	17	C	C6-N1-C1'	-6.11	113.46	120.80
22	RA	848	G	C4-N9-C1'	6.11	134.44	126.50
22	RA	1653	G	P-O3'-C3'	6.11	127.03	119.70
22	YA	805	G	C4-N9-C1'	6.11	134.44	126.50
22	YA	2383	G	C4-N9-C1'	6.11	134.44	126.50
22	YA	2725	A	C8-N9-C4	-6.11	103.36	105.80
1	XA	1481	U	C6-N1-C2	-6.10	117.34	121.00
53	XV	17	C	N3-C2-O2	-6.10	117.63	121.90
22	RA	2726	U	C2-N1-C1'	6.10	125.02	117.70
22	YA	2544	G	C6-C5-N7	-6.10	126.74	130.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
53	QV	25	C	N3-C4-C5	-6.10	119.46	121.90
22	RA	2581	G	C8-N9-C4	-6.09	103.96	106.40
22	YA	1437	C	C6-N1-C2	-6.09	117.86	120.30
53	XV	71	C	O5'-P-OP1	-6.09	100.22	105.70
22	RA	2499	C	N3-C2-O2	-6.09	117.64	121.90
22	YA	912	C	N1-C2-O2	6.09	122.55	118.90
22	YA	676	A	C4-C5-N7	6.08	113.74	110.70
22	YA	856	C	N1-C2-O2	6.08	122.55	118.90
22	YA	917	A	N1-C2-N3	6.08	132.34	129.30
1	QA	1473	A	C8-N9-C4	6.08	108.23	105.80
22	YA	2441	C	C6-N1-C2	6.08	122.73	120.30
22	YA	2518	A	C5-N7-C8	-6.08	100.86	103.90
1	XA	687	A	P-O3'-C3'	6.07	126.99	119.70
1	XA	518	C	N3-C2-O2	-6.07	117.65	121.90
22	YA	856	C	C5-C6-N1	6.07	124.03	121.00
22	YA	517	C	C6-N1-C2	-6.07	117.87	120.30
22	RA	2035	G	N3-C4-N9	-6.07	122.36	126.00
22	YA	537	C	N1-C2-O2	6.07	122.54	118.90
22	RA	2722	G	C8-N9-C1'	-6.07	119.11	127.00
22	YA	74	A	O4'-C1'-N9	-6.07	103.35	108.20
22	YA	2471	C	C6-N1-C2	-6.07	117.87	120.30
22	RA	809	G	N3-C4-C5	-6.06	125.57	128.60
22	YA	527	C	N1-C2-O2	6.06	122.54	118.90
22	YA	1012	U	OP2-P-O3'	6.06	118.53	105.20
22	YA	2321	G	N1-C6-O6	-6.06	116.27	119.90
22	YA	2429	G	OP2-P-O3'	6.05	118.52	105.20
1	XA	131	C	N1-C2-O2	6.05	122.53	118.90
22	YA	576	U	N1-C2-N3	-6.05	111.27	114.90
22	YA	1528	A	N7-C8-N9	6.05	116.83	113.80
22	YA	1653	G	P-O3'-C3'	6.05	126.96	119.70
1	XA	326	G	C5-C6-N1	-6.05	108.48	111.50
22	RA	743	G	C8-N9-C4	6.05	108.82	106.40
1	XA	1301	U	C6-N1-C1'	-6.05	112.73	121.20
22	YA	912	C	C6-N1-C2	-6.05	117.88	120.30
1	QA	243	A	P-O3'-C3'	6.04	126.95	119.70
22	RA	537	C	C5-C6-N1	6.04	124.02	121.00
22	RA	1204	A	C2-N3-C4	-6.04	107.58	110.60
22	RA	2251	G	N3-C4-N9	6.04	129.63	126.00
1	XA	1145	C	P-O3'-C3'	6.04	126.95	119.70
22	RA	1890	A	C8-N9-C4	6.04	108.22	105.80
22	YA	1247	A	N7-C8-N9	-6.04	110.78	113.80
22	YA	1328	G	N1-C2-N3	6.04	127.52	123.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
22	YA	1686	C	C5-C6-N1	6.03	124.02	121.00
22	RA	798	G	N1-C6-O6	6.03	123.52	119.90
22	RA	2275	C	C5-C6-N1	-6.03	117.98	121.00
1	QA	754	C	N3-C2-O2	-6.03	117.68	121.90
1	QA	685	G	C4-N9-C1'	-6.02	118.67	126.50
1	QA	754	C	C2-N1-C1'	6.02	125.43	118.80
33	RQ	79	LEU	CA-CB-CG	6.02	129.16	115.30
22	YA	2371	G	C5-C6-N1	-6.02	108.49	111.50
22	RA	2518	A	N1-C6-N6	6.02	122.21	118.60
22	YA	1204	A	N1-C2-N3	6.02	132.31	129.30
23	RB	83	G	C4-C5-C6	6.02	122.41	118.80
22	YA	977	G	N3-C4-N9	6.02	129.61	126.00
22	YA	2776	A	P-O3'-C3'	6.02	126.92	119.70
22	YA	621	A	C5-C6-N1	-6.01	114.69	117.70
53	QV	71	C	N3-C2-O2	-6.01	117.69	121.90
22	RA	2605	U	C6-N1-C2	-6.01	117.39	121.00
22	YA	2550	G	N1-C6-O6	6.01	123.51	119.90
22	RA	1947	C	C5-C6-N1	6.01	124.01	121.00
22	YA	1190	G	C4-C5-N7	6.01	113.20	110.80
22	RA	1795	C	N1-C2-O2	-6.01	115.29	118.90
22	YA	830	G	C8-N9-C4	-6.01	104.00	106.40
22	YA	1005	C	N3-C2-O2	-6.01	117.69	121.90
23	YB	81	G	C4-C5-N7	6.01	113.20	110.80
53	XV	17	C	C5-C6-N1	6.01	124.00	121.00
22	RA	962	G	C8-N9-C4	-6.00	104.00	106.40
27	RG	34	LEU	CA-CB-CG	6.00	129.10	115.30
1	XA	1053	G	C4-N9-C1'	-6.00	118.70	126.50
22	YA	2413	G	N3-C4-N9	-6.00	122.40	126.00
1	QA	1285	A	P-O3'-C3'	6.00	126.90	119.70
1	QA	1498	U	P-O3'-C3'	6.00	126.90	119.70
1	XA	633	G	N1-C6-O6	6.00	123.50	119.90
22	YA	88	G	N3-C4-C5	-6.00	125.60	128.60
1	QA	797	C	C5-C6-N1	6.00	124.00	121.00
22	RA	1819	A	C2-N3-C4	-6.00	107.60	110.60
22	YA	2392	A	C5-N7-C8	-5.99	100.90	103.90
22	RA	974(A)	C	P-O3'-C3'	5.99	126.89	119.70
22	YA	273(F)	C	N1-C2-O2	5.99	122.49	118.90
22	RA	2585	U	C2-N1-C1'	5.99	124.89	117.70
1	QA	587	G	C6-C5-N7	-5.99	126.81	130.40
22	YA	1835	G	C8-N9-C4	-5.99	104.00	106.40
22	RA	343	C	N1-C2-O2	5.99	122.49	118.90
1	XA	1385	G	N1-C6-O6	5.99	123.49	119.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
22	YA	1342	A	O5'-P-OP1	-5.98	100.31	105.70
22	YA	130	C	C6-N1-C2	5.98	122.69	120.30
22	YA	567	A	O5'-P-OP2	-5.98	100.32	105.70
1	XA	320	C	C6-N1-C2	5.98	122.69	120.30
22	YA	1493	C	C5-C6-N1	-5.98	118.01	121.00
53	QV	30	G	N1-C6-O6	5.98	123.49	119.90
22	RA	2444	G	O5'-P-OP2	-5.97	100.32	105.70
23	RB	44	G	N3-C4-N9	-5.97	122.42	126.00
1	XA	1506	U	N3-C2-O2	5.97	126.38	122.20
22	YA	789	A	N1-C6-N6	-5.97	115.02	118.60
22	YA	793	A	N1-C6-N6	5.97	122.18	118.60
22	RA	966	G	O5'-P-OP2	-5.97	100.33	105.70
22	RA	1792	G	C5-C6-N1	5.97	114.48	111.50
22	YA	1313	U	C2-N1-C1'	5.97	124.86	117.70
1	XA	511	C	C5-C6-N1	-5.97	118.02	121.00
53	XV	32	C	N3-C4-C5	-5.96	119.51	121.90
22	RA	141	A	N7-C8-N9	5.96	116.78	113.80
54	QX	6	G	C5-N7-C8	-5.96	101.32	104.30
22	YA	210	C	C6-N1-C2	5.96	122.69	120.30
22	YA	1313	U	N3-C2-O2	-5.96	118.03	122.20
22	RA	915	C	N3-C2-O2	-5.96	117.73	121.90
22	RA	803	U	C5-C4-O4	-5.96	122.33	125.90
22	RA	2506	U	C2-N1-C1'	5.96	124.85	117.70
22	YA	1685	C	C6-N1-C2	5.96	122.68	120.30
22	RA	389	G	N1-C6-O6	5.96	123.47	119.90
22	RA	577	G	O5'-P-OP1	-5.96	100.34	105.70
22	YA	621	A	C5-N7-C8	-5.96	100.92	103.90
22	YA	1434	A	C8-N9-C4	5.96	108.18	105.80
22	YA	1992	G	O4'-C1'-N9	-5.95	103.44	108.20
22	RA	2552	U	N1-C2-O2	-5.95	118.64	122.80
1	QA	1157	A	P-O3'-C3'	5.95	126.83	119.70
38	YV	35	LEU	CA-CB-CG	5.95	128.97	115.30
22	YA	1800	C	C6-N1-C2	5.94	122.68	120.30
22	YA	1313	U	O4'-C1'-N1	5.94	112.95	108.20
1	QA	117	G	N3-C4-N9	5.94	129.56	126.00
54	QX	6	G	C5-C6-O6	-5.94	125.04	128.60
22	YA	404	C	P-O3'-C3'	5.94	126.83	119.70
22	RA	406	G	C6-C5-N7	-5.93	126.84	130.40
1	QA	44	G	C8-N9-C1'	-5.93	119.29	127.00
22	RA	1496	A	C8-N9-C4	-5.93	103.43	105.80
53	QV	17	C	C6-N1-C1'	-5.93	113.69	120.80
22	YA	1425	G	N7-C8-N9	5.93	116.06	113.10

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
22	RA	989	G	N3-C4-C5	-5.93	125.64	128.60
23	RB	22	U	C2-N1-C1'	5.93	124.81	117.70
22	RA	1606	G	C4-C5-N7	5.92	113.17	110.80
22	RA	2689	U	P-O3'-C3'	5.92	126.81	119.70
22	YA	917	A	C5-C6-N1	-5.92	114.74	117.70
22	RA	859	G	C8-N9-C4	-5.92	104.03	106.40
22	YA	760	G	C6-C5-N7	-5.92	126.85	130.40
1	QA	701	C	N1-C2-O2	5.92	122.45	118.90
54	XX	8	A	C8-N9-C4	-5.92	103.43	105.80
22	RA	2509	G	C4-N9-C1'	5.92	134.19	126.50
22	YA	845	G	N3-C4-C5	5.92	131.56	128.60
22	YA	1955	U	P-O3'-C3'	5.92	126.80	119.70
22	YA	2358	G	N9-C4-C5	5.92	107.77	105.40
22	YA	189	G	N3-C4-N9	5.91	129.55	126.00
22	YA	2700	C	C5-C6-N1	-5.91	118.04	121.00
1	QA	1346	A	P-O3'-C3'	5.91	126.79	119.70
22	RA	180	G	O5'-P-OP1	-5.91	100.39	105.70
22	RA	1602	U	C6-N1-C2	-5.91	117.46	121.00
22	RA	2499	C	N1-C2-O2	5.90	122.44	118.90
22	YA	929	G	C5-C6-N1	-5.90	108.55	111.50
22	YA	1395	A	O4'-C1'-N9	5.90	112.92	108.20
22	YA	1612	C	C6-N1-C2	5.90	122.66	120.30
22	YA	285	C	C5-C6-N1	-5.90	118.05	121.00
22	YA	448	U	N3-C2-O2	-5.90	118.07	122.20
22	RA	2688	U	C5-C4-O4	5.90	129.44	125.90
22	YA	2025	C	C6-N1-C2	-5.90	117.94	120.30
1	XA	320	C	C2-N1-C1'	-5.90	112.31	118.80
22	YA	1968	G	C6-C5-N7	-5.90	126.86	130.40
22	YA	2830	G	C6-C5-N7	-5.90	126.86	130.40
22	RA	1624	G	N9-C4-C5	-5.89	103.04	105.40
22	YA	189	G	C4-C5-C6	5.89	122.34	118.80
22	RA	1204	A	N1-C2-N3	5.89	132.25	129.30
22	YA	2010	G	C5-C6-O6	-5.89	125.06	128.60
22	YA	2031	A	O4'-C1'-N9	5.89	112.91	108.20
22	RA	917	A	C2-N3-C4	-5.89	107.66	110.60
22	YA	1314	C	C2-N1-C1'	5.89	125.28	118.80
22	YA	2406	U	O4'-C1'-N1	-5.89	103.49	108.20
22	YA	2558	C	N3-C4-C5	5.89	124.25	121.90
22	RA	1450	C	C6-N1-C2	-5.89	117.94	120.30
22	RA	2590	A	C8-N9-C4	5.89	108.16	105.80
22	RA	695	G	C8-N9-C4	5.88	108.75	106.40
1	XA	789	U	N3-C4-C5	-5.88	111.07	114.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
22	YA	1698	A	C2-N3-C4	-5.88	107.66	110.60
1	XA	1053	G	O4'-C1'-N9	5.88	112.91	108.20
22	YA	573	G	C4-C5-N7	5.88	113.15	110.80
22	YA	1383	C	C2-N1-C1'	5.88	125.27	118.80
22	YA	1386	C	N1-C2-O2	-5.88	115.37	118.90
22	RA	729	G	C8-N9-C4	-5.88	104.05	106.40
1	XA	1397	C	C2-N1-C1'	5.88	125.27	118.80
22	YA	1842	G	C2-N3-C4	-5.88	108.96	111.90
22	YA	102	G	P-O3'-C3'	5.88	126.75	119.70
22	RA	754	C	C6-N1-C2	5.88	122.65	120.30
1	XA	1455	G	C8-N9-C4	5.87	108.75	106.40
22	YA	326	G	N1-C6-O6	5.87	123.42	119.90
1	XA	833	U	C2-N1-C1'	-5.87	110.66	117.70
22	RA	385	C	C6-N1-C1'	-5.87	113.76	120.80
22	RA	2867	G	C8-N9-C4	5.87	108.75	106.40
22	YA	582	G	C6-C5-N7	-5.86	126.88	130.40
22	YA	2499	C	C5-C4-N4	-5.86	116.10	120.20
1	QA	1403	C	C6-N1-C2	-5.86	117.96	120.30
1	QA	666	G	C8-N9-C4	-5.86	104.06	106.40
22	YA	801	G	N3-C4-C5	-5.86	125.67	128.60
22	YA	1349	A	N1-C6-N6	5.86	122.11	118.60
22	YA	1776	G	O5'-P-OP2	5.85	117.72	110.70
22	YA	1210	A	N7-C8-N9	5.85	116.72	113.80
22	RA	828	U	N1-C2-N3	5.85	118.41	114.90
22	YA	1602	U	N3-C4-C5	-5.84	111.09	114.60
22	YA	2282	G	N3-C4-C5	-5.84	125.68	128.60
22	RA	2712	U	P-O3'-C3'	5.84	126.71	119.70
23	RB	44	G	C6-C5-N7	5.84	133.91	130.40
22	YA	944	G	C8-N9-C1'	-5.84	119.41	127.00
54	QX	6	G	N7-C8-N9	5.84	116.02	113.10
1	QA	777	A	O4'-C1'-N9	5.84	112.87	108.20
1	XA	1091	U	N3-C2-O2	-5.84	118.11	122.20
22	RA	741	G	C5-C6-O6	-5.83	125.10	128.60
23	RB	44	G	C8-N9-C1'	5.83	134.58	127.00
23	YB	94	C	C6-N1-C2	-5.83	117.97	120.30
22	YA	503	A	P-O3'-C3'	5.83	126.69	119.70
1	QA	718	G	N3-C4-C5	5.83	131.51	128.60
22	YA	1425	G	C5-C6-N1	-5.83	108.59	111.50
1	XA	1432	G	O5'-P-OP1	-5.83	100.46	105.70
22	YA	1653	G	N3-C4-C5	-5.83	125.69	128.60
1	QA	99	C	C6-N1-C2	-5.82	117.97	120.30
22	RA	2241	A	O5'-P-OP1	-5.82	100.46	105.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
22	YA	974(A)	C	P-O3'-C3'	5.82	126.69	119.70
22	RA	1528	A	C8-N9-C4	-5.82	103.47	105.80
22	RA	2062	A	N1-C6-N6	-5.82	115.11	118.60
22	RA	2852	G	C6-C5-N7	-5.82	126.91	130.40
22	YA	512	G	C4-N9-C1'	-5.82	118.93	126.50
22	YA	1471	A	C8-N9-C4	-5.82	103.47	105.80
22	RA	1310	G	N1-C6-O6	5.82	123.39	119.90
22	YA	2310	A	C4-C5-C6	5.82	119.91	117.00
22	RA	1502	C	C2-N1-C1'	5.82	125.20	118.80
1	XA	117	G	C4-C5-N7	5.82	113.13	110.80
25	RE	63	LEU	CA-CB-CG	5.81	128.67	115.30
22	YA	2505	G	N1-C6-O6	5.81	123.39	119.90
22	RA	1694	C	P-O3'-C3'	5.81	126.68	119.70
22	YA	1773	A	N3-C4-C5	-5.81	122.73	126.80
22	RA	1319	G	N9-C4-C5	-5.81	103.08	105.40
22	YA	570	G	N3-C4-N9	-5.81	122.51	126.00
22	RA	2526	G	N3-C4-N9	-5.81	122.51	126.00
22	YA	729	G	C6-C5-N7	-5.81	126.91	130.40
22	RA	856	C	C5-C6-N1	5.81	123.90	121.00
1	XA	6	G	C6-C5-N7	-5.81	126.92	130.40
22	YA	450	G	C2-N3-C4	-5.81	109.00	111.90
22	YA	1614	A	C5-C6-N6	-5.81	119.05	123.70
22	RA	2251	G	N3-C4-C5	-5.81	125.70	128.60
22	RA	752	A	C8-N9-C4	-5.80	103.48	105.80
22	YA	382	G	C6-C5-N7	-5.80	126.92	130.40
1	QA	1336	C	N3-C2-O2	-5.79	117.84	121.90
22	RA	2401	U	C2-N1-C1'	5.79	124.65	117.70
1	XA	703	G	N3-C4-N9	5.79	129.47	126.00
22	RA	1672	C	C5-C6-N1	5.79	123.89	121.00
22	YA	2544	G	N1-C6-O6	5.78	123.37	119.90
53	XV	67	C	N1-C2-O2	5.78	122.37	118.90
22	YA	1929	G	C6-C5-N7	-5.78	126.94	130.40
1	XA	345	C	P-O3'-C3'	5.77	126.62	119.70
22	RA	2814	C	C5-C6-N1	-5.77	118.12	121.00
22	RA	1840	G	C4-C5-N7	5.77	113.11	110.80
54	XX	6	G	C6-C5-N7	-5.77	126.94	130.40
22	YA	18	C	C6-N1-C2	-5.76	118.00	120.30
22	RA	395	U	C2-N1-C1'	-5.76	110.79	117.70
22	RA	1672	C	C2-N3-C4	5.75	122.78	119.90
1	XA	775	G	C6-C5-N7	-5.75	126.95	130.40
22	YA	1193	G	N3-C4-N9	-5.75	122.55	126.00
22	YA	2033	A	N1-C6-N6	-5.75	115.15	118.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
22	YA	2550	G	C5-C6-O6	-5.75	125.15	128.60
22	RA	1695	G	C6-C5-N7	-5.75	126.95	130.40
22	YA	2542	A	C8-N9-C4	5.75	108.10	105.80
22	YA	772	C	O5'-P-OP2	-5.75	100.53	105.70
22	YA	1686	C	C6-N1-C2	-5.75	118.00	120.30
22	RA	74	A	C4-C5-C6	5.75	119.87	117.00
23	YB	66	A	P-O3'-C3'	5.75	126.60	119.70
22	RA	848	G	N3-C4-N9	5.75	129.45	126.00
22	RA	2722	G	C6-C5-N7	-5.75	126.95	130.40
22	YA	2008	C	O5'-P-OP2	-5.75	100.53	105.70
22	RA	227	A	P-O3'-C3'	5.75	126.59	119.70
22	RA	688	U	C5-C6-N1	5.74	125.57	122.70
22	RA	688	U	N3-C4-O4	5.74	123.42	119.40
22	RA	450	G	C8-N9-C4	-5.74	104.10	106.40
1	XA	229	U	C5-C6-N1	5.74	125.57	122.70
22	RA	2043	C	N1-C2-O2	5.74	122.34	118.90
22	RA	1902	C	N3-C4-C5	5.73	124.19	121.90
33	YQ	82	ARG	N-CA-C	5.73	126.47	111.00
1	QA	1302	U	N3-C2-O2	-5.73	118.19	122.20
22	YA	1386	C	C6-N1-C1'	5.73	127.67	120.80
22	YA	2062	A	N1-C6-N6	5.73	122.04	118.60
22	YA	2500	U	N3-C2-O2	-5.73	118.19	122.20
22	YA	2713	A	N7-C8-N9	5.73	116.66	113.80
22	YA	2856	C	C6-N1-C2	-5.73	118.01	120.30
22	YA	1698	A	C5-C6-N1	-5.72	114.84	117.70
22	YA	2498	C	C6-N1-C2	-5.72	118.01	120.30
22	RA	2346	A	C2-N3-C4	-5.72	107.74	110.60
22	RA	2776	A	P-O3'-C3'	5.72	126.57	119.70
22	RA	1627	G	C6-C5-N7	-5.72	126.97	130.40
1	XA	558	G	C4-C5-N7	5.72	113.09	110.80
22	RA	1684	C	C6-N1-C2	-5.72	118.01	120.30
22	YA	1022	G	N1-C6-O6	-5.71	116.47	119.90
22	YA	2591	C	C6-N1-C2	-5.71	118.01	120.30
1	QA	266	G	P-O3'-C3'	5.71	126.56	119.70
22	RA	2520	C	C6-N1-C2	5.71	122.58	120.30
22	RA	227	A	C8-N9-C4	-5.71	103.52	105.80
1	QA	932	C	C6-N1-C1'	-5.71	113.95	120.80
22	RA	1781	C	N3-C2-O2	-5.71	117.90	121.90
22	RA	2584	U	N3-C2-O2	-5.71	118.20	122.20
22	YA	1987	G	N3-C4-C5	-5.71	125.75	128.60
22	YA	446	G	C8-N9-C1'	-5.71	119.58	127.00
1	QA	117	G	C5-C6-O6	-5.71	125.18	128.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	XA	243	A	P-O3'-C3'	5.70	126.54	119.70
1	XA	1524	C	N1-C2-O2	-5.70	115.48	118.90
22	YA	2597	G	C5-C6-N1	-5.70	108.65	111.50
1	XA	328	C	P-O3'-C3'	5.70	126.54	119.70
1	XA	544	G	C6-C5-N7	-5.70	126.98	130.40
22	YA	1437	C	C5-C6-N1	5.70	123.85	121.00
22	YA	1332	G	N3-C4-N9	5.69	129.41	126.00
22	RA	1789	A	C8-N9-C4	-5.69	103.52	105.80
22	YA	298	G	C8-N9-C1'	5.69	134.40	127.00
22	YA	1905	C	C5-C6-N1	5.69	123.84	121.00
22	YA	2046	G	C4-N9-C1'	5.69	133.90	126.50
1	QA	1200	C	N3-C2-O2	-5.69	117.92	121.90
22	YA	189	G	C4-C5-N7	5.68	113.07	110.80
22	RA	1501	C	C6-N1-C2	-5.68	118.03	120.30
1	XA	703	G	C4-N9-C1'	5.68	133.89	126.50
32	YP	59	LEU	CA-CB-CG	5.68	128.37	115.30
22	RA	1967	C	C6-N1-C2	5.68	122.57	120.30
22	RA	2401	U	C6-N1-C2	-5.68	117.59	121.00
22	RA	2420	C	O5'-P-OP1	-5.68	100.59	105.70
22	YA	298	G	N3-C4-N9	-5.68	122.59	126.00
53	XV	42	G	C6-C5-N7	-5.68	126.99	130.40
22	RA	810	U	N1-C2-N3	5.67	118.30	114.90
22	YA	676	A	O4'-C1'-N9	5.67	112.74	108.20
22	YA	1729	A	O4'-C1'-N9	5.67	112.74	108.20
22	YA	1568	G	N3-C4-N9	-5.67	122.60	126.00
22	RA	1992	G	N3-C4-C5	-5.67	125.77	128.60
22	YA	2712	U	O4'-C1'-N1	5.67	112.74	108.20
22	YA	2053	G	N3-C4-C5	5.67	131.43	128.60
1	XA	1504	G	O5'-P-OP1	-5.67	100.60	105.70
22	YA	88	G	C4-N9-C1'	5.67	133.87	126.50
1	XA	792	A	C3'-C2'-C1'	-5.66	96.97	101.50
22	YA	138	G	O4'-C1'-N9	5.66	112.73	108.20
22	YA	2310	A	N1-C6-N6	5.66	122.00	118.60
22	RA	1012	U	P-O3'-C3'	5.66	126.49	119.70
43	Y0	44	ARG	NE-CZ-NH1	-5.66	117.47	120.30
22	YA	1942	C	C2-N1-C1'	5.65	125.02	118.80
22	RA	776	G	C8-N9-C1'	-5.65	119.65	127.00
22	YA	2760	C	C6-N1-C2	5.65	122.56	120.30
22	YA	2053	G	N1-C6-O6	5.65	123.29	119.90
22	YA	2234	G	C5-C6-O6	-5.65	125.21	128.60
22	YA	2513	G	C5-C6-N1	-5.65	108.68	111.50
22	YA	251	A	O5'-P-OP1	-5.65	100.62	105.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
22	YA	1214	A	C8-N9-C4	5.65	108.06	105.80
22	YA	1797	C	O5'-P-OP1	-5.65	100.62	105.70
1	QA	703	G	N3-C4-C5	-5.65	125.78	128.60
22	YA	621	A	C8-N9-C4	-5.65	103.54	105.80
22	RA	2544	G	C6-C5-N7	-5.64	127.01	130.40
1	XA	539	A	O5'-P-OP1	-5.64	100.62	105.70
22	YA	2689	U	P-O3'-C3'	5.64	126.47	119.70
22	RA	1786	A	N9-C1'-C2'	5.64	121.33	114.00
22	YA	676	A	C5-C6-N1	-5.64	114.88	117.70
22	YA	2595	G	N9-C4-C5	-5.64	103.14	105.40
22	YA	592	G	N3-C4-C5	-5.64	125.78	128.60
22	YA	1214	A	N1-C6-N6	-5.64	115.22	118.60
22	RA	496	G	C8-N9-C1'	-5.63	119.68	127.00
22	RA	2401	U	N1-C2-O2	5.63	126.74	122.80
22	YA	1311	G	N3-C4-N9	5.63	129.38	126.00
22	RA	860	U	N1-C2-N3	5.63	118.28	114.90
22	YA	1136	G	N1-C6-O6	5.63	123.28	119.90
22	RA	1379	A	C4-C5-C6	-5.63	114.19	117.00
1	XA	328	C	N3-C2-O2	-5.63	117.96	121.90
1	XA	1084	G	N3-C4-C5	-5.63	125.78	128.60
22	YA	729	G	C8-N9-C1'	-5.63	119.68	127.00
22	YA	1770	G	C2-N3-C4	-5.63	109.08	111.90
22	YA	827	U	O4'-C1'-N1	5.63	112.70	108.20
22	RA	2306	C	N1-C2-O2	5.63	122.28	118.90
22	RA	271(C)	U	P-O3'-C3'	5.63	126.45	119.70
22	RA	1534	G	N3-C4-C5	-5.62	125.79	128.60
22	YA	621	A	N1-C6-N6	5.62	121.97	118.60
22	YA	1559	G	N3-C4-C5	5.62	131.41	128.60
1	QA	44	G	C6-C5-N7	-5.62	127.03	130.40
1	XA	731	G	N3-C4-C5	5.62	131.41	128.60
1	XA	775	G	N1-C6-O6	5.62	123.27	119.90
22	YA	99	U	P-O3'-C3'	5.62	126.45	119.70
53	XV	4	G	N9-C1'-C2'	-5.62	105.82	112.00
22	YA	141	A	N7-C8-N9	5.62	116.61	113.80
22	YA	448	U	OP1-P-O3'	5.62	117.56	105.20
22	RA	2311	A	C8-N9-C4	-5.62	103.55	105.80
22	YA	1187	G	C4-C5-C6	5.62	122.17	118.80
24	YD	229	VAL	CB-CA-C	-5.61	100.73	111.40
1	QA	252	U	N3-C2-O2	-5.61	118.27	122.20
1	QA	1200	C	OP2-P-O3'	5.61	117.54	105.20
22	RA	1786	A	O4'-C1'-N9	5.61	112.69	108.20
22	YA	842	G	N1-C6-O6	5.61	123.26	119.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
22	YA	1698	A	C6-C5-N7	-5.61	128.38	132.30
22	YA	2700	C	C2-N3-C4	-5.61	117.10	119.90
22	YA	848	G	C4-C5-N7	5.60	113.04	110.80
22	YA	2234	G	C4-C5-N7	5.60	113.04	110.80
1	QA	611	A	C8-N9-C4	5.60	108.04	105.80
22	RA	2642	G	C5-C6-O6	-5.59	125.25	128.60
22	YA	679	C	C6-N1-C1'	-5.59	114.09	120.80
22	YA	1558	A	P-O3'-C3'	5.59	126.41	119.70
22	YA	2731	G	O5'-P-OP1	-5.59	100.67	105.70
22	YA	801	G	C8-N9-C4	-5.59	104.16	106.40
22	RA	2555	U	N1-C2-O2	-5.59	118.89	122.80
1	XA	1159	U	O4'-C1'-N1	5.59	112.67	108.20
22	YA	774	A	N3-C4-N9	-5.59	122.93	127.40
22	YA	2071	A	N1-C6-N6	5.59	121.95	118.60
22	YA	1128	A	C8-N9-C4	-5.58	103.57	105.80
1	QA	753	A	P-O3'-C3'	5.58	126.40	119.70
32	YP	25	SER	N-CA-C	-5.58	95.93	111.00
22	RA	1790	C	O5'-P-OP1	-5.58	100.68	105.70
1	XA	1235	U	C5-C6-N1	5.58	125.49	122.70
22	YA	2686	G	N3-C4-N9	5.58	129.35	126.00
22	RA	1771	C	C5-C6-N1	-5.58	118.21	121.00
1	XA	652	U	N1-C2-O2	5.58	126.70	122.80
22	YA	2028	U	N3-C4-O4	5.58	123.30	119.40
1	QA	1435	G	N3-C4-C5	5.57	131.39	128.60
1	XA	115	G	P-O3'-C3'	5.57	126.39	119.70
22	YA	845	G	C8-N9-C4	5.57	108.63	106.40
22	YA	2612	C	N3-C2-O2	-5.57	118.00	121.90
22	RA	2430	A	C2-N3-C4	-5.57	107.81	110.60
22	YA	1782	C	N3-C4-N4	5.57	121.90	118.00
22	RA	300	A	N1-C6-N6	5.57	121.94	118.60
22	RA	1882	C	C5-C6-N1	5.57	123.79	121.00
1	XA	122	G	C8-N9-C4	5.57	108.63	106.40
22	YA	1216	G	C5-C6-N1	-5.57	108.72	111.50
22	YA	1930	G	C4-N9-C1'	-5.57	119.26	126.50
22	YA	2032	G	C4-C5-N7	5.57	113.03	110.80
22	RA	373	U	C2-N1-C1'	5.57	124.38	117.70
22	YA	141	A	C8-N9-C4	-5.57	103.57	105.80
53	XV	52	G	C4-C5-N7	5.57	113.03	110.80
22	RA	2573	C	C6-N1-C2	-5.57	118.07	120.30
22	YA	1942	C	C5-C6-N1	5.57	123.78	121.00
1	QA	1302	U	C6-N1-C1'	-5.57	113.41	121.20
22	RA	1548	C	C6-N1-C2	5.57	122.53	120.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
22	RA	828	U	C6-N1-C2	-5.56	117.66	121.00
1	XA	893	C	C6-N1-C2	5.56	122.53	120.30
22	YA	1776	G	C4-N9-C1'	5.56	133.73	126.50
22	RA	2456	C	N3-C4-C5	-5.56	119.68	121.90
23	RB	83	G	C6-C5-N7	-5.56	127.06	130.40
22	RA	2035	G	N3-C4-C5	5.56	131.38	128.60
22	RA	2581	G	N1-C6-O6	-5.55	116.57	119.90
22	YA	637	A	P-O3'-C3'	5.55	126.36	119.70
22	YA	966	G	O5'-P-OP2	-5.55	100.70	105.70
22	YA	2418	A	N1-C6-N6	5.55	121.93	118.60
23	YB	16	G	N1-C6-O6	5.55	123.23	119.90
22	RA	1696	G	N1-C6-O6	-5.55	116.57	119.90
23	RB	83	G	C4-N9-C1'	5.55	133.72	126.50
22	YA	1568	G	C6-C5-N7	5.55	133.73	130.40
53	QV	76	A	C8-N9-C4	5.55	108.02	105.80
22	YA	2468	G	C4-N9-C1'	5.55	133.72	126.50
22	YA	792	G	C4-C5-N7	-5.55	108.58	110.80
22	YA	1938	A	O4'-C1'-N9	5.55	112.64	108.20
22	RA	1313	U	C2-N1-C1'	5.55	124.36	117.70
22	YA	1269	A	OP2-P-O3'	5.55	117.40	105.20
22	RA	1506	C	C2-N1-C1'	5.54	124.90	118.80
22	YA	1807	G	N9-C1'-C2'	-5.54	105.90	112.00
22	RA	2002	G	N3-C4-N9	5.54	129.33	126.00
22	YA	69	C	N3-C2-O2	-5.54	118.02	121.90
22	YA	296	C	C6-N1-C2	5.54	122.52	120.30
22	YA	793	A	C4-C5-N7	5.54	113.47	110.70
22	YA	1665	A	N1-C6-N6	5.54	121.93	118.60
22	RA	972	G	N1-C6-O6	-5.54	116.58	119.90
22	RA	1899	G	N3-C2-N2	5.54	123.78	119.90
22	RA	693	C	C5-C6-N1	-5.54	118.23	121.00
22	YA	1070	A	O4'-C1'-N9	5.54	112.63	108.20
22	RA	2573	C	C5-C6-N1	5.54	123.77	121.00
1	XA	1094	G	P-O3'-C3'	5.54	126.35	119.70
22	YA	1613	G	N3-C4-N9	5.54	129.32	126.00
22	RA	2583	G	N3-C4-N9	5.54	129.32	126.00
22	RA	1771	C	C2-N3-C4	-5.54	117.13	119.90
22	YA	2711	A	C2-N3-C4	-5.54	107.83	110.60
23	YB	94	C	C5-C6-N1	5.54	123.77	121.00
22	RA	1558	A	P-O3'-C3'	5.53	126.34	119.70
22	RA	2712(A)	A	N9-C4-C5	5.53	108.01	105.80
22	RA	1929	G	C5-N7-C8	-5.53	101.53	104.30
1	XA	1094	G	OP2-P-O3'	5.53	117.37	105.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	QA	603	U	C6-N1-C2	-5.53	117.68	121.00
22	RA	685	A	N1-C6-N6	-5.53	115.28	118.60
22	YA	1333	C	C5-C6-N1	5.53	123.77	121.00
22	YA	2310	A	C6-C5-N7	-5.53	128.43	132.30
1	XA	1195	C	C5-C6-N1	5.53	123.77	121.00
1	QA	894	G	N3-C4-C5	5.53	131.36	128.60
22	YA	2032	G	C5-N7-C8	-5.53	101.54	104.30
22	YA	2299	G	N1-C6-O6	5.52	123.21	119.90
22	RA	2832	U	P-O3'-C3'	5.52	126.33	119.70
22	YA	146	G	C5-C6-N1	-5.52	108.74	111.50
22	YA	2702	U	O5'-P-OP2	-5.52	100.73	105.70
23	YB	25	A	N7-C8-N9	5.52	116.56	113.80
22	RA	2581	G	N3-C4-C5	-5.52	125.84	128.60
22	YA	1542	G	N3-C4-C5	-5.52	125.84	128.60
22	YA	146	G	N1-C6-O6	5.52	123.21	119.90
1	QA	691	G	N1-C6-O6	5.51	123.21	119.90
22	YA	1506	C	C5-C6-N1	5.51	123.76	121.00
22	YA	1678	G	C5-N7-C8	-5.51	101.55	104.30
22	YA	326	G	C5-C6-N1	-5.50	108.75	111.50
22	YA	2453	A	C2-N3-C4	5.50	113.35	110.60
22	YA	796	C	C6-N1-C2	5.50	122.50	120.30
22	YA	945	A	P-O3'-C3'	5.50	126.30	119.70
22	YA	2484	G	C6-C5-N7	-5.50	127.10	130.40
22	YA	2595	G	N3-C4-N9	5.50	129.30	126.00
22	RA	1557	C	C6-N1-C2	5.50	122.50	120.30
29	RI	77	LEU	CA-CB-CG	5.50	127.94	115.30
22	YA	537	C	C5-C6-N1	5.50	123.75	121.00
22	RA	2060	A	P-O3'-C3'	5.49	126.29	119.70
22	RA	2593	U	OP2-P-O3'	5.49	117.29	105.20
22	YA	239	U	C5-C6-N1	-5.49	119.95	122.70
22	YA	991	C	C6-N1-C2	5.49	122.50	120.30
22	YA	1528	A	C8-N9-C4	-5.49	103.60	105.80
22	YA	2681	C	N3-C2-O2	-5.49	118.05	121.90
22	RA	965	C	C6-N1-C2	-5.49	118.10	120.30
22	RA	2440	C	C2-N1-C1'	-5.49	112.76	118.80
22	YA	2207	C	C6-N1-C2	-5.49	118.10	120.30
1	QA	291	C	C6-N1-C2	-5.49	118.10	120.30
1	QA	690	G	O4'-C1'-N9	5.49	112.59	108.20
1	QA	894	G	C8-N9-C1'	5.49	134.14	127.00
22	RA	1684	C	N3-C4-C5	-5.49	119.70	121.90
22	RA	2448	A	N9-C4-C5	5.49	108.00	105.80
25	RE	27	LEU	CA-CB-CG	5.49	127.93	115.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
22	YA	1773	A	C8-N9-C4	-5.49	103.61	105.80
1	XA	793	U	C6-N1-C2	-5.49	117.71	121.00
22	RA	1623	G	N1-C6-O6	5.49	123.19	119.90
22	RA	1904	G	C8-N9-C4	5.49	108.59	106.40
1	XA	775	G	N9-C4-C5	-5.49	103.21	105.40
22	YA	1838	C	C6-N1-C2	5.49	122.49	120.30
22	RA	537	C	C6-N1-C2	-5.48	118.11	120.30
22	RA	1310	G	N3-C4-N9	5.48	129.29	126.00
1	XA	775	G	C4-C5-N7	5.48	112.99	110.80
22	YA	530	G	N3-C4-C5	5.48	131.34	128.60
22	YA	2713	A	C5-N7-C8	-5.48	101.16	103.90
22	RA	622	G	N3-C4-C5	5.48	131.34	128.60
22	YA	189	G	N9-C4-C5	-5.48	103.21	105.40
22	RA	1929	G	N7-C8-N9	5.48	115.84	113.10
22	RA	140	A	O4'-C1'-N9	5.48	112.58	108.20
22	YA	974(A)	C	N3-C2-O2	-5.47	118.07	121.90
22	YA	1528	A	O4'-C1'-N9	5.47	112.58	108.20
22	RA	227	A	C4-C5-C6	5.47	119.74	117.00
22	YA	450	G	N1-C2-N3	5.47	127.18	123.90
22	YA	784	A	N1-C6-N6	-5.47	115.32	118.60
22	YA	1214	A	C5-N7-C8	5.47	106.64	103.90
1	QA	1027	C	P-O3'-C3'	5.47	126.26	119.70
22	RA	553	U	N1-C2-N3	5.47	118.18	114.90
22	RA	1377	G	C8-N9-C4	-5.47	104.21	106.40
22	RA	1525	G	N9-C4-C5	-5.47	103.21	105.40
22	YA	99	U	OP2-P-O3'	5.47	117.23	105.20
22	YA	194	G	C4-N9-C1'	-5.47	119.39	126.50
22	YA	1012	U	P-O3'-C3'	5.46	126.26	119.70
22	RA	948	G	N3-C4-C5	5.46	131.33	128.60
22	YA	1343	G	C4-N9-C1'	5.46	133.60	126.50
22	YA	483	A	C6-C5-N7	-5.46	128.48	132.30
22	YA	1786	A	N9-C4-C5	-5.46	103.62	105.80
22	YA	2318	G	C5-N7-C8	-5.46	101.57	104.30
22	YA	2447	G	OP1-P-O3'	5.46	117.20	105.20
54	XX	7	G	N3-C2-N2	-5.46	116.08	119.90
1	QA	703	G	C4-N9-C1'	5.46	133.59	126.50
22	RA	1698	A	N1-C6-N6	5.46	121.87	118.60
1	XA	487	A	N1-C2-N3	5.46	132.03	129.30
23	YB	49	C	C5-C6-N1	5.46	123.73	121.00
22	RA	2318	G	N7-C8-N9	5.45	115.83	113.10
22	YA	945	A	OP2-P-O3'	5.45	117.19	105.20
22	YA	2254	C	N1-C2-O2	-5.45	115.63	118.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
22	YA	2846	G	C5-C6-N1	-5.45	108.77	111.50
22	RA	1215	G	N1-C6-O6	5.45	123.17	119.90
22	RA	1534	G	C2-N3-C4	5.45	114.62	111.90
1	QA	410	G	P-O3'-C3'	5.45	126.24	119.70
32	RP	88	LEU	CA-CB-CG	5.45	127.83	115.30
1	QA	330	C	N1-C2-O2	5.45	122.17	118.90
22	RA	2067	G	C5-C6-N1	-5.45	108.78	111.50
22	YA	2234	G	N3-C4-C5	5.45	131.32	128.60
1	QA	934	C	P-O3'-C3'	5.44	126.23	119.70
22	YA	1968	G	C4-C5-N7	5.44	112.98	110.80
1	XA	1323	G	N1-C6-O6	5.44	123.17	119.90
22	YA	1773	A	C6-N1-C2	-5.44	115.33	118.60
22	RA	1757	U	N3-C2-O2	-5.44	118.39	122.20
22	YA	2383	G	C8-N9-C1'	-5.44	119.93	127.00
22	YA	2487	G	C4-C5-C6	5.44	122.06	118.80
22	RA	141	A	O4'-C1'-N9	5.44	112.55	108.20
22	RA	467	G	O5'-P-OP2	-5.44	100.81	105.70
22	RA	2456	C	C6-N1-C2	-5.44	118.12	120.30
22	YA	783	A	N3-C4-C5	5.44	130.61	126.80
22	YA	1284	A	N1-C6-N6	5.44	121.86	118.60
22	YA	1814	G	C4-C5-C6	5.44	122.06	118.80
23	YB	11	C	C6-N1-C2	-5.44	118.13	120.30
1	QA	1157	A	O4'-C1'-N9	5.43	112.55	108.20
22	YA	1987	G	N3-C4-N9	5.43	129.26	126.00
1	QA	410	G	N9-C1'-C2'	-5.43	106.03	112.00
22	RA	450	G	C6-C5-N7	-5.43	127.14	130.40
1	XA	117	G	C6-C5-N7	-5.43	127.14	130.40
22	RA	1608	A	N1-C6-N6	-5.43	115.34	118.60
22	YA	307	G	C4-C5-N7	5.43	112.97	110.80
1	QA	682	G	N1-C6-O6	5.43	123.16	119.90
22	RA	396	G	N1-C6-O6	5.43	123.16	119.90
22	RA	1024	G	C4-N9-C1'	5.43	133.56	126.50
22	YA	1957	C	C2-N3-C4	-5.43	117.19	119.90
22	YA	2439	A	N1-C6-N6	5.43	121.86	118.60
22	YA	2466	C	C6-N1-C2	5.43	122.47	120.30
22	YA	2518	A	C5-C6-N1	-5.43	114.99	117.70
1	QA	428	G	N3-C4-C5	5.42	131.31	128.60
22	RA	271(C)	U	OP2-P-O3'	5.42	117.13	105.20
22	YA	1243	G	C5-C6-N1	-5.42	108.79	111.50
22	YA	1624	G	N3-C4-C5	5.42	131.31	128.60
22	YA	2474	C	N1-C2-O2	5.42	122.15	118.90
22	RA	2782	G	N7-C8-N9	5.42	115.81	113.10

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
22	YA	517	C	C5-C6-N1	5.42	123.71	121.00
22	YA	2495	G	O5'-P-OP2	-5.42	100.82	105.70
22	RA	1781	C	N3-C4-N4	-5.42	114.21	118.00
22	YA	593	G	O5'-P-OP2	-5.42	100.83	105.70
1	QA	685	G	N3-C4-N9	-5.42	122.75	126.00
22	RA	688	U	C6-N1-C2	-5.42	117.75	121.00
22	YA	1880	C	C6-N1-C2	-5.42	118.13	120.30
22	RA	860	U	C6-N1-C2	-5.41	117.75	121.00
22	YA	2358	G	C8-N9-C4	-5.41	104.23	106.40
22	YA	2595	G	N1-C6-O6	5.41	123.15	119.90
1	XA	481	G	P-O3'-C3'	5.41	126.19	119.70
22	YA	27	G	N3-C2-N2	-5.41	116.11	119.90
22	YA	1835	G	C4-N9-C1'	5.41	133.53	126.50
22	YA	2441	C	C2-N1-C1'	-5.41	112.85	118.80
22	RA	2509	G	C8-N9-C1'	-5.41	119.97	127.00
22	RA	2814	C	C6-N1-C2	5.41	122.46	120.30
22	YA	945	A	C5-C6-N1	-5.41	115.00	117.70
22	RA	2261	C	N1-C2-O2	-5.40	115.66	118.90
1	XA	781	A	C5-C6-N1	5.40	120.40	117.70
22	YA	966	G	C8-N9-C4	5.40	108.56	106.40
22	YA	1976	U	N1-C2-N3	5.40	118.14	114.90
22	YA	2595	G	C4-C5-N7	5.40	112.96	110.80
22	YA	2867	G	P-O3'-C3'	5.40	126.18	119.70
1	XA	789	U	C4-C5-C6	5.40	122.94	119.70
22	YA	1240	U	C2-N1-C1'	5.39	124.17	117.70
22	RA	1931	U	C6-N1-C2	-5.39	117.76	121.00
22	RA	2391	G	O4'-C1'-N9	5.39	112.51	108.20
22	RA	2505	G	N3-C4-N9	5.39	129.24	126.00
22	YA	330	A	C2-N3-C4	-5.39	107.90	110.60
22	RA	2487	G	C6-C5-N7	-5.39	127.17	130.40
1	XA	1285	A	P-O3'-C3'	5.39	126.17	119.70
22	RA	1021	A	N7-C8-N9	5.39	116.49	113.80
1	XA	114	U	C5-C6-N1	-5.39	120.01	122.70
22	YA	788	A	N9-C4-C5	-5.39	103.64	105.80
22	YA	2439	A	C6-C5-N7	-5.39	128.53	132.30
22	YA	862	G	N1-C2-N3	5.38	127.13	123.90
22	YA	2499	C	N3-C4-N4	5.38	121.77	118.00
22	RA	1790	C	C6-N1-C1'	5.38	127.25	120.80
23	RB	24	G	P-O3'-C3'	5.38	126.16	119.70
22	YA	142	G	C8-N9-C1'	5.38	133.99	127.00
22	YA	1642	G	C5-C6-O6	-5.38	125.37	128.60
22	YA	2336	A	O4'-C1'-N9	-5.38	103.90	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
22	RA	783	A	C6-C5-N7	-5.38	128.54	132.30
22	RA	1950	G	C8-N9-C1'	-5.38	120.01	127.00
22	YA	1391	U	N3-C2-O2	-5.37	118.44	122.20
22	RA	1332	G	C8-N9-C4	-5.37	104.25	106.40
22	RA	2318	G	C4-N9-C1'	5.37	133.48	126.50
1	XA	440	A	C8-N9-C4	-5.37	103.65	105.80
22	YA	2518	A	C6-C5-N7	-5.37	128.54	132.30
22	RA	1506	C	N1-C2-O2	5.36	122.12	118.90
22	YA	774	A	C5-N7-C8	-5.36	101.22	103.90
22	RA	1558	A	C2-N3-C4	-5.36	107.92	110.60
22	RA	1653	G	C4-N9-C1'	5.36	133.47	126.50
22	YA	1535	U	N1-C2-O2	5.36	126.55	122.80
53	XV	17	C	C6-N1-C2	-5.36	118.16	120.30
1	XA	1498	U	O4'-C1'-N1	-5.36	103.91	108.20
22	YA	1184	G	N3-C4-N9	5.36	129.21	126.00
22	RA	328	U	C5-C6-N1	-5.36	120.02	122.70
22	YA	621	A	C4-C5-C6	5.36	119.68	117.00
23	YB	117	G	C8-N9-C4	5.36	108.54	106.40
22	RA	450	G	N7-C8-N9	5.35	115.78	113.10
22	YA	1922	G	C8-N9-C4	5.35	108.54	106.40
22	RA	37	C	C6-N1-C2	-5.35	118.16	120.30
22	YA	489	G	C8-N9-C4	-5.35	104.26	106.40
22	YA	1228	G	N1-C6-O6	5.35	123.11	119.90
22	YA	1863	G	N3-C4-C5	5.35	131.28	128.60
22	YA	51	G	C5-C6-O6	5.35	131.81	128.60
22	YA	1377	G	C6-C5-N7	-5.35	127.19	130.40
22	RA	2401	U	C5-C6-N1	5.35	125.37	122.70
22	RA	1142	U	C6-N1-C1'	-5.34	113.72	121.20
22	YA	1256	G	C4-N9-C1'	5.34	133.44	126.50
1	QA	1053	G	O4'-C1'-N9	5.34	112.47	108.20
22	RA	1621	U	N1-C2-N3	5.34	118.10	114.90
22	RA	2392	A	C8-N9-C4	-5.34	103.66	105.80
22	YA	125	G	N1-C6-O6	-5.34	116.70	119.90
22	YA	1687	G	C6-C5-N7	-5.34	127.20	130.40
22	YA	2352	A	C8-N9-C4	-5.34	103.66	105.80
1	XA	1397	C	N3-C2-O2	-5.34	118.16	121.90
22	YA	676	A	C6-C5-N7	-5.34	128.56	132.30
22	YA	2713	A	C6-C5-N7	-5.33	128.57	132.30
1	QA	353	A	OP2-P-O3'	5.33	116.93	105.20
1	XA	1432	G	N7-C8-N9	5.33	115.77	113.10
22	YA	1535	U	C2-N1-C1'	5.33	124.10	117.70
22	YA	1544	C	C2-N1-C1'	5.33	124.66	118.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	XA	11	G	N1-C6-O6	5.33	123.10	119.90
22	RA	452	G	C4-N9-C1'	5.33	133.43	126.50
1	XA	633	G	C6-C5-N7	-5.33	127.20	130.40
22	YA	1930	G	C6-C5-N7	5.33	133.60	130.40
22	YA	860	U	C5-C6-N1	-5.33	120.04	122.70
22	YA	1425	G	C6-C5-N7	-5.33	127.20	130.40
22	RA	509	C	C5-C6-N1	-5.33	118.34	121.00
22	YA	1824	G	C2-N3-C4	5.33	114.56	111.90
22	RA	382	G	C6-C5-N7	-5.32	127.21	130.40
22	RA	2755	C	C6-N1-C2	-5.32	118.17	120.30
22	YA	1916	A	C5-C6-N1	-5.32	115.04	117.70
22	RA	2036	C	C6-N1-C2	-5.32	118.17	120.30
1	XA	498	A	O4'-C1'-N9	5.32	112.46	108.20
1	QA	1397	C	C5-C6-N1	5.32	123.66	121.00
22	YA	857	C	C5-C6-N1	5.32	123.66	121.00
1	XA	792	A	P-O3'-C3'	5.32	126.08	119.70
22	YA	446	G	C4-N9-C1'	5.32	133.41	126.50
22	YA	473	G	C2-N3-C4	-5.32	109.24	111.90
22	RA	1974	C	C6-N1-C2	5.32	122.43	120.30
22	RA	2432	A	C2-N3-C4	-5.32	107.94	110.60
22	YA	1138	G	N3-C4-N9	5.32	129.19	126.00
22	YA	1667	G	N9-C4-C5	-5.32	103.27	105.40
22	YA	1471	A	C4-C5-C6	5.31	119.66	117.00
1	QA	1336	C	C2-N3-C4	5.31	122.56	119.90
22	YA	1966	A	C8-N9-C4	5.31	107.92	105.80
22	YA	2310	A	C5-C6-N1	-5.31	115.04	117.70
1	XA	576	G	C4-N9-C1'	5.31	133.40	126.50
1	QA	309	G	C5-C6-O6	-5.31	125.41	128.60
1	QA	1065	U	OP2-P-O3'	5.31	116.88	105.20
22	RA	1528	A	C5-N7-C8	-5.31	101.25	103.90
22	YA	945	A	C4-C5-N7	5.31	113.36	110.70
22	YA	1514	U	C5-C6-N1	5.31	125.35	122.70
22	RA	732	C	C6-N1-C2	5.31	122.42	120.30
22	YA	645	C	C5-C6-N1	5.31	123.65	121.00
22	YA	771	G	O5'-P-OP2	5.31	117.07	110.70
22	RA	139	G	N1-C6-O6	-5.31	116.72	119.90
22	RA	774	A	N3-C4-C5	5.31	130.51	126.80
22	RA	1220	A	O4'-C1'-N9	5.31	112.44	108.20
1	QA	31	G	P-O3'-C3'	5.30	126.07	119.70
1	QA	685	G	C8-N9-C4	5.30	108.52	106.40
22	RA	1078	U	P-O3'-C3'	5.30	126.06	119.70
22	YA	450	G	C5-C6-O6	5.30	131.78	128.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
22	YA	780	G	C4-N9-C1'	5.30	133.40	126.50
53	QV	28	C	C6-N1-C2	-5.30	118.18	120.30
22	YA	860	U	C5-C4-O4	5.30	129.08	125.90
22	YA	1598	C	C5-C6-N1	5.30	123.65	121.00
22	RA	1653	G	N1-C6-O6	-5.30	116.72	119.90
22	RA	2772	C	C5-C4-N4	-5.30	116.49	120.20
22	RA	2468	G	C4-N9-C1'	5.30	133.39	126.50
22	YA	573	G	O4'-C1'-N9	-5.30	103.96	108.20
22	YA	2311	A	C5-N7-C8	-5.30	101.25	103.90
22	YA	2557	G	N1-C6-O6	-5.30	116.72	119.90
18	QR	31	LEU	CA-CB-CG	5.29	127.48	115.30
22	RA	1625	C	C6-N1-C2	5.29	122.42	120.30
22	RA	271(B)	G	OP2-P-O3'	5.29	116.84	105.20
22	RA	1535	U	N3-C2-O2	-5.29	118.50	122.20
22	RA	1678	G	C5-N7-C8	-5.29	101.65	104.30
22	RA	1899	G	C2-N3-C4	-5.29	109.25	111.90
22	YA	1964	G	C4-C5-N7	5.29	112.92	110.80
22	YA	450	G	C4-C5-N7	-5.29	108.68	110.80
22	YA	1241	A	C2-N3-C4	-5.29	107.95	110.60
56	Z6	74	C	N1-C2-O2	5.29	122.08	118.90
22	YA	2056	G	C5-C6-O6	-5.29	125.43	128.60
54	XX	1	A	O5'-P-OP1	-5.29	100.94	105.70
22	YA	140	A	C4-C5-C6	5.29	119.64	117.00
22	RA	1312	U	P-O3'-C3'	5.29	126.04	119.70
22	RA	1606	G	C5-N7-C8	-5.29	101.66	104.30
22	RA	1947	C	C6-N1-C2	-5.29	118.19	120.30
1	XA	1108	G	C4-C5-C6	5.29	121.97	118.80
22	YA	813	U	N1-C2-N3	5.29	118.07	114.90
22	YA	2082	A	C8-N9-C4	5.29	107.91	105.80
22	RA	2423	U	C5-C4-O4	-5.28	122.73	125.90
22	RA	2686	G	N1-C6-O6	5.28	123.07	119.90
1	XA	1452	C	C2-N1-C1'	5.28	124.61	118.80
22	YA	1263	U	N1-C2-N3	5.28	118.07	114.90
22	RA	2585	U	C6-N1-C1'	-5.28	113.81	121.20
1	QA	1206	G	N3-C4-C5	-5.28	125.96	128.60
22	RA	825	C	OP1-P-O3'	5.28	116.81	105.20
22	RA	846	C	P-O3'-C3'	5.28	126.04	119.70
22	RA	1651	G	C6-C5-N7	-5.28	127.23	130.40
22	RA	2392	A	C5-N7-C8	-5.28	101.26	103.90
22	RA	2779	U	N3-C4-O4	-5.28	115.70	119.40
1	XA	111	G	N3-C4-C5	5.28	131.24	128.60
1	XA	1397	C	N1-C2-O2	5.28	122.07	118.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
22	RA	2494	G	C8-N9-C4	5.28	108.51	106.40
22	YA	1183	G	C4-C5-N7	5.28	112.91	110.80
22	RA	496	G	C4-N9-C1'	5.28	133.36	126.50
1	XA	1113	C	C6-N1-C2	-5.28	118.19	120.30
1	XA	1516	G	N3-C4-N9	-5.28	122.83	126.00
22	RA	553	U	C5-C4-O4	5.28	129.07	125.90
22	YA	1671	U	N3-C4-O4	5.28	123.09	119.40
22	YA	1858	G	C4-N9-C1'	5.28	133.36	126.50
23	YB	56	G	N3-C4-C5	-5.27	125.96	128.60
22	RA	921	G	C5-C6-N1	-5.27	108.86	111.50
22	RA	2779	U	N3-C2-O2	-5.27	118.51	122.20
22	YA	120	U	C5-C4-O4	5.27	129.06	125.90
22	YA	528	A	C5-N7-C8	-5.27	101.26	103.90
23	YB	14	U	N3-C2-O2	-5.27	118.51	122.20
1	QA	851	G	C4-N9-C1'	5.27	133.35	126.50
1	XA	1354	C	C6-N1-C2	-5.27	118.19	120.30
1	QA	1297	C	OP2-P-O3'	5.27	116.79	105.20
22	RA	405	U	C5-C6-N1	5.27	125.33	122.70
1	XA	625	G	C8-N9-C4	-5.27	104.29	106.40
22	RA	2330	G	O5'-P-OP1	-5.27	100.96	105.70
22	RA	1606	G	N3-C4-C5	5.26	131.23	128.60
22	RA	1644	C	C6-N1-C2	-5.26	118.19	120.30
22	RA	2702	U	N3-C2-O2	-5.26	118.52	122.20
22	YA	805	G	C4-C5-N7	5.26	112.91	110.80
22	YA	2010	G	C4-C5-N7	5.26	112.91	110.80
22	RA	2089	U	C5-C6-N1	5.26	125.33	122.70
22	YA	945	A	C5-N7-C8	-5.26	101.27	103.90
22	YA	1130	U	C2-N1-C1'	5.26	124.02	117.70
22	YA	1922	G	N3-C4-C5	5.26	131.23	128.60
22	RA	622	G	C4-N9-C1'	-5.26	119.66	126.50
22	RA	857	C	C6-N1-C2	-5.26	118.19	120.30
22	RA	1790	C	N1-C2-O2	-5.26	115.74	118.90
22	RA	2665	A	O4'-C1'-N9	5.26	112.41	108.20
22	YA	752	A	N7-C8-N9	-5.26	111.17	113.80
22	YA	2217	G	N1-C6-O6	5.26	123.06	119.90
48	Y5	4	HIS	C-N-CD	5.26	139.45	128.40
22	RA	1950	G	C6-C5-N7	-5.26	127.24	130.40
1	XA	1053	G	C8-N9-C4	5.26	108.50	106.40
22	YA	1968	G	N1-C6-O6	5.26	123.06	119.90
1	QA	177	C	C6-N1-C2	-5.26	118.20	120.30
1	XA	481	G	C5-C6-O6	5.26	131.75	128.60
22	YA	739	G	O5'-P-OP1	5.26	117.01	110.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	QA	314	C	C2-N1-C1'	5.25	124.58	118.80
22	RA	396	G	C4-C5-C6	5.25	121.95	118.80
22	YA	1084	A	O4'-C1'-N9	5.25	112.40	108.20
22	RA	1816	G	N1-C6-O6	5.25	123.05	119.90
1	XA	320	C	C5-C6-N1	-5.25	118.37	121.00
22	YA	1807	G	N1-C6-O6	5.25	123.05	119.90
22	YA	1899	G	N1-C2-N3	5.25	127.05	123.90
1	XA	227	G	C8-N9-C4	5.25	108.50	106.40
1	XA	653	A	C8-N9-C4	-5.25	103.70	105.80
22	YA	2505	G	C5-C6-N1	-5.25	108.88	111.50
1	XA	365	U	O4'-C1'-N1	5.25	112.40	108.20
22	YA	2430	A	C8-N9-C4	-5.25	103.70	105.80
53	QV	10	G	O5'-P-OP1	-5.25	100.98	105.70
22	RA	783	A	C5-C6-N1	-5.25	115.08	117.70
1	XA	781	A	C4-C5-C6	-5.25	114.38	117.00
22	RA	809	G	N3-C4-N9	5.24	129.15	126.00
22	RA	2302	G	C8-N9-C4	-5.24	104.30	106.40
1	QA	1435	G	C2-N3-C4	-5.24	109.28	111.90
22	YA	1612	C	C2-N1-C1'	-5.24	113.03	118.80
1	QA	244	U	C5-C6-N1	5.24	125.32	122.70
22	YA	511	U	C2-N1-C1'	5.24	123.99	117.70
22	YA	2503	A	C5-C6-N1	5.24	120.32	117.70
22	YA	2587	A	N1-C6-N6	-5.24	115.46	118.60
1	XA	1502	A	C6-C5-N7	-5.24	128.63	132.30
22	YA	1138	G	N3-C4-C5	-5.24	125.98	128.60
22	RA	205	G	N3-C4-C5	-5.24	125.98	128.60
1	XA	821	G	C8-N9-C4	5.24	108.49	106.40
22	YA	1332	G	O4'-C1'-N9	-5.23	104.01	108.20
22	RA	986	C	N3-C2-O2	-5.23	118.24	121.90
22	YA	420	C	N1-C2-O2	5.23	122.04	118.90
22	YA	774	A	N1-C2-N3	5.23	131.92	129.30
22	YA	1406	U	C5-C6-N1	5.23	125.31	122.70
22	YA	2318	G	N7-C8-N9	5.23	115.72	113.10
1	QA	894	G	C4-N9-C1'	-5.23	119.70	126.50
22	RA	2333	A	C8-N9-C4	5.22	107.89	105.80
22	RA	2385	C	N3-C2-O2	-5.22	118.24	121.90
1	XA	1432	G	C5-C6-N1	-5.22	108.89	111.50
22	YA	2025	C	N3-C4-C5	-5.22	119.81	121.90
22	YA	2766	G	C4-C5-N7	5.22	112.89	110.80
1	QA	718	G	N3-C4-N9	-5.22	122.87	126.00
22	YA	450	G	C6-C5-N7	-5.22	127.27	130.40
22	YA	1668	A	N1-C6-N6	-5.22	115.47	118.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
22	RA	1021	A	C8-N9-C4	-5.22	103.71	105.80
22	RA	385	C	C2-N3-C4	5.22	122.51	119.90
22	RA	1332	G	C6-C5-N7	-5.22	127.27	130.40
22	YA	848	G	C5-C6-O6	-5.22	125.47	128.60
1	QA	181	G	P-O3'-C3'	5.22	125.96	119.70
1	QA	1159	U	O4'-C1'-N1	5.22	112.37	108.20
22	YA	372	G	N9-C4-C5	-5.22	103.31	105.40
22	YA	1647	G	O4'-C1'-N9	-5.22	104.03	108.20
1	QA	1347	G	P-O3'-C3'	5.21	125.96	119.70
22	RA	859	G	P-O3'-C3'	5.21	125.96	119.70
22	YA	300	A	N1-C6-N6	5.21	121.73	118.60
1	XA	1513	A	N1-C6-N6	5.21	121.73	118.60
55	XY	34	C	C5-C6-N1	5.21	123.61	121.00
22	RA	2594	C	C6-N1-C2	5.21	122.39	120.30
1	XA	511	C	C2-N3-C4	-5.21	117.30	119.90
22	YA	679	C	C6-N1-C2	5.21	122.38	120.30
22	YA	1699	G	C5-C6-O6	5.21	131.73	128.60
22	YA	2593	U	N3-C4-C5	-5.21	111.47	114.60
1	QA	244	U	C2-N1-C1'	5.21	123.95	117.70
22	RA	397	G	N3-C4-C5	5.21	131.21	128.60
22	YA	2253	G	C4-C5-N7	-5.21	108.72	110.80
22	YA	2776	A	C8-N9-C4	-5.21	103.72	105.80
22	RA	1264	G	N3-C4-C5	-5.21	126.00	128.60
1	XA	513	C	C5-C6-N1	5.21	123.60	121.00
22	RA	22	C	N3-C4-C5	5.21	123.98	121.90
22	RA	2025	C	N3-C4-C5	-5.21	119.82	121.90
22	YA	138	G	C5-C6-N1	5.21	114.10	111.50
22	YA	2377	A	C8-N9-C4	5.21	107.88	105.80
22	RA	929	G	C4-N9-C1'	5.20	133.26	126.50
22	YA	1426	G	C8-N9-C4	-5.20	104.32	106.40
1	QA	938	A	C8-N9-C4	-5.20	103.72	105.80
22	YA	848	G	N3-C4-N9	5.20	129.12	126.00
22	RA	124	G	N1-C6-O6	5.20	123.02	119.90
22	RA	140	A	C5-N7-C8	-5.20	101.30	103.90
22	RA	2307	G	C8-N9-C4	-5.20	104.32	106.40
22	RA	2713	A	O4'-C1'-N9	-5.20	104.04	108.20
22	YA	1383	C	N1-C2-O2	5.20	122.02	118.90
23	RB	41	U	C2-N1-C1'	-5.20	111.46	117.70
1	XA	1509	C	N3-C4-C5	-5.20	119.82	121.90
1	QA	1065	U	P-O3'-C3'	5.20	125.94	119.70
22	RA	1801	G	C5-C6-N1	5.20	114.10	111.50
22	RA	2711	A	C2-N3-C4	-5.20	108.00	110.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	XA	576	G	C8-N9-C4	-5.20	104.32	106.40
22	RA	2563	U	C5-C4-O4	5.20	129.02	125.90
1	XA	529	G	N1-C6-O6	5.20	123.02	119.90
22	YA	754	C	C5-C6-N1	-5.20	118.40	121.00
22	YA	1753	G	C8-N9-C4	-5.20	104.32	106.40
22	YA	2439	A	C5-C6-N6	-5.20	119.54	123.70
1	QA	573	A	N1-C6-N6	-5.19	115.48	118.60
1	XA	664	G	C5-C6-O6	5.19	131.72	128.60
22	YA	1205	U	N3-C4-C5	-5.19	111.48	114.60
1	XA	792	A	C4-C5-N7	5.19	113.30	110.70
22	YA	1667	G	N1-C6-O6	5.19	123.02	119.90
1	XA	60	A	P-O3'-C3'	5.19	125.93	119.70
1	XA	690	G	O4'-C1'-N9	5.19	112.35	108.20
22	RA	546	C	C6-N1-C2	-5.19	118.22	120.30
22	RA	1980	G	OP1-P-O3'	5.19	116.61	105.20
22	RA	2306	C	N3-C2-O2	-5.19	118.27	121.90
1	XA	1506	U	C6-N1-C2	5.19	124.11	121.00
19	XS	41	VAL	C-N-CD	-5.19	109.19	120.60
22	YA	114	U	C6-N1-C1'	-5.19	113.94	121.20
22	YA	582	G	C4-C5-N7	5.19	112.88	110.80
22	YA	1662	C	C2-N3-C4	-5.18	117.31	119.90
22	RA	828	U	N3-C4-O4	-5.18	115.77	119.40
22	RA	1428	C	C6-N1-C2	5.18	122.37	120.30
22	RA	2511	U	N3-C2-O2	-5.18	118.57	122.20
31	RO	8	LEU	CA-CB-CG	5.18	127.22	115.30
53	QV	75	C	N3-C2-O2	-5.18	118.27	121.90
1	XA	703	G	C8-N9-C1'	-5.18	120.26	127.00
22	YA	792	G	N3-C4-N9	-5.18	122.89	126.00
1	XA	1219	U	N1-C2-O2	-5.18	119.17	122.80
22	YA	1965	C	N3-C4-C5	5.18	123.97	121.90
22	YA	2050	C	N3-C2-O2	-5.18	118.28	121.90
53	QV	57	A	N1-C6-N6	-5.18	115.49	118.60
22	YA	2430	A	N7-C8-N9	5.18	116.39	113.80
22	RA	1525	G	C5-C6-O6	-5.17	125.50	128.60
22	YA	551	G	C4-N9-C1'	-5.17	119.77	126.50
22	YA	1425	G	N3-C4-C5	-5.17	126.01	128.60
22	YA	570	G	N3-C4-C5	5.17	131.19	128.60
22	YA	620	G	N3-C4-N9	-5.17	122.90	126.00
22	RA	1022	G	C8-N9-C4	-5.17	104.33	106.40
22	RA	2032	G	C5-C6-O6	-5.17	125.50	128.60
22	RA	2587	A	C8-N9-C4	5.17	107.87	105.80
22	YA	28	A	O5'-P-OP1	-5.17	101.05	105.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
22	YA	917	A	C6-C5-N7	-5.17	128.68	132.30
1	QA	1509	C	C6-N1-C2	5.17	122.37	120.30
1	QA	818	G	C5-C6-N1	-5.17	108.92	111.50
22	RA	783	A	C2-N3-C4	-5.17	108.02	110.60
1	QA	317	G	N3-C4-C5	-5.17	126.02	128.60
22	YA	2271	G	C8-N9-C1'	-5.16	120.29	127.00
22	RA	2415	G	N3-C4-N9	5.16	129.10	126.00
22	YA	1915	U	N1-C2-O2	5.16	126.41	122.80
53	QV	30	G	C6-C5-N7	-5.16	127.30	130.40
22	RA	1806	C	C6-N1-C2	5.16	122.36	120.30
1	XA	652	U	C5-C6-N1	5.16	125.28	122.70
1	XA	1113	C	C5-C6-N1	5.16	123.58	121.00
22	YA	2430	A	C6-C5-N7	-5.16	128.69	132.30
53	XV	23	C	C5-C6-N1	-5.16	118.42	121.00
22	RA	848	G	C6-C5-N7	-5.16	127.30	130.40
22	RA	1627	G	C2-N3-C4	-5.16	109.32	111.90
22	YA	1216	G	C6-C5-N7	-5.16	127.31	130.40
22	YA	1657	C	C5-C6-N1	-5.16	118.42	121.00
53	XV	68	C	N3-C4-C5	5.16	123.96	121.90
1	XA	346	G	N3-C4-N9	5.16	129.09	126.00
22	YA	1502	C	C6-N1-C2	-5.16	118.24	120.30
1	QA	785	G	C2-N3-C4	-5.15	109.32	111.90
4	QD	28	SER	C-N-CD	5.15	139.22	128.40
22	RA	270(X)	G	C5-C6-N1	-5.15	108.92	111.50
22	RA	754	C	N1-C2-N3	-5.15	115.59	119.20
22	RA	1989	G	N1-C6-O6	5.15	122.99	119.90
22	RA	2071	A	C8-N9-C4	-5.15	103.74	105.80
22	YA	450	G	C8-N9-C1'	-5.15	120.30	127.00
22	RA	860	U	N3-C4-C5	-5.15	111.51	114.60
22	RA	1805	U	C2-N1-C1'	5.15	123.88	117.70
22	RA	2061	G	N9-C4-C5	5.15	107.46	105.40
22	RA	2423	U	C6-N1-C1'	-5.15	113.99	121.20
1	XA	792	A	N9-C1'-C2'	5.15	120.70	114.00
22	YA	1142(A)	A	C2-N3-C4	-5.15	108.03	110.60
22	YA	1332	G	C5-C6-N1	-5.15	108.93	111.50
22	RA	1894	C	O5'-P-OP2	-5.15	101.07	105.70
22	RA	1651	G	N1-C6-O6	5.14	122.99	119.90
22	RA	2612	C	C6-N1-C1'	-5.14	114.63	120.80
22	RA	966	G	C8-N9-C4	5.14	108.46	106.40
1	XA	1091	U	C6-N1-C2	-5.14	117.92	121.00
1	QA	266	G	C5-N7-C8	-5.14	101.73	104.30
22	RA	1678	G	N3-C4-C5	5.14	131.17	128.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
22	RA	2392	A	C6-C5-N7	-5.14	128.70	132.30
22	RA	2455	G	C4-N9-C1'	5.14	133.18	126.50
1	XA	1432	G	C6-C5-N7	-5.14	127.32	130.40
22	YA	2048	G	N9-C4-C5	5.14	107.46	105.40
22	RA	693	C	C2-N3-C4	-5.14	117.33	119.90
22	YA	1773	A	C2-N3-C4	5.14	113.17	110.60
22	YA	1908	C	C6-N1-C2	-5.14	118.25	120.30
22	YA	2095	C	N3-C2-O2	-5.14	118.30	121.90
22	RA	809	G	C8-N9-C1'	-5.13	120.33	127.00
53	XV	60	U	N3-C4-O4	5.13	122.99	119.40
1	QA	1478	C	N1-C2-O2	5.13	121.98	118.90
22	RA	1390	U	C5-C6-N1	5.13	125.27	122.70
23	RB	94	C	C6-N1-C2	-5.13	118.25	120.30
22	RA	1022	G	P-O3'-C3'	5.13	125.86	119.70
22	RA	2511	U	C2-N1-C1'	5.13	123.86	117.70
22	RA	2779	U	N1-C2-O2	5.13	126.39	122.80
22	YA	452	G	C8-N9-C4	-5.13	104.35	106.40
22	YA	780	G	C6-C5-N7	-5.13	127.32	130.40
22	YA	1888	G	C2-N3-C4	5.13	114.47	111.90
1	QA	356	A	O4'-C1'-N9	5.13	112.30	108.20
22	RA	74	A	C2-N3-C4	-5.13	108.04	110.60
22	YA	974(A)	C	OP2-P-O3'	5.13	116.48	105.20
22	RA	284	U	C5-C6-N1	5.13	125.26	122.70
22	RA	1215	G	C6-C5-N7	-5.13	127.32	130.40
1	QA	1190	G	N3-C4-C5	-5.12	126.04	128.60
1	QA	1435	G	N1-C6-O6	5.12	122.97	119.90
22	RA	1319	G	C4-C5-N7	5.12	112.85	110.80
22	RA	2782	G	N3-C4-N9	5.12	129.07	126.00
22	RA	1895	C	C6-N1-C2	-5.12	118.25	120.30
22	YA	940	G	C8-N9-C4	-5.12	104.35	106.40
22	YA	1612	C	N3-C2-O2	5.12	125.48	121.90
22	RA	1789	A	N9-C4-C5	5.12	107.85	105.80
38	RV	35	LEU	CA-CB-CG	5.12	127.07	115.30
1	XA	749	C	C2-N3-C4	5.12	122.46	119.90
1	XA	1158	C	C2-N1-C1'	5.12	124.43	118.80
22	YA	2070	G	C4-C5-N7	-5.12	108.75	110.80
22	YA	2299	G	N7-C8-N9	5.12	115.66	113.10
22	YA	2048	G	C8-N9-C4	-5.12	104.35	106.40
1	XA	1158	C	N1-C2-O2	5.12	121.97	118.90
22	YA	929	G	C4-C5-N7	-5.12	108.75	110.80
22	YA	1614	A	C5-C6-N1	5.12	120.26	117.70
1	QA	634	C	C2-N1-C1'	-5.11	113.17	118.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
22	RA	1613	G	N3-C4-N9	5.11	129.07	126.00
22	YA	197	A	C6-C5-N7	-5.11	128.72	132.30
22	YA	912	C	N3-C2-O2	-5.11	118.32	121.90
22	YA	385	C	N1-C2-O2	-5.11	115.83	118.90
22	YA	1358	G	C8-N9-C4	-5.11	104.36	106.40
22	YA	1888	G	N3-C4-C5	-5.11	126.04	128.60
22	RA	1799	G	N3-C4-C5	-5.11	126.04	128.60
1	XA	108	G	C4-C5-N7	5.11	112.84	110.80
22	YA	814	C	C2-N1-C1'	-5.11	113.18	118.80
22	YA	2070	G	C6-C5-N7	5.11	133.47	130.40
22	RA	188	G	C8-N9-C4	5.11	108.44	106.40
22	RA	2311	A	N1-C2-N3	5.11	131.85	129.30
22	RA	2455	G	N3-C4-N9	5.11	129.06	126.00
23	RB	60	C	C6-N1-C2	-5.11	118.26	120.30
22	YA	1022	G	N3-C4-C5	-5.11	126.05	128.60
22	YA	1835	G	N7-C8-N9	5.11	115.65	113.10
22	RA	456	C	C2-N1-C1'	5.11	124.42	118.80
22	RA	783	A	C4-C5-N7	5.11	113.25	110.70
22	RA	2584	U	C6-N1-C2	-5.11	117.94	121.00
1	XA	328	C	C5-C6-N1	5.11	123.55	121.00
22	YA	2779	U	N3-C2-O2	-5.11	118.63	122.20
22	RA	1021	A	C2-N3-C4	-5.10	108.05	110.60
22	RA	1559	G	C4-C5-N7	5.10	112.84	110.80
22	RA	2820	A	P-O3'-C3'	5.10	125.83	119.70
22	YA	860	U	C4-C5-C6	5.10	122.76	119.70
22	RA	1337	G	C8-N9-C4	-5.10	104.36	106.40
22	RA	1817	G	C6-C5-N7	-5.10	127.34	130.40
22	YA	1790	C	N3-C4-C5	5.10	123.94	121.90
22	RA	1184	G	N9-C4-C5	-5.10	103.36	105.40
22	YA	197	A	N1-C6-N6	5.10	121.66	118.60
22	YA	974	G	C6-N1-C2	-5.10	122.04	125.10
22	YA	2582	G	N3-C4-C5	-5.10	126.05	128.60
22	RA	2494	G	N3-C4-N9	5.10	129.06	126.00
22	YA	2271	G	C4-N9-C1'	5.10	133.13	126.50
22	YA	2362	G	C4-N9-C1'	5.10	133.13	126.50
22	RA	1658	C	C5-C6-N1	5.10	123.55	121.00
22	RA	1806	C	N3-C2-O2	5.10	125.47	121.90
1	XA	899	C	C6-N1-C2	5.10	122.34	120.30
22	YA	509	C	O5'-P-OP1	-5.10	101.11	105.70
22	RA	2307	G	N7-C8-N9	5.10	115.65	113.10
22	YA	1187	G	C4-N9-C1'	5.10	133.12	126.50
23	YB	117	G	N3-C4-C5	5.10	131.15	128.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	YE	117	MET	CA-CB-CG	5.10	121.96	113.30
22	YA	1699	G	C4-C5-N7	-5.09	108.76	110.80
22	YA	1782	C	C6-N1-C2	-5.09	118.26	120.30
22	YA	2686	G	N3-C4-C5	-5.09	126.05	128.60
22	RA	622	G	C8-N9-C4	5.09	108.44	106.40
1	XA	692	U	N3-C4-O4	5.09	122.97	119.40
1	QA	938	A	N7-C8-N9	5.09	116.34	113.80
22	YA	530	G	C4-N9-C1'	-5.09	119.88	126.50
22	YA	539	G	N3-C4-C5	-5.09	126.05	128.60
22	YA	1247	A	C8-N9-C4	5.09	107.84	105.80
22	YA	1701	A	C8-N9-C4	-5.09	103.77	105.80
22	RA	752	A	P-O3'-C3'	5.09	125.81	119.70
22	RA	762	U	N3-C2-O2	5.09	125.76	122.20
22	RA	1792	G	N3-C4-C5	-5.09	126.06	128.60
22	RA	2392	A	C2-N3-C4	-5.09	108.06	110.60
22	YA	1343	G	N3-C4-C5	-5.09	126.06	128.60
1	QA	1403	C	C5-C6-N1	5.09	123.54	121.00
22	YA	846	C	C6-N1-C2	-5.09	118.27	120.30
22	YA	1386	C	C2-N1-C1'	-5.09	113.20	118.80
23	YB	81	G	C6-C5-N7	-5.09	127.35	130.40
1	QA	700	G	N1-C6-O6	-5.08	116.85	119.90
22	RA	593	G	N3-C4-C5	5.08	131.14	128.60
1	XA	1516	G	N3-C4-C5	5.08	131.14	128.60
22	RA	445	C	OP2-P-O3'	5.08	116.38	105.20
22	RA	2087	G	C8-N9-C1'	-5.08	120.39	127.00
22	RA	2642	G	C4-C5-N7	5.08	112.83	110.80
22	YA	253	C	O5'-P-OP1	-5.08	101.13	105.70
22	YA	621	A	N1-C2-N3	5.08	131.84	129.30
22	YA	699	A	C8-N9-C4	-5.08	103.77	105.80
22	YA	1187	G	C8-N9-C4	-5.08	104.37	106.40
22	RA	389	G	N3-C4-N9	5.08	129.05	126.00
22	RA	2230	G	N3-C4-N9	5.08	129.05	126.00
1	XA	827	U	N3-C2-O2	-5.08	118.64	122.20
22	YA	556	G	C4-N9-C1'	5.08	133.10	126.50
53	XV	52	G	C5-C6-O6	-5.08	125.55	128.60
22	YA	2073	C	OP1-P-O3'	5.08	116.37	105.20
22	RA	2702	U	N1-C2-O2	5.08	126.35	122.80
22	YA	282	A	C8-N9-C4	5.08	107.83	105.80
22	YA	333	G	C8-N9-C4	-5.08	104.37	106.40
22	YA	1655	A	N1-C6-N6	5.08	121.64	118.60
22	YA	2062	A	C4-C5-N7	5.08	113.24	110.70
1	QA	593	G	N1-C6-O6	5.07	122.94	119.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
22	RA	585	G	OP2-P-O3'	5.07	116.36	105.20
22	RA	854	G	C5-C6-N1	-5.07	108.96	111.50
22	RA	1644	C	C6-N1-C1'	-5.07	114.72	120.80
23	RB	103	U	C5-C6-N1	-5.07	120.16	122.70
22	YA	2487	G	C5-C6-N1	-5.07	108.97	111.50
1	QA	266	G	C4-C5-N7	5.07	112.83	110.80
22	RA	576	U	C5-C6-N1	5.07	125.23	122.70
1	QA	230	G	C5-C6-N1	-5.07	108.97	111.50
22	YA	88	G	C8-N9-C1'	-5.07	120.41	127.00
22	YA	573	G	C5-N7-C8	-5.07	101.77	104.30
22	YA	1998	G	C8-N9-C4	5.07	108.43	106.40
22	YA	1193	G	N3-C4-C5	5.06	131.13	128.60
22	RA	1568	G	C6-C5-N7	5.06	133.44	130.40
22	YA	971	C	N1-C2-O2	-5.06	115.86	118.90
1	XA	809	G	N1-C6-O6	5.06	122.94	119.90
22	YA	530	G	N3-C4-N9	-5.06	122.97	126.00
22	YA	2830	G	C4-N9-C1'	5.06	133.08	126.50
22	YA	338	G	N3-C4-N9	5.06	129.03	126.00
22	YA	551	G	O5'-P-OP2	-5.06	101.15	105.70
22	RA	270(Y)	G	C4-C5-N7	-5.06	108.78	110.80
22	RA	1930	G	C5-N7-C8	5.06	106.83	104.30
1	QA	220	G	C4-C5-N7	5.05	112.82	110.80
1	XA	1211	U	C5-C4-O4	5.05	128.93	125.90
22	YA	744	G	C8-N9-C4	-5.05	104.38	106.40
22	YA	1240	U	N3-C2-O2	-5.05	118.66	122.20
22	RA	1733	G	C6-C5-N7	-5.05	127.37	130.40
1	XA	819	A	N1-C6-N6	5.05	121.63	118.60
22	YA	790	C	N3-C2-O2	5.05	125.44	121.90
22	RA	539	G	C6-C5-N7	-5.05	127.37	130.40
22	RA	1525	G	N1-C6-O6	5.05	122.93	119.90
22	YA	373	U	C2-N1-C1'	5.05	123.76	117.70
22	RA	2419	U	C6-N1-C2	-5.05	117.97	121.00
22	YA	1689	A	N1-C6-N6	-5.05	115.57	118.60
22	YA	2566	A	P-O3'-C3'	5.05	125.76	119.70
1	QA	1338	G	N1-C6-O6	-5.04	116.87	119.90
22	RA	475	U	C2-N1-C1'	5.04	123.75	117.70
22	RA	2254	C	OP2-P-O3'	5.04	116.30	105.20
1	XA	1027	C	OP1-P-O3'	5.04	116.30	105.20
22	YA	114	U	C5-C4-O4	-5.04	122.87	125.90
22	YA	1835	G	N3-C4-N9	5.04	129.03	126.00
22	YA	1974	C	N3-C4-N4	-5.04	114.47	118.00
1	XA	811	C	C6-N1-C2	5.04	122.32	120.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
22	RA	123	G	C8-N9-C4	5.04	108.42	106.40
23	RB	89	G	C8-N9-C4	-5.04	104.39	106.40
1	XA	297	G	C6-C5-N7	-5.04	127.38	130.40
1	XA	456	C	C5-C6-N1	5.04	123.52	121.00
22	YA	2869	G	C5-C6-N1	-5.04	108.98	111.50
22	YA	1403	C	N3-C2-O2	-5.04	118.38	121.90
22	RA	1024	G	C6-C5-N7	-5.03	127.38	130.40
22	RA	2345	G	C5-C6-O6	5.03	131.62	128.60
22	RA	2499	C	C2-N1-C1'	5.03	124.34	118.80
22	YA	663	G	C6-C5-N7	-5.03	127.38	130.40
22	YA	845	G	N9-C4-C5	-5.03	103.39	105.40
22	YA	1614	A	C2-N3-C4	5.03	113.12	110.60
22	YA	116	C	C4-C5-C6	5.03	119.92	117.40
1	QA	561	U	P-O3'-C3'	5.03	125.74	119.70
22	RA	2307	G	C4-N9-C1'	5.03	133.04	126.50
22	RA	2430	A	C5-C6-N1	-5.03	115.19	117.70
22	RA	2767	C	C6-N1-C2	-5.03	118.29	120.30
22	YA	1614	A	C6-N1-C2	-5.03	115.58	118.60
22	YA	1834	U	C4-C5-C6	5.03	122.72	119.70
22	YA	2318	G	C6-C5-N7	-5.03	127.38	130.40
22	YA	1148	A	C8-N9-C4	5.03	107.81	105.80
22	YA	2453	A	C5-C6-N1	5.03	120.21	117.70
22	RA	2307	G	O4'-C1'-N9	5.03	112.22	108.20
1	XA	968	A	C8-N9-C4	5.03	107.81	105.80
22	YA	487	C	C6-N1-C2	-5.03	118.29	120.30
22	YA	2283	C	N1-C2-O2	-5.03	115.89	118.90
22	YA	2301	C	C6-N1-C2	-5.03	118.29	120.30
1	QA	244	U	N1-C2-O2	5.02	126.32	122.80
1	QA	252	U	N1-C2-O2	5.02	126.32	122.80
22	RA	475	U	N3-C2-O2	-5.02	118.68	122.20
1	XA	509	A	C8-N9-C4	-5.02	103.79	105.80
22	YA	2497	A	C2-N3-C4	5.02	113.11	110.60
22	YA	2500	U	N1-C2-O2	5.02	126.32	122.80
22	RA	917	A	C5-C6-N1	-5.02	115.19	117.70
22	RA	1613	G	N3-C4-C5	-5.02	126.09	128.60
22	RA	1930	G	O4'-C1'-N9	5.02	112.22	108.20
1	XA	690	G	C4-C5-N7	5.02	112.81	110.80
1	XA	1279	A	C8-N9-C4	-5.02	103.79	105.80
22	YA	773	U	C5-C6-N1	-5.02	120.19	122.70
22	YA	846	C	C4-C5-C6	5.02	119.91	117.40
22	YA	1900	A	O5'-P-OP1	-5.02	101.18	105.70
22	YA	2345	G	N9-C4-C5	5.02	107.41	105.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
22	RA	2490	G	O4'-C1'-N9	5.02	112.22	108.20
22	RA	2505	G	N3-C4-C5	-5.02	126.09	128.60
22	YA	659	C	C6-N1-C2	5.02	122.31	120.30
22	YA	1155	A	C5-C6-N6	-5.02	119.68	123.70
1	XA	136	C	C5-C6-N1	-5.02	118.49	121.00
22	YA	465	G	N3-C4-N9	5.02	129.01	126.00
53	QV	41	C	N1-C2-O2	5.02	121.91	118.90
22	YA	1247	A	C5-N7-C8	5.02	106.41	103.90
22	RA	2509	G	C6-C5-N7	-5.01	127.39	130.40
22	YA	139	G	N3-C4-C5	-5.01	126.09	128.60
22	YA	2035	G	O5'-P-OP2	-5.01	101.19	105.70
22	YA	2592	G	C8-N9-C4	-5.01	104.39	106.40
22	RA	2371	G	N3-C4-N9	-5.01	122.99	126.00
23	RB	44	G	N3-C4-C5	5.01	131.11	128.60
22	YA	512	G	O4'-C1'-N9	5.01	112.21	108.20
22	YA	1314	C	C5-C6-N1	5.01	123.51	121.00
22	YA	1620	G	C4-N9-C1'	5.01	133.02	126.50
22	YA	2468	G	N7-C8-N9	5.01	115.61	113.10
22	RA	2126	A	P-O3'-C3'	5.01	125.71	119.70
22	YA	201	C	C6-N1-C2	5.01	122.30	120.30
22	YA	551	G	C8-N9-C4	5.01	108.40	106.40
22	YA	2228	G	O5'-P-OP2	-5.01	101.19	105.70
1	XA	420	U	C2-N1-C1'	5.01	123.71	117.70
42	YZ	150	LEU	CA-CB-CG	5.01	126.82	115.30
22	RA	1786	A	C5-C6-N1	-5.01	115.20	117.70
22	RA	1819	A	P-O3'-C3'	5.01	125.71	119.70
1	XA	545	C	N3-C2-O2	-5.01	118.39	121.90
1	XA	619	U	C5-C6-N1	5.01	125.20	122.70
22	YA	512	G	C8-N9-C1'	5.01	133.51	127.00
22	RA	1398	C	C5-C4-N4	-5.00	116.70	120.20
22	RA	2422	A	P-O3'-C3'	5.00	125.70	119.70
33	RQ	82	ARG	N-CA-C	5.00	124.51	111.00
1	XA	31	G	P-O3'-C3'	5.00	125.70	119.70
1	XA	799	G	N3-C4-C5	-5.00	126.10	128.60
1	XA	557	G	C8-N9-C1'	-5.00	120.50	127.00
1	XA	557	G	C6-C5-N7	-5.00	127.40	130.40
22	YA	1948	G	C5-C6-N1	5.00	114.00	111.50

There are no chirality outliers.

All (19) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
12	QL	47	LYS	Peptide
47	R4	38	LYS	Peptide
51	R8	30	ARG	Peptide
51	R8	35	GLN	Peptide
25	RE	21	VAL	Peptide
28	RH	127	GLU	Peptide
28	RH	153	LYS	Peptide
29	RI	134	PRO	Peptide
12	XL	47	LYS	Peptide
45	Y2	17	SER	Peptide
51	Y8	30	ARG	Peptide
51	Y8	51	ALA	Peptide
25	YE	21	VAL	Peptide
26	YF	47	GLY	Peptide
28	YH	127	GLU	Peptide
28	YH	153	LYS	Peptide
35	YS	109	GLY	Peptide
42	YZ	181	GLU	Peptide
42	YZ	61	LEU	Peptide

5.2 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 hydrogens added by MolProbity. The Clashes column lists the number of clashes within the asymmetric unit, and the number in parentheses is this value normalized per 1000 atoms of the molecule in the chain. The Symm-Clashes column gives symmetry related clashes, in the same way as for the Clashes column.

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	QA	32247	0	16277	775	0
1	XA	32249	0	16279	824	0
2	QB	1924	0	1975	64	0
2	XB	1924	0	1975	83	0
3	QC	1605	0	1668	50	0
3	XC	1605	0	1668	63	0
4	QD	1703	0	1763	68	0
4	XD	1703	0	1764	48	0
5	QE	1155	0	1213	36	0
5	XE	1155	0	1213	43	0
6	QF	843	0	857	20	0
6	XF	843	0	857	23	0
7	QG	1257	0	1296	41	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
7	XG	1257	0	1296	30	0
8	QH	1116	0	1177	40	0
8	XH	1116	0	1177	32	0
9	QI	1010	0	1037	43	0
9	XI	1010	0	1037	60	0
10	QJ	801	0	849	50	0
10	XJ	801	0	849	40	0
11	QK	885	0	904	29	0
11	XK	885	0	904	33	0
12	QL	975	0	1062	43	0
12	XL	975	0	1062	47	0
13	QM	964	0	1034	46	0
13	XM	964	0	1034	62	0
14	QN	492	0	529	27	0
14	XN	492	0	529	23	0
15	QO	734	0	771	23	0
15	XO	734	0	771	22	0
16	QP	705	0	725	21	0
16	XP	705	0	725	29	0
17	QQ	834	0	904	26	0
17	XQ	834	0	904	20	0
18	QR	574	0	644	13	0
18	XR	574	0	644	21	0
19	QS	674	0	699	39	0
19	XS	674	0	699	55	0
20	QT	763	0	861	25	0
20	XT	763	0	861	40	0
21	QU	217	0	234	12	0
21	XU	217	0	234	8	0
22	RA	62071	0	31292	1370	0
22	YA	62091	0	31301	1336	1
23	RB	2573	0	1306	57	0
23	YB	2573	0	1306	64	1
24	RD	2115	0	2195	107	0
24	YD	2115	0	2195	106	0
25	RE	1568	0	1634	67	0
25	YE	1568	0	1634	68	0
26	RF	1585	0	1632	76	0
26	YF	1585	0	1632	64	0
27	RG	1474	0	1535	62	0
27	YG	1474	0	1535	69	0
28	RH	1307	0	1382	67	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
28	YH	1307	0	1382	62	0
29	RI	1136	0	1223	84	0
29	YI	1136	0	1223	73	0
30	RN	1104	0	1180	38	0
30	YN	1104	0	1180	51	0
31	RO	933	0	996	23	0
31	YO	933	0	996	25	0
32	RP	1145	0	1227	79	0
32	YP	1145	0	1228	95	0
33	RQ	1122	0	1179	58	0
33	YQ	1122	0	1179	49	0
34	RR	968	0	1033	48	0
34	YR	968	0	1033	37	0
35	RS	882	0	943	45	0
35	YS	882	0	943	43	0
36	RT	1141	0	1202	51	0
36	YT	1141	0	1202	56	0
37	RU	964	0	1022	36	0
37	YU	964	0	1022	54	0
38	RV	779	0	852	24	0
38	YV	779	0	852	43	0
39	RW	900	0	964	28	0
39	YW	900	0	964	26	0
40	RX	725	0	778	31	0
40	YX	725	0	778	24	0
41	RY	785	0	878	52	0
41	YY	785	0	878	43	0
42	RZ	1461	0	1493	96	0
42	YZ	1461	0	1493	104	0
43	R0	648	0	671	37	0
43	Y0	648	0	672	41	0
44	R1	763	0	848	32	0
44	Y1	763	0	848	36	0
45	R2	581	0	629	14	0
45	Y2	581	0	629	23	0
46	R3	469	0	518	7	0
46	Y3	469	0	518	15	0
47	R4	581	0	574	30	0
47	Y4	581	0	574	76	0
48	R5	459	0	480	30	0
48	Y5	459	0	480	31	0
49	R6	424	0	450	30	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
49	Y6	424	0	450	29	0
50	R7	430	0	480	17	0
50	Y7	430	0	480	19	0
51	R8	517	0	582	36	0
51	Y8	517	0	582	43	0
52	R9	307	0	338	14	0
52	Y9	307	0	338	17	0
53	QV	1644	0	836	29	0
53	XV	1644	0	836	36	0
54	QX	173	0	88	3	0
54	XX	173	0	88	3	0
55	QY	174	0	88	4	0
55	XY	174	0	88	2	0
56	Z6	74	0	51	0	0
56	Z8	74	0	51	4	0
57	QA	42	0	45	1	0
57	XA	42	0	45	2	0
58	QA	76	0	0	0	0
58	QF	1	0	0	0	0
58	QM	1	0	0	0	0
58	QV	1	0	0	0	0
58	R0	1	0	0	0	0
58	R5	1	0	0	0	0
58	R8	2	0	0	0	0
58	RA	247	0	0	0	0
58	RB	2	0	0	0	0
58	RD	1	0	0	0	0
58	RE	2	0	0	0	0
58	RF	1	0	0	0	0
58	RP	2	0	0	0	0
58	XA	82	0	0	0	0
58	XB	1	0	0	0	0
58	XM	1	0	0	0	0
58	XV	2	0	0	0	0
58	Y0	1	0	0	0	0
58	Y5	1	0	0	0	0
58	YA	265	0	0	0	0
58	YB	3	0	0	0	0
58	YD	2	0	0	0	0
58	YP	2	0	0	0	0
58	YQ	1	0	0	0	0
58	YX	1	0	0	0	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
59	QD	1	0	0	0	0
59	QN	1	0	0	0	0
59	XD	1	0	0	0	0
59	XN	1	0	0	0	0
All	All	291730	0	198220	7613	1

Clashscore is defined as the number of clashes calculated for the entry per 1000 atoms (including hydrogens) of the entry. The overall clashscore for this entry is 16.

All (7613) close contacts within the same asymmetric unit are listed below.

Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:RA:2701:C:H3'	22:RA:2702:U:H5''	1.27	1.07
1:XA:963:G:N3	10:XJ:55:LYS:NZ	2.02	1.07
24:YD:43:ARG:NH1	24:YD:44:ASN:OD1	1.86	1.06
22:YA:2701:C:H3'	22:YA:2702:U:H5''	1.38	1.05
22:YA:1138:G:H21	30:YN:106:MET:HE3	1.22	1.04
22:RA:1310:G:OP2	50:R7:9:ARG:NH1	1.91	1.01
13:XM:3:ARG:HB3	47:Y4:34:GLU:HB3	1.42	1.01
22:YA:498:G:N3	41:YY:47:LYS:NZ	2.07	1.01
22:YA:571:A:H5'	22:YA:2030:A:H62	1.26	1.00
1:XA:1298:C:OP2	7:XG:114:ARG:NH2	1.93	0.99
1:QA:1244:C:H42	1:QA:1293:G:H1	1.10	0.98
22:RA:617:G:OP1	26:RF:40:GLN:NE2	1.95	0.98
22:YA:140:A:H8	22:YA:1408:C:HO2'	1.00	0.97
4:QD:9:CYS:SG	4:QD:22:LYS:CE	2.52	0.97
13:XM:7:VAL:HG21	27:YG:113:ARG:O	1.64	0.97
4:QD:9:CYS:SG	4:QD:31:CYS:O	2.23	0.96
1:XA:1298:C:H2'	7:XG:114:ARG:HH12	1.29	0.96
22:RA:768:G:O2'	22:RA:1379:A:N6	1.99	0.96
22:RA:2392:A:H8	32:RP:60:MET:HG2	1.25	0.96
22:RA:1019:U:H3	22:RA:1142(A):A:H62	1.11	0.95
1:XA:1305:G:HO2'	1:XA:1306:A:H8	1.09	0.95
22:YA:631:A:OP2	51:Y8:46:ARG:NH2	1.99	0.95
4:QD:9:CYS:SG	4:QD:22:LYS:HE3	2.07	0.95
22:RA:2068:U:H3	22:RA:2430:A:H2	1.06	0.94
1:XA:1299:A:H2'	1:XA:1301:U:H1'	1.48	0.94
22:YA:483:A:H4'	41:YY:49:VAL:HA	1.48	0.94
42:YZ:9:TYR:HE2	42:YZ:35:ARG:HD3	1.33	0.94
1:QA:559:A:H4'	1:QA:560:U:H3'	1.49	0.93
2:QB:185:ILE:HG22	2:QB:199:TYR:HB2	1.48	0.93
1:XA:1002:G:H1	1:XA:1038:C:H42	1.16	0.93
22:YA:2580:U:H4'	25:YE:130:GLY:HA3	1.51	0.93

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:YA:2287:A:H62	22:YA:2344:U:H3	1.14	0.92
22:RA:900:A:H3'	22:RA:901:A:H8	1.35	0.92
22:RA:242:G:H5''	51:R8:62:LEU:HD13	1.50	0.92
32:RP:58:THR:O	32:RP:61:ARG:NE	2.03	0.92
13:QM:3:ARG:HB3	47:R4:34:GLU:HB3	1.52	0.91
25:YE:24:THR:HG21	25:YE:188:VAL:HG11	1.52	0.91
22:YA:993:G:OP1	37:YU:50:ARG:NH2	2.04	0.91
23:RB:22:U:H3	23:RB:61:G:H1	1.16	0.91
22:YA:674:G:H1'	26:YF:74:ARG:HD3	1.51	0.90
22:YA:1496:A:H8	22:YA:1577:C:HO2'	1.18	0.90
22:YA:2470:G:H5'	33:YQ:56:ARG:HH22	1.35	0.90
1:XA:1094:G:O2'	1:XA:1095:U:OP2	1.88	0.90
22:RA:442:G:H1'	26:RF:48:THR:HG21	1.51	0.90
48:R5:55:ARG:HG3	48:R5:57:VAL:H	1.37	0.89
13:XM:3:ARG:HG2	47:Y4:34:GLU:HG2	1.55	0.89
25:YE:50:GLY:HA2	25:YE:77:ILE:HA	1.53	0.89
29:YI:29:TYR:HD2	29:YI:30:LEU:HD23	1.39	0.89
41:YY:79:CYS:SG	41:YY:80:GLY:N	2.45	0.88
1:QA:963:G:N3	10:QJ:55:LYS:NZ	2.21	0.88
22:YA:2820:A:C8	25:YE:109:LYS:HE2	2.08	0.88
36:RT:26:ASP:HB3	36:RT:92:GLY:H	1.36	0.88
42:YZ:151:HIS:HB3	42:YZ:170:THR:HA	1.53	0.88
53:XV:6:G:H1	53:XV:67:C:H42	1.17	0.88
33:YQ:134:ARG:NH2	42:YZ:119:GLU:OE2	2.05	0.88
32:RP:64:LYS:O	32:RP:66:GLY:N	2.07	0.87
22:YA:1728:G:N1	22:YA:1730:U:OP2	2.07	0.87
22:RA:1464:C:HO2'	22:RA:1528:A:H8	1.23	0.87
29:YI:71:ILE:HG23	29:YI:72:LEU:HD13	1.54	0.87
22:YA:910:A:H62	33:YQ:12:GLN:HA	1.39	0.87
32:YP:58:THR:O	32:YP:61:ARG:NE	2.08	0.87
22:YA:122:G:N2	22:YA:129:C:O2	2.08	0.87
41:YY:76:CYS:HB3	41:YY:96:ILE:HD13	1.57	0.87
1:QA:1410:G:H1	1:QA:1490:C:H42	1.23	0.87
48:Y5:40:LYS:HG2	48:Y5:47:PRO:HD2	1.56	0.86
32:RP:19:VAL:HG13	32:RP:21:ARG:H	1.40	0.86
4:XD:157:LEU:O	4:XD:161:ASN:ND2	2.07	0.86
1:QA:1124:G:H3'	1:QA:1145:C:N4	1.89	0.86
22:RA:708:C:H42	22:RA:723:G:H1	1.20	0.86
1:QA:448:A:OP2	1:QA:485:G:N2	2.08	0.86
22:YA:1844:C:H2'	22:YA:1845:G:H8	1.41	0.86
1:QA:1243:C:OP2	21:QU:10:ARG:NH2	2.09	0.86
22:RA:674:G:H1'	26:RF:74:ARG:HD3	1.57	0.86

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:RA:2502:G:H5''	22:RA:2503:A:H5''	1.57	0.86
24:RD:43:ARG:NH1	24:RD:44:ASN:OD1	2.08	0.86
22:RA:1061:U:H5'	22:RA:1070:A:H1'	1.56	0.86
22:YA:265:A:N6	22:YA:427:U:O2'	2.07	0.86
5:QE:50:GLU:HB3	5:QE:53:LEU:HD13	1.59	0.85
22:YA:2015:A:H1'	48:Y5:2:ALA:HA	1.57	0.85
22:YA:2593:U:H2'	22:YA:2594:C:H6	1.39	0.85
22:RA:2701:C:H3'	22:RA:2702:U:C5'	2.04	0.85
1:XA:58:C:O2'	1:XA:388:G:N7	2.09	0.85
1:XA:1346:A:OP1	9:XI:120:ARG:NH1	2.09	0.85
23:RB:83:G:H1	23:RB:93:C:H42	1.24	0.85
1:QA:1127:G:N1	1:QA:1145:C:O2	2.08	0.84
22:RA:2839:G:H5'	34:RR:46:GLY:HA2	1.59	0.84
41:RY:79:CYS:SG	41:RY:80:GLY:N	2.45	0.84
39:YW:18:ARG:HG3	39:YW:76:VAL:HG13	1.58	0.84
22:RA:2106:G:H1	22:RA:2183:C:H42	1.21	0.84
1:QA:1298:C:OP2	7:QG:114:ARG:NH2	2.10	0.84
22:YA:270(T):G:H5''	44:Y1:97:LEU:HD22	1.59	0.84
22:YA:67:U:H3	22:YA:74:A:H2	1.25	0.84
36:YT:26:ASP:HB3	36:YT:92:GLY:H	1.42	0.84
22:RA:1187:G:H5''	38:RV:81:TYR:CE2	2.13	0.83
30:YN:4:TYR:O	37:YU:64:ARG:NH1	2.10	0.83
22:RA:2107:C:H42	22:RA:2182:G:H1	1.26	0.83
1:XA:448:A:OP2	1:XA:485:G:N2	2.08	0.83
2:QB:80:ILE:HD11	2:QB:208:ILE:HG23	1.58	0.83
27:YG:27:ASN:HB3	27:YG:30:GLU:HG3	1.60	0.83
1:QA:346:G:H1'	1:QA:347:G:H5'	1.58	0.83
22:YA:2849:U:H5	36:YT:93:ARG:HH12	1.26	0.83
32:YP:19:VAL:HG13	32:YP:21:ARG:H	1.41	0.83
48:R5:4:HIS:HB3	48:R5:5:PRO:HD3	1.61	0.82
37:YU:90:VAL:O	37:YU:92:ARG:N	2.11	0.82
22:RA:1285:G:N2	22:RA:1329:U:OP1	2.10	0.82
22:YA:1063:G:H22	22:YA:1076:C:H1'	1.44	0.82
22:YA:462:C:H42	22:YA:467:G:H1	1.26	0.82
1:QA:677:U:H3	1:QA:713:G:H22	1.28	0.82
1:XA:1342:C:H4'	9:XI:125:TYR:HB3	1.60	0.82
26:RF:197:ASP:O	26:RF:199:TRP:N	2.12	0.82
29:RI:4:ILE:HD11	29:RI:44:LEU:HD12	1.62	0.82
22:YA:994:C:H3'	37:YU:54:LYS:HE3	1.61	0.82
48:R5:16:ARG:NH1	48:R5:17:ASP:OD1	2.13	0.82
44:Y1:7:ILE:HD12	44:Y1:62:VAL:HG11	1.62	0.82
22:YA:2115:G:N2	22:YA:2165:G:N7	2.27	0.82

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:RA:676:A:H8	22:RA:2069:G:H21	1.28	0.82
41:RY:29:GLU:HB3	41:RY:38:ILE:HG12	1.62	0.82
22:YA:2099:U:H3	22:YA:2190:G:H1	1.25	0.82
32:RP:62:LEU:HD21	51:R8:25:MET:HB2	1.61	0.81
22:RA:1053:C:H42	22:RA:1106:G:H1	1.28	0.81
29:RI:81:VAL:HG21	29:RI:142:VAL:HG12	1.62	0.81
48:Y5:16:ARG:NH1	48:Y5:17:ASP:OD1	2.13	0.81
22:YA:286:C:H2'	22:YA:287:C:H6	1.43	0.81
45:Y2:47:ASN:O	45:Y2:49:LYS:N	2.12	0.81
42:YZ:94:GLU:HB2	42:YZ:130:PRO:HD2	1.63	0.81
22:RA:270(R):G:N3	44:R1:78:LYS:NZ	2.26	0.81
2:XB:69:LEU:HB3	2:XB:162:ILE:HG22	1.61	0.81
22:YA:250:G:OP2	51:Y8:13:ARG:NH2	2.13	0.81
30:YN:4:TYR:OH	30:YN:7:LYS:NZ	2.14	0.81
26:RF:103:LYS:HA	26:RF:106:ARG:HG3	1.63	0.81
53:QV:6:G:H1	53:QV:67:C:H42	1.25	0.81
45:R2:47:ASN:O	45:R2:49:LYS:N	2.13	0.81
22:RA:2107:C:N3	22:RA:2182:G:N2	2.26	0.81
1:XA:1192:C:OP2	3:XC:4:LYS:NZ	2.14	0.81
22:RA:631:A:OP2	51:R8:46:ARG:NH2	2.13	0.81
22:RA:249:C:O2	51:R8:12:LYS:NZ	2.13	0.81
1:XA:1281:U:OP2	1:XA:1282:C:N4	2.14	0.81
13:XM:3:ARG:HG2	47:Y4:34:GLU:CG	2.11	0.81
22:YA:138:G:N2	40:YX:44:GLU:OE2	2.14	0.81
22:YA:237:C:N4	22:YA:260:G:O6	2.14	0.81
22:RA:685:A:H5''	22:RA:788:A:H62	1.46	0.80
13:QM:14:ARG:H	13:QM:44:ARG:HD3	1.45	0.80
25:RE:201:THR:HG22	25:RE:203:LYS:H	1.45	0.80
36:RT:24:PRO:HA	36:RT:49:VAL:HG13	1.61	0.80
22:YA:984:A:H5''	22:YA:985:C:H5	1.46	0.80
22:RA:2712:U:O2'	22:RA:2712(A):A:O5'	1.97	0.80
30:RN:42:TRP:O	37:RU:64:ARG:NH2	2.15	0.80
43:R0:53:MET:HG3	43:R0:59:LEU:HD23	1.62	0.80
25:RE:50:GLY:HA2	25:RE:77:ILE:HA	1.64	0.80
22:YA:1310:G:OP2	50:Y7:9:ARG:NH1	2.14	0.80
22:YA:581:C:H2'	22:YA:582:G:H8	1.46	0.80
41:YY:76:CYS:SG	41:YY:77:PRO:HD2	2.22	0.80
1:QA:1346:A:H5''	9:QI:120:ARG:HH12	1.47	0.80
13:QM:3:ARG:HA	13:QM:9:ILE:HG21	1.62	0.80
22:RA:1667:G:O2'	22:RA:1991:U:O4	2.00	0.80
22:RA:27:G:HO2'	22:RA:28:A:H8	1.30	0.80
1:QA:1129:C:N4	1:QA:1133:G:O6	2.15	0.80

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
42:RZ:182:LYS:H	42:RZ:182:LYS:HD3	1.45	0.80
22:YA:869:G:N2	22:YA:908:C:O2	2.15	0.80
1:XA:257:G:H1	1:XA:269:C:H42	1.28	0.79
13:XM:65:LYS:HD3	13:XM:69:GLU:HG3	1.63	0.79
22:YA:819:A:OP2	22:YA:1187:G:N2	2.15	0.79
22:YA:620:G:H4'	22:YA:621:A:H5'	1.63	0.79
22:YA:879:G:O6	22:YA:898:C:N4	2.14	0.79
42:YZ:60:GLU:HA	42:YZ:66:SER:HA	1.63	0.79
1:QA:337:C:H2'	1:QA:338:A:H8	1.47	0.79
22:RA:468:G:H4'	26:RF:62:ARG:HH12	1.46	0.79
22:YA:1479:G:N7	22:YA:1510:A:N6	2.30	0.79
29:YI:82:ARG:HD3	29:YI:146:ALA:HB3	1.62	0.79
40:YX:67:GLY:O	40:YX:69:TYR:N	2.15	0.79
22:RA:996:A:H4'	37:RU:92:ARG:HE	1.45	0.79
34:RR:104:ARG:HD2	34:RR:111:LEU:HD21	1.63	0.79
3:XC:32:LEU:HD13	3:XC:59:ARG:HD3	1.64	0.79
20:XT:33:ILE:O	20:XT:37:SER:OG	2.00	0.79
29:RI:41:GLU:HA	29:RI:44:LEU:HB2	1.64	0.79
15:QO:26:GLU:OE2	15:QO:77:ARG:NH1	2.16	0.79
22:RA:301:G:N2	22:RA:316:C:O2	2.14	0.79
22:YA:1422:G:N2	22:YA:1498:C:O2	2.14	0.79
11:QK:21:ILE:HB	11:QK:84:VAL:HG12	1.65	0.79
22:YA:1798:U:H5'	24:YD:259:THR:HG22	1.64	0.79
22:YA:2233:U:H2'	22:YA:2234:G:C8	2.18	0.79
22:RA:507:A:H5''	22:RA:508:G:H5'	1.64	0.79
2:XB:77:ALA:HB2	2:XB:211:ILE:HD13	1.64	0.79
3:XC:59:ARG:HH12	3:XC:97:LYS:HE3	1.47	0.79
22:YA:271:G:H2'	22:YA:272:G:H8	1.46	0.79
1:XA:1298:C:H2'	7:XG:114:ARG:NH1	1.96	0.78
1:XA:134:A:H61	16:XP:25:ARG:NH1	1.82	0.78
22:RA:2580:U:H4'	25:RE:130:GLY:HA3	1.63	0.78
3:QC:79:ARG:CZ	11:XK:99:GLN:HB2	2.12	0.78
22:YA:2015:A:N3	48:Y5:2:ALA:N	2.30	0.78
4:QD:27:TYR:OH	6:XF:15:ASP:OD2	2.01	0.78
53:QV:40:C:H2'	53:QV:41:C:H6	1.49	0.78
4:XD:9:CYS:SG	4:XD:22:LYS:NZ	2.52	0.78
22:YA:2292:C:P	35:YS:17:ARG:HH22	2.06	0.78
30:RN:95:PRO:O	30:RN:97:ARG:N	2.15	0.78
47:Y4:1:MET:SD	47:Y4:6:HIS:NE2	2.56	0.78
33:YQ:60:ARG:HH11	42:YZ:113:ALA:HB3	1.47	0.78
1:QA:976:G:N2	1:QA:1362(A):C:OP2	2.15	0.78
1:QA:191:G:O2'	20:QT:101:GLY:O	2.01	0.78

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:QA:191:G:H1'	20:QT:105:SER:HB3	1.66	0.78
32:RP:126:VAL:HG12	32:RP:147:LEU:HD21	1.63	0.78
22:YA:1055:G:H1	22:YA:1104:C:H42	1.32	0.78
22:YA:1568:G:H4'	24:YD:59:LYS:HB3	1.65	0.78
1:QA:792:A:H4'	1:QA:793:U:O5'	1.84	0.78
20:QT:100:ILE:HG13	20:QT:102:GLY:H	1.48	0.78
22:RA:1542:G:O6	22:RA:1543:A:N6	2.17	0.78
24:RD:69:ARG:NH2	24:RD:128:GLY:O	2.17	0.78
22:YA:630:G:OP1	51:Y8:46:ARG:NH1	2.16	0.78
31:YO:88:ASN:HD21	31:YO:92:GLU:HB2	1.47	0.78
1:QA:542:G:OP1	4:QD:10:ARG:NH2	2.17	0.78
1:QA:885:G:O2'	1:QA:914:A:N1	2.16	0.78
1:QA:1292:U:OP1	7:QG:41:ARG:NH2	2.17	0.78
10:QJ:50:ILE:HA	10:QJ:60:ARG:HG2	1.66	0.78
1:XA:1263:C:N4	1:XA:1272:G:O6	2.15	0.78
22:YA:1434:A:H61	22:YA:1558:A:H62	1.29	0.78
13:XM:14:ARG:H	13:XM:44:ARG:HD3	1.49	0.77
1:QA:244:U:H5'	1:QA:244:U:H6	1.48	0.77
22:YA:1021:A:OP2	30:YN:65:LYS:NZ	2.17	0.77
1:QA:1196:U:O2	3:QC:162:GLN:NE2	2.17	0.77
3:XC:20:SER:HB2	3:XC:40:ARG:HH22	1.50	0.77
22:RA:2011:U:OP2	39:RW:16:LYS:NZ	2.15	0.77
24:YD:69:ARG:NH2	24:YD:128:GLY:O	2.18	0.77
42:RZ:94:GLU:HB2	42:RZ:130:PRO:HD2	1.65	0.77
26:RF:66:PRO:O	26:RF:68:LYS:N	2.18	0.77
1:XA:1130:A:O2'	9:XI:3:GLN:NE2	2.16	0.77
30:YN:95:PRO:O	30:YN:97:ARG:N	2.18	0.77
1:QA:1127:G:H22	1:QA:1145:C:H1'	1.47	0.77
43:R0:26:TYR:N	43:R0:29:GLN:OE1	2.18	0.77
22:RA:484:C:O2	22:RA:496:G:N2	2.17	0.77
1:XA:388:G:O2'	1:XA:389:A:OP2	2.01	0.77
32:YP:47:ASP:OD1	32:YP:50:ARG:NH2	2.17	0.77
22:RA:1454:U:OP1	34:RR:77:ARG:NH1	2.18	0.76
22:YA:180:G:N2	22:YA:215:G:O6	2.19	0.76
22:RA:2293:C:H5''	35:RS:89:ARG:HH12	1.51	0.76
22:RA:483:A:H4'	41:RY:49:VAL:HA	1.67	0.76
1:XA:1077:G:N2	1:XA:1080:A:OP2	2.17	0.76
29:RI:92:VAL:HG13	29:RI:120:ILE:HG23	1.67	0.76
22:RA:2392:A:C8	32:RP:60:MET:HG2	2.16	0.76
13:XM:62:ASN:HA	47:Y4:49:PHE:CD2	2.21	0.76
25:RE:9:VAL:HB	25:RE:25:VAL:HG23	1.66	0.76
1:XA:1094:G:HO2'	1:XA:1095:U:P	2.08	0.76

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:YA:443:A:N7	26:YF:45:ARG:HD2	2.00	0.76
1:QA:662:G:O2'	1:QA:836:G:OP1	2.04	0.76
34:RR:3:HIS:O	34:RR:5:LYS:N	2.19	0.76
42:RZ:79:ARG:HB3	42:RZ:80:ARG:HD3	1.66	0.76
16:XP:45:THR:HG22	16:XP:47:ASP:H	1.51	0.76
22:YA:2134:A:OP2	22:YA:2157:G:N2	2.19	0.76
35:RS:62:LYS:HB3	35:RS:97:ARG:HD3	1.67	0.76
19:XS:5:LEU:HD21	47:Y4:66:SER:HB2	1.68	0.76
22:YA:2415:G:H4'	32:YP:67:MET:N	2.00	0.76
22:RA:2818:G:OP2	34:RR:42:LYS:NZ	2.18	0.76
13:XM:61:GLU:O	47:Y4:49:PHE:CE2	2.38	0.76
34:YR:74:LYS:O	34:YR:76:VAL:N	2.18	0.76
1:QA:1002:G:H2'	1:QA:1003:G:H8	1.51	0.76
26:YF:197:ASP:O	26:YF:199:TRP:N	2.19	0.76
28:YH:153:LYS:HG2	28:YH:162:ILE:HG13	1.67	0.76
1:XA:523:A:H61	12:XL:92:ASP:HB2	1.51	0.75
22:RA:1059:G:O6	22:RA:1079:C:N4	2.18	0.75
41:RY:95:LYS:HB3	41:RY:100:ALA:HA	1.69	0.75
13:XM:3:ARG:CB	47:Y4:34:GLU:HB3	2.15	0.75
22:YA:581:C:H2'	22:YA:582:G:C8	2.22	0.75
42:RZ:150:LEU:HD23	42:RZ:171:ILE:HG13	1.68	0.75
1:XA:451:A:OP1	1:XA:481:G:N2	2.17	0.75
22:RA:2439:A:C8	22:RA:2439:A:H5'	2.21	0.75
36:YT:57:PHE:O	36:YT:58:ASN:ND2	2.19	0.75
1:QA:689:C:OP1	11:QK:27:ASN:ND2	2.19	0.75
41:RY:87:LYS:HD3	41:RY:92:ASN:HB3	1.69	0.75
1:XA:1352:C:H42	1:XA:1370:G:H1	1.35	0.75
1:XA:564:C:O2'	8:XH:91:ARG:NH2	2.20	0.75
36:YT:27:THR:HG23	36:YT:90:GLN:HB3	1.67	0.75
1:QA:1316:G:H22	1:QA:1319:A:H5''	1.52	0.75
1:QA:979:C:OP1	1:QA:1223:C:N4	2.19	0.75
49:R6:41:PRO:HG2	49:R6:45:LYS:H	1.52	0.75
22:RA:2572:A:H5''	22:RA:2574:G:H4'	1.68	0.75
32:RP:14:LYS:O	32:RP:16:ARG:N	2.20	0.75
42:RZ:156:LYS:HG2	42:RZ:158:PRO:HD3	1.66	0.75
1:XA:559:A:OP1	5:XE:126:ARG:NH2	2.19	0.75
37:YU:92:ARG:O	37:YU:94:ASN:N	2.20	0.75
42:YZ:97:GLU:HB3	42:YZ:125:LEU:HD11	1.68	0.75
5:QE:102:ALA:HB1	5:QE:106:PRO:HG2	1.69	0.75
4:QD:57:ARG:HH22	5:QE:107:ARG:HD3	1.50	0.75
38:YV:24:LYS:HA	38:YV:92:THR:HG23	1.68	0.75
50:R7:9:ARG:HH21	50:R7:48:LYS:HD2	1.52	0.74

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:RA:2298:A:H62	22:RA:2318:G:H8	1.32	0.74
22:RA:984:A:H5''	22:RA:985:C:H5	1.52	0.74
34:RR:56:LYS:NZ	34:RR:90:ARG:O	2.20	0.74
41:RY:86:ARG:HB2	41:RY:95:LYS:HD2	1.69	0.74
30:YN:13:TRP:HB2	30:YN:133:GLN:HG3	1.69	0.74
1:QA:1305:G:HO2'	1:QA:1306:A:H8	1.35	0.74
5:QE:7:GLU:HG2	5:QE:112:LEU:HD22	1.69	0.74
34:RR:74:LYS:O	34:RR:76:VAL:N	2.18	0.74
1:XA:793:U:O2	1:XA:1516:G:H4'	1.87	0.74
22:RA:1614:A:H62	39:RW:93:ALA:HB2	1.52	0.74
29:RI:8:PRO:HD3	29:RI:15:VAL:HG13	1.68	0.74
1:XA:581:G:N2	1:XA:760:G:N7	2.35	0.74
17:XQ:66:SER:O	17:XQ:70:ARG:NH1	2.21	0.74
29:YI:64:GLU:O	29:YI:67:ARG:NH2	2.20	0.74
35:YS:78:LEU:HD21	35:YS:108:GLY:HA3	1.68	0.74
1:XA:931:C:O2	1:XA:1386:G:N2	2.18	0.74
22:YA:1209:G:H21	22:YA:1210:A:H62	1.32	0.74
22:YA:1630(A):C:N4	22:YA:1635:G:O6	2.16	0.74
42:YZ:101:PRO:HA	42:YZ:123:ASP:HB3	1.70	0.74
27:RG:34:LEU:HB2	27:RG:172:LEU:HD21	1.69	0.74
2:XB:178:ARG:HG3	8:XH:72:PRO:HA	1.69	0.74
22:YA:1996:C:OP1	31:YO:31:LYS:NZ	2.20	0.74
1:QA:1204:A:OP1	14:QN:3:ARG:NH2	2.20	0.74
22:RA:620:G:H4'	22:RA:621:A:H5''	1.68	0.74
1:XA:1279:A:O2'	1:XA:1282:C:N4	2.20	0.74
1:XA:356:A:H2'	1:XA:357:G:H8	1.51	0.74
1:XA:606:G:H1	1:XA:631:G:H5''	1.51	0.74
1:QA:147:G:H1	1:QA:175:C:H42	1.34	0.74
8:QH:29:SER:HB3	8:QH:32:LYS:HG3	1.69	0.74
22:YA:2444:G:OP2	26:YF:68:LYS:HE3	1.88	0.74
36:YT:51:ARG:HG2	36:YT:98:LYS:HG3	1.70	0.74
43:Y0:53:MET:HB3	43:Y0:59:LEU:HD23	1.70	0.74
22:YA:2701:C:H3'	22:YA:2702:U:C5'	2.17	0.74
27:YG:161:THR:HG22	27:YG:163:ALA:H	1.53	0.74
1:QA:1023:G:H3'	1:QA:1024:G:H5''	1.70	0.74
1:QA:411:A:C5	1:QA:413:G:H1'	2.23	0.74
25:RE:62:PRO:O	25:RE:64:LYS:N	2.20	0.74
22:YA:1688:U:O2	22:YA:1700:A:H5''	1.88	0.74
23:YB:28:C:OP1	35:YS:36:TYR:OH	2.06	0.74
42:YZ:144:LEU:HD12	42:YZ:174:VAL:HG23	1.70	0.74
22:RA:602:G:O2'	22:RA:604:G:O2'	2.05	0.74
22:RA:140:A:H8	22:RA:1408:C:HO2'	1.35	0.73

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
5:QE:100:VAL:O	5:QE:107:ARG:NH2	2.20	0.73
43:R0:65:GLY:HA3	43:R0:83:PRO:HA	1.70	0.73
22:RA:2115:G:N2	22:RA:2165:G:N7	2.34	0.73
22:RA:1080:C:N4	22:RA:1088:A:OP2	2.16	0.73
22:RA:259:G:O2'	22:RA:621:A:O2'	2.04	0.73
1:XA:1286:A:H5''	21:XU:26:LYS:HD2	1.70	0.73
53:XV:23:C:H2'	53:XV:24:U:H6	1.51	0.73
47:Y4:9:LEU:H	47:Y4:27:THR:HG23	1.53	0.73
22:YA:776:G:H4'	22:YA:777:A:H5''	1.70	0.73
23:YB:15:A:H5'	23:YB:16:G:C8	2.22	0.73
40:YX:27:THR:HB	40:YX:80:ILE:HB	1.69	0.73
22:RA:2509:G:H1	22:RA:2579:C:H42	1.35	0.73
22:YA:1190:G:OP1	32:YP:30:THR:OG1	2.05	0.73
32:YP:14:LYS:O	32:YP:16:ARG:N	2.22	0.73
22:RA:2112:G:O6	22:RA:2169:A:N6	2.20	0.73
29:RI:29:TYR:O	29:RI:33:ARG:HB2	1.88	0.73
1:XA:396:G:O2'	1:XA:398:C:OP1	2.07	0.73
22:YA:1359:A:N6	22:YA:1372:U:H3	1.86	0.73
22:RA:2245:U:H5'	22:RA:2246:G:H5'	1.71	0.73
23:RB:28:C:N4	23:RB:56:G:O6	2.17	0.73
4:XD:7:PRO:HB2	4:XD:10:ARG:HD2	1.69	0.73
1:QA:1244:C:N4	1:QA:1293:G:H1	1.83	0.73
22:RA:2074:U:H2'	22:RA:2075:U:C6	2.24	0.73
28:YH:86:GLU:HG3	28:YH:165:ALA:H	1.53	0.73
33:YQ:104:PHE:HE1	33:YQ:125:LEU:HD11	1.53	0.73
22:YA:1754:C:OP1	36:YT:96:ARG:NH1	2.21	0.73
33:YQ:111:GLU:OE1	33:YQ:133:ARG:NH2	2.22	0.73
22:RA:1086:A:O2'	22:RA:1087:G:N7	2.22	0.73
22:YA:273(C):C:H42	22:YA:363(C):G:H1	1.34	0.73
33:YQ:24:GLY:O	33:YQ:26:TYR:N	2.19	0.73
4:QD:175:SER:HB3	4:QD:186:LEU:HD21	1.69	0.72
22:RA:530:G:O2'	22:RA:532:A:N7	2.22	0.72
1:XA:674:G:H2'	1:XA:675:A:H8	1.54	0.72
7:QG:9:VAL:HG13	7:QG:94:ARG:HH21	1.54	0.72
53:QV:40:C:H2'	53:QV:41:C:C6	2.24	0.72
22:RA:273:G:H1	22:RA:364:C:H42	1.38	0.72
22:YA:1509:C:N3	22:YA:1511:A:N6	2.37	0.72
1:QA:1055:A:O2'	3:QC:161:GLU:OE2	2.07	0.72
3:QC:58:GLU:HB2	3:QC:65:ALA:HB3	1.70	0.72
22:RA:155:C:H42	22:RA:171:G:H1	1.37	0.72
22:RA:774:A:O2'	22:RA:775:G:O5'	2.08	0.72
3:QC:20:SER:HB2	3:QC:40:ARG:HH22	1.54	0.72

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
43:R0:72:ARG:HB2	43:R0:75:LEU:HB2	1.70	0.72
22:RA:1449:A:O2'	22:RA:1530:G:N2	2.22	0.72
22:RA:1754:C:OP1	36:RT:96:ARG:NH1	2.18	0.72
22:RA:2328:A:H2'	22:RA:2329:G:C8	2.25	0.72
22:RA:239:U:H3	22:RA:258:G:H1	1.37	0.72
22:RA:2540:C:O2'	22:RA:2740:A:N3	2.23	0.72
23:RB:65:C:H41	23:RB:108:C:H2'	1.53	0.72
47:Y4:48:ARG:HH12	47:Y4:52:THR:HG22	1.54	0.72
29:YI:68:LEU:HA	29:YI:71:ILE:HG22	1.71	0.72
1:QA:957:U:H4'	19:QS:79:THR:HB	1.72	0.72
22:RA:1474:C:H42	22:RA:1519:G:H1	1.38	0.72
22:YA:530:G:O2'	22:YA:532:A:N7	2.23	0.72
45:Y2:42:GLY:O	45:Y2:44:LEU:N	2.20	0.72
27:YG:6:ALA:H	47:Y4:23:GLU:HG2	1.54	0.72
22:YA:2287:A:N6	22:YA:2344:U:H3	1.87	0.72
24:YD:35:LYS:HD2	24:YD:104:TYR:CE1	2.25	0.72
22:RA:1856:G:H1	22:RA:1886:C:H42	1.37	0.72
29:RI:88:ILE:HG12	29:RI:122:GLU:H	1.54	0.72
23:YB:60:C:H2'	23:YB:61:G:H8	1.55	0.72
27:YG:64:THR:HG23	27:YG:66:GLN:H	1.55	0.72
28:YH:129:THR:OG1	28:YH:129:THR:O	2.08	0.72
17:QQ:4:LYS:HE3	17:QQ:6:LEU:HD21	1.72	0.72
31:YO:47:ILE:HG13	31:YO:48:PRO:HD2	1.72	0.72
41:YY:51:VAL:HG13	41:YY:52:SER:H	1.54	0.72
42:YZ:53:ILE:HG22	42:YZ:71:VAL:HG13	1.72	0.72
1:QA:1286:A:H5''	21:QU:26:LYS:HD2	1.72	0.71
1:XA:1455:G:H5''	20:XT:31:SER:HB2	1.72	0.71
22:YA:1403:C:H5''	22:YA:1471:A:H1'	1.73	0.71
22:YA:242:G:H5''	51:Y8:62:LEU:HD13	1.72	0.71
42:YZ:151:HIS:HA	42:YZ:171:ILE:HG13	1.72	0.71
1:QA:1502:A:H2	1:QA:1505:G:H1	1.35	0.71
22:RA:1063:G:N2	22:RA:1076:C:O2'	2.23	0.71
22:RA:2364:C:OP1	43:R0:55:ARG:NH1	2.23	0.71
22:RA:27:G:N2	22:RA:513:A:OP2	2.23	0.71
42:RZ:76:LEU:HA	42:RZ:83:PRO:HA	1.71	0.71
5:XE:10:MET:HB3	5:XE:32:VAL:HG22	1.70	0.71
6:XF:50:TYR:OH	18:XR:74:ARG:O	2.06	0.71
22:YA:286:C:H2'	22:YA:287:C:C6	2.24	0.71
22:RA:2319:G:N1	22:RA:2334:G:OP2	2.22	0.71
9:XI:114:TYR:HE1	10:XJ:60:ARG:H	1.38	0.71
2:QB:115:LEU:HB2	2:QB:145:LEU:HD12	1.73	0.71
22:RA:997:G:OP1	37:RU:93:LYS:HD3	1.88	0.71

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
29:RI:2:LYS:HA	29:RI:20:ASP:HA	1.70	0.71
46:R3:8:LEU:HD13	46:R3:31:LEU:HD23	1.71	0.71
49:R6:17:LYS:HB3	49:R6:44:ARG:HH22	1.55	0.71
22:RA:259:G:H21	22:RA:621:A:H8	1.35	0.71
22:YA:1062:G:H2'	22:YA:1063:G:C8	2.25	0.71
30:YN:89:LYS:O	30:YN:93:THR:HG22	1.90	0.71
1:QA:404:U:H2'	1:QA:405:U:H6	1.53	0.71
25:YE:170:LEU:HD21	25:YE:187:ALA:HB3	1.72	0.71
4:QD:28:SER:HB3	4:QD:29:PRO:HD3	1.72	0.71
27:RG:61:ALA:HB2	27:RG:68:PRO:HD3	1.72	0.71
32:RP:38:GLN:HG2	32:RP:45:LEU:HD12	1.72	0.71
22:YA:443:A:H3'	26:YF:45:ARG:HH12	1.56	0.71
41:YY:29:GLU:HB3	41:YY:38:ILE:HG23	1.70	0.71
42:YZ:45:ASP:OD1	42:YZ:49:ARG:NE	2.22	0.71
42:RZ:63:ASP:HB3	42:RZ:65:GLN:HG3	1.73	0.71
8:XH:10:LEU:HD22	8:XH:83:ILE:HD11	1.72	0.71
1:XA:1123:A:H4'	10:XJ:36:GLY:HA3	1.72	0.71
13:XM:62:ASN:OD1	47:Y4:49:PHE:HD2	1.74	0.71
1:QA:1435:G:H2'	1:QA:1436:U:C6	2.26	0.71
10:QJ:61:GLU:OE2	14:QN:45:ARG:NH1	2.23	0.71
22:RA:27:G:H22	22:RA:512:G:H1'	1.56	0.71
22:YA:24:G:O2'	39:YW:78:GLU:O	2.09	0.71
41:YY:42:VAL:HG12	41:YY:65:ALA:HB3	1.71	0.71
22:RA:2287:A:N6	22:RA:2344:U:H3	1.89	0.71
22:RA:597:U:O2	22:RA:660:G:N1	2.19	0.71
33:RQ:81:VAL:O	33:RQ:82:ARG:NE	2.22	0.71
20:XT:45:GLN:HB2	20:XT:91:LEU:HD13	1.73	0.71
22:YA:1338:G:N7	40:YX:62:LYS:NZ	2.39	0.71
22:YA:1434:A:H61	22:YA:1558:A:N6	1.88	0.71
22:YA:2245:U:H5'	22:YA:2246:G:H5'	1.71	0.71
22:YA:2681:C:O2'	22:YA:2682:U:OP2	2.09	0.71
31:YO:2:ILE:HD12	31:YO:6:THR:HG21	1.72	0.71
35:YS:106:ARG:HA	35:YS:110:LEU:HD21	1.73	0.71
35:YS:24:LEU:HB2	35:YS:85:VAL:HG12	1.71	0.71
36:YT:77:PRO:HB2	36:YT:80:SER:HB2	1.72	0.71
1:QA:1321:C:H3'	1:QA:1322:C:H5''	1.73	0.70
22:RA:2377:A:H2'	22:RA:2378:A:C8	2.25	0.70
22:RA:1693:U:O2'	24:RD:14:ARG:NH2	2.23	0.70
51:Y8:58:ILE:HD13	51:Y8:61:LEU:HD21	1.73	0.70
22:YA:1264:G:H3'	22:YA:1265:A:H5''	1.72	0.70
22:YA:1586:A:H3'	22:YA:1587:A:H8	1.56	0.70
42:YZ:152:ALA:HB2	42:YZ:168:GLU:HA	1.72	0.70

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
45:R2:29:LYS:HE3	45:R2:57:ILE:HG21	1.73	0.70
22:YA:2610:C:H4'	22:YA:2611:U:OP2	1.91	0.70
19:QS:41:VAL:HB	19:QS:42:PRO:HA	1.73	0.70
22:RA:1860:G:H1	22:RA:1882:C:H42	1.40	0.70
36:RT:18:ASP:N	36:RT:18:ASP:OD1	2.19	0.70
22:YA:1649:G:O2'	34:YR:107:ASP:OD1	2.08	0.70
19:QS:40:ILE:HD11	19:QS:62:ILE:HD12	1.74	0.70
22:RA:503:A:H4'	22:RA:504:U:H5'	1.73	0.70
39:RW:29:LEU:HD22	39:RW:69:LEU:HD11	1.72	0.70
10:XJ:50:ILE:HA	10:XJ:60:ARG:HG2	1.72	0.70
27:YG:47:LYS:HD3	27:YG:81:LYS:HB2	1.73	0.70
1:XA:1239:A:H62	1:XA:1299:A:H62	1.40	0.70
1:XA:501:C:OP1	12:XL:117:ARG:NH2	2.24	0.70
13:XM:57:ARG:NH2	47:Y4:34:GLU:O	2.24	0.70
10:XJ:61:GLU:OE2	14:XN:45:ARG:NH1	2.25	0.70
13:XM:65:LYS:HE2	47:Y4:50:VAL:HG11	1.72	0.70
22:YA:2712:U:H1'	22:YA:2712(A):A:C8	2.27	0.70
1:QA:1002:G:H2'	1:QA:1003:G:C8	2.26	0.70
13:QM:59:TYR:O	13:QM:63:THR:OG1	2.07	0.70
22:RA:1496:A:H8	22:RA:1577:C:HO2'	1.39	0.70
22:RA:2355:C:H1'	43:R0:39:ARG:HH21	1.56	0.70
28:RH:106:THR:HG22	28:RH:112:PRO:HB3	1.72	0.70
1:XA:1315:U:H2'	1:XA:1316:G:O4'	1.92	0.70
1:XA:962:C:H2'	1:XA:963:G:H8	1.55	0.70
18:XR:58:LEU:HD23	18:XR:62:GLU:HB3	1.74	0.70
22:YA:1184:G:OP1	46:Y3:29:ARG:NH1	2.24	0.70
39:YW:17:VAL:HG12	39:YW:76:VAL:HG11	1.72	0.70
22:RA:141:A:H8	22:RA:1595:G:H21	1.38	0.70
22:RA:2287:A:H62	22:RA:2344:U:H3	1.39	0.70
22:RA:923:C:H2'	22:RA:924:C:H6	1.56	0.70
1:XA:113:G:H1	1:XA:314:C:H42	1.37	0.70
22:YA:1446:C:H42	22:YA:1465:G:H1	1.38	0.70
24:YD:43:ARG:HB3	24:YD:54:ARG:HB2	1.74	0.70
13:XM:8:GLU:OE2	27:YG:115:ARG:NH1	2.24	0.70
1:QA:1226:C:H4'	19:QS:80:TYR:CZ	2.25	0.70
1:QA:337:C:H2'	1:QA:338:A:C8	2.25	0.70
22:RA:2444:G:OP2	26:RF:68:LYS:HE3	1.91	0.70
1:XA:686:U:H1'	11:XK:42:TRP:HE1	1.55	0.70
14:XN:48:ALA:HB2	14:XN:53:LEU:HD12	1.73	0.70
22:RA:1899:G:H21	22:RA:1902:C:N4	1.90	0.70
22:RA:2418:A:OP2	51:R8:29:LYS:HE2	1.92	0.70
22:RA:694:U:N3	22:RA:768:G:O6	2.17	0.70

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
24:RD:93:ALA:HB3	24:RD:105:ILE:HG22	1.74	0.70
25:RE:119:ARG:HB3	25:RE:120:TRP:CD1	2.27	0.70
1:XA:339:C:OP2	31:YO:97:ARG:NH1	2.25	0.70
2:XB:185:ILE:HG22	2:XB:199:TYR:HB2	1.74	0.70
22:YA:1794:U:H2'	22:YA:1795:C:H6	1.56	0.70
26:YF:185:ASP:HA	26:YF:188:ARG:HD3	1.72	0.70
22:YA:2470:G:H5'	33:YQ:56:ARG:NH2	2.05	0.70
43:R0:23:VAL:HG13	43:R0:38:VAL:HG22	1.74	0.69
22:RA:1769:G:O2'	22:RA:1958:C:OP1	2.10	0.69
29:YI:77:LEU:HD22	29:YI:101:LEU:HG	1.74	0.69
1:QA:1051:C:O2	1:QA:1207:G:N2	2.19	0.69
22:RA:1310:G:H1	22:RA:1604:C:H42	1.39	0.69
4:XD:105:VAL:HG13	4:XD:110:PHE:HB2	1.74	0.69
47:R4:18:CYS:SG	47:R4:19:GLY:N	2.66	0.69
1:XA:976:G:N2	1:XA:1362(A):C:OP2	2.25	0.69
1:XA:474:G:H2'	1:XA:475:G:H8	1.57	0.69
13:XM:7:VAL:CG2	27:YG:113:ARG:O	2.40	0.69
29:YI:9:LEU:HD21	29:YI:12:LEU:HB2	1.74	0.69
10:QJ:48:THR:HA	10:QJ:62:HIS:HB3	1.73	0.69
1:XA:971:G:N2	1:XA:1363:A:OP2	2.24	0.69
19:XS:10:PHE:HB2	19:XS:39:THR:H	1.54	0.69
22:YA:2308:G:H22	22:YA:2311:A:H2	1.41	0.69
26:YF:182:ASN:ND2	26:YF:185:ASP:OD2	2.19	0.69
22:RA:1543:A:H1'	22:RA:1545:A:O4'	1.91	0.69
22:RA:2392:A:OP2	22:RA:2422:A:N6	2.26	0.69
42:RZ:74:VAL:HG13	42:RZ:86:VAL:HG22	1.75	0.69
42:RZ:69:THR:HG22	42:RZ:90:VAL:HA	1.73	0.69
1:XA:1132:C:H2'	1:XA:1133:G:H8	1.56	0.69
6:XF:68:PRO:HG2	6:XF:71:ARG:HG3	1.75	0.69
24:YD:182:LEU:H	24:YD:272:ALA:HB3	1.56	0.69
29:YI:93:THR:HG22	29:YI:119:PRO:HB3	1.75	0.69
1:QA:1322:C:O2'	1:QA:1323:G:H5'	1.93	0.69
47:R4:7:PRO:HB2	47:R4:27:THR:HG21	1.74	0.69
20:XT:100:ILE:HG13	20:XT:102:GLY:H	1.56	0.69
24:YD:71:ASP:HB2	24:YD:103:ARG:HH22	1.58	0.69
26:YF:110:LEU:HD11	26:YF:181:LEU:HD13	1.74	0.69
1:XA:136:C:H42	1:XA:227:G:H1	1.39	0.69
1:XA:601:C:H2'	1:XA:602:A:C8	2.27	0.69
29:YI:128:LEU:HD23	29:YI:140:LEU:HD21	1.75	0.69
48:R5:41:PRO:O	48:R5:44:THR:OG1	2.11	0.69
22:RA:265:A:N6	22:RA:427:U:O2'	2.25	0.69
1:XA:243:A:H4'	1:XA:244:U:O5'	1.93	0.69

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
49:Y6:11:LEU:HD11	49:Y6:51:GLU:HG3	1.75	0.69
22:YA:2331:G:H4'	43:Y0:43:THR:H	1.58	0.69
26:YF:184:TYR:O	26:YF:188:ARG:HG3	1.93	0.69
43:R0:56:ASP:OD2	43:R0:58:THR:N	2.20	0.69
22:RA:392:C:H5''	22:RA:409:C:H5''	1.75	0.69
23:RB:5:C:OP1	23:RB:61:G:O2'	2.10	0.69
25:YE:128:SER:OG	25:YE:129:HIS:N	2.24	0.69
22:RA:2093:G:N2	22:RA:2196:C:O2	2.24	0.69
33:RQ:37:LEU:HD21	33:RQ:130:LYS:HE3	1.74	0.69
39:RW:29:LEU:HG	39:RW:33:ARG:HD2	1.74	0.69
42:RZ:60:GLU:HA	42:RZ:66:SER:HA	1.75	0.69
26:YF:157:VAL:HB	26:YF:194:MET:HB3	1.75	0.69
22:YA:443:A:H3'	26:YF:45:ARG:NH1	2.08	0.69
22:RA:2445:G:OP1	26:RF:74:ARG:NH2	2.26	0.68
24:RD:25:THR:O	24:RD:27:THR:N	2.26	0.68
25:RE:2:LYS:HD3	25:RE:95:ILE:HG22	1.75	0.68
28:RH:86:GLU:HG3	28:RH:165:ALA:H	1.56	0.68
1:XA:601:C:H2'	1:XA:602:A:H8	1.57	0.68
22:YA:2781:A:H5''	22:YA:2782:G:H5'	1.75	0.68
22:YA:521:G:H2'	22:YA:522:G:H8	1.58	0.68
32:YP:64:LYS:C	32:YP:66:GLY:H	1.96	0.68
22:RA:1403:C:H5''	22:RA:1471:A:H1'	1.75	0.68
22:RA:2889:C:H3'	22:RA:2891:G:H8	1.58	0.68
1:XA:978:A:OP2	1:XA:1362(A):C:N4	2.25	0.68
44:Y1:73:LEU:HD13	44:Y1:90:ILE:HG22	1.76	0.68
22:RA:1266:G:O5'	39:RW:15:ARG:NH2	2.26	0.68
53:XV:4:G:O2'	53:XV:5:G:H8	1.76	0.68
3:QC:3:ASN:OD1	3:QC:3:ASN:N	2.27	0.68
1:XA:977:A:H8	1:XA:1223:C:N3	1.91	0.68
1:QA:1065:U:O2'	1:QA:1066:C:OP2	2.11	0.68
22:RA:1048:A:H2	22:RA:1112:G:H21	1.40	0.68
27:RG:66:GLN:NE2	27:RG:93:THR:O	2.26	0.68
27:RG:47:LYS:HD3	27:RG:81:LYS:HB2	1.76	0.68
1:XA:501:C:H2'	1:XA:502:G:H8	1.56	0.68
1:XA:547:A:OP1	4:XD:73:ARG:NH2	2.25	0.68
22:YA:1689:A:H62	22:YA:1698:A:H2	1.41	0.68
22:YA:458:G:O2'	22:YA:469:G:O6	2.11	0.68
36:YT:123:GLN:O	36:YT:125:ARG:N	2.26	0.68
1:QA:108:G:H5''	1:QA:109:A:H5''	1.74	0.68
5:QE:11:ILE:HG13	5:QE:31:LEU:HB3	1.76	0.68
13:QM:8:GLU:OE2	27:RG:115:ARG:HD3	1.93	0.68
1:XA:1129:C:O2'	1:XA:1131:G:N7	2.27	0.68

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:XB:235:SER:OG	2:XB:236:TYR:N	2.25	0.68
22:YA:2698:U:H2'	22:YA:2699:C:C6	2.29	0.68
24:YD:25:THR:O	24:YD:27:THR:N	2.26	0.68
16:QP:4:ILE:HG12	16:QP:21:VAL:HG12	1.75	0.68
34:RR:38:VAL:HG22	34:RR:112:ALA:HB2	1.75	0.68
1:XA:24:U:H2'	1:XA:25:C:H6	1.59	0.68
14:XN:13:THR:N	14:XN:14:PRO:HD2	2.09	0.68
25:YE:95:ILE:HD12	25:YE:95:ILE:H	1.59	0.68
11:QK:58:PRO:HB2	11:QK:93:GLN:HG3	1.75	0.68
22:RA:2602:A:N6	53:QV:76:A:H2'	2.09	0.68
22:RA:819:A:OP2	22:RA:1187:G:N2	2.27	0.68
33:RQ:12:GLN:HG2	33:RQ:73:PRO:HD2	1.75	0.68
22:YA:2753:A:O2'	52:Y9:15:LYS:NZ	2.27	0.68
24:YD:142:VAL:HG23	24:YD:193:VAL:HA	1.75	0.68
32:YP:64:LYS:C	32:YP:66:GLY:N	2.48	0.68
33:YQ:37:LEU:HD21	33:YQ:130:LYS:HE3	1.74	0.68
22:RA:2120:G:H2'	22:RA:2121:G:C8	2.29	0.68
30:YN:133:GLN:HB2	30:YN:135:PRO:HD3	1.76	0.68
1:QA:552:U:O2'	12:QL:86:ARG:O	2.11	0.68
22:RA:2331:G:O2'	43:R0:43:THR:HG22	1.93	0.68
22:RA:754:C:H2'	22:RA:755:C:H6	1.59	0.68
32:YP:39:LYS:HG3	32:YP:45:LEU:HD22	1.75	0.68
22:RA:185:U:H2'	22:RA:186:G:C8	2.30	0.67
22:RA:2438:U:O3'	22:RA:2439:A:H3'	1.94	0.67
22:RA:923:C:H2'	22:RA:924:C:C6	2.28	0.67
27:RG:83:ARG:H	27:RG:86:MET:HG3	1.59	0.67
2:QB:27:LYS:HD2	2:QB:193:ASP:HB2	1.75	0.67
22:RA:1649:G:O2'	34:RR:107:ASP:OD1	2.07	0.67
1:QA:346:G:OP1	36:RT:41:ARG:NH2	2.27	0.67
22:YA:2582:G:N2	22:YA:2583:G:H1'	2.10	0.67
1:QA:1356:G:H2'	1:QA:1357:A:C8	2.28	0.67
1:QA:297:G:N2	1:QA:300:A:OP2	2.28	0.67
1:QA:376:G:H1	1:QA:387:U:H3	1.41	0.67
22:RA:1696:G:H21	22:RA:1978:A:H5'	1.58	0.67
28:RH:152:ARG:HG3	28:RH:153:LYS:HD2	1.77	0.67
51:Y8:29:LYS:O	51:Y8:31:HIS:N	2.27	0.67
22:YA:607:U:H3	22:YA:621:A:H2	1.43	0.67
1:QA:1053:G:H5'	1:QA:1054:C:H5'	1.75	0.67
4:QD:154:ASN:OD1	4:QD:154:ASN:N	2.26	0.67
19:QS:29:ARG:HD3	19:QS:30:LEU:HD13	1.77	0.67
22:RA:300:A:H2'	22:RA:334:C:H1'	1.75	0.67
8:XH:120:THR:H	8:XH:123:GLU:HB2	1.59	0.67

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
19:XS:40:ILE:HG12	19:XS:41:VAL:HG13	1.76	0.67
22:YA:1048:A:P	22:YA:1110:G:H22	2.17	0.67
22:YA:1270:C:H5''	22:YA:1271:G:H5'	1.77	0.67
22:YA:2757:A:OP1	52:Y9:19:ARG:HA	1.94	0.67
42:YZ:72:ARG:NH2	42:YZ:97:GLU:O	2.26	0.67
1:QA:983:A:N1	1:QA:1222:G:N2	2.43	0.67
24:RD:182:LEU:H	24:RD:272:ALA:HB3	1.59	0.67
28:RH:41:MET:HE1	28:RH:64:LEU:HD22	1.76	0.67
5:XE:31:LEU:HD23	5:XE:45:PHE:CD1	2.30	0.67
28:YH:137:ASP:OD1	28:YH:138:LYS:N	2.27	0.67
33:YQ:89:ASN:O	33:YQ:92:GLY:N	2.18	0.67
22:RA:270(I):G:H2'	22:RA:270(J):G:H8	1.60	0.67
23:RB:28:C:N3	23:RB:56:G:N1	2.29	0.67
38:RV:72:VAL:HG13	38:RV:85:LYS:HB3	1.75	0.67
1:XA:353:A:H8	1:XA:353:A:H5'	1.60	0.67
22:YA:2393:A:H5'	32:YP:62:LEU:HB3	1.77	0.67
25:YE:1:MET:N	25:YE:83:ASP:O	2.28	0.67
42:YZ:182:LYS:HG3	42:YZ:183:LEU:HA	1.76	0.67
1:XA:322:C:O2	1:XA:332:G:N2	2.28	0.67
1:XA:973:G:OP1	10:XJ:57:LYS:NZ	2.27	0.67
2:XB:168:THR:HB	2:XB:192:SER:HB2	1.77	0.67
22:YA:1665:A:H1'	31:YO:1:MET:HG3	1.76	0.67
36:YT:16:ARG:NH2	36:YT:83:ILE:O	2.27	0.67
24:RD:49:ILE:HD11	24:RD:52:ARG:HA	1.77	0.67
36:RT:84:GLN:HG2	36:RT:85:LYS:HG2	1.76	0.67
22:RA:138:G:N2	40:RX:44:GLU:OE2	2.24	0.67
2:XB:174:VAL:HG13	2:XB:184:VAL:HG11	1.76	0.67
22:YA:27:G:N2	22:YA:512:G:O2'	2.28	0.67
22:YA:712:G:H1	22:YA:719:C:H42	1.43	0.67
34:YR:78:LYS:HE2	34:YR:83:ILE:HD11	1.77	0.67
38:YV:52:VAL:HG21	38:YV:55:ALA:HB3	1.76	0.67
22:RA:1139:G:O2'	22:RA:1143:A:N1	2.22	0.67
22:RA:1859:A:N6	22:RA:1883:G:O2'	2.28	0.67
22:RA:252:G:OP2	32:RP:50:ARG:NH1	2.28	0.67
22:RA:969:U:H2'	22:RA:970:C:C6	2.29	0.67
26:RF:143:ALA:HB1	26:RF:148:LEU:HB2	1.75	0.67
33:RQ:30:GLY:HA2	33:RQ:107:ALA:HB2	1.77	0.67
42:RZ:62:PRO:O	42:RZ:64:GLY:N	2.27	0.67
1:XA:266:G:H5''	1:XA:267:C:C5	2.29	0.67
5:XE:37:ARG:HA	5:XE:114:GLY:H	1.59	0.67
48:Y5:4:HIS:HB3	48:Y5:5:PRO:HD3	1.77	0.67
22:YA:2294:C:OP2	35:YS:13:ARG:NH1	2.28	0.67

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:YA:27:G:O2'	22:YA:28:A:H8	1.76	0.67
1:QA:757:U:O2'	1:QA:879:C:O2	2.12	0.66
1:QA:1104:G:H4'	2:QB:111:ARG:NH1	2.09	0.66
22:YA:2263:C:H2'	22:YA:2264:C:H6	1.59	0.66
24:YD:35:LYS:HG2	24:YD:64:ILE:H	1.59	0.66
22:RA:1041:C:H42	22:RA:1114:G:H1	1.43	0.66
22:RA:2655:G:N2	22:RA:2665:A:OP2	2.28	0.66
22:RA:2404:C:H1'	32:RP:67:MET:HE1	1.77	0.66
22:YA:1061:U:H3'	22:YA:1062:G:H5''	1.77	0.66
33:YQ:62:GLY:HA2	42:YZ:116:VAL:HG21	1.78	0.66
1:QA:946:A:O2'	1:QA:1333:A:N3	2.24	0.66
1:QA:405:U:O4	4:QD:2:GLY:N	2.28	0.66
22:YA:589:C:H2'	22:YA:590:A:C8	2.30	0.66
44:R1:7:ILE:HG12	44:R1:91:LYS:NZ	2.11	0.66
52:R9:27:CYS:SG	52:R9:29:ASN:ND2	2.69	0.66
22:RA:1019:U:H3	22:RA:1142(A):A:N6	1.90	0.66
1:XA:1008:C:H42	1:XA:1021:G:H1	1.41	0.66
10:XJ:7:LYS:HB2	10:XJ:97:GLU:HB2	1.76	0.66
22:YA:31:C:O3'	22:YA:1238:G:H5''	1.94	0.66
22:YA:1798:U:C5'	24:YD:259:THR:HG22	2.25	0.66
28:YH:86:GLU:HG3	28:YH:165:ALA:N	2.10	0.66
39:YW:45:TYR:CZ	39:YW:49:LYS:HD2	2.30	0.66
1:QA:411:A:H62	1:QA:413:G:H21	1.41	0.66
3:QC:70:VAL:HG12	3:QC:72:LYS:H	1.60	0.66
22:RA:848:G:H2'	22:RA:849:A:C8	2.31	0.66
1:XA:250:A:H4'	1:XA:251:G:O5'	1.95	0.66
13:XM:105:THR:O	13:XM:107:ALA:N	2.29	0.66
41:YY:49:VAL:O	41:YY:51:VAL:N	2.29	0.66
42:YZ:33:LEU:HD21	42:YZ:35:ARG:HD2	1.75	0.66
22:RA:1309:G:H4'	50:R7:7:PRO:HB2	1.78	0.66
1:XA:321:A:N6	1:XA:329:A:OP2	2.29	0.66
1:XA:651:C:H2'	1:XA:652:U:H6	1.60	0.66
41:YY:97:ARG:HE	41:YY:98:VAL:HB	1.61	0.66
19:QS:39:THR:HG22	19:QS:40:ILE:H	1.61	0.66
22:RA:2781:A:H5''	22:RA:2782:G:H5'	1.76	0.66
27:RG:6:ALA:H	47:R4:23:GLU:HG2	1.60	0.66
1:XA:940:C:H2'	1:XA:941:G:C8	2.31	0.66
22:YA:1167:U:H2'	22:YA:1168:G:H8	1.60	0.66
22:YA:1407:C:H42	22:YA:1595:G:H1	1.44	0.66
23:RB:8:U:H5'	35:RS:15:ARG:HH12	1.61	0.66
22:YA:758:C:O2'	22:YA:1981:A:N3	2.23	0.66
25:RE:63:LEU:HD13	25:RE:65:GLY:H	1.60	0.66

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
41:RY:49:VAL:O	41:RY:51:VAL:N	2.29	0.66
1:XA:880:C:OP1	12:XL:12:ARG:NH1	2.28	0.66
23:YB:15:A:H5'	23:YB:16:G:H8	1.61	0.66
30:YN:35:ARG:O	30:YN:37:LYS:N	2.29	0.66
32:YP:105:LEU:O	32:YP:106:LEU:HB2	1.95	0.66
1:QA:1128:C:OP1	9:QI:66:ARG:NH2	2.27	0.66
1:QA:975:A:H4'	1:QA:976:G:H5''	1.79	0.66
22:RA:2065:C:H1'	22:RA:2449:U:H3	1.61	0.66
22:RA:414:C:O2	22:RA:1864:U:O2'	2.13	0.66
33:RQ:135:ASP:OD1	33:RQ:135:ASP:N	2.23	0.66
36:RT:102:ILE:HB	36:RT:110:ILE:HD13	1.78	0.66
1:XA:1060:C:C4	3:XC:2:GLY:HA2	2.31	0.66
1:XA:403:C:OP1	4:XD:137:SER:OG	2.13	0.66
19:XS:50:ALA:HB1	19:XS:57:HIS:HB3	1.77	0.66
22:YA:2612:C:H2'	22:YA:2613:U:H5'	1.77	0.66
1:XA:1356:G:H2'	1:XA:1357:A:C8	2.31	0.65
22:YA:1061:U:H4'	22:YA:1070:A:H1'	1.76	0.65
38:YV:21:ARG:HD2	38:YV:91:TYR:CD1	2.31	0.65
1:QA:35:G:O2'	12:QL:118:SER:O	2.14	0.65
22:RA:1444(A):A:H4'	22:RA:1460:A:O2'	1.95	0.65
22:RA:1409:C:H42	22:RA:1593:G:H1	1.44	0.65
22:RA:1657:C:H2'	22:RA:1658:C:C6	2.30	0.65
1:XA:1218:C:H2'	1:XA:1219:U:C6	2.31	0.65
1:QA:1286:A:H8	1:QA:1287:A:H4'	1.61	0.65
1:QA:501:C:H2'	1:QA:502:G:H8	1.60	0.65
2:QB:82:ARG:HA	2:QB:92:TYR:CE2	2.31	0.65
22:RA:1854:A:H62	22:RA:1888:G:H8	1.42	0.65
24:RD:108:PRO:HG2	24:RD:111:LEU:HG	1.78	0.65
24:RD:27:THR:HG21	24:RD:81:ALA:HB1	1.78	0.65
29:RI:77:LEU:HD21	29:RI:97:ILE:HG22	1.78	0.65
1:XA:1366:C:H2'	1:XA:1367:C:H6	1.61	0.65
44:Y1:29:GLY:O	44:Y1:31:GLY:N	2.30	0.65
36:YT:16:ARG:HD3	36:YT:19:LEU:HD11	1.77	0.65
1:QA:1318:A:H4'	19:QS:11:VAL:HG11	1.77	0.65
22:RA:1939:U:OP1	22:RA:2604:U:O2'	2.14	0.65
32:RP:59:LEU:HA	32:RP:61:ARG:NE	2.12	0.65
48:Y5:40:LYS:HZ1	48:Y5:48:GLU:HB2	1.61	0.65
42:YZ:30:ASN:HD22	42:YZ:90:VAL:HB	1.61	0.65
1:QA:1175:G:H2'	1:QA:1176:A:H8	1.60	0.65
47:R4:1:MET:SD	47:R4:6:HIS:NE2	2.69	0.65
49:R6:11:LEU:HD23	49:R6:26:ASN:HB3	1.78	0.65
29:RI:109:ILE:HB	29:RI:130:TYR:OH	1.96	0.65

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:XA:1280:A:O2'	1:XA:1281:U:OP1	2.14	0.65
1:XA:392:G:H2'	1:XA:393:A:C8	2.31	0.65
22:YA:1952:A:C2	31:YO:22:ILE:HG23	2.31	0.65
37:YU:8:VAL:HG23	37:YU:11:ARG:HH21	1.62	0.65
19:QS:28:LYS:HB2	19:QS:47:HIS:CE1	2.32	0.65
22:RA:1681:G:O2'	22:RA:1762:A:O2'	2.13	0.65
1:XA:412:A:H4'	1:XA:413:G:O5'	1.95	0.65
11:XK:21:ILE:HB	11:XK:84:VAL:HG12	1.77	0.65
45:Y2:50:ILE:HD12	45:Y2:51:ARG:H	1.62	0.65
22:YA:2227:A:H5''	24:YD:263:ARG:NH1	2.11	0.65
1:QA:1513:A:H2'	1:QA:1514:C:C6	2.32	0.65
16:QP:53:VAL:HG12	16:QP:79:VAL:HG22	1.77	0.65
22:RA:1833:U:O2'	22:RA:1969:A:N1	2.26	0.65
41:RY:38:ILE:HG22	41:RY:66:PRO:HA	1.79	0.65
2:XB:178:ARG:NH1	2:XB:196:LEU:O	2.28	0.65
22:YA:2023:G:H5'	22:YA:2617:C:H4'	1.78	0.65
28:YH:20:ALA:HB3	28:YH:23:ARG:HG2	1.77	0.65
22:RA:1204:A:H2	22:RA:1241:A:N1	1.93	0.65
22:RA:1278:A:H2'	22:RA:1279:G:C8	2.31	0.65
22:RA:404:C:O2'	22:RA:405:U:OP2	2.15	0.65
29:RI:73:GLU:HG3	29:RI:136:VAL:HG23	1.78	0.65
1:XA:1125:U:OP2	1:XA:1145:C:N4	2.29	0.65
20:XT:97:ALA:O	20:XT:99:LEU:N	2.30	0.65
22:YA:1049:C:H2'	22:YA:1050:A:H5''	1.79	0.65
3:QC:9:GLY:HA2	3:QC:12:LEU:HD23	1.78	0.65
32:RP:71:VAL:HG13	32:RP:72:PRO:HD3	1.78	0.65
22:YA:589:C:H2'	22:YA:590:A:H8	1.62	0.65
29:YI:113:ARG:HB3	29:YI:131:LYS:HD3	1.78	0.65
1:QA:1395:C:O2'	1:QA:1401:G:O2'	2.15	0.65
48:R5:58:LEU:HD13	48:R5:60:VAL:HG12	1.77	0.65
23:RB:33:G:H5'	27:RG:2:PRO:HG3	1.78	0.65
32:RP:47:ASP:OD1	32:RP:50:ARG:NH2	2.30	0.65
32:RP:85:LEU:HA	32:RP:88:LEU:HD22	1.79	0.65
19:XS:5:LEU:CD1	47:Y4:66:SER:HA	2.27	0.65
22:YA:2133:G:H1'	22:YA:2158:A:H61	1.62	0.65
22:YA:2787:C:HO2'	22:YA:2810:A:HO2'	1.42	0.65
22:YA:2818:G:HO2'	22:YA:2836:U:HO2'	1.44	0.65
24:YD:80:ALA:HB3	24:YD:94:LEU:HD13	1.79	0.65
13:QM:3:ARG:HD2	13:QM:9:ILE:HG12	1.79	0.64
43:R0:36:ILE:HD11	43:R0:39:ARG:HG2	1.79	0.64
22:RA:592:G:H1	22:RA:665:C:H42	1.45	0.64
1:XA:1023:G:H3'	1:XA:1024:G:H5''	1.78	0.64

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
13:XM:77:ASN:OD1	47:Y4:71:ARG:NH1	2.30	0.64
48:Y5:56:LYS:HD2	48:Y5:56:LYS:H	1.60	0.64
22:YA:1485:G:O6	22:YA:1504:C:N4	2.20	0.64
22:YA:1535:U:H5''	22:YA:1537:C:C4	2.31	0.64
22:YA:1930:G:H2'	22:YA:1968:G:C6	2.32	0.64
23:YB:56:G:H5'	27:YG:27:ASN:HD21	1.62	0.64
24:YD:44:ASN:HB3	24:YD:49:ILE:HA	1.78	0.64
26:YF:107:LYS:HD2	26:YF:207:GLY:H	1.62	0.64
28:YH:153:LYS:HG3	28:YH:161:GLY:HA2	1.79	0.64
22:RA:2355:C:H4'	43:R0:24:LYS:HG3	1.79	0.64
22:RA:630:G:N2	22:RA:633:A:OP2	2.30	0.64
31:RO:4:PRO:O	31:RO:5:GLN:HB2	1.96	0.64
1:XA:1221:G:O3'	19:XS:77:THR:HG21	1.98	0.64
3:XC:122:GLU:OE1	3:XC:126:ARG:NH2	2.29	0.64
22:YA:1048:A:OP2	22:YA:1110:G:N2	2.30	0.64
22:YA:995:C:H5''	37:YU:54:LYS:HG2	1.79	0.64
1:QA:1123:A:H4'	10:QJ:36:GLY:HA3	1.79	0.64
22:RA:587:C:OP2	32:RP:21:ARG:NH2	2.29	0.64
42:RZ:17:ALA:HA	42:RZ:20:ARG:HB2	1.78	0.64
22:YA:2115:G:N2	22:YA:2164:C:OP2	2.30	0.64
22:YA:2068:U:H3	22:YA:2430:A:H2	1.43	0.64
22:YA:2494:G:H2'	22:YA:2495:G:H8	1.62	0.64
29:YI:92:VAL:HG13	29:YI:120:ILE:HG23	1.79	0.64
37:YU:88:ILE:HG22	37:YU:90:VAL:HG23	1.79	0.64
10:QJ:77:PRO:O	10:QJ:79:ARG:NH1	2.30	0.64
22:RA:1370:C:O2'	22:RA:1811:G:O2'	2.14	0.64
24:RD:35:LYS:HG2	24:RD:64:ILE:N	2.12	0.64
22:YA:128:C:H4'	50:Y7:49:ARG:HH12	1.62	0.64
22:YA:2145:C:O2	22:YA:2147:G:N2	2.29	0.64
22:YA:2343:C:O2'	22:YA:2373:G:O2'	2.16	0.64
28:YH:153:LYS:HB3	28:YH:162:ILE:H	1.63	0.64
1:QA:405:U:OP1	1:QA:406:G:O2'	2.12	0.64
1:QA:1179:A:O3'	9:QI:103:THR:HG23	1.97	0.64
22:RA:1020:A:N6	22:RA:1141:U:O2'	2.29	0.64
22:RA:1138:G:H21	30:RN:106:MET:HE3	1.61	0.64
22:RA:345:A:H2'	22:RA:347:A:H62	1.60	0.64
1:XA:910:C:P	12:XL:97:ARG:HH22	2.21	0.64
15:XO:26:GLU:OE2	15:XO:77:ARG:NH1	2.31	0.64
22:YA:1499:C:H2'	22:YA:1500:G:C8	2.33	0.64
22:YA:2693:A:H2'	22:YA:2694:G:H8	1.62	0.64
24:YD:30:GLU:HG3	24:YD:63:ARG:NH2	2.12	0.64
33:YQ:78:PRO:O	33:YQ:79:LEU:HB2	1.97	0.64

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
10:QJ:53:PRO:HA	14:QN:42:ILE:HD12	1.79	0.64
24:RD:8:PRO:HB3	24:RD:14:ARG:HB2	1.79	0.64
24:RD:65:ILE:HD11	24:RD:67:PHE:CE1	2.31	0.64
1:XA:1004:A:H1'	1:XA:1036:G:H1	1.62	0.64
1:XA:1129:C:H4'	1:XA:1130:A:H5'	1.80	0.64
1:XA:129(A):G:H1'	1:XA:190:G:H5''	1.80	0.64
53:XV:23:C:H2'	53:XV:24:U:C6	2.32	0.64
19:XS:5:LEU:HD11	47:Y4:66:SER:C	2.18	0.64
22:YA:593:G:O4'	51:Y8:4:MET:HE1	1.97	0.64
22:YA:1020:A:N6	22:YA:1141:U:O2'	2.29	0.64
25:YE:9:VAL:HB	25:YE:25:VAL:HG23	1.80	0.64
42:YZ:17:ALA:HA	42:YZ:20:ARG:HB2	1.79	0.64
1:QA:370:C:H2'	1:QA:371:G:C8	2.33	0.64
1:QA:738:C:OP2	6:QF:92:LYS:NZ	2.29	0.64
22:RA:1043:C:H42	22:RA:1112:G:H1	1.43	0.64
22:RA:1728:G:H3'	22:RA:1729:A:H5''	1.78	0.64
26:RF:192:LEU:HD22	26:RF:194:MET:HG2	1.80	0.64
29:RI:98:ALA:HB2	29:RI:111:PRO:HB3	1.79	0.64
1:XA:191:G:O2'	20:XT:101:GLY:O	2.16	0.64
42:YZ:182:LYS:H	42:YZ:183:LEU:HB2	1.62	0.64
1:QA:1238:A:H62	1:QA:1299:A:N6	1.96	0.64
5:QE:11:ILE:HD11	5:QE:31:LEU:HD12	1.80	0.64
1:QA:750:G:N2	15:QO:23:GLY:O	2.30	0.64
22:RA:2306:C:H3'	22:RA:2307:G:H5''	1.80	0.64
24:RD:35:LYS:HG2	24:RD:64:ILE:H	1.63	0.64
34:RR:104:ARG:HD3	34:RR:109:ALA:HB3	1.79	0.64
37:RU:90:VAL:O	37:RU:92:ARG:N	2.30	0.64
22:YA:1069:A:H4'	22:YA:1070:A:H5''	1.80	0.64
34:YR:51:LEU:HD13	34:YR:66:VAL:HG13	1.79	0.64
1:QA:1122:U:O4	1:QA:1123:A:N6	2.30	0.64
2:QB:5:ILE:HG21	2:QB:221:LEU:HD23	1.78	0.64
22:RA:2734:A:H2'	22:RA:2735:G:O4'	1.97	0.64
33:RQ:17:LEU:HD21	33:RQ:41:TRP:CD1	2.33	0.64
8:XH:7:ALA:HB2	8:XH:85:ARG:HD3	1.80	0.64
22:YA:1129:A:N6	22:YA:2491:U:OP1	2.31	0.64
22:YA:602:G:O2'	22:YA:604:G:O2'	2.15	0.64
22:YA:2599:G:OP2	24:YD:236:GLY:HA2	1.98	0.64
1:QA:1443:G:N2	36:RT:119:LYS:HB2	2.13	0.64
47:R4:48:ARG:O	47:R4:50:VAL:N	2.31	0.64
22:RA:300:A:H1'	22:RA:319:C:H1'	1.80	0.64
22:RA:984:A:H5''	22:RA:985:C:C5	2.33	0.64
29:RI:77:LEU:HB2	29:RI:104:GLN:HE22	1.62	0.64

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:RA:137(A):G:H1'	40:RX:41:ASN:ND2	2.13	0.64
1:XA:1029:G:O2'	1:XA:1032(A):G:N2	2.31	0.64
1:XA:501:C:H2'	1:XA:502:G:C8	2.31	0.64
1:XA:561:U:O2'	1:XA:562:C:OP2	2.16	0.64
1:XA:881:G:P	12:XL:12:ARG:HH22	2.20	0.64
2:XB:187:LEU:HA	2:XB:201:ILE:HB	1.78	0.64
3:XC:19:GLU:O	3:XC:40:ARG:NH2	2.30	0.64
22:YA:577:G:O2'	22:YA:1254:A:OP1	2.15	0.64
22:YA:309:G:N3	22:YA:329:G:O2'	2.31	0.64
36:YT:36:GLU:HG3	36:YT:41:ARG:HE	1.62	0.64
44:R1:29:GLY:O	44:R1:31:GLY:N	2.29	0.63
22:RA:270(R):G:H2'	22:RA:270(S):G:C8	2.33	0.63
28:RH:88:LEU:HD11	28:RH:165:ALA:HB2	1.80	0.63
40:RX:43:VAL:HG13	40:RX:51:VAL:HG21	1.79	0.63
1:XA:686:U:O4	1:XA:703:G:H1'	1.97	0.63
3:XC:11:ARG:O	3:XC:13:GLY:N	2.30	0.63
24:YD:35:LYS:NZ	24:YD:64:ILE:O	2.31	0.63
27:YG:112:PRO:HB3	47:Y4:37:SER:HB2	1.80	0.63
10:QJ:4:ILE:HB	10:QJ:74:ILE:HG13	1.81	0.63
22:RA:1022:G:O2'	22:RA:1023:U:OP2	2.16	0.63
45:Y2:41:ILE:HD11	45:Y2:44:LEU:HG	1.80	0.63
19:XS:42:PRO:HB3	47:Y4:60:GLN:OE1	1.98	0.63
22:YA:2025:C:H2'	22:YA:2026:C:H6	1.62	0.63
32:YP:58:THR:HG22	32:YP:61:ARG:HG3	1.80	0.63
35:YS:59:LYS:HD3	35:YS:60:GLY:H	1.62	0.63
42:YZ:102:LEU:HD21	42:YZ:124:ILE:HG13	1.80	0.63
1:QA:438:G:N2	1:QA:495:A:OP2	2.27	0.63
1:QA:718:G:OP2	1:QA:720:C:N4	2.31	0.63
2:QB:24:TRP:HD1	2:QB:24:TRP:H	1.46	0.63
12:QL:7:ILE:HG21	17:QQ:34:LYS:HB2	1.80	0.63
22:RA:1378:A:HO2'	22:RA:1379:A:P	2.19	0.63
22:RA:873:G:H1	22:RA:904:C:H42	1.44	0.63
29:RI:94:ALA:H	29:RI:116:LEU:HD13	1.63	0.63
1:XA:258:G:H2'	1:XA:259:G:H8	1.63	0.63
1:XA:777:A:H2'	1:XA:778:G:C8	2.34	0.63
1:XA:1305:G:H5'	21:XU:4:GLY:HA3	1.80	0.63
51:Y8:16:ILE:HD13	51:Y8:57:ARG:HG2	1.80	0.63
22:YA:1437:C:HO2'	22:YA:1518:C:HO2'	1.44	0.63
22:YA:1674:G:N2	22:YA:1677:A:N1	2.46	0.63
1:QA:1141:C:H2'	1:QA:1142:G:H8	1.63	0.63
1:QA:165:C:H2'	1:QA:166:G:H8	1.63	0.63
4:QD:7:PRO:HB2	4:QD:10:ARG:HD2	1.81	0.63

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
45:R2:65:ASN:HB3	45:R2:69:ARG:HH22	1.61	0.63
22:RA:1474:C:N4	22:RA:1519:G:H1	1.95	0.63
35:RS:26:LEU:HB3	35:RS:87:PHE:HA	1.81	0.63
19:QS:40:ILE:HG23	19:QS:41:VAL:HG22	1.79	0.63
22:RA:1467:C:H42	22:RA:1525:G:H1	1.46	0.63
22:RA:1999:C:O2	22:RA:2687:U:O2'	2.16	0.63
34:RR:33:ARG:HG3	34:RR:115:GLU:HB3	1.79	0.63
37:RU:66:ASN:O	37:RU:70:ARG:HB2	1.98	0.63
42:RZ:52:SER:O	42:RZ:52:SER:OG	2.15	0.63
1:XA:67:C:H2'	1:XA:68:G:H8	1.63	0.63
5:XE:98:THR:HB	5:XE:117:ASP:HB3	1.79	0.63
47:Y4:23:GLU:O	47:Y4:25:TYR:N	2.31	0.63
47:Y4:48:ARG:O	47:Y4:50:VAL:N	2.31	0.63
22:YA:2632:A:O2'	22:YA:2811:G:O2'	2.09	0.63
22:YA:404:C:O2'	22:YA:405:U:OP2	2.13	0.63
39:YW:41:LYS:HE3	48:Y5:25:LEU:HD21	1.80	0.63
41:YY:91:GLU:HG3	41:YY:92:ASN:H	1.63	0.63
1:QA:1053:G:H2'	1:QA:1199:U:H5	1.64	0.63
22:RA:1245:G:OP1	32:RP:13:ASN:ND2	2.32	0.63
22:RA:27:G:O2'	22:RA:28:A:H8	1.79	0.63
1:XA:1321:C:H3'	1:XA:1322:C:H5''	1.79	0.63
1:XA:406:G:H5'	4:XD:5:ILE:HD13	1.81	0.63
1:XA:429:U:H1'	1:XA:430:A:H5''	1.80	0.63
2:XB:79:ASP:HA	2:XB:82:ARG:HB2	1.81	0.63
5:XE:147:ASP:O	5:XE:151:LEU:HG	1.97	0.63
13:XM:91:ARG:HB2	13:XM:98:VAL:HG13	1.80	0.63
50:Y7:9:ARG:HH21	50:Y7:48:LYS:HD2	1.63	0.63
22:YA:1899:G:N2	22:YA:1902:C:H41	1.97	0.63
22:YA:2151:G:H2'	22:YA:2152:G:C8	2.33	0.63
22:YA:774:A:H2	22:YA:787:U:HO2'	1.45	0.63
23:YB:116:G:H4'	35:YS:54:LEU:HD13	1.81	0.63
24:YD:25:THR:HG23	24:YD:27:THR:HB	1.80	0.63
24:YD:35:LYS:HG2	24:YD:64:ILE:N	2.13	0.63
28:YH:83:TYR:CZ	28:YH:138:LYS:HD2	2.34	0.63
32:YP:13:ASN:O	32:YP:15:ARG:N	2.32	0.63
37:YU:83:LEU:HD12	37:YU:113:ALA:HB2	1.79	0.63
22:RA:1839:G:C8	22:RA:1927:A:H1'	2.34	0.63
22:RA:676:A:H2	22:RA:802:A:H61	1.45	0.63
32:RP:95:VAL:HG13	32:RP:100:LEU:HD21	1.80	0.63
1:XA:1152:A:H2'	1:XA:1153:C:H6	1.63	0.63
22:YA:2502:G:H5''	22:YA:2503:A:H5''	1.79	0.63
53:QV:16:C:O2'	53:QV:61:C:OP1	2.17	0.63

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:RA:1980:G:O2'	22:RA:1982:C:OP2	2.15	0.63
22:RA:815:C:H2'	22:RA:816:C:H6	1.63	0.63
22:RA:861:A:H62	22:RA:916:G:H21	1.46	0.63
13:XM:23:TYR:HB3	13:XM:67:GLU:HA	1.81	0.63
49:Y6:41:PRO:HG2	49:Y6:45:LYS:H	1.63	0.63
31:YO:13:ASN:ND2	31:YO:96:THR:O	2.30	0.63
1:QA:1068:G:N3	1:QA:1191:A:H2	1.95	0.63
1:QA:620:C:C2	4:QD:135:LEU:HG	2.34	0.63
1:QA:196:A:OP1	20:QT:68:LYS:NZ	2.30	0.63
22:RA:141:A:N6	22:RA:1595:G:O2'	2.32	0.63
30:RN:133:GLN:HB2	30:RN:135:PRO:HD3	1.79	0.63
41:RY:51:VAL:HG13	41:RY:52:SER:H	1.64	0.63
1:XA:826:C:H2'	1:XA:827:U:O2	1.99	0.63
22:YA:1882:C:H5'	22:YA:1883:G:OP2	1.99	0.63
22:YA:620:G:H4'	22:YA:621:A:C5'	2.28	0.63
28:YH:152:ARG:HG3	28:YH:153:LYS:HD2	1.81	0.63
1:QA:1133:G:H2'	1:QA:1134:G:H8	1.63	0.62
8:QH:10:LEU:HD22	8:QH:83:ILE:HD11	1.80	0.62
22:RA:2870:C:H5''	34:RR:65:LEU:HD21	1.81	0.62
22:RA:993:G:OP1	37:RU:50:ARG:NH2	2.32	0.62
30:RN:13:TRP:HB2	30:RN:133:GLN:HG3	1.81	0.62
1:XA:346:G:H1'	1:XA:347:G:H5'	1.81	0.62
9:XI:24:GLY:N	9:XI:60:ASP:OD1	2.29	0.62
22:YA:2469:A:H2	22:YA:2481:G:H21	1.47	0.62
22:YA:571:A:H5'	22:YA:2030:A:N6	2.07	0.62
13:XM:68:GLY:HA3	27:YG:116:ASP:OD2	1.98	0.62
28:YH:26:VAL:HG11	28:YH:75:ALA:HB1	1.81	0.62
42:YZ:45:ASP:CG	42:YZ:49:ARG:HE	2.02	0.62
1:QA:619:U:N3	4:QD:134:ASP:OD2	2.32	0.62
22:RA:185:U:H2'	22:RA:186:G:H8	1.62	0.62
22:RA:2327:A:H2'	22:RA:2328:A:C8	2.33	0.62
35:RS:15:ARG:HH11	35:RS:25:ARG:HH21	1.44	0.62
1:XA:1126:U:H1'	1:XA:1280:A:C5	2.34	0.62
10:XJ:32:ALA:HB3	10:XJ:76:ASN:HB2	1.79	0.62
22:YA:1441:G:H2'	22:YA:1442:G:H8	1.64	0.62
22:YA:2822:G:H2'	22:YA:2823:A:H5''	1.80	0.62
42:YZ:9:TYR:CE2	42:YZ:35:ARG:HD3	2.25	0.62
7:QG:155:ARG:HD3	7:QG:155:ARG:H	1.65	0.62
22:RA:2610:C:H4'	22:RA:2611:U:OP2	1.98	0.62
25:RE:119:ARG:HG2	25:RE:160:TYR:HB2	1.80	0.62
26:RF:12:LEU:HD12	26:RF:17:ARG:HG2	1.80	0.62
2:XB:212:GLN:NE2	2:XB:235:SER:HB2	2.15	0.62

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:YA:229:A:OP1	22:YA:229:A:H4'	2.00	0.62
43:R0:56:ASP:OD2	43:R0:57:PHE:N	2.32	0.62
44:R1:7:ILE:HG12	44:R1:91:LYS:HZ1	1.61	0.62
22:RA:2537:U:H2'	22:RA:2538:C:C6	2.35	0.62
22:RA:2760:C:H2'	22:RA:2761:G:H5''	1.81	0.62
22:RA:670:A:H4'	22:RA:671:C:H5''	1.80	0.62
22:RA:805:G:N2	22:RA:829:A:OP1	2.33	0.62
22:RA:2680:C:H5'	25:RE:189:PRO:HA	1.80	0.62
1:XA:1502:A:H2	1:XA:1505:G:H22	1.45	0.62
1:XA:735:C:H2'	1:XA:736:C:H6	1.64	0.62
2:XB:12:GLU:O	2:XB:16:HIS:ND1	2.21	0.62
2:XB:92:TYR:CE1	2:XB:151:GLY:HA3	2.35	0.62
22:YA:1423:G:H2'	22:YA:1424:G:H8	1.65	0.62
27:YG:115:ARG:NH2	27:YG:137:GLU:OE1	2.33	0.62
27:YG:3:LEU:HD12	27:YG:4:ASP:H	1.64	0.62
1:QA:1142:G:H3'	1:QA:1143:G:H8	1.65	0.62
1:QA:10:A:H2'	1:QA:11:G:H8	1.63	0.62
1:QA:1448:C:H2'	1:QA:1449:C:H6	1.63	0.62
22:RA:2015:A:H1'	48:R5:2:ALA:HA	1.82	0.62
22:RA:1058:G:N2	22:RA:1080:C:O2	2.32	0.62
40:RX:53:LYS:HB2	40:RX:82:GLN:HB3	1.80	0.62
10:XJ:5:ARG:HH21	10:XJ:99:LYS:HD2	1.63	0.62
19:XS:13:ASP:N	19:XS:13:ASP:OD1	2.32	0.62
22:YA:273(C):C:N3	22:YA:363(C):G:N2	2.44	0.62
22:YA:2817:G:H21	22:YA:2836:U:H1'	1.65	0.62
26:YF:46:ARG:HG2	26:YF:46:ARG:HH11	1.65	0.62
36:YT:1:MET:O	36:YT:3:ARG:N	2.29	0.62
1:QA:1237:C:O2'	1:QA:1300:G:N2	2.23	0.62
11:QK:98:LEU:O	11:QK:101:SER:OG	2.13	0.62
22:RA:1181:C:H2'	22:RA:1182:A:C8	2.34	0.62
22:RA:2831:G:H1'	22:RA:2883:A:H2'	1.80	0.62
36:RT:54:ARG:HA	36:RT:59:THR:HG23	1.82	0.62
2:XB:54:THR:HG21	2:XB:201:ILE:HD11	1.82	0.62
7:XG:111:ARG:NH1	7:XG:113:GLU:OE2	2.32	0.62
22:YA:153:C:OP1	44:Y1:88:LYS:HE2	2.00	0.62
22:YA:72:U:N3	45:Y2:62:THR:HG22	2.14	0.62
22:YA:2065:C:O2	22:YA:2449:U:N3	2.28	0.62
22:YA:2820:A:O5'	34:YR:4:LEU:HD23	1.99	0.62
12:QL:57:LYS:HG2	12:QL:67:THR:HG22	1.81	0.62
13:QM:3:ARG:HG2	47:R4:34:GLU:HG2	1.81	0.62
22:RA:140:A:H8	22:RA:1408:C:O2'	1.82	0.62
22:RA:2753:A:O2'	52:R9:15:LYS:NZ	2.31	0.62

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:RA:852:G:H2'	22:RA:853:G:C8	2.35	0.62
1:QA:1446:A:O2'	1:QA:1447:G:O5'	2.18	0.62
22:RA:2354:G:O2'	43:R0:36:ILE:HG22	2.00	0.62
1:XA:894:G:H2'	1:XA:895:G:C8	2.35	0.62
22:YA:1237:A:H4'	22:YA:1238:G:H5'	1.80	0.62
8:QH:6:ILE:HB	8:QH:85:ARG:NH1	2.15	0.62
17:QQ:66:SER:O	17:QQ:70:ARG:NH1	2.33	0.62
22:RA:1899:G:H21	22:RA:1902:C:H41	1.45	0.62
22:RA:2704:C:H2'	22:RA:2705:A:O4'	2.00	0.62
22:RA:717:G:H2'	22:RA:718:A:O4'	2.00	0.62
4:XD:111:ALA:HB2	4:XD:120:LEU:HD12	1.82	0.62
47:Y4:37:SER:HB3	47:Y4:42:PHE:CD1	2.35	0.62
22:YA:1113:U:H2'	22:YA:1114:G:C8	2.33	0.62
22:YA:1470:G:N2	22:YA:1522:G:OP2	2.32	0.62
22:YA:2154:G:H2'	22:YA:2155:G:H8	1.65	0.62
22:YA:2439:A:H8	22:YA:2439:A:H5'	1.64	0.62
22:YA:2840:C:H2'	22:YA:2841:C:C6	2.35	0.62
22:YA:729:G:H2'	22:YA:1775:U:H1'	1.80	0.62
1:QA:444:C:H2'	1:QA:445:G:H8	1.65	0.62
1:QA:658:G:OP1	15:QO:8:LYS:NZ	2.32	0.62
1:QA:690:G:H2'	1:QA:691:G:O4'	2.00	0.62
24:RD:35:LYS:HD2	24:RD:104:TYR:CD1	2.35	0.62
42:RZ:27:VAL:HG23	42:RZ:36:LYS:HA	1.81	0.62
1:XA:449:C:H5	16:XP:42:ARG:HH11	1.46	0.62
9:XI:29:ASN:OD1	9:XI:65:VAL:N	2.29	0.62
22:YA:1359:A:H2'	22:YA:1360:A:H5'	1.82	0.62
22:YA:1382:G:H2'	22:YA:1383:C:H6	1.65	0.62
22:YA:2159:G:H2'	22:YA:2160:G:H8	1.63	0.62
22:YA:2461:C:H2'	22:YA:2462:U:C6	2.35	0.62
22:YA:298:G:O2'	22:YA:340:A:N6	2.33	0.62
22:YA:443:A:C5	26:YF:45:ARG:HD2	2.33	0.62
22:RA:817:C:H2'	22:RA:818:G:O4'	2.00	0.61
25:RE:51:PHE:CD1	25:RE:52:LEU:HG	2.34	0.61
29:RI:8:PRO:HG3	29:RI:14:ASP:HB2	1.82	0.61
1:XA:1414:U:H2'	1:XA:1415:G:H8	1.64	0.61
1:XA:1525:G:OP1	11:XK:120:ARG:NH2	2.33	0.61
5:XE:42:GLY:HA3	5:XE:66:MET:HG2	1.82	0.61
19:XS:5:LEU:HG	47:Y4:66:SER:CB	2.30	0.61
51:Y8:23:VAL:HG11	51:Y8:46:ARG:HD3	1.81	0.61
22:YA:1789:A:H2'	22:YA:1790:C:O4'	2.00	0.61
22:YA:2306:C:H3'	22:YA:2307:G:H5''	1.81	0.61
22:YA:252:G:OP2	32:YP:50:ARG:NH1	2.32	0.61

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:YA:2882:A:OP1	34:YR:96:ARG:NH1	2.33	0.61
1:QA:304:U:H2'	1:QA:305:G:C8	2.35	0.61
1:QA:508:C:O2	1:QA:509:A:N6	2.28	0.61
1:QA:561:U:O2'	1:QA:562:C:OP2	2.15	0.61
1:QA:853:G:H2'	1:QA:854:G:H8	1.64	0.61
10:QJ:40:LEU:HB2	10:QJ:69:ASN:HB3	1.82	0.61
11:QK:121:PRO:HD2	11:QK:126:ARG:HD3	1.80	0.61
22:RA:1047:G:H2'	22:RA:1110:G:N1	2.15	0.61
22:RA:1449:A:HO2'	22:RA:1530:G:H21	1.43	0.61
22:RA:270:A:OP1	44:R1:98:LEU:HB3	1.98	0.61
22:RA:270(N):G:OP1	29:RI:57:ARG:NH2	2.31	0.61
25:RE:67:PHE:O	25:RE:69:LYS:N	2.32	0.61
26:RF:28:ILE:HG22	26:RF:112:MET:HB3	1.80	0.61
22:YA:1454:U:H5'	34:YR:63:ARG:HE	1.66	0.61
22:YA:413:C:H2'	22:YA:414:C:H6	1.66	0.61
14:QN:13:THR:N	14:QN:14:PRO:HD2	2.15	0.61
22:RA:1869:G:N2	22:RA:1872:A:OP2	2.33	0.61
22:RA:2198:A:C2	29:RI:29:TYR:HB2	2.34	0.61
1:XA:991:U:O2'	1:XA:992:U:O5'	2.17	0.61
22:YA:918:A:N3	23:YB:80:U:O2'	2.33	0.61
35:YS:83:LYS:C	35:YS:109:GLY:HA3	2.21	0.61
37:YU:92:ARG:HD2	38:YV:11:GLN:HB2	1.82	0.61
22:RA:1069:A:H2'	22:RA:1073:A:N7	2.15	0.61
22:RA:1359:A:N6	22:RA:1372:U:H3	1.99	0.61
22:RA:2820:A:C6	34:RR:4:LEU:HD11	2.35	0.61
20:XT:100:ILE:HG13	20:XT:102:GLY:N	2.15	0.61
22:YA:2632:A:HO2'	22:YA:2811:G:HO2'	1.36	0.61
26:YF:197:ASP:OD2	26:YF:197:ASP:N	2.33	0.61
1:QA:45:U:H2'	1:QA:46:G:C8	2.36	0.61
1:QA:791:G:H2'	1:QA:792:A:H5'	1.82	0.61
52:R9:25:VAL:HB	52:R9:34:GLN:HB2	1.82	0.61
22:RA:620:G:H4'	22:RA:621:A:C5'	2.30	0.61
1:XA:1336:C:H1'	1:XA:1337:G:C2	2.36	0.61
1:XA:737:A:H2'	1:XA:738:C:C6	2.35	0.61
1:XA:973:G:H3'	1:XA:974:A:H5''	1.82	0.61
53:XV:15:G:N2	53:XV:21:A:N3	2.49	0.61
22:YA:1055:G:O2'	22:YA:1085:A:N1	2.27	0.61
22:YA:2302:G:N2	22:YA:2314:C:O2	2.30	0.61
22:YA:27:G:HO2'	22:YA:28:A:H8	1.46	0.61
22:YA:330:A:HO2'	22:YA:331:A:H8	1.49	0.61
23:YB:15:A:H1'	23:YB:109:G:C4	2.36	0.61
3:QC:14:ILE:O	3:QC:16:ARG:N	2.33	0.61

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
11:QK:22:HIS:HB3	11:QK:29:ILE:HG23	1.83	0.61
44:R1:53:VAL:HG22	44:R1:74:VAL:HG13	1.83	0.61
22:RA:1856:G:H1	22:RA:1886:C:N4	1.97	0.61
1:XA:894:G:H2'	1:XA:895:G:H8	1.66	0.61
53:XV:74:C:O2'	53:XV:75:C:H5'	2.00	0.61
22:YA:2123:G:H2'	22:YA:2124:G:H8	1.66	0.61
1:QA:250:A:O2'	1:QA:251:G:OP2	2.18	0.61
4:QD:30:LYS:C	4:QD:32:ALA:H	2.03	0.61
15:QO:82:ILE:O	15:QO:86:GLY:N	2.32	0.61
22:RA:1026:U:H4'	22:RA:1027:A:OP1	2.01	0.61
32:RP:84:ASN:HB3	32:RP:86:LYS:HG2	1.83	0.61
1:XA:1292:U:OP2	7:XG:41:ARG:NH2	2.34	0.61
19:XS:5:LEU:CD2	47:Y4:66:SER:HB2	2.30	0.61
22:YA:1364:G:C8	44:Y1:2:SER:N	2.68	0.61
22:YA:2832:U:H4'	22:YA:2833:G:H5''	1.83	0.61
1:QA:1437:C:H2'	1:QA:1438:G:C8	2.36	0.61
14:QN:6:LEU:HD23	14:QN:23:ARG:HH22	1.64	0.61
22:RA:2751:G:N7	28:RH:2:SER:HB3	2.16	0.61
29:RI:133:HIS:HB2	29:RI:134:PRO:CD	2.31	0.61
33:RQ:65:PHE:O	33:RQ:67:ARG:N	2.34	0.61
22:YA:2756:U:OP2	52:Y9:19:ARG:NH2	2.33	0.61
1:QA:328:C:O2	1:QA:328:C:H2'	2.01	0.61
1:QA:664:G:H22	1:QA:741:G:H1	1.49	0.61
1:QA:573:A:N3	1:QA:883:C:O2'	2.33	0.61
21:QU:6:ARG:HE	21:QU:15:ARG:NH2	1.99	0.61
22:RA:1210:A:H5''	22:RA:1210:A:C8	2.35	0.61
22:RA:669:G:N3	22:RA:669:G:H2'	2.14	0.61
39:RW:25:ARG:NH2	39:RW:74:ALA:O	2.33	0.61
2:XB:67:THR:HG21	2:XB:155:LEU:HG	1.81	0.61
8:XH:4:ASP:OD1	8:XH:85:ARG:NH1	2.34	0.61
15:XO:87:ILE:HG22	15:XO:88:ARG:H	1.65	0.61
37:YU:52:ARG:HA	37:YU:55:ARG:HG3	1.83	0.61
1:QA:1251:A:H2'	1:QA:1252:A:C8	2.35	0.61
1:QA:864:A:H5'	5:QE:86:ALA:HB2	1.83	0.61
1:QA:1152:A:OP1	10:QJ:68:HIS:NE2	2.33	0.61
22:RA:1060:U:H3	22:RA:1088:A:H1'	1.66	0.61
29:RI:65:ALA:O	29:RI:68:LEU:N	2.33	0.61
35:RS:88:ASP:O	35:RS:89:ARG:HB3	2.01	0.61
1:XA:266:G:H5''	1:XA:267:C:H5	1.65	0.61
1:XA:67:C:H2'	1:XA:68:G:C8	2.35	0.61
44:Y1:83:GLU:O	44:Y1:85:LEU:N	2.34	0.61
1:QA:147:G:H2'	1:QA:148:G:H8	1.66	0.60

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:QA:192:U:H2'	1:QA:193:C:H6	1.66	0.60
1:QA:980:C:H5''	1:QA:981:U:C5	2.36	0.60
23:RB:3:C:H2'	23:RB:4:C:C6	2.35	0.60
36:RT:77:PRO:HB2	36:RT:80:SER:HB2	1.83	0.60
37:RU:90:VAL:HG11	38:RV:40:LEU:HD12	1.82	0.60
48:Y5:16:ARG:HH11	48:Y5:16:ARG:HG2	1.66	0.60
24:YD:72:LYS:NZ	24:YD:99:ASP:OD1	2.33	0.60
1:QA:17:U:H2'	1:QA:18:C:C6	2.36	0.60
3:QC:11:ARG:O	3:QC:13:GLY:N	2.34	0.60
3:QC:8:ILE:HG23	3:QC:16:ARG:HG2	1.83	0.60
1:XA:145:G:H1	1:XA:177:C:H42	1.48	0.60
1:XA:24:U:H2'	1:XA:25:C:C6	2.36	0.60
1:XA:538:G:H5''	12:XL:114:LYS:HB2	1.81	0.60
22:YA:1878:G:H2'	22:YA:1879:C:C6	2.35	0.60
22:YA:1930:G:H2'	22:YA:1968:G:O6	2.00	0.60
23:YB:15:A:H4'	23:YB:15:A:OP1	2.00	0.60
22:YA:444:C:H4'	26:YF:49:ALA:HB2	1.82	0.60
29:YI:79:ILE:HB	29:YI:142:VAL:HA	1.83	0.60
33:YQ:35:VAL:HG13	33:YQ:130:LYS:HB3	1.83	0.60
1:QA:1280:A:O2'	1:QA:1281:U:OP1	2.17	0.60
9:QI:13:ALA:HB2	9:QI:68:GLY:HA3	1.82	0.60
14:QN:24:CYS:HB3	14:QN:29:ARG:H	1.66	0.60
22:RA:155:C:N4	22:RA:161:U:O4	2.34	0.60
23:RB:82:G:H2'	23:RB:83:G:H8	1.66	0.60
1:XA:677:U:H3	1:XA:713:G:H22	1.47	0.60
53:XV:49:G:O6	53:XV:65:C:N4	2.33	0.60
47:Y4:56:VAL:HA	47:Y4:60:GLN:HB2	1.84	0.60
22:YA:2030:A:H5''	22:YA:2031:A:OP1	2.00	0.60
22:YA:691:C:H2'	22:YA:692:C:H6	1.66	0.60
24:YD:108:PRO:HB3	24:YD:143:HIS:CE1	2.35	0.60
22:YA:1803:A:O2'	24:YD:259:THR:HG21	2.01	0.60
28:YH:113:VAL:HG11	28:YH:151:ILE:HD12	1.83	0.60
1:QA:229:U:H2'	1:QA:230:G:H8	1.66	0.60
22:RA:2745:C:H42	22:RA:2759:G:H1	1.47	0.60
28:RH:8:PRO:HG2	28:RH:69:ARG:HE	1.66	0.60
1:QA:1422:G:H5''	31:RO:48:PRO:HB3	1.83	0.60
1:XA:1070:U:OP1	5:XE:18:ARG:NH1	2.34	0.60
1:XA:332:G:H2'	1:XA:333:G:H8	1.65	0.60
17:XQ:11:VAL:HG12	17:XQ:85:VAL:HG13	1.83	0.60
22:YA:2257:U:H2'	22:YA:2258:C:C6	2.36	0.60
22:YA:2451:A:C6	56:Z8:76:PPU:HE2	2.36	0.60
22:YA:573:G:O2'	22:YA:574:C:H3'	2.01	0.60

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
13:XM:8:GLU:OE2	27:YG:115:ARG:HD3	2.01	0.60
29:YI:79:ILE:O	29:YI:143:SER:N	2.34	0.60
32:YP:95:VAL:HG13	32:YP:100:LEU:HD21	1.83	0.60
1:QA:709:G:H2'	1:QA:710:G:H8	1.66	0.60
22:RA:1689:A:H62	22:RA:1698:A:H2	1.49	0.60
34:RR:70:LEU:O	34:RR:72:ASP:N	2.31	0.60
41:RY:87:LYS:O	41:RY:88:LYS:NZ	2.33	0.60
22:YA:2119:A:H61	22:YA:2168:G:H22	1.50	0.60
24:YD:35:LYS:HD2	24:YD:104:TYR:CD1	2.35	0.60
31:YO:96:THR:O	31:YO:97:ARG:HB3	2.01	0.60
36:YT:84:GLN:OE1	36:YT:85:LYS:NZ	2.34	0.60
7:QG:26:PHE:O	7:QG:30:ILE:HG12	2.01	0.60
15:QO:39:LEU:HD13	15:QO:56:LEU:HB2	1.82	0.60
47:R4:23:GLU:O	47:R4:25:TYR:N	2.34	0.60
34:RR:33:ARG:NH2	48:R5:55:ARG:HG2	2.15	0.60
22:RA:27:G:N2	22:RA:512:G:H1'	2.16	0.60
24:RD:44:ASN:HB3	24:RD:49:ILE:HA	1.83	0.60
1:XA:1062:U:H2'	1:XA:1063:C:C6	2.36	0.60
1:XA:690:G:H22	11:XK:55:LYS:HZ1	1.48	0.60
1:XA:1453:G:H2'	20:XT:39:LYS:HE2	1.83	0.60
22:YA:2477:C:H2'	52:Y9:1:MET:HG3	1.82	0.60
22:YA:325:G:H2'	22:YA:326:G:H8	1.66	0.60
22:YA:363:G:H2'	22:YA:363(A):A:H8	1.66	0.60
28:YH:4:ILE:HB	28:YH:6:ARG:HG2	1.82	0.60
29:YI:10:GLU:OE2	29:YI:11:ASN:N	2.35	0.60
1:QA:833:U:H3	1:QA:853:G:H1	1.49	0.60
2:QB:15:VAL:H	2:QB:16:HIS:CE1	2.20	0.60
4:QD:105:VAL:HG13	4:QD:110:PHE:HB2	1.83	0.60
10:QJ:42:THR:HG23	10:QJ:68:HIS:HA	1.83	0.60
48:R5:16:ARG:HH11	48:R5:16:ARG:HG2	1.65	0.60
22:RA:1068:G:N2	22:RA:1095:A:O2'	2.35	0.60
22:RA:438:G:H2'	22:RA:439:G:H8	1.67	0.60
28:RH:154:PRO:HD3	28:RH:162:ILE:N	2.16	0.60
42:RZ:94:GLU:HB2	42:RZ:130:PRO:CD	2.31	0.60
1:XA:1292:U:H2'	1:XA:1293:G:C8	2.36	0.60
1:XA:131:C:H2'	1:XA:132:C:C6	2.37	0.60
5:XE:152:ARG:NH1	8:XH:44:PHE:CZ	2.70	0.60
43:Y0:23:VAL:HB	43:Y0:26:TYR:HE2	1.66	0.60
22:YA:61:G:O6	22:YA:94:G:N2	2.35	0.60
27:YG:28:VAL:HG23	27:YG:29:TRP:CD1	2.36	0.60
32:YP:147:LEU:O	32:YP:148:LEU:HB2	2.02	0.60
1:QA:1129:C:H4'	1:QA:1130:A:H5'	1.84	0.60

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:RA:125:G:H1'	50:R7:13:ALA:HB1	1.84	0.60
22:RA:127:A:H5''	22:RA:128:C:C6	2.36	0.60
22:RA:1803:A:O2'	24:RD:259:THR:HG21	2.02	0.60
22:RA:996:A:H4'	37:RU:92:ARG:NE	2.15	0.60
1:XA:1410:G:H2'	1:XA:1411:C:H6	1.67	0.60
1:XA:1422:G:H5''	31:YO:48:PRO:HB3	1.82	0.60
1:XA:556:C:H2'	1:XA:557:G:H8	1.67	0.60
52:Y9:35:ARG:HH21	52:Y9:37:GLY:HA3	1.67	0.60
22:YA:1064:C:N4	22:YA:1070:A:OP1	2.35	0.60
22:YA:1872:A:H5'	22:YA:1878:G:OP2	2.02	0.60
22:YA:2439:A:C8	22:YA:2439:A:H5'	2.36	0.60
1:QA:1172:C:H2'	1:QA:1173:G:C8	2.36	0.60
1:QA:1292:U:H2'	1:QA:1293:G:H8	1.65	0.60
22:RA:1464:C:O2'	22:RA:1528:A:H8	1.83	0.60
22:RA:954:G:O2'	22:RA:2274:A:N1	2.30	0.60
22:RA:479:A:N3	22:RA:481:G:H5''	2.17	0.60
27:RG:64:THR:HG23	27:RG:66:GLN:H	1.65	0.60
22:RA:631:A:OP1	32:RP:64:LYS:HE2	2.02	0.60
1:XA:267:C:OP2	17:XQ:67:LYS:HD2	2.01	0.60
22:YA:1530:G:O6	22:YA:1542:G:N2	2.34	0.60
22:YA:2468:G:H5''	33:YQ:120:ILE:HD12	1.83	0.60
12:QL:84:LEU:HD22	12:QL:104:VAL:HG11	1.84	0.60
1:QA:191:G:C1'	20:QT:105:SER:HB3	2.31	0.60
22:RA:1796:U:H2'	22:RA:1797:C:C6	2.37	0.60
22:RA:2629:A:H4'	22:RA:2629:A:OP1	2.00	0.60
24:RD:70:TRP:CH2	24:RD:150:LYS:HA	2.36	0.60
22:RA:2620:C:O2'	25:RE:157:ALA:O	2.18	0.60
27:RG:114:ILE:HD13	27:RG:140:ILE:HG21	1.83	0.60
1:XA:401:C:H2'	1:XA:402:G:H8	1.67	0.60
51:Y8:50:LEU:HD12	51:Y8:51:ALA:H	1.67	0.60
22:YA:1790:C:O2'	24:YD:209:ALA:HB2	2.02	0.60
1:QA:1219:U:OP1	14:QN:19:ARG:NH2	2.24	0.59
1:QA:1152:A:H5''	10:QJ:13:HIS:HD2	1.66	0.59
22:RA:1423:G:H2'	22:RA:1424:G:H8	1.67	0.59
22:RA:2509:G:H1	22:RA:2579:C:N4	2.00	0.59
1:XA:1256:A:OP2	3:XC:26:LYS:NZ	2.30	0.59
2:XB:235:SER:O	2:XB:237:ALA:N	2.35	0.59
22:YA:1652:A:OP1	34:YR:8:ARG:NH1	2.34	0.59
22:YA:1728:G:H3'	22:YA:1729:A:H5''	1.84	0.59
22:YA:419:C:H2'	22:YA:420:C:O4'	2.02	0.59
34:YR:42:LYS:HA	34:YR:45:ARG:HD2	1.84	0.59
1:QA:1437:C:H2'	1:QA:1438:G:H8	1.66	0.59

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:RA:1576:U:H2'	22:RA:1577:C:H6	1.67	0.59
42:RZ:166:SER:HB3	42:RZ:168:GLU:H	1.67	0.59
1:XA:1130:A:N6	1:XA:1144:G:H21	1.99	0.59
13:XM:3:ARG:HA	13:XM:9:ILE:HG21	1.83	0.59
22:YA:270(R):G:H2'	22:YA:270(S):G:H8	1.66	0.59
23:YB:82:G:H2'	23:YB:83:G:H8	1.67	0.59
42:YZ:94:GLU:HB2	42:YZ:130:PRO:CD	2.31	0.59
1:QA:1298:C:H4'	1:QA:1299:A:C4	2.36	0.59
35:RS:38:GLN:OE1	35:RS:47:THR:OG1	2.18	0.59
36:RT:105:LEU:O	36:RT:107:ASP:N	2.36	0.59
1:XA:1298:C:H4'	1:XA:1299:A:O4'	2.03	0.59
1:XA:1453:G:N7	20:XT:55:ILE:HD11	2.16	0.59
22:YA:1204:A:H2	22:YA:1241:A:N1	2.00	0.59
39:YW:86:LEU:HD12	39:YW:87:PRO:HD2	1.83	0.59
42:YZ:158:PRO:O	42:YZ:160:GLY:N	2.36	0.59
1:QA:301:G:H2'	1:QA:302:G:H8	1.67	0.59
1:QA:618:C:H5'	1:QA:619:U:H5''	1.83	0.59
1:QA:696:A:N1	1:QA:797:C:O2'	2.35	0.59
1:QA:811:C:H4'	1:QA:900:A:N6	2.18	0.59
9:QI:9:ARG:HB3	9:QI:14:VAL:HG13	1.84	0.59
51:R8:29:LYS:HB2	51:R8:44:LYS:HG2	1.84	0.59
42:RZ:103:ARG:HD3	42:RZ:136:PHE:CG	2.38	0.59
6:XF:61:LEU:HB3	6:XF:63:TYR:HE2	1.66	0.59
1:XA:1226:C:O2'	13:XM:111:LYS:NZ	2.36	0.59
22:YA:2154:G:H2'	22:YA:2155:G:C8	2.38	0.59
23:YB:95:U:H2'	23:YB:96:G:C8	2.37	0.59
34:YR:33:ARG:NH2	48:Y5:55:ARG:HG2	2.17	0.59
1:QA:565:U:H5''	1:QA:566:G:H2'	1.83	0.59
1:QA:828:A:H2'	1:QA:829:G:O4'	2.02	0.59
3:QC:50:ALA:HB2	3:QC:75:VAL:HB	1.85	0.59
4:QD:64:LEU:HB2	4:QD:198:VAL:HG11	1.83	0.59
22:RA:1101:U:H2'	22:RA:1102:C:H6	1.65	0.59
22:RA:70:G:H21	22:RA:71:A:N6	2.00	0.59
23:RB:80:U:H2'	23:RB:81:G:H21	1.67	0.59
1:XA:1002:G:H2'	1:XA:1003:G:H8	1.68	0.59
2:XB:92:TYR:HE1	2:XB:151:GLY:HA3	1.65	0.59
22:YA:1337:G:H2'	22:YA:1338:G:H8	1.68	0.59
22:YA:2471:C:H5'	22:YA:2472:G:OP2	2.02	0.59
25:YE:36:ARG:HH21	25:YE:88:GLY:HA2	1.68	0.59
28:YH:98:LEU:HD22	28:YH:125:VAL:HB	1.83	0.59
22:RA:1337:G:OP2	40:RX:73:ARG:NH2	2.35	0.59
22:RA:385:C:O2'	22:RA:388:G:N2	2.36	0.59

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
27:RG:67:LYS:HE2	47:R4:6:HIS:CE1	2.38	0.59
5:XE:45:PHE:CE2	5:XE:47:LYS:HD2	2.38	0.59
1:XA:191:G:N3	20:XT:105:SER:HB3	2.18	0.59
50:Y7:35:ARG:HG3	50:Y7:42:LEU:HD11	1.85	0.59
22:YA:1274:A:N3	22:YA:1297:C:H1'	2.17	0.59
22:YA:1429:G:H2'	22:YA:1430:C:C6	2.38	0.59
22:YA:1434:A:H2'	22:YA:1435:G:C8	2.36	0.59
22:YA:943:U:OP2	32:YP:36:LYS:NZ	2.35	0.59
39:YW:111:HIS:CD2	39:YW:112:GLY:H	2.20	0.59
42:YZ:77:ASP:OD2	42:YZ:80:ARG:HD3	2.02	0.59
1:QA:1163:C:H42	1:QA:1173:G:H1	1.50	0.59
13:QM:49:THR:HB	13:QM:52:GLU:HG3	1.85	0.59
1:QA:110:C:O2'	16:QP:25:ARG:O	2.17	0.59
22:RA:94:G:H21	45:R2:47:ASN:HD22	1.51	0.59
47:R4:16:CYS:SG	47:R4:17:GLY:N	2.75	0.59
49:R6:52:VAL:HG22	49:R6:53:LYS:HG3	1.84	0.59
22:RA:1663:C:HO2'	22:RA:1664:A:H8	1.49	0.59
22:RA:1918:A:O2'	22:RA:1920:C:N4	2.36	0.59
22:RA:2563:U:H4'	31:RO:28:SER:HA	1.84	0.59
22:RA:84:A:N1	22:RA:98:G:O2'	2.31	0.59
28:RH:105:LEU:HD13	28:RH:105:LEU:H	1.68	0.59
39:RW:86:LEU:HD12	39:RW:87:PRO:HD2	1.85	0.59
1:XA:1288:A:N3	1:XA:1352:C:O2'	2.25	0.59
1:XA:148:G:H2'	1:XA:149:A:H8	1.68	0.59
1:XA:376:G:OP1	16:XP:5:ARG:HB2	2.03	0.59
46:Y3:6:VAL:HG13	46:Y3:56:VAL:HG13	1.84	0.59
1:XA:1443:G:N2	22:YA:2864:G:OP1	2.28	0.59
42:YZ:140:ASP:N	42:YZ:140:ASP:OD2	2.35	0.59
1:QA:1221:G:OP1	1:QA:1320:C:N4	2.35	0.59
1:QA:452:A:O2'	1:QA:453:A:O5'	2.20	0.59
3:QC:131:ARG:HH11	5:QE:50:GLU:HG2	1.68	0.59
22:RA:806:C:P	32:RP:41:ARG:HH11	2.26	0.59
33:RQ:109:VAL:HG12	33:RQ:114:ALA:HB2	1.83	0.59
22:YA:2334:G:H5'	35:YS:9:ARG:HG2	1.85	0.59
22:YA:2789:C:H1'	22:YA:2892:A:C2	2.37	0.59
32:YP:26:GLY:O	32:YP:28:GLY:N	2.35	0.59
42:YZ:52:SER:O	42:YZ:54:HIS:N	2.35	0.59
42:YZ:48:PHE:HE2	42:YZ:71:VAL:HG11	1.66	0.59
1:QA:1326:C:OP1	21:QU:17:THR:OG1	2.18	0.59
1:QA:164:U:H2'	1:QA:165:C:C6	2.37	0.59
7:QG:73:MET:HG2	7:QG:90:GLU:HA	1.83	0.59
22:RA:1534:G:H2'	22:RA:1535:U:H4'	1.84	0.59

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:RA:507:A:C5'	22:RA:508:G:H5'	2.31	0.59
22:RA:1795:C:O2	24:RD:255:LYS:HE2	2.02	0.59
24:RD:85:ASP:HB2	24:RD:92:ILE:HD13	1.84	0.59
22:RA:2749:A:H4'	28:RH:62:LYS:HB3	1.84	0.59
1:XA:376:G:H1	1:XA:387:U:H3	1.51	0.59
22:YA:1778:U:H2'	22:YA:1784:A:N6	2.18	0.59
22:YA:2636:U:H1'	22:YA:2783:G:H22	1.67	0.59
22:YA:2729:G:H1'	25:YE:187:ALA:HB2	1.85	0.59
28:YH:6:ARG:NH2	28:YH:54:ARG:HH22	2.01	0.59
22:YA:142:G:H1'	40:YX:37:THR:HG21	1.84	0.59
1:QA:1465:C:H2'	1:QA:1466:C:O4'	2.02	0.59
44:R1:92:LYS:HG3	44:R1:96:LYS:HB2	1.84	0.59
22:RA:49:A:H61	22:RA:177:G:H2'	1.66	0.59
22:RA:2392:A:H2	22:RA:2424:C:H42	1.49	0.59
28:RH:121:ILE:HG13	28:RH:140:LYS:HD2	1.84	0.59
22:RA:389:G:H1	32:RP:70:GLN:HB3	1.67	0.59
42:RZ:117:LEU:HD12	42:RZ:141:VAL:HG21	1.84	0.59
4:XD:9:CYS:SG	4:XD:22:LYS:HE2	2.39	0.59
10:XJ:76:ASN:O	10:XJ:78:ASN:ND2	2.36	0.59
13:XM:13:LYS:HA	13:XM:44:ARG:HD2	1.83	0.59
14:YN:23:ARG:HD2	14:YN:28:GLY:O	2.03	0.59
20:XT:10:LEU:HG	20:XT:12:ALA:H	1.67	0.59
22:YA:1918:A:O2'	22:YA:1920:C:N4	2.35	0.59
15:XO:56:LEU:HD21	22:YA:715:G:C4	2.38	0.59
23:YB:14:U:O3'	23:YB:107:U:O2'	2.20	0.59
30:YN:40:PRO:HB3	37:YU:68:ALA:HB2	1.85	0.59
1:QA:1348:U:H4'	9:QI:120:ARG:HD2	1.85	0.58
22:RA:1534:G:H2'	22:RA:1534:G:N3	2.17	0.58
22:RA:439:G:H2'	22:RA:440:G:H8	1.68	0.58
22:RA:439:G:H2'	22:RA:440:G:C8	2.38	0.58
1:XA:1239:A:H62	1:XA:1299:A:N6	1.99	0.58
1:XA:933:G:O6	7:XG:3:ARG:NH2	2.36	0.58
12:XL:38:THR:HG23	12:XL:57:LYS:HB3	1.84	0.58
48:Y5:4:HIS:HB3	48:Y5:5:PRO:CD	2.32	0.58
22:YA:2146:C:H4'	22:YA:2147:G:C8	2.38	0.58
22:YA:2712:U:H1'	22:YA:2712(A):A:N7	2.17	0.58
29:YI:4:ILE:HG12	29:YI:18:VAL:HG22	1.85	0.58
35:YS:106:ARG:HA	35:YS:110:LEU:HD11	1.85	0.58
35:YS:26:LEU:HB3	35:YS:87:PHE:HA	1.85	0.58
1:QA:523:A:H61	12:QL:53:ARG:HH12	1.51	0.58
22:RA:2146:C:H4'	22:RA:2147:G:C8	2.38	0.58
22:RA:2689:U:OP1	22:RA:2719:G:N2	2.23	0.58

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:RA:823:G:H2'	22:RA:824:A:C8	2.38	0.58
24:RD:44:ASN:CB	24:RD:49:ILE:HA	2.33	0.58
1:XA:606:G:O2'	1:XA:632:A:N6	2.34	0.58
3:XC:14:ILE:HG12	3:XC:15:THR:H	1.67	0.58
22:YA:1678:G:H8	22:YA:1678:G:O5'	1.86	0.58
22:YA:1680:U:O2'	22:YA:1763:G:N7	2.32	0.58
24:YD:28:GLU:OE1	24:YD:29:PRO:HD2	2.03	0.58
1:QA:243:A:H4'	1:QA:244:U:O5'	2.03	0.58
1:QA:997:U:H2'	1:QA:998:G:C8	2.38	0.58
22:RA:1533:C:H42	22:RA:1538:G:H1	1.51	0.58
22:RA:702:G:N2	22:RA:730:C:O2	2.36	0.58
22:RA:774:A:H2	22:RA:787:U:HO2'	1.51	0.58
22:RA:900:A:H3'	22:RA:901:A:C8	2.27	0.58
24:RD:71:ASP:OD2	24:RD:103:ARG:NH2	2.36	0.58
1:XA:390:C:O3'	16:XP:28:ARG:NH2	2.36	0.58
22:YA:1069:A:H2'	22:YA:1073:A:N7	2.18	0.58
22:YA:746:A:C5	22:YA:2611:U:H5''	2.39	0.58
27:YG:136:ARG:O	27:YG:154:GLY:HA2	2.02	0.58
34:YR:67:LEU:HD13	34:YR:76:VAL:HG21	1.85	0.58
1:QA:429:U:H1'	1:QA:430:A:H5''	1.86	0.58
10:QJ:49:VAL:HG13	14:QN:41:ARG:HB2	1.85	0.58
1:QA:685:G:H5'	11:QK:39:PRO:O	2.03	0.58
16:QP:21:VAL:O	16:QP:33:ILE:HG12	2.02	0.58
22:RA:1006:C:H5'	30:RN:28:THR:HG23	1.85	0.58
1:XA:675:A:H2'	1:XA:676:A:H8	1.68	0.58
13:XM:57:ARG:HE	47:Y4:35:VAL:HG22	1.68	0.58
28:YH:153:LYS:HB3	28:YH:154:PRO:HD3	1.85	0.58
29:YI:110:ASP:N	29:YI:130:TYR:OH	2.36	0.58
40:YX:61:GLY:N	40:YX:75:ASP:OD2	2.36	0.58
1:QA:745:C:H2'	1:QA:746:A:C8	2.38	0.58
4:QD:111:ALA:HB2	4:QD:120:LEU:HD12	1.85	0.58
13:QM:121:LYS:NZ	55:QY:40:G:O2'	2.33	0.58
22:RA:738:G:H3'	22:RA:739:G:C8	2.38	0.58
24:RD:35:LYS:HD2	24:RD:104:TYR:CE1	2.39	0.58
20:XT:63:ILE:HG22	20:XT:77:ALA:HB1	1.86	0.58
20:XT:56:MET:HG3	20:XT:88:VAL:HG21	1.86	0.58
44:Y1:51:VAL:HG11	44:Y1:74:VAL:HG21	1.84	0.58
22:YA:1203:G:O6	22:YA:1204:A:N6	2.37	0.58
22:YA:574:C:N3	25:YE:145:LYS:NZ	2.46	0.58
38:YV:44:LYS:O	38:YV:46:VAL:N	2.36	0.58
1:QA:446:G:H2'	1:QA:447:G:O4'	2.04	0.58
2:QB:77:ALA:HB2	2:QB:211:ILE:HD13	1.86	0.58

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
12:QL:10:LEU:HB3	17:QQ:32:TYR:CE1	2.39	0.58
22:RA:630:G:OP1	51:R8:46:ARG:NH1	2.37	0.58
23:RB:15:A:H5'	23:RB:16:G:C8	2.38	0.58
24:RD:182:LEU:N	24:RD:272:ALA:HB3	2.17	0.58
27:RG:136:ARG:O	27:RG:154:GLY:HA2	2.03	0.58
1:XA:1305:G:N2	1:XA:1331:G:H2'	2.19	0.58
1:XA:1358:U:H3	1:XA:1363:A:H61	1.49	0.58
6:XF:36:ARG:NH1	6:XF:38:GLU:OE2	2.36	0.58
9:XI:43:ALA:HA	9:XI:74:ILE:HD13	1.85	0.58
43:Y0:35:ASN:OD1	43:Y0:35:ASN:N	2.34	0.58
47:Y4:42:PHE:O	47:Y4:44:THR:N	2.36	0.58
22:YA:957:A:N1	22:YA:2458:G:H4'	2.18	0.58
22:YA:270(Q):C:OP1	29:YI:45:LYS:NZ	2.37	0.58
29:YI:93:THR:N	29:YI:96:ASP:OD1	2.35	0.58
1:QA:165:C:H2'	1:QA:166:G:C8	2.38	0.58
22:RA:1278:A:H2'	22:RA:1279:G:H8	1.68	0.58
22:RA:2582:G:N2	22:RA:2583:G:H1'	2.18	0.58
28:RH:89:ILE:O	28:RH:89:ILE:HG12	2.04	0.58
22:RA:534:U:O2'	37:RU:49:HIS:ND1	2.27	0.58
1:XA:1029:G:H1'	1:XA:1032(A):G:H1	1.68	0.58
1:XA:1070:U:H2'	1:XA:1071:C:H6	1.68	0.58
5:XE:91:LEU:HD12	5:XE:120:THR:HG22	1.85	0.58
8:XH:39:LEU:HB3	8:XH:45:ILE:HG12	1.86	0.58
1:XA:1320:C:C4	19:XS:36:ARG:HG3	2.38	0.58
29:YI:72:LEU:HD21	29:YI:107:VAL:HG11	1.86	0.58
8:QH:121:ASP:N	8:QH:121:ASP:OD1	2.34	0.58
22:RA:2067:G:H1	22:RA:2443:C:H42	1.51	0.58
22:RA:2439:A:H8	22:RA:2439:A:H5'	1.67	0.58
22:RA:270(T):G:H5''	44:R1:97:LEU:HD22	1.86	0.58
22:RA:685:A:H5''	22:RA:788:A:N6	2.16	0.58
27:RG:112:PRO:HB3	47:R4:37:SER:HB2	1.85	0.58
28:RH:87:LEU:HD22	28:RH:162:ILE:HG22	1.85	0.58
29:RI:133:HIS:HB2	29:RI:134:PRO:HD2	1.85	0.58
30:RN:13:TRP:O	30:RN:135:PRO:HD2	2.03	0.58
32:RP:47:ASP:OD1	32:RP:49:ARG:NH1	2.37	0.58
42:RZ:110:GLY:HA2	42:RZ:111:VAL:C	2.24	0.58
2:XB:15:VAL:H	2:XB:16:HIS:CE1	2.22	0.58
2:XB:72:GLY:HA2	2:XB:165:VAL:HG22	1.86	0.58
2:XB:96:ARG:H	2:XB:96:ARG:HD2	1.67	0.58
43:Y0:72:ARG:HB2	43:Y0:75:LEU:HB2	1.85	0.58
22:YA:1278:A:H4'	34:YR:34:ILE:HD12	1.84	0.58
22:YA:2359:C:H2'	22:YA:2360:A:O4'	2.04	0.58

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:YA:834:C:H2'	22:YA:835:A:C8	2.38	0.58
31:YO:64:ARG:HG2	31:YO:79:PHE:CG	2.38	0.58
34:YR:27:SER:HB3	34:YR:34:ILE:HD11	1.84	0.58
1:QA:517:G:O2'	1:QA:531:U:OP2	2.21	0.58
1:QA:715:A:H2'	1:QA:716:A:C8	2.38	0.58
7:QG:26:PHE:CE2	7:QG:30:ILE:HD11	2.38	0.58
12:QL:53:ARG:HD3	12:QL:93:LEU:HD21	1.86	0.58
22:RA:1309:G:HO2'	22:RA:1611:C:HO2'	1.51	0.58
22:RA:2022:U:O2'	22:RA:2617:C:H5'	2.04	0.58
22:RA:2041:U:H2'	22:RA:2042:A:C8	2.38	0.58
22:RA:2227:A:H5''	24:RD:263:ARG:NH1	2.19	0.58
22:RA:586:A:H5'	26:RF:89:VAL:HG21	1.86	0.58
29:RI:14:ASP:H	29:RI:17:GLN:HB2	1.68	0.58
30:RN:54:VAL:HB	30:RN:122:VAL:HG22	1.85	0.58
22:RA:1226:G:H4'	38:RV:84:LYS:HG2	1.85	0.58
1:XA:1157:A:H62	1:XA:1178:G:N2	2.02	0.58
1:XA:1486:G:H2'	1:XA:1487:G:O4'	2.04	0.58
1:XA:486:U:H2'	1:XA:487:A:C8	2.39	0.58
1:XA:673:G:H2'	1:XA:674:G:C8	2.39	0.58
1:XA:877:C:H5''	8:XH:88:LYS:HD3	1.85	0.58
3:XC:95:THR:HG22	3:XC:97:LYS:HG3	1.84	0.58
1:XA:1298:C:P	7:XG:114:ARG:HH22	2.27	0.58
19:XS:80:TYR:O	19:XS:82:GLY:N	2.36	0.58
22:YA:2232:U:P	44:Y1:40:ARG:HH12	2.26	0.58
22:YA:1109:C:O2'	22:YA:1110:G:OP1	2.21	0.58
22:YA:1520:U:H2'	22:YA:1521:G:O4'	2.04	0.58
22:YA:2593:U:H2'	22:YA:2594:C:C6	2.30	0.58
22:YA:2693:A:H2'	22:YA:2694:G:C8	2.39	0.58
22:YA:768:G:O2'	22:YA:1379:A:N6	2.32	0.58
36:YT:24:PRO:HA	36:YT:49:VAL:HG13	1.85	0.58
22:YA:1614:A:N6	39:YW:88:ARG:H	2.02	0.58
1:QA:1226:C:H4'	19:QS:80:TYR:OH	2.04	0.58
1:QA:973:G:H3'	1:QA:974:A:C5'	2.34	0.58
1:QA:1059:C:O3'	14:QN:45:ARG:NH2	2.37	0.58
22:RA:1427:A:H4'	22:RA:1428:C:O5'	2.02	0.58
23:RB:31:C:H4'	27:RG:29:TRP:HH2	1.69	0.58
24:RD:24:ILE:HD11	24:RD:91:ARG:HD2	1.85	0.58
22:RA:443:A:N7	26:RF:45:ARG:HD2	2.19	0.58
29:RI:110:ASP:N	29:RI:130:TYR:OH	2.36	0.58
22:RA:2415:G:H4'	32:RP:66:GLY:HA3	1.84	0.58
1:XA:328:C:H4'	1:XA:329:A:H5'	1.86	0.58
22:YA:1167:U:H2'	22:YA:1168:G:C8	2.39	0.58

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:YA:2112:G:O6	22:YA:2169:A:N6	2.37	0.58
22:YA:2712:U:O2'	22:YA:2712(A):A:H8	1.87	0.58
22:YA:2738:A:H2	22:YA:2766:G:H22	1.52	0.58
23:YB:44:G:H1'	23:YB:47:C:N4	2.18	0.58
22:YA:1490:A:O2'	24:YD:99:ASP:OD2	2.20	0.58
34:YR:117:VAL:HG22	34:YR:118:GLU:H	1.68	0.58
34:YR:24:GLN:OE1	34:YR:36:THR:HG21	2.04	0.58
35:YS:59:LYS:HD3	35:YS:60:GLY:N	2.19	0.58
1:QA:365:U:H5''	1:QA:366:C:OP1	2.04	0.57
22:RA:2757:A:P	52:R9:20:HIS:H	2.27	0.57
22:RA:1012:U:OP1	37:RU:75:ASN:ND2	2.36	0.57
22:RA:609(A):G:H2'	22:RA:610:C:H6	1.69	0.57
42:RZ:141:VAL:HG23	42:RZ:144:LEU:HG	1.86	0.57
1:XA:1020:U:H2'	1:XA:1021:G:C8	2.39	0.57
1:XA:405:U:O4	4:XD:2:GLY:N	2.37	0.57
7:XG:89:MET:HE1	7:XG:156:TRP:H	1.69	0.57
22:YA:2074:U:H2'	22:YA:2075:U:C6	2.39	0.57
22:YA:625:G:O6	32:YP:107:LYS:HE2	2.04	0.57
26:YF:127:GLU:O	26:YF:129:PHE:N	2.32	0.57
33:YQ:66:ILE:HA	33:YQ:104:PHE:HA	1.85	0.57
37:YU:92:ARG:HD3	37:YU:94:ASN:HB3	1.85	0.57
39:YW:73:ALA:HB3	39:YW:106:ILE:HD13	1.84	0.57
13:QM:14:ARG:N	13:QM:44:ARG:HD3	2.18	0.57
13:QM:58:GLU:O	13:QM:62:ASN:ND2	2.31	0.57
51:R8:36:LYS:HB3	51:R8:40:GLU:HG2	1.85	0.57
22:RA:1389:G:H2'	22:RA:1390:U:C6	2.40	0.57
22:RA:251:A:C5	22:RA:252:G:H1'	2.39	0.57
39:RW:71:VAL:HA	39:RW:107:LEU:HD12	1.86	0.57
41:RY:95:LYS:NZ	41:RY:99:CYS:O	2.37	0.57
1:XA:560:U:O2'	1:XA:561:U:OP2	2.19	0.57
2:XB:93:VAL:HG11	2:XB:97:TRP:HD1	1.69	0.57
22:YA:846:C:O2'	22:YA:847:U:OP2	2.10	0.57
27:YG:67:LYS:HE2	47:Y4:6:HIS:CE1	2.38	0.57
22:YA:956:G:H5''	33:YQ:77:LYS:HE2	1.85	0.57
3:QC:134:ILE:HG23	3:QC:151:VAL:HB	1.85	0.57
7:QG:15:ASP:OD2	7:QG:44:TYR:OH	2.22	0.57
22:RA:1378:A:OP1	50:R7:10:ARG:NH2	2.36	0.57
22:RA:225:A:H5'	22:RA:226:G:OP2	2.04	0.57
22:RA:2506:U:O2	22:RA:2506:U:H2'	2.04	0.57
22:RA:642:G:H21	22:RA:646:A:H2	1.50	0.57
25:RE:131:ALA:HB1	25:RE:135:HIS:HE1	1.69	0.57
42:RZ:121:HIS:CD2	42:RZ:169:GLU:HG2	2.38	0.57

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:XA:1124:G:H3'	1:XA:1145:C:H41	1.69	0.57
1:XA:518:C:H2'	1:XA:530:G:C2	2.39	0.57
3:XC:70:VAL:HG21	3:XC:76:VAL:HG11	1.85	0.57
4:XD:9:CYS:HB3	4:XD:32:ALA:HB2	1.87	0.57
22:YA:2741:A:OP1	52:Y9:22:ARG:NH1	2.36	0.57
22:YA:898:C:H3'	22:YA:899:A:H8	1.70	0.57
24:YD:65:ILE:H	24:YD:65:ILE:HD13	1.68	0.57
25:YE:35:GLN:HB3	25:YE:48:GLN:HB2	1.87	0.57
26:YF:28:ILE:HG22	26:YF:112:MET:HB3	1.85	0.57
27:YG:98:ARG:NH1	47:Y4:1:MET:SD	2.77	0.57
3:QC:134:ILE:HG22	3:QC:168:ALA:HB3	1.86	0.57
27:RG:68:PRO:HB2	27:RG:90:LEU:HD12	1.86	0.57
28:RH:153:LYS:HB3	28:RH:154:PRO:CD	2.34	0.57
34:RR:117:VAL:O	34:RR:118:GLU:HB2	2.04	0.57
1:XA:388:G:HO2'	1:XA:389:A:P	2.27	0.57
11:XK:21:ILE:HG13	11:XK:30:VAL:HG12	1.86	0.57
22:YA:2193:G:H2'	22:YA:2194:G:H8	1.69	0.57
22:YA:2292:C:OP2	35:YS:17:ARG:NH2	2.30	0.57
22:YA:1820:U:C2	24:YD:202:LYS:HB3	2.38	0.57
33:YQ:116:GLU:O	33:YQ:120:ILE:HG12	2.05	0.57
22:YA:1187:G:H5''	38:YV:81:TYR:CE2	2.38	0.57
42:YZ:25:PRO:O	42:YZ:85:HIS:HA	2.04	0.57
1:QA:1446:A:H4'	36:RT:125:ARG:HH22	1.69	0.57
22:RA:223:A:O2'	22:RA:420:C:O2	2.22	0.57
22:RA:587:C:N3	32:RP:33:ARG:NH1	2.53	0.57
1:XA:1305:G:O2'	1:XA:1306:A:H8	1.83	0.57
1:XA:1525:G:P	11:XK:120:ARG:HH22	2.28	0.57
1:XA:244:U:H4'	1:XA:245:C:O5'	2.03	0.57
1:XA:27:G:H4'	4:XD:209:ARG:HG3	1.86	0.57
1:XA:1114:C:H1'	14:XN:60:SER:HB2	1.86	0.57
54:XX:5:C:C2	55:XY:36:G:N2	2.73	0.57
22:YA:1967:C:H2'	22:YA:1968:G:H5'	1.86	0.57
22:YA:2438:U:O3'	22:YA:2439:A:H3'	2.04	0.57
22:YA:2469:A:H5'	22:YA:2470:G:OP2	2.04	0.57
22:YA:2712:U:OP1	22:YA:2714:G:H4'	2.05	0.57
35:YS:10:ARG:NH2	35:YS:91:PRO:O	2.36	0.57
1:QA:1175:G:H2'	1:QA:1176:A:C8	2.39	0.57
1:QA:1466:C:H2'	1:QA:1467:G:O4'	2.05	0.57
22:RA:1385:G:O2'	22:RA:1396:U:O2	2.13	0.57
42:RZ:104:PHE:HB3	42:RZ:141:VAL:CG1	2.35	0.57
1:XA:123:C:OP1	1:XA:311:C:O2'	2.13	0.57
1:XA:914:A:H2'	1:XA:915:A:H8	1.70	0.57

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
16:XP:20:VAL:HG23	16:XP:35:LYS:HA	1.86	0.57
17:XQ:55:ASP:HA	17:XQ:79:SER:HA	1.85	0.57
1:XA:107:G:O6	20:XT:15:ARG:HD3	2.05	0.57
27:YG:98:ARG:HH12	47:Y4:1:MET:HB3	1.69	0.57
1:QA:166:G:H2'	1:QA:167:G:C8	2.39	0.57
22:RA:2712:U:OP1	22:RA:2714:G:H4'	2.05	0.57
22:RA:884:C:C2	22:RA:885:C:H5	2.23	0.57
27:RG:22:ARG:HH21	27:RG:171:ALA:HB1	1.69	0.57
41:RY:76:CYS:SG	41:RY:77:PRO:HD2	2.45	0.57
1:XA:1491:G:N7	57:XA:1601:PAR:O53	2.30	0.57
2:XB:96:ARG:HD3	2:XB:148:TYR:HE1	1.70	0.57
4:XD:154:ASN:OD1	4:XD:154:ASN:N	2.37	0.57
22:YA:99:U:H4'	22:YA:101:G:H5''	1.85	0.57
22:YA:2281:C:O2'	22:YA:2282:G:H5'	2.05	0.57
1:QA:452:A:O2'	1:QA:453:A:O4'	2.12	0.57
7:QG:79:ARG:HH12	7:QG:82:GLY:HA2	1.69	0.57
22:RA:443:A:C5	26:RF:45:ARG:HD2	2.40	0.57
24:RD:145:VAL:HG13	24:RD:191:ALA:HB2	1.87	0.57
24:RD:241:PRO:O	24:RD:242:ARG:HB2	2.04	0.57
32:RP:58:THR:C	32:RP:61:ARG:HE	2.05	0.57
1:XA:1243:C:H42	1:XA:1294:G:H1	1.52	0.57
1:XA:272:C:H2'	1:XA:273:A:H8	1.69	0.57
1:XA:591:U:H2'	1:XA:592:G:H8	1.70	0.57
1:XA:903:G:H2'	1:XA:904:C:C6	2.39	0.57
19:XS:32:LYS:HA	19:XS:50:ALA:HB3	1.86	0.57
22:YA:1210:A:H8	22:YA:1210:A:H5'	1.70	0.57
28:YH:149:ARG:HG3	28:YH:162:ILE:O	2.05	0.57
32:YP:135:LEU:O	32:YP:139:LYS:HB2	2.04	0.57
1:QA:1152:A:H2'	1:QA:1153:C:H6	1.69	0.57
13:QM:23:TYR:HB3	13:QM:67:GLU:HG2	1.87	0.57
19:QS:41:VAL:HB	19:QS:42:PRO:CA	2.34	0.57
43:R0:68:GLU:OE2	43:R0:82:ARG:NH1	2.33	0.57
22:RA:1328:G:H2'	22:RA:1330:C:C4	2.40	0.57
22:RA:515:A:H1'	22:RA:581:C:H1'	1.87	0.57
22:RA:823:G:H2'	22:RA:824:A:H8	1.70	0.57
1:XA:1327:C:OP2	21:XU:12:LYS:NZ	2.36	0.57
1:XA:1459:C:OP1	20:XT:27:LYS:NZ	2.37	0.57
22:YA:863:A:H2'	22:YA:864:G:C8	2.40	0.57
22:YA:950:G:H1	22:YA:967:C:H42	1.51	0.57
24:YD:71:ASP:CB	24:YD:103:ARG:HH22	2.18	0.57
2:QB:51:LEU:HD23	2:QB:201:ILE:HD12	1.86	0.57
6:QF:3:ARG:NH1	6:QF:38:GLU:OE2	2.37	0.57

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:RA:1341:U:OP1	22:RA:1397:U:N3	2.37	0.57
22:RA:2197:U:H1'	22:RA:2198:A:C8	2.40	0.57
22:RA:483:A:H5'	41:RY:49:VAL:HG22	1.86	0.57
24:RD:44:ASN:HB2	24:RD:48:ARG:O	2.05	0.57
40:RX:60:ARG:NH1	50:R7:47:ARG:HH22	2.03	0.57
1:XA:690:G:H2'	1:XA:691:G:O4'	2.04	0.57
9:XI:15:ALA:HB2	9:XI:65:VAL:HG23	1.86	0.57
22:YA:1301:A:C8	22:YA:1303:G:C8	2.93	0.57
22:YA:1444(A):A:H4'	22:YA:1460:A:H2'	1.87	0.57
22:YA:2123:G:H2'	22:YA:2124:G:C8	2.40	0.57
22:YA:2695:C:H2'	22:YA:2696:U:C6	2.39	0.57
22:YA:2811:G:O6	22:YA:2889:C:N4	2.37	0.57
22:YA:54:G:O2'	50:Y7:35:ARG:HD3	2.05	0.57
1:XA:345:C:OP2	36:YT:41:ARG:HD2	2.05	0.57
3:QC:73:PRO:HG3	3:QC:105:GLU:HG3	1.88	0.56
12:QL:117:ARG:HB3	12:QL:122:THR:HB	1.87	0.56
22:RA:550:G:O2'	22:RA:1220:A:O2'	2.11	0.56
22:RA:2556:C:H2'	22:RA:2557:G:O4'	2.05	0.56
22:RA:520:G:H2'	22:RA:521:G:H8	1.70	0.56
33:RQ:32:TYR:HE1	33:RQ:133:ARG:HG3	1.69	0.56
38:RV:52:VAL:HG21	38:RV:55:ALA:HB3	1.87	0.56
1:XA:1158:C:H4'	2:XB:133:LYS:NZ	2.20	0.56
22:YA:2395:C:O2'	44:Y1:30:VAL:HG12	2.05	0.56
47:Y4:71:ARG:HB2	47:Y4:71:ARG:HH11	1.68	0.56
22:YA:1222:C:H2'	22:YA:1223:C:H6	1.69	0.56
22:YA:2277:G:OP2	43:Y0:12:ASN:ND2	2.27	0.56
22:YA:2688:U:H5	22:YA:2720:U:OP2	1.88	0.56
22:YA:26:G:O2'	22:YA:514:A:N6	2.31	0.56
22:YA:764:A:N3	24:YD:213:ARG:NH1	2.52	0.56
22:YA:1138:G:N2	30:YN:106:MET:HE3	2.06	0.56
33:YQ:85:LYS:O	33:YQ:87:LYS:N	2.38	0.56
1:QA:407:G:OP1	4:QD:3:ARG:NH1	2.37	0.56
8:QH:102:ARG:NH1	8:QH:105:ARG:NH2	2.53	0.56
22:RA:1053:C:N4	22:RA:1106:G:H1	2.00	0.56
22:RA:1717:G:H1	22:RA:1742:C:H42	1.53	0.56
22:RA:307:G:H21	22:RA:330:A:H62	1.51	0.56
24:RD:108:PRO:HB3	24:RD:143:HIS:CE1	2.40	0.56
22:RA:2749:A:H1'	28:RH:63:SER:OG	2.05	0.56
33:RQ:43:THR:HA	33:RQ:94:VAL:HG12	1.87	0.56
1:XA:1126:U:H1'	1:XA:1280:A:N7	2.20	0.56
1:XA:1389:C:H2'	1:XA:1390:U:O4'	2.04	0.56
1:XA:284:G:H2'	1:XA:285:G:C8	2.39	0.56

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:XA:712:A:H2'	1:XA:713:G:C8	2.40	0.56
22:YA:1210:A:C5'	22:YA:1210:A:H8	2.18	0.56
22:YA:1790:C:H5''	22:YA:1791:A:OP1	2.05	0.56
22:YA:675:A:C8	22:YA:804:A:C6	2.93	0.56
22:YA:852:G:H2'	22:YA:853:G:C8	2.40	0.56
26:YF:107:LYS:HD2	26:YF:206:ILE:HA	1.86	0.56
27:YG:81:LYS:O	27:YG:82:LEU:HB2	2.04	0.56
29:YI:5:LEU:HD13	29:YI:17:GLN:HB3	1.87	0.56
1:QA:1095:U:P	1:QA:1108:G:H1	2.28	0.56
22:RA:262:A:H2'	22:RA:263:C:O4'	2.05	0.56
22:RA:372:G:H8	44:R1:65:SER:O	1.87	0.56
22:RA:974(A):C:H4'	22:RA:975:G:O5'	2.05	0.56
24:RD:148:GLU:HB2	24:RD:151:LYS:HD2	1.87	0.56
26:RF:11:VAL:HG12	26:RF:12:LEU:H	1.69	0.56
29:RI:144:VAL:HG22	29:RI:145:VAL:H	1.70	0.56
34:RR:67:LEU:HD13	34:RR:76:VAL:HG21	1.86	0.56
10:XJ:50:ILE:HD11	10:XJ:57:LYS:HD3	1.86	0.56
22:YA:1053:C:H42	22:YA:1106:G:H1	1.51	0.56
22:YA:1467:C:C5	22:YA:1546:C:H2'	2.40	0.56
22:YA:10:G:N2	22:YA:2802:G:OP1	2.39	0.56
31:YO:85:VAL:HG11	31:YO:114:ILE:HD11	1.87	0.56
32:YP:101:VAL:HG23	32:YP:106:LEU:HB3	1.88	0.56
36:YT:60:THR:HG22	36:YT:77:PRO:HA	1.86	0.56
38:YV:59:ALA:HB2	38:YV:96:ILE:HD13	1.88	0.56
1:QA:474:G:H5'	16:QP:81:ARG:HG3	1.87	0.56
22:RA:1043:C:N3	22:RA:1112:G:N2	2.46	0.56
22:RA:631:A:H2'	22:RA:632:A:O4'	2.05	0.56
32:RP:106:LEU:O	32:RP:107:LYS:HB2	2.05	0.56
25:RE:10:GLY:HA3	36:RT:8:LYS:HD2	1.85	0.56
38:RV:44:LYS:HE2	38:RV:45:THR:H	1.70	0.56
42:RZ:153:SER:HA	42:RZ:155:LEU:HD12	1.88	0.56
1:XA:1321:C:H5''	1:XA:1322:C:C5'	2.36	0.56
1:XA:382:A:H2'	1:XA:383:A:H8	1.70	0.56
22:YA:2277:G:OP2	43:Y0:10:THR:OG1	2.23	0.56
22:YA:1833:U:H2'	22:YA:1834:U:H6	1.69	0.56
22:YA:2306:C:H2'	22:YA:2307:G:N2	2.20	0.56
22:YA:630:G:N2	22:YA:633:A:OP2	2.33	0.56
22:YA:937:U:H2'	22:YA:938:G:O4'	2.05	0.56
42:YZ:105:VAL:HG13	42:YZ:140:ASP:HA	1.86	0.56
1:QA:476:G:H2'	1:QA:477:G:H8	1.69	0.56
1:QA:690:G:H22	11:QK:55:LYS:HZ1	1.53	0.56
17:QQ:90:ILE:O	17:QQ:94:ASN:ND2	2.38	0.56

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:RA:1282:U:H2'	22:RA:1283:G:O4'	2.05	0.56
22:RA:2576:G:O2'	22:RA:2579:C:OP2	2.15	0.56
22:RA:822:U:H2'	22:RA:823:G:C8	2.40	0.56
41:RY:81:LYS:HZ3	41:RY:98:VAL:HG11	1.69	0.56
42:RZ:157:LEU:HB3	42:RZ:161:VAL:O	2.06	0.56
1:XA:1005:A:H5''	1:XA:1038:C:H1'	1.87	0.56
22:YA:2086:U:H2'	22:YA:2087:G:C8	2.41	0.56
22:YA:2540:C:H2'	22:YA:2541:A:O4'	2.05	0.56
22:YA:732:C:H2'	22:YA:733:G:O4'	2.05	0.56
22:YA:2864:G:OP1	36:YT:119:LYS:HD2	2.05	0.56
39:YW:71:VAL:HA	39:YW:107:LEU:HD12	1.87	0.56
22:RA:1021:A:H2'	22:RA:1023:U:H5'	1.88	0.56
22:RA:1473:G:H2'	22:RA:1474:C:O4'	2.06	0.56
22:RA:2784:C:H2'	22:RA:2785:C:C6	2.41	0.56
22:RA:486:C:N4	22:RA:487:C:H41	2.04	0.56
22:RA:50:U:H3'	22:RA:51:G:H5'	1.87	0.56
23:RB:13:A:H2'	23:RB:70:C:O2'	2.06	0.56
22:RA:2311:A:H8	27:RG:82:LEU:HD11	1.70	0.56
33:RQ:66:ILE:HA	33:RQ:104:PHE:HA	1.87	0.56
1:XA:316:G:OP2	1:XA:351:G:O2'	2.22	0.56
1:XA:503:C:H2'	1:XA:504:C:H6	1.69	0.56
2:XB:84:GLU:HB3	2:XB:219:VAL:HG21	1.86	0.56
16:XP:20:VAL:HG21	16:XP:32:TYR:CD1	2.40	0.56
22:YA:1138:G:H2'	22:YA:1139:G:O4'	2.06	0.56
22:YA:2299:G:N2	22:YA:2318:G:H1'	2.20	0.56
22:YA:2354:G:N2	22:YA:2363:C:O2	2.39	0.56
38:YV:66:ARG:HH11	38:YV:88:ARG:HD3	1.71	0.56
2:QB:82:ARG:HA	2:QB:92:TYR:HE2	1.71	0.56
22:RA:108:U:H2'	22:RA:109:G:H8	1.69	0.56
33:RQ:24:GLY:O	33:RQ:26:TYR:N	2.36	0.56
35:RS:106:ARG:HA	35:RS:110:LEU:HD11	1.87	0.56
7:XG:54:THR:O	7:XG:56:GLN:N	2.39	0.56
49:Y6:25:LYS:HE2	49:Y6:27:LYS:HE3	1.87	0.56
22:YA:2532:G:H1'	22:YA:2663:G:H22	1.70	0.56
22:YA:2877:G:H2'	22:YA:2878:U:O4'	2.06	0.56
1:QA:1152:A:H5''	10:QJ:13:HIS:CD2	2.40	0.56
1:QA:1220:G:O3'	19:QS:36:ARG:HD3	2.06	0.56
1:QA:501:C:H2'	1:QA:502:G:C8	2.39	0.56
1:QA:977:A:H2'	1:QA:978:A:H5''	1.88	0.56
32:RP:68:GLN:HG2	51:R8:12:LYS:HD3	1.88	0.56
22:RA:987:G:O2'	22:RA:1000:A:N3	2.35	0.56
25:RE:4:ILE:HD12	25:RE:28:ALA:HB1	1.88	0.56

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
29:RI:115:ALA:O	29:RI:117:GLU:N	2.32	0.56
40:RX:31:HIS:CD2	40:RX:32:PRO:HD2	2.40	0.56
42:RZ:128:VAL:HG22	42:RZ:129:SER:H	1.71	0.56
1:XA:210:U:O2'	1:XA:216:G:N7	2.38	0.56
2:XB:21:ARG:O	2:XB:23:ARG:HD3	2.05	0.56
19:XS:5:LEU:HD11	47:Y4:66:SER:CA	2.35	0.56
22:YA:654(A):G:H8	22:YA:654(A):G:OP2	1.89	0.56
31:YO:97:ARG:HA	31:YO:117:LEU:HD22	1.88	0.56
22:YA:481:G:OP2	41:YY:47:LYS:HG3	2.06	0.56
1:QA:1167:A:H2'	1:QA:1169:A:O4'	2.06	0.56
12:QL:89:ARG:HB3	12:QL:97:ARG:HA	1.87	0.56
12:QL:45:PRO:HB3	12:QL:92:ASP:HB3	1.87	0.56
13:QM:7:VAL:HG21	27:RG:113:ARG:O	2.06	0.56
22:RA:108:U:H2'	22:RA:109:G:C8	2.41	0.56
22:RA:74:A:H4'	22:RA:75:G:O5'	2.06	0.56
42:RZ:178:GLU:O	42:RZ:179:ASP:HB2	2.06	0.56
1:XA:1213:A:N6	1:XA:1215:G:N3	2.54	0.56
1:XA:320:C:H2'	1:XA:321:A:C8	2.41	0.56
3:XC:174:PRO:HD2	3:XC:182:ILE:HD11	1.88	0.56
22:YA:1899:G:H21	22:YA:1902:C:H41	1.52	0.56
22:YA:2801:A:C5	22:YA:2802:G:H1'	2.41	0.56
22:YA:307:G:H21	22:YA:330:A:N6	2.04	0.56
22:YA:462:C:N4	22:YA:467:G:H1	1.99	0.56
1:QA:790:A:C6	1:QA:791:G:C6	2.94	0.56
22:RA:1259:G:H2'	22:RA:1260:G:C8	2.41	0.56
22:RA:934:G:H2'	22:RA:935:C:C6	2.41	0.56
26:RF:110:LEU:HD11	26:RF:181:LEU:HD12	1.88	0.56
1:XA:1347:G:N2	1:XA:1374:A:O5'	2.38	0.56
22:YA:1854:A:H2	22:YA:2087:G:N3	2.03	0.56
22:YA:2205:C:H2'	22:YA:2206:C:H6	1.70	0.56
23:YB:41:U:C4	27:YG:70:VAL:HG23	2.41	0.56
28:YH:92:ILE:HD12	28:YH:92:ILE:H	1.71	0.56
33:YQ:81:VAL:C	33:YQ:82:ARG:HG2	2.25	0.56
22:YA:1754:C:P	36:YT:96:ARG:HH12	2.29	0.56
41:YY:95:LYS:HB3	41:YY:100:ALA:HA	1.87	0.56
1:QA:1333:A:H2'	1:QA:1334:G:O4'	2.06	0.56
1:QA:339:C:OP2	31:RO:97:ARG:NH1	2.39	0.56
1:QA:579:G:H2'	1:QA:580:U:C6	2.40	0.56
1:QA:811:C:H4'	1:QA:900:A:H61	1.71	0.56
4:QD:187:ARG:NH2	4:QD:193:ASP:OD2	2.38	0.56
8:QH:106:GLY:O	8:QH:122:ARG:NH2	2.36	0.56
10:QJ:5:ARG:HG3	10:QJ:71:LEU:HD11	1.87	0.56

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:QA:754:C:H5'	15:QO:72:ARG:HH22	1.70	0.56
32:RP:121:LYS:HD3	32:RP:122:PRO:HD2	1.88	0.56
37:RU:94:ASN:C	37:RU:94:ASN:HD22	2.09	0.56
1:XA:1333:A:H2'	1:XA:1334:G:O4'	2.05	0.56
1:XA:1349:A:OP2	9:XI:118:LYS:NZ	2.29	0.56
2:XB:158:LEU:HD13	2:XB:182:ILE:HD11	1.89	0.56
4:XD:122:ARG:NH1	4:XD:134:ASP:O	2.39	0.56
22:YA:601:C:O2	22:YA:605:C:H4'	2.06	0.56
24:YD:232:PRO:HB3	24:YD:244:ARG:NH1	2.21	0.56
30:YN:40:PRO:O	37:YU:64:ARG:HD2	2.06	0.56
1:QA:107:G:C2	1:QA:108:G:H1'	2.41	0.55
1:QA:1128:C:H4'	9:QI:16:ARG:HH12	1.71	0.55
2:QB:71:VAL:HG12	2:QB:93:VAL:HB	1.88	0.55
48:R5:4:HIS:HB3	48:R5:5:PRO:CD	2.32	0.55
49:R6:36:LEU:HB2	49:R6:50:ARG:HA	1.88	0.55
22:RA:1337:G:H2'	22:RA:1338:G:H8	1.72	0.55
22:RA:1801:G:OP2	24:RD:154:LYS:HE2	2.05	0.55
29:RI:5:LEU:HB2	29:RI:16:GLY:H	1.69	0.55
39:RW:86:LEU:HD22	39:RW:96:ILE:HD11	1.88	0.55
1:XA:690:G:H1	11:XK:55:LYS:HZ1	1.54	0.55
3:XC:9:GLY:HA2	3:XC:12:LEU:HD23	1.88	0.55
4:XD:11:LEU:HD13	4:XD:66:ARG:HG2	1.88	0.55
22:YA:1093:G:H5'	28:YH:170:ARG:NH1	2.21	0.55
22:YA:1068:G:O2'	22:YA:1096:A:N3	2.39	0.55
22:YA:1203:G:H3'	22:YA:1204:A:H5''	1.89	0.55
36:YT:29:ARG:HB2	36:YT:46:GLU:HG3	1.88	0.55
10:QJ:16:LEU:HD23	10:QJ:94:VAL:HG13	1.88	0.55
10:QJ:78:ASN:O	10:QJ:81:THR:OG1	2.24	0.55
1:QA:1317:C:N3	19:QS:37:ARG:NH2	2.53	0.55
22:RA:1803:A:H2	22:RA:1822:G:N3	2.05	0.55
22:RA:1825:A:OP2	24:RD:220:HIS:NE2	2.38	0.55
23:RB:75:G:H4'	42:RZ:36:LYS:HG3	1.88	0.55
25:RE:63:LEU:CD1	25:RE:65:GLY:H	2.19	0.55
31:RO:78:ARG:HH21	36:RT:103:ARG:NH2	2.03	0.55
36:RT:26:ASP:O	36:RT:49:VAL:HG12	2.07	0.55
1:XA:674:G:H2'	1:XA:675:A:C8	2.39	0.55
1:XA:807:A:H2'	1:XA:808:C:C6	2.42	0.55
3:XC:130:VAL:O	3:XC:134:ILE:HG12	2.06	0.55
5:XE:37:ARG:HA	5:XE:114:GLY:N	2.21	0.55
22:YA:1545(A):A:H2'	22:YA:1546:C:O4'	2.05	0.55
22:YA:2584:U:H2'	22:YA:2585:U:H2'	1.87	0.55
22:YA:2712:U:HO2'	22:YA:2712(A):A:P	2.28	0.55

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:YA:448:U:C4	22:YA:583:G:H1'	2.41	0.55
29:YI:13:GLY:HA3	29:YI:17:GLN:HB2	1.86	0.55
30:YN:56:ASN:N	30:YN:125:GLY:O	2.22	0.55
22:YA:956:G:OP2	33:YQ:14:ARG:NH2	2.39	0.55
22:YA:1614:A:H61	39:YW:88:ARG:H	1.52	0.55
1:QA:1161:C:H2'	1:QA:1162:C:H6	1.71	0.55
1:QA:1399:C:C2	1:QA:1502:A:N6	2.74	0.55
1:QA:570:G:H2'	1:QA:571:U:C6	2.41	0.55
1:QA:701:C:H1'	1:QA:703:G:C6	2.40	0.55
9:QI:77:ILE:O	9:QI:81:ILE:HG12	2.06	0.55
1:QA:585:G:O3'	17:QQ:34:LYS:NZ	2.39	0.55
47:R4:24:THR:OG1	47:R4:25:TYR:N	2.38	0.55
22:RA:445:C:H5''	37:RU:3:ARG:HB3	1.89	0.55
22:RA:2250:G:C4	33:RQ:82:ARG:HG3	2.41	0.55
42:RZ:182:LYS:HD3	42:RZ:182:LYS:N	2.17	0.55
1:XA:95:G:H3'	1:XA:96:G:H8	1.71	0.55
10:XJ:34:VAL:HG22	10:XJ:74:ILE:HG22	1.89	0.55
6:XF:97:PHE:HD2	18:XR:31:LEU:HD21	1.70	0.55
43:Y0:27:GLU:HG3	43:Y0:68:GLU:HA	1.89	0.55
22:YA:1204:A:H1'	22:YA:1206:G:C8	2.42	0.55
22:YA:2263:C:H2'	22:YA:2264:C:C6	2.42	0.55
26:YF:101:LEU:O	26:YF:106:ARG:NH1	2.40	0.55
29:YI:129:THR:HA	29:YI:137:PRO:HA	1.88	0.55
36:YT:39:ARG:HG2	36:YT:40:THR:H	1.72	0.55
43:R0:56:ASP:OD1	43:R0:58:THR:OG1	2.24	0.55
22:RA:1846:G:H5'	22:RA:1847:A:OP2	2.05	0.55
22:RA:195:A:H5''	22:RA:196:A:O5'	2.07	0.55
38:RV:7:THR:HG23	38:RV:22:VAL:HG11	1.88	0.55
1:XA:1004:A:N1	1:XA:1024:G:H2'	2.20	0.55
1:XA:1053:G:H2'	1:XA:1199:U:H5	1.71	0.55
1:XA:1226:C:OP2	13:XM:103:THR:OG1	2.15	0.55
5:XE:50:GLU:HB3	5:XE:53:LEU:HD13	1.88	0.55
1:XA:963:G:C2	10:XJ:55:LYS:NZ	2.75	0.55
15:XO:18:PHE:CE1	15:XO:21:ASP:HB2	2.41	0.55
49:Y6:28:ARG:HB3	49:Y6:30:THR:H	1.71	0.55
51:Y8:50:LEU:HD12	51:Y8:51:ALA:N	2.21	0.55
22:YA:1459:G:H2'	22:YA:1460:A:H5'	1.89	0.55
22:YA:2159:G:H2'	22:YA:2160:G:C8	2.40	0.55
22:YA:699:A:H2'	22:YA:700:G:O4'	2.07	0.55
42:YZ:1:MET:HG2	42:YZ:2:GLU:H	1.71	0.55
1:QA:909:A:O2'	1:QA:1413:A:O2'	2.21	0.55
1:QA:963:G:H21	10:QJ:55:LYS:HD3	1.71	0.55

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:QB:178:ARG:HH21	8:QH:74:PRO:HG3	1.71	0.55
1:QA:953:G:N7	13:QM:104:ARG:NH2	2.55	0.55
14:QN:48:ALA:HB2	14:QN:53:LEU:HD12	1.88	0.55
44:R1:53:VAL:HG11	44:R1:90:ILE:HD11	1.88	0.55
22:RA:1418:G:N1	22:RA:1579:A:OP2	2.36	0.55
22:RA:1753:G:N1	22:RA:1756:G:OP2	2.38	0.55
22:RA:78:A:H2'	22:RA:79:G:C8	2.42	0.55
29:RI:116:LEU:O	29:RI:118:LYS:N	2.40	0.55
33:RQ:30:GLY:CA	33:RQ:107:ALA:HB2	2.37	0.55
20:XT:49:ALA:HB1	20:XT:99:LEU:HB2	1.89	0.55
22:YA:2356:C:O3'	43:Y0:20:ARG:HD3	2.07	0.55
19:XS:67:VAL:HG21	47:Y4:60:GLN:HE22	1.70	0.55
51:Y8:60:LEU:HB3	51:Y8:63:PRO:HG2	1.89	0.55
22:YA:2306:C:H2'	22:YA:2307:G:H21	1.71	0.55
27:YG:67:LYS:HZ3	47:Y4:6:HIS:CD2	2.24	0.55
28:YH:121:ILE:HG12	28:YH:140:LYS:HD2	1.89	0.55
32:YP:52:GLU:HG3	32:YP:57:THR:HG22	1.88	0.55
36:YT:3:ARG:HG3	36:YT:7:ILE:HG12	1.88	0.55
38:YV:38:LEU:H	38:YV:51:VAL:HG13	1.70	0.55
42:YZ:136:PHE:HE1	42:YZ:138:GLU:HG3	1.71	0.55
1:QA:1301:U:H3'	1:QA:1302:U:H5'	1.89	0.55
1:QA:632:A:H3'	1:QA:633:G:H8	1.72	0.55
1:QA:985:C:H42	1:QA:1220:G:H1	1.54	0.55
2:QB:5:ILE:HD12	2:QB:224:GLN:HG2	1.89	0.55
8:QH:86:ILE:HG13	8:QH:133:LEU:HD22	1.89	0.55
22:RA:2543:G:H2'	22:RA:2544:G:C8	2.42	0.55
26:RF:101:LEU:O	26:RF:106:ARG:NH1	2.40	0.55
37:RU:52:ARG:HA	37:RU:55:ARG:HG3	1.88	0.55
41:RY:37:VAL:HG21	41:RY:72:VAL:HG21	1.88	0.55
41:RY:96:ILE:HG12	41:RY:101:LYS:HB2	1.88	0.55
41:RY:81:LYS:HB2	41:RY:96:ILE:HG22	1.89	0.55
1:XA:411:A:C4	1:XA:413:G:H1'	2.42	0.55
2:XB:82:ARG:NH1	2:XB:86:GLU:OE2	2.40	0.55
22:YA:468:G:N7	50:Y7:39:ARG:NH2	2.51	0.55
22:YA:1534:G:H1	22:YA:1538:G:N2	2.03	0.55
22:YA:958:U:OP2	33:YQ:14:ARG:NH1	2.40	0.55
25:YE:63:LEU:HD12	25:YE:64:LYS:N	2.22	0.55
28:YH:157:TYR:HA	28:YH:171:LEU:O	2.06	0.55
32:YP:62:LEU:HD12	51:Y8:30:ARG:NH1	2.22	0.55
47:R4:16:CYS:SG	47:R4:36:CYS:N	2.79	0.55
22:RA:1210:A:H4'	22:RA:1211:U:O5'	2.07	0.55
22:RA:288:C:H2'	22:RA:289:A:H8	1.72	0.55

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:RA:589:C:H2'	22:RA:590:A:C8	2.42	0.55
1:XA:1175:G:H2'	1:XA:1176:A:C8	2.42	0.55
1:XA:1359:C:OP2	14:YN:35:ARG:NH1	2.40	0.55
1:XA:1497:G:H2'	1:XA:1498:U:H5'	1.88	0.55
1:XA:262:A:H2'	1:XA:263:A:C8	2.42	0.55
1:XA:45:U:H2'	1:XA:46:G:C8	2.42	0.55
22:YA:900:A:H3'	22:YA:901:A:H8	1.71	0.55
32:YP:71:VAL:HG13	32:YP:72:PRO:HD3	1.88	0.55
22:YA:2467:C:H4'	33:YQ:123:HIS:CD2	2.40	0.55
1:QA:1002:G:H1	1:QA:1038:C:H42	1.54	0.55
1:QA:474:G:H2'	1:QA:475:G:H8	1.72	0.55
1:QA:711:G:OP1	6:QF:54:LYS:NZ	2.36	0.55
4:QD:27:TYR:HE2	6:XF:15:ASP:HB3	1.71	0.55
22:RA:1576:U:H2'	22:RA:1577:C:C6	2.42	0.55
22:RA:2611:U:O2	48:R5:3:LYS:HE3	2.06	0.55
22:RA:2888:C:H2'	22:RA:2889:C:H6	1.72	0.55
22:RA:70:G:H21	22:RA:71:A:H62	1.55	0.55
28:RH:109:PHE:HZ	28:RH:152:ARG:HG2	1.72	0.55
9:XI:16:ARG:HB2	9:XI:64:THR:HB	1.89	0.55
11:XK:34:ASP:OD1	11:XK:38:ASN:N	2.39	0.55
1:XA:1318:A:H5'	19:XS:11:VAL:HG11	1.89	0.55
43:Y0:18:ALA:HB3	43:Y0:20:ARG:NH1	2.22	0.55
22:YA:1841:U:H2'	22:YA:1842:G:C8	2.42	0.55
22:YA:528:A:C2	22:YA:2043:C:H4'	2.42	0.55
22:YA:612:G:O2'	22:YA:616:A:N1	2.33	0.55
22:YA:630:G:OP2	51:Y8:15:LYS:NZ	2.39	0.55
24:YD:43:ARG:HD2	24:YD:44:ASN:OD1	2.07	0.55
29:YI:77:LEU:HD23	29:YI:138:ILE:HD11	1.89	0.55
39:YW:14:PRO:O	39:YW:17:VAL:N	2.40	0.55
1:QA:745:C:H2'	1:QA:746:A:H8	1.72	0.55
48:R5:56:LYS:H	48:R5:56:LYS:HD2	1.72	0.55
22:RA:1466:G:N2	22:RA:1547:C:N3	2.55	0.55
22:RA:265:A:O2'	22:RA:266:G:H4'	2.07	0.55
24:RD:35:LYS:NZ	24:RD:104:TYR:HB2	2.22	0.55
23:RB:37:C:O2	35:RS:95:HIS:NE2	2.40	0.55
40:RX:25:LYS:HD3	40:RX:80:ILE:HD11	1.89	0.55
1:XA:1256:A:OP2	1:XA:1279:A:N6	2.40	0.55
1:XA:1320:C:N4	19:XS:36:ARG:HG3	2.21	0.55
1:XA:539:A:OP1	12:XL:114:LYS:NZ	2.32	0.55
1:XA:965:A:H4'	1:XA:966:G:OP1	2.07	0.55
8:XH:86:ILE:HG22	8:XH:93:VAL:HG21	1.89	0.55
22:YA:1499:C:H2'	22:YA:1500:G:H8	1.71	0.55

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
23:YB:70:C:H2'	23:YB:71:C:C6	2.42	0.55
36:YT:26:ASP:O	36:YT:49:VAL:HG12	2.07	0.55
38:YV:34:GLU:O	38:YV:36:PRO:HD3	2.06	0.55
1:QA:414:A:N6	1:QA:431:A:N3	2.55	0.55
9:QI:26:VAL:HG22	9:QI:61:ALA:HB3	1.89	0.55
10:QJ:13:HIS:CE1	10:QJ:14:LYS:HE3	2.42	0.55
22:RA:1728:G:H3'	22:RA:1729:A:C5'	2.36	0.55
22:RA:2469:A:OP1	22:RA:2469:A:H4'	2.06	0.55
22:RA:2688:U:H5	22:RA:2720:U:OP2	1.90	0.55
23:RB:40:U:H1'	23:RB:45:A:H61	1.71	0.55
29:RI:13:GLY:HA3	29:RI:17:GLN:CD	2.28	0.55
41:RY:95:LYS:CB	41:RY:100:ALA:HA	2.36	0.55
23:RB:103:U:O2'	42:RZ:72:ARG:HD3	2.07	0.55
1:XA:719:C:O2'	18:XR:49:LYS:HB3	2.07	0.55
1:XA:767:A:H2'	1:XA:768:A:O4'	2.07	0.55
12:XL:70:ILE:HG12	12:XL:100:ILE:HD12	1.88	0.55
22:YA:771:G:OP1	50:Y7:14:LYS:HE3	2.06	0.55
22:YA:862:G:H2'	22:YA:863:A:O4'	2.06	0.55
26:YF:116:ASP:OD2	32:YP:1:MET:N	2.26	0.55
38:YV:61:VAL:HG23	38:YV:63:GLY:H	1.71	0.55
51:R8:29:LYS:HD3	51:R8:44:LYS:HB2	1.88	0.54
22:RA:1028:A:N3	22:RA:2486:G:O2'	2.37	0.54
22:RA:1050:A:H2'	22:RA:1051:G:O4'	2.07	0.54
22:RA:1167:U:H2'	22:RA:1168:G:O4'	2.07	0.54
22:RA:1283:G:N2	22:RA:1286:A:H5'	2.22	0.54
22:RA:2041:U:H2'	22:RA:2042:A:H8	1.72	0.54
22:RA:1354:A:OP1	24:RD:38:LYS:HE2	2.06	0.54
28:RH:124:GLU:HB3	28:RH:132:ARG:HG3	1.89	0.54
42:RZ:140:ASP:OD2	42:RZ:140:ASP:N	2.38	0.54
1:XA:221:C:H2'	1:XA:222:U:H6	1.73	0.54
1:XA:1128:C:H5'	9:XI:16:ARG:HH22	1.71	0.54
10:XJ:33:GLN:HB2	10:XJ:75:ILE:HD11	1.88	0.54
22:YA:2110:G:OP1	22:YA:2145:C:N4	2.40	0.54
22:YA:2205:C:H2'	22:YA:2206:C:C6	2.42	0.54
22:YA:2298:A:H62	22:YA:2318:G:H8	1.53	0.54
22:YA:2585:U:H5	56:Z8:76:PPU:HO2'	1.54	0.54
22:YA:271:G:H2'	22:YA:272:G:C8	2.34	0.54
22:YA:2788:C:O2'	22:YA:2809:A:N3	2.37	0.54
4:QD:167:GLY:CA	24:YD:135:PHE:CE2	2.89	0.54
30:YN:42:TRP:O	37:YU:64:ARG:NH2	2.40	0.54
22:YA:2394:C:OP1	32:YP:63:PRO:HD2	2.06	0.54
1:QA:1402:C:H2'	1:QA:1403:C:O4'	2.06	0.54

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:QA:249:U:O2'	1:QA:252:U:O2'	2.21	0.54
22:RA:2126:A:H4'	22:RA:2127:G:O5'	2.08	0.54
22:RA:2543:G:H21	22:RA:2646:C:H5''	1.71	0.54
22:RA:2867:G:O2'	22:RA:2868:A:P	2.66	0.54
22:RA:861:A:N3	23:RB:79:C:O2'	2.39	0.54
26:RF:184:TYR:CE2	26:RF:188:ARG:HD2	2.42	0.54
30:RN:40:PRO:HB3	37:RU:68:ALA:HB2	1.89	0.54
33:RQ:31:ASP:O	33:RQ:134:ARG:HB2	2.07	0.54
36:RT:1:MET:O	36:RT:3:ARG:N	2.40	0.54
1:XA:1095:U:OP1	1:XA:1108:G:N2	2.38	0.54
1:XA:392:G:H2'	1:XA:393:A:H8	1.72	0.54
3:XC:150:LYS:HE2	3:XC:152:ILE:HD11	1.88	0.54
8:XH:54:ASP:OD1	8:XH:54:ASP:N	2.39	0.54
13:XM:22:ILE:HD12	13:XM:25:ILE:HD12	1.89	0.54
22:YA:2336:A:H61	43:Y0:43:THR:HG21	1.73	0.54
48:Y5:55:ARG:HG3	48:Y5:57:VAL:H	1.72	0.54
22:YA:2366:A:H2'	22:YA:2367:G:O4'	2.07	0.54
22:YA:834:C:H2'	22:YA:835:A:H8	1.72	0.54
13:XM:3:ARG:HH22	27:YG:139:LEU:HD13	1.70	0.54
22:YA:2562:U:O2'	31:YO:23:ARG:HD3	2.07	0.54
33:YQ:109:VAL:HG13	33:YQ:113:GLN:HB3	1.89	0.54
33:YQ:60:ARG:HA	42:YZ:178:GLU:O	2.07	0.54
34:YR:55:ALA:HB2	34:YR:79:LEU:HD13	1.89	0.54
34:YR:56:LYS:NZ	34:YR:87:TYR:O	2.40	0.54
36:YT:62:THR:HG22	36:YT:75:ILE:HG12	1.89	0.54
1:QA:187:C:H1'	1:QA:191(A):G:N2	2.22	0.54
1:QA:523:A:H61	12:QL:92:ASP:HB2	1.72	0.54
1:QA:790:A:N6	1:QA:791:G:O6	2.41	0.54
5:QE:78:HIS:CE1	5:QE:142:LEU:HD23	2.42	0.54
22:RA:2343:C:O2'	22:RA:2373:G:O2'	2.14	0.54
22:RA:1999:C:H5''	22:RA:2723:C:O2'	2.08	0.54
22:RA:2758:A:C2	22:RA:2759:G:H1'	2.43	0.54
22:RA:1843:C:H5'	24:RD:253:GLN:OE1	2.07	0.54
33:RQ:54:MET:HG3	33:RQ:117:ALA:HB1	1.89	0.54
1:XA:128:G:O2'	17:XQ:3:LYS:NZ	2.33	0.54
1:XA:729:A:H2'	1:XA:730:G:H8	1.71	0.54
4:XD:92:VAL:O	4:XD:96:LEU:HD22	2.07	0.54
3:QC:79:ARG:HD2	11:XK:99:GLN:OE1	2.07	0.54
22:YA:1149:G:H2'	22:YA:1150:C:C6	2.43	0.54
22:YA:1794:U:H2'	22:YA:1795:C:C6	2.42	0.54
22:YA:501:A:H8	22:YA:501:A:O5'	1.90	0.54
22:YA:609(A):G:H2'	22:YA:610:C:C6	2.41	0.54

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
24:YD:12:SER:O	24:YD:16:MET:HB2	2.08	0.54
1:QA:1425:U:H2'	1:QA:1426:C:C6	2.43	0.54
1:QA:530:G:O6	54:QX:6:G:H1'	2.08	0.54
44:R1:58:ILE:HD11	44:R1:86:SER:HB2	1.88	0.54
45:R2:42:GLY:O	45:R2:44:LEU:N	2.35	0.54
25:RE:35:GLN:HE21	25:RE:37:ARG:CZ	2.21	0.54
30:RN:30:ILE:HG22	30:RN:34:LEU:HD22	1.88	0.54
34:RR:103:ARG:NH1	34:RR:108:GLY:O	2.41	0.54
42:RZ:100:VAL:HG11	42:RZ:134:PRO:HG2	1.89	0.54
23:YB:12:C:O2'	43:Y0:74:ARG:HG3	2.07	0.54
22:YA:2421:G:OP1	49:Y6:6:ARG:NH2	2.39	0.54
22:YA:1423:G:H2'	22:YA:1424:G:C8	2.41	0.54
37:YU:76:TYR:CZ	37:YU:80:ILE:HG13	2.43	0.54
33:YQ:137:TYR:OH	42:YZ:45:ASP:OD2	2.20	0.54
1:QA:1152:A:H2'	1:QA:1153:C:C6	2.42	0.54
1:QA:865:A:H5'	1:QA:1078:U:C5	2.43	0.54
1:QA:988:G:H2'	1:QA:989:C:O4'	2.07	0.54
9:QI:121:ARG:NH1	9:QI:122:ALA:O	2.40	0.54
10:QJ:8:LEU:HB3	10:QJ:16:LEU:HD21	1.88	0.54
45:R2:50:ILE:HD12	45:R2:51:ARG:H	1.72	0.54
13:QM:3:ARG:CB	47:R4:34:GLU:HB3	2.31	0.54
48:R5:40:LYS:HG2	48:R5:47:PRO:HD2	1.90	0.54
22:RA:1849:G:H2'	22:RA:1850:G:H8	1.73	0.54
22:RA:2586:C:OP2	22:RA:2608:G:N1	2.32	0.54
27:RG:16:ARG:NH2	27:RG:28:VAL:O	2.41	0.54
29:RI:8:PRO:HA	29:RI:14:ASP:HA	1.88	0.54
1:XA:1161:C:H2'	1:XA:1162:C:C6	2.43	0.54
1:XA:382:A:H2'	1:XA:383:A:C8	2.42	0.54
1:XA:881:G:OP1	12:XL:12:ARG:NH2	2.40	0.54
5:XE:100:VAL:HG22	5:XE:118:ILE:HG22	1.90	0.54
1:XA:707:C:OP1	11:XK:85:ARG:NH1	2.40	0.54
47:Y4:54:GLY:O	47:Y4:59:PHE:HB2	2.07	0.54
22:YA:2847:U:P	36:YT:98:LYS:HZ3	2.30	0.54
22:YA:247:G:H4'	22:YA:386:G:C5	2.43	0.54
4:QD:149:ALA:HB3	4:QD:152:SER:HB2	1.89	0.54
13:QM:22:ILE:HB	13:QM:25:ILE:HD12	1.89	0.54
22:RA:520:G:H2'	22:RA:521:G:C8	2.43	0.54
22:RA:861:A:H2'	22:RA:862:G:O4'	2.07	0.54
22:RA:994:C:OP2	37:RU:54:LYS:NZ	2.38	0.54
24:RD:35:LYS:HZ1	24:RD:104:TYR:HB2	1.71	0.54
29:RI:115:ALA:HB3	29:RI:128:LEU:HD12	1.89	0.54
29:RI:82:ARG:HG2	29:RI:146:ALA:HB3	1.88	0.54

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
37:RU:112:ARG:NH2	38:RV:47:VAL:HG13	2.23	0.54
40:RX:83:VAL:CG1	40:RX:87:GLN:HB2	2.38	0.54
1:XA:1252:A:H2'	1:XA:1253:G:O4'	2.08	0.54
5:XE:12:LEU:HD21	5:XE:14:ARG:HD3	1.89	0.54
7:XG:20:ASP:HB3	7:XG:23:VAL:HG23	1.88	0.54
12:XL:115:LYS:O	12:XL:117:ARG:N	2.35	0.54
18:XR:31:LEU:H	18:XR:31:LEU:HD23	1.73	0.54
1:XA:1314:C:OP1	19:XS:6:LYS:HE3	2.08	0.54
22:YA:1510:A:OP1	22:YA:1511:A:H8	1.91	0.54
22:YA:2439:A:H4'	22:YA:2440:C:O5'	2.08	0.54
22:YA:573:G:OP2	38:YV:78:LYS:NZ	2.39	0.54
30:YN:35:ARG:HB2	30:YN:42:TRP:CH2	2.42	0.54
32:YP:64:LYS:O	32:YP:66:GLY:N	2.41	0.54
42:YZ:169:GLU:HG2	42:YZ:170:THR:N	2.22	0.54
1:QA:1095:U:OP1	1:QA:1108:G:N1	2.41	0.54
1:QA:498:A:H4'	1:QA:500:G:OP1	2.06	0.54
2:QB:84:GLU:HB3	2:QB:219:VAL:HG21	1.89	0.54
23:RB:5:C:O2'	23:RB:27:C:O2	2.26	0.54
36:RT:111:ARG:O	36:RT:112:ARG:HG3	2.08	0.54
36:RT:37:GLY:O	36:RT:39:ARG:N	2.34	0.54
1:XA:1368:G:OP1	9:XI:111:ARG:NH2	2.37	0.54
1:XA:20:U:H2'	1:XA:21:G:O4'	2.07	0.54
1:XA:513:C:H42	1:XA:538:G:H1	1.54	0.54
1:XA:585:G:O2'	1:XA:879:C:OP1	2.21	0.54
1:XA:940:C:H2'	1:XA:941:G:H8	1.71	0.54
1:XA:941:G:H1	1:XA:1342:C:H42	1.55	0.54
3:XC:150:LYS:HB3	3:XC:201:TYR:HB2	1.90	0.54
7:XG:49:ILE:O	7:XG:53:LYS:HB3	2.08	0.54
53:XV:3:C:H2'	53:XV:4:G:H5'	1.89	0.54
45:Y2:35:LEU:HD12	45:Y2:53:LEU:HD12	1.89	0.54
22:YA:964:C:O2'	22:YA:2273:A:N3	2.38	0.54
22:YA:674:G:N3	26:YF:74:ARG:NH1	2.56	0.54
5:QE:7:GLU:N	5:QE:35:GLY:O	2.36	0.54
22:RA:699:A:H2'	22:RA:700:G:O4'	2.08	0.54
25:RE:111:ARG:HG3	25:RE:160:TYR:CD1	2.43	0.54
32:RP:9:ASN:HB2	32:RP:10:PRO:HD2	1.90	0.54
32:RP:38:GLN:HG2	32:RP:45:LEU:CD1	2.36	0.54
1:XA:1190:G:OP2	3:XC:5:ILE:HG23	2.08	0.54
1:XA:347:G:H1'	1:XA:348:G:H5''	1.90	0.54
3:XC:15:THR:HG23	3:XC:181:ASN:HD22	1.73	0.54
10:XJ:32:ALA:H	10:XJ:78:ASN:HD21	1.55	0.54
22:YA:1178:C:H2'	22:YA:1179:C:C6	2.43	0.54

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:YA:2028:U:H2'	22:YA:2029:G:O4'	2.08	0.54
22:YA:2807:G:H22	22:YA:2893:G:H1	1.56	0.54
42:YZ:28:MET:O	42:YZ:34:ASN:HA	2.08	0.54
1:QA:279:A:H4'	1:QA:280:C:H5''	1.90	0.54
1:QA:633:G:H5'	1:QA:634:C:OP2	2.08	0.54
22:RA:1423:G:H2'	22:RA:1424:G:C8	2.42	0.54
22:RA:945:A:C4	22:RA:2448:A:C2	2.96	0.54
22:RA:242:G:O2'	22:RA:254:G:O6	2.10	0.54
22:RA:855:G:H1	22:RA:922:U:H3	1.56	0.54
34:RR:45:ARG:HA	34:RR:95:THR:HG21	1.90	0.54
1:XA:426:G:OP1	4:XD:38:TYR:OH	2.16	0.54
13:XM:3:ARG:HA	13:XM:9:ILE:CG2	2.37	0.54
16:XP:43:LYS:HG2	16:XP:48:TRP:CE3	2.42	0.54
22:YA:1013:C:H42	22:YA:1149:G:H1	1.54	0.54
22:YA:1149:G:H2'	22:YA:1150:C:H6	1.73	0.54
22:YA:1341:U:O4'	40:YX:57:LEU:HD23	2.08	0.54
22:YA:2389:G:H5''	22:YA:2390:U:O4'	2.08	0.54
22:YA:2396:G:C2	22:YA:2397:G:C8	2.96	0.54
27:YG:15:VAL:HG21	27:YG:176:LEU:HD23	1.90	0.54
29:YI:109:ILE:HB	29:YI:130:TYR:CZ	2.43	0.54
30:YN:6:PRO:HG3	30:YN:41:ASP:HB2	1.89	0.54
2:QB:204:ASN:HD22	2:QB:206:ASP:H	1.56	0.54
4:QD:194:LEU:HD12	4:QD:195:ALA:H	1.73	0.54
1:QA:1371:G:OP1	9:QI:12:GLU:HB2	2.08	0.54
19:QS:10:PHE:HE2	19:QS:16:LEU:HD22	1.73	0.54
22:RA:1924:C:H4'	53:QV:13:C:O2'	2.07	0.54
22:RA:1203:G:H5''	22:RA:1204:A:H5''	1.90	0.54
22:RA:2224:G:OP1	24:RD:268:ARG:NH1	2.39	0.54
22:RA:2549:G:N2	22:RA:2560:C:C2	2.76	0.54
22:RA:2509:G:N2	22:RA:2579:C:N3	2.47	0.54
22:RA:2712:U:HO2'	22:RA:2712(A):A:P	2.27	0.54
22:RA:245:G:O2'	22:RA:384:U:O2	2.14	0.54
22:RA:559:G:H2'	22:RA:560:C:O4'	2.07	0.54
22:RA:679:C:H2'	22:RA:680:G:C8	2.43	0.54
22:RA:902:C:H2'	22:RA:903:C:C6	2.42	0.54
2:XB:162:ILE:O	2:XB:185:ILE:HG12	2.07	0.54
10:XJ:9:ARG:HB2	10:XJ:95:GLU:HB3	1.88	0.54
22:YA:2262:U:OP2	43:Y0:16:SER:HB2	2.08	0.54
32:YP:62:LEU:HD12	51:Y8:30:ARG:HH11	1.72	0.54
49:Y6:25:LYS:HZ2	51:Y8:34:TRP:HZ2	1.56	0.54
22:YA:2245:U:C5'	22:YA:2246:G:H5'	2.37	0.54
22:YA:2315:G:OP1	27:YG:36:LYS:NZ	2.41	0.54

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:YA:340:A:H2'	22:YA:341:G:O4'	2.08	0.54
23:YB:40:U:H3	23:YB:43:C:H5''	1.73	0.54
24:YD:70:TRP:CH2	24:YD:150:LYS:HA	2.43	0.54
25:YE:111:ARG:HD2	25:YE:160:TYR:CD1	2.42	0.54
1:QA:1336:C:H2'	1:QA:1336:C:O2	2.08	0.53
2:QB:235:SER:O	2:QB:237:ALA:N	2.41	0.53
22:RA:2102:U:H2'	22:RA:2103:C:C6	2.43	0.53
22:RA:2267:A:H5''	22:RA:2268:A:H5'	1.89	0.53
22:RA:2309:A:C6	22:RA:2310:A:C6	2.95	0.53
22:RA:478:A:N1	22:RA:500:G:H4'	2.23	0.53
32:RP:14:LYS:O	32:RP:16:ARG:HG2	2.08	0.53
1:XA:1225:A:N3	1:XA:1225:A:H2'	2.22	0.53
1:XA:591:U:H2'	1:XA:592:G:C8	2.43	0.53
2:XB:82:ARG:HA	2:XB:92:TYR:CE2	2.43	0.53
22:YA:1270:C:O2'	22:YA:1648:C:OP2	2.17	0.53
22:YA:2853:C:H2'	22:YA:2854:G:H8	1.73	0.53
22:YA:304:G:H2'	22:YA:305:U:C6	2.43	0.53
29:YI:131:LYS:HB3	29:YI:132:PRO:HA	1.90	0.53
32:YP:88:LEU:HD12	32:YP:95:VAL:HG11	1.90	0.53
1:QA:1072:G:H2'	1:QA:1073:U:C6	2.43	0.53
1:QA:1410:G:H1	1:QA:1490:C:N4	2.00	0.53
1:QA:191(D):U:H2'	1:QA:191(E):G:C8	2.44	0.53
3:QC:84:ILE:HD11	3:QC:88:ARG:HH21	1.73	0.53
15:QO:6:GLU:OE2	15:QO:6:GLU:N	2.35	0.53
47:R4:56:VAL:HA	47:R4:60:GLN:HB2	1.89	0.53
22:RA:2050:C:N4	22:RA:2051:A:N1	2.55	0.53
22:RA:271:G:H2'	22:RA:272:G:H8	1.73	0.53
22:RA:2772:C:H2'	22:RA:2773:C:C6	2.43	0.53
22:RA:686:G:H21	22:RA:788:A:H61	1.56	0.53
24:RD:44:ASN:HD22	24:RD:44:ASN:N	2.06	0.53
22:RA:321:G:H5''	26:RF:136:THR:HG23	1.90	0.53
32:RP:61:ARG:HD2	51:R8:13:ARG:HD2	1.90	0.53
22:RA:2277:G:H5''	33:RQ:85:LYS:HB2	1.90	0.53
36:RT:33:LYS:HD2	36:RT:82:LEU:HA	1.89	0.53
1:XA:1075:C:OP1	2:XB:179:LYS:HE2	2.09	0.53
1:XA:1191:A:H5''	3:XC:4:LYS:HZ2	1.73	0.53
3:XC:14:ILE:O	3:XC:16:ARG:N	2.35	0.53
22:YA:1265:A:H3'	48:Y5:19:ARG:NH1	2.23	0.53
22:YA:190:A:N3	22:YA:679:C:O2'	2.40	0.53
22:YA:270(E):G:H2'	22:YA:270(F):U:O4'	2.08	0.53
24:YD:244:ARG:HB2	24:YD:245:PRO:HD2	1.90	0.53
24:YD:43:ARG:CB	24:YD:54:ARG:HB2	2.38	0.53

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
25:YE:78:LEU:HG	25:YE:79:ARG:NE	2.23	0.53
30:YN:30:ILE:HG23	30:YN:52:VAL:HG11	1.91	0.53
33:YQ:137:TYR:CE2	42:YZ:83:PRO:HG3	2.44	0.53
1:QA:598:U:H4'	8:QH:94:TYR:CD2	2.43	0.53
1:QA:593:G:H1	1:QA:646:U:H3	1.55	0.53
1:QA:689:C:OP2	11:QK:55:LYS:NZ	2.41	0.53
12:QL:55:VAL:HG12	12:QL:69:TYR:HA	1.90	0.53
22:RA:1053:C:N3	22:RA:1106:G:N2	2.42	0.53
22:RA:1204:A:O2'	22:RA:1205:U:O5'	2.26	0.53
22:RA:1289:C:H2'	22:RA:1290:C:C6	2.44	0.53
22:RA:1930:G:O2'	22:RA:1931:U:P	2.66	0.53
22:RA:2250:G:C8	22:RA:2496:C:H5''	2.44	0.53
22:RA:2563:U:O2	22:RA:2565:A:H8	1.90	0.53
22:RA:2687:U:C4	22:RA:2688:U:C5	2.96	0.53
22:RA:49:A:N7	22:RA:120:U:H5	2.06	0.53
29:RI:144:VAL:HG13	29:RI:145:VAL:HG23	1.91	0.53
29:RI:7:GLU:O	29:RI:9:LEU:HD13	2.08	0.53
1:XA:1145:C:H5'	1:XA:1146:A:OP1	2.08	0.53
1:XA:327:A:C4	1:XA:329:A:C8	2.97	0.53
2:XB:60:ASP:O	2:XB:64:ARG:HG2	2.09	0.53
10:XJ:4:ILE:HG12	10:XJ:100:THR:HG22	1.89	0.53
19:XS:36:ARG:NH1	19:XS:52:TYR:O	2.42	0.53
45:Y2:15:LYS:H	45:Y2:67:LYS:HE2	1.73	0.53
22:YA:1076:C:H2'	22:YA:1077:A:H5''	1.90	0.53
22:YA:1509:C:H2'	22:YA:1511:A:C8	2.43	0.53
22:YA:2636:U:OP1	25:YE:79:ARG:HA	2.09	0.53
22:YA:528:A:H3'	22:YA:528:A:C8	2.42	0.53
22:YA:1454:U:H5'	34:YR:63:ARG:NE	2.23	0.53
38:YV:66:ARG:NH1	38:YV:88:ARG:HD3	2.23	0.53
1:QA:1321:C:N4	1:QA:1322:C:N3	2.57	0.53
1:QA:147:G:H2'	1:QA:148:G:C8	2.44	0.53
1:QA:299:G:H2'	1:QA:300:A:C8	2.44	0.53
1:QA:606:G:H22	1:QA:631:G:H5'	1.73	0.53
1:QA:6:G:N2	5:QE:98:THR:OG1	2.41	0.53
8:QH:51:VAL:HG11	8:QH:60:ARG:HG3	1.90	0.53
1:QA:1350:A:OP2	9:QI:118:LYS:NZ	2.41	0.53
22:RA:1224:G:N2	22:RA:1227:A:OP2	2.42	0.53
22:RA:1264:G:H3'	22:RA:1265:A:H5''	1.89	0.53
22:RA:2562:U:O2'	31:RO:23:ARG:NH1	2.35	0.53
22:RA:554:U:H2'	22:RA:556:G:C8	2.44	0.53
23:RB:105:G:H2'	23:RB:106:G:H8	1.73	0.53
31:RO:2:ILE:HD13	31:RO:8:LEU:HD11	1.90	0.53

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
33:RQ:32:TYR:CE1	33:RQ:133:ARG:HG3	2.43	0.53
38:RV:99:ILE:O	38:RV:101:GLY:N	2.42	0.53
1:XA:1238:A:H62	1:XA:1301:U:H3	1.54	0.53
9:XI:111:ARG:NE	9:XI:112:LYS:O	2.38	0.53
11:XK:84:VAL:HG11	11:XK:95:ILE:HD11	1.90	0.53
22:YA:2789:C:H1'	22:YA:2892:A:H2	1.73	0.53
22:YA:528:A:C2	22:YA:2042:A:H2'	2.44	0.53
1:QA:636:U:H2'	1:QA:637:G:C8	2.44	0.53
1:QA:920:U:H2'	1:QA:921:U:C6	2.43	0.53
3:QC:35:GLU:HG2	3:QC:59:ARG:NH2	2.24	0.53
45:R2:10:LEU:O	45:R2:13:ALA:N	2.40	0.53
13:QM:62:ASN:OD1	47:R4:49:PHE:HD2	1.92	0.53
22:RA:1620:G:O2'	22:RA:1621:U:H5'	2.09	0.53
22:RA:2332:U:H4'	22:RA:2336:A:N6	2.24	0.53
22:RA:247:G:H4'	22:RA:386:G:C5	2.44	0.53
22:RA:270(F):U:H2'	22:RA:270(G):C:C6	2.44	0.53
22:RA:380:U:H2'	22:RA:381:G:C8	2.43	0.53
22:RA:511:U:O4	22:RA:512:G:N1	2.42	0.53
26:RF:135:LYS:HB3	26:RF:138:GLU:HG3	1.90	0.53
22:RA:674:G:C1'	26:RF:74:ARG:HD3	2.35	0.53
28:RH:149:ARG:HE	28:RH:154:PRO:HG2	1.73	0.53
1:XA:1347:G:OP2	9:XI:107:ARG:HG2	2.09	0.53
1:XA:514:C:H2'	1:XA:515:G:C8	2.44	0.53
52:Y9:27:CYS:SG	52:Y9:28:GLU:N	2.82	0.53
22:YA:1165:U:H2'	22:YA:1166:C:C6	2.43	0.53
22:YA:2033:A:O2'	22:YA:2035:G:OP2	2.26	0.53
22:YA:747:U:OP2	48:Y5:3:LYS:HD2	2.08	0.53
23:YB:77:U:P	42:YZ:19:ARG:HH22	2.31	0.53
24:YD:30:GLU:HG3	24:YD:63:ARG:HH21	1.73	0.53
36:YT:112:ARG:O	36:YT:112:ARG:NE	2.39	0.53
36:YT:51:ARG:CG	36:YT:98:LYS:HG3	2.38	0.53
42:YZ:102:LEU:HG	42:YZ:123:ASP:HA	1.89	0.53
1:QA:1004:A:H1'	1:QA:1036:G:H22	1.74	0.53
1:QA:1510:U:H2'	1:QA:1511:G:C8	2.44	0.53
1:QA:892:A:H2'	1:QA:893:C:C6	2.43	0.53
22:RA:1405:U:H2'	22:RA:1406:U:C6	2.44	0.53
22:RA:2010:G:H5''	39:RW:42:ARG:HB2	1.91	0.53
26:RF:32:LEU:O	26:RF:36:VAL:HG23	2.09	0.53
29:RI:114:LEU:HD12	29:RI:129:THR:O	2.08	0.53
1:XA:107:G:C2	1:XA:108:G:H1'	2.44	0.53
1:XA:933:G:N2	1:XA:1384:C:O2	2.39	0.53
8:XH:121:ASP:HB2	8:XH:125:ARG:NH2	2.24	0.53

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
17:XQ:4:LYS:HE3	17:XQ:6:LEU:HD21	1.90	0.53
22:YA:1162:G:H2'	22:YA:1163:G:H8	1.72	0.53
22:YA:1953:A:N1	22:YA:2549:G:O2'	2.38	0.53
23:YB:16:G:C6	23:YB:69:G:C2	2.97	0.53
33:YQ:12:GLN:HG2	33:YQ:73:PRO:HD2	1.90	0.53
36:YT:105:LEU:O	36:YT:107:ASP:N	2.42	0.53
42:YZ:52:SER:OG	42:YZ:52:SER:O	2.24	0.53
1:QA:1346:A:H5''	9:QI:120:ARG:NH1	2.20	0.53
1:QA:148:G:H2'	1:QA:149:A:H8	1.72	0.53
1:QA:382:A:H2'	1:QA:383:A:H8	1.73	0.53
1:QA:665:A:H2'	1:QA:725:G:N2	2.22	0.53
1:QA:872:A:O2'	1:QA:873:A:H5''	2.08	0.53
6:QF:10:LEU:HD13	6:QF:61:LEU:HD13	1.90	0.53
9:QI:71:SER:HA	9:QI:74:ILE:HD12	1.90	0.53
22:RA:1035:U:H2'	22:RA:1036:G:C8	2.44	0.53
22:RA:1058:G:H1	22:RA:1079:C:N4	2.06	0.53
22:RA:2277:G:OP2	43:R0:10:THR:HG21	2.09	0.53
22:RA:2823:A:OP1	25:RE:113:PHE:HB2	2.08	0.53
22:RA:676:A:H8	22:RA:2069:G:N2	2.02	0.53
13:QM:7:VAL:HB	27:RG:115:ARG:NH1	2.24	0.53
29:RI:132:PRO:HB2	29:RI:133:HIS:CE1	2.43	0.53
35:RS:106:ARG:HA	35:RS:110:LEU:HD21	1.91	0.53
41:RY:98:VAL:HG13	41:RY:99:CYS:SG	2.48	0.53
1:XA:356:A:N3	1:XA:368:U:O2'	2.35	0.53
1:XA:865:A:H2	1:XA:918:A:H4'	1.72	0.53
19:XS:5:LEU:HD11	47:Y4:67:TYR:N	2.24	0.53
22:YA:1933:G:H2'	22:YA:1934:C:O4'	2.09	0.53
22:YA:2022:U:O2'	22:YA:2617:C:H5'	2.09	0.53
22:YA:273(C):C:N4	22:YA:363(C):G:H1	2.04	0.53
22:YA:729:G:C6	24:YD:208:LYS:HB2	2.43	0.53
30:YN:96:GLU:HG2	30:YN:97:ARG:N	2.23	0.53
32:YP:92:GLU:HA	32:YP:123:LEU:HD23	1.89	0.53
23:YB:37:C:O2	35:YS:95:HIS:NE2	2.42	0.53
36:YT:16:ARG:HE	36:YT:19:LEU:HD21	1.73	0.53
1:QA:1342:C:H4'	9:QI:125:TYR:HB3	1.90	0.53
1:QA:922:G:H2'	1:QA:923:A:C8	2.44	0.53
19:QS:44:MET:O	19:QS:46:GLY:N	2.40	0.53
45:R2:65:ASN:HB3	45:R2:69:ARG:NH2	2.24	0.53
22:RA:1871:A:H2'	22:RA:1872:A:C8	2.44	0.53
22:RA:2128:C:H1'	22:RA:2173:A:N3	2.23	0.53
22:RA:295:G:H1	22:RA:343:C:H42	1.56	0.53
22:RA:445:C:H2'	22:RA:446:G:O4'	2.09	0.53

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:RA:609(A):G:H2'	22:RA:610:C:C6	2.44	0.53
22:RA:864:G:H1'	22:RA:914:C:H42	1.74	0.53
22:RA:960:A:H2'	22:RA:962:G:H5'	1.91	0.53
26:RF:157:VAL:HB	26:RF:194:MET:HB3	1.91	0.53
32:RP:113:LYS:HG2	32:RP:115:LEU:HD23	1.90	0.53
1:QA:1432:G:OP1	36:RT:107:ASP:HB2	2.09	0.53
39:RW:110:LYS:HG3	39:RW:111:HIS:ND1	2.23	0.53
42:RZ:111:VAL:O	42:RZ:113:ALA:N	2.42	0.53
1:XA:1312:G:H3'	47:Y4:67:TYR:OH	2.09	0.53
1:XA:68:G:H5'	1:XA:171:A:H1'	1.90	0.53
1:XA:947:G:H2'	1:XA:948:C:C6	2.44	0.53
19:XS:31:ILE:HG23	19:XS:49:ILE:HA	1.91	0.53
20:XT:95:ALA:O	20:XT:97:ALA:N	2.42	0.53
22:YA:1413:G:H2'	22:YA:1414:G:O4'	2.09	0.53
22:YA:1676:A:H2'	22:YA:1677:A:O4'	2.08	0.53
22:YA:2734:A:H5'	22:YA:2735:G:OP2	2.09	0.53
24:YD:206:LEU:O	24:YD:211:ARG:HD3	2.09	0.53
37:YU:102:GLU:OE1	38:YV:13:ARG:NH2	2.42	0.53
1:QA:1077:G:N2	1:QA:1080:A:OP2	2.38	0.53
1:QA:1194:U:H5''	1:QA:1195:C:OP2	2.09	0.53
1:QA:447:G:O6	1:QA:485:G:H2'	2.09	0.53
1:QA:7:G:H2'	5:QE:119:LEU:HD22	1.90	0.53
4:QD:78:LEU:HD22	4:QD:96:LEU:HB3	1.89	0.53
44:R1:80:LEU:HD23	44:R1:80:LEU:H	1.74	0.53
22:RA:2262:U:H5	43:R0:16:SER:HG	1.57	0.53
22:RA:26:G:H1'	22:RA:515:A:H61	1.73	0.53
22:RA:303:U:H2'	22:RA:304:G:C8	2.43	0.53
22:RA:415:A:H2'	22:RA:416:C:O4'	2.08	0.53
22:RA:709:U:H3	22:RA:722:A:H61	1.55	0.53
22:RA:768:G:H2'	22:RA:769:G:H8	1.74	0.53
25:RE:203:LYS:HE3	25:RE:204:ALA:HB2	1.91	0.53
29:RI:101:LEU:HD23	29:RI:105:HIS:HB2	1.90	0.53
1:XA:1321:C:H5''	1:XA:1322:C:H5''	1.91	0.53
1:XA:381:C:H2'	1:XA:382:A:O4'	2.09	0.53
18:XR:25:THR:HB	18:XR:26:LEU:HD23	1.91	0.53
49:Y6:26:ASN:ND2	49:Y6:35:GLU:OE2	2.42	0.53
22:YA:1510:A:N3	22:YA:1510:A:H2'	2.24	0.53
22:YA:528:A:H2	22:YA:2043:C:C5'	2.22	0.53
22:YA:2572:A:C8	25:YE:144:ARG:NE	2.75	0.53
27:YG:179:PRO:HG3	47:Y4:38:LYS:NZ	2.24	0.53
28:YH:149:ARG:NH1	28:YH:167:GLU:OE1	2.42	0.53
29:YI:82:ARG:O	29:YI:89:TYR:HD1	1.92	0.53

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:QA:918:A:H2'	1:QA:919:A:O4'	2.09	0.53
1:QA:939:G:H5''	7:QG:102:ARG:NH2	2.24	0.53
43:R0:70:GLN:OE1	43:R0:80:HIS:NE2	2.40	0.53
22:RA:2232:U:P	44:R1:40:ARG:HH12	2.32	0.53
48:R5:40:LYS:NZ	48:R5:46:CYS:HB3	2.24	0.53
22:RA:137(A):G:N3	40:RX:41:ASN:ND2	2.54	0.53
22:RA:1496:A:H8	22:RA:1577:C:O2'	1.92	0.53
22:RA:2888:C:H2'	22:RA:2889:C:C6	2.44	0.53
23:RB:13:A:O2'	23:RB:14:U:H3'	2.08	0.53
28:RH:10:PRO:HD2	28:RH:50:VAL:HG13	1.89	0.53
22:RA:1652:A:N6	34:RR:11:ASN:OD1	2.38	0.53
1:XA:130:A:N3	1:XA:263:A:O2'	2.37	0.53
1:XA:243:A:H4'	1:XA:244:U:H3'	1.91	0.53
1:XA:946:A:H2'	1:XA:947:G:C8	2.43	0.53
2:XB:44:LEU:HD12	2:XB:44:LEU:H	1.74	0.53
1:XA:255:G:H4'	17:XQ:17:LYS:HD3	1.91	0.53
49:Y6:40:CYS:HB2	49:Y6:45:LYS:HD3	1.90	0.53
22:YA:1093:G:OP1	28:YH:170:ARG:NH1	2.42	0.53
22:YA:2441:C:OP2	22:YA:2586:C:O2'	2.24	0.53
22:YA:270(T):G:OP1	44:Y1:97:LEU:HD13	2.09	0.53
30:YN:13:TRP:O	30:YN:135:PRO:HD2	2.08	0.53
41:YY:35:TYR:CE1	41:YY:69:ALA:HB3	2.44	0.53
1:QA:1275:A:H2'	1:QA:1276:G:O4'	2.10	0.52
1:QA:476:G:H2'	1:QA:477:G:C8	2.44	0.52
1:QA:37:U:O2'	1:QA:500:G:H4'	2.09	0.52
1:QA:36:C:O2'	12:QL:117:ARG:NH2	2.42	0.52
45:R2:4:SER:OG	45:R2:5:GLU:OE2	2.16	0.52
22:RA:1532:C:O2	22:RA:1540:G:N2	2.42	0.52
22:RA:1858:G:H1'	22:RA:1884:A:N6	2.24	0.52
22:RA:2844:G:H3'	22:RA:2845:G:H8	1.74	0.52
25:RE:1:MET:N	25:RE:83:ASP:O	2.41	0.52
1:XA:1003:G:H21	1:XA:1005:A:H5'	1.74	0.52
1:XA:1399:C:C2	1:XA:1502:A:N6	2.77	0.52
7:XG:15:ASP:HB3	7:XG:19:GLY:H	1.74	0.52
12:XL:7:ILE:HD13	12:XL:10:LEU:HD12	1.90	0.52
22:YA:1055:G:N2	22:YA:1104:C:N3	2.47	0.52
29:YI:124:GLY:H	29:YI:142:VAL:HG23	1.74	0.52
35:YS:10:ARG:O	35:YS:12:PHE:N	2.42	0.52
33:YQ:60:ARG:NH1	42:YZ:113:ALA:HB3	2.20	0.52
1:QA:1244:C:N3	1:QA:1293:G:N2	2.41	0.52
1:QA:1305:G:N2	1:QA:1331:G:H2'	2.24	0.52
14:QN:24:CYS:HB3	14:QN:29:ARG:N	2.23	0.52

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:RA:1181:C:H2'	22:RA:1182:A:H8	1.73	0.52
24:RD:206:LEU:O	24:RD:211:ARG:NH1	2.38	0.52
22:RA:1007:C:H5''	30:RN:35:ARG:HH11	1.75	0.52
1:XA:1161:C:O2'	1:XA:1162:C:H5'	2.09	0.52
1:XA:1439:C:H42	1:XA:1462:G:H1	1.57	0.52
20:XT:47:GLY:O	20:XT:49:ALA:N	2.41	0.52
1:XA:261:U:OP2	20:XT:79:ARG:NH2	2.42	0.52
27:YG:96:ARG:O	27:YG:98:ARG:N	2.42	0.52
29:YI:5:LEU:HD21	29:YI:12:LEU:HB3	1.91	0.52
30:YN:110:GLY:O	30:YN:114:ARG:HG3	2.09	0.52
42:YZ:144:LEU:HD11	42:YZ:149:SER:HA	1.90	0.52
42:YZ:10:ARG:NH2	42:YZ:26:GLY:H	2.07	0.52
1:QA:940:C:H42	1:QA:1343:G:H1	1.56	0.52
4:QD:98:GLU:OE2	4:QD:107:ARG:NE	2.43	0.52
1:QA:410:G:H3'	4:QD:25:ARG:HH21	1.73	0.52
29:RI:79:ILE:HD13	29:RI:80:PRO:HD2	1.91	0.52
22:RA:943:U:OP2	32:RP:36:LYS:HG2	2.08	0.52
38:RV:60:GLU:HB2	38:RV:97:LYS:HE3	1.92	0.52
1:XA:1067:A:N1	1:XA:1108:G:O2'	2.36	0.52
1:XA:1277:C:O2'	1:XA:1279:A:H1'	2.09	0.52
3:XC:40:ARG:O	3:XC:44:GLU:HB2	2.09	0.52
22:YA:1114:G:H2'	22:YA:1115:G:H8	1.72	0.52
22:YA:2261:C:OP2	43:Y0:17:GLN:N	2.40	0.52
22:YA:2688:U:H1'	22:YA:2721:A:N6	2.25	0.52
22:YA:669:G:N3	22:YA:669:G:H2'	2.23	0.52
24:YD:132:PRO:HD3	24:YD:190:TYR:CZ	2.44	0.52
24:YD:85:ASP:OD2	24:YD:88:ARG:HD2	2.08	0.52
29:YI:5:LEU:N	29:YI:5:LEU:HD12	2.24	0.52
35:YS:6:ALA:O	35:YS:10:ARG:HD3	2.09	0.52
33:YQ:20:ALA:HB3	42:YZ:79:ARG:NH2	2.23	0.52
1:QA:396:G:O2'	1:QA:398:C:OP1	2.20	0.52
1:QA:42:G:H8	1:QA:42:G:O5'	1.93	0.52
1:QA:625:G:H2'	1:QA:626:U:H6	1.75	0.52
2:QB:134:GLU:HA	2:QB:137:ARG:HB3	1.92	0.52
13:QM:66:LEU:HA	13:QM:70:LEU:HB2	1.92	0.52
22:RA:1297:C:H2'	22:RA:1298:C:H6	1.74	0.52
22:RA:2106:G:H1	22:RA:2183:C:N4	2.01	0.52
22:RA:548:A:C5	22:RA:549:G:H1'	2.43	0.52
24:RD:35:LYS:NZ	24:RD:64:ILE:O	2.41	0.52
26:RF:134:GLY:HA3	26:RF:165:ARG:NH1	2.25	0.52
28:RH:46:GLU:OE2	28:RH:51:ARG:NH1	2.42	0.52
1:XA:1245:A:OP2	21:XU:9:ARG:NH2	2.42	0.52

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:YA:1614:A:N1	39:YW:91:GLY:HA2	2.25	0.52
22:YA:2845:G:H5''	36:YT:54:ARG:O	2.08	0.52
22:YA:297:C:H2'	22:YA:298:G:O4'	2.09	0.52
22:YA:347:A:H2'	22:YA:348:G:C8	2.44	0.52
22:YA:1287:A:N7	34:YR:107:ASP:HB2	2.25	0.52
1:QA:617:G:H1	1:QA:623:C:H42	1.57	0.52
3:QC:37:GLN:NE2	14:QN:52:GLN:OE1	2.32	0.52
22:RA:2019:A:OP2	48:R5:9:LYS:NZ	2.40	0.52
22:RA:1247:A:OP1	26:RF:95:ARG:NH2	2.42	0.52
22:RA:1432:C:H2'	22:RA:1433:U:O4'	2.10	0.52
22:RA:1790:C:H5''	22:RA:1791:A:OP1	2.10	0.52
22:RA:2105:C:N4	22:RA:2106:G:O6	2.42	0.52
22:RA:2247:A:H2'	22:RA:2248:C:C6	2.44	0.52
22:RA:2461:C:H2'	22:RA:2462:U:H6	1.73	0.52
27:RG:82:LEU:HA	27:RG:86:MET:SD	2.48	0.52
28:RH:86:GLU:HG3	28:RH:165:ALA:N	2.25	0.52
29:RI:29:TYR:CD2	29:RI:30:LEU:HD23	2.44	0.52
34:RR:59:ASP:OD1	34:RR:61:HIS:HB3	2.08	0.52
1:QA:1464:G:OP1	36:RT:108:ARG:NH2	2.43	0.52
1:XA:1203:C:H2'	1:XA:1204:A:H8	1.75	0.52
1:XA:987:G:H1	1:XA:1218:C:H42	1.57	0.52
1:XA:757:U:OP1	1:XA:822:C:O2'	2.27	0.52
16:XP:8:ARG:O	16:XP:9:PHE:HD2	1.93	0.52
22:YA:213:A:H2'	22:YA:214:G:O4'	2.09	0.52
22:YA:2193:G:H2'	22:YA:2194:G:C8	2.44	0.52
22:YA:325:G:H2'	22:YA:326:G:C8	2.43	0.52
22:YA:528:A:OP2	30:YN:114:ARG:NH1	2.42	0.52
1:QA:690:G:H22	11:QK:55:LYS:NZ	2.08	0.52
22:RA:537:C:H5'	22:RA:539:G:OP2	2.10	0.52
22:RA:78:A:H2'	22:RA:79:G:H8	1.73	0.52
24:RD:108:PRO:HB3	24:RD:143:HIS:HE1	1.73	0.52
24:RD:133:LEU:HB3	24:RD:173:VAL:HG11	1.91	0.52
26:RF:150:GLY:HA2	26:RF:172:TRP:CE3	2.44	0.52
29:RI:124:GLY:O	29:RI:142:VAL:HG23	2.09	0.52
42:RZ:111:VAL:HG13	42:RZ:112:ARG:H	1.74	0.52
1:XA:1284:C:H3'	1:XA:1285:A:H8	1.75	0.52
1:XA:684:A:C6	1:XA:685:G:C6	2.98	0.52
3:XC:189:ALA:HB3	3:XC:196:LEU:HB2	1.91	0.52
14:XN:43:CYS:HA	14:XN:46:GLU:HG3	1.92	0.52
1:XA:1320:C:H5'	19:XS:70:LYS:HG3	1.92	0.52
53:XV:74:C:C2'	53:XV:75:C:H5'	2.40	0.52
49:Y6:13:CYS:O	49:Y6:21:TYR:HA	2.09	0.52

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:YA:11:G:H2'	22:YA:12:U:H5'	1.90	0.52
22:YA:1658:C:H2'	22:YA:1659:U:C6	2.45	0.52
22:YA:519:U:H2'	22:YA:520:G:H8	1.75	0.52
27:YG:88:ILE:O	27:YG:88:ILE:HD13	2.09	0.52
1:QA:602:A:H2'	1:QA:603:U:C6	2.45	0.52
1:QA:7:G:H5'	1:QA:298:A:O4'	2.10	0.52
22:RA:1042:G:H2'	22:RA:1043:C:C6	2.45	0.52
22:RA:180:G:P	50:R7:32:LYS:HE2	2.50	0.52
22:RA:1810:A:H2'	22:RA:1811:G:O4'	2.10	0.52
22:RA:2119:A:N6	22:RA:2170:A:N7	2.56	0.52
22:RA:380:U:H2'	22:RA:381:G:H8	1.74	0.52
29:RI:29:TYR:HD2	29:RI:30:LEU:HD23	1.74	0.52
41:RY:87:LYS:HA	41:RY:92:ASN:HB3	1.91	0.52
1:XA:464:G:C6	1:XA:466:C:H5'	2.45	0.52
1:XA:1229:A:O2'	53:XV:30:G:OP1	2.25	0.52
51:Y8:11:LYS:NZ	51:Y8:63:PRO:HG3	2.24	0.52
22:YA:2527:C:H5"	52:Y9:30:PRO:HB2	1.90	0.52
22:YA:1820:U:H4'	22:YA:1821:A:OP2	2.10	0.52
22:YA:2291:U:H2'	22:YA:2292:C:C6	2.44	0.52
26:YF:63:LYS:HE2	26:YF:67:GLN:HB2	1.91	0.52
32:YP:20:GLY:HA2	32:YP:27:HIS:O	2.10	0.52
1:QA:1150:U:O4	1:QA:1151:A:N6	2.43	0.52
1:QA:137:C:O4'	16:QP:63:GLY:HA2	2.09	0.52
1:QA:192:U:H2'	1:QA:193:C:C6	2.45	0.52
1:QA:301:G:H2'	1:QA:302:G:C8	2.45	0.52
1:QA:382:A:H2'	1:QA:383:A:C8	2.44	0.52
22:RA:551:G:H5'	22:RA:1220:A:H1'	1.91	0.52
22:RA:1592:C:H2'	22:RA:1593:G:H8	1.74	0.52
22:RA:2493:U:H2'	22:RA:2494:G:O4'	2.10	0.52
22:RA:2774:C:H2'	22:RA:2775:A:O4'	2.10	0.52
22:RA:608:A:OP1	26:RF:100:THR:OG1	2.28	0.52
23:RB:44:G:H5"	23:RB:45:A:OP1	2.09	0.52
24:RD:206:LEU:HD22	24:RD:211:ARG:HG2	1.92	0.52
29:RI:12:LEU:HG	29:RI:19:VAL:HG21	1.90	0.52
38:RV:34:GLU:O	38:RV:36:PRO:HD3	2.10	0.52
41:RY:84:ARG:O	41:RY:95:LYS:HD3	2.09	0.52
1:XA:113:G:H1	1:XA:314:C:N4	2.07	0.52
1:XA:1069:C:O2'	1:XA:1192:C:O2	2.15	0.52
1:XA:42:G:H1	1:XA:400:C:H42	1.58	0.52
1:XA:476:G:H2'	1:XA:477:G:C8	2.45	0.52
7:XG:78:ARG:HG3	7:XG:79:ARG:N	2.25	0.52
10:XJ:78:ASN:O	10:XJ:81:THR:OG1	2.25	0.52

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
20:XT:53:LEU:O	20:XT:57:ARG:NH1	2.42	0.52
22:YA:278:A:H2'	22:YA:279:C:C6	2.45	0.52
22:YA:2825:C:O5'	22:YA:2825:C:H6	1.92	0.52
22:YA:649:G:C6	22:YA:650:C:C4	2.98	0.52
22:YA:759:G:H2'	22:YA:760:G:H8	1.74	0.52
26:YF:24:LEU:HD23	26:YF:115:ALA:HA	1.91	0.52
1:QA:1126:U:H1'	1:QA:1280:A:N7	2.25	0.52
1:QA:376:G:H5''	16:QP:5:ARG:HB2	1.92	0.52
1:QA:411:A:H62	1:QA:413:G:N2	2.08	0.52
4:QD:12:CYS:HA	4:QD:19:LEU:HD23	1.92	0.52
5:QE:145:LYS:HA	8:QH:107:LEU:HD21	1.91	0.52
11:QK:96:ARG:HA	11:QK:99:GLN:HE21	1.75	0.52
22:RA:1178:C:H4'	22:RA:1179:C:OP1	2.10	0.52
22:RA:2183:C:H2'	22:RA:2184:G:C8	2.45	0.52
22:RA:2867:G:O2'	22:RA:2868:A:H8	1.93	0.52
22:RA:883:G:H22	22:RA:892:G:H22	1.57	0.52
39:RW:60:ASN:HD22	39:RW:60:ASN:H	1.56	0.52
1:XA:643:C:H2'	1:XA:644:G:H8	1.73	0.52
1:XA:877:C:O2'	8:XH:3:THR:OG1	2.22	0.52
2:XB:35:GLU:O	2:XB:36:ARG:HD3	2.10	0.52
4:XD:13:ARG:HD2	4:XD:38:TYR:O	2.10	0.52
12:XL:77:LEU:HD21	12:XL:107:ALA:HA	1.92	0.52
1:XA:1296:C:OP1	13:XM:44:ARG:NH2	2.43	0.52
45:Y2:58:ALA:O	45:Y2:62:THR:HG23	2.10	0.52
46:Y3:40:THR:HB	46:Y3:43:ILE:HG12	1.92	0.52
22:YA:330:A:O2'	22:YA:331:A:H8	1.92	0.52
22:YA:860:U:H5	22:YA:917:A:C2	2.28	0.52
28:YH:41:MET:HE1	28:YH:64:LEU:HB3	1.91	0.52
1:QA:701:C:H1'	1:QA:703:G:C5	2.45	0.52
1:QA:892:A:H2'	1:QA:893:C:H6	1.75	0.52
5:QE:91:LEU:HD12	5:QE:120:THR:HG22	1.92	0.52
11:QK:32:ILE:HG13	11:QK:72:ALA:HB2	1.92	0.52
22:RA:631:A:P	51:R8:46:ARG:NH2	2.83	0.52
22:RA:1341:U:OP2	22:RA:1394:U:O2'	2.24	0.52
22:RA:172:C:H2'	22:RA:173:G:C8	2.44	0.52
22:RA:1857:G:O2'	22:RA:1885:A:N6	2.42	0.52
22:RA:2291:U:H2'	22:RA:2292:C:C6	2.45	0.52
22:RA:2482:G:O6	33:RQ:124:LYS:NZ	2.43	0.52
22:RA:903:C:H2'	22:RA:904:C:C6	2.45	0.52
29:RI:38:LEU:H	29:RI:38:LEU:HD12	1.74	0.52
36:RT:111:ARG:C	36:RT:113:LYS:H	2.12	0.52
1:XA:359:U:H2'	1:XA:360:A:C8	2.45	0.52

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:XA:518:C:H2'	1:XA:530:G:N3	2.24	0.52
1:XA:590:C:O2'	1:XA:591:U:H5'	2.09	0.52
44:Y1:83:GLU:HG2	44:Y1:84:GLY:N	2.24	0.52
22:YA:2398:U:H2'	22:YA:2399:G:C8	2.45	0.52
22:YA:270(R):G:H2'	22:YA:270(S):G:C8	2.43	0.52
22:YA:503:A:H4'	22:YA:504:U:H5'	1.92	0.52
22:YA:540:G:H5'	22:YA:541:C:OP2	2.10	0.52
22:YA:700:G:H2'	22:YA:701:G:O4'	2.10	0.52
22:YA:863:A:H2'	22:YA:864:G:H8	1.75	0.52
28:YH:88:LEU:H	28:YH:88:LEU:HD22	1.75	0.52
36:YT:88:ILE:HD12	36:YT:90:GLN:N	2.25	0.52
1:QA:1217:C:H2'	1:QA:1218:C:C6	2.45	0.51
1:QA:1305:G:H22	1:QA:1331:G:H2'	1.75	0.51
1:QA:1453:G:H2'	20:QT:39:LYS:NZ	2.24	0.51
1:QA:222:U:H2'	1:QA:223:U:C6	2.45	0.51
1:QA:32:A:H2'	1:QA:33:A:C8	2.45	0.51
1:QA:659:U:N3	1:QA:660:G:N7	2.58	0.51
8:QH:77:GLU:HG2	8:QH:78:GLN:H	1.74	0.51
44:R1:2:SER:HB2	44:R1:4:VAL:HG12	1.92	0.51
22:RA:111:A:H4'	45:R2:69:ARG:NH2	2.24	0.51
22:RA:2057:A:H2'	22:RA:2058:A:O4'	2.10	0.51
22:RA:2287:A:O2'	22:RA:2288:A:H5''	2.09	0.51
22:RA:2532:G:H2'	22:RA:2533:A:O4'	2.09	0.51
24:RD:12:SER:HB2	24:RD:208:LYS:HB3	1.92	0.51
26:RF:150:GLY:HA2	26:RF:172:TRP:CD2	2.45	0.51
29:RI:138:ILE:HG12	29:RI:139:GLN:O	2.10	0.51
22:RA:2404:C:O3'	32:RP:77:ARG:NH2	2.42	0.51
34:RR:33:ARG:HD3	34:RR:113:LEU:HG	1.92	0.51
1:XA:1132:C:H2'	1:XA:1133:G:C8	2.41	0.51
1:XA:677:U:H2'	1:XA:678:U:O4'	2.11	0.51
1:XA:865:A:C2	1:XA:918:A:H4'	2.44	0.51
2:XB:29:ALA:O	2:XB:32:ILE:HG22	2.10	0.51
3:XC:47:LEU:HD11	3:XC:76:VAL:HB	1.91	0.51
4:XD:108:LEU:HB3	4:XD:110:PHE:CE1	2.45	0.51
19:XS:19:VAL:HG11	19:XS:44:MET:HG2	1.91	0.51
20:XT:26:ASN:HB2	20:XT:71:THR:HG23	1.92	0.51
43:Y0:67:VAL:HG22	43:Y0:81:VAL:HG22	1.91	0.51
49:Y6:7:ILE:HG13	49:Y6:8:LYS:H	1.75	0.51
51:Y8:51:ALA:N	51:Y8:53:PRO:HD2	2.25	0.51
22:YA:1062:G:H8	22:YA:1062:G:O5'	1.93	0.51
22:YA:1056:G:H4'	22:YA:1086:A:H8	1.75	0.51
22:YA:892:G:N2	22:YA:893:C:C2	2.78	0.51

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
39:YW:40:ASN:O	39:YW:41:LYS:HG2	2.10	0.51
1:QA:1142:G:H3'	1:QA:1143:G:C8	2.44	0.51
1:QA:1151:A:H2'	1:QA:1152:A:H8	1.75	0.51
1:QA:427:U:OP1	4:QD:13:ARG:NH2	2.42	0.51
22:RA:1083:U:O2'	22:RA:1085:A:H5''	2.10	0.51
22:RA:1636:C:H2'	22:RA:1637:A:C8	2.45	0.51
22:RA:2059:A:H5'	26:RF:71:GLY:HA2	1.93	0.51
40:RX:59:VAL:HG21	40:RX:78:LYS:HE3	1.91	0.51
1:XA:1347:G:H22	1:XA:1374:A:P	2.34	0.51
2:XB:170:GLU:O	2:XB:174:VAL:HG23	2.11	0.51
1:XA:1117:G:H5''	9:XI:104:ARG:NH1	2.25	0.51
45:Y2:24:LEU:HD13	45:Y2:60:LEU:HD11	1.92	0.51
22:YA:1430:C:H2'	22:YA:1431:U:C6	2.46	0.51
22:YA:1446:C:N4	22:YA:1465:G:H1	2.06	0.51
22:YA:235:U:H2'	22:YA:236:C:H6	1.75	0.51
22:YA:380:U:H5'	44:Y1:16:ASN:O	2.10	0.51
32:YP:96:THR:HG22	32:YP:126:VAL:HB	1.92	0.51
34:YR:83:ILE:HG22	34:YR:87:TYR:HE2	1.76	0.51
37:YU:107:ALA:O	37:YU:110:VAL:HB	2.10	0.51
1:QA:1143:G:H2'	1:QA:1144:G:C8	2.45	0.51
1:QA:965:A:C2	1:QA:969:A:C2	2.99	0.51
1:QA:984:C:H2'	1:QA:985:C:H6	1.75	0.51
22:RA:1101:U:H2'	22:RA:1102:C:C6	2.45	0.51
23:RB:52:A:N6	35:RS:33:LYS:HG3	2.25	0.51
26:RF:47:GLY:HA3	26:RF:95:ARG:O	2.10	0.51
28:RH:153:LYS:HG2	28:RH:162:ILE:HG13	1.92	0.51
32:RP:10:PRO:O	32:RP:12:ALA:N	2.43	0.51
39:RW:67:ASP:OD2	39:RW:67:ASP:N	2.33	0.51
33:RQ:108:GLY:HA3	42:RZ:116:VAL:HG21	1.92	0.51
42:RZ:165:VAL:HG11	42:RZ:169:GLU:HB2	1.92	0.51
1:XA:110:C:H2'	1:XA:111:G:O4'	2.10	0.51
1:XA:1511:G:H2'	1:XA:1512:U:O4'	2.10	0.51
1:XA:1493:A:OP1	57:XA:1601:PAR:H51	2.11	0.51
5:XE:102:ALA:HB1	5:XE:106:PRO:HG2	1.92	0.51
20:XT:89:ARG:HH21	20:XT:104:LEU:HD11	1.76	0.51
22:YA:26:G:N1	22:YA:27:G:N2	2.58	0.51
28:YH:26:VAL:HG13	28:YH:27:LYS:H	1.76	0.51
38:YV:65:GLY:HA3	38:YV:91:TYR:CZ	2.46	0.51
42:YZ:144:LEU:HD21	42:YZ:149:SER:HA	1.93	0.51
1:QA:1388:C:H2'	1:QA:1389:C:C6	2.46	0.51
4:QD:61:LYS:HB2	4:QD:203:VAL:HG13	1.93	0.51
10:QJ:31:GLY:HA3	10:QJ:78:ASN:ND2	2.26	0.51

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
7:QG:153:HIS:CE1	11:QK:57:THR:HG23	2.46	0.51
22:RA:1049:C:H2'	22:RA:1050:A:H5''	1.91	0.51
22:RA:1384:A:N3	22:RA:1405:U:H1'	2.25	0.51
22:RA:1607:C:H5''	22:RA:1608:A:H5'	1.92	0.51
22:RA:297:C:H5''	41:RY:85:VAL:HG21	1.92	0.51
29:RI:37:VAL:HG12	29:RI:38:LEU:HD12	1.92	0.51
41:RY:74:PRO:O	41:RY:80:GLY:HA2	2.11	0.51
2:XB:21:ARG:HB2	2:XB:39:ILE:HA	1.91	0.51
5:XE:13:ILE:HD11	5:XE:55:VAL:HG22	1.91	0.51
6:XF:4:TYR:HD1	6:XF:92:LYS:HA	1.76	0.51
9:XI:11:LYS:H	9:XI:104:ARG:HH21	1.57	0.51
9:XI:70:LYS:O	9:XI:74:ILE:HG13	2.10	0.51
48:Y5:38:ALA:HB3	48:Y5:40:LYS:HE3	1.92	0.51
22:YA:858:U:O2	22:YA:2268:A:H2'	2.11	0.51
22:YA:2370:G:C6	22:YA:2371:G:C6	2.98	0.51
22:YA:612:G:N2	22:YA:616:A:O2'	2.44	0.51
24:YD:148:GLU:HB2	24:YD:151:LYS:HD2	1.92	0.51
26:YF:127:GLU:OE1	26:YF:196:LEU:HB2	2.11	0.51
27:YG:77:ILE:HD13	27:YG:82:LEU:HD12	1.93	0.51
30:YN:38:HIS:O	37:YU:67:ALA:HB1	2.10	0.51
38:YV:25:LEU:H	38:YV:92:THR:HG21	1.75	0.51
42:YZ:181:GLU:HG3	42:YZ:183:LEU:HB2	1.93	0.51
1:QA:1068:G:N3	1:QA:1191:A:C2	2.76	0.51
1:QA:824:C:H2'	1:QA:825:G:C8	2.45	0.51
1:QA:859:A:H2'	1:QA:860:A:O4'	2.11	0.51
18:QR:32:ARG:HA	18:QR:69:THR:HG21	1.91	0.51
22:RA:1303:G:HO2'	22:RA:1642:G:HO2'	1.58	0.51
22:RA:2273:A:H2'	22:RA:2274:A:C8	2.46	0.51
22:RA:2399:G:H2'	22:RA:2400:G:O4'	2.11	0.51
22:RA:2517:C:C2	22:RA:2542:A:N6	2.78	0.51
22:RA:389:G:N1	32:RP:70:GLN:HB3	2.25	0.51
40:RX:35:THR:HG23	40:RX:38:GLU:HG2	1.93	0.51
1:XA:1432:G:H8	1:XA:1432:G:O5'	1.94	0.51
1:XA:484:G:H4'	1:XA:485:G:O5'	2.11	0.51
13:XM:14:ARG:N	13:XM:44:ARG:HD3	2.21	0.51
45:Y2:65:ASN:HB3	45:Y2:69:ARG:NH2	2.26	0.51
46:Y3:43:ILE:O	46:Y3:47:VAL:HG23	2.10	0.51
22:YA:2150:U:H2'	22:YA:2151:G:C8	2.46	0.51
22:YA:528:A:H3'	22:YA:528:A:H8	1.75	0.51
22:YA:860:U:C5	22:YA:917:A:C2	2.97	0.51
27:YG:16:ARG:O	27:YG:20:ILE:HG12	2.10	0.51
37:YU:47:TYR:HA	37:YU:50:ARG:NH2	2.26	0.51

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:QA:105:G:H2'	1:QA:106:C:H6	1.76	0.51
1:QA:1086:U:H3	1:QA:1099:G:H22	1.57	0.51
1:QA:1376:U:OP1	7:QG:94:ARG:NH1	2.43	0.51
8:QH:20:TYR:HE2	8:QH:75:ARG:HD2	1.76	0.51
12:QL:38:THR:HG23	12:QL:57:LYS:HB3	1.93	0.51
21:QU:6:ARG:HE	21:QU:15:ARG:HH21	1.59	0.51
22:RA:1381:G:H1'	22:RA:1571:A:N1	2.26	0.51
22:RA:1948:G:N2	22:RA:1958:C:O2	2.41	0.51
22:RA:388:G:OP1	44:R1:32:LYS:N	2.32	0.51
28:RH:86:GLU:H	28:RH:86:GLU:CD	2.12	0.51
1:XA:1127:G:H4'	1:XA:1148:U:O2	2.11	0.51
1:XA:1226:C:H4'	1:XA:1227:A:OP1	2.11	0.51
1:XA:778:G:H1'	11:XK:119:CYS:HB3	1.93	0.51
7:XG:155:ARG:O	7:XG:155:ARG:NH2	2.43	0.51
17:XQ:100:LYS:O	17:XQ:101:ARG:NE	2.43	0.51
20:XT:10:LEU:O	20:XT:13:LEU:HG	2.11	0.51
44:Y1:70:VAL:O	44:Y1:74:VAL:HG23	2.10	0.51
48:Y5:42:PRO:HB2	48:Y5:43:HIS:ND1	2.25	0.51
48:Y5:56:LYS:HD3	48:Y5:58:LEU:HD23	1.90	0.51
22:YA:1550:C:H2'	22:YA:1551:C:H6	1.75	0.51
22:YA:2078:C:H42	22:YA:2241:A:H61	1.58	0.51
22:YA:380:U:H2'	22:YA:381:G:H8	1.76	0.51
29:YI:56:LYS:HE3	29:YI:57:ARG:HG2	1.93	0.51
34:YR:104:ARG:HD3	34:YR:111:LEU:HD21	1.92	0.51
36:YT:109:GLU:O	36:YT:113:LYS:HB2	2.11	0.51
1:QA:137:C:H42	1:QA:226:G:H1	1.56	0.51
1:QA:266:G:H5''	1:QA:267:C:C5	2.46	0.51
1:QA:35:G:H2'	1:QA:36:C:C6	2.46	0.51
1:QA:370:C:H2'	1:QA:371:G:H8	1.75	0.51
1:QA:1368:G:H5'	9:QI:112:LYS:HB3	1.92	0.51
22:RA:1382:G:H4'	22:RA:1573:G:N2	2.25	0.51
22:RA:1677:A:O5'	22:RA:1677:A:H8	1.93	0.51
22:RA:1716:U:H2'	22:RA:1717:G:H8	1.75	0.51
22:RA:180:G:OP2	50:R7:32:LYS:HE2	2.11	0.51
22:RA:2712:U:H1'	22:RA:2712(A):A:C8	2.45	0.51
22:RA:2630:G:N3	22:RA:2894:G:N2	2.58	0.51
22:RA:723:G:C6	22:RA:724:U:C4	2.98	0.51
22:RA:902:C:H2'	22:RA:903:C:H6	1.76	0.51
26:RF:149:ASP:N	26:RF:149:ASP:OD1	2.27	0.51
29:RI:11:ASN:O	29:RI:12:LEU:HB2	2.09	0.51
29:RI:60:GLU:HG3	29:RI:61:ARG:HH12	1.75	0.51
36:RT:28:VAL:HG23	36:RT:88:ILE:HA	1.92	0.51

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
42:RZ:91:LEU:HD12	42:RZ:130:PRO:HG3	1.93	0.51
1:XA:234:C:H2'	1:XA:235:C:H6	1.74	0.51
1:XA:692:U:O2'	1:XA:694:A:N7	2.29	0.51
1:XA:828:A:H2'	1:XA:829:G:O4'	2.10	0.51
6:XF:97:PHE:CD2	18:XR:31:LEU:HD21	2.46	0.51
19:XS:15:LEU:O	19:XS:19:VAL:N	2.36	0.51
19:XS:26:GLY:O	19:XS:28:LYS:N	2.43	0.51
22:YA:1041:C:H2'	22:YA:1042:G:H8	1.76	0.51
22:YA:1469:A:H2'	22:YA:1470:G:C8	2.44	0.51
22:YA:1537:C:H2'	22:YA:1538:G:O4'	2.11	0.51
22:YA:1843:C:H5'	24:YD:253:GLN:OE1	2.10	0.51
23:YB:60:C:H2'	23:YB:61:G:C8	2.42	0.51
33:YQ:2:LEU:H	33:YQ:2:LEU:HD23	1.76	0.51
37:YU:92:ARG:NH1	38:YV:11:GLN:O	2.44	0.51
41:YY:81:LYS:HG2	41:YY:97:ARG:HD3	1.93	0.51
1:QA:347:G:O2'	1:QA:348:G:H5''	2.11	0.51
1:QA:991:U:O4	1:QA:1212:U:O2'	2.19	0.51
19:QS:5:LEU:HG	47:R4:66:SER:HB3	1.93	0.51
22:RA:140:A:C8	22:RA:1408:C:O2'	2.61	0.51
23:RB:65:C:N4	23:RB:108:C:H2'	2.23	0.51
25:RE:134:ILE:HA	25:RE:137:HIS:CD2	2.46	0.51
26:RF:185:ASP:HA	26:RF:188:ARG:HD3	1.93	0.51
42:RZ:104:PHE:HB3	42:RZ:141:VAL:HG12	1.93	0.51
1:XA:396:G:C2	1:XA:398:C:C4	2.99	0.51
1:XA:962:C:H2'	1:XA:963:G:C8	2.41	0.51
48:Y5:45:VAL:HG11	48:Y5:57:VAL:HG12	1.93	0.51
22:YA:347:A:H2'	22:YA:348:G:H8	1.75	0.51
22:YA:640:C:O2	22:YA:649:G:C2	2.64	0.51
23:YB:24:G:H1'	23:YB:26:A:H62	1.75	0.51
23:YB:42:C:O2	27:YG:93:THR:N	2.27	0.51
24:YD:35:LYS:NZ	24:YD:104:TYR:HB2	2.26	0.51
25:YE:62:PRO:O	25:YE:64:LYS:N	2.43	0.51
28:YH:6:ARG:NE	28:YH:54:ARG:HH12	2.09	0.51
35:YS:11:LYS:HB2	35:YS:91:PRO:HB3	1.93	0.51
39:YW:106:ILE:O	39:YW:106:ILE:HG12	2.07	0.51
1:QA:1192:C:OP2	3:QC:4:LYS:NZ	2.41	0.51
1:QA:767:A:O2'	1:QA:1524:C:O2	2.28	0.51
16:QP:3:LYS:HG3	16:QP:24:ALA:HB2	1.92	0.51
20:QT:14:LYS:HA	20:QT:17:ARG:HG3	1.91	0.51
22:RA:1645:G:H5''	22:RA:1646:C:H5'	1.93	0.51
22:RA:1927:A:H2'	22:RA:1928:A:C8	2.46	0.51
22:RA:37:C:H2'	22:RA:38:A:C8	2.45	0.51

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
26:RF:20:LEU:HD23	26:RF:125:LEU:HD12	1.93	0.51
37:RU:90:VAL:HG22	38:RV:39:LEU:HB3	1.93	0.51
1:XA:1306:A:N6	1:XA:1331:G:H1'	2.25	0.51
1:XA:1313:U:OP1	19:XS:5:LEU:HB2	2.11	0.51
1:XA:1402:C:H2'	1:XA:1403:C:O4'	2.11	0.51
1:XA:598:U:H2'	1:XA:599:C:H6	1.75	0.51
4:XD:78:LEU:HD22	4:XD:96:LEU:HB3	1.93	0.51
15:XO:33:THR:HG21	15:XO:85:LEU:HD22	1.93	0.51
22:YA:1028:A:N3	22:YA:2486:G:O2'	2.34	0.51
22:YA:141(A):C:H2'	22:YA:142:G:O4'	2.10	0.51
22:YA:1753:G:H5'	22:YA:1754:C:OP2	2.09	0.51
22:YA:2467:C:C2'	22:YA:2468:G:H5'	2.41	0.51
22:YA:2849:U:H4'	22:YA:2868:A:C2	2.46	0.51
22:YA:455:C:N3	22:YA:473:G:H5'	2.26	0.51
22:YA:796:C:H2'	22:YA:797:C:C6	2.46	0.51
23:YB:56:G:H5'	27:YG:27:ASN:ND2	2.26	0.51
33:YQ:66:ILE:O	33:YQ:104:PHE:N	2.39	0.51
22:YA:1217:C:OP1	37:YU:15:LYS:HE3	2.11	0.51
1:QA:1239:A:H62	1:QA:1299:A:N6	2.08	0.51
6:QF:69:GLU:H	6:QF:69:GLU:CD	2.15	0.51
22:RA:1262:A:H2	48:R5:10:LYS:HD2	1.76	0.51
22:RA:2262:U:OP1	43:R0:19:LYS:NZ	2.39	0.51
22:RA:2505:G:H2'	22:RA:2576:G:O6	2.10	0.51
22:RA:1637:A:H4'	22:RA:2711:A:O2'	2.11	0.51
22:RA:322:A:H5'	22:RA:340:A:H1'	1.93	0.51
22:RA:607:U:H3	22:RA:621:A:H2	1.57	0.51
22:RA:679:C:H2'	22:RA:680:G:H8	1.74	0.51
22:RA:811:U:OP2	32:RP:29:LYS:N	2.38	0.51
27:RG:88:ILE:HD13	27:RG:88:ILE:O	2.10	0.51
35:RS:56:LEU:HD23	35:RS:58:LEU:HD22	1.92	0.51
1:XA:1030:C:H2'	1:XA:1031:G:O4'	2.10	0.51
1:XA:1157:A:H8	1:XA:1158:C:N4	2.09	0.51
1:XA:22:G:H2'	1:XA:23:C:C6	2.45	0.51
11:XK:41:THR:HG21	11:XK:71:LYS:HB3	1.93	0.51
51:Y8:23:VAL:CG1	51:Y8:46:ARG:HD3	2.40	0.51
22:YA:1655:A:O2'	25:YE:115:GLY:HA2	2.11	0.51
22:YA:199:A:C8	22:YA:2433:A:N6	2.80	0.51
22:YA:2577:A:H5''	22:YA:2578:G:H5'	1.93	0.51
22:YA:610:C:H42	22:YA:618:G:H1	1.59	0.51
22:YA:811:U:H2'	32:YP:21:ARG:O	2.11	0.51
23:YB:104:A:H5'	42:YZ:72:ARG:HD3	1.92	0.51
1:QA:967:C:H2'	1:QA:968:A:C8	2.45	0.50

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
9:QI:8:GLY:HA2	9:QI:79:LEU:HD12	1.92	0.50
11:QK:33:THR:HG22	11:QK:39:PRO:HA	1.92	0.50
1:QA:189:U:O2'	17:QQ:63:ARG:NH2	2.44	0.50
48:R5:3:LYS:HA	48:R5:3:LYS:NZ	2.27	0.50
32:RP:62:LEU:CD2	51:R8:25:MET:HB2	2.37	0.50
22:RA:1859:A:N6	22:RA:1883:G:HO2'	2.09	0.50
22:RA:2477:C:H2'	52:R9:1:MET:HG3	1.92	0.50
22:RA:330:A:O2'	22:RA:331:A:H2'	2.11	0.50
22:RA:723:G:H2'	22:RA:724:U:O4'	2.11	0.50
23:RB:48:A:H2'	23:RB:49:C:C6	2.45	0.50
36:RT:118:ARG:HH21	36:RT:121:ILE:HG21	1.76	0.50
36:RT:19:LEU:HD22	36:RT:86:ILE:HG22	1.93	0.50
22:RA:25:U:H5'	39:RW:79:GLY:HA2	1.92	0.50
40:RX:40:LYS:HG3	40:RX:51:VAL:HB	1.92	0.50
1:XA:1065:U:C5	1:XA:1190:G:H1'	2.46	0.50
1:XA:1179:A:H4'	9:XI:103:THR:HA	1.93	0.50
1:XA:129:U:H2'	1:XA:131:C:H5	1.76	0.50
1:XA:571:U:O4	1:XA:864:A:N6	2.43	0.50
6:XF:86:ARG:O	6:XF:87:ARG:HG2	2.11	0.50
22:YA:1019:U:HO2'	22:YA:1021:A:H2	1.57	0.50
22:YA:1114:G:H2'	22:YA:1115:G:C8	2.46	0.50
22:YA:1923:U:H2'	22:YA:1924:C:C6	2.45	0.50
22:YA:195:A:H5''	22:YA:196:A:O5'	2.10	0.50
22:YA:2219:G:H2'	22:YA:2224:G:H5'	1.91	0.50
22:YA:2294:C:H2'	22:YA:2295:C:H6	1.76	0.50
22:YA:2469:A:H2	22:YA:2481:G:N2	2.08	0.50
22:YA:279:C:H2'	22:YA:280:C:H6	1.75	0.50
22:YA:287:C:H2'	22:YA:288:C:C6	2.46	0.50
22:YA:593:G:H1	22:YA:664:C:H42	1.59	0.50
22:YA:691:C:H2'	22:YA:692:C:C6	2.45	0.50
28:YH:89:ILE:HG12	28:YH:89:ILE:O	2.10	0.50
35:YS:30:ARG:HG3	35:YS:97:ARG:NH2	2.26	0.50
22:YA:2584:U:H5''	56:Z8:76:PPU:H92	1.93	0.50
1:QA:359:U:H2'	1:QA:360:A:C8	2.45	0.50
1:QA:41:G:H2'	1:QA:42:G:C8	2.46	0.50
13:QM:33:ALA:HA	13:QM:59:TYR:HE2	1.76	0.50
22:RA:1667:G:OP2	22:RA:1667:G:H8	1.94	0.50
22:RA:2419:U:H2'	22:RA:2420:C:C6	2.46	0.50
22:RA:2516:G:C5	22:RA:2517:C:C4	2.99	0.50
22:RA:270(I):G:H2'	22:RA:270(J):G:C8	2.44	0.50
22:RA:2747:G:H21	22:RA:2757:A:H62	1.57	0.50
22:RA:706:A:H2'	22:RA:707:G:O4'	2.11	0.50

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:RA:860:U:O2'	22:RA:861:A:H5'	2.10	0.50
30:RN:46:VAL:HG13	30:RN:48:MET:HG3	1.93	0.50
1:XA:1346:A:C4	7:XG:10:ARG:NH1	2.79	0.50
1:XA:272:C:H2'	1:XA:273:A:C8	2.47	0.50
2:XB:80:ILE:HD11	2:XB:208:ILE:HG23	1.93	0.50
2:XB:9:GLU:HB3	2:XB:48:MET:SD	2.50	0.50
3:XC:138:VAL:HG22	3:XC:151:VAL:HG23	1.93	0.50
4:XD:108:LEU:HD21	4:XD:183:GLY:HA3	1.93	0.50
22:YA:1825:A:H2'	22:YA:1826:G:H8	1.76	0.50
22:YA:1882:C:H3'	22:YA:1883:G:H8	1.76	0.50
22:YA:2422:A:C5	22:YA:2424:C:N4	2.79	0.50
22:YA:2498:C:O2'	22:YA:2499:C:H5'	2.11	0.50
22:YA:2633:G:H1'	25:YE:62:PRO:HG2	1.92	0.50
22:YA:2757:A:P	52:Y9:20:HIS:H	2.34	0.50
22:YA:869:G:H2'	22:YA:870:A:O4'	2.11	0.50
22:YA:969:U:H2'	22:YA:970:C:C6	2.46	0.50
23:YB:80:U:O2'	23:YB:81:G:H5'	2.10	0.50
22:YA:2469:A:O2'	33:YQ:56:ARG:HG2	2.10	0.50
22:YA:2821:A:OP2	34:YR:3:HIS:NE2	2.44	0.50
39:YW:57:ASN:O	39:YW:61:ASN:HB2	2.10	0.50
1:QA:1009:G:H1	1:QA:1020:U:H3	1.60	0.50
1:QA:1301:U:O2	1:QA:1301:U:H2'	2.09	0.50
1:QA:276:G:O3'	17:QQ:68:ARG:NH1	2.40	0.50
1:QA:501:C:OP1	12:QL:117:ARG:NH2	2.37	0.50
1:QA:568:G:N2	1:QA:883:C:C2	2.79	0.50
1:QA:1312:G:OP2	47:R4:67:TYR:HE1	1.93	0.50
22:RA:1173:G:H4'	22:RA:1174:A:N7	2.26	0.50
22:RA:1278:A:H4'	34:RR:34:ILE:HD12	1.93	0.50
22:RA:2065:C:H1'	22:RA:2449:U:N3	2.26	0.50
22:RA:2070:G:H2'	22:RA:2071:A:C8	2.46	0.50
22:RA:240:G:O2'	22:RA:257:A:N6	2.41	0.50
22:RA:347:A:H2'	22:RA:348:G:H8	1.76	0.50
22:RA:372:G:O2'	22:RA:373:U:P	2.69	0.50
25:RE:176:ILE:HG23	25:RE:178:GLU:OE2	2.11	0.50
25:RE:6:GLY:HA2	25:RE:51:PHE:CZ	2.46	0.50
28:RH:152:ARG:HH21	28:RH:153:LYS:HZ1	1.60	0.50
32:RP:14:LYS:HD3	32:RP:14:LYS:O	2.12	0.50
33:RQ:17:LEU:HD23	33:RQ:96:VAL:HG23	1.92	0.50
39:RW:60:ASN:HD22	39:RW:60:ASN:N	2.09	0.50
22:RA:498:G:N3	41:RY:47:LYS:NZ	2.59	0.50
41:RY:97:ARG:HH21	41:RY:98:VAL:HB	1.77	0.50
1:XA:1450:U:O2'	1:XA:1451:A:N7	2.43	0.50

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:XA:160:A:H1'	1:XA:344:A:C5	2.47	0.50
1:XA:243:A:C2	1:XA:246:A:C8	3.00	0.50
1:XA:260:G:H2'	1:XA:261:U:C6	2.45	0.50
1:XA:749:C:H2'	1:XA:750:G:H8	1.76	0.50
1:XA:881:G:H2'	1:XA:882:C:O4'	2.11	0.50
2:XB:114:ARG:O	2:XB:117:GLU:HB2	2.10	0.50
3:XC:54:ARG:HD3	3:XC:56:ASP:OD1	2.10	0.50
19:XS:40:ILE:HG23	19:XS:67:VAL:O	2.11	0.50
51:Y8:58:ILE:HA	51:Y8:61:LEU:HD21	1.92	0.50
22:YA:1292:U:H2'	22:YA:1293:C:C6	2.46	0.50
22:YA:1658:C:H2'	22:YA:1659:U:H6	1.76	0.50
22:YA:2636:U:H1'	22:YA:2783:G:N2	2.26	0.50
22:YA:2764:A:N6	22:YA:2766:G:C2	2.80	0.50
22:YA:783:A:C8	22:YA:783:A:H3'	2.46	0.50
32:YP:62:LEU:N	32:YP:62:LEU:HD23	2.26	0.50
33:YQ:89:ASN:O	33:YQ:91:GLU:N	2.44	0.50
1:QA:105:G:H2'	1:QA:106:C:C6	2.46	0.50
1:QA:1178:G:C8	1:QA:1180:A:OP2	2.65	0.50
1:QA:1297:C:H4'	1:QA:1298:C:H5'	1.94	0.50
7:QG:116:ALA:O	7:QG:120:ILE:HG12	2.11	0.50
9:QI:53:VAL:HB	9:QI:95:LYS:HE3	1.92	0.50
10:QJ:47:PHE:CE1	10:QJ:63:PHE:HB2	2.47	0.50
1:QA:1366:C:O3'	10:QJ:60:ARG:NH2	2.44	0.50
11:QK:17:GLY:N	11:QK:79:SER:O	2.44	0.50
44:R1:62:VAL:HG23	44:R1:63:ALA:O	2.11	0.50
22:RA:1007:C:H5''	30:RN:35:ARG:NH1	2.26	0.50
22:RA:1188:U:O2'	22:RA:1189:A:H5'	2.11	0.50
22:RA:1991:U:H2'	22:RA:1992:G:H5''	1.93	0.50
22:RA:33:U:O4	22:RA:446:G:O2'	2.25	0.50
22:RA:860:U:C5	22:RA:917:A:C2	2.98	0.50
24:RD:62:TYR:CE1	24:RD:64:ILE:HA	2.46	0.50
40:RX:60:ARG:HH12	50:R7:47:ARG:HH22	1.58	0.50
42:RZ:10:ARG:HD3	42:RZ:18:LEU:HD21	1.93	0.50
1:XA:41:G:H2'	1:XA:42:G:C8	2.47	0.50
2:XB:189:ASP:HB3	2:XB:203:GLY:O	2.12	0.50
47:Y4:10:VAL:HG22	47:Y4:11:PRO:HD2	1.94	0.50
22:YA:443:A:H1'	22:YA:1201:C:O4'	2.11	0.50
22:YA:2574:G:H2'	22:YA:2575:C:C6	2.46	0.50
22:YA:2790:A:C2	22:YA:2791:C:H2'	2.46	0.50
22:YA:805:G:N2	22:YA:828:U:H5''	2.26	0.50
38:YV:52:VAL:HG23	38:YV:55:ALA:H	1.76	0.50
1:QA:313:A:H2'	1:QA:314:C:C6	2.46	0.50

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:QA:673:G:H2'	1:QA:674:G:C8	2.46	0.50
2:QB:162:ILE:HD11	2:QB:184:VAL:HG22	1.93	0.50
2:QB:231:GLU:HG3	2:QB:233:SER:H	1.77	0.50
12:QL:54:LYS:HD2	12:QL:54:LYS:H	1.75	0.50
12:QL:69:TYR:CG	12:QL:90:VAL:HG21	2.46	0.50
48:R5:46:CYS:HB2	48:R5:50:GLY:HA3	1.93	0.50
50:R7:5:TRP:NE1	50:R7:7:PRO:HG3	2.26	0.50
51:R8:23:VAL:HG11	51:R8:46:ARG:HD3	1.92	0.50
22:RA:1860:G:H1	22:RA:1882:C:N4	2.09	0.50
22:RA:318:C:H2'	22:RA:319:C:H6	1.77	0.50
29:RI:109:ILE:HB	29:RI:130:TYR:CZ	2.47	0.50
33:RQ:89:ASN:O	33:RQ:92:GLY:N	2.42	0.50
1:XA:115:G:O5'	1:XA:115:G:H8	1.94	0.50
1:XA:1232:U:OP1	9:XI:124:GLN:NE2	2.45	0.50
1:XA:1382:C:H2'	1:XA:1383:C:C6	2.46	0.50
1:XA:690:G:H22	11:XK:55:LYS:NZ	2.08	0.50
2:XB:111:ARG:HH21	2:XB:114:ARG:HG2	1.76	0.50
2:XB:21:ARG:O	2:XB:23:ARG:N	2.44	0.50
1:XA:719:C:O2'	18:XR:50:ILE:O	2.20	0.50
19:XS:4:SER:O	19:XS:5:LEU:HD13	2.11	0.50
43:Y0:50:ASN:C	43:Y0:62:LEU:HD12	2.32	0.50
22:YA:1348:G:H2'	22:YA:1349:A:H5''	1.91	0.50
25:YE:111:ARG:HA	34:YR:1:MET:CG	2.40	0.50
26:YF:167:ALA:HB1	26:YF:173:VAL:HG11	1.93	0.50
27:YG:67:LYS:HZ3	47:Y4:1:MET:HB2	1.77	0.50
27:YG:79:ASN:N	27:YG:79:ASN:HD22	2.08	0.50
32:YP:58:THR:O	32:YP:61:ARG:CZ	2.59	0.50
1:QA:10:A:H2'	1:QA:11:G:C8	2.45	0.50
1:QA:1133:G:H2'	1:QA:1134:G:C8	2.46	0.50
1:QA:1285:A:H4'	1:QA:1286:A:O5'	2.12	0.50
1:QA:42:G:H2'	1:QA:43:C:O4'	2.11	0.50
1:QA:464:G:C6	1:QA:466:C:H5'	2.47	0.50
9:QI:95:LYS:NZ	9:QI:96:LEU:HD13	2.26	0.50
13:QM:40:ASN:ND2	13:QM:43:THR:HG23	2.27	0.50
22:RA:2815:C:H5'	48:R5:29:THR:HG21	1.93	0.50
22:RA:1024:G:O5'	22:RA:1024:G:H8	1.95	0.50
22:RA:111:A:C6	22:RA:112:U:C4	3.00	0.50
22:RA:1754:C:N3	22:RA:2716:U:O2'	2.39	0.50
22:RA:1798:U:C5'	24:RD:259:THR:HG22	2.42	0.50
22:RA:1947:C:H42	22:RA:1959:G:H1	1.58	0.50
22:RA:2055:C:H4'	22:RA:2056:G:H5''	1.94	0.50
22:RA:2293:C:H5''	35:RS:89:ARG:NH1	2.23	0.50

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:RA:935:C:H2'	22:RA:936:C:H6	1.76	0.50
32:RP:26:GLY:O	32:RP:28:GLY:N	2.45	0.50
40:RX:26:TYR:HB3	40:RX:92:LEU:HD12	1.93	0.50
42:RZ:1:MET:HG2	42:RZ:2:GLU:H	1.76	0.50
1:XA:537:G:H5''	12:XL:113:ARG:NH1	2.26	0.50
13:XM:3:ARG:CG	47:Y4:34:GLU:HB3	2.41	0.50
43:Y0:24:LYS:O	43:Y0:25:ARG:HD3	2.12	0.50
49:Y6:47:THR:HG22	49:Y6:48:VAL:HG12	1.94	0.50
22:YA:1751:C:H2'	22:YA:1752:C:C6	2.47	0.50
22:YA:2025:C:H2'	22:YA:2026:C:C6	2.44	0.50
27:YG:5:VAL:HG11	27:YG:100:TRP:HB3	1.93	0.50
28:YH:84:SER:O	28:YH:85:LYS:HB2	2.11	0.50
31:YO:120:GLU:HG2	31:YO:122:LEU:HG	1.94	0.50
42:YZ:10:ARG:NH2	42:YZ:37:VAL:O	2.44	0.50
1:QA:1522:U:H2'	1:QA:1523:G:H8	1.77	0.50
1:QA:179:A:H2'	1:QA:180:U:C6	2.46	0.50
1:QA:789:U:H5	1:QA:791:G:H3'	1.76	0.50
1:QA:1080:A:H5''	5:QE:16:THR:HG21	1.92	0.50
19:QS:41:VAL:HA	19:QS:44:MET:HG3	1.93	0.50
22:RA:1899:G:N2	22:RA:1902:C:H41	2.10	0.50
22:RA:273:G:H1	22:RA:364:C:N4	2.07	0.50
13:QM:3:ARG:NH2	27:RG:113:ARG:HH21	2.10	0.50
28:RH:132:ARG:HH11	28:RH:132:ARG:HB2	1.76	0.50
29:RI:5:LEU:HD12	29:RI:17:GLN:HB3	1.92	0.50
35:RS:67:ARG:O	35:RS:71:ARG:HG3	2.12	0.50
36:RT:111:ARG:O	36:RT:113:LYS:N	2.42	0.50
42:RZ:121:HIS:NE2	42:RZ:169:GLU:HG2	2.26	0.50
1:XA:234:C:H2'	1:XA:235:C:C6	2.46	0.50
2:XB:162:ILE:HD11	2:XB:184:VAL:HG22	1.94	0.50
53:XV:19:G:C4	53:XV:57:A:C2	2.99	0.50
50:Y7:5:TRP:NE1	50:Y7:7:PRO:HG3	2.26	0.50
51:Y8:25:MET:O	51:Y8:47:LYS:NZ	2.44	0.50
22:YA:1364:G:N7	44:Y1:2:SER:N	2.59	0.50
22:YA:1835:G:H5''	22:YA:1836:C:OP2	2.12	0.50
22:YA:1999:C:H2'	22:YA:2000:G:H8	1.76	0.50
22:YA:226:G:H2'	22:YA:227:A:C8	2.47	0.50
22:YA:239:U:H2'	22:YA:240:G:O4'	2.12	0.50
26:YF:65:TRP:O	26:YF:67:GLN:N	2.43	0.50
32:YP:36:LYS:HB3	32:YP:40:SER:HB3	1.94	0.50
38:YV:61:VAL:HA	38:YV:94:LEU:HD23	1.93	0.50
1:QA:1037:C:H2'	1:QA:1038:C:C6	2.47	0.50
1:QA:348:G:H2'	1:QA:349:A:H8	1.77	0.50

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
4:QD:33:MET:CE	4:QD:37:PRO:HA	2.41	0.50
13:QM:92:HIS:HD2	13:QM:110:ARG:HH21	1.58	0.50
13:QM:40:ASN:HD22	13:QM:43:THR:HG23	1.77	0.50
22:RA:1545:A:H2'	22:RA:1545(A):A:O4'	2.12	0.50
22:RA:1803:A:H4'	24:RD:259:THR:HG23	1.94	0.50
22:RA:2228:G:C6	22:RA:2229:C:N3	2.80	0.50
22:RA:2570:G:H2'	22:RA:2571:C:O4'	2.12	0.50
22:RA:1818:U:H2'	24:RD:157:ARG:HG3	1.94	0.50
36:RT:39:ARG:HG2	36:RT:40:THR:H	1.76	0.50
42:RZ:180:VAL:O	42:RZ:181:GLU:HB2	2.12	0.50
1:XA:59:A:N6	1:XA:331:G:H1'	2.26	0.50
1:XA:97:U:H2'	1:XA:99:C:C6	2.47	0.50
2:XB:32:ILE:HD11	2:XB:40:HIS:HB3	1.94	0.50
11:XK:86:GLY:O	11:XK:91:ARG:HD3	2.11	0.50
53:XV:17:C:O2	53:XV:17:C:H2'	2.11	0.50
22:YA:1012:U:O4	30:YN:25:ARG:HA	2.12	0.50
22:YA:1858:G:O2'	22:YA:1884:A:N6	2.44	0.50
22:YA:2776:A:OP1	22:YA:2776:A:H3'	2.12	0.50
22:YA:563:G:H22	22:YA:578:A:H2	1.60	0.50
22:YA:759:G:H2'	22:YA:760:G:C8	2.46	0.50
23:YB:89(A):A:N7	23:YB:90:C:H1'	2.27	0.50
26:YF:108:LYS:O	26:YF:112:MET:HG3	2.12	0.50
28:YH:4:ILE:HG13	28:YH:6:ARG:NE	2.26	0.50
30:YN:58:ASP:OD1	30:YN:58:ASP:N	2.45	0.50
33:YQ:66:ILE:HG13	33:YQ:67:ARG:N	2.27	0.50
1:QA:1288:A:C2	1:QA:1289:A:C4	3.00	0.50
1:QA:149:A:H4'	1:QA:1450:U:C4	2.46	0.50
1:QA:410:G:H5''	1:QA:411:A:OP1	2.12	0.50
1:QA:56:U:H2'	1:QA:57:G:C8	2.46	0.50
10:QJ:22:LYS:HZ2	10:QJ:23:ILE:HA	1.77	0.50
22:RA:1561:G:H2'	22:RA:1562:A:H8	1.77	0.50
22:RA:1614:A:H62	39:RW:93:ALA:CB	2.21	0.50
22:RA:1796:U:H2'	22:RA:1797:C:H6	1.75	0.50
22:RA:2116:G:H1	22:RA:2162:G:P	2.35	0.50
22:RA:2359:C:H2'	22:RA:2360:A:O4'	2.12	0.50
22:RA:2784:C:H2'	22:RA:2785:C:H6	1.77	0.50
22:RA:611:C:C2	22:RA:618:G:N2	2.79	0.50
22:RA:688:U:O5'	22:RA:688:U:H6	1.95	0.50
22:RA:826:U:H2'	22:RA:828:U:O4'	2.12	0.50
26:RF:16:GLY:O	26:RF:18:ARG:N	2.45	0.50
30:RN:34:LEU:O	30:RN:49:GLY:HA3	2.12	0.50
36:RT:34:VAL:HG12	36:RT:36:GLU:HG2	1.94	0.50

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:XA:1179:A:H2'	1:XA:1180:A:O4'	2.12	0.50
1:XA:1366:C:H2'	1:XA:1367:C:C6	2.44	0.50
1:XA:431:A:H2'	1:XA:432:A:O4'	2.12	0.50
1:XA:923:A:H2'	1:XA:924:C:O4'	2.12	0.50
4:XD:112:VAL:HG12	4:XD:116:GLN:OE1	2.12	0.50
13:XM:49:THR:HB	13:XM:52:GLU:H	1.77	0.50
15:XO:67:LEU:HB3	15:XO:78:TYR:HE1	1.77	0.50
22:YA:1812:A:H2'	22:YA:1813:G:H8	1.77	0.50
22:YA:2795:G:H3'	22:YA:2797:U:C5'	2.42	0.50
22:YA:2804:C:H2'	22:YA:2805:G:C8	2.47	0.50
25:YE:73:GLU:HG3	25:YE:74:PRO:HD2	1.92	0.50
29:YI:29:TYR:CD2	29:YI:30:LEU:HD23	2.31	0.50
37:YU:83:LEU:HG	37:YU:88:ILE:HG13	1.93	0.50
40:YX:60:ARG:HH22	50:Y7:47:ARG:HH12	1.60	0.50
41:YY:97:ARG:HH21	41:YY:98:VAL:HB	1.76	0.50
33:YQ:20:ALA:HB3	42:YZ:79:ARG:CZ	2.42	0.50
1:QA:1118:C:H1'	1:QA:1179:A:C4	2.47	0.49
1:QA:1343:G:H2'	1:QA:1344:C:C6	2.46	0.49
1:QA:1352:C:OP1	21:QU:3:LYS:NZ	2.39	0.49
1:QA:1455:G:H2'	1:QA:1459:C:H6	1.76	0.49
3:QC:14:ILE:HG12	3:QC:15:THR:N	2.27	0.49
9:QI:118:LYS:O	9:QI:120:ARG:N	2.40	0.49
9:QI:46:ALA:HB2	9:QI:74:ILE:HG23	1.94	0.49
22:RA:1075:C:C2	22:RA:1076:C:H1'	2.47	0.49
22:RA:1341:U:H2'	22:RA:1397:U:O2	2.12	0.49
22:RA:20:C:H2'	22:RA:21:A:H8	1.76	0.49
22:RA:2247:A:H2'	22:RA:2248:C:H6	1.75	0.49
22:RA:2668:G:H2'	22:RA:2669:G:H8	1.77	0.49
22:RA:656:G:H2'	22:RA:657:U:O4'	2.12	0.49
22:RA:815:C:H2'	22:RA:816:C:C6	2.44	0.49
23:RB:28:C:H2'	23:RB:29:A:O4'	2.12	0.49
40:RX:40:LYS:O	40:RX:42:ALA:N	2.45	0.49
42:RZ:45:ASP:O	42:RZ:48:PHE:N	2.44	0.49
1:XA:1304:G:N1	1:XA:1332:A:OP2	2.32	0.49
1:XA:1431:C:H2'	1:XA:1432:G:O4'	2.11	0.49
1:XA:1443:G:H5'	1:XA:1446:A:OP2	2.12	0.49
1:XA:264:U:H2'	1:XA:265:G:O4'	2.12	0.49
1:XA:337:C:H2'	1:XA:338:A:C8	2.46	0.49
1:XA:598:U:H2'	1:XA:599:C:C6	2.47	0.49
5:XE:76:ILE:HG13	5:XE:93:PRO:HB3	1.94	0.49
13:XM:20:THR:C	13:XM:22:ILE:H	2.15	0.49
16:XP:28:ARG:NH1	16:XP:29:ASP:OD1	2.45	0.49

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
20:XT:64:ASP:HA	20:XT:67:ALA:HB3	1.93	0.49
22:YA:107:C:H2'	22:YA:108:U:H6	1.77	0.49
22:YA:2780:G:OP2	30:YN:118:LYS:HE2	2.12	0.49
22:YA:479:A:N3	22:YA:481:G:H5''	2.26	0.49
23:YB:48:A:P	35:YS:30:ARG:HH22	2.35	0.49
25:YE:103:ASP:OD1	25:YE:201:THR:HG23	2.12	0.49
22:YA:1093:G:H4'	28:YH:170:ARG:NH2	2.26	0.49
22:YA:2641:G:P	30:YN:83:LYS:HE3	2.52	0.49
32:YP:126:VAL:HG13	32:YP:145:PRO:HB2	1.94	0.49
42:YZ:144:LEU:HD13	42:YZ:145:GLU:H	1.77	0.49
1:QA:1203:C:H2'	1:QA:1204:A:H8	1.76	0.49
1:QA:1263:C:H5'	1:QA:1264:C:OP2	2.11	0.49
1:QA:1347:G:H22	1:QA:1374:A:P	2.36	0.49
1:QA:1404:C:H2'	1:QA:1405:G:C8	2.47	0.49
1:QA:411:A:N6	1:QA:413:G:H21	2.10	0.49
1:QA:784:C:H4'	22:RA:1837:C:OP1	2.12	0.49
2:QB:204:ASN:ND2	2:QB:206:ASP:O	2.45	0.49
2:QB:235:SER:OG	2:QB:236:TYR:N	2.46	0.49
3:QC:14:ILE:HG12	3:QC:15:THR:H	1.76	0.49
3:QC:157:ILE:HD11	3:QC:166:GLU:HB2	1.94	0.49
13:QM:65:LYS:NZ	47:R4:52:THR:HG21	2.27	0.49
6:QF:97:PHE:O	18:QR:31:LEU:HD23	2.12	0.49
22:RA:1171:G:N7	22:RA:1174:A:N6	2.60	0.49
22:RA:1205:U:C4	26:RF:171:PRO:HA	2.47	0.49
22:RA:1598:C:H5'	40:RX:36:LYS:HB2	1.93	0.49
22:RA:2078:C:H2'	22:RA:2079:U:O4'	2.11	0.49
22:RA:2416:C:H2'	22:RA:2417:C:C6	2.48	0.49
22:RA:270(S):G:H5'	44:R1:76:ARG:HG2	1.93	0.49
22:RA:873:G:H1	22:RA:904:C:N4	2.10	0.49
33:RQ:20:ALA:HB1	33:RQ:99:PRO:HD2	1.94	0.49
1:XA:16:A:N1	1:XA:919:A:H2	2.11	0.49
1:XA:1147:C:O2'	9:XI:16:ARG:HD3	2.12	0.49
12:XL:71:PRO:O	12:XL:102:ARG:HD3	2.12	0.49
14:XN:23:ARG:NH1	14:XN:30:ALA:HB2	2.27	0.49
22:YA:2118:U:O2	22:YA:2148:G:O2'	2.22	0.49
22:YA:336:C:O2'	41:YY:35:TYR:OH	2.26	0.49
22:YA:551:G:H5'	22:YA:1220:A:H1'	1.92	0.49
22:YA:881:G:H3'	22:YA:882:G:H8	1.76	0.49
1:QA:109:A:C6	1:QA:326:G:C6	3.00	0.49
1:QA:1342:C:H2'	1:QA:1343:G:C8	2.47	0.49
1:QA:334:C:H2'	1:QA:335:C:C6	2.47	0.49
1:QA:954:G:H21	1:QA:1227:A:H62	1.60	0.49

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
8:QH:9:MET:HG3	8:QH:26:VAL:HG21	1.94	0.49
22:RA:1467:C:N3	22:RA:1525:G:N2	2.52	0.49
22:RA:184:C:H2'	22:RA:185:U:C6	2.47	0.49
22:RA:2729:G:H1'	25:RE:187:ALA:HB2	1.93	0.49
22:RA:2828:C:O2'	22:RA:2829:C:H5'	2.12	0.49
23:RB:83:G:N2	23:RB:93:C:N3	2.50	0.49
28:RH:155:SER:OG	28:RH:156:ALA:N	2.45	0.49
33:RQ:11:LYS:HE2	33:RQ:86:GLY:O	2.11	0.49
34:RR:44:LEU:HD22	34:RR:48:VAL:HG23	1.94	0.49
1:XA:1256:A:H4'	1:XA:1258:G:C4	2.47	0.49
1:XA:67:C:O2'	1:XA:171:A:N3	2.39	0.49
11:XK:82:VAL:HB	11:XK:108:ILE:HG12	1.94	0.49
13:XM:81:LEU:HD13	13:XM:88:ARG:HD2	1.94	0.49
6:XF:97:PHE:HB2	18:XR:32:ARG:CZ	2.41	0.49
22:YA:1093:G:HO2'	22:YA:1099:G:H1	1.59	0.49
22:YA:2629:A:O2'	22:YA:2630:G:H5''	2.11	0.49
22:YA:273:G:N2	22:YA:365:C:C2	2.80	0.49
22:YA:769:G:H5'	22:YA:1379:A:N6	2.28	0.49
4:QD:167:GLY:HA3	24:YD:135:PHE:CE2	2.47	0.49
29:YI:5:LEU:HD11	29:YI:19:VAL:HG12	1.94	0.49
30:YN:7:LYS:HD2	30:YN:7:LYS:N	2.28	0.49
40:YX:53:LYS:HB3	40:YX:82:GLN:HB3	1.93	0.49
3:QC:73:PRO:O	3:QC:76:VAL:HG22	2.12	0.49
22:RA:2755:C:N3	52:R9:19:ARG:NH1	2.60	0.49
22:RA:1077:A:C2	22:RA:1078:U:H4'	2.48	0.49
22:RA:1534:G:C2'	22:RA:1535:U:H4'	2.41	0.49
22:RA:2021:C:H5	37:RU:25:TRP:CD1	2.30	0.49
22:RA:242:G:N2	22:RA:254:G:H2'	2.28	0.49
23:RB:8:U:O3'	35:RS:25:ARG:NH2	2.39	0.49
24:RD:175:LEU:HD12	24:RD:185:VAL:HG21	1.93	0.49
22:RA:1798:U:H5'	24:RD:259:THR:HG22	1.95	0.49
26:RF:9:ILE:HD11	26:RF:125:LEU:HG	1.94	0.49
27:RG:115:ARG:NH2	27:RG:137:GLU:OE1	2.46	0.49
35:RS:15:ARG:NH1	35:RS:25:ARG:HH21	2.11	0.49
42:RZ:10:ARG:NH2	42:RZ:26:GLY:O	2.45	0.49
1:XA:188:U:H2'	1:XA:189:U:H5''	1.94	0.49
1:XA:996:A:O5'	1:XA:996:A:H8	1.95	0.49
9:XI:40:LEU:C	9:XI:42:ARG:H	2.15	0.49
10:XJ:49:VAL:HG22	14:XN:41:ARG:HB2	1.94	0.49
19:XS:5:LEU:CD1	47:Y4:66:SER:CA	2.90	0.49
20:XT:89:ARG:NH2	20:XT:104:LEU:HD11	2.27	0.49
22:YA:2401:U:H2'	22:YA:2402:C:H5''	1.94	0.49

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:YA:1786:A:C2	22:YA:2606:C:H1'	2.47	0.49
22:YA:277:C:H5'	22:YA:278:A:H5'	1.95	0.49
22:YA:307:G:H21	22:YA:330:A:H62	1.60	0.49
22:YA:522:G:C2	22:YA:523:C:C2	3.00	0.49
23:YB:89:G:C6	23:YB:89(A):A:C6	3.01	0.49
24:YD:121:PRO:HB3	24:YD:135:PHE:CE1	2.47	0.49
25:YE:35:GLN:HG2	25:YE:37:ARG:HE	1.78	0.49
26:YF:31:HIS:HB2	32:YP:9:ASN:OD1	2.12	0.49
27:YG:94:LEU:HD12	27:YG:99:MET:HA	1.95	0.49
29:YI:110:ASP:HB3	29:YI:111:PRO:C	2.32	0.49
29:YI:3:VAL:HG12	29:YI:38:LEU:HA	1.94	0.49
29:YI:72:LEU:HD11	29:YI:107:VAL:HG21	1.94	0.49
37:YU:95:LEU:HD22	38:YV:4:ILE:HD12	1.93	0.49
42:YZ:136:PHE:CE1	42:YZ:138:GLU:HG3	2.47	0.49
1:QA:684:A:C6	1:QA:685:G:C5	3.00	0.49
7:QG:20:ASP:HB3	7:QG:23:VAL:HG23	1.94	0.49
18:QR:26:LEU:HD22	18:QR:42:ARG:HD2	1.94	0.49
50:R7:31:LEU:HD22	50:R7:42:LEU:HD13	1.95	0.49
22:RA:1359:A:H2'	22:RA:1360:A:H5'	1.94	0.49
22:RA:1678:G:N2	22:RA:1989:G:H22	2.10	0.49
22:RA:286:C:H2'	22:RA:287:C:C6	2.48	0.49
1:XA:1258:G:H1	1:XA:1277:C:H42	1.60	0.49
1:XA:34:C:H1'	12:XL:32:PHE:CE2	2.48	0.49
1:XA:56:U:H2'	1:XA:57:G:C8	2.46	0.49
22:YA:1087:G:H2'	22:YA:1089:G:H4'	1.93	0.49
22:YA:1355:G:O5'	22:YA:1355:G:H8	1.95	0.49
22:YA:1509:C:H3'	22:YA:1510:A:H5''	1.94	0.49
22:YA:185:U:H4'	22:YA:218:A:H4'	1.94	0.49
22:YA:2561:A:H2'	22:YA:2562:U:O4'	2.12	0.49
22:YA:2656:U:H3	22:YA:2665:A:H2	1.57	0.49
22:YA:483:A:H5''	22:YA:484:C:OP2	2.12	0.49
30:YN:34:LEU:HD21	30:YN:120:LEU:HB2	1.94	0.49
30:YN:17:ASP:O	30:YN:56:ASN:HB2	2.12	0.49
22:YA:1754:C:H5	36:YT:96:ARG:NH2	2.11	0.49
37:YU:61:TRP:CD2	37:YU:94:ASN:HA	2.47	0.49
1:QA:1356:G:H2'	1:QA:1357:A:H8	1.76	0.49
1:QA:587:G:N2	1:QA:754:C:OP2	2.46	0.49
8:QH:95:VAL:HB	8:QH:99:GLU:O	2.13	0.49
1:QA:1058:G:N2	10:QJ:53:PRO:HG3	2.27	0.49
1:QA:664:G:P	18:QR:64:ARG:HH21	2.35	0.49
46:R3:6:VAL:HG13	46:R3:56:VAL:HG13	1.94	0.49
22:RA:1047:G:H2'	22:RA:1110:G:H1	1.78	0.49

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:RA:1161:C:H2'	22:RA:1162:G:C8	2.47	0.49
22:RA:1401:G:H2'	22:RA:1402:C:C6	2.48	0.49
22:RA:1469:A:H2'	22:RA:1470:G:O4'	2.13	0.49
22:RA:177:G:H3'	22:RA:178:G:H8	1.77	0.49
22:RA:1899:G:N2	22:RA:1902:C:N4	2.58	0.49
22:RA:2510:C:H2'	22:RA:2511:U:C6	2.47	0.49
22:RA:296:C:H2'	22:RA:297:C:H6	1.77	0.49
22:RA:322:A:OP2	26:RF:169:ASN:HB2	2.13	0.49
26:RF:178:PRO:HG2	26:RF:179:GLU:OE2	2.13	0.49
30:RN:134:ARG:N	30:RN:135:PRO:HD3	2.28	0.49
33:RQ:69:PHE:CD1	33:RQ:70:PRO:HD2	2.46	0.49
41:RY:47:LYS:HG2	41:RY:60:PHE:HD1	1.76	0.49
1:XA:374:A:O2'	1:XA:451:A:OP2	2.27	0.49
1:XA:528:C:H41	12:XL:49:ASN:CG	2.14	0.49
2:XB:24:TRP:CZ3	2:XB:26:PRO:HA	2.48	0.49
1:XA:1191:A:H5''	3:XC:4:LYS:NZ	2.27	0.49
19:XS:41:VAL:HB	19:XS:42:PRO:CA	2.42	0.49
47:Y4:15:ILE:HD13	47:Y4:15:ILE:H	1.77	0.49
49:Y6:41:PRO:HD2	49:Y6:46:HIS:N	2.28	0.49
22:YA:147:U:H2'	22:YA:148:C:C6	2.48	0.49
22:YA:2633:G:H5'	22:YA:2811:G:O2'	2.11	0.49
23:YB:95:U:H2'	23:YB:96:G:H8	1.75	0.49
24:YD:27:THR:HG21	24:YD:83:GLU:HG2	1.94	0.49
40:YX:57:LEU:HD11	40:YX:78:LYS:HD2	1.94	0.49
3:QC:47:LEU:HD23	3:QC:68:VAL:HG11	1.94	0.49
14:QN:15:LYS:HD2	14:QN:16:PHE:CE2	2.47	0.49
17:QQ:18:THR:HG23	17:QQ:69:LYS:HE3	1.94	0.49
22:RA:1016:G:H2'	22:RA:1017:G:O4'	2.13	0.49
22:RA:1065:U:H3	22:RA:1073:A:H61	1.61	0.49
22:RA:121:G:H4'	22:RA:149:A:H5'	1.94	0.49
22:RA:1789:A:H2'	22:RA:1790:C:O4'	2.13	0.49
22:RA:593:G:H4'	51:R8:61:LEU:HD13	1.94	0.49
24:RD:35:LYS:HZ1	24:RD:65:ILE:HA	1.76	0.49
25:RE:70:ALA:O	25:RE:72:VAL:N	2.46	0.49
26:RF:132:VAL:HG23	26:RF:133:ASN:OD1	2.12	0.49
27:RG:110:ALA:HB1	27:RG:140:ILE:HD12	1.94	0.49
27:RG:60:LEU:O	27:RG:64:THR:HG22	2.11	0.49
33:RQ:89:ASN:O	33:RQ:91:GLU:N	2.45	0.49
37:RU:92:ARG:O	37:RU:92:ARG:HG2	2.13	0.49
40:RX:27:THR:HB	40:RX:80:ILE:HB	1.94	0.49
42:RZ:151:HIS:O	42:RZ:171:ILE:HG12	2.13	0.49
1:XA:1060:C:C5	3:XC:2:GLY:HA2	2.48	0.49

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:XA:143:A:H5''	1:XA:144:G:O5'	2.12	0.49
1:XA:37:U:H2'	1:XA:38:G:O4'	2.12	0.49
1:XA:464:G:H1'	1:XA:468:A:N6	2.28	0.49
11:XK:59:TYR:CZ	11:XK:63:LEU:HD11	2.47	0.49
13:XM:14:ARG:HG2	13:XM:17:VAL:HG23	1.94	0.49
49:Y6:41:PRO:O	49:Y6:45:LYS:HE3	2.12	0.49
32:YP:61:ARG:HD3	51:Y8:13:ARG:HD2	1.94	0.49
32:YP:63:PRO:HD3	51:Y8:13:ARG:HD3	1.95	0.49
22:YA:781:A:H2'	22:YA:1777:U:O2'	2.13	0.49
22:YA:2345:G:N3	22:YA:2381:C:H2'	2.28	0.49
22:YA:2645:G:C3'	22:YA:2646:C:H5'	2.43	0.49
25:YE:179:GLU:HB3	25:YE:181:LEU:HD23	1.94	0.49
41:YY:86:ARG:HB2	41:YY:95:LYS:HD2	1.93	0.49
1:QA:1318:A:H4'	19:QS:11:VAL:CG1	2.43	0.49
1:QA:229:U:H2'	1:QA:230:G:C8	2.48	0.49
1:QA:8:A:H4'	1:QA:9:G:OP1	2.11	0.49
1:QA:975:A:C8	1:QA:1357:A:H2	2.31	0.49
49:R6:15:GLU:CD	49:R6:41:PRO:HB3	2.32	0.49
22:RA:1853:A:N3	22:RA:2233:U:O2'	2.41	0.49
22:RA:2210:G:H5'	22:RA:2211:G:C6	2.48	0.49
22:RA:270(U):C:H2'	22:RA:270(V):G:H8	1.77	0.49
22:RA:58:G:C5	22:RA:59:U:C5	3.01	0.49
22:RA:606:U:H4'	22:RA:658:C:H4'	1.94	0.49
22:RA:979:G:H3'	22:RA:980:A:C5'	2.41	0.49
24:RD:228:PRO:HD3	24:RD:234:GLY:C	2.33	0.49
27:RG:54:GLU:HA	27:RG:57:ALA:HB3	1.94	0.49
29:RI:81:VAL:CG2	29:RI:142:VAL:HG12	2.39	0.49
42:RZ:62:PRO:C	42:RZ:64:GLY:H	2.16	0.49
1:XA:17:U:H2'	1:XA:18:C:C6	2.48	0.49
1:XA:643:C:H2'	1:XA:644:G:C8	2.48	0.49
1:XA:818:G:O2'	1:XA:819:A:H5'	2.12	0.49
3:XC:148:GLY:HA3	3:XC:172:ARG:O	2.12	0.49
10:XJ:35:SER:OG	10:XJ:73:ASP:HB2	2.13	0.49
12:XL:62:SER:HB2	12:XL:64:TYR:HD1	1.76	0.49
22:YA:1208:C:C4	22:YA:1209:G:N7	2.81	0.49
22:YA:1312:U:H4'	22:YA:1313:U:O5'	2.13	0.49
22:YA:1930:G:O2'	22:YA:1931:U:P	2.71	0.49
22:YA:2020:A:O2'	22:YA:2021:C:H2'	2.12	0.49
22:YA:855:G:C6	22:YA:856:C:C4	3.01	0.49
24:YD:76:PRO:HG2	24:YD:98:VAL:HG21	1.94	0.49
29:YI:104:GLN:HG2	29:YI:105:HIS:CE1	2.48	0.49
22:YA:2496:C:P	33:YQ:81:VAL:HG12	2.53	0.49

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:QA:1203:C:H2'	1:QA:1204:A:C8	2.48	0.49
1:QA:522:C:OP2	12:QL:69:TYR:OH	2.25	0.49
1:QA:849:C:H2'	1:QA:850:U:O4'	2.13	0.49
12:QL:24:VAL:HG13	12:QL:98:TYR:HE2	1.77	0.49
1:QA:1226:C:H2'	13:QM:103:THR:HB	1.93	0.49
15:QO:87:ILE:HG22	15:QO:88:ARG:H	1.78	0.49
19:QS:77:THR:HG22	19:QS:78:ARG:HD3	1.95	0.49
20:QT:79:ARG:O	20:QT:83:ARG:HG3	2.12	0.49
53:QV:9:G:N3	53:QV:45:G:H2'	2.28	0.49
49:R6:14:THR:O	49:R6:49:HIS:HA	2.12	0.49
22:RA:1091:G:N2	22:RA:1101:U:H1'	2.27	0.49
22:RA:1212:G:N2	22:RA:1236:G:O2'	2.44	0.49
22:RA:1449:A:HO2'	22:RA:1530:G:N2	2.04	0.49
22:RA:2540:C:H2'	22:RA:2541:A:O4'	2.13	0.49
22:RA:589:C:H2'	22:RA:590:A:H8	1.76	0.49
22:RA:680:G:H2'	22:RA:681:G:C8	2.48	0.49
29:RI:3:VAL:HG12	29:RI:38:LEU:HA	1.94	0.49
1:XA:1277:C:H2'	1:XA:1279:A:H8	1.76	0.49
1:XA:1443:G:H2'	36:YT:122:ASP:OD2	2.13	0.49
1:XA:518:C:H2'	1:XA:530:G:C4	2.48	0.49
2:XB:47:THR:HA	2:XB:202:PRO:HG2	1.95	0.49
5:XE:10:MET:SD	5:XE:13:ILE:HD13	2.53	0.49
1:XA:1291:G:OP1	7:XG:37:ASN:ND2	2.46	0.49
3:QC:79:ARG:HE	11:XK:99:GLN:NE2	2.11	0.49
49:Y6:21:TYR:HE1	49:Y6:53:LYS:HE3	1.77	0.49
22:YA:1657:C:O2'	25:YE:133:LYS:HD2	2.13	0.49
22:YA:1693:U:O2'	24:YD:14:ARG:NH2	2.45	0.49
22:YA:1758:G:OP1	22:YA:1760:A:N6	2.46	0.49
22:YA:2323:G:H2'	22:YA:2324:C:O4'	2.13	0.49
22:YA:602:G:C2	22:YA:656:G:C6	3.01	0.49
24:YD:61:LEU:O	24:YD:63:ARG:NH1	2.45	0.49
28:YH:12:PRO:HG3	28:YH:48:GLY:HA2	1.95	0.49
42:YZ:48:PHE:CE2	42:YZ:52:SER:HA	2.48	0.49
1:QA:1025:U:HO2'	1:QA:1026:G:P	2.36	0.49
1:QA:1066:C:H5'	1:QA:1067:A:OP2	2.13	0.49
1:QA:1512:U:H2'	1:QA:1513:A:H8	1.78	0.49
1:QA:266:G:H5'	1:QA:268:C:H41	1.77	0.49
1:QA:617:G:N2	1:QA:618:C:N3	2.61	0.49
1:QA:751:U:H2'	1:QA:752:G:O4'	2.13	0.49
2:QB:80:ILE:HG21	2:QB:212:GLN:HA	1.95	0.49
4:QD:129:ASN:HA	4:QD:145:GLU:HB2	1.94	0.49
10:QJ:51:ARG:NH2	14:QN:58:LYS:HZ1	2.11	0.49

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
21:QU:5:ASP:O	21:QU:11:GLY:HA3	2.13	0.49
22:RA:1130:U:C2	25:RE:147:PRO:HB3	2.48	0.49
22:RA:1178:C:H2'	22:RA:1179:C:C5	2.48	0.49
22:RA:1292:U:H2'	22:RA:1293:C:C6	2.48	0.49
22:RA:1676:A:N6	22:RA:1677:A:N1	2.61	0.49
22:RA:2144:U:O2'	22:RA:2147:G:O6	2.21	0.49
22:RA:2292:C:OP2	35:RS:17:ARG:NH2	2.46	0.49
22:RA:860:U:H5	22:RA:917:A:C2	2.31	0.49
22:RA:861:A:C2	22:RA:917:A:C5	3.01	0.49
27:RG:98:ARG:HE	27:RG:98:ARG:HB2	1.38	0.49
1:XA:1118:C:OP1	9:XI:9:ARG:HD3	2.12	0.49
3:XC:79:ARG:HH12	3:XC:82:GLU:HG3	1.77	0.49
6:XF:19:LEU:HD21	6:XF:59:TYR:CE2	2.47	0.49
1:XA:1179:A:O3'	9:XI:103:THR:HG23	2.13	0.49
22:YA:1042:G:H1	22:YA:1113:U:H3	1.61	0.49
22:YA:1957:C:H2'	22:YA:1958:C:C6	2.48	0.49
22:YA:2639:A:H2'	22:YA:2640:G:O4'	2.13	0.49
22:YA:698:C:O2'	22:YA:734:A:N6	2.46	0.49
24:YD:170:GLY:C	24:YD:172:TYR:H	2.16	0.49
26:YF:176:LEU:HD21	26:YF:181:LEU:HA	1.94	0.49
33:YQ:104:PHE:CE1	33:YQ:125:LEU:HD11	2.41	0.49
42:YZ:52:SER:C	42:YZ:54:HIS:H	2.16	0.49
1:QA:1053:G:O6	1:QA:1199:U:H2'	2.13	0.48
1:QA:1053:G:N7	1:QA:1199:U:H3'	2.27	0.48
1:QA:1412:C:H2'	1:QA:1413:A:C8	2.48	0.48
1:QA:325:A:H2'	1:QA:326:G:O4'	2.11	0.48
1:QA:455:C:H42	1:QA:477:G:H1	1.59	0.48
1:QA:855:G:C6	1:QA:856:C:C4	3.01	0.48
2:QB:96:ARG:H	2:QB:96:ARG:HD2	1.76	0.48
7:QG:155:ARG:NH2	7:QG:155:ARG:O	2.46	0.48
15:QO:16:ALA:HB1	15:QO:21:ASP:HB3	1.94	0.48
1:QA:1312:G:H5''	47:R4:67:TYR:OH	2.13	0.48
49:R6:25:LYS:HE2	49:R6:27:LYS:HD3	1.94	0.48
22:RA:1022:G:H4'	22:RA:1023:U:H5'	1.95	0.48
22:RA:1137:G:O2'	22:RA:2039:C:H5'	2.13	0.48
22:RA:205:G:O2'	22:RA:206:U:OP2	2.25	0.48
22:RA:2469:A:H2	22:RA:2481:G:H21	1.61	0.48
22:RA:503:A:C4'	22:RA:504:U:H5'	2.42	0.48
28:RH:4:ILE:HG13	28:RH:6:ARG:NE	2.28	0.48
36:RT:16:ARG:HD3	36:RT:19:LEU:HD11	1.94	0.48
41:RY:47:LYS:HG2	41:RY:60:PHE:CD1	2.48	0.48
1:XA:347:G:C4	1:XA:348:G:C8	3.00	0.48

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:XA:444:C:H2'	1:XA:445:G:C8	2.48	0.48
3:XC:134:ILE:HG23	3:XC:151:VAL:HB	1.94	0.48
5:XE:33:VAL:HG11	5:XE:109:ILE:HA	1.95	0.48
22:YA:1159:U:H2'	22:YA:1160:G:O4'	2.13	0.48
22:YA:225:A:O2'	22:YA:257:A:H4'	2.13	0.48
22:YA:2687:U:H2'	22:YA:2688:U:O4'	2.12	0.48
22:YA:270(G):C:H2'	22:YA:270(H):C:C6	2.47	0.48
24:YD:35:LYS:HD3	24:YD:63:ARG:CB	2.43	0.48
22:YA:2636:U:OP2	25:YE:79:ARG:NH1	2.46	0.48
28:YH:98:LEU:HD13	28:YH:125:VAL:HB	1.94	0.48
36:YT:107:ASP:H	36:YT:110:ILE:HG22	1.78	0.48
1:QA:1060:C:H2'	1:QA:1061:G:H8	1.78	0.48
1:QA:1305:G:O2'	1:QA:1306:A:O4'	2.31	0.48
1:QA:440:A:H5'	1:QA:442:C:OP2	2.13	0.48
2:QB:21:ARG:O	2:QB:23:ARG:N	2.46	0.48
1:QA:1368:G:H5'	9:QL:112:LYS:O	2.13	0.48
10:QJ:24:VAL:HG21	10:QJ:37:PRO:HD3	1.95	0.48
10:QJ:32:ALA:HB3	10:QJ:76:ASN:HB2	1.95	0.48
12:QL:58:VAL:O	12:QL:65:GLU:HA	2.13	0.48
22:RA:107:C:H2'	22:RA:108:U:C6	2.48	0.48
22:RA:1366:A:H2'	22:RA:1367:A:O4'	2.12	0.48
22:RA:2056:G:N2	48:R5:4:HIS:O	2.45	0.48
22:RA:2404:C:H2'	22:RA:2405:G:H5'	1.95	0.48
22:RA:381:G:H2'	22:RA:382:G:H8	1.78	0.48
22:RA:456:C:O2'	22:RA:457:A:H5'	2.13	0.48
22:RA:977:G:C6	22:RA:987:G:C6	3.01	0.48
26:RF:178:PRO:HB2	26:RF:201:VAL:HG11	1.94	0.48
28:RH:41:MET:HG3	28:RH:54:ARG:HA	1.96	0.48
42:RZ:30:ASN:N	42:RZ:30:ASN:OD1	2.43	0.48
1:XA:107:G:OP1	1:XA:325:A:N6	2.46	0.48
1:XA:485:G:H1'	1:XA:486:U:H5	1.77	0.48
1:XA:619:U:H2'	1:XA:619:U:O2	2.11	0.48
1:XA:757:U:H2'	1:XA:758:G:O4'	2.13	0.48
6:XF:35:ALA:HA	6:XF:67:MET:HB3	1.94	0.48
22:YA:1011:G:H22	22:YA:1151:G:H1'	1.77	0.48
22:YA:1204:A:H1'	22:YA:1206:G:C5	2.48	0.48
22:YA:1265:A:H8	22:YA:1265:A:OP1	1.95	0.48
22:YA:1494:A:H2'	22:YA:1495:A:C8	2.48	0.48
22:YA:1870:C:H2'	22:YA:1871:A:O4'	2.12	0.48
22:YA:1918:A:HO2'	22:YA:1920:C:N4	2.11	0.48
22:YA:2097:C:H2'	22:YA:2098:U:O4'	2.14	0.48
22:YA:840:C:OP2	22:YA:932:G:N2	2.39	0.48

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:YA:860:U:OP2	22:YA:916:G:N1	2.45	0.48
25:YE:111:ARG:HG2	34:YR:1:MET:SD	2.53	0.48
25:YE:21:VAL:HG23	25:YE:22:PRO:HD3	1.95	0.48
27:YG:166:ASP:HA	27:YG:169:ALA:HB3	1.95	0.48
28:YH:55:PRO:HG2	28:YH:61:HIS:CE1	2.48	0.48
31:YO:4:PRO:O	31:YO:5:GLN:HB2	2.11	0.48
31:YO:76:ALA:HB3	36:YT:75:ILE:HD12	1.95	0.48
37:YU:98:LEU:O	37:YU:102:GLU:N	2.37	0.48
39:YW:51:LEU:HD23	39:YW:105:VAL:HG11	1.94	0.48
42:YZ:10:ARG:NH2	42:YZ:26:GLY:O	2.45	0.48
1:QA:1224:G:C6	1:QA:1322:C:H1'	2.49	0.48
1:QA:1310:G:N2	1:QA:1327:C:O2	2.40	0.48
1:QA:1423:G:H2'	1:QA:1424:C:O4'	2.12	0.48
1:QA:129(A):G:N3	1:QA:189:U:H5'	2.28	0.48
1:QA:474:G:H2'	1:QA:475:G:C8	2.48	0.48
2:QB:163:PHE:HD2	2:QB:185:ILE:HG13	1.78	0.48
4:QD:88:VAL:HG13	5:QE:97:GLY:HA3	1.95	0.48
7:QG:113:GLU:HG3	7:QG:119:ARG:HG2	1.94	0.48
44:R1:53:VAL:HB	44:R1:58:ILE:HD12	1.94	0.48
22:RA:577:G:O2'	22:RA:1254:A:OP1	2.32	0.48
22:RA:247:G:N7	22:RA:249:C:C2	2.81	0.48
22:RA:2545:G:H2'	22:RA:2546:U:O4'	2.13	0.48
22:RA:27:G:C2	22:RA:512:G:N3	2.81	0.48
22:RA:858:U:O2	22:RA:2268:A:H2'	2.14	0.48
26:RF:155:LEU:HD12	26:RF:174:VAL:HG22	1.94	0.48
32:RP:59:LEU:HA	32:RP:61:ARG:HE	1.76	0.48
34:RR:97:VAL:HG22	34:RR:114:VAL:CG2	2.43	0.48
40:RX:39:ILE:O	40:RX:43:VAL:HG12	2.13	0.48
1:XA:1024:G:N3	1:XA:1024:G:H3'	2.28	0.48
1:XA:1090:U:H2'	1:XA:1091:U:H6	1.78	0.48
1:XA:1399:C:C2	1:XA:1401:G:C5	3.01	0.48
1:XA:564:C:C2	17:XQ:31:LEU:HD11	2.48	0.48
3:XC:130:VAL:HG21	3:XC:157:ILE:HG23	1.94	0.48
5:XE:152:ARG:NH2	8:XH:107:LEU:O	2.46	0.48
15:XO:70:LEU:HD11	15:XO:77:ARG:HG3	1.96	0.48
16:XP:26:ARG:HH21	16:XP:31:LYS:HB3	1.77	0.48
22:YA:1728:G:H3'	22:YA:1729:A:C5'	2.43	0.48
22:YA:2729:G:H2'	22:YA:2730:C:C6	2.48	0.48
22:YA:396:G:H1'	44:Y1:42:GLN:HB3	1.94	0.48
22:YA:1823:G:P	24:YD:54:ARG:HH21	2.36	0.48
26:YF:185:ASP:OD1	26:YF:188:ARG:NH1	2.35	0.48
1:QA:1082:G:H5'	1:QA:1083:U:OP2	2.13	0.48

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
4:QD:100:ARG:NH2	4:QD:136:PRO:O	2.47	0.48
13:QM:23:TYR:HE1	13:QM:70:LEU:HD12	1.77	0.48
22:RA:1316:U:H2'	22:RA:1317:A:C8	2.48	0.48
22:RA:2563:U:N3	22:RA:2566:A:OP2	2.43	0.48
22:RA:429:A:C5	22:RA:430:G:C6	3.01	0.48
22:RA:962:G:H2'	22:RA:963:U:O4'	2.14	0.48
32:RP:58:THR:O	32:RP:61:ARG:CZ	2.61	0.48
23:RB:7:G:H5'	35:RS:29:PHE:CE1	2.49	0.48
1:XA:1216:G:OP1	14:XN:2:ALA:HA	2.13	0.48
1:XA:200:G:H1	1:XA:217:C:H42	1.61	0.48
1:XA:542:G:OP1	4:XD:10:ARG:NH2	2.46	0.48
1:XA:713:G:H2'	1:XA:714:G:C8	2.48	0.48
2:XB:101:MET:HA	2:XB:108:ILE:HG13	1.95	0.48
3:XC:7:PRO:O	3:XC:11:ARG:HG2	2.13	0.48
5:XE:50:GLU:HG3	5:XE:52:PRO:HD2	1.95	0.48
6:XF:36:ARG:CZ	6:XF:38:GLU:HG2	2.44	0.48
20:XT:93:GLU:OE1	20:XT:94:ALA:N	2.46	0.48
44:Y1:41:ARG:HG3	44:Y1:41:ARG:HH11	1.79	0.48
48:Y5:41:PRO:O	48:Y5:44:THR:OG1	2.32	0.48
22:YA:1796:U:H2'	22:YA:1797:C:C6	2.47	0.48
22:YA:199:A:C8	22:YA:2433:A:C6	3.01	0.48
22:YA:2127:G:H22	22:YA:2162:G:H1'	1.78	0.48
22:YA:2168:G:N2	22:YA:2170:A:H62	2.11	0.48
22:YA:2321:G:N2	22:YA:2322:A:O4'	2.46	0.48
22:YA:220:G:O2'	22:YA:233:A:N3	2.44	0.48
22:YA:2532:G:C6	22:YA:2533:A:C6	3.01	0.48
22:YA:259:G:H21	22:YA:621:A:H8	1.60	0.48
22:YA:638:G:H2'	22:YA:639:U:O4'	2.13	0.48
22:YA:745:G:O6	22:YA:746:A:N6	2.46	0.48
23:YB:82:G:C4	23:YB:83:G:C8	3.01	0.48
25:YE:20:ALA:HB3	25:YE:21:VAL:HG13	1.95	0.48
28:YH:137:ASP:HB3	28:YH:140:LYS:HB3	1.94	0.48
32:YP:82:GLY:HA2	32:YP:113:LYS:O	2.12	0.48
32:YP:135:LEU:HD13	32:YP:139:LYS:HE2	1.94	0.48
36:YT:102:ILE:HB	36:YT:110:ILE:HD13	1.95	0.48
38:YV:15:GLU:O	38:YV:18:LEU:HB2	2.14	0.48
1:QA:256:U:H2'	1:QA:257:G:C8	2.48	0.48
1:QA:258:G:C2	1:QA:259:G:C8	3.02	0.48
1:QA:642:A:N3	8:QH:113:SER:OG	2.38	0.48
3:QC:150:LYS:HG3	3:QC:169:ALA:HB2	1.96	0.48
13:QM:49:THR:HG22	13:QM:51:ALA:H	1.79	0.48
20:QT:12:ALA:O	20:QT:15:ARG:HB2	2.14	0.48

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
53:QV:53:G:O2'	53:QV:54:U:H6	1.96	0.48
43:R0:40:GLN:OE1	43:R0:44:ARG:N	2.43	0.48
46:R3:4:LEU:O	46:R3:36:VAL:HA	2.13	0.48
22:RA:1011:G:C2	22:RA:1151:G:C2	3.01	0.48
22:RA:1319:G:H1	22:RA:1333:C:H42	1.59	0.48
22:RA:2461:C:H2'	22:RA:2462:U:C6	2.48	0.48
22:RA:270(P):C:O3'	29:RI:45:LYS:HE2	2.14	0.48
22:RA:2751:G:C2	28:RH:3:ARG:HB3	2.49	0.48
22:RA:2815:C:H2'	22:RA:2816:C:H6	1.77	0.48
22:RA:508:G:HO2'	22:RA:509:C:P	2.36	0.48
22:RA:592:G:H1	22:RA:665:C:N4	2.10	0.48
22:RA:888:C:H3'	22:RA:889:C:H4'	1.95	0.48
30:RN:4:TYR:O	37:RU:64:ARG:NH1	2.46	0.48
34:RR:2:ARG:HA	34:RR:5:LYS:HE3	1.95	0.48
1:XA:258:G:H2'	1:XA:259:G:C8	2.46	0.48
1:XA:295:C:H2'	1:XA:296:U:C6	2.48	0.48
2:XB:204:ASN:ND2	2:XB:206:ASP:H	2.11	0.48
5:XE:110:LEU:HD13	5:XE:118:ILE:HG21	1.94	0.48
11:XK:18:ARG:NH2	11:XK:35:PRO:O	2.45	0.48
22:YA:1341:U:OP2	22:YA:1394:U:O2'	2.18	0.48
22:YA:1665:A:H2'	22:YA:1666:G:O4'	2.14	0.48
22:YA:2331:G:H4'	43:Y0:43:THR:N	2.26	0.48
22:YA:1639:U:H4'	22:YA:2699:C:H4'	1.95	0.48
22:YA:890:A:HO2'	22:YA:892:G:H8	1.61	0.48
22:YA:816:C:O2'	22:YA:932:G:O6	2.26	0.48
32:YP:14:LYS:O	32:YP:16:ARG:HG2	2.13	0.48
32:YP:5:ASP:O	32:YP:6:LEU:O	2.31	0.48
1:QA:380:G:C2	1:QA:384:G:C6	3.02	0.48
9:QI:17:VAL:HG11	9:QI:81:ILE:HA	1.95	0.48
10:QJ:80:LYS:HD3	10:QJ:80:LYS:HA	1.69	0.48
11:QK:48:ILE:HD11	11:QK:64:ALA:HA	1.95	0.48
15:QO:26:GLU:H	15:QO:26:GLU:HG2	1.41	0.48
16:QP:43:LYS:HA	16:QP:48:TRP:HB3	1.96	0.48
19:QS:26:GLY:O	19:QS:28:LYS:N	2.41	0.48
43:R0:36:ILE:HG13	43:R0:58:THR:HG23	1.93	0.48
48:R5:55:ARG:HG3	48:R5:57:VAL:N	2.17	0.48
22:RA:1259:G:H2'	22:RA:1260:G:H8	1.78	0.48
22:RA:180:G:N2	22:RA:214:G:O6	2.46	0.48
22:RA:2404:C:H1'	32:RP:67:MET:CE	2.44	0.48
22:RA:627:A:H4'	22:RA:628:G:H5'	1.95	0.48
22:RA:825:C:H2'	22:RA:826:U:O4'	2.13	0.48
26:RF:197:ASP:N	26:RF:197:ASP:OD2	2.46	0.48

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
29:RI:90:GLY:O	29:RI:121:LYS:HE2	2.13	0.48
35:RS:64:GLU:O	35:RS:68:GLN:HG3	2.14	0.48
25:RE:181:LEU:HD21	36:RT:7:ILE:HG23	1.95	0.48
22:RA:991:C:O2'	38:RV:85:LYS:NZ	2.47	0.48
41:RY:51:VAL:O	41:RY:56:PRO:HA	2.14	0.48
41:RY:81:LYS:NZ	41:RY:98:VAL:HG11	2.28	0.48
42:RZ:146:ILE:HG22	42:RZ:174:VAL:HG12	1.95	0.48
1:XA:1086:U:H3	1:XA:1099:G:H22	1.61	0.48
1:XA:1233:G:H2'	1:XA:1234:C:C6	2.49	0.48
2:XB:73:THR:OG1	2:XB:170:GLU:OE2	2.23	0.48
9:XI:9:ARG:HB2	9:XI:14:VAL:HA	1.96	0.48
3:QC:79:ARG:NH2	11:XK:99:GLN:HB2	2.29	0.48
22:YA:1607:C:H4'	22:YA:1608:A:O5'	2.14	0.48
22:YA:2320:A:N3	22:YA:2320:A:H2'	2.28	0.48
22:YA:2564:A:OP1	22:YA:2648:C:H4'	2.14	0.48
22:YA:2867:G:OP2	36:YT:119:LYS:NZ	2.23	0.48
22:YA:443:A:H5''	22:YA:444:C:OP1	2.14	0.48
22:YA:609(A):G:H2'	22:YA:610:C:H6	1.79	0.48
22:YA:77:C:O5'	22:YA:77:C:H6	1.97	0.48
29:YI:52:ARG:HA	29:YI:55:ALA:HB3	1.95	0.48
22:YA:662:G:H5''	32:YP:17:LYS:HG2	1.95	0.48
32:YP:52:GLU:O	32:YP:55:ARG:HG2	2.14	0.48
40:YX:63:LYS:O	40:YX:64:LYS:HD2	2.14	0.48
41:YY:35:TYR:CD1	41:YY:69:ALA:HB3	2.49	0.48
42:YZ:105:VAL:HG22	42:YZ:140:ASP:HB3	1.94	0.48
1:QA:1305:G:H5'	21:QU:4:GLY:HA3	1.94	0.48
1:QA:559:A:C4'	1:QA:560:U:H3'	2.34	0.48
1:QA:935:A:H2'	1:QA:936:C:C6	2.49	0.48
8:QH:102:ARG:NH1	8:QH:105:ARG:HH22	2.12	0.48
22:RA:2021:C:OP1	48:R5:12:SER:OG	2.28	0.48
22:RA:2030:A:H4'	22:RA:2031:A:C8	2.48	0.48
22:RA:2109:U:H2'	22:RA:2110:G:C8	2.47	0.48
22:RA:769:G:H5'	22:RA:1379:A:H61	1.79	0.48
27:RG:81:LYS:O	27:RG:82:LEU:HB2	2.13	0.48
28:RH:154:PRO:HD3	28:RH:162:ILE:H	1.77	0.48
32:RP:36:LYS:HB3	32:RP:40:SER:HB3	1.95	0.48
1:XA:1171:G:H2'	1:XA:1172:C:C6	2.48	0.48
1:XA:1365:G:H2'	1:XA:1366:C:H6	1.79	0.48
1:XA:1366:C:C2	1:XA:1367:C:C5	3.01	0.48
1:XA:201:C:N4	1:XA:209:U:O2	2.47	0.48
1:XA:865:A:N3	1:XA:918:A:O2'	2.38	0.48
19:XS:39:THR:HG22	19:XS:40:ILE:H	1.78	0.48

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
53:XV:10:G:N3	53:XV:10:G:H2'	2.28	0.48
53:XV:2:G:H2'	53:XV:3:C:H6	1.78	0.48
22:YA:1183:G:H4'	46:Y3:29:ARG:HH22	1.78	0.48
22:YA:1266:G:O5'	39:YW:15:ARG:NH2	2.46	0.48
22:YA:1359:A:H61	22:YA:1372:U:H3	1.60	0.48
22:YA:1448:G:N3	22:YA:1529:A:H2	2.12	0.48
22:YA:270(O):U:O4	29:YI:52:ARG:HD3	2.14	0.48
22:YA:963:U:O2'	22:YA:964:C:H5'	2.13	0.48
22:YA:975:G:H1'	22:YA:990:A:C2	2.48	0.48
24:YD:254:THR:O	24:YD:254:THR:OG1	2.30	0.48
37:YU:60:LEU:O	37:YU:60:LEU:HD22	2.14	0.48
37:YU:97:ASP:OD1	37:YU:101:ARG:NH1	2.46	0.48
38:YV:76:LYS:HB2	38:YV:81:TYR:HB3	1.95	0.48
39:YW:67:ASP:OD2	39:YW:67:ASP:N	2.46	0.48
42:YZ:62:PRO:O	42:YZ:64:GLY:N	2.47	0.48
1:QA:1053:G:H2'	1:QA:1199:U:C5	2.48	0.48
1:QA:1347:G:C8	9:QI:107:ARG:HB3	2.49	0.48
1:QA:662:G:H2'	1:QA:663:A:C8	2.49	0.48
4:QD:31:CYS:SG	4:QD:31:CYS:O	2.71	0.48
9:QI:40:LEU:O	9:QI:42:ARG:N	2.46	0.48
10:QJ:78:ASN:O	10:QJ:82:ILE:HG12	2.14	0.48
53:QV:17:C:O2	53:QV:17:C:H2'	2.13	0.48
48:R5:46:CYS:O	48:R5:48:GLU:N	2.47	0.48
51:R8:51:ALA:N	51:R8:53:PRO:HD2	2.29	0.48
22:RA:1190:G:H5'	32:RP:32:THR:HA	1.96	0.48
22:RA:1608:A:H1'	22:RA:1610:A:OP2	2.14	0.48
22:RA:1849:G:H2'	22:RA:1850:G:C8	2.47	0.48
22:RA:2279:G:N2	22:RA:2280:G:H1'	2.29	0.48
22:RA:1755:A:N6	22:RA:2694:G:O2'	2.47	0.48
22:RA:2742:C:OP1	52:R9:35:ARG:HD3	2.13	0.48
22:RA:813:U:H2'	22:RA:814:C:C6	2.48	0.48
22:RA:617:G:P	26:RF:40:GLN:HE21	2.28	0.48
22:RA:2415:G:H4'	32:RP:67:MET:N	2.28	0.48
1:XA:1323:G:H4'	1:XA:1362(A):C:C2	2.49	0.48
1:XA:292:G:N7	1:XA:293:G:H1'	2.29	0.48
1:XA:7:G:H5'	1:XA:298:A:O4'	2.14	0.48
1:XA:356:A:H2'	1:XA:357:G:C8	2.41	0.48
1:XA:486:U:H2'	1:XA:487:A:H8	1.77	0.48
1:XA:623:C:H2'	1:XA:624:C:O4'	2.14	0.48
5:XE:6:PHE:CE2	5:XE:36:ASP:HB3	2.48	0.48
9:XI:114:TYR:CD2	9:XI:114:TYR:N	2.81	0.48
16:XP:22:THR:HA	16:XP:33:ILE:HG12	1.96	0.48

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
48:Y5:58:LEU:HD22	48:Y5:60:VAL:HB	1.96	0.48
22:YA:2477:C:H2'	52:Y9:1:MET:CG	2.43	0.48
22:YA:1045:A:O2'	22:YA:1046:A:OP2	2.22	0.48
22:YA:1131:G:N2	22:YA:1132:A:C2	2.82	0.48
22:YA:263:C:H2'	22:YA:264:C:O4'	2.14	0.48
22:YA:279:C:H2'	22:YA:280:C:C6	2.48	0.48
22:YA:521:G:H2'	22:YA:522:G:C8	2.44	0.48
29:YI:83:ALA:O	29:YI:85:GLU:N	2.47	0.48
35:YS:74:ALA:HB1	35:YS:107:GLU:HB3	1.96	0.48
37:YU:90:VAL:HG22	38:YV:39:LEU:HB3	1.96	0.48
1:QA:181:G:O2'	1:QA:182:U:O5'	2.32	0.48
1:QA:743:U:H2'	1:QA:744:C:C6	2.49	0.48
1:QA:911:U:H2'	1:QA:912:C:C6	2.49	0.48
5:QE:69:VAL:O	5:QE:71:LEU:N	2.47	0.48
7:QG:57:GLU:N	7:QG:57:GLU:OE1	2.41	0.48
17:QQ:100:LYS:O	17:QQ:101:ARG:NE	2.47	0.48
47:R4:23:GLU:HG3	47:R4:25:TYR:CE2	2.49	0.48
49:R6:18:ARG:HB2	49:R6:44:ARG:HH12	1.77	0.48
22:RA:2107:C:N4	22:RA:2182:G:H1	2.04	0.48
22:RA:2803:C:H2'	22:RA:2804:C:C6	2.48	0.48
22:RA:405:U:H6	22:RA:405:U:H5'	1.78	0.48
26:RF:102:PRO:HB2	26:RF:105:VAL:HG23	1.95	0.48
27:RG:82:LEU:HD21	27:RG:88:ILE:HG13	1.96	0.48
28:RH:86:GLU:OE1	28:RH:86:GLU:N	2.43	0.48
1:XA:1112:C:C2	3:XC:178:LEU:HB2	2.49	0.48
1:XA:1118:C:P	9:XI:104:ARG:HH11	2.37	0.48
1:XA:777:A:H2'	1:XA:778:G:H8	1.77	0.48
6:XF:10:LEU:HD22	6:XF:61:LEU:HD11	1.95	0.48
13:XM:68:GLY:HA3	27:YG:116:ASP:CG	2.34	0.48
22:YA:1293:C:H2'	22:YA:1294:U:H6	1.79	0.48
22:YA:1382:G:C4	22:YA:1383:C:C5	3.02	0.48
22:YA:1436:G:H2'	22:YA:1437:C:O4'	2.13	0.48
22:YA:1733:G:H5'	22:YA:1734:C:OP2	2.14	0.48
22:YA:2112:G:C6	22:YA:2169:A:N6	2.81	0.48
22:YA:2131:G:H1'	22:YA:2158:A:N6	2.28	0.48
22:YA:1638:C:O2'	22:YA:2698:U:O2'	2.15	0.48
22:YA:566:U:OP1	32:YP:29:LYS:NZ	2.39	0.48
23:YB:78:A:C2	23:YB:99:A:C4	3.02	0.48
28:YH:6:ARG:HA	28:YH:66:GLY:HA2	1.95	0.48
29:YI:40:THR:O	29:YI:44:LEU:HB2	2.13	0.48
32:YP:46:LYS:HB3	32:YP:46:LYS:HE3	1.54	0.48
32:YP:98:GLU:HA	32:YP:101:VAL:HB	1.96	0.48

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
37:YU:92:ARG:CZ	38:YV:11:GLN:H	2.26	0.48
1:QA:1086:U:H6	1:QA:1086:U:O5'	1.97	0.48
12:QL:17:LYS:HG2	12:QL:19:ARG:HG2	1.94	0.48
12:QL:38:THR:O	12:QL:79:GLU:HG3	2.14	0.48
22:RA:125:G:H1'	50:R7:13:ALA:CB	2.44	0.48
22:RA:1342:A:O2'	22:RA:1344:G:OP2	2.28	0.48
22:RA:1614:A:N7	39:RW:93:ALA:HB2	2.28	0.48
22:RA:229:A:H4'	22:RA:229:A:OP1	2.12	0.48
22:RA:2633:G:H2'	22:RA:2634:G:O4'	2.14	0.48
24:RD:25:THR:O	24:RD:27:THR:HG22	2.14	0.48
26:RF:183:VAL:O	26:RF:187:VAL:HG23	2.13	0.48
29:RI:113:ARG:HG3	29:RI:131:LYS:HD3	1.96	0.48
1:XA:1127:G:H21	1:XA:1147:C:N4	2.12	0.48
1:XA:438:G:H4'	4:XD:123:HIS:CD2	2.48	0.48
8:XH:49:GLU:HG2	8:XH:62:TYR:HE2	1.78	0.48
1:XA:254:G:OP1	17:XQ:67:LYS:O	2.32	0.48
49:Y6:27:LYS:HB2	49:Y6:27:LYS:NZ	2.28	0.48
22:YA:1416:G:H2'	22:YA:1417:C:C6	2.49	0.48
22:YA:1469:A:H2'	22:YA:1470:G:H8	1.76	0.48
22:YA:389:G:H1	32:YP:70:GLN:HB3	1.79	0.48
22:YA:392:C:H5''	22:YA:409:C:H5''	1.95	0.48
22:YA:413:C:H6	22:YA:413:C:O5'	1.97	0.48
22:YA:57:C:H2'	22:YA:58:G:O4'	2.13	0.48
22:YA:805:G:H22	22:YA:828:U:H5''	1.79	0.48
24:YD:35:LYS:HZ1	24:YD:104:TYR:HB2	1.79	0.48
41:YY:44:ILE:HG13	41:YY:45:VAL:N	2.28	0.48
1:QA:1347:G:HO2'	1:QA:1373:G:H1	1.61	0.47
1:QA:602:A:H2'	1:QA:603:U:H6	1.78	0.47
1:QA:663:A:O3'	18:QR:64:ARG:NH2	2.47	0.47
4:QD:106:TYR:HE1	4:QD:112:VAL:O	1.97	0.47
4:QD:57:ARG:NH2	5:QE:107:ARG:HD3	2.24	0.47
13:QM:57:ARG:HH11	13:QM:57:ARG:HB2	1.79	0.47
14:QN:41:ARG:CZ	14:QN:42:ILE:HD11	2.44	0.47
45:R2:41:ILE:HD11	45:R2:44:LEU:HD12	1.96	0.47
32:RP:61:ARG:CD	51:R8:13:ARG:HD2	2.44	0.47
52:R9:27:CYS:SG	52:R9:32:HIS:HB2	2.54	0.47
22:RA:1093:G:H1'	22:RA:1099:G:O6	2.14	0.47
22:RA:2646:C:H2'	22:RA:2647:U:O4'	2.14	0.47
22:RA:2821:A:H2'	22:RA:2822:G:O4'	2.14	0.47
22:RA:455:C:N3	22:RA:473:G:H5'	2.29	0.47
22:RA:671:C:H2'	22:RA:672:C:C6	2.49	0.47
22:RA:747:U:O2	22:RA:2014:A:H1'	2.14	0.47

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
23:RB:78:A:H2'	23:RB:79:C:O4'	2.14	0.47
40:RX:83:VAL:HG11	40:RX:87:GLN:HB2	1.96	0.47
1:XA:1043:C:H2'	1:XA:1044:A:H8	1.79	0.47
1:XA:1390:U:H2'	1:XA:1391:U:H6	1.78	0.47
1:XA:1410:G:H2'	1:XA:1411:C:C6	2.48	0.47
1:XA:678:U:C4	1:XA:679:C:N4	2.82	0.47
18:XR:66:LEU:O	18:XR:70:ILE:HG13	2.14	0.47
43:Y0:6:GLY:O	53:XV:1:C:O2'	2.27	0.47
45:Y2:59:ARG:O	45:Y2:63:VAL:HG23	2.14	0.47
22:YA:458:G:C8	50:Y7:37:LYS:HG2	2.49	0.47
22:YA:2349:G:OP2	51:Y8:42:ARG:HD3	2.14	0.47
22:YA:189:G:H1'	22:YA:207:A:N6	2.29	0.47
22:YA:2038:G:H2'	22:YA:2039:C:O4'	2.14	0.47
22:YA:2108:C:H2'	22:YA:2109:U:C6	2.48	0.47
30:YN:134:ARG:N	30:YN:135:PRO:HD3	2.29	0.47
35:YS:65:VAL:O	35:YS:69:VAL:HG12	2.14	0.47
38:YV:44:LYS:O	38:YV:46:VAL:HG12	2.13	0.47
22:YA:336:C:HO2'	41:YY:35:TYR:HH	1.57	0.47
42:YZ:141:VAL:HG23	42:YZ:144:LEU:HB2	1.96	0.47
42:YZ:145:GLU:OE2	42:YZ:146:ILE:HG23	2.14	0.47
1:QA:176:C:H2'	1:QA:177:C:H6	1.78	0.47
1:QA:222:U:H2'	1:QA:223:U:H6	1.79	0.47
1:QA:623:C:H2'	1:QA:624:C:O4'	2.14	0.47
1:QA:636:U:H2'	1:QA:637:G:H8	1.80	0.47
1:QA:826:C:H2'	1:QA:827:U:O2	2.14	0.47
2:QB:25:ASN:O	2:QB:27:LYS:N	2.47	0.47
44:R1:91:LYS:O	44:R1:94:LEU:N	2.36	0.47
26:RF:167:ALA:HB1	26:RF:173:VAL:HG11	1.95	0.47
27:RG:145:THR:O	27:RG:147:ASP:N	2.47	0.47
1:XA:556:C:H2'	1:XA:557:G:C8	2.49	0.47
1:XA:939:G:C2	1:XA:940:C:C2	3.02	0.47
2:XB:84:GLU:OE1	2:XB:87:ARG:NH2	2.43	0.47
3:XC:70:VAL:HG12	3:XC:72:LYS:H	1.79	0.47
9:XI:121:ARG:NH1	9:XI:122:ALA:O	2.47	0.47
9:XI:126:SER:O	9:XI:128:ARG:N	2.43	0.47
10:XJ:38:ILE:HD11	10:XJ:71:LEU:HD23	1.96	0.47
18:XR:36:ASN:ND2	18:XR:36:ASN:O	2.41	0.47
48:Y5:46:CYS:O	48:Y5:48:GLU:N	2.38	0.47
22:YA:1797:C:H4'	24:YD:257:LEU:O	2.14	0.47
22:YA:2444:G:P	26:YF:68:LYS:HE3	2.53	0.47
22:YA:2721:A:H2'	22:YA:2722:G:O4'	2.14	0.47
23:YB:62:C:H2'	23:YB:63:G:H8	1.79	0.47

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
42:YZ:10:ARG:HD2	42:YZ:36:LYS:HB3	1.95	0.47
42:YZ:182:LYS:CG	42:YZ:183:LEU:HA	2.43	0.47
1:QA:10:A:OP2	5:QE:126:ARG:HD3	2.14	0.47
1:QA:1127:G:H21	1:QA:1147:C:H41	1.62	0.47
1:QA:1238:A:H62	1:QA:1299:A:H61	1.62	0.47
1:QA:375:U:OP1	16:QP:69:THR:HG21	2.13	0.47
2:QB:97:TRP:CH2	2:QB:173:ALA:HA	2.49	0.47
2:QB:211:ILE:O	2:QB:215:LEU:HB2	2.14	0.47
2:QB:70:PHE:O	2:QB:93:VAL:N	2.48	0.47
4:QD:12:CYS:HA	4:QD:19:LEU:CD2	2.44	0.47
4:QD:26:CYS:HA	4:QD:31:CYS:HA	1.96	0.47
20:QT:75:ASN:OD1	20:QT:75:ASN:N	2.40	0.47
22:RA:1078:U:O2'	22:RA:1088:A:N1	2.46	0.47
22:RA:2070:G:H2'	22:RA:2071:A:O4'	2.14	0.47
22:RA:186:G:C2	22:RA:211:A:C2	3.03	0.47
22:RA:2320:A:H8	22:RA:2321:G:N1	2.12	0.47
22:RA:2832:U:H4'	22:RA:2833:G:H5''	1.95	0.47
22:RA:822:U:H2'	22:RA:823:G:H8	1.78	0.47
30:RN:7:LYS:HD2	30:RN:7:LYS:H	1.80	0.47
32:RP:127:ALA:HB3	32:RP:130:PHE:CZ	2.49	0.47
1:XA:1360:A:H2'	1:XA:1361:G:O4'	2.15	0.47
3:XC:79:ARG:NH1	3:XC:82:GLU:HG3	2.29	0.47
4:XD:15:GLU:HG2	4:XD:63:LYS:HB2	1.97	0.47
5:XE:8:GLU:OE2	5:XE:63:ARG:NH2	2.46	0.47
43:Y0:23:VAL:HA	43:Y0:38:VAL:HG22	1.96	0.47
43:Y0:22:GLY:N	43:Y0:39:ARG:O	2.37	0.47
44:Y1:91:LYS:HB3	44:Y1:92:LYS:H	1.44	0.47
22:YA:1198:U:H2'	22:YA:1199:U:H6	1.78	0.47
22:YA:1668:A:H4'	22:YA:1669:A:O5'	2.15	0.47
22:YA:175:G:H2'	22:YA:176:G:H8	1.79	0.47
22:YA:1825:A:H2'	22:YA:1826:G:C8	2.49	0.47
22:YA:2584:U:C5'	56:Z8:76:PPU:H92	2.45	0.47
22:YA:467:G:O2'	22:YA:796:C:O2'	2.24	0.47
24:YD:71:ASP:HB2	24:YD:103:ARG:NH2	2.27	0.47
22:YA:598:G:H5'	32:YP:11:GLY:HA3	1.95	0.47
32:YP:144:GLU:N	32:YP:144:GLU:OE1	2.40	0.47
36:YT:11:GLU:N	36:YT:11:GLU:OE1	2.43	0.47
42:YZ:89:PHE:HE1	42:YZ:96:VAL:HG21	1.79	0.47
1:QA:1099:G:H2'	1:QA:1100:C:O4'	2.15	0.47
1:QA:544:G:OP2	4:QD:66:ARG:NH2	2.47	0.47
6:QF:41:GLU:HB2	6:QF:62:TRP:CE3	2.50	0.47
7:QG:99:LEU:HD22	7:QG:103:TRP:CZ2	2.49	0.47

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:RA:1283:G:N2	22:RA:1285:G:H3'	2.30	0.47
22:RA:2037:G:C6	22:RA:2038:G:C6	3.02	0.47
22:RA:2421:G:OP1	49:R6:6:ARG:NH2	2.47	0.47
22:RA:2391:G:O2'	22:RA:2422:A:N7	2.48	0.47
22:RA:605:C:H1'	22:RA:657:U:O2'	2.14	0.47
33:RQ:136:ALA:C	33:RQ:138:ASP:H	2.18	0.47
37:RU:97:ASP:OD1	37:RU:101:ARG:NH1	2.47	0.47
42:RZ:177:PRO:O	42:RZ:178:GLU:HG2	2.14	0.47
1:XA:1093:A:C2	1:XA:1095:U:H5'	2.50	0.47
1:XA:1148:U:H2'	1:XA:1149:C:O4'	2.14	0.47
1:XA:405:U:OP2	4:XD:3:ARG:NH2	2.47	0.47
1:XA:625:G:H2'	1:XA:626:U:H6	1.79	0.47
1:XA:803:G:H2'	1:XA:804:U:O4'	2.15	0.47
3:XC:81:GLY:O	3:XC:85:ARG:HB2	2.14	0.47
6:XF:69:GLU:O	6:XF:72:VAL:HG12	2.14	0.47
12:XL:24:VAL:HG12	12:XL:24:VAL:O	2.14	0.47
12:XL:7:ILE:HA	12:XL:7:ILE:HD13	1.82	0.47
20:XT:98:PRO:O	20:XT:100:ILE:N	2.46	0.47
43:Y0:25:ARG:HH11	43:Y0:25:ARG:HG2	1.80	0.47
44:Y1:53:VAL:HG22	44:Y1:74:VAL:HG13	1.96	0.47
22:YA:1914:C:H2'	22:YA:1915:U:O4'	2.14	0.47
22:YA:383:U:O2	22:YA:385:C:N4	2.46	0.47
22:YA:563:G:C4	22:YA:2018:G:C2	3.03	0.47
22:YA:624:C:O2	22:YA:657:U:H4'	2.14	0.47
23:YB:31:C:N4	35:YS:32:LEU:HD13	2.29	0.47
26:YF:36:VAL:HG11	26:YF:183:VAL:HG11	1.95	0.47
42:YZ:111:VAL:HA	42:YZ:115:GLY:HA3	1.95	0.47
1:QA:1127:G:H21	1:QA:1147:C:N4	2.12	0.47
1:QA:1207:G:H2'	1:QA:1208:C:C6	2.49	0.47
1:QA:1292:U:H2'	1:QA:1293:G:C8	2.48	0.47
1:QA:176:C:OP1	20:QT:29:LYS:NZ	2.48	0.47
1:QA:757:U:H2'	1:QA:758:G:O4'	2.14	0.47
2:QB:85:ALA:HB3	2:QB:92:TYR:HD2	1.79	0.47
1:QA:1106:G:H5''	3:QC:172:ARG:HG2	1.97	0.47
20:QT:30:LYS:O	20:QT:33:ILE:HB	2.14	0.47
22:RA:458:G:O2'	50:R7:39:ARG:HD3	2.15	0.47
22:RA:1178:C:H2'	22:RA:1179:C:C6	2.48	0.47
22:RA:565:C:H4'	22:RA:1253:A:C6	2.50	0.47
22:RA:1509:C:H3'	22:RA:1510:A:H5''	1.97	0.47
22:RA:729:G:H2'	22:RA:1775:U:H1'	1.97	0.47
22:RA:2067:G:H1	22:RA:2443:C:N4	2.12	0.47
22:RA:2336:A:H61	43:R0:43:THR:HG21	1.80	0.47

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:RA:430:G:H5''	22:RA:431:U:OP2	2.13	0.47
22:RA:754:C:H2'	22:RA:755:C:C6	2.45	0.47
22:RA:764:A:H5'	24:RD:210:GLY:HA2	1.95	0.47
22:RA:777:A:H2'	22:RA:778:G:C8	2.50	0.47
22:RA:840:C:H2'	22:RA:841:A:C8	2.49	0.47
25:RE:73:GLU:HG3	25:RE:74:PRO:HD2	1.95	0.47
27:RG:3:LEU:HD11	47:R4:25:TYR:CE1	2.48	0.47
33:RQ:63:LYS:HG2	33:RQ:65:PHE:CE2	2.50	0.47
36:RT:64:ARG:HD2	36:RT:73:GLU:OE1	2.14	0.47
42:RZ:151:HIS:HA	42:RZ:170:THR:HA	1.95	0.47
1:XA:1347:G:O2'	1:XA:1348:U:P	2.72	0.47
1:XA:1435:G:H2'	1:XA:1436:U:C6	2.50	0.47
1:XA:163:C:H2'	1:XA:164:U:C6	2.50	0.47
1:XA:280:C:C2	17:XQ:38:ARG:HG3	2.49	0.47
1:XA:595:G:H1'	1:XA:596:C:H5	1.78	0.47
1:XA:790:A:OP1	53:XV:38:A:O2'	2.23	0.47
3:XC:34:LEU:HD23	3:XC:38:ARG:HG3	1.95	0.47
3:XC:22:TRP:CD1	3:XC:59:ARG:HD2	2.49	0.47
9:XI:4:TYR:CZ	9:XI:88:TYR:HB2	2.49	0.47
12:XL:27:LEU:O	12:XL:29:GLY:N	2.46	0.47
15:XO:66:LEU:HA	15:XO:66:LEU:HD12	1.67	0.47
20:XT:35:THR:O	20:XT:39:LYS:HG3	2.14	0.47
51:Y8:36:LYS:HB3	51:Y8:40:GLU:HG2	1.95	0.47
22:YA:270:A:C2	22:YA:366:C:H4'	2.49	0.47
22:YA:528:A:H2	22:YA:2043:C:H5'	1.79	0.47
24:YD:28:GLU:HB2	24:YD:29:PRO:CD	2.45	0.47
33:YQ:21:THR:HB	33:YQ:22:LYS:H	1.40	0.47
1:QA:1298:C:O2'	1:QA:1299:A:OP2	2.28	0.47
9:QL:28:VAL:HG22	9:QL:63:ILE:HB	1.96	0.47
12:QL:44:THR:HA	12:QL:45:PRO:HD3	1.74	0.47
12:QL:51:ALA:HB3	12:QL:53:ARG:HE	1.80	0.47
13:QM:78:ILE:HG23	13:QM:92:HIS:ND1	2.29	0.47
43:R0:24:LYS:O	43:R0:25:ARG:HD3	2.14	0.47
22:RA:1283:G:H22	22:RA:1286:A:H5'	1.80	0.47
22:RA:1297:C:H2'	22:RA:1298:C:C6	2.49	0.47
22:RA:1300:U:H4'	22:RA:1301:A:H5''	1.95	0.47
22:RA:1449:A:H5'	22:RA:1449(A):G:OP2	2.15	0.47
22:RA:1782:C:H1'	22:RA:2609:U:H5''	1.96	0.47
22:RA:186:G:H2'	22:RA:187:G:H8	1.80	0.47
22:RA:2293:C:OP1	22:RA:2377:A:N6	2.47	0.47
22:RA:2327:A:N6	22:RA:2387:U:O4	2.47	0.47
22:RA:2516:G:C2	22:RA:2569:G:N3	2.83	0.47

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:RA:2566:A:H4'	22:RA:2567:G:O5'	2.15	0.47
22:RA:2662:A:H8	22:RA:2662:A:O5'	1.96	0.47
22:RA:2679:A:C2	22:RA:2729:G:C2	3.02	0.47
22:RA:901:A:H2'	22:RA:901:A:N3	2.29	0.47
25:RE:37:ARG:HA	25:RE:37:ARG:NE	2.28	0.47
22:RA:871:U:H4'	33:RQ:69:PHE:CE2	2.49	0.47
39:RW:63:ASP:OD1	39:RW:63:ASP:N	2.48	0.47
41:RY:21:LYS:HG3	41:RY:22:GLY:N	2.30	0.47
1:XA:209:U:H1'	1:XA:216:G:C2	2.50	0.47
1:XA:664:G:H22	1:XA:741:G:H1	1.62	0.47
1:XA:729:A:H2'	1:XA:730:G:C8	2.49	0.47
17:XQ:67:LYS:O	17:XQ:68:ARG:HB3	2.15	0.47
32:YP:50:ARG:HE	51:Y8:7:HIS:HE2	1.63	0.47
22:YA:1656:C:P	25:YE:136:ARG:HE	2.37	0.47
22:YA:1833:U:O2'	22:YA:1969:A:N1	2.38	0.47
22:YA:2142:C:H2'	22:YA:2143:C:C6	2.49	0.47
22:YA:2712:U:O2'	22:YA:2712(A):A:P	2.71	0.47
22:YA:2849:U:OP2	36:YT:95:ARG:NH1	2.48	0.47
26:YF:164:ARG:HG3	26:YF:175:THR:OG1	2.15	0.47
27:YG:28:VAL:O	27:YG:31:VAL:HG13	2.14	0.47
30:YN:30:ILE:HG22	30:YN:34:LEU:HD22	1.96	0.47
1:QA:604:G:H2'	1:QA:605:U:O4'	2.15	0.47
1:QA:652:U:O2'	1:QA:653:A:O5'	2.32	0.47
6:QF:61:LEU:HB3	6:QF:63:TYR:HE2	1.80	0.47
8:QH:91:ARG:HB2	12:QL:7:ILE:HG13	1.97	0.47
17:QQ:76:LEU:HD21	17:QQ:79:SER:HB2	1.97	0.47
22:RA:1204:A:H1'	22:RA:1206:G:C4	2.49	0.47
22:RA:1382:G:H4'	22:RA:1573:G:C2	2.50	0.47
22:RA:1416:G:C2	22:RA:1417:C:C4	3.02	0.47
22:RA:1728:G:C6	22:RA:1730:U:OP2	2.68	0.47
22:RA:2351:G:H8	22:RA:2351:G:O5'	1.98	0.47
22:RA:2512:C:H5"	22:RA:2513:G:OP2	2.14	0.47
22:RA:2605:U:H2'	22:RA:2606:C:H6	1.80	0.47
22:RA:960:A:H61	33:RQ:82:ARG:HH12	1.62	0.47
25:RE:95:ILE:H	25:RE:95:ILE:HD12	1.80	0.47
29:RI:79:ILE:HG22	29:RI:142:VAL:HG13	1.96	0.47
22:RA:2378:A:OP1	35:RS:111:GLU:HG2	2.15	0.47
1:XA:1064:G:OP1	1:XA:1386:G:H4'	2.14	0.47
1:XA:457:C:H2'	1:XA:458:C:C6	2.50	0.47
1:XA:31:G:O2'	1:XA:48:C:N4	2.47	0.47
1:XA:29:G:N2	1:XA:554:C:O2	2.45	0.47
1:XA:61:G:H2'	1:XA:62:U:O4'	2.15	0.47

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
10:XJ:47:PHE:HB3	14:YN:34:TYR:CE2	2.50	0.47
11:XK:48:ILE:HG13	11:XK:63:LEU:HB2	1.97	0.47
53:XV:4:G:O2'	53:XV:5:G:O5'	2.27	0.47
1:XA:1494:G:H4'	22:YA:1913:A:N7	2.30	0.47
22:YA:401:A:H61	22:YA:422:A:H61	1.62	0.47
22:YA:71:A:H5''	22:YA:72:U:H3'	1.96	0.47
24:YD:206:LEU:HA	24:YD:206:LEU:HD23	1.51	0.47
26:YF:182:ASN:HD21	26:YF:185:ASP:CG	2.14	0.47
27:YG:113:ARG:HG2	47:Y4:34:GLU:OE2	2.14	0.47
27:YG:34:LEU:HD22	27:YG:35:GLU:N	2.30	0.47
29:YI:67:ARG:CZ	29:YI:68:LEU:HD13	2.45	0.47
39:YW:110:LYS:HG3	39:YW:111:HIS:H	1.80	0.47
1:QA:954:G:N2	1:QA:1226:C:O2	2.43	0.47
1:QA:1347:G:O2'	1:QA:1348:U:P	2.73	0.47
1:QA:189:U:C4	17:QQ:72:ARG:NH2	2.83	0.47
1:QA:580:U:H5''	15:QO:58:MET:HG2	1.95	0.47
1:QA:980:C:H5''	1:QA:981:U:H5	1.78	0.47
7:QG:18:TYR:HD2	7:QG:59:LEU:HD22	1.79	0.47
12:QL:27:LEU:O	12:QL:29:GLY:N	2.47	0.47
44:R1:76:ARG:H	44:R1:76:ARG:HD2	1.80	0.47
22:RA:1835:G:H1'	22:RA:1931:U:C5	2.50	0.47
22:RA:2257:U:O2'	22:RA:2258:C:H5'	2.15	0.47
22:RA:2415:G:C5'	32:RP:67:MET:H	2.28	0.47
22:RA:2418:A:P	51:R8:29:LYS:HE2	2.54	0.47
22:RA:2697:G:C6	22:RA:2698:U:C4	3.03	0.47
22:RA:1638:C:H5''	22:RA:2710:C:O2'	2.14	0.47
22:RA:2749:A:H3'	22:RA:2750:A:H2'	1.97	0.47
22:RA:336:C:H2'	22:RA:337:C:C6	2.50	0.47
22:RA:709:U:C2	22:RA:723:G:N2	2.83	0.47
22:RA:777:A:H2'	22:RA:778:G:H8	1.80	0.47
28:RH:152:ARG:HG3	28:RH:153:LYS:CD	2.44	0.47
29:RI:61:ARG:HA	29:RI:61:ARG:NE	2.30	0.47
22:RA:2690:C:OP2	34:RR:14:SER:HB3	2.14	0.47
35:RS:56:LEU:O	35:RS:58:LEU:N	2.48	0.47
36:RT:123:GLN:O	36:RT:125:ARG:N	2.48	0.47
1:XA:1152:A:H2'	1:XA:1153:C:C6	2.48	0.47
1:XA:926:G:C6	1:XA:1505:G:C6	3.02	0.47
1:XA:401:C:H2'	1:XA:402:G:C8	2.47	0.47
1:XA:411:A:N9	1:XA:413:G:H1'	2.29	0.47
1:XA:41:G:H2'	1:XA:42:G:H8	1.80	0.47
2:XB:93:VAL:HG11	2:XB:97:TRP:CD1	2.50	0.47
5:XE:89:ILE:HG12	5:XE:91:LEU:HD13	1.97	0.47

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
9:XI:114:TYR:HD1	10:XJ:60:ARG:HB2	1.79	0.47
22:YA:1342:A:OP1	40:YX:36:LYS:NZ	2.47	0.47
22:YA:138:G:H2'	22:YA:139:G:C8	2.50	0.47
22:YA:2051:A:H5'	22:YA:2578:G:O4'	2.14	0.47
23:YB:99:A:C4	23:YB:100:G:C8	3.03	0.47
24:YD:237:GLU:O	24:YD:239:ARG:N	2.47	0.47
27:YG:114:ILE:HD13	27:YG:140:ILE:HG21	1.96	0.47
28:YH:122:THR:HG22	28:YH:134:SER:HB2	1.96	0.47
1:QA:484:G:H4'	1:QA:485:G:O5'	2.15	0.47
1:QA:56:U:H2'	1:QA:57:G:H8	1.80	0.47
2:QB:32:ILE:HD13	2:QB:40:HIS:HB3	1.95	0.47
12:QL:17:LYS:HG3	12:QL:18:VAL:N	2.30	0.47
22:RA:2285:C:N4	49:R6:27:LYS:HE2	2.30	0.47
22:RA:1803:A:C8	22:RA:1804:C:C5	3.02	0.47
22:RA:2647:U:H2'	22:RA:2648:C:C6	2.50	0.47
22:RA:685:A:C8	22:RA:774:A:C6	3.03	0.47
24:RD:12:SER:O	24:RD:16:MET:HB2	2.14	0.47
24:RD:211:ARG:HD2	24:RD:214:TRP:CZ3	2.50	0.47
25:RE:21:VAL:HB	25:RE:22:PRO:HB3	1.96	0.47
26:RF:133:ASN:HA	26:RF:162:LEU:HD22	1.96	0.47
29:RI:122:GLU:O	29:RI:126:TYR:OH	2.32	0.47
42:RZ:53:ILE:HG22	42:RZ:71:VAL:O	2.15	0.47
1:XA:1080:A:H5''	1:XA:1081:G:OP2	2.14	0.47
1:XA:1142:G:H2'	1:XA:1143:G:O4'	2.15	0.47
1:XA:502:G:OP1	12:XL:118:SER:HB2	2.14	0.47
53:XV:15:G:H22	53:XV:48:C:H42	1.62	0.47
46:Y3:23:LEU:HD13	46:Y3:50:VAL:HG11	1.96	0.47
13:XM:77:ASN:HA	47:Y4:71:ARG:NH2	2.29	0.47
22:YA:1026:U:O2	22:YA:1027:A:H3'	2.15	0.47
22:YA:1906:G:H1	22:YA:1924:C:H42	1.63	0.47
22:YA:1999:C:H2'	22:YA:2000:G:C8	2.50	0.47
22:YA:207:A:H2'	22:YA:208:C:O4'	2.15	0.47
22:YA:2335:A:O2'	22:YA:2336:A:H8	1.98	0.47
22:YA:2787:C:O2'	22:YA:2810:A:O2'	2.26	0.47
22:YA:2850:A:N7	22:YA:2868:A:O2'	2.35	0.47
22:YA:972:G:C6	22:YA:973:A:C6	3.03	0.47
26:YF:129:PHE:HA	26:YF:142:TRP:NE1	2.29	0.47
26:YF:9:ILE:HG23	26:YF:20:LEU:O	2.15	0.47
29:YI:4:ILE:HG21	29:YI:47:LEU:HD22	1.97	0.47
1:QA:865:A:H5'	1:QA:1078:U:H5	1.80	0.47
1:QA:51:A:C6	1:QA:353:A:C2	3.03	0.47
2:QB:8:LYS:H	2:QB:8:LYS:HD3	1.79	0.47

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
3:QC:82:GLU:O	3:QC:86:VAL:HG13	2.14	0.47
11:QK:16:SER:OG	11:QK:106:LYS:NZ	2.48	0.47
43:R0:72:ARG:CB	43:R0:75:LEU:HB2	2.44	0.47
22:RA:1422:G:C6	22:RA:1423:G:C5	3.03	0.47
22:RA:1465:G:C4	22:RA:1466:G:C8	3.03	0.47
22:RA:1919:A:H2'	22:RA:1919:A:N3	2.29	0.47
22:RA:2418:A:H2'	22:RA:2419:U:O4'	2.14	0.47
22:RA:2712:U:O2'	22:RA:2712(A):A:P	2.73	0.47
22:RA:2715:C:H2'	22:RA:2716:U:C6	2.50	0.47
22:RA:2755:C:C4	52:R9:19:ARG:NH1	2.83	0.47
22:RA:307:G:H21	22:RA:330:A:N6	2.12	0.47
22:RA:540:G:C6	22:RA:541:C:C4	3.03	0.47
22:RA:735:A:H2'	22:RA:736:C:O4'	2.15	0.47
24:RD:118:VAL:HG22	24:RD:119:ALA:N	2.29	0.47
28:RH:27:LYS:HA	28:RH:32:GLU:HA	1.96	0.47
36:RT:16:ARG:HE	36:RT:19:LEU:HD21	1.80	0.47
41:RY:76:CYS:HB2	41:RY:101:LYS:HG3	1.96	0.47
42:RZ:1:MET:HB3	42:RZ:3:TYR:CE1	2.50	0.47
1:XA:552:U:H4'	12:XL:86:ARG:O	2.15	0.47
1:XA:598:U:H4'	8:XH:94:TYR:CD2	2.49	0.47
1:XA:864:A:H2	1:XA:917:G:N3	2.12	0.47
2:XB:18:GLY:H	2:XB:42:ILE:HG22	1.80	0.47
22:YA:1009:A:OP1	30:YN:37:LYS:NZ	2.45	0.47
22:YA:1045:A:H5''	22:YA:1047:G:H1'	1.96	0.47
22:YA:137(A):G:N3	40:YX:41:ASN:ND2	2.61	0.47
22:YA:1464:C:HO2'	22:YA:1528:A:H8	1.63	0.47
22:YA:155:C:H5'	22:YA:161:U:OP2	2.15	0.47
22:YA:2433:A:H5''	22:YA:2434:A:OP1	2.15	0.47
22:YA:2777:G:H3'	22:YA:2777:G:C8	2.50	0.47
22:YA:287:C:H2'	22:YA:288:C:H6	1.80	0.47
22:YA:304:G:H2'	22:YA:305:U:H6	1.79	0.47
22:YA:436:C:H2'	22:YA:438:G:H8	1.79	0.47
25:YE:116:VAL:HG11	25:YE:138:PRO:HB3	1.97	0.47
28:YH:154:PRO:HD3	28:YH:162:ILE:H	1.79	0.47
28:YH:4:ILE:HB	28:YH:6:ARG:CG	2.43	0.47
1:QA:1129:C:H5'	1:QA:1130:A:OP1	2.15	0.47
1:QA:1436:U:H2'	1:QA:1437:C:O4'	2.15	0.47
1:QA:144:G:H1	1:QA:178:C:H42	1.62	0.47
1:QA:464:G:H1'	1:QA:468:A:N6	2.30	0.47
1:QA:933:G:O6	7:QG:3:ARG:NH2	2.47	0.47
19:QS:35:SER:O	19:QS:71:LEU:HD12	2.15	0.47
22:RA:70:G:C2	22:RA:114:U:C4	3.03	0.47

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:RA:1657:C:H2'	22:RA:1658:C:H6	1.75	0.47
22:RA:2156:G:O6	22:RA:2157:G:N2	2.48	0.47
22:RA:2648:C:H2'	22:RA:2649:U:C6	2.50	0.47
22:RA:580:C:H2'	22:RA:581:C:C6	2.49	0.47
22:RA:593:G:O2'	51:R8:61:LEU:HD13	2.15	0.47
22:RA:742:G:H2'	22:RA:743:G:H8	1.80	0.47
26:RF:62:ARG:HB3	26:RF:62:ARG:CZ	2.45	0.47
38:RV:24:LYS:HG3	38:RV:92:THR:HG23	1.97	0.47
1:XA:1010:G:H2'	1:XA:1011:G:C8	2.49	0.47
1:XA:998:G:N2	1:XA:1043:C:O2	2.37	0.47
1:XA:1131:G:H2'	1:XA:1132:C:C6	2.50	0.47
1:XA:1053:G:H2'	1:XA:1199:U:C5	2.50	0.47
1:XA:1212:U:O2'	1:XA:1213:A:C8	2.68	0.47
1:XA:1430:C:H2'	1:XA:1431:C:H6	1.79	0.47
19:XS:33:THR:OG1	19:XS:34:TRP:N	2.48	0.47
53:XV:38:A:O5'	53:XV:38:A:H8	1.98	0.47
53:XV:4:G:HO2'	53:XV:5:G:P	2.38	0.47
22:YA:819:A:P	22:YA:1187:G:H22	2.38	0.47
22:YA:1336:A:H2'	22:YA:1337:G:C8	2.50	0.47
22:YA:1368:G:C2	22:YA:1369:G:C8	3.02	0.47
22:YA:2126:A:H4'	22:YA:2127:G:O5'	2.15	0.47
22:YA:2365:G:H4'	43:Y0:60:PHE:CE2	2.50	0.47
22:YA:409:C:O2'	22:YA:410:G:H5'	2.15	0.47
22:YA:49:A:N7	22:YA:120:U:C5	2.83	0.47
26:YF:140:LEU:HD12	26:YF:140:LEU:HA	1.77	0.47
27:YG:11:TYR:HA	27:YG:15:VAL:HB	1.95	0.47
28:YH:4:ILE:HG13	28:YH:6:ARG:CZ	2.45	0.47
29:YI:5:LEU:H	29:YI:5:LEU:HD12	1.80	0.47
32:YP:64:LYS:HB2	51:Y8:25:MET:HG3	1.96	0.47
32:YP:96:THR:O	32:YP:99:LEU:HB3	2.15	0.47
22:YA:896:A:N3	42:YZ:176:PRO:HB3	2.30	0.47
1:QA:1144:G:H22	1:QA:1146:A:H62	1.63	0.46
1:QA:793:U:O2	1:QA:1516:G:H4'	2.15	0.46
1:QA:410:G:N1	1:QA:429:U:O2	2.48	0.46
2:QB:166:ASP:OD1	2:QB:169:LYS:HB2	2.15	0.46
5:QE:9:LYS:HB3	5:QE:112:LEU:HD11	1.98	0.46
13:QM:3:ARG:HH12	27:RG:113:ARG:NH2	2.13	0.46
19:QS:15:LEU:H	19:QS:15:LEU:HD23	1.79	0.46
20:QT:89:ARG:NH2	20:QT:105:SER:O	2.36	0.46
44:R1:89:GLU:HA	44:R1:93:GLU:HB2	1.95	0.46
51:R8:29:LYS:HD3	51:R8:44:LYS:CB	2.45	0.46
22:RA:1142:U:H2'	22:RA:1142:U:O2	2.15	0.46

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:RA:1448:G:H1'	22:RA:1528:A:H62	1.80	0.46
22:RA:2134:A:H1'	22:RA:2159:G:H21	1.80	0.46
22:RA:185:U:H4'	22:RA:218:A:H4'	1.97	0.46
22:RA:2318:G:H22	35:RS:2:ALA:N	2.12	0.46
22:RA:517:C:OP1	48:R5:16:ARG:NH2	2.48	0.46
22:RA:586:A:N1	22:RA:809:G:O2'	2.43	0.46
22:RA:74:A:H8	22:RA:74:A:C5'	2.27	0.46
22:RA:866:A:N3	22:RA:866:A:H2'	2.29	0.46
37:RU:8:VAL:HG23	37:RU:11:ARG:HH21	1.80	0.46
22:RA:2013:A:H2	39:RW:88:ARG:HH22	1.63	0.46
1:XA:606:G:N2	1:XA:631:G:H8	2.12	0.46
1:XA:993:G:O6	1:XA:1045:C:N4	2.29	0.46
4:XD:63:LYS:HD2	4:XD:198:VAL:HG22	1.97	0.46
17:XQ:63:ARG:HG2	17:XQ:64:PRO:HD2	1.97	0.46
55:XY:34:C:O5'	55:XY:34:C:H6	1.97	0.46
47:Y4:2:LYS:HD2	47:Y4:2:LYS:HA	1.67	0.46
48:Y5:33:CYS:SG	48:Y5:34:PRO:HD2	2.55	0.46
22:YA:2466:C:H5''	52:Y9:6:SER:HB3	1.96	0.46
22:YA:1289:C:H2'	22:YA:1290:C:H6	1.80	0.46
22:YA:1899:G:N2	22:YA:1902:C:N4	2.63	0.46
22:YA:2051:A:C6	22:YA:2614:A:C5	3.03	0.46
22:YA:221:A:H4'	22:YA:222:A:O5'	2.16	0.46
22:YA:2645:G:H3'	22:YA:2646:C:H5'	1.97	0.46
22:YA:372:G:O2'	22:YA:373:U:P	2.73	0.46
22:YA:483:A:H3'	22:YA:484:C:H6	1.80	0.46
22:YA:554:U:O2'	22:YA:556:G:H8	1.98	0.46
26:YF:108:LYS:NZ	26:YF:108:LYS:HB3	2.31	0.46
30:YN:114:ARG:O	30:YN:115:ARG:HB3	2.14	0.46
41:YY:73:ARG:HB3	41:YY:73:ARG:HE	1.47	0.46
41:YY:87:LYS:HD3	41:YY:92:ASN:HB3	1.98	0.46
1:QA:1126:U:OP2	1:QA:1281:U:H1'	2.16	0.46
1:QA:1512:U:H2'	1:QA:1513:A:C8	2.50	0.46
1:QA:358:U:H2'	1:QA:359:U:O4'	2.14	0.46
1:QA:408:A:H2'	1:QA:409:G:O4'	2.14	0.46
1:QA:683:G:H2'	1:QA:684:A:C8	2.50	0.46
1:QA:769:G:H4'	1:QA:1513:A:H4'	1.96	0.46
1:QA:572:A:N3	1:QA:917:G:H1'	2.31	0.46
7:QG:78:ARG:HG3	7:QG:79:ARG:N	2.29	0.46
16:QP:3:LYS:O	16:QP:21:VAL:HA	2.15	0.46
12:QL:11:VAL:HG13	17:QQ:29:HIS:HD2	1.80	0.46
17:QQ:74:LEU:HB3	17:QQ:75:ARG:H	1.63	0.46
53:QV:54:U:H2'	53:QV:55:U:O4'	2.15	0.46

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:RA:1022:G:C6	22:RA:1140:C:C4	3.03	0.46
22:RA:1579:A:H2'	22:RA:1580:A:C8	2.50	0.46
22:RA:1741:C:O5'	22:RA:1741:C:H6	1.97	0.46
22:RA:2274:A:N1	22:RA:2276:G:H1'	2.30	0.46
24:RD:70:TRP:CD2	24:RD:150:LYS:HD2	2.49	0.46
24:RD:61:LEU:HA	24:RD:61:LEU:HD12	1.77	0.46
25:RE:186:GLY:O	25:RE:188:VAL:N	2.48	0.46
28:RH:153:LYS:HB3	28:RH:162:ILE:H	1.80	0.46
39:RW:23:LEU:O	39:RW:27:LYS:HD2	2.14	0.46
41:RY:89:PHE:O	41:RY:90:LEU:HD13	2.15	0.46
1:XA:1397:C:H4'	1:XA:1398:A:OP2	2.15	0.46
1:XA:1415:G:C6	1:XA:1486:G:C6	3.03	0.46
1:XA:760:G:H2'	1:XA:761:G:H5'	1.97	0.46
3:XC:14:ILE:HG12	3:XC:15:THR:N	2.30	0.46
7:XG:74:GLU:HG2	7:XG:91:VAL:HG22	1.98	0.46
9:XI:18:PHE:HB2	9:XI:62:TYR:HB3	1.97	0.46
47:Y4:38:LYS:HD3	47:Y4:42:PHE:HE1	1.80	0.46
22:YA:770:G:N3	22:YA:1354:A:H2	2.12	0.46
22:YA:1791:A:H8	22:YA:1791:A:OP2	1.98	0.46
22:YA:2487:G:N2	22:YA:2488:A:C4	2.83	0.46
22:YA:464:U:H2'	22:YA:465:G:O4'	2.14	0.46
22:YA:569:U:H2'	22:YA:570:G:O4'	2.15	0.46
23:YB:6:C:C2	23:YB:115:G:N2	2.84	0.46
32:YP:19:VAL:HG13	32:YP:21:ARG:N	2.20	0.46
32:YP:88:LEU:HB2	32:YP:91:PHE:HE2	1.80	0.46
35:YS:52:SER:HB2	35:YS:55:ALA:H	1.79	0.46
35:YS:27:SER:HA	35:YS:88:ASP:HB2	1.96	0.46
1:QA:1135:U:H2'	1:QA:1137:C:O2	2.15	0.46
1:QA:1104:G:O5'	2:QB:111:ARG:HD2	2.16	0.46
12:QL:11:VAL:HG11	17:QQ:36:ILE:HG21	1.97	0.46
20:QT:33:ILE:HD13	20:QT:62:LEU:HB3	1.97	0.46
22:RA:1588:C:H2'	22:RA:1589:C:H6	1.79	0.46
22:RA:1754:C:H5''	36:RT:113:LYS:HE3	1.97	0.46
22:RA:751:A:C6	22:RA:789:A:C5	3.03	0.46
22:RA:852:G:N2	22:RA:926:A:H1'	2.31	0.46
24:RD:43:ARG:HH11	24:RD:44:ASN:CG	2.16	0.46
36:RT:20:PRO:HD2	36:RT:86:ILE:HG23	1.97	0.46
31:RO:76:ALA:HB3	36:RT:75:ILE:HB	1.97	0.46
40:RX:49:VAL:HG13	40:RX:83:VAL:HG13	1.96	0.46
1:XA:1004:A:H1'	1:XA:1036:G:N1	2.29	0.46
1:XA:679:C:H2'	1:XA:680:C:C6	2.50	0.46
1:XA:703:G:O5'	1:XA:703:G:H8	1.99	0.46

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:XA:77:C:O2	1:XA:92:G:N2	2.36	0.46
2:XB:163:PHE:CD2	2:XB:185:ILE:HG13	2.50	0.46
2:XB:201:ILE:HG21	2:XB:214:ILE:HG21	1.95	0.46
4:XD:30:LYS:C	4:XD:32:ALA:H	2.18	0.46
1:XA:1202:G:H1'	14:XN:29:ARG:HD2	1.96	0.46
19:XS:41:VAL:HA	19:XS:44:MET:HG3	1.97	0.46
19:XS:41:VAL:HG23	19:XS:67:VAL:HG13	1.98	0.46
43:Y0:27:GLU:HA	43:Y0:67:VAL:O	2.15	0.46
22:YA:1441:G:H2'	22:YA:1442:G:C8	2.48	0.46
22:YA:2062:A:H2'	22:YA:2062:A:N3	2.30	0.46
22:YA:2491:U:O2'	22:YA:2570:G:OP1	2.29	0.46
22:YA:629:G:N3	22:YA:639:U:O2'	2.47	0.46
22:YA:654(A):G:C6	22:YA:654(B):C:N4	2.83	0.46
22:YA:466:A:N3	22:YA:683:C:H1'	2.29	0.46
22:YA:787:U:H3'	22:YA:791:C:H41	1.80	0.46
24:YD:17:THR:CG2	24:YD:205:VAL:H	2.29	0.46
24:YD:94:LEU:HD22	24:YD:95:LEU:N	2.31	0.46
25:YE:150:VAL:HG13	25:YE:154:LYS:HG3	1.96	0.46
25:YE:176:ILE:HB	25:YE:181:LEU:HB2	1.97	0.46
32:YP:121:LYS:HE2	32:YP:121:LYS:HB2	1.75	0.46
22:YA:389:G:N1	32:YP:70:GLN:HB3	2.30	0.46
42:YZ:144:LEU:HD13	42:YZ:145:GLU:N	2.30	0.46
42:YZ:182:LYS:HE3	42:YZ:182:LYS:HB2	1.56	0.46
1:QA:1120:G:H2'	1:QA:1121:U:C6	2.51	0.46
6:QF:10:LEU:N	6:QF:59:TYR:O	2.46	0.46
53:QV:3:C:O2'	53:QV:4:G:H5'	2.15	0.46
22:RA:1504:C:H5'	22:RA:1505:C:OP2	2.15	0.46
22:RA:2410:G:H2'	22:RA:2411:A:O4'	2.15	0.46
22:RA:580:C:H2'	22:RA:581:C:H6	1.81	0.46
22:RA:57:C:H2'	22:RA:58:G:O4'	2.15	0.46
29:RI:118:LYS:HD2	29:RI:118:LYS:HA	1.77	0.46
32:RP:83:VAL:HG12	32:RP:114:ILE:HA	1.98	0.46
35:RS:48:LEU:HD23	35:RS:82:ILE:HD11	1.96	0.46
40:RX:55:ASN:HB2	40:RX:80:ILE:HG23	1.97	0.46
42:RZ:40:ASP:OD1	42:RZ:42:VAL:HB	2.15	0.46
42:RZ:59:LEU:HD11	42:RZ:69:THR:HG21	1.96	0.46
1:XA:1003:G:N2	1:XA:1005:A:H5'	2.30	0.46
1:XA:1065:U:C4	1:XA:1190:G:H1'	2.51	0.46
1:XA:1293:G:H2'	1:XA:1294:G:O4'	2.15	0.46
1:XA:1446:A:C6	36:YT:118:ARG:NH1	2.84	0.46
1:XA:217:C:O2'	1:XA:466:C:N4	2.48	0.46
1:XA:818:G:N2	1:XA:873:A:OP1	2.43	0.46

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
7:XG:115:ARG:HB2	7:XG:118:VAL:HG22	1.97	0.46
9:XI:83:ARG:O	9:XI:86:VAL:HG12	2.15	0.46
1:XA:974:A:OP2	14:XN:41:ARG:NH1	2.48	0.46
20:XT:87:LYS:HD2	20:XT:87:LYS:HA	1.74	0.46
44:Y1:96:LYS:H	44:Y1:97:LEU:HD12	1.81	0.46
22:YA:1465:G:H5'	22:YA:1528:A:H1'	1.98	0.46
22:YA:1496:A:H8	22:YA:1577:C:O2'	1.90	0.46
22:YA:2397:G:H2'	22:YA:2398:U:C6	2.50	0.46
22:YA:2777:G:H8	22:YA:2777:G:H3'	1.79	0.46
22:YA:2817:G:OP1	34:YR:99:LYS:NZ	2.37	0.46
22:YA:30:G:H2'	22:YA:31:C:O4'	2.15	0.46
22:YA:979:G:H5''	22:YA:980:A:OP2	2.15	0.46
26:YF:127:GLU:OE2	26:YF:128:ALA:N	2.47	0.46
1:QA:1129:C:OP1	9:QI:62:TYR:OH	2.20	0.46
1:QA:377:G:H1	1:QA:386:C:H42	1.62	0.46
19:QS:63:THR:HG23	19:QS:65:ASN:OD1	2.15	0.46
22:RA:1561:G:H2'	22:RA:1562:A:C8	2.51	0.46
22:RA:1797:C:C4	22:RA:1798:U:C5	3.04	0.46
22:RA:807:U:O2'	22:RA:2060:A:N1	2.45	0.46
22:RA:2146:C:H4'	22:RA:2147:G:N7	2.31	0.46
22:RA:2321:G:N3	22:RA:2321:G:H2'	2.31	0.46
22:RA:2516:G:N2	22:RA:2569:G:H1'	2.30	0.46
22:RA:275:G:H3'	22:RA:276:A:H5''	1.97	0.46
22:RA:519:U:H2'	22:RA:520:G:H8	1.80	0.46
22:RA:935:C:H2'	22:RA:936:C:C6	2.49	0.46
23:RB:97:G:H2'	23:RB:98:G:O4'	2.15	0.46
26:RF:126:VAL:HG11	26:RF:142:TRP:HH2	1.80	0.46
27:RG:22:ARG:HH22	27:RG:175:LEU:HD21	1.80	0.46
35:RS:78:LEU:HD11	35:RS:107:GLU:O	2.15	0.46
35:RS:83:LYS:O	35:RS:109:GLY:HA3	2.15	0.46
39:RW:86:LEU:O	39:RW:94:ASP:N	2.44	0.46
41:RY:17:SER:OG	41:RY:71:LYS:HD2	2.16	0.46
42:RZ:82:ARG:HH11	42:RZ:82:ARG:HG2	1.81	0.46
1:XA:1074:G:H2'	1:XA:1075:C:C6	2.51	0.46
1:XA:129(A):G:N2	1:XA:191(A):G:C5	2.83	0.46
1:XA:135:C:H2'	1:XA:136:C:H5'	1.98	0.46
1:XA:284:G:H2'	1:XA:285:G:H8	1.80	0.46
1:XA:579:G:C6	1:XA:580:U:C4	3.04	0.46
5:XE:78:HIS:HB3	8:XH:107:LEU:HD12	1.98	0.46
46:Y3:8:LEU:HD22	46:Y3:31:LEU:HD22	1.96	0.46
22:YA:1093:G:O2'	22:YA:1099:G:N1	2.45	0.46
22:YA:1534:G:N3	22:YA:1534:G:H2'	2.30	0.46

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:YA:1658:C:C2	22:YA:1659:U:C5	3.04	0.46
22:YA:2335:A:O2'	22:YA:2336:A:C8	2.69	0.46
22:YA:746:A:C6	22:YA:2611:U:H5''	2.50	0.46
22:YA:894:C:H2'	22:YA:895:U:H6	1.81	0.46
24:YD:118:VAL:HG22	24:YD:119:ALA:N	2.31	0.46
24:YD:25:THR:CG2	24:YD:82:ILE:H	2.27	0.46
22:YA:2683:C:H4'	25:YE:13:ARG:NH2	2.31	0.46
29:YI:32:PRO:C	29:YI:34:GLY:H	2.19	0.46
32:YP:29:LYS:HD2	32:YP:30:THR:HG23	1.97	0.46
37:YU:75:ASN:HB3	37:YU:78:THR:H	1.81	0.46
41:YY:94:LYS:HD2	41:YY:101:LYS:HZ3	1.81	0.46
42:YZ:43:GLU:O	42:YZ:47:VAL:HG23	2.15	0.46
1:QA:1269:A:N1	1:QA:1312:G:O2'	2.38	0.46
1:QA:1338:G:H21	53:QV:41:C:H1'	1.80	0.46
1:QA:946:A:H61	1:QA:1234:C:N4	2.14	0.46
10:QJ:84:GLN:HG3	10:QJ:84:GLN:H	1.49	0.46
43:R0:29:GLN:O	43:R0:67:VAL:HG23	2.16	0.46
49:R6:13:CYS:HB2	49:R6:22:ALA:HB3	1.98	0.46
22:RA:1389:G:H2'	22:RA:1390:U:H6	1.81	0.46
22:RA:834:C:H2'	22:RA:835:A:H8	1.80	0.46
27:RG:98:ARG:O	27:RG:101:ILE:HG13	2.16	0.46
28:RH:170:ARG:HB3	28:RH:171:LEU:H	1.52	0.46
29:RI:131:LYS:HB3	29:RI:132:PRO:HA	1.97	0.46
29:RI:82:ARG:NE	29:RI:146:ALA:O	2.49	0.46
32:RP:124:LYS:HA	32:RP:143:GLY:O	2.16	0.46
1:XA:1057:G:H2'	1:XA:1058:G:O4'	2.15	0.46
1:XA:975:A:N6	1:XA:1367:C:O4'	2.49	0.46
1:XA:977:A:H2'	1:XA:978:A:H5''	1.98	0.46
3:XC:178:LEU:HA	3:XC:178:LEU:HD13	1.84	0.46
3:XC:78:GLY:HA3	3:XC:83:ARG:HB3	1.98	0.46
12:XL:62:SER:O	12:XL:64:TYR:N	2.48	0.46
44:Y1:80:LEU:HB2	44:Y1:81:LYS:H	1.61	0.46
22:YA:1899:G:H21	22:YA:1902:C:N4	2.14	0.46
22:YA:2059:A:H5'	22:YA:2060:A:OP2	2.16	0.46
22:YA:264:C:C2'	22:YA:265:A:H5''	2.46	0.46
22:YA:865:C:H4'	22:YA:866:A:OP1	2.16	0.46
25:YE:36:ARG:NH2	25:YE:88:GLY:HA2	2.29	0.46
27:YG:34:LEU:HD12	27:YG:100:TRP:CH2	2.50	0.46
1:QA:1285:A:H5'	1:QA:1286:A:N3	2.30	0.46
20:QT:29:LYS:O	20:QT:33:ILE:HG12	2.16	0.46
1:QA:186:C:H5'	20:QT:78:ALA:HB1	1.97	0.46
53:QV:35:A:H2'	53:QV:36:U:C6	2.51	0.46

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:QA:530:G:O2'	55:QY:35:G:H4'	2.15	0.46
51:R8:39:LYS:O	51:R8:43:GLN:HB2	2.15	0.46
51:R8:50:LEU:C	51:R8:53:PRO:HD2	2.36	0.46
22:RA:1543:A:O2'	22:RA:1544:C:H3'	2.14	0.46
22:RA:2292:C:H2'	22:RA:2293:C:C6	2.51	0.46
23:RB:31:C:H4'	27:RG:29:TRP:CH2	2.50	0.46
33:RQ:29:PHE:N	33:RQ:105:GLU:OE2	2.40	0.46
1:XA:1049:U:H4'	1:XA:1050:G:C5'	2.46	0.46
1:XA:1365:G:H2'	1:XA:1366:C:C6	2.51	0.46
1:XA:485:G:O2'	1:XA:486:U:P	2.74	0.46
1:XA:815:A:H4'	1:XA:817:C:C4	2.50	0.46
1:XA:973:G:C4	10:XJ:55:LYS:HE2	2.51	0.46
7:XG:50:ILE:HG21	7:XG:61:VAL:HG21	1.98	0.46
10:XJ:62:HIS:H	10:XJ:62:HIS:CD2	2.33	0.46
13:XM:36:LYS:HD3	13:XM:36:LYS:C	2.36	0.46
15:XO:56:LEU:O	15:XO:60:VAL:HG23	2.16	0.46
15:XO:6:GLU:H	15:XO:6:GLU:CD	2.15	0.46
19:XS:41:VAL:HB	19:XS:42:PRO:HA	1.96	0.46
22:YA:1190:G:H5'	32:YP:32:THR:HA	1.98	0.46
22:YA:1268:A:H2'	22:YA:1269:A:O4'	2.16	0.46
22:YA:1598:C:H2'	22:YA:1599:C:H6	1.81	0.46
22:YA:2078:C:N4	22:YA:2241:A:H61	2.14	0.46
22:YA:2867:G:O2'	22:YA:2868:A:P	2.73	0.46
22:YA:909:A:H2'	22:YA:912:C:H5	1.80	0.46
24:YD:35:LYS:HB3	24:YD:63:ARG:HA	1.98	0.46
24:YD:35:LYS:HE3	24:YD:63:ARG:C	2.36	0.46
33:YQ:136:ALA:O	33:YQ:138:ASP:N	2.40	0.46
22:YA:996:A:H4'	37:YU:92:ARG:HE	1.81	0.46
39:YW:110:LYS:HG3	39:YW:111:HIS:ND1	2.31	0.46
1:QA:1010:G:N2	1:QA:1020:U:H1'	2.31	0.46
1:QA:1320:C:C2	19:QS:72:GLY:HA3	2.50	0.46
1:QA:20:U:H2'	1:QA:21:G:O4'	2.16	0.46
1:QA:673:G:O5'	1:QA:673:G:H8	1.98	0.46
1:QA:713:G:H2'	1:QA:714:G:C8	2.51	0.46
1:QA:651:C:N4	1:QA:753:A:OP2	2.41	0.46
1:QA:771:G:H2'	1:QA:772:U:C6	2.51	0.46
2:QB:165:VAL:HG23	2:QB:166:ASP:H	1.81	0.46
4:QD:103:ASN:OD1	4:QD:114:ARG:NE	2.49	0.46
4:QD:75:PHE:HE1	4:QD:97:LEU:HD11	1.81	0.46
4:QD:9:CYS:SG	4:QD:31:CYS:C	2.94	0.46
12:QL:54:LYS:N	12:QL:54:LYS:HD2	2.31	0.46
19:QS:32:LYS:HA	19:QS:50:ALA:HB3	1.98	0.46

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
49:R6:33:LYS:HG3	49:R6:34:LEU:HD13	1.98	0.46
22:RA:330:A:H2	22:RA:1210:A:H2'	1.80	0.46
22:RA:1338:G:N3	22:RA:1393:A:H2	2.13	0.46
22:RA:1778:U:H2'	22:RA:1784:A:N6	2.30	0.46
22:RA:2074:U:H2'	22:RA:2075:U:H6	1.75	0.46
22:RA:224:G:O6	22:RA:419:C:O2'	2.27	0.46
22:RA:1639:U:H4'	22:RA:2699:C:H4'	1.98	0.46
22:RA:384:U:H2'	22:RA:385:C:H6	1.81	0.46
22:RA:548:A:C6	22:RA:549:G:H1'	2.51	0.46
22:RA:817:C:O2'	22:RA:839:U:H5''	2.16	0.46
22:RA:864:G:C6	22:RA:865:C:N4	2.84	0.46
24:RD:68:LYS:HD2	24:RD:70:TRP:CZ2	2.51	0.46
25:RE:63:LEU:HD12	25:RE:64:LYS:N	2.30	0.46
28:RH:87:LEU:HA	28:RH:163:TYR:O	2.16	0.46
28:RH:85:LYS:HA	28:RH:85:LYS:HD2	1.85	0.46
37:RU:69:CYS:HB3	37:RU:106:PHE:HZ	1.81	0.46
1:XA:1386:G:H2'	1:XA:1387:G:H8	1.80	0.46
2:XB:204:ASN:HD22	2:XB:205:ASP:N	2.13	0.46
2:XB:70:PHE:O	2:XB:93:VAL:N	2.34	0.46
12:XL:92:ASP:O	12:XL:94:PRO:HD3	2.16	0.46
16:XP:1:MET:O	16:XP:3:LYS:HG3	2.16	0.46
20:XT:26:ASN:O	20:XT:30:LYS:HB2	2.16	0.46
53:XV:52:G:N3	53:XV:52:G:H2'	2.30	0.46
22:YA:1972:A:H2'	22:YA:1973:G:C8	2.50	0.46
22:YA:216:A:C4	22:YA:432:A:C2	3.03	0.46
22:YA:2319:G:N7	35:YS:3:ARG:HB3	2.31	0.46
22:YA:2602:A:N6	53:XV:76:A:H2'	2.30	0.46
22:YA:2605:U:H2'	22:YA:2606:C:C6	2.51	0.46
22:YA:2586:C:C5	22:YA:2608:G:N2	2.84	0.46
22:YA:2741:A:OP1	52:Y9:22:ARG:NH2	2.47	0.46
22:YA:2849:U:H5	36:YT:93:ARG:NH1	2.06	0.46
22:YA:637:A:H4'	22:YA:638:G:O5'	2.15	0.46
22:YA:923:C:O4'	43:Y0:29:GLN:NE2	2.42	0.46
23:YB:51:G:H5'	23:YB:52:A:OP2	2.16	0.46
22:YA:1354:A:OP1	24:YD:38:LYS:HE2	2.15	0.46
25:YE:116:VAL:O	25:YE:117:MET:HB3	2.16	0.46
1:QA:1158:C:N3	1:QA:1160:G:C8	2.83	0.46
1:QA:1468:A:H5''	1:QA:1469:G:OP2	2.15	0.46
1:QA:322:C:H41	1:QA:328:C:H6	1.63	0.46
1:QA:778:G:O5'	1:QA:778:G:H8	1.98	0.46
1:QA:789:U:H1'	1:QA:792:A:H2	1.81	0.46
1:QA:883:C:O2'	1:QA:884:U:H5'	2.15	0.46

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:QB:178:ARG:NH2	8:QH:74:PRO:HG3	2.30	0.46
9:QI:45:ALA:O	9:QI:48:GLU:HG2	2.15	0.46
52:R9:8:LYS:O	52:R9:34:GLN:NE2	2.49	0.46
22:RA:1337:G:H2'	22:RA:1338:G:C8	2.50	0.46
22:RA:1578:U:H6	22:RA:1578:U:OP2	1.99	0.46
22:RA:2334:G:H4'	22:RA:2335:A:OP2	2.15	0.46
22:RA:2666:C:H3'	22:RA:2667:C:H6	1.81	0.46
22:RA:363:G:H2'	22:RA:363(A):A:H8	1.80	0.46
22:RA:48:G:N2	22:RA:177:G:H21	2.13	0.46
22:RA:705:A:H1'	24:RD:9:TYR:CE1	2.50	0.46
22:RA:2635:C:H5''	25:RE:78:LEU:HA	1.98	0.46
28:RH:115:VAL:HG11	28:RH:148:ILE:HD11	1.98	0.46
31:RO:31:LYS:HB3	31:RO:32:TYR:CD1	2.51	0.46
33:RQ:104:PHE:HE1	33:RQ:125:LEU:HD11	1.80	0.46
33:RQ:81:VAL:C	33:RQ:82:ARG:HG2	2.37	0.46
34:RR:37:THR:OG1	34:RR:40:LYS:HG3	2.16	0.46
35:RS:24:LEU:HB2	35:RS:85:VAL:HG12	1.96	0.46
35:RS:61:ASN:O	35:RS:65:VAL:HG23	2.14	0.46
1:XA:975:A:H8	1:XA:975:A:H5'	1.79	0.46
1:XA:986:A:H2'	1:XA:987:G:O4'	2.16	0.46
2:XB:114:ARG:O	2:XB:118:LEU:HG	2.16	0.46
2:XB:217:ARG:HB2	2:XB:217:ARG:HE	1.54	0.46
9:XI:46:ALA:HA	9:XI:78:LYS:HB2	1.98	0.46
18:XR:32:ARG:HA	18:XR:69:THR:HG21	1.97	0.46
22:YA:1175:U:H4'	22:YA:1176:G:OP1	2.15	0.46
22:YA:570:G:H2'	22:YA:2030:A:C5	2.51	0.46
22:YA:254:G:N7	51:Y8:5:LYS:HE2	2.31	0.46
22:YA:2751:G:H8	22:YA:2751:G:O5'	1.98	0.46
22:YA:436:C:H2'	22:YA:438:G:C8	2.51	0.46
22:YA:740:U:H2'	22:YA:741:G:C8	2.51	0.46
22:YA:840:C:O5'	22:YA:840:C:H6	1.98	0.46
25:YE:70:ALA:O	25:YE:72:VAL:N	2.49	0.46
26:YF:129:PHE:O	26:YF:142:TRP:CD1	2.69	0.46
28:YH:103:LEU:HD23	28:YH:115:VAL:HB	1.97	0.46
28:YH:167:GLU:HA	28:YH:168:PRO:HD3	1.79	0.46
34:YR:51:LEU:HD12	34:YR:70:LEU:HG	1.97	0.46
34:YR:78:LYS:O	34:YR:83:ILE:HG12	2.16	0.46
1:QA:1213:A:C6	1:QA:1215:G:C4	3.03	0.46
1:QA:1399:C:H4'	1:QA:1400:C:O5'	2.16	0.46
1:QA:706:A:H1'	11:QK:29:ILE:HD11	1.98	0.46
44:R1:73:LEU:HB3	44:R1:90:ILE:HG23	1.97	0.46
49:R6:44:ARG:O	49:R6:45:LYS:HB2	2.16	0.46

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:RA:1392:A:N6	22:RA:1393:A:N6	2.63	0.46
22:RA:414:C:H1'	22:RA:1864:U:O2'	2.15	0.46
22:RA:608:A:H2'	22:RA:609:A:C8	2.51	0.46
22:RA:71:A:H4'	22:RA:72:U:H5''	1.97	0.46
23:RB:6:C:O2	23:RB:115:G:N2	2.49	0.46
28:RH:103:LEU:HD13	28:RH:131:VAL:HG11	1.97	0.46
29:RI:101:LEU:HB3	29:RI:107:VAL:O	2.16	0.46
32:RP:101:VAL:HG23	32:RP:107:LYS:H	1.81	0.46
36:RT:26:ASP:HB2	36:RT:90:GLN:O	2.16	0.46
38:RV:51:VAL:HG12	38:RV:53:GLU:H	1.80	0.46
1:XA:291:C:H42	1:XA:309:G:H1	1.64	0.46
1:XA:411:A:C8	1:XA:413:G:H1'	2.51	0.46
2:XB:55:PHE:HD1	2:XB:58:ILE:HG13	1.81	0.46
22:YA:1329:U:H5''	22:YA:1330:C:H5	1.81	0.46
22:YA:1901:A:H2'	22:YA:1901:A:N3	2.31	0.46
22:YA:1945:G:C6	22:YA:1946:U:C4	3.03	0.46
22:YA:278:A:H4'	22:YA:279:C:OP1	2.15	0.46
22:YA:327:G:N2	22:YA:335:C:O2	2.45	0.46
22:YA:36:G:N3	22:YA:450:G:O2'	2.49	0.46
22:YA:395:U:O2'	22:YA:396:G:C8	2.65	0.46
23:YB:24:G:O6	23:YB:56:G:O2'	2.27	0.46
25:YE:108:SER:HB3	25:YE:165:VAL:HG21	1.98	0.46
28:YH:106:THR:HG22	28:YH:112:PRO:HB3	1.97	0.46
28:YH:86:GLU:O	28:YH:87:LEU:HB2	2.16	0.46
32:YP:135:LEU:HA	32:YP:135:LEU:HD23	1.74	0.46
38:YV:19:LYS:HA	38:YV:94:LEU:O	2.15	0.46
42:YZ:16:SER:O	42:YZ:20:ARG:HB2	2.15	0.46
1:QA:1327:C:OP2	21:QU:12:LYS:NZ	2.49	0.45
1:QA:791:G:C2'	1:QA:792:A:H5'	2.45	0.45
1:QA:998(A):C:H2'	1:QA:999:U:C6	2.51	0.45
5:QE:97:GLY:N	5:QE:117:ASP:OD2	2.40	0.45
10:QJ:22:LYS:HB3	10:QJ:22:LYS:HE3	1.68	0.45
22:RA:2278:A:H5''	43:R0:12:ASN:HD21	1.81	0.45
47:R4:10:VAL:HA	47:R4:11:PRO:HD2	1.75	0.45
22:RA:210:C:H4'	22:RA:1367:A:H1'	1.97	0.45
22:RA:1640:C:H5'	22:RA:1641:A:OP2	2.15	0.45
22:RA:2512:C:H1'	25:RE:140:SER:O	2.16	0.45
22:RA:2593:U:C4	22:RA:2594:C:N4	2.84	0.45
22:RA:29:U:H2'	22:RA:30:G:C8	2.51	0.45
22:RA:385:C:HO2'	22:RA:388:G:N2	2.13	0.45
22:RA:671:C:O2'	22:RA:672:C:H5'	2.16	0.45
22:RA:71:A:H5''	22:RA:72:U:H3'	1.98	0.45

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:RA:1805:U:O2	24:RD:50:THR:HB	2.16	0.45
28:RH:120:GLY:HA3	28:RH:140:LYS:NZ	2.32	0.45
34:RR:33:ARG:HG2	34:RR:34:ILE:N	2.30	0.45
1:XA:1154:G:C4	1:XA:1155:G:C8	3.04	0.45
1:XA:437:U:H2'	1:XA:438:G:O4'	2.16	0.45
1:XA:453:A:C6	1:XA:454:C:C4	3.04	0.45
5:XE:41:VAL:HG13	5:XE:113:ALA:HB2	1.97	0.45
6:XF:48:LEU:HG	6:XF:57:GLN:HA	1.98	0.45
9:XI:18:PHE:HD1	9:XI:62:TYR:HD2	1.62	0.45
22:YA:114:U:H2'	22:YA:115:C:C6	2.51	0.45
22:YA:1230:C:H2'	22:YA:1231:G:C8	2.51	0.45
22:YA:1530:G:C6	22:YA:1531:C:C4	3.03	0.45
22:YA:1742:C:H5'	22:YA:1743:G:OP2	2.16	0.45
22:YA:2135:A:O2'	22:YA:2160:G:H4'	2.16	0.45
22:YA:2255:G:C5	22:YA:2256:G:C8	3.04	0.45
22:YA:2592:G:C6	22:YA:2593:U:N3	2.84	0.45
22:YA:2596:U:H2'	22:YA:2597:G:O4'	2.17	0.45
22:YA:273(A):G:C2	22:YA:364:C:N3	2.84	0.45
22:YA:469:G:N7	50:Y7:37:LYS:NZ	2.63	0.45
22:YA:26:G:H1'	22:YA:515:A:H61	1.80	0.45
24:YD:10:THR:OG1	24:YD:13:ARG:HB2	2.16	0.45
24:YD:137:PRO:O	24:YD:140:THR:HG23	2.16	0.45
26:YF:129:PHE:C	26:YF:131:GLY:H	2.18	0.45
22:YA:2406:U:N3	32:YP:73:GLY:O	2.33	0.45
33:YQ:135:ASP:N	33:YQ:135:ASP:OD1	2.48	0.45
1:QA:1144:G:N2	1:QA:1146:A:H62	2.14	0.45
1:QA:1386:G:C2	1:QA:1387:G:C8	3.04	0.45
1:QA:922:G:N3	1:QA:1398:A:H2	2.14	0.45
1:QA:299:G:H2'	1:QA:300:A:H8	1.81	0.45
1:QA:54:C:N4	1:QA:353:A:OP2	2.49	0.45
1:QA:44:G:N2	1:QA:399:G:C4	2.85	0.45
1:QA:652:U:H1'	1:QA:653:A:H2	1.79	0.45
1:QA:987:G:H1	1:QA:1218:C:H42	1.64	0.45
4:QD:18:LYS:HD3	4:QD:20:TYR:CZ	2.51	0.45
8:QH:20:TYR:HA	8:QH:65:TYR:CZ	2.51	0.45
13:QM:84:ILE:HD12	13:QM:84:ILE:HA	1.75	0.45
22:RA:1968:G:O2'	22:RA:1969:A:O4'	2.24	0.45
22:RA:2212:A:H1'	22:RA:2215:G:C5	2.51	0.45
22:RA:2061:G:H5''	22:RA:2503:A:C2	2.52	0.45
22:RA:2857:G:N2	22:RA:2859:G:H3'	2.30	0.45
22:RA:2867:G:OP2	36:RT:119:LYS:NZ	2.35	0.45
32:RP:6:LEU:HB3	32:RP:7:ARG:H	1.55	0.45

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
32:RP:88:LEU:HD12	32:RP:95:VAL:HG11	1.98	0.45
35:RS:16:ASN:HA	35:RS:19:LYS:HD3	1.98	0.45
22:RA:2379:G:O2'	35:RS:17:ARG:NH1	2.49	0.45
42:RZ:45:ASP:OD2	42:RZ:49:ARG:NH2	2.50	0.45
1:XA:114:U:H2'	1:XA:115:G:C8	2.52	0.45
1:XA:701:C:O2	1:XA:703:G:N1	2.49	0.45
1:XA:742:G:OP2	15:XO:35:ARG:NH2	2.47	0.45
2:XB:140:HIS:HA	2:XB:143:GLU:OE1	2.17	0.45
9:XI:114:TYR:HD2	9:XI:114:TYR:N	2.14	0.45
18:XR:73:ALA:HB3	18:XR:79:LEU:HD12	1.98	0.45
20:XT:75:ASN:OD1	20:XT:75:ASN:N	2.40	0.45
43:Y0:51:VAL:CG1	43:Y0:59:LEU:HB3	2.46	0.45
44:Y1:58:ILE:N	44:Y1:58:ILE:HD12	2.31	0.45
49:Y6:33:LYS:HB2	49:Y6:33:LYS:HE2	1.76	0.45
22:YA:1012:U:O2'	22:YA:1013:C:OP2	2.25	0.45
22:YA:1319:G:C6	22:YA:1320:C:N4	2.84	0.45
22:YA:1544:C:O2	22:YA:1544:C:H2'	2.17	0.45
22:YA:1588:C:H2'	22:YA:1589:C:H6	1.82	0.45
22:YA:224:G:O6	22:YA:419:C:O2'	2.29	0.45
22:YA:2317:C:H2'	22:YA:2318:G:O4'	2.16	0.45
32:YP:138:LEU:C	32:YP:140:ALA:H	2.19	0.45
37:YU:68:ALA:O	37:YU:71:GLN:HB2	2.16	0.45
41:YY:51:VAL:HG13	41:YY:52:SER:N	2.28	0.45
41:YY:84:ARG:HB3	41:YY:95:LYS:HD3	1.97	0.45
1:QA:945:G:C6	1:QA:1337:G:C5	3.04	0.45
1:QA:17:U:H1'	1:QA:1080:A:H1'	1.97	0.45
4:QD:121:VAL:O	4:QD:134:ASP:HA	2.16	0.45
6:QF:99:ALA:HB1	18:QR:23:LYS:NZ	2.31	0.45
13:QM:89:GLY:O	13:QM:92:HIS:HB2	2.15	0.45
22:RA:818:G:N1	22:RA:1188:U:OP2	2.41	0.45
22:RA:1341:U:P	22:RA:1397:U:H3	2.39	0.45
22:RA:1533:C:N4	22:RA:1538:G:H1	2.14	0.45
22:RA:1620:G:H2'	22:RA:1621:U:C6	2.51	0.45
22:RA:184:C:H4'	22:RA:217:G:N3	2.31	0.45
22:RA:1931:U:H2'	22:RA:1932:A:O4'	2.17	0.45
22:RA:531:C:C5	22:RA:2035:G:C2	3.05	0.45
22:RA:537:C:H6	22:RA:537:C:H5''	1.82	0.45
22:RA:635:C:O2'	22:RA:639:U:OP1	2.32	0.45
22:RA:2787:C:H1'	25:RE:62:PRO:HG3	1.98	0.45
33:RQ:2:LEU:HD23	33:RQ:2:LEU:H	1.81	0.45
42:RZ:19:ARG:HD2	42:RZ:84:GLU:HA	1.98	0.45
1:XA:1171:G:C2	1:XA:1172:C:C2	3.04	0.45

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:XA:1264:C:H42	1:XA:1271:G:H1	1.64	0.45
1:XA:1269:A:H2	1:XA:1312:G:N3	2.14	0.45
1:XA:1284:C:H3'	1:XA:1285:A:C8	2.50	0.45
1:XA:1305:G:O2'	1:XA:1306:A:O5'	2.34	0.45
1:XA:922:G:O2'	1:XA:1398:A:N1	2.43	0.45
1:XA:453:A:C5	1:XA:454:C:C4	3.05	0.45
5:XE:99:GLY:N	5:XE:117:ASP:OD2	2.47	0.45
8:XH:86:ILE:HG13	8:XH:133:LEU:HD22	1.98	0.45
13:XM:58:GLU:O	13:XM:62:ASN:ND2	2.33	0.45
19:XS:47:HIS:O	19:XS:62:ILE:HG12	2.17	0.45
22:YA:372:G:H5'	44:Y1:66:HIS:NE2	2.32	0.45
22:YA:1144:G:H2'	22:YA:1145:C:C6	2.51	0.45
22:YA:1726:G:C6	22:YA:1727:U:C4	3.03	0.45
22:YA:198:C:O2'	22:YA:199:A:H5''	2.15	0.45
22:YA:2530:A:O2'	22:YA:2532:G:OP2	2.23	0.45
22:YA:735:A:H3'	22:YA:736:C:H6	1.80	0.45
26:YF:11:VAL:HA	26:YF:125:LEU:O	2.16	0.45
32:YP:27:HIS:N	32:YP:27:HIS:ND1	2.64	0.45
37:YU:66:ASN:O	37:YU:70:ARG:HB2	2.17	0.45
22:YA:1161:C:H4'	38:YV:8:GLY:HA2	1.99	0.45
41:YY:87:LYS:HA	41:YY:92:ASN:HB3	1.98	0.45
1:QA:1109:C:H2'	1:QA:1110:A:O4'	2.16	0.45
1:QA:1124:G:H5''	1:QA:1145:C:H41	1.82	0.45
1:QA:1285:A:H5'	1:QA:1286:A:C2	2.51	0.45
1:QA:1298:C:H4'	1:QA:1299:A:C5	2.52	0.45
1:QA:514:C:C2	1:QA:515:G:C8	3.05	0.45
1:QA:685:G:C2	1:QA:686:U:C4	3.04	0.45
3:QC:131:ARG:NH1	5:QE:50:GLU:HG2	2.30	0.45
6:QF:45:LEU:HD12	6:QF:59:TYR:HD1	1.82	0.45
7:QG:20:ASP:OD1	7:QG:21:VAL:N	2.48	0.45
7:QG:45:ASP:O	7:QG:49:ILE:HG12	2.16	0.45
3:QC:23:TYR:CD1	10:QJ:10:GLY:HA2	2.51	0.45
53:QV:17:C:H5'	53:QV:61:C:OP1	2.16	0.45
22:RA:19:C:OP2	37:RU:30:LYS:NZ	2.45	0.45
22:RA:2740:A:H2'	22:RA:2741:A:C8	2.52	0.45
22:RA:585:G:O5'	22:RA:585:G:H8	1.99	0.45
22:RA:843:G:N2	22:RA:936:C:C2	2.84	0.45
23:RB:61:G:H2'	23:RB:62:C:C6	2.52	0.45
24:RD:76:PRO:HB2	24:RD:116:GLN:OE1	2.17	0.45
26:RF:31:HIS:HB2	32:RP:9:ASN:OD1	2.16	0.45
31:RO:48:PRO:O	31:RO:49:ARG:HG2	2.17	0.45
22:RA:957:A:H5''	33:RQ:14:ARG:HH22	1.81	0.45

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:RA:1335:U:OP2	40:RX:65:ARG:NH2	2.49	0.45
1:XA:1236:A:O2'	1:XA:1304:G:H4'	2.17	0.45
1:XA:129(A):G:N2	1:XA:191(A):G:C4	2.84	0.45
1:XA:963:G:N2	1:XA:972:C:N3	2.53	0.45
6:XF:100:ASN:O	18:XR:28:GLU:HG2	2.17	0.45
7:XG:45:ASP:O	7:XG:49:ILE:HG12	2.16	0.45
44:Y1:91:LYS:HE3	44:Y1:91:LYS:HA	1.98	0.45
46:Y3:31:LEU:O	46:Y3:32:GLN:HB2	2.17	0.45
27:YG:6:ALA:N	47:Y4:23:GLU:HG2	2.28	0.45
22:YA:229:A:C2	22:YA:418:G:H4'	2.52	0.45
22:YA:232:G:OP2	22:YA:232:G:H8	1.98	0.45
22:YA:2801:A:C6	22:YA:2802:G:H1'	2.52	0.45
22:YA:2812:G:H2'	22:YA:2813:A:C8	2.52	0.45
23:YB:62:C:H2'	23:YB:63:G:C8	2.51	0.45
32:YP:124:LYS:HA	32:YP:143:GLY:O	2.15	0.45
34:YR:109:ALA:HA	34:YR:110:PRO:HD2	1.77	0.45
41:YY:56:PRO:O	41:YY:58:GLY:N	2.49	0.45
1:QA:1014:A:H4'	19:QS:14:HIS:CD2	2.51	0.45
1:QA:1338:G:H2'	1:QA:1339:A:C8	2.52	0.45
1:QA:392:G:H2'	1:QA:393:A:H8	1.82	0.45
3:QC:19:GLU:HA	3:QC:54:ARG:HH12	1.82	0.45
4:QD:15:GLU:HG2	4:QD:63:LYS:HG3	1.97	0.45
1:QA:1298:C:C5	7:QG:114:ARG:HD2	2.51	0.45
49:R6:26:ASN:ND2	49:R6:35:GLU:OE2	2.49	0.45
22:RA:1079:C:H5'	22:RA:1080:C:OP2	2.16	0.45
22:RA:1130:U:N3	25:RE:147:PRO:HB3	2.31	0.45
22:RA:1416:G:H2'	22:RA:1417:C:C6	2.52	0.45
22:RA:1754:C:H2'	22:RA:1755:A:C8	2.50	0.45
22:RA:2025:C:H2'	22:RA:2026:C:C6	2.52	0.45
22:RA:270(E):G:C2	22:RA:270(F):U:C2	3.05	0.45
22:RA:428:A:N7	22:RA:429:A:C5	2.84	0.45
22:RA:482:A:H4'	41:RY:47:LYS:HD2	1.99	0.45
22:RA:759:G:H2'	22:RA:760:G:C8	2.51	0.45
23:RB:83:G:H1	23:RB:93:C:N4	2.03	0.45
24:RD:105:ILE:HD12	24:RD:105:ILE:HA	1.63	0.45
24:RD:118:VAL:HG22	24:RD:119:ALA:H	1.82	0.45
24:RD:121:PRO:HB3	24:RD:135:PHE:CE1	2.52	0.45
24:RD:30:GLU:HG3	24:RD:63:ARG:CZ	2.47	0.45
22:RA:2679:A:H5'	25:RE:165:VAL:HG21	1.98	0.45
27:RG:106:LEU:HA	27:RG:110:ALA:HB3	1.98	0.45
32:RP:18:ARG:HD2	32:RP:27:HIS:HD2	1.81	0.45
32:RP:77:ARG:HB2	32:RP:78:PRO:HD2	1.99	0.45

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:RA:1030:G:OP2	33:RQ:128:LYS:HG2	2.17	0.45
33:RQ:63:LYS:HD2	42:RZ:175:VAL:HG21	1.98	0.45
42:RZ:45:ASP:OD1	42:RZ:49:ARG:NE	2.41	0.45
1:XA:1447:G:N2	1:XA:1460:A:H1'	2.32	0.45
1:XA:1510:U:H2'	1:XA:1511:G:C8	2.51	0.45
1:XA:479:C:H2'	1:XA:480:U:O4'	2.17	0.45
1:XA:908:A:H2'	1:XA:909:A:C8	2.51	0.45
1:XA:945:G:N2	1:XA:1334:G:O2'	2.48	0.45
19:XS:63:THR:HG23	19:XS:66:MET:HG2	1.99	0.45
45:Y2:4:SER:OG	45:Y2:5:GLU:OE1	2.23	0.45
22:YA:1022:G:C6	22:YA:1140:C:C4	3.05	0.45
22:YA:1125:G:C6	22:YA:1126:A:N6	2.84	0.45
22:YA:184:C:H2'	22:YA:185:U:C6	2.52	0.45
22:YA:2762:G:C6	22:YA:2763:G:C4	3.05	0.45
27:YG:146:TYR:O	27:YG:149:VAL:HG22	2.16	0.45
37:YU:58:ARG:HA	37:YU:61:TRP:CE3	2.52	0.45
38:YV:36:PRO:HA	38:YV:56:SER:OG	2.16	0.45
42:YZ:5:LEU:HD22	42:YZ:47:VAL:HG21	1.97	0.45
1:QA:1358:U:H5''	14:QN:33:VAL:O	2.16	0.45
1:QA:514:C:H2'	1:QA:515:G:H8	1.81	0.45
1:QA:97:U:H2'	1:QA:99:C:C6	2.52	0.45
4:QD:53:ASP:O	4:QD:57:ARG:HD2	2.16	0.45
7:QG:113:GLU:CG	7:QG:119:ARG:HG2	2.47	0.45
7:QG:49:ILE:O	7:QG:53:LYS:HB3	2.16	0.45
1:QA:1151:A:H5'	10:QJ:41:PRO:HA	1.99	0.45
12:QL:113:ARG:HH21	12:QL:116:SER:HB2	1.81	0.45
22:RA:1792:G:H2'	22:RA:1793:C:H6	1.81	0.45
22:RA:2076:U:H5''	22:RA:2077:A:OP1	2.16	0.45
22:RA:2439:A:P	22:RA:2439:A:H3'	2.57	0.45
22:RA:270(T):G:C5'	44:R1:97:LEU:HD22	2.47	0.45
22:RA:2882:A:OP1	34:RR:96:ARG:NH1	2.35	0.45
22:RA:708:C:N4	22:RA:723:G:H1	2.02	0.45
25:RE:111:ARG:HA	34:RR:1:MET:SD	2.57	0.45
28:RH:153:LYS:HG3	28:RH:161:GLY:HA2	1.97	0.45
31:RO:22:ILE:HG12	31:RO:41:ALA:HA	1.98	0.45
34:RR:78:LYS:HE2	34:RR:83:ILE:HD11	1.98	0.45
34:RR:103:ARG:NH1	39:RW:40:ASN:OD1	2.50	0.45
42:RZ:10:ARG:NE	42:RZ:37:VAL:O	2.49	0.45
1:XA:1316:G:N2	1:XA:1318:A:H3'	2.32	0.45
1:XA:923:A:N6	1:XA:1392:G:O6	2.50	0.45
1:XA:489:C:H2'	1:XA:490:G:H8	1.81	0.45
1:XA:522:C:H2'	1:XA:523:A:O4'	2.16	0.45

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
3:XC:48:TYR:OH	3:XC:122:GLU:OE2	2.22	0.45
13:XM:65:LYS:O	13:XM:70:LEU:HD23	2.17	0.45
15:XO:32:LEU:HD11	15:XO:62:GLN:HG2	1.99	0.45
17:XQ:43:LEU:HD12	17:XQ:68:ARG:HG2	1.97	0.45
1:XA:1014:A:H4'	19:XS:14:HIS:CD2	2.51	0.45
43:Y0:15:ASP:OD1	43:Y0:16:SER:N	2.46	0.45
45:Y2:21:LEU:O	45:Y2:25:VAL:HG23	2.17	0.45
49:Y6:15:GLU:CD	49:Y6:41:PRO:HB3	2.37	0.45
22:YA:2078:C:C4	22:YA:2079:U:C4	3.05	0.45
22:YA:2124:G:C6	22:YA:2125:G:C4	3.05	0.45
22:YA:2212:A:N3	22:YA:2215:G:N1	2.64	0.45
22:YA:704:G:H2'	22:YA:726:G:N2	2.31	0.45
22:YA:783:A:C8	22:YA:783:A:C3'	2.99	0.45
23:YB:15:A:H1'	23:YB:109:G:N9	2.31	0.45
28:YH:150:ALA:O	28:YH:152:ARG:N	2.49	0.45
36:YT:6:LEU:HA	36:YT:9:LEU:HB2	1.99	0.45
38:YV:19:LYS:HG3	38:YV:95:LEU:HD23	1.98	0.45
41:YY:101:LYS:HG2	41:YY:102:CYS:H	1.81	0.45
42:YZ:100:VAL:HA	42:YZ:101:PRO:HD3	1.84	0.45
42:YZ:26:GLY:HA2	42:YZ:85:HIS:CD2	2.52	0.45
1:QA:1199:U:H4'	10:QJ:54:PHE:CE2	2.51	0.45
1:QA:134:A:H61	16:QP:25:ARG:NH1	2.15	0.45
1:QA:1516:G:H2'	1:QA:1518:A:OP2	2.17	0.45
1:QA:129(A):G:H1'	1:QA:189:U:H5''	1.97	0.45
1:QA:272:C:H2'	1:QA:273:A:C8	2.52	0.45
4:QD:8:VAL:HG13	4:QD:21:LEU:HD12	1.97	0.45
11:QK:91:ARG:NH1	11:QK:110:ASP:OD1	2.48	0.45
12:QL:102:ARG:HB3	12:QL:102:ARG:HE	1.39	0.45
20:QT:26:ASN:HB2	20:QT:71:THR:HG23	1.97	0.45
49:R6:34:LEU:HD13	49:R6:34:LEU:H	1.81	0.45
22:RA:1485:G:N1	22:RA:1486:A:C5	2.85	0.45
22:RA:2355:C:O2	43:R0:39:ARG:NH2	2.50	0.45
22:RA:2686:G:N2	22:RA:2724:C:H1'	2.31	0.45
22:RA:2852:G:H2'	22:RA:2853:C:C6	2.51	0.45
22:RA:404:C:HO2'	22:RA:405:U:P	2.36	0.45
22:RA:49:A:N7	22:RA:120:U:C5	2.84	0.45
22:RA:728:G:C2	22:RA:730:C:C2	3.04	0.45
27:RG:10:LYS:O	27:RG:14:GLU:HB3	2.17	0.45
34:RR:29:LEU:HD12	34:RR:29:LEU:HA	1.74	0.45
1:XA:1053:G:H5'	1:XA:1054:C:H5'	1.98	0.45
1:XA:1386:G:H2'	1:XA:1387:G:C8	2.52	0.45
1:XA:376:G:H5''	16:XP:5:ARG:HD2	1.99	0.45

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:XA:857:C:H2'	1:XA:858:G:O4'	2.17	0.45
7:XG:15:ASP:OD2	7:XG:44:TYR:OH	2.35	0.45
16:XP:17:TYR:CE1	16:XP:41:PRO:HG3	2.52	0.45
22:YA:1127:A:N7	22:YA:2488:A:O2'	2.48	0.45
22:YA:1840:G:C6	22:YA:1841:U:C4	3.05	0.45
22:YA:2006:C:O2'	22:YA:2823:A:N3	2.49	0.45
22:YA:2115:G:O6	22:YA:2172:U:H5	2.00	0.45
22:YA:2447:G:N2	22:YA:2450:A:OP2	2.49	0.45
22:YA:2635:C:H5''	25:YE:78:LEU:HA	1.99	0.45
22:YA:673:C:OP1	26:YF:54:ARG:NH1	2.46	0.45
22:YA:676:A:H2	22:YA:802:A:H61	1.63	0.45
25:YE:67:PHE:O	25:YE:69:LYS:N	2.49	0.45
29:YI:110:ASP:HB2	29:YI:130:TYR:OH	2.16	0.45
29:YI:81:VAL:HG21	29:YI:88:ILE:HD12	1.99	0.45
1:QA:1241:G:H2'	1:QA:1242:C:C6	2.52	0.45
1:QA:1347:G:O2'	1:QA:1348:U:OP2	2.34	0.45
1:QA:273:A:H1'	17:QQ:16:GLN:OE1	2.17	0.45
1:QA:607:A:H2'	1:QA:608:A:O4'	2.16	0.45
1:QA:617:G:N2	1:QA:623:C:N3	2.61	0.45
2:QB:76:GLN:O	2:QB:208:ILE:HG12	2.17	0.45
2:QB:30:ARG:HH21	2:QB:194:PRO:HG2	1.81	0.45
4:QD:28:SER:HB3	4:QD:29:PRO:CD	2.42	0.45
8:QH:104:ARG:O	8:QH:107:LEU:HB2	2.16	0.45
8:QH:6:ILE:O	8:QH:10:LEU:HG	2.17	0.45
10:QJ:40:LEU:HB2	10:QJ:69:ASN:CB	2.47	0.45
11:QK:41:THR:HG21	11:QK:71:LYS:HB2	1.99	0.45
22:RA:1676:A:H2'	22:RA:1677:A:O4'	2.17	0.45
22:RA:18:C:H2'	22:RA:19:C:C6	2.52	0.45
22:RA:1935:G:H1'	22:RA:1964:G:N2	2.32	0.45
22:RA:1972:A:H2'	22:RA:1973:G:C8	2.51	0.45
23:RB:40:U:H1'	23:RB:45:A:N6	2.31	0.45
25:RE:107:THR:O	25:RE:190:GLY:HA2	2.17	0.45
30:RN:19:GLU:HB2	30:RN:56:ASN:HD22	1.80	0.45
34:RR:33:ARG:HH22	48:R5:55:ARG:HG2	1.81	0.45
35:RS:10:ARG:O	35:RS:14:VAL:HG12	2.17	0.45
41:RY:68:HIS:CE1	41:RY:70:SER:HB3	2.52	0.45
42:RZ:110:GLY:HA2	42:RZ:111:VAL:O	2.17	0.45
1:XA:1129:C:C4'	1:XA:1130:A:H5'	2.45	0.45
1:XA:1497:G:C2'	1:XA:1498:U:H5'	2.47	0.45
1:XA:232:G:H1'	1:XA:262:A:N1	2.31	0.45
1:XA:388:G:O2'	1:XA:389:A:P	2.75	0.45
1:XA:454:C:N4	1:XA:479:C:N3	2.64	0.45

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
3:XC:153:VAL:HG22	3:XC:198:VAL:HG22	1.98	0.45
4:XD:50:ARG:HG3	4:XD:50:ARG:H	1.63	0.45
8:XH:51:VAL:HG11	8:XH:60:ARG:HG3	1.98	0.45
19:XS:66:MET:HB2	19:XS:74:PHE:CZ	2.52	0.45
44:Y1:79:GLY:N	44:Y1:80:LEU:HD23	2.32	0.45
22:YA:1689:A:N6	22:YA:1698:A:H2	2.11	0.45
22:YA:2580:U:H4'	25:YE:130:GLY:CA	2.34	0.45
22:YA:270(A):A:N6	22:YA:270(Y):G:H1'	2.32	0.45
22:YA:277:C:H3'	22:YA:278:A:C5'	2.46	0.45
22:YA:661:C:H5''	32:YP:15:ARG:NH2	2.31	0.45
24:YD:44:ASN:ND2	24:YD:44:ASN:N	2.64	0.45
29:YI:115:ALA:HB3	29:YI:128:LEU:HD12	1.98	0.45
34:YR:24:GLN:HE21	34:YR:44:LEU:HG	1.81	0.45
36:YT:102:ILE:HA	36:YT:105:LEU:CD2	2.47	0.45
39:YW:97:LYS:HE2	39:YW:99:ARG:NH2	2.31	0.45
1:QA:132:C:H2'	1:QA:133:U:O4'	2.17	0.45
1:QA:1375:A:H4'	7:QG:29:LYS:HE3	1.99	0.45
1:QA:1379:G:O6	7:QG:2:ALA:HB3	2.17	0.45
1:QA:1455:G:H2'	1:QA:1459:C:C6	2.52	0.45
1:QA:145:G:H2'	1:QA:146:G:O4'	2.17	0.45
1:QA:24:U:H2'	1:QA:25:C:C6	2.52	0.45
1:QA:500:G:H2'	1:QA:501:C:C6	2.51	0.45
3:QC:79:ARG:NE	11:XK:99:GLN:CD	2.70	0.45
1:QA:974:A:OP2	14:QN:41:ARG:NH1	2.50	0.45
43:R0:43:THR:HG23	43:R0:43:THR:O	2.17	0.45
44:R1:83:GLU:N	44:R1:83:GLU:OE2	2.49	0.45
45:R2:41:ILE:HD11	45:R2:44:LEU:HB2	1.99	0.45
22:RA:1946:U:H2'	22:RA:1947:C:C6	2.52	0.45
22:RA:2564:A:C2	22:RA:2647:U:H4'	2.52	0.45
22:RA:2705:A:C6	22:RA:2706:G:C4	3.05	0.45
25:RE:46:ALA:HB2	25:RE:82:ARG:HA	1.98	0.45
26:RF:161:GLU:OE2	26:RF:164:ARG:NH1	2.50	0.45
26:RF:45:ARG:CG	26:RF:45:ARG:HH11	2.29	0.45
34:RR:42:LYS:HA	34:RR:45:ARG:HD2	1.98	0.45
42:RZ:181:GLU:HB3	42:RZ:182:LYS:H	1.47	0.45
1:XA:947:G:N2	1:XA:1235:U:C2	2.84	0.45
1:XA:126:G:H4'	1:XA:634:C:O2	2.16	0.45
1:XA:426:G:P	4:XD:36:ARG:HH11	2.40	0.45
2:XB:115:LEU:HD13	2:XB:145:LEU:HB3	1.98	0.45
1:XA:406:G:C5'	4:XD:5:ILE:HD13	2.46	0.45
4:XD:86:LYS:H	4:XD:86:LYS:HD2	1.82	0.45
20:XT:33:ILE:HG23	20:XT:63:ILE:HG12	1.99	0.45

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
53:XV:4:G:O2'	53:XV:5:G:P	2.75	0.45
43:Y0:43:THR:HG23	43:Y0:43:THR:O	2.17	0.45
45:Y2:24:LEU:HD23	45:Y2:24:LEU:HA	1.67	0.45
47:Y4:16:CYS:HB3	47:Y4:33:VAL:HB	1.98	0.45
22:YA:1204:A:O2'	22:YA:1205:U:O5'	2.35	0.45
22:YA:1430:C:H2'	22:YA:1431:U:H6	1.80	0.45
22:YA:2030:A:H4'	22:YA:2031:A:H8	1.82	0.45
22:YA:2331:G:N2	22:YA:2385:C:C4	2.84	0.45
22:YA:2507:C:H2'	22:YA:2508:G:O4'	2.17	0.45
22:YA:2758:A:C2	22:YA:2759:G:H1'	2.52	0.45
22:YA:414:C:H2'	22:YA:415:A:C8	2.52	0.45
22:YA:636:G:H4'	22:YA:638:G:H4'	1.97	0.45
22:YA:994:C:OP1	37:YU:53:ARG:NH2	2.49	0.45
4:QD:167:GLY:HA2	24:YD:135:PHE:CE2	2.52	0.45
25:YE:167:VAL:HG21	25:YE:187:ALA:CB	2.47	0.45
22:YA:674:G:C1'	26:YF:74:ARG:HD3	2.35	0.45
40:YX:60:ARG:HH22	50:Y7:47:ARG:NH1	2.14	0.45
42:YZ:136:PHE:C	42:YZ:137:ILE:HG12	2.38	0.45
1:QA:1012:U:H2'	1:QA:1013:G:C8	2.52	0.45
1:QA:1475:G:H2'	1:QA:1476:G:H8	1.82	0.45
1:QA:280:C:C2	17:QQ:38:ARG:HG3	2.52	0.45
1:QA:836:G:C6	1:QA:851:G:C6	3.05	0.45
1:QA:980:C:H5'	1:QA:981:U:OP2	2.17	0.45
2:QB:163:PHE:HA	2:QB:185:ILE:HG13	1.99	0.45
2:QB:51:LEU:HD22	2:QB:55:PHE:HE2	1.82	0.45
53:QV:25:C:H2'	53:QV:26:G:O4'	2.17	0.45
22:RA:1183:G:O3'	46:R3:29:ARG:NH1	2.50	0.45
22:RA:1314:C:H42	22:RA:1338:G:H1	1.65	0.45
22:RA:1651:G:N2	22:RA:2007:C:C2	2.85	0.45
22:RA:1788:C:H2'	22:RA:1789:A:O4'	2.17	0.45
22:RA:2262:U:H2'	22:RA:2263:C:C6	2.52	0.45
22:RA:2383:G:OP2	51:R8:37:SER:HB2	2.17	0.45
22:RA:2575:C:H2'	22:RA:2578:G:O6	2.17	0.45
22:RA:270(E):G:N2	22:RA:270(F):U:C2	2.86	0.45
22:RA:67:U:H2'	22:RA:68:G:C8	2.52	0.45
22:RA:765:G:H2'	22:RA:766:C:C6	2.52	0.45
22:RA:888:C:C3'	22:RA:889:C:H4'	2.48	0.45
22:RA:971:C:H2'	22:RA:972:G:O4'	2.17	0.45
22:RA:99:U:H4'	22:RA:101:G:O5'	2.16	0.45
27:RG:102:PHE:O	27:RG:106:LEU:N	2.50	0.45
32:RP:64:LYS:HB2	51:R8:25:MET:HG3	1.98	0.45
33:RQ:111:GLU:C	33:RQ:113:GLN:H	2.19	0.45

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:XA:241:C:C2	1:XA:286:G:C2	3.05	0.45
1:XA:35:G:C2	1:XA:550:G:C2	3.05	0.45
1:XA:652:U:H1'	1:XA:653:A:C2	2.52	0.45
1:XA:664:G:N2	1:XA:741:G:H1	2.15	0.45
1:XA:407:G:H1'	4:XD:119:GLN:HE22	1.81	0.45
8:XH:75:ARG:HA	8:XH:76:PRO:HD2	1.71	0.45
10:XJ:16:LEU:HD11	10:XJ:70:ARG:HB2	1.99	0.45
9:XI:111:ARG:HH22	10:XJ:62:HIS:CE1	2.35	0.45
13:XM:62:ASN:OD1	47:Y4:49:PHE:CD2	2.63	0.45
19:XS:24:ALA:O	19:XS:25:LYS:HB3	2.16	0.45
22:YA:2213:U:H1'	44:Y1:52:ARG:CZ	2.47	0.45
47:Y4:22:ILE:HG22	47:Y4:23:GLU:H	1.82	0.45
22:YA:1101:U:H2'	22:YA:1102:C:C6	2.51	0.45
22:YA:1151:G:C2	22:YA:1152:C:C2	3.05	0.45
22:YA:1003:G:N2	22:YA:1153:C:C2	2.85	0.45
22:YA:1344:G:H4'	22:YA:1384:A:C5	2.52	0.45
22:YA:1412:A:H2'	22:YA:1413:G:C8	2.52	0.45
22:YA:1579:A:H2'	22:YA:1580:A:C8	2.52	0.45
22:YA:1751:C:H2'	22:YA:1752:C:H6	1.81	0.45
22:YA:648:G:H4'	22:YA:2351:G:H5''	1.98	0.45
22:YA:2356:C:H2'	22:YA:2357:U:O4'	2.16	0.45
22:YA:2352:A:C4	22:YA:2366:A:C2	3.05	0.45
22:YA:2545:G:H2'	22:YA:2546:U:O4'	2.17	0.45
22:YA:2853:C:H2'	22:YA:2854:G:C8	2.51	0.45
22:YA:372:G:O2'	22:YA:373:U:O5'	2.34	0.45
22:YA:493:G:H4'	39:YW:8:ARG:HB2	1.99	0.45
24:YD:39:LYS:HB2	24:YD:62:TYR:HB2	1.98	0.45
28:YH:3:ARG:HA	28:YH:3:ARG:NE	2.32	0.45
28:YH:52:VAL:HG21	28:YH:68:THR:HG22	1.99	0.45
32:YP:126:VAL:HG12	32:YP:147:LEU:HD22	1.99	0.45
1:QA:1376:U:P	7:QG:94:ARG:HH12	2.40	0.44
1:QA:1494:G:N7	57:QA:1601:PAR:N32	2.65	0.44
1:QA:29:G:O2'	1:QA:295:C:H4'	2.17	0.44
1:QA:437:U:C5	1:QA:438:G:C5	3.05	0.44
1:QA:457:C:H42	1:QA:475:G:H1	1.65	0.44
8:QH:6:ILE:HB	8:QH:85:ARG:HH11	1.82	0.44
9:QI:126:SER:O	9:QI:128:ARG:N	2.45	0.44
13:QM:92:HIS:CD2	13:QM:110:ARG:HH21	2.35	0.44
1:QA:376:G:H5''	16:QP:5:ARG:HD2	1.99	0.44
19:QS:10:PHE:HB2	19:QS:39:THR:H	1.82	0.44
19:QS:66:MET:HB2	19:QS:74:PHE:CZ	2.51	0.44
22:RA:1174:A:N3	22:RA:1178:C:N4	2.53	0.44

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:RA:1428:C:O2'	22:RA:1569:A:OP2	2.25	0.44
22:RA:2015:A:C8	22:RA:2016:U:C6	3.05	0.44
22:RA:201:C:H4'	22:RA:386:G:C2	2.53	0.44
22:RA:286:C:H2'	22:RA:287:C:H6	1.80	0.44
22:RA:413:C:H2'	22:RA:414:C:C6	2.53	0.44
23:RB:13:A:C6	23:RB:70:C:H5'	2.52	0.44
28:RH:52:VAL:HG21	28:RH:69:ARG:HA	1.98	0.44
30:RN:116:LEU:HA	30:RN:116:LEU:HD23	1.78	0.44
31:RO:111:PHE:HB3	31:RO:114:ILE:HG13	1.98	0.44
1:XA:99:C:H2'	1:XA:101:A:C8	2.52	0.44
1:XA:1342:C:H4'	9:XI:125:TYR:CB	2.39	0.44
1:XA:892:A:O2'	1:XA:1415:G:H4'	2.17	0.44
1:XA:1442:G:C5	1:XA:1446:A:C6	3.05	0.44
1:XA:164:U:H2'	1:XA:165:C:C6	2.52	0.44
1:XA:807:A:H2'	1:XA:808:C:H6	1.81	0.44
2:XB:12:GLU:C	2:XB:14:GLY:H	2.21	0.44
2:XB:33:TYR:HB2	2:XB:43:ASP:HB2	1.98	0.44
1:XA:1106:G:H5''	3:XC:172:ARG:HG2	1.99	0.44
4:XD:25:ARG:NH1	4:XD:30:LYS:HG3	2.32	0.44
12:XL:45:PRO:HG3	12:XL:53:ARG:HD3	1.98	0.44
22:YA:1209:G:H21	22:YA:1210:A:N6	2.09	0.44
22:YA:1622:G:H2'	22:YA:1623:G:H8	1.82	0.44
22:YA:2461:C:H2'	22:YA:2462:U:H6	1.78	0.44
22:YA:2790:A:H2'	22:YA:2791:C:H5''	1.99	0.44
13:XM:68:GLY:CA	27:YG:116:ASP:OD2	2.63	0.44
28:YH:12:PRO:O	28:YH:13:LYS:HB2	2.17	0.44
22:YA:904:C:O2'	42:YZ:169:GLU:HG3	2.17	0.44
1:QA:1466:C:C5	1:QA:1467:G:C5	3.05	0.44
1:QA:412:A:H1'	1:QA:413:G:OP2	2.17	0.44
4:QD:158:ILE:HA	4:QD:158:ILE:HD13	1.82	0.44
10:QJ:33:GLN:O	10:QJ:75:ILE:HG12	2.17	0.44
22:RA:1027:A:N6	22:RA:1126:A:C4	2.85	0.44
22:RA:1658:C:OP1	25:RE:135:HIS:NE2	2.50	0.44
22:RA:1753:G:N1	22:RA:1756:G:C2	2.85	0.44
22:RA:2066:C:C2'	22:RA:2067:G:H5'	2.47	0.44
22:RA:397:G:H1'	22:RA:2231:C:O2'	2.17	0.44
22:RA:742:G:H2'	22:RA:743:G:C8	2.53	0.44
31:RO:87:ILE:HD12	31:RO:91:LEU:HD12	1.99	0.44
34:RR:28:LEU:HD12	34:RR:48:VAL:HG11	1.99	0.44
22:RA:994:C:O2	38:RV:10:LYS:HE2	2.17	0.44
1:XA:1320:C:H5'	19:XS:70:LYS:CG	2.46	0.44
1:XA:956:U:H2'	1:XA:957:U:O4'	2.18	0.44

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
7:XG:138:LYS:HE2	7:XG:142:GLU:OE2	2.17	0.44
11:XK:28:THR:OG1	11:XK:90:GLY:HA3	2.17	0.44
1:XA:667:G:H4'	15:XO:51:HIS:CE1	2.53	0.44
53:XV:66:C:H2'	53:XV:67:C:H6	1.82	0.44
45:Y2:41:ILE:HD11	45:Y2:44:LEU:CG	2.47	0.44
22:YA:1202:C:N4	22:YA:1203:G:C6	2.85	0.44
22:YA:1288:U:C2	22:YA:1327:C:O2	2.70	0.44
22:YA:1405:U:H2'	22:YA:1406:U:C6	2.52	0.44
22:YA:1601:G:C5	22:YA:1602:U:C4	3.04	0.44
22:YA:2328:A:H2'	22:YA:2329:G:C8	2.52	0.44
22:YA:413:C:H2'	22:YA:414:C:C6	2.49	0.44
22:YA:467:G:O5'	22:YA:467:G:H8	1.99	0.44
22:YA:479:A:HO2'	22:YA:481:G:H8	1.63	0.44
22:YA:950:G:H2'	22:YA:951:C:C6	2.53	0.44
23:YB:22:U:H2'	23:YB:23:G:C8	2.51	0.44
29:YI:95:LYS:O	29:YI:99:GLU:HB2	2.17	0.44
30:YN:62:VAL:HG12	30:YN:66:LYS:HD2	1.98	0.44
31:YO:86:ILE:HG22	31:YO:94:ARG:HD3	2.00	0.44
39:YW:33:ARG:NH2	39:YW:52:GLU:OE1	2.50	0.44
40:YX:35:THR:O	40:YX:39:ILE:HG13	2.16	0.44
42:YZ:109:ALA:HB3	42:YZ:143:GLY:HA2	1.98	0.44
1:QA:412:A:H4'	1:QA:413:G:O5'	2.17	0.44
6:QF:23:LYS:O	6:QF:27:GLN:HG2	2.17	0.44
6:QF:41:GLU:HB3	6:QF:62:TRP:HB3	2.00	0.44
15:QO:39:LEU:HD23	15:QO:39:LEU:HA	1.68	0.44
49:R6:32:ASN:N	49:R6:32:ASN:OD1	2.49	0.44
22:RA:630:G:P	51:R8:46:ARG:HH12	2.40	0.44
22:RA:1227:A:H5''	22:RA:1228:G:OP2	2.16	0.44
22:RA:1408:C:H2'	22:RA:1409:C:C6	2.52	0.44
22:RA:1641:A:H2'	22:RA:1642:G:O4'	2.17	0.44
22:RA:1773:A:H2'	22:RA:1774:C:O4'	2.17	0.44
22:RA:2261:C:C5	43:R0:16:SER:HB3	2.52	0.44
22:RA:2259:G:C2	22:RA:2282:G:N1	2.86	0.44
22:RA:2397:G:N2	22:RA:2420:C:H1'	2.32	0.44
22:RA:2391:G:N2	22:RA:2425:A:OP1	2.43	0.44
22:RA:2889:C:H3'	22:RA:2891:G:C8	2.46	0.44
22:RA:311:A:C6	22:RA:328:U:C4	3.05	0.44
22:RA:846:C:O2'	22:RA:847:U:OP2	2.28	0.44
22:RA:953:A:C2	22:RA:954:G:C8	3.05	0.44
25:RE:23:VAL:HG12	25:RE:184:VAL:O	2.17	0.44
28:RH:109:PHE:CZ	28:RH:152:ARG:HG2	2.53	0.44
33:RQ:12:GLN:HE21	33:RQ:72:LYS:HD3	1.82	0.44

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
37:RU:65:ILE:HG12	37:RU:96:ALA:CB	2.47	0.44
41:RY:42:VAL:HG12	41:RY:65:ALA:HB3	1.99	0.44
1:XA:157:G:H1	1:XA:164:U:H3	1.64	0.44
1:XA:451:A:H61	1:XA:481:G:H5'	1.82	0.44
1:XA:564:C:C4	1:XA:565:U:C4	3.04	0.44
1:XA:693:G:H2'	1:XA:694:A:C8	2.52	0.44
9:XI:25:LYS:HE3	9:XI:25:LYS:HB2	1.72	0.44
13:XM:115:LYS:HB2	13:XM:115:LYS:HE3	1.75	0.44
10:XJ:61:GLU:OE1	14:YN:58:LYS:HE2	2.17	0.44
1:XA:530:G:O6	54:XX:6:G:H1'	2.17	0.44
22:YA:517:C:OP1	48:Y5:16:ARG:NH2	2.50	0.44
22:YA:1309:G:H4'	50:Y7:7:PRO:HB2	1.99	0.44
22:YA:980:A:C4	22:YA:1136:G:O4'	2.70	0.44
22:YA:1382:G:H2'	22:YA:1383:C:C6	2.48	0.44
22:YA:1404:C:H2'	22:YA:1405:U:H5'	1.99	0.44
22:YA:1923:U:H2'	22:YA:1924:C:H6	1.83	0.44
22:YA:2574:G:H2'	22:YA:2575:C:H6	1.82	0.44
22:YA:265:A:O2'	22:YA:266:G:H4'	2.16	0.44
22:YA:2881:C:H2'	22:YA:2882:A:H8	1.83	0.44
27:YG:114:ILE:HB	27:YG:117:PHE:HB2	1.99	0.44
22:YA:2305:A:H5''	27:YG:134:GLY:HA3	2.00	0.44
29:YI:23:PRO:HA	29:YI:26:ALA:HB3	1.99	0.44
29:YI:86:THR:HA	29:YI:123:LEU:HB2	1.99	0.44
31:YO:17:ARG:NH2	31:YO:47:ILE:HD13	2.33	0.44
32:YP:64:LYS:CB	51:Y8:25:MET:HG3	2.48	0.44
1:QA:108:G:H5''	1:QA:109:A:C5'	2.43	0.44
1:QA:1141:C:H2'	1:QA:1142:G:C8	2.48	0.44
1:QA:1364:U:O2'	1:QA:1365:G:H5'	2.17	0.44
1:QA:401:C:H2'	1:QA:402:G:C8	2.52	0.44
1:QA:487:A:H2'	1:QA:488:C:O4'	2.18	0.44
1:QA:530:G:O2'	1:QA:531:U:P	2.75	0.44
1:QA:583:A:H2'	1:QA:584:G:O4'	2.17	0.44
1:QA:853:G:H2'	1:QA:854:G:C8	2.49	0.44
1:QA:881:G:H2'	1:QA:882:C:O4'	2.17	0.44
3:QC:70:VAL:HG21	3:QC:76:VAL:HG11	2.00	0.44
1:QA:922:G:H4'	5:QE:20:GLN:HA	1.99	0.44
7:QG:153:HIS:HE1	11:QK:57:THR:HG23	1.82	0.44
12:QL:11:VAL:HG13	17:QQ:29:HIS:CD2	2.52	0.44
1:QA:254:G:OP1	17:QQ:67:LYS:O	2.35	0.44
53:QV:19:G:N2	53:QV:56:C:N3	2.66	0.44
22:RA:1161:C:H2'	22:RA:1162:G:H8	1.81	0.44
22:RA:120:U:C5	22:RA:149:A:N6	2.85	0.44

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:RA:1735:C:H2'	22:RA:1741:C:C6	2.52	0.44
22:RA:1803:A:N6	22:RA:1814:G:O2'	2.45	0.44
22:RA:1930:G:HO2'	22:RA:1931:U:P	2.40	0.44
22:RA:2106:G:H2'	22:RA:2107:C:O4'	2.18	0.44
22:RA:2133:G:H1'	22:RA:2158:A:H61	1.81	0.44
22:RA:2494:G:H2'	22:RA:2495:G:H8	1.83	0.44
22:RA:2527:C:H5''	52:R9:30:PRO:HB2	1.99	0.44
22:RA:302:C:H2'	22:RA:303:U:C6	2.52	0.44
22:RA:511:U:O4	22:RA:512:G:C6	2.71	0.44
22:RA:921:G:H4'	22:RA:2269:A:C5	2.52	0.44
23:RB:77:U:C5	23:RB:98:G:N2	2.85	0.44
24:RD:70:TRP:HZ3	24:RD:146:GLU:OE2	2.01	0.44
24:RD:49:ILE:CD1	24:RD:52:ARG:HA	2.47	0.44
27:RG:57:ALA:HB1	27:RG:68:PRO:HG2	1.98	0.44
28:RH:4:ILE:O	28:RH:6:ARG:N	2.51	0.44
30:RN:114:ARG:O	30:RN:115:ARG:HB3	2.17	0.44
33:RQ:134:ARG:CZ	42:RZ:122:ARG:HD2	2.48	0.44
35:RS:11:LYS:HG3	35:RS:91:PRO:HD3	1.98	0.44
42:RZ:111:VAL:HG22	42:RZ:112:ARG:N	2.33	0.44
1:XA:1032(A):G:H2'	1:XA:1032(B):G:C8	2.52	0.44
1:XA:1299:A:H2'	1:XA:1301:U:C1'	2.34	0.44
1:XA:647:C:H2'	1:XA:648:A:O4'	2.17	0.44
3:XC:82:GLU:O	3:XC:86:VAL:HG13	2.17	0.44
8:XH:83:ILE:HB	8:XH:137:VAL:HG13	1.99	0.44
8:XH:65:TYR:HA	8:XH:79:VAL:HG23	1.98	0.44
1:XA:1226:C:O2'	13:XM:103:THR:O	2.23	0.44
18:XR:52:PRO:HB2	18:XR:54:ARG:HG2	2.00	0.44
19:XS:5:LEU:CG	47:Y4:66:SER:HB2	2.47	0.44
20:XT:87:LYS:O	20:XT:91:LEU:HG	2.18	0.44
21:XU:5:ASP:HB3	21:XU:8:THR:OG1	2.17	0.44
53:XV:14:A:N3	53:XV:14:A:H2'	2.33	0.44
43:Y0:12:ASN:HB2	43:Y0:13:GLY:H	1.46	0.44
44:Y1:53:VAL:HB	44:Y1:58:ILE:HD13	1.98	0.44
13:XM:65:LYS:HB3	47:Y4:50:VAL:HG21	1.99	0.44
22:YA:1087:G:C5	22:YA:1089:G:H1'	2.52	0.44
22:YA:942:G:O2'	22:YA:1189:A:H2'	2.17	0.44
22:YA:2885:C:N3	22:YA:2886:G:H1'	2.32	0.44
22:YA:469:G:O6	50:Y7:37:LYS:NZ	2.31	0.44
22:YA:530:G:H5''	22:YA:531:C:OP1	2.17	0.44
29:YI:94:ALA:HB1	29:YI:111:PRO:HB2	1.98	0.44
22:YA:1142(A):A:H4'	30:YN:25:ARG:HH22	1.81	0.44
36:YT:61:PHE:CE2	36:YT:76:PHE:HB2	2.53	0.44

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
37:YU:104:GLN:OE1	37:YU:105:VAL:HG23	2.17	0.44
37:YU:66:ASN:HB2	37:YU:76:TYR:HB2	1.99	0.44
1:QA:1022:G:H2'	1:QA:1023:G:C8	2.52	0.44
1:QA:1127:G:H22	1:QA:1145:C:C1'	2.24	0.44
1:QA:1255:G:C6	1:QA:1279:A:C8	3.06	0.44
1:QA:1271:G:H5'	1:QA:1314:C:H5'	1.98	0.44
1:QA:1335:C:P	1:QA:1337:G:H21	2.40	0.44
1:QA:1350:A:H2'	1:QA:1351:U:O4'	2.17	0.44
1:QA:44:G:C6	1:QA:45:U:C2	3.06	0.44
1:QA:752:G:HO2'	1:QA:753:A:P	2.40	0.44
2:QB:228:GLY:O	2:QB:230:VAL:N	2.50	0.44
4:QD:150:GLU:OE1	4:QD:150:GLU:N	2.51	0.44
1:QA:1080:A:C5'	5:QE:16:THR:HG21	2.47	0.44
11:QK:92:GLU:HB3	11:QK:96:ARG:NH1	2.33	0.44
12:QL:109:GLY:HA3	12:QL:121:GLY:O	2.17	0.44
12:QL:70:ILE:HD13	12:QL:77:LEU:HD12	1.99	0.44
1:QA:1219:U:P	14:QN:19:ARG:HH22	2.38	0.44
53:QV:61:C:H2'	53:QV:62:C:H6	1.83	0.44
45:R2:49:LYS:O	45:R2:53:LEU:HB2	2.18	0.44
48:R5:46:CYS:HA	48:R5:47:PRO:HD2	1.63	0.44
22:RA:1815:A:C6	22:RA:1817:G:C6	3.05	0.44
22:RA:1816:G:C8	24:RD:62:TYR:CZ	3.05	0.44
22:RA:1856:G:N2	22:RA:1886:C:N3	2.53	0.44
22:RA:2191:G:C6	22:RA:2192:G:C8	3.05	0.44
22:RA:2232:U:OP2	44:R1:40:ARG:NH1	2.43	0.44
22:RA:2489:G:C6	22:RA:2490:G:N7	2.86	0.44
22:RA:2032:G:N1	22:RA:2572:A:C8	2.86	0.44
22:RA:2593:U:O4	22:RA:2594:C:N4	2.50	0.44
22:RA:2821:A:H8	22:RA:2821:A:O5'	2.00	0.44
22:RA:564:C:H2'	22:RA:565:C:O4'	2.17	0.44
22:RA:778:G:C6	22:RA:779:U:C4	3.06	0.44
22:RA:918:A:C5	22:RA:919:G:H1'	2.52	0.44
27:RG:37:VAL:O	27:RG:94:LEU:HG	2.17	0.44
31:RO:106:LEU:HD23	31:RO:106:LEU:HA	1.81	0.44
38:RV:35:LEU:CD2	38:RV:57:VAL:HG22	2.47	0.44
42:RZ:104:PHE:HB3	42:RZ:141:VAL:HG11	2.00	0.44
42:RZ:103:ARG:HD3	42:RZ:136:PHE:CD1	2.52	0.44
1:XA:1158:C:H4'	2:XB:133:LYS:HZ3	1.82	0.44
1:XA:1213:A:N7	1:XA:1215:G:C5	2.86	0.44
1:XA:302:G:C6	1:XA:303:A:C5	3.06	0.44
1:XA:491:G:H2'	1:XA:492:G:O4'	2.18	0.44
1:XA:775:G:O2'	1:XA:776:G:H5'	2.17	0.44

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:XA:868:C:H2'	1:XA:869:G:O4'	2.18	0.44
5:XE:110:LEU:HD13	5:XE:118:ILE:HD13	1.98	0.44
7:XG:87:VAL:HG11	7:XG:155:ARG:HA	1.99	0.44
1:XA:949:A:N7	13:XM:106:ASN:ND2	2.66	0.44
15:XO:32:LEU:O	15:XO:36:ILE:HG13	2.18	0.44
15:XO:82:ILE:O	15:XO:86:GLY:N	2.51	0.44
19:XS:81:ARG:HB2	19:XS:81:ARG:HE	1.36	0.44
53:XV:16:C:O2'	53:XV:61:C:OP1	2.34	0.44
43:Y0:53:MET:HA	43:Y0:58:THR:O	2.17	0.44
45:Y2:17:SER:CB	45:Y2:67:LYS:HE3	2.47	0.44
22:YA:1071:G:O5'	22:YA:1071:G:H8	2.00	0.44
22:YA:1339:G:C2	22:YA:1340:U:C5	3.06	0.44
22:YA:1753:G:H5''	22:YA:1753:G:H8	1.83	0.44
22:YA:270:A:H1'	22:YA:370:G:C2	2.52	0.44
22:YA:270(K):C:O2	22:YA:270(N):G:N2	2.39	0.44
22:YA:2774:C:H2'	22:YA:2775:A:O4'	2.17	0.44
22:YA:686:G:N2	22:YA:788:A:H61	2.16	0.44
23:YB:66:A:H61	23:YB:107:U:H2'	1.82	0.44
23:YB:11:C:O5'	23:YB:12:C:H5	2.00	0.44
26:YF:184:TYR:CE2	26:YF:188:ARG:HD2	2.52	0.44
28:YH:124:GLU:HB3	28:YH:132:ARG:HG3	1.99	0.44
30:YN:134:ARG:O	30:YN:136:GLU:N	2.50	0.44
36:YT:42:ILE:HG21	36:YT:84:GLN:NE2	2.32	0.44
38:YV:15:GLU:HG3	38:YV:16:PRO:HD2	1.99	0.44
38:YV:99:ILE:H	38:YV:99:ILE:HD13	1.82	0.44
42:YZ:182:LYS:HG3	42:YZ:183:LEU:CD2	2.48	0.44
42:YZ:6:LYS:HB2	42:YZ:6:LYS:HE3	1.61	0.44
42:YZ:92:SER:OG	42:YZ:93:ASP:N	2.49	0.44
1:QA:977:A:H1'	1:QA:981:U:H3	1.81	0.44
2:QB:71:VAL:HA	2:QB:93:VAL:HB	2.00	0.44
4:QD:166:LYS:HG3	4:QD:178:VAL:HG11	1.99	0.44
15:QO:50:HIS:O	15:QO:53:HIS:HB3	2.17	0.44
22:RA:856:C:H1'	43:R0:27:GLU:HB3	1.99	0.44
44:R1:49:VAL:HG11	44:R1:70:VAL:HG11	1.98	0.44
22:RA:1045:A:O4'	22:RA:1111:A:N6	2.51	0.44
22:RA:1425:G:H2'	22:RA:1426:G:C8	2.53	0.44
22:RA:1668:A:H4'	22:RA:1669:A:O5'	2.17	0.44
22:RA:2111:C:H5	22:RA:2147:G:H22	1.65	0.44
22:RA:2495:G:H5''	33:RQ:81:VAL:HG13	1.98	0.44
22:RA:2634:G:C6	22:RA:2635:C:C4	3.05	0.44
22:RA:2662:A:C5	22:RA:2663:G:H1'	2.53	0.44
22:RA:590:A:H2'	22:RA:591:C:C6	2.52	0.44

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
24:RD:65:ILE:H	24:RD:65:ILE:HD13	1.82	0.44
22:RA:2679:A:H4'	25:RE:165:VAL:HG11	1.99	0.44
27:RG:171:ALA:O	27:RG:175:LEU:HG	2.18	0.44
27:RG:51:ARG:O	27:RG:53:LEU:N	2.48	0.44
28:RH:28:GLY:HA3	28:RH:79:VAL:HB	2.00	0.44
22:RA:1191:G:OP1	32:RP:32:THR:HB	2.17	0.44
42:RZ:8:TYR:HB2	42:RZ:38:TYR:CE2	2.52	0.44
42:RZ:54:HIS:CD2	42:RZ:101:PRO:HG3	2.52	0.44
42:RZ:82:ARG:HA	42:RZ:83:PRO:HD3	1.89	0.44
1:XA:1095:U:P	1:XA:1108:G:H1	2.41	0.44
1:XA:1124:G:C8	1:XA:1145:C:C5	3.05	0.44
1:XA:1280:A:HO2'	1:XA:1281:U:P	2.35	0.44
1:XA:1364:U:C6	21:XU:14:TRP:HH2	2.35	0.44
1:XA:160:A:H2'	1:XA:161:A:O4'	2.17	0.44
1:XA:271:C:H2'	1:XA:272:C:C6	2.52	0.44
1:XA:329:A:C2	1:XA:332:G:C4	3.05	0.44
9:XI:95:LYS:HZ3	9:XI:96:LEU:HD13	1.83	0.44
12:XL:42:THR:HA	12:XL:53:ARG:O	2.18	0.44
15:XO:39:LEU:HD13	15:XO:56:LEU:HB2	2.00	0.44
47:Y4:48:ARG:CZ	47:Y4:51:ASP:HA	2.47	0.44
49:Y6:34:LEU:HD13	49:Y6:34:LEU:H	1.83	0.44
49:Y6:7:ILE:HD12	49:Y6:7:ILE:HA	1.85	0.44
22:YA:1026:U:H1'	22:YA:1027:A:O5'	2.18	0.44
22:YA:1045:A:N3	22:YA:1047:G:N2	2.66	0.44
22:YA:1077:A:H3'	22:YA:1078:U:C5'	2.47	0.44
22:YA:2041:U:H2'	22:YA:2042:A:H8	1.83	0.44
22:YA:2209:C:O2	22:YA:2216:G:C2	2.70	0.44
22:YA:2216:G:H2'	22:YA:2217:G:H8	1.82	0.44
22:YA:2592:G:C6	22:YA:2593:U:C2	3.06	0.44
22:YA:480:A:H1'	41:YY:44:ILE:HG12	1.98	0.44
26:YF:63:LYS:HE3	26:YF:65:TRP:O	2.18	0.44
35:YS:43:GLU:HG3	43:Y0:49:LYS:NZ	2.32	0.44
35:YS:88:ASP:HB3	35:YS:89:ARG:H	1.47	0.44
36:YT:48:ILE:H	36:YT:48:ILE:HD12	1.83	0.44
22:YA:482:A:H4'	41:YY:47:LYS:HD2	2.00	0.44
41:YY:51:VAL:O	41:YY:56:PRO:HA	2.18	0.44
1:QA:1061:G:OP1	10:QJ:59:SER:OG	2.34	0.44
1:QA:1237:C:H5''	1:QA:1238:A:O4'	2.18	0.44
1:QA:1442:G:C5	1:QA:1446:A:C6	3.05	0.44
1:QA:35:G:C6	1:QA:36:C:N4	2.86	0.44
5:QE:100:VAL:HG22	5:QE:118:ILE:HG22	1.99	0.44
10:QJ:47:PHE:HE1	10:QJ:63:PHE:HB2	1.83	0.44

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
12:QL:71:PRO:HG3	12:QL:99:HIS:HD2	1.82	0.44
16:QP:23:ASP:O	16:QP:26:ARG:HB2	2.17	0.44
49:R6:40:CYS:HA	49:R6:41:PRO:HD2	1.85	0.44
49:R6:41:PRO:HD2	49:R6:46:HIS:H	1.83	0.44
22:RA:467:G:OP1	50:R7:33:ARG:NH1	2.51	0.44
22:RA:1153:C:H2'	22:RA:1154:G:O4'	2.17	0.44
22:RA:1535:U:C2	22:RA:1536:A:N7	2.86	0.44
22:RA:1593:G:C2	22:RA:1594:G:C5	3.06	0.44
22:RA:1593:G:H2'	22:RA:1594:G:C8	2.53	0.44
22:RA:1777:U:O2'	22:RA:1778:U:H5'	2.18	0.44
22:RA:1803:A:H4'	24:RD:259:THR:CG2	2.47	0.44
22:RA:2816:C:H2'	22:RA:2817:G:C8	2.52	0.44
23:RB:15:A:H1'	23:RB:109:G:C4	2.53	0.44
24:RD:34:VAL:HG22	24:RD:35:LYS:HG3	2.00	0.44
26:RF:9:ILE:HA	26:RF:10:PRO:HD3	1.89	0.44
26:RF:117:ARG:HH12	32:RP:1:MET:N	2.16	0.44
27:RG:95:ARG:O	27:RG:99:MET:HG2	2.18	0.44
29:RI:130:TYR:C	29:RI:131:LYS:HD2	2.38	0.44
29:RI:69:LYS:HG2	29:RI:70:GLU:N	2.33	0.44
34:RR:54:LEU:HD23	34:RR:66:VAL:HG23	1.98	0.44
36:RT:107:ASP:O	36:RT:111:ARG:NH1	2.51	0.44
38:RV:16:PRO:HB3	38:RV:97:LYS:O	2.17	0.44
38:RV:49:THR:HB	38:RV:50:PRO:HD2	1.99	0.44
40:RX:57:LEU:HD11	40:RX:78:LYS:HD2	1.99	0.44
42:RZ:181:GLU:HB3	42:RZ:182:LYS:HD3	2.00	0.44
1:XA:1095:U:H2'	1:XA:1096:C:C6	2.52	0.44
1:XA:1316:G:O2'	1:XA:1318:A:N7	2.37	0.44
1:XA:57:G:N2	1:XA:355:C:O2	2.51	0.44
1:XA:724:G:C2	1:XA:725:G:C8	3.05	0.44
1:XA:870:U:H5''	1:XA:871:U:OP1	2.17	0.44
1:XA:958:A:N6	1:XA:959:A:N1	2.66	0.44
12:XL:39:VAL:HG12	12:XL:41:ARG:HG3	2.00	0.44
13:XM:23:TYR:HE1	13:XM:70:LEU:HD12	1.83	0.44
1:XA:1308:U:H5''	13:XM:98:VAL:HG23	1.99	0.44
15:XO:26:GLU:HG2	15:XO:26:GLU:H	1.54	0.44
16:XP:18:ARG:NH1	16:XP:32:TYR:OH	2.50	0.44
47:Y4:35:VAL:C	47:Y4:37:SER:H	2.20	0.44
51:Y8:49:VAL:HG23	51:Y8:53:PRO:HB3	2.00	0.44
22:YA:1042:G:C6	22:YA:1043:C:C4	3.06	0.44
22:YA:1337:G:C4	22:YA:1338:G:C8	3.06	0.44
22:YA:1382:G:C4	22:YA:1383:C:H5	2.34	0.44
22:YA:1980:G:O2'	22:YA:1982:C:OP2	2.35	0.44

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:YA:2169:A:C6	22:YA:2170:A:C6	3.06	0.44
22:YA:692:C:HO2'	22:YA:1354:A:HO2'	1.64	0.44
22:YA:987:G:C6	22:YA:988:A:C4	3.06	0.44
23:YB:114:G:H2'	23:YB:115:G:O4'	2.18	0.44
24:YD:61:LEU:HA	24:YD:61:LEU:HD13	1.91	0.44
24:YD:85:ASP:HB2	24:YD:92:ILE:HD13	1.99	0.44
27:YG:98:ARG:O	27:YG:101:ILE:HG13	2.17	0.44
32:YP:62:LEU:HB2	51:Y8:30:ARG:HH11	1.83	0.44
22:YA:483:A:O2'	41:YY:48:ALA:O	2.36	0.44
42:YZ:5:LEU:HB3	42:YZ:6:LYS:H	1.52	0.44
1:QA:1264:C:O2	1:QA:1272:G:N2	2.51	0.44
1:QA:179:A:H2'	1:QA:180:U:H6	1.83	0.44
1:QA:560:U:H4'	1:QA:561:U:O5'	2.17	0.44
1:QA:687:A:H4'	1:QA:688:G:O5'	2.17	0.44
1:QA:991:U:O2	1:QA:993:G:H8	2.01	0.44
9:QI:16:ARG:O	9:QI:63:ILE:HA	2.17	0.44
1:QA:44:G:OP2	16:QP:12:LYS:HE2	2.18	0.44
52:R9:24:TYR:CE2	52:R9:35:ARG:HG3	2.53	0.44
22:RA:30:G:O2'	22:RA:1214:A:N3	2.43	0.44
22:RA:1582:C:N4	22:RA:1583:A:N7	2.66	0.44
22:RA:2111:C:N3	22:RA:2118:U:O2'	2.50	0.44
22:RA:601:C:O2	22:RA:605:C:H4'	2.18	0.44
22:RA:952:G:C6	22:RA:966:G:C6	3.06	0.44
24:RD:85:ASP:HA	24:RD:86:PRO:HD2	1.72	0.44
27:RG:95:ARG:C	27:RG:99:MET:HG2	2.38	0.44
28:RH:123:PHE:O	28:RH:125:VAL:HG23	2.18	0.44
31:RO:22:ILE:HA	31:RO:22:ILE:HD13	1.77	0.44
32:RP:140:ALA:O	32:RP:141:ALA:HB2	2.17	0.44
33:RQ:83:MET:HB2	43:R0:7:LEU:HD12	2.00	0.44
40:RX:87:GLN:O	40:RX:88:LYS:HG3	2.18	0.44
42:RZ:101:PRO:HA	42:RZ:123:ASP:HA	1.99	0.44
42:RZ:127:LYS:HB3	42:RZ:162:GLU:HB3	2.00	0.44
42:RZ:177:PRO:HB2	42:RZ:178:GLU:H	1.62	0.44
1:XA:134:A:H61	16:XP:25:ARG:HH12	1.63	0.44
1:XA:1517:G:N3	22:YA:1919:A:O2'	2.36	0.44
1:XA:371:G:H2'	1:XA:372:C:O4'	2.18	0.44
1:XA:625:G:H2'	1:XA:626:U:C6	2.53	0.44
1:XA:954:G:C6	1:XA:955:U:C4	3.06	0.44
3:XC:47:LEU:HA	3:XC:47:LEU:HD12	1.83	0.44
15:XO:77:ARG:HA	15:XO:80:ALA:HB3	1.99	0.44
16:XP:39:TYR:CZ	16:XP:41:PRO:HB3	2.53	0.44
22:YA:1210:A:C5'	22:YA:1210:A:C8	3.00	0.44

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:YA:1449:A:C6	22:YA:1449(A):G:C4	3.06	0.44
22:YA:1581:G:C6	22:YA:1582:C:C4	3.06	0.44
22:YA:2557:G:H5''	22:YA:2557:G:H8	1.83	0.44
22:YA:2734:A:H3'	22:YA:2735:G:H8	1.83	0.44
22:YA:2795:G:N2	22:YA:2799:A:OP2	2.50	0.44
22:YA:554:U:HO2'	22:YA:556:G:H8	1.58	0.44
23:YB:12:C:O2	43:Y0:74:ARG:HD2	2.17	0.44
22:YA:1792:G:OP1	24:YD:206:LEU:HB2	2.18	0.44
25:YE:105:THR:OG1	25:YE:199:ARG:NH1	2.50	0.44
26:YF:47:GLY:HA3	26:YF:95:ARG:O	2.18	0.44
27:YG:10:LYS:HE2	27:YG:175:LEU:O	2.18	0.44
29:YI:2:LYS:HG2	29:YI:20:ASP:HB3	2.00	0.44
1:QA:927:G:H1	1:QA:1390:U:H3	1.65	0.44
1:QA:358:U:H2'	1:QA:359:U:C6	2.52	0.44
1:QA:392:G:H2'	1:QA:393:A:C8	2.51	0.44
1:QA:793:U:H3'	1:QA:794:A:H5''	2.00	0.44
1:QA:814:A:N7	1:QA:816:A:C4	2.85	0.44
1:QA:1119:C:OP1	9:QI:83:ARG:NH1	2.51	0.44
10:QJ:54:PHE:HB3	10:QJ:55:LYS:H	1.69	0.44
53:QV:1:C:H2'	53:QV:2:G:H8	1.83	0.44
53:QV:54:U:C5	53:QV:55:U:C4	3.06	0.44
48:R5:16:ARG:HD2	48:R5:20:ARG:NH1	2.33	0.44
22:RA:1039:G:H1	22:RA:1116:C:H42	1.65	0.44
22:RA:1751:C:O2'	22:RA:1752:C:H5'	2.18	0.44
22:RA:244:A:H2'	22:RA:245:G:O4'	2.18	0.44
22:RA:2491:U:H1'	22:RA:2569:G:O3'	2.18	0.44
22:RA:2850:A:C2	22:RA:2851:A:C4	3.06	0.44
22:RA:301:G:H1'	22:RA:302:C:C6	2.53	0.44
22:RA:997:G:OP1	37:RU:93:LYS:HB2	2.18	0.44
34:RR:27:SER:HB3	34:RR:34:ILE:HD11	1.99	0.44
35:RS:19:LYS:O	35:RS:20:ARG:HB3	2.18	0.44
41:RY:81:LYS:HB2	41:RY:96:ILE:CG2	2.48	0.44
42:RZ:59:LEU:O	42:RZ:60:GLU:HB3	2.17	0.44
1:XA:1108:G:H5'	3:XC:176:HIS:ND1	2.33	0.44
1:XA:253:U:H2'	1:XA:254:G:C8	2.53	0.44
1:XA:373:A:H2'	1:XA:374:A:H8	1.82	0.44
1:XA:652:U:O2	1:XA:652:U:H2'	2.18	0.44
3:XC:108:ASN:HB3	3:XC:111:LEU:HD12	2.00	0.44
6:XF:33:TYR:HB2	6:XF:75:LEU:HD12	1.99	0.44
11:XK:19:ALA:HB2	11:XK:32:ILE:HG22	2.00	0.44
44:Y1:70:VAL:O	44:Y1:73:LEU:HB2	2.18	0.44
22:YA:76:C:H1'	45:Y2:62:THR:HG21	1.99	0.44

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
49:Y6:41:PRO:HD2	49:Y6:46:HIS:H	1.81	0.44
22:YA:1496:A:H2'	22:YA:1577:C:O2'	2.18	0.44
22:YA:2283:C:C2	22:YA:2389:G:C2	3.06	0.44
22:YA:830:G:N2	22:YA:2445:G:O2'	2.47	0.44
22:YA:2516:G:C6	22:YA:2517:C:C4	3.05	0.44
22:YA:2776:A:C6	22:YA:2778:A:C6	3.06	0.44
27:YG:47:LYS:HB2	27:YG:47:LYS:HE3	1.73	0.44
40:YX:70:LEU:H	40:YX:70:LEU:HD23	1.83	0.44
1:QA:115:G:H4'	1:QA:116:A:O5'	2.17	0.43
1:QA:1394:A:H61	1:QA:1500:A:HO2'	1.65	0.43
1:QA:404:U:H2'	1:QA:405:U:C6	2.44	0.43
1:QA:963:G:H1	1:QA:972:C:H42	1.64	0.43
4:QD:155:LEU:O	4:QD:159:ARG:HG2	2.18	0.43
7:QG:116:ALA:HA	7:QG:119:ARG:HE	1.83	0.43
1:QA:976:G:P	14:QN:32:SER:H	2.41	0.43
49:R6:28:ARG:HG3	49:R6:31:PRO:HD2	2.00	0.43
22:RA:1025:G:C4	22:RA:1135:C:H1'	2.52	0.43
22:RA:1022:G:H22	22:RA:1142(A):A:H2	1.65	0.43
22:RA:1014:U:H3	22:RA:1148:A:H61	1.66	0.43
22:RA:579:G:O2'	22:RA:2019:A:OP1	2.32	0.43
22:RA:2612:C:C5	22:RA:2613:U:H5	2.36	0.43
22:RA:2734:A:C8	22:RA:2735:G:C8	3.06	0.43
22:RA:2740:A:N6	22:RA:2764:A:C8	2.86	0.43
22:RA:2869:G:H8	22:RA:2869:G:O5'	2.01	0.43
22:RA:80:G:O2'	22:RA:294:A:N1	2.47	0.43
22:RA:396:G:H8	22:RA:396:G:O5'	2.01	0.43
22:RA:588:U:H2'	22:RA:589:C:C6	2.52	0.43
22:RA:918:A:O2'	23:RB:96:G:N2	2.51	0.43
24:RD:145:VAL:HG11	24:RD:175:LEU:HD11	2.00	0.43
22:RA:2788:C:OP1	25:RE:61:ARG:NH1	2.51	0.43
29:RI:80:PRO:HA	29:RI:143:SER:O	2.17	0.43
22:RA:1188:U:H4'	38:RV:79:VAL:HG22	1.99	0.43
1:XA:1162:C:C2	1:XA:1175:G:C2	3.06	0.43
1:XA:1271:G:H2'	1:XA:1272:G:H5''	2.00	0.43
1:XA:554:C:H2'	1:XA:555:C:H6	1.83	0.43
1:XA:95:G:H3'	1:XA:96:G:C8	2.51	0.43
7:XG:36:LYS:HB2	7:XG:36:LYS:HZ2	1.83	0.43
12:XL:24:VAL:O	12:XL:26:ALA:N	2.47	0.43
16:XP:45:THR:HG22	16:XP:47:ASP:N	2.26	0.43
1:XA:1220:G:N2	19:XS:54:GLY:O	2.48	0.43
22:YA:1924:C:H4'	53:XV:13:C:O2'	2.17	0.43
44:Y1:94:LEU:HD23	44:Y1:94:LEU:HA	1.81	0.43

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
45:Y2:31:GLU:HB2	45:Y2:53:LEU:HD11	2.00	0.43
22:YA:2815:C:H5'	48:Y5:29:THR:HG21	2.00	0.43
22:YA:1011:G:C2	22:YA:1151:G:N3	2.85	0.43
22:YA:1111:A:O2'	22:YA:1112:G:H4'	2.17	0.43
22:YA:1319:G:C2	22:YA:1334:G:C5	3.05	0.43
22:YA:1332:G:H2'	22:YA:1332:G:H8	1.54	0.43
22:YA:1360:A:H2'	22:YA:1361:G:O4'	2.18	0.43
22:YA:1568:G:H5'	24:YD:59:LYS:O	2.17	0.43
22:YA:1972:A:H2'	22:YA:1973:G:H8	1.82	0.43
22:YA:2387:U:H1'	43:Y0:41:ARG:NH2	2.33	0.43
22:YA:363(B):G:H2'	22:YA:363(C):G:C8	2.52	0.43
22:YA:389:G:H22	32:YP:72:PRO:CD	2.31	0.43
22:YA:656:G:H2'	22:YA:657:U:C6	2.53	0.43
23:YB:106:G:C6	23:YB:107:U:C4	3.06	0.43
22:YA:1803:A:H4'	24:YD:259:THR:HG23	2.00	0.43
25:YE:37:ARG:O	25:YE:45:THR:HA	2.18	0.43
26:YF:66:PRO:O	26:YF:68:LYS:N	2.51	0.43
28:YH:4:ILE:HG12	28:YH:4:ILE:H	1.59	0.43
28:YH:67:LEU:O	28:YH:71:LEU:HB2	2.17	0.43
32:YP:126:VAL:HG12	32:YP:147:LEU:CD2	2.48	0.43
22:YA:896:A:C8	42:YZ:146:ILE:HD12	2.52	0.43
1:QA:1266:G:N2	1:QA:1270:C:N3	2.66	0.43
1:QA:1388:C:H2'	1:QA:1389:C:H6	1.82	0.43
1:QA:153:C:H6	1:QA:153:C:O5'	2.01	0.43
1:QA:271:C:H2'	1:QA:272:C:H6	1.83	0.43
1:QA:518:C:H4'	1:QA:519:C:H5''	2.00	0.43
1:QA:74:C:H42	1:QA:96:G:H1	1.66	0.43
10:QJ:51:ARG:NE	10:QJ:60:ARG:O	2.45	0.43
22:RA:1213:A:N3	22:RA:1238:G:O2'	2.46	0.43
22:RA:1310:G:H1	22:RA:1604:C:N4	2.12	0.43
22:RA:923:C:O5'	22:RA:923:C:H6	2.01	0.43
25:RE:143:ASN:HD22	25:RE:147:PRO:HD3	1.83	0.43
32:RP:37:GLY:O	32:RP:40:SER:OG	2.26	0.43
40:RX:67:GLY:O	40:RX:69:TYR:N	2.43	0.43
41:RY:42:VAL:O	41:RY:65:ALA:N	2.45	0.43
1:XA:1216:G:H5''	14:XN:5:ALA:HB2	1.99	0.43
1:XA:414:A:C6	1:XA:431:A:C2	3.06	0.43
1:XA:517:G:H4'	1:XA:519:C:C6	2.54	0.43
1:XA:564:C:C4	17:XQ:31:LEU:HD11	2.53	0.43
5:XE:9:LYS:HE3	5:XE:9:LYS:HB2	1.89	0.43
10:XJ:32:ALA:H	10:XJ:78:ASN:ND2	2.16	0.43
16:XP:4:ILE:HB	16:XP:66:PRO:HB3	2.00	0.43

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
19:XS:64:GLU:O	47:Y4:55:ARG:NH1	2.51	0.43
1:XA:1305:G:C5'	21:XU:4:GLY:HA3	2.46	0.43
44:Y1:25:LYS:C	44:Y1:27:GLU:H	2.22	0.43
32:YP:61:ARG:NH1	51:Y8:56:GLU:OE2	2.49	0.43
22:YA:1058:G:O5'	22:YA:1060:U:H5	2.01	0.43
22:YA:942:G:O2'	22:YA:1189:A:N3	2.41	0.43
22:YA:1476:C:H2'	22:YA:1477:A:O4'	2.18	0.43
22:YA:1795:C:H2'	22:YA:1796:U:O4'	2.17	0.43
22:YA:1853:A:C6	22:YA:1889:A:C5	3.06	0.43
22:YA:2350:C:H5	51:Y8:42:ARG:NH1	2.17	0.43
22:YA:2512:C:H2'	22:YA:2513:G:O4'	2.17	0.43
22:YA:2655:G:O2'	22:YA:2664:G:O6	2.36	0.43
22:YA:2871:C:H5''	22:YA:2872:G:OP1	2.18	0.43
22:YA:310:A:C4	22:YA:312:G:C8	3.05	0.43
22:YA:414:C:H1'	22:YA:1864:U:H1'	2.01	0.43
29:YI:46:ALA:C	29:YI:50:ARG:HD3	2.38	0.43
34:YR:38:VAL:HG22	34:YR:112:ALA:HB2	2.00	0.43
36:YT:35:LYS:H	36:YT:35:LYS:HD2	1.83	0.43
22:YA:65:C:H5'	40:YX:71:GLY:HA3	2.00	0.43
1:QA:927:G:H2'	1:QA:928:G:O4'	2.18	0.43
1:QA:937:A:O5'	1:QA:937:A:H8	2.02	0.43
2:QB:167:PRO:HG3	2:QB:188:ALA:HB2	2.00	0.43
2:QB:74:LYS:O	2:QB:78:GLN:HG3	2.18	0.43
3:QC:81:GLY:O	3:QC:85:ARG:HB2	2.18	0.43
4:QD:133:VAL:HG12	4:QD:135:LEU:H	1.83	0.43
7:QG:113:GLU:HG2	7:QG:113:GLU:H	1.39	0.43
7:QG:9:VAL:HG13	7:QG:94:ARG:NH2	2.27	0.43
11:QK:19:ALA:HB2	11:QK:32:ILE:HG22	2.00	0.43
13:QM:3:ARG:NH1	27:RG:113:ARG:NH2	2.66	0.43
1:QA:1223:C:P	19:QS:78:ARG:HH12	2.41	0.43
20:QT:16:HIS:O	20:QT:19:SER:HB3	2.18	0.43
22:RA:2364:C:H2'	22:RA:2365:G:O4'	2.18	0.43
22:RA:2518:A:H4'	22:RA:2519:U:OP1	2.14	0.43
22:RA:1462:C:H4'	22:RA:2703:C:H5'	2.00	0.43
22:RA:2766:G:H2'	22:RA:2766:G:N3	2.34	0.43
22:RA:888:C:C2'	22:RA:889:C:H4'	2.48	0.43
25:RE:119:ARG:HD3	25:RE:160:TYR:HB2	2.00	0.43
29:RI:94:ALA:N	29:RI:116:LEU:HD13	2.31	0.43
29:RI:57:ARG:O	29:RI:61:ARG:HG2	2.18	0.43
30:RN:33:LEU:HA	30:RN:38:HIS:CE1	2.53	0.43
33:RQ:136:ALA:O	33:RQ:138:ASP:N	2.46	0.43
22:RA:960:A:H61	33:RQ:82:ARG:NH1	2.16	0.43

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:QA:1446:A:C5	36:RT:118:ARG:NH1	2.87	0.43
36:RT:19:LEU:HA	36:RT:20:PRO:HD3	1.86	0.43
22:RA:1614:A:N1	39:RW:91:GLY:HA2	2.34	0.43
22:RA:483:A:H1'	41:RY:59:GLY:O	2.19	0.43
41:RY:97:ARG:HE	41:RY:98:VAL:HB	1.83	0.43
42:RZ:48:PHE:O	42:RZ:52:SER:HB3	2.18	0.43
1:XA:1318:A:H4'	19:XS:11:VAL:CG1	2.48	0.43
1:XA:1460:A:H2'	1:XA:1461:G:O4'	2.18	0.43
1:XA:250:A:H5'	1:XA:252:U:O4'	2.18	0.43
1:XA:256:U:H2'	1:XA:257:G:O4'	2.18	0.43
1:XA:374:A:C6	1:XA:375:U:C4	3.06	0.43
2:XB:80:ILE:HG21	2:XB:212:GLN:HA	2.00	0.43
3:XC:72:LYS:HB3	3:XC:75:VAL:HG23	2.00	0.43
4:XD:100:ARG:NH1	4:XD:137:SER:HB3	2.33	0.43
10:XJ:54:PHE:CZ	10:XJ:55:LYS:HE3	2.54	0.43
12:XL:62:SER:C	12:XL:64:TYR:H	2.21	0.43
13:XM:14:ARG:H	13:XM:44:ARG:CD	2.25	0.43
17:XQ:62:SER:HB3	17:XQ:72:ARG:HE	1.84	0.43
1:XA:1312:G:H5''	47:Y4:67:TYR:OH	2.17	0.43
52:Y9:1:MET:O	52:Y9:34:GLN:HG2	2.18	0.43
22:YA:2756:U:H5''	52:Y9:19:ARG:HB3	2.00	0.43
22:YA:2638:G:N1	22:YA:2776:A:OP2	2.27	0.43
22:YA:467:G:OP2	50:Y7:34:ARG:NH1	2.51	0.43
22:YA:528:A:C3'	22:YA:528:A:C8	3.02	0.43
22:YA:547:A:H2'	22:YA:548:A:C8	2.54	0.43
22:YA:951:C:C2'	22:YA:952:G:H5'	2.48	0.43
24:YD:92:ILE:HD12	24:YD:104:TYR:CD2	2.54	0.43
27:YG:67:LYS:O	27:YG:67:LYS:HD2	2.17	0.43
30:YN:112:LEU:HG	30:YN:112:LEU:O	2.17	0.43
38:YV:52:VAL:O	38:YV:54:GLY:N	2.51	0.43
40:YX:72:LYS:HG2	40:YX:73:ARG:O	2.18	0.43
42:YZ:179:ASP:OD1	42:YZ:180:VAL:N	2.51	0.43
42:YZ:62:PRO:C	42:YZ:64:GLY:H	2.21	0.43
1:QA:319:G:C2	1:QA:320:C:C2	3.07	0.43
1:QA:397:A:H3'	1:QA:397:A:N3	2.32	0.43
1:QA:402:G:C6	1:QA:403:C:C4	3.06	0.43
1:QA:26:A:N6	1:QA:558:G:O2'	2.48	0.43
1:QA:768:A:N3	1:QA:1512:U:O2'	2.50	0.43
1:QA:904:C:C4	1:QA:905:U:C4	3.07	0.43
1:QA:890:G:O2'	1:QA:906:G:O6	2.25	0.43
1:QA:985:C:H2'	1:QA:986:A:C8	2.52	0.43
8:QH:13:ILE:O	8:QH:17:THR:HG23	2.19	0.43

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
17:QQ:60:ILE:HB	17:QQ:74:LEU:HD23	2.00	0.43
22:RA:1265:A:H3'	48:R5:19:ARG:NH1	2.33	0.43
22:RA:1492:G:H3'	22:RA:1493:C:H5'	1.99	0.43
22:RA:1727:U:H2'	22:RA:1728:G:O4'	2.18	0.43
22:RA:1952:A:C2	31:RO:22:ILE:HG23	2.54	0.43
22:RA:240:G:H2'	22:RA:241:A:C8	2.53	0.43
22:RA:2458:G:H4'	22:RA:2459:A:H8	1.82	0.43
22:RA:333:G:H5''	22:RA:334:C:OP2	2.18	0.43
22:RA:634:C:H2'	22:RA:635:C:H6	1.83	0.43
22:RA:668:G:H2'	22:RA:670:A:H62	1.83	0.43
22:RA:797:C:H2'	22:RA:798:G:C8	2.53	0.43
23:RB:80:U:C2	23:RB:81:G:N2	2.87	0.43
1:QA:713:G:OP1	24:RD:166:GLN:NE2	2.50	0.43
22:RA:2224:G:OP1	24:RD:268:ARG:HD3	2.18	0.43
29:RI:4:ILE:HA	29:RI:18:VAL:HA	2.01	0.43
1:XA:1355:G:H2'	1:XA:1356:G:C8	2.52	0.43
1:XA:1430:C:H2'	1:XA:1431:C:C6	2.53	0.43
1:XA:1480:G:C6	1:XA:1481:U:C2	3.06	0.43
1:XA:1489:G:H2'	1:XA:1490:C:O4'	2.18	0.43
1:XA:258:G:H1	1:XA:268:C:H42	1.65	0.43
1:XA:373:A:H2'	1:XA:374:A:C8	2.53	0.43
1:XA:657:G:C2	1:XA:658:G:C8	3.06	0.43
1:XA:883:C:C2'	1:XA:884:U:H5'	2.48	0.43
1:XA:903:G:H2'	1:XA:904:C:H6	1.83	0.43
2:XB:100:GLY:N	2:XB:176:GLU:OE2	2.47	0.43
4:XD:153:ARG:NH1	4:XD:181:MET:HB2	2.32	0.43
9:XI:118:LYS:O	9:XI:119:ALA:HB3	2.18	0.43
12:XL:110:VAL:CG2	12:XL:120:TYR:HB3	2.48	0.43
12:XL:58:VAL:O	12:XL:65:GLU:HA	2.18	0.43
12:XL:78:GLN:HB3	12:XL:79:GLU:H	1.68	0.43
14:XN:29:ARG:HD3	14:XN:40:CYS:HB2	1.99	0.43
20:XT:98:PRO:C	20:XT:100:ILE:H	2.21	0.43
43:Y0:37:LEU:HG	43:Y0:60:PHE:HA	2.01	0.43
43:Y0:27:GLU:HB2	43:Y0:69:PHE:CD1	2.53	0.43
13:XM:62:ASN:CG	47:Y4:49:PHE:HD2	2.20	0.43
22:YA:819:A:C4	22:YA:1189:A:C2	3.06	0.43
22:YA:1257:C:H4'	26:YF:83:PHE:CE2	2.53	0.43
22:YA:1812:A:H2'	22:YA:1813:G:C8	2.53	0.43
22:YA:1906:G:C2	22:YA:1925:C:O2	2.71	0.43
22:YA:199:A:O2'	22:YA:2433:A:N6	2.41	0.43
22:YA:228:A:C6	22:YA:230:U:C2	3.07	0.43
22:YA:2467:C:O2'	22:YA:2468:G:H5'	2.18	0.43

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:YA:2595:G:H5''	22:YA:2596:U:OP2	2.18	0.43
22:YA:2680:C:H2'	22:YA:2681:C:C5	2.54	0.43
22:YA:2783:G:O5'	22:YA:2783:G:H8	2.02	0.43
22:YA:2881:C:H2'	22:YA:2882:A:C8	2.53	0.43
22:YA:323:G:H1'	22:YA:1205:U:O2	2.19	0.43
22:YA:440:G:H2'	22:YA:441:U:O4'	2.18	0.43
22:YA:593:G:H1	22:YA:664:C:N4	2.17	0.43
22:YA:78:A:H2'	22:YA:79:G:C8	2.53	0.43
22:YA:802:A:H5''	22:YA:803:U:OP2	2.19	0.43
22:YA:825:C:H2'	22:YA:826:U:O4'	2.18	0.43
22:YA:817:C:H4'	22:YA:932:G:C5	2.53	0.43
25:YE:188:VAL:HG13	25:YE:188:VAL:O	2.19	0.43
25:YE:87:GLU:O	25:YE:89:ASP:N	2.50	0.43
26:YF:33:LEU:HD12	26:YF:33:LEU:HA	1.86	0.43
31:YO:88:ASN:ND2	31:YO:92:GLU:HB2	2.22	0.43
35:YS:39:ILE:HD12	35:YS:85:VAL:HG11	2.00	0.43
38:YV:55:ALA:HB2	38:YV:101:GLY:HA2	1.99	0.43
22:YA:1225:C:O2'	38:YV:85:LYS:HA	2.19	0.43
40:YX:53:LYS:H	40:YX:82:GLN:HB3	1.83	0.43
42:YZ:44:PHE:O	42:YZ:48:PHE:N	2.48	0.43
1:QA:1026:G:N2	1:QA:1028:C:OP1	2.52	0.43
1:QA:1004:A:H1'	1:QA:1036:G:N2	2.33	0.43
1:QA:1314:C:P	19:QS:6:LYS:HD2	2.59	0.43
1:QA:1347:G:N2	1:QA:1374:A:OP2	2.43	0.43
1:QA:1376:U:H2'	1:QA:1377:A:C8	2.53	0.43
1:QA:166:G:H2'	1:QA:167:G:H8	1.80	0.43
1:QA:296:U:H2'	1:QA:297:G:C8	2.53	0.43
1:QA:895:G:H1	1:QA:904:C:H42	1.66	0.43
1:QA:542:G:H5'	4:QD:41:GLY:HA3	2.00	0.43
10:QJ:76:ASN:HA	10:QJ:77:PRO:HD2	1.85	0.43
16:QP:20:VAL:HG21	16:QP:32:TYR:CE1	2.54	0.43
22:RA:1024:G:N1	22:RA:1025:G:C6	2.87	0.43
22:RA:11:G:H2'	22:RA:12:U:H5'	2.00	0.43
22:RA:1323:U:OP1	39:RW:98:LYS:NZ	2.43	0.43
22:RA:1686:C:C2	22:RA:1703:G:N2	2.86	0.43
22:RA:1689:A:H2'	22:RA:1690:A:C8	2.54	0.43
22:RA:1954:G:O2'	22:RA:1955:U:OP2	2.29	0.43
22:RA:2637:U:C4	22:RA:2638:G:C6	3.06	0.43
22:RA:2693:A:H2'	22:RA:2694:G:H8	1.84	0.43
22:RA:429:A:C6	22:RA:430:G:N1	2.87	0.43
22:RA:702:G:C6	22:RA:703:U:C4	3.06	0.43
22:RA:738:G:C6	22:RA:739:G:C2	3.06	0.43

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
23:RB:19:G:H2'	23:RB:20:C:O4'	2.19	0.43
22:RA:2744:G:H21	28:RH:143:GLN:NE2	2.16	0.43
36:RT:1:MET:O	36:RT:3:ARG:HG2	2.19	0.43
41:RY:47:LYS:O	41:RY:49:VAL:N	2.51	0.43
41:RY:46:LYS:HB2	41:RY:61:ILE:HG22	2.00	0.43
1:XA:812:C:H1'	1:XA:813:U:OP2	2.18	0.43
2:XB:215:LEU:HA	2:XB:215:LEU:HD22	1.73	0.43
1:XA:825:G:H1'	8:XH:2:LEU:HD21	2.00	0.43
10:XJ:44:VAL:HG13	10:XJ:66:ARG:HG2	1.99	0.43
15:XO:25:THR:HG21	15:XO:70:LEU:HB2	2.01	0.43
45:Y2:15:LYS:H	45:Y2:67:LYS:CE	2.32	0.43
46:Y3:51:ALA:HA	46:Y3:54:VAL:HG12	2.00	0.43
47:Y4:43:TYR:CD2	47:Y4:43:TYR:C	2.92	0.43
22:YA:1495:A:O2'	22:YA:1579:A:H5''	2.18	0.43
22:YA:1652:A:C2'	22:YA:1653:G:H5'	2.49	0.43
22:YA:1657:C:H4'	25:YE:133:LYS:HB3	2.00	0.43
22:YA:1831:G:H1	22:YA:1974:C:H42	1.67	0.43
22:YA:2373:G:H1	22:YA:2380:C:H42	1.65	0.43
22:YA:243:U:O2'	22:YA:244:A:H5'	2.18	0.43
22:YA:2648:C:H2'	22:YA:2649:U:C6	2.53	0.43
22:YA:2792:G:C6	22:YA:2805:G:C2	3.06	0.43
22:YA:2854:G:C6	22:YA:2864:G:N1	2.86	0.43
22:YA:285:C:H2'	22:YA:286:C:C6	2.53	0.43
22:YA:654:A:O2'	22:YA:654(A):G:OP2	2.34	0.43
22:YA:707:G:H8	22:YA:707:G:O5'	2.01	0.43
22:YA:724:U:H2'	22:YA:725:G:O4'	2.18	0.43
24:YD:132:PRO:HG3	24:YD:190:TYR:CE1	2.54	0.43
26:YF:64:ILE:HG23	26:YF:65:TRP:CD1	2.53	0.43
22:YA:2653:U:O2'	28:YH:110:SER:HB2	2.18	0.43
31:YO:64:ARG:HG2	31:YO:79:PHE:CD1	2.53	0.43
32:YP:83:VAL:O	32:YP:114:ILE:HA	2.19	0.43
34:YR:33:ARG:HH21	48:Y5:55:ARG:HG2	1.82	0.43
41:YY:67:LEU:HA	41:YY:67:LEU:HD12	1.77	0.43
1:QA:1161:C:H2'	1:QA:1162:C:C6	2.51	0.43
1:QA:1337:G:H4'	1:QA:1338:G:OP1	2.19	0.43
1:QA:390:C:O3'	16:QP:28:ARG:NH2	2.47	0.43
1:QA:986:A:O2'	19:QS:55:LYS:O	2.37	0.43
2:QB:8:LYS:HE3	2:QB:11:LEU:HB3	2.01	0.43
2:QB:217:ARG:HE	2:QB:217:ARG:HB2	1.29	0.43
3:QC:11:ARG:HB3	3:QC:15:THR:HB	2.00	0.43
9:QI:116:LYS:HE2	9:QI:122:ALA:HB2	2.01	0.43
13:QM:3:ARG:HG2	47:R4:34:GLU:CG	2.47	0.43

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
17:QQ:63:ARG:HG2	17:QQ:64:PRO:HD2	2.00	0.43
18:QR:37:VAL:HG22	18:QR:78:LEU:HB3	2.01	0.43
43:R0:53:MET:HA	43:R0:58:THR:O	2.19	0.43
51:R8:58:ILE:HA	51:R8:61:LEU:HD21	2.01	0.43
22:RA:1268:A:H2'	22:RA:1269:A:O4'	2.18	0.43
22:RA:1523:U:O5'	22:RA:1523:U:H6	2.01	0.43
22:RA:2693:A:H2'	22:RA:2694:G:C8	2.54	0.43
22:RA:493:G:H2'	22:RA:494:G:O4'	2.19	0.43
22:RA:752:A:C5	22:RA:1781:C:O4'	2.72	0.43
22:RA:948:G:N2	22:RA:970:C:O2	2.51	0.43
29:RI:115:ALA:C	29:RI:117:GLU:H	2.18	0.43
22:RA:2562:U:O2'	31:RO:23:ARG:HD3	2.18	0.43
39:RW:20:VAL:HG22	39:RW:47:VAL:HG21	2.00	0.43
1:XA:1235:U:H2'	1:XA:1236:A:O4'	2.18	0.43
1:XA:1314:C:OP2	19:XS:4:SER:OG	2.37	0.43
1:XA:181:G:O2'	1:XA:182:U:O5'	2.36	0.43
1:XA:271:C:H2'	1:XA:272:C:H6	1.83	0.43
1:XA:731:G:OP1	1:XA:766:A:H1'	2.18	0.43
1:XA:734:G:C2	1:XA:735:C:C2	3.07	0.43
1:XA:914:A:H2'	1:XA:915:A:C8	2.51	0.43
2:XB:172:ILE:O	2:XB:175:ARG:HB3	2.18	0.43
2:XB:37:ASN:C	2:XB:39:ILE:H	2.20	0.43
1:XA:970:C:N4	9:XI:128:ARG:OXT	2.51	0.43
9:XI:8:GLY:HA2	9:XI:79:LEU:HD12	2.01	0.43
45:Y2:47:ASN:HB2	45:Y2:48:HIS:H	1.50	0.43
50:Y7:47:ARG:HB2	50:Y7:48:LYS:H	1.60	0.43
22:YA:1313:U:H2'	22:YA:1313:U:O2	2.18	0.43
22:YA:1827:C:H2'	22:YA:1828:G:O4'	2.18	0.43
22:YA:1920:C:H6	22:YA:1920:C:O5'	2.01	0.43
22:YA:2186:G:H2'	22:YA:2187:G:C8	2.54	0.43
22:YA:2205:C:O5'	22:YA:2205:C:H6	2.02	0.43
22:YA:2350:C:H2'	22:YA:2351:G:O4'	2.18	0.43
22:YA:2531:A:H2'	22:YA:2532:G:H8	1.83	0.43
22:YA:2764:A:N7	22:YA:2766:G:C6	2.86	0.43
22:YA:2634:G:N2	22:YA:2785:C:C2	2.87	0.43
22:YA:493:G:H2'	22:YA:494:G:O4'	2.18	0.43
29:YI:77:LEU:HD12	29:YI:104:GLN:HE22	1.83	0.43
22:YA:2094:G:OP1	29:YI:22:LYS:HD2	2.17	0.43
31:YO:88:ASN:OD1	31:YO:90:GLN:HB2	2.19	0.43
32:YP:113:LYS:HG2	32:YP:115:LEU:HD23	2.01	0.43
32:YP:126:VAL:HG22	32:YP:145:PRO:HG2	2.01	0.43
42:YZ:58:VAL:O	42:YZ:60:GLU:N	2.50	0.43

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:QA:1291:G:H4'	9:QI:38:GLN:O	2.18	0.43
1:QA:266:G:H5''	1:QA:267:C:H5	1.81	0.43
1:QA:376:G:H2'	1:QA:377:G:H8	1.84	0.43
4:QD:135:LEU:HD13	4:QD:135:LEU:HA	1.86	0.43
13:QM:44:ARG:HB2	13:QM:47:ASP:OD2	2.19	0.43
15:QO:17:ARG:HD3	15:QO:26:GLU:HG3	1.99	0.43
1:QA:1317:C:C2	19:QS:37:ARG:NH2	2.86	0.43
22:RA:1025:G:C5	22:RA:1135:C:H1'	2.54	0.43
22:RA:1173:G:H4'	22:RA:1174:A:C5	2.54	0.43
22:RA:1675:C:O5'	22:RA:1675:C:H6	2.01	0.43
22:RA:1726:G:H2'	22:RA:1727:U:O4'	2.19	0.43
22:RA:1799:G:H5'	22:RA:1819:A:H61	1.83	0.43
22:RA:2257:U:H2'	22:RA:2258:C:C6	2.53	0.43
22:RA:563:G:H22	22:RA:578:A:H2	1.66	0.43
22:RA:706:A:C2	22:RA:707:G:H1'	2.53	0.43
24:RD:35:LYS:HE3	24:RD:64:ILE:C	2.39	0.43
25:RE:36:ARG:HH21	25:RE:88:GLY:HA2	1.84	0.43
26:RF:9:ILE:HG23	26:RF:20:LEU:O	2.18	0.43
29:RI:128:LEU:HA	29:RI:128:LEU:HD13	1.57	0.43
30:RN:58:ASP:HB3	30:RN:95:PRO:HB3	2.00	0.43
32:RP:90:ARG:HB3	32:RP:91:PHE:H	1.68	0.43
37:RU:69:CYS:HB3	37:RU:106:PHE:CZ	2.53	0.43
41:RY:55:TYR:CD2	41:RY:55:TYR:N	2.86	0.43
1:XA:1422:G:H1	1:XA:1478:C:H42	1.65	0.43
1:XA:1504:G:OP1	1:XA:1507:A:H4'	2.19	0.43
1:XA:979:C:OP1	1:XA:1223:C:N4	2.52	0.43
13:XM:4:ILE:HG22	13:XM:5:ALA:N	2.34	0.43
22:YA:1697:G:OP2	22:YA:1698:A:O2'	2.23	0.43
22:YA:1932:A:H2	22:YA:1969:A:C2	2.36	0.43
22:YA:2133:G:H1'	22:YA:2158:A:N6	2.31	0.43
22:YA:2256:G:C6	22:YA:2257:U:C4	3.07	0.43
22:YA:2432:A:H2'	22:YA:2433:A:C8	2.54	0.43
22:YA:465:G:C6	22:YA:466:A:N6	2.87	0.43
22:YA:704:G:H2'	22:YA:726:G:H22	1.83	0.43
22:YA:748:G:OP2	39:YW:88:ARG:HG3	2.19	0.43
25:YE:119:ARG:HG2	25:YE:160:TYR:HB2	2.00	0.43
29:YI:37:VAL:HG12	29:YI:38:LEU:HD12	2.01	0.43
34:YR:34:ILE:HD13	34:YR:34:ILE:HA	1.72	0.43
34:YR:70:LEU:HA	34:YR:70:LEU:HD23	1.84	0.43
41:YY:80:GLY:O	41:YY:81:LYS:HG3	2.18	0.43
41:YY:87:LYS:HB2	41:YY:87:LYS:NZ	2.34	0.43
1:QA:1127:G:N2	1:QA:1145:C:O2'	2.52	0.43

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:QA:1129:C:C4'	1:QA:1130:A:H5'	2.49	0.43
1:QA:1346:A:C4	7:QG:10:ARG:NH1	2.86	0.43
1:QA:1522:U:H2'	1:QA:1523:G:C8	2.53	0.43
1:QA:486:U:H2'	1:QA:487:A:H8	1.84	0.43
1:QA:625:G:H2'	1:QA:626:U:C6	2.53	0.43
1:QA:781:A:C8	1:QA:782:A:C8	3.07	0.43
8:QH:105:ARG:HA	8:QH:105:ARG:HD3	1.78	0.43
8:QH:25:ASP:OD1	8:QH:25:ASP:N	2.50	0.43
11:QK:38:ASN:HA	11:QK:39:PRO:HD3	1.88	0.43
17:QQ:45:HIS:NE2	17:QQ:47:PRO:HG3	2.34	0.43
43:R0:7:LEU:N	43:R0:7:LEU:HD23	2.34	0.43
22:RA:1203:G:H3'	22:RA:1204:A:H5''	2.01	0.43
22:RA:1360:A:C6	22:RA:1372:U:C4	3.07	0.43
22:RA:1489:U:O3'	22:RA:1490:A:H8	2.01	0.43
22:RA:1510:A:N3	22:RA:1510:A:H2'	2.33	0.43
22:RA:2066:C:H2'	22:RA:2067:G:H5'	2.01	0.43
22:RA:2282:G:H5''	22:RA:2283:C:O4'	2.18	0.43
22:RA:2532:G:H2'	22:RA:2533:A:C8	2.53	0.43
22:RA:2867:G:O2'	22:RA:2868:A:O5'	2.30	0.43
22:RA:492:A:H2'	22:RA:493:G:O4'	2.19	0.43
22:RA:508:G:O2'	22:RA:509:C:P	2.77	0.43
23:RB:29:A:H2'	23:RB:30:C:C6	2.54	0.43
26:RF:23:ASP:OD1	26:RF:23:ASP:N	2.48	0.43
32:RP:18:ARG:HD2	32:RP:27:HIS:CD2	2.54	0.43
33:RQ:20:ALA:HA	33:RQ:98:LYS:HB3	2.00	0.43
22:RA:1188:U:C4'	38:RV:79:VAL:HG22	2.48	0.43
42:RZ:62:PRO:C	42:RZ:64:GLY:N	2.72	0.43
1:XA:1010:G:N2	1:XA:1020:U:H1'	2.34	0.43
1:XA:1213:A:C5	1:XA:1215:G:C4	3.06	0.43
1:XA:1219:U:H2'	1:XA:1220:G:O4'	2.18	0.43
1:XA:1439:C:N4	1:XA:1462:G:H1	2.17	0.43
1:XA:522:C:H41	12:XL:53:ARG:HH22	1.67	0.43
1:XA:627:G:O2'	1:XA:628:G:H5'	2.19	0.43
1:XA:662:G:H2'	1:XA:663:A:C8	2.53	0.43
2:XB:7:VAL:HG21	2:XB:217:ARG:NH1	2.34	0.43
7:XG:140:ASP:HA	7:XG:143:ARG:NH1	2.34	0.43
12:XL:59:ARG:NH1	12:XL:65:GLU:OE2	2.51	0.43
14:XN:27:CYS:SG	14:XN:29:ARG:HB2	2.58	0.43
45:Y2:17:SER:HB3	45:Y2:67:LYS:HE3	2.00	0.43
19:XS:5:LEU:CG	47:Y4:66:SER:CB	2.96	0.43
49:Y6:28:ARG:HH21	49:Y6:30:THR:HG23	1.84	0.43
22:YA:1360:A:N6	22:YA:1372:U:C5	2.87	0.43

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:YA:1449:A:H5'	22:YA:1449(A):G:OP2	2.19	0.43
22:YA:1903:G:OP2	24:YD:241:PRO:HB2	2.19	0.43
22:YA:2063:C:C4	22:YA:2064:C:C5	3.07	0.43
22:YA:2475:C:H3'	22:YA:2476:A:H5''	1.99	0.43
22:YA:382:G:H1	22:YA:392:C:H42	1.67	0.43
22:YA:950:G:H2'	22:YA:951:C:H6	1.84	0.43
25:YE:36:ARG:HH21	25:YE:88:GLY:CA	2.32	0.43
27:YG:145:THR:O	27:YG:147:ASP:N	2.44	0.43
32:YP:15:ARG:O	32:YP:17:LYS:HG3	2.19	0.43
32:YP:30:THR:O	32:YP:33:ARG:HB2	2.18	0.43
32:YP:5:ASP:O	32:YP:6:LEU:C	2.57	0.43
1:QA:1126:U:H6	1:QA:1126:U:H2'	1.66	0.43
1:QA:1239:A:O2'	1:QA:1298:C:N4	2.50	0.43
1:QA:147:G:N2	1:QA:148:G:C4	2.87	0.43
1:QA:444:C:H2'	1:QA:445:G:C8	2.49	0.43
1:QA:67:C:H2'	1:QA:68:G:C8	2.54	0.43
5:QE:18:ARG:HE	5:QE:18:ARG:HB3	1.51	0.43
9:QI:95:LYS:HZ1	9:QI:96:LEU:HD13	1.83	0.43
12:QL:85:ILE:HD12	12:QL:85:ILE:HA	1.75	0.43
15:QO:25:THR:HG21	15:QO:70:LEU:HB2	2.00	0.43
20:QT:84:LEU:HA	20:QT:84:LEU:HD23	1.86	0.43
53:QV:4:G:N3	53:QV:5:G:C8	2.87	0.43
22:RA:1075:C:H2'	22:RA:1076:C:C4'	2.49	0.43
22:RA:1203:G:O6	22:RA:1204:A:N6	2.52	0.43
22:RA:1834:U:O5'	22:RA:1834:U:H6	2.02	0.43
22:RA:1858:G:H1'	22:RA:1884:A:H61	1.83	0.43
22:RA:242:G:H2'	51:R8:5:LYS:HA	2.01	0.43
22:RA:2516:G:C6	22:RA:2569:G:C2	3.07	0.43
22:RA:2811:G:H8	22:RA:2811:G:H5''	1.83	0.43
22:RA:710:G:H2'	22:RA:711:G:H8	1.84	0.43
23:RB:49:C:H2'	23:RB:50:G:C8	2.54	0.43
25:RE:179:GLU:HB3	25:RE:181:LEU:HD22	1.99	0.43
26:RF:34:TRP:CE3	26:RF:35:GLU:HG2	2.54	0.43
27:RG:97:ASP:HA	27:RG:100:TRP:HD1	1.84	0.43
30:RN:61:ARG:HA	30:RN:61:ARG:HE	1.82	0.43
31:RO:104:ARG:HD3	36:RT:36:GLU:OE2	2.19	0.43
32:RP:65:ARG:O	32:RP:68:GLN:NE2	2.50	0.43
33:RQ:104:PHE:CE1	33:RQ:125:LEU:HD11	2.54	0.43
33:RQ:116:GLU:O	33:RQ:120:ILE:HG12	2.17	0.43
35:RS:88:ASP:CG	35:RS:89:ARG:H	2.21	0.43
36:RT:107:ASP:O	36:RT:110:ILE:HG22	2.19	0.43
1:XA:977:A:C8	1:XA:1223:C:N3	2.78	0.43

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:XA:1441:G:N2	1:XA:1461:G:O6	2.51	0.43
1:XA:154:C:H42	1:XA:167:G:H1	1.66	0.43
1:XA:181:G:HO2'	1:XA:182:U:P	2.42	0.43
1:XA:22:G:C5	1:XA:23:C:C4	3.07	0.43
1:XA:131:C:O2'	1:XA:262:A:N3	2.45	0.43
1:XA:427:U:C4	1:XA:428:G:C6	3.06	0.43
1:XA:719:C:H1'	18:XR:49:LYS:HB3	2.01	0.43
1:XA:741:G:H2'	1:XA:742:G:O4'	2.19	0.43
1:XA:953:G:C2	1:XA:954:G:H1'	2.53	0.43
2:XB:212:GLN:NE2	2:XB:216:SER:HB2	2.34	0.43
5:XE:69:VAL:O	5:XE:71:LEU:N	2.51	0.43
13:XM:3:ARG:HG2	47:Y4:34:GLU:CB	2.49	0.43
14:YN:6:LEU:HD23	14:YN:23:ARG:HH22	1.83	0.43
48:Y5:58:LEU:HD13	48:Y5:60:VAL:HB	2.01	0.43
48:Y5:58:LEU:HB2	48:Y5:60:VAL:H	1.83	0.43
22:YA:1767:C:H2'	22:YA:1768:U:O4'	2.18	0.43
22:YA:2335:A:O2'	22:YA:2336:A:H2'	2.18	0.43
22:YA:2634:G:H1	22:YA:2784:C:H42	1.67	0.43
22:YA:2788:C:OP1	25:YE:61:ARG:NH1	2.51	0.43
22:YA:671:C:H2'	22:YA:672:C:H6	1.84	0.43
22:YA:846:C:C2	22:YA:847:U:H5	2.37	0.43
22:YA:898:C:H5'	22:YA:899:A:OP2	2.18	0.43
22:YA:950:G:H1	22:YA:967:C:N4	2.16	0.43
22:YA:978:G:H2'	22:YA:979:G:O4'	2.19	0.43
32:YP:125:VAL:CG1	32:YP:138:LEU:HD21	2.49	0.43
32:YP:62:LEU:HB2	51:Y8:30:ARG:NH1	2.34	0.43
42:YZ:108:PRO:HB2	42:YZ:111:VAL:HG23	2.01	0.43
1:QA:1119:C:H2'	1:QA:1120:G:C8	2.53	0.43
1:QA:1172:C:H2'	1:QA:1173:G:H8	1.81	0.43
1:QA:1200:C:O2'	1:QA:1201:A:OP2	2.34	0.43
1:QA:1492:A:C6	1:QA:1493:A:N1	2.86	0.43
1:QA:530:G:HO2'	1:QA:531:U:P	2.40	0.43
1:QA:754:C:H5'	15:QO:72:ARG:NH2	2.34	0.43
8:QH:101:PRO:HG2	8:QH:133:LEU:HD11	2.01	0.43
9:QI:112:LYS:HD3	9:QI:113:LYS:O	2.18	0.43
18:QR:29:PHE:CD2	18:QR:29:PHE:N	2.87	0.43
18:QR:53:ARG:HH21	18:QR:60:ALA:N	2.17	0.43
19:QS:41:VAL:HG12	19:QS:44:MET:HB2	2.01	0.43
49:R6:7:ILE:HG13	49:R6:8:LYS:H	1.84	0.43
22:RA:1265:A:C8	22:RA:1267:U:C2	3.07	0.43
22:RA:1303:G:H1	22:RA:1625:C:H42	1.67	0.43
22:RA:176:G:C6	22:RA:177:G:N7	2.87	0.43

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:RA:242:G:H3'	51:R8:6:THR:HG23	1.99	0.43
22:RA:27:G:H1'	22:RA:513:A:H62	1.84	0.43
22:RA:372:G:N2	22:RA:400:G:H2'	2.34	0.43
22:RA:784:A:O4'	24:RD:227:ASN:ND2	2.52	0.43
25:RE:116:VAL:HG11	25:RE:138:PRO:HB3	2.01	0.43
25:RE:117:MET:HB2	25:RE:122:PHE:O	2.18	0.43
29:RI:88:ILE:H	29:RI:88:ILE:HG12	1.50	0.43
30:RN:89:LYS:O	30:RN:93:THR:HG22	2.19	0.43
41:RY:54:LYS:HB3	41:RY:55:TYR:CD2	2.53	0.43
42:RZ:163:LEU:HG	42:RZ:163:LEU:H	1.50	0.43
42:RZ:59:LEU:HB2	42:RZ:60:GLU:H	1.52	0.43
1:XA:1087:G:N2	1:XA:1099:G:H1'	2.33	0.43
1:XA:1240:U:OP2	7:XG:116:ALA:N	2.52	0.43
1:XA:1347:G:C8	9:XI:107:ARG:HB3	2.54	0.43
1:XA:622:A:C8	1:XA:623:C:C6	3.07	0.43
1:XA:690:G:C6	1:XA:691:G:C6	3.07	0.43
3:XC:149:ALA:HA	3:XC:201:TYR:O	2.18	0.43
4:XD:196:LEU:O	4:XD:198:VAL:N	2.51	0.43
12:XL:28:LYS:HB3	12:XL:30:ALA:HB2	2.01	0.43
12:XL:44:THR:HA	12:XL:45:PRO:HD3	1.68	0.43
1:XA:1220:G:H21	19:XS:54:GLY:CA	2.32	0.43
46:Y3:7:LYS:HE2	46:Y3:32:GLN:O	2.19	0.43
1:XA:1312:G:H5''	47:Y4:67:TYR:CE1	2.54	0.43
47:Y4:6:HIS:HA	47:Y4:7:PRO:HD2	1.82	0.43
49:Y6:41:PRO:HG2	49:Y6:45:LYS:N	2.29	0.43
22:YA:1059:G:H3'	22:YA:1060:U:H5''	2.01	0.43
22:YA:1084:A:H5'	22:YA:1085:A:OP2	2.18	0.43
22:YA:1289:C:C2	22:YA:1290:C:C5	3.07	0.43
22:YA:2314:C:H2'	22:YA:2315:G:C8	2.53	0.43
22:YA:2773:C:P	25:YE:166:THR:HG1	2.42	0.43
22:YA:425:G:N2	22:YA:426:C:C2	2.87	0.43
22:YA:630:G:H4'	22:YA:640:C:H4'	2.00	0.43
22:YA:729:G:O6	24:YD:209:ALA:N	2.41	0.43
22:YA:933:A:C5	22:YA:934:G:C8	3.07	0.43
23:YB:77:U:H2'	23:YB:78:A:H5'	2.01	0.43
25:YE:14:ILE:HG23	25:YE:15:PHE:N	2.34	0.43
25:YE:4:ILE:HD12	25:YE:28:ALA:HB1	2.01	0.43
33:YQ:45:GLN:H	33:YQ:45:GLN:CD	2.22	0.43
35:YS:83:LYS:HZ1	35:YS:109:GLY:HA2	1.83	0.43
38:YV:64:HIS:ND1	38:YV:92:THR:HG22	2.34	0.43
22:YA:1339:G:H5''	40:YX:16:LYS:HD3	2.01	0.43
42:YZ:133:ILE:H	42:YZ:133:ILE:HD12	1.84	0.43

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
42:YZ:144:LEU:HD11	42:YZ:149:SER:CB	2.49	0.43
1:QA:1306:A:C6	1:QA:1307:U:C2	3.06	0.42
1:QA:1394:A:N6	1:QA:1501:C:H5'	2.34	0.42
1:QA:451:A:N7	1:QA:481:G:N1	2.67	0.42
2:QB:21:ARG:HG3	2:QB:38:GLY:O	2.19	0.42
4:QD:108:LEU:HD21	4:QD:183:GLY:HA3	2.01	0.42
9:QI:17:VAL:HG11	9:QI:81:ILE:HD13	2.00	0.42
14:QN:47:LEU:HD23	14:QN:47:LEU:HA	1.74	0.42
49:R6:8:LYS:O	49:R6:27:LYS:HA	2.18	0.42
22:RA:1204:A:C2	22:RA:1241:A:C2	3.07	0.42
22:RA:1319:G:H1	22:RA:1333:C:N4	2.16	0.42
22:RA:1527:G:H2'	22:RA:1543:A:N1	2.32	0.42
22:RA:2376:A:H2'	22:RA:2377:A:O4'	2.19	0.42
22:RA:264:C:C2'	22:RA:265:A:H5''	2.49	0.42
22:RA:2676:C:O2	22:RA:2732:G:N2	2.44	0.42
22:RA:2676:C:H2'	22:RA:2677:G:H8	1.84	0.42
22:RA:360:G:H2'	22:RA:361:G:O4'	2.19	0.42
22:RA:370:G:H4'	22:RA:371:A:OP2	2.19	0.42
22:RA:394:A:H5''	22:RA:395:U:OP2	2.18	0.42
22:RA:452:G:H2'	22:RA:453:C:H6	1.83	0.42
22:RA:718:A:H3'	22:RA:719:C:C6	2.54	0.42
22:RA:86:C:H2'	22:RA:87:C:H6	1.84	0.42
23:RB:14:U:O3'	23:RB:107:U:O2'	2.33	0.42
25:RE:48:GLN:OE1	25:RE:64:LYS:NZ	2.52	0.42
28:RH:124:GLU:HB3	28:RH:132:ARG:CG	2.48	0.42
34:RR:113:LEU:HD12	34:RR:113:LEU:HA	1.88	0.42
42:RZ:68:PRO:O	42:RZ:91:LEU:HB2	2.19	0.42
1:XA:1149:C:H2'	1:XA:1150:U:C6	2.54	0.42
1:XA:116:A:H2'	1:XA:117:G:O4'	2.19	0.42
1:XA:1213:A:N1	1:XA:1215:G:H1'	2.34	0.42
1:XA:522:C:H41	12:XL:53:ARG:NH2	2.16	0.42
1:XA:554:C:H2'	1:XA:555:C:C6	2.53	0.42
1:XA:837:G:N2	1:XA:849:C:O2	2.51	0.42
1:XA:973:G:H3'	1:XA:974:A:C5'	2.48	0.42
5:XE:131:ILE:HD13	5:XE:131:ILE:HA	1.84	0.42
5:XE:42:GLY:CA	5:XE:66:MET:HG2	2.48	0.42
6:XF:30:LEU:HB3	6:XF:35:ALA:HB3	2.01	0.42
8:XH:13:ILE:O	8:XH:17:THR:HG23	2.19	0.42
10:XJ:6:ILE:HG22	10:XJ:98:ILE:HG23	2.01	0.42
18:XR:56:THR:HB	18:XR:58:LEU:HD12	2.01	0.42
47:Y4:14:ILE:HG13	47:Y4:31:ILE:HB	1.99	0.42
22:YA:1429:G:H2'	22:YA:1430:C:H6	1.82	0.42

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:YA:2360:A:H2'	22:YA:2361:A:O4'	2.19	0.42
22:YA:654(B):C:H42	22:YA:654(T):C:H42	1.67	0.42
22:YA:773:U:O2	22:YA:778:G:O2'	2.37	0.42
23:YB:79:C:H2'	23:YB:80:U:O4'	2.19	0.42
25:YE:111:ARG:HD2	25:YE:160:TYR:CE1	2.55	0.42
25:YE:201:THR:HG22	25:YE:203:LYS:H	1.83	0.42
27:YG:31:VAL:HA	27:YG:32:PRO:HD3	1.83	0.42
29:YI:92:VAL:O	29:YI:120:ILE:HG22	2.18	0.42
42:YZ:166:SER:H	42:YZ:167:PRO:HA	1.84	0.42
1:QA:1128:C:O2'	1:QA:1130:A:H8	2.01	0.42
1:QA:1355:G:H2'	1:QA:1356:G:O4'	2.19	0.42
1:QA:358:U:H2'	1:QA:359:U:H6	1.84	0.42
1:QA:374:A:C6	1:QA:375:U:C4	3.06	0.42
1:QA:424:G:O5'	1:QA:424:G:H8	2.01	0.42
1:QA:540:G:H2'	1:QA:541:G:C8	2.54	0.42
1:QA:877:C:H5''	8:QH:88:LYS:HD3	2.00	0.42
6:QF:99:ALA:HB1	18:QR:23:LYS:HZ2	1.83	0.42
15:QO:48:LYS:HA	15:QO:48:LYS:HD3	1.76	0.42
20:QT:87:LYS:HD2	20:QT:87:LYS:HA	1.68	0.42
55:QY:34:C:H2'	55:QY:35:G:C8	2.54	0.42
22:RA:1212:G:O2'	22:RA:1236:G:N2	2.46	0.42
22:RA:1502:C:H5'	22:RA:1503:U:OP2	2.18	0.42
22:RA:226:G:O2'	22:RA:227:A:O5'	2.34	0.42
22:RA:2355:C:O5'	22:RA:2355:C:H6	2.02	0.42
22:RA:2557:G:O2'	22:RA:2558:C:H5'	2.19	0.42
22:RA:470:A:C2	22:RA:471:A:C4	3.07	0.42
22:RA:966:G:H2'	22:RA:967:C:C6	2.54	0.42
24:RD:169:GLU:N	24:RD:172:TYR:O	2.52	0.42
26:RF:28:ILE:HG13	26:RF:28:ILE:H	1.68	0.42
22:RA:955:C:OP2	33:RQ:14:ARG:HD2	2.20	0.42
33:RQ:78:PRO:O	33:RQ:79:LEU:HB3	2.19	0.42
38:RV:64:HIS:CG	38:RV:92:THR:HG22	2.52	0.42
42:RZ:117:LEU:HA	42:RZ:174:VAL:HA	2.01	0.42
42:RZ:104:PHE:HA	42:RZ:139:VAL:HB	2.01	0.42
1:XA:1049:U:HO2'	14:XN:2:ALA:N	2.16	0.42
1:XA:1090:U:H2'	1:XA:1091:U:C6	2.54	0.42
1:XA:1152:A:H5'	10:XJ:13:HIS:CG	2.55	0.42
1:XA:1305:G:OP2	1:XA:1305:G:C8	2.72	0.42
1:XA:1352:C:N4	1:XA:1370:G:H1	2.10	0.42
1:XA:1427:U:H2'	1:XA:1428:A:C8	2.54	0.42
1:XA:390:C:H2'	1:XA:391:G:C8	2.54	0.42
1:XA:779:C:O2'	1:XA:780:A:H5'	2.18	0.42

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:XA:780:A:H1'	1:XA:803:G:N2	2.34	0.42
1:XA:825:G:C6	1:XA:826:C:C4	3.07	0.42
3:XC:85:ARG:HD2	3:XC:85:ARG:HA	1.83	0.42
8:XH:104:ARG:HD2	8:XH:138:TRP:CD2	2.53	0.42
49:Y6:15:GLU:HG2	49:Y6:49:HIS:NE2	2.34	0.42
50:Y7:25:PRO:HA	50:Y7:28:ARG:CZ	2.49	0.42
22:YA:1265:A:H3'	48:Y5:19:ARG:HH12	1.83	0.42
22:YA:1514:U:H2'	22:YA:1515:C:C6	2.54	0.42
22:YA:1686:C:H6	22:YA:1686:C:H5''	1.85	0.42
22:YA:1794:U:C2	22:YA:1795:C:C5	3.06	0.42
22:YA:1820:U:O2	24:YD:202:LYS:N	2.51	0.42
22:YA:1952:A:C6	22:YA:1953:A:N1	2.87	0.42
22:YA:2246:G:H1'	22:YA:2426:A:C2	2.55	0.42
22:YA:2404:C:O3'	32:YP:77:ARG:NH2	2.50	0.42
22:YA:273(F):C:H2'	22:YA:274:G:H5''	2.01	0.42
22:YA:363(F):A:H4'	22:YA:364:C:H5'	2.00	0.42
22:YA:776:G:C4'	22:YA:777:A:H5''	2.44	0.42
22:YA:778:G:C6	22:YA:779:U:C4	3.07	0.42
22:YA:875:G:N2	22:YA:903:C:C2	2.87	0.42
25:YE:201:THR:HG22	25:YE:203:LYS:N	2.34	0.42
28:YH:159:GLU:O	28:YH:160:LYS:HG2	2.19	0.42
30:YN:134:ARG:H	30:YN:135:PRO:HD3	1.83	0.42
30:YN:96:GLU:HG2	30:YN:97:ARG:H	1.84	0.42
39:YW:86:LEU:HD22	39:YW:96:ILE:HD12	2.01	0.42
42:YZ:33:LEU:HD12	42:YZ:34:ASN:H	1.84	0.42
1:QA:1015:A:C6	1:QA:1016:A:C6	3.07	0.42
1:QA:1053:G:O3'	1:QA:1054:C:H4'	2.19	0.42
1:QA:9:G:C4	1:QA:10:A:C8	3.08	0.42
1:QA:1424:C:H2'	1:QA:1425:U:O4'	2.19	0.42
1:QA:1453:G:H2'	20:QT:39:LYS:HZ3	1.82	0.42
1:QA:593:G:N2	1:QA:646:U:O2	2.37	0.42
1:QA:923:A:H2'	1:QA:924:C:O4'	2.20	0.42
2:QB:69:LEU:O	2:QB:162:ILE:HA	2.18	0.42
3:QC:112:SER:O	3:QC:116:VAL:HG23	2.20	0.42
3:QC:148:GLY:HA3	3:QC:172:ARG:O	2.18	0.42
6:QF:62:TRP:CH2	6:QF:64:GLN:HB2	2.55	0.42
7:QG:102:ARG:HG2	7:QG:106:GLN:OE1	2.20	0.42
9:QI:48:GLU:N	9:QI:49:PRO:HD2	2.35	0.42
17:QQ:29:HIS:CG	17:QQ:30:PRO:HD2	2.54	0.42
49:R6:35:GLU:HG2	49:R6:35:GLU:H	1.72	0.42
49:R6:45:LYS:HD3	49:R6:45:LYS:HA	1.75	0.42
22:RA:1238:G:O2'	22:RA:1239:G:H5'	2.20	0.42

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:RA:1591:G:C6	22:RA:1592:C:C4	3.07	0.42
22:RA:1673:U:H5''	22:RA:1674:G:OP2	2.19	0.42
22:RA:1826:G:C6	22:RA:1827:C:C4	3.08	0.42
22:RA:1947:C:H6	22:RA:1947:C:H5''	1.83	0.42
22:RA:2004:G:C6	22:RA:2005:A:C4	3.08	0.42
22:RA:2120:G:H2'	22:RA:2121:G:H8	1.81	0.42
22:RA:2205:C:O2'	22:RA:2227:A:N1	2.48	0.42
22:RA:2401:U:H2'	22:RA:2402:C:C6	2.54	0.42
22:RA:2489:G:C2'	22:RA:2490:G:H5'	2.49	0.42
22:RA:2854:G:C6	22:RA:2855:C:C4	3.07	0.42
22:RA:884:C:H41	22:RA:886:C:H1'	1.84	0.42
24:RD:245:PRO:HA	24:RD:246:PRO:HD3	1.95	0.42
28:RH:90:LYS:HE2	28:RH:90:LYS:HB3	1.91	0.42
30:RN:96:GLU:HB2	30:RN:122:VAL:HG12	2.00	0.42
35:RS:12:PHE:HD2	35:RS:12:PHE:HA	1.72	0.42
35:RS:39:ILE:HD11	35:RS:73:LEU:HD11	2.00	0.42
1:XA:1414:U:H2'	1:XA:1415:G:C8	2.51	0.42
1:XA:1519:A:N7	1:XA:1520:G:H1'	2.35	0.42
1:XA:375:U:O3'	16:XP:6:LEU:HB2	2.20	0.42
1:XA:833:U:H2'	1:XA:834:C:C6	2.55	0.42
6:XF:95:GLU:HA	6:XF:96:PRO:HD3	1.87	0.42
7:XG:38:LEU:HD12	7:XG:38:LEU:O	2.20	0.42
9:XI:32:ASP:OD1	9:XI:33:PHE:N	2.53	0.42
53:XV:2:G:H2'	53:XV:3:C:C6	2.54	0.42
44:Y1:58:ILE:HG23	44:Y1:87:PRO:HG3	2.02	0.42
47:Y4:60:GLN:O	47:Y4:63:TYR:HB3	2.20	0.42
51:Y8:52:LYS:N	51:Y8:53:PRO:HD2	2.33	0.42
22:YA:1636:C:H2'	22:YA:1637:A:C8	2.53	0.42
22:YA:1973:G:C6	22:YA:1974:C:C4	3.07	0.42
22:YA:2364:C:H2'	22:YA:2365:G:O4'	2.19	0.42
22:YA:2712:U:H2'	22:YA:2712(A):A:H3'	2.01	0.42
27:YG:103:LEU:HD23	27:YG:103:LEU:HA	1.83	0.42
27:YG:16:ARG:N	27:YG:17:PRO:HD2	2.34	0.42
28:YH:126:PRO:HG2	28:YH:128:PRO:HA	2.00	0.42
28:YH:126:PRO:HB2	28:YH:127:GLU:H	1.59	0.42
29:YI:133:HIS:HB2	29:YI:134:PRO:CD	2.50	0.42
33:YQ:76:LYS:HG3	33:YQ:77:LYS:N	2.35	0.42
35:YS:60:GLY:O	35:YS:61:ASN:HB3	2.18	0.42
1:QA:1494:G:C2	1:QA:1495:U:C6	3.08	0.42
1:QA:261:U:N3	1:QA:264:U:OP2	2.44	0.42
1:QA:316:G:OP2	1:QA:351:G:O2'	2.32	0.42
5:QE:79:GLU:HB3	5:QE:92:LYS:HA	2.02	0.42

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
14:QN:41:ARG:NH2	14:QN:42:ILE:HD11	2.35	0.42
15:QO:43:LEU:HD23	15:QO:43:LEU:HA	1.74	0.42
17:QQ:10:VAL:HG13	17:QQ:19:VAL:HB	2.01	0.42
47:R4:14:ILE:HG22	47:R4:24:THR:HG22	2.01	0.42
49:R6:11:LEU:HD13	49:R6:11:LEU:HA	1.81	0.42
22:RA:116:C:H2'	22:RA:117:G:O4'	2.19	0.42
22:RA:1409:C:N4	22:RA:1593:G:H1	2.16	0.42
22:RA:2168:G:N3	22:RA:2168:G:H2'	2.34	0.42
22:RA:2590:A:O2'	22:RA:2591:C:H5'	2.20	0.42
22:RA:2630:G:H2'	22:RA:2631:G:H8	1.85	0.42
22:RA:2632:A:C2	22:RA:2787:C:C2	3.07	0.42
22:RA:2683:C:OP1	36:RT:53:ARG:NH2	2.52	0.42
22:RA:2695:C:H2'	22:RA:2696:U:C6	2.55	0.42
22:RA:273:G:C2	22:RA:273(A):G:C8	3.08	0.42
22:RA:278:A:H61	22:RA:362:U:H3	1.67	0.42
22:RA:49:A:N6	22:RA:177:G:C4	2.87	0.42
22:RA:58:G:N2	22:RA:70:G:C4	2.88	0.42
24:RD:72:LYS:NZ	24:RD:99:ASP:OD1	2.43	0.42
27:RG:159:VAL:HG21	27:RG:173:LEU:HD11	2.00	0.42
28:RH:6:ARG:HG3	28:RH:7:LEU:HG	2.01	0.42
29:RI:126:TYR:HE1	29:RI:142:VAL:HG21	1.83	0.42
29:RI:61:ARG:NH2	29:RI:64:GLU:OE1	2.52	0.42
35:RS:29:PHE:HD2	35:RS:92:TYR:HH	1.66	0.42
35:RS:93:LYS:HE3	35:RS:93:LYS:HB2	1.66	0.42
37:RU:75:ASN:HB2	37:RU:78:THR:H	1.84	0.42
1:XA:1032(B):G:H2'	1:XA:1033:G:C8	2.54	0.42
1:XA:1213:A:C6	1:XA:1215:G:C4	3.06	0.42
1:XA:1256:A:H2	1:XA:1277:C:C6	2.37	0.42
1:XA:1469:G:H2'	1:XA:1470:G:C8	2.55	0.42
1:XA:639:G:C2	1:XA:640:A:C5	3.07	0.42
1:XA:791:G:C5	1:XA:792:A:C2	3.08	0.42
2:XB:113:HIS:O	2:XB:116:GLU:HB2	2.20	0.42
2:XB:7:VAL:HG11	2:XB:217:ARG:CZ	2.49	0.42
7:XG:89:MET:CE	7:XG:156:TRP:H	2.32	0.42
13:XM:7:VAL:O	13:XM:9:ILE:HG23	2.19	0.42
46:Y3:4:LEU:HD22	46:Y3:56:VAL:HG12	2.01	0.42
22:YA:1214:A:N6	22:YA:1235:G:O2'	2.47	0.42
22:YA:128:C:H4'	50:Y7:49:ARG:NH1	2.31	0.42
22:YA:1401:G:H2'	22:YA:1402:C:C6	2.54	0.42
22:YA:1482:U:H5'	22:YA:1483:G:P	2.60	0.42
22:YA:2032:G:OP2	22:YA:2454:G:O2'	2.28	0.42
22:YA:528:A:N1	22:YA:2042:A:H2'	2.34	0.42

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:YA:2088:G:C6	22:YA:2089:U:C4	3.07	0.42
22:YA:2304:G:H22	22:YA:2312:U:H3	1.68	0.42
22:YA:2543:G:N2	22:YA:2765:A:C8	2.88	0.42
22:YA:258:G:C5	22:YA:259:G:N7	2.88	0.42
22:YA:2636:U:H2'	22:YA:2637:U:C6	2.54	0.42
22:YA:2849:U:P	36:YT:95:ARG:HH12	2.42	0.42
22:YA:612:G:H2'	22:YA:613:U:O2	2.19	0.42
22:YA:778:G:C5	22:YA:779:U:C4	3.07	0.42
22:YA:88:G:C2	22:YA:89:G:C8	3.07	0.42
23:YB:15:A:O2'	23:YB:109:G:C8	2.62	0.42
25:YE:57:LYS:HD2	25:YE:57:LYS:HA	1.87	0.42
26:YF:45:ARG:HH11	26:YF:45:ARG:CG	2.32	0.42
28:YH:153:LYS:HB3	28:YH:154:PRO:CD	2.49	0.42
32:YP:39:LYS:HG3	32:YP:45:LEU:CD2	2.45	0.42
33:YQ:39:PRO:HA	33:YQ:97:VAL:O	2.20	0.42
36:YT:58:ASN:C	36:YT:58:ASN:HD22	2.23	0.42
36:YT:45:PHE:CE1	36:YT:65:LYS:HE3	2.55	0.42
36:YT:80:SER:HA	36:YT:81:PRO:HD3	1.89	0.42
42:YZ:106:GLY:O	42:YZ:141:VAL:HG13	2.19	0.42
42:YZ:49:ARG:HG3	42:YZ:49:ARG:H	1.56	0.42
1:QA:1080:A:H5''	1:QA:1081:G:OP2	2.19	0.42
1:QA:955:U:H1'	1:QA:1227:A:H61	1.84	0.42
1:QA:1306:A:N6	1:QA:1331:G:O2'	2.52	0.42
1:QA:130:A:H5''	1:QA:190:G:O2'	2.19	0.42
1:QA:945:G:C6	1:QA:1337:G:C6	3.07	0.42
2:QB:44:LEU:HD12	2:QB:44:LEU:H	1.83	0.42
4:QD:192:GLU:HG3	4:QD:192:GLU:H	1.56	0.42
6:QF:22:GLU:O	6:QF:26:ILE:HG13	2.19	0.42
7:QG:70:LYS:HA	7:QG:71:PRO:HD2	1.89	0.42
19:QS:10:PHE:CG	19:QS:11:VAL:N	2.88	0.42
51:R8:4:MET:SD	51:R8:61:LEU:HD12	2.59	0.42
22:RA:1027:A:C6	22:RA:1126:A:C4	3.08	0.42
22:RA:1149:G:H2'	22:RA:1150:C:C6	2.55	0.42
22:RA:123:G:H2'	22:RA:124:G:O4'	2.19	0.42
22:RA:1444(A):A:H5'	22:RA:1445:C:H5	1.83	0.42
22:RA:1553:A:N7	22:RA:1555:G:C5	2.87	0.42
22:RA:2038:G:H2'	22:RA:2039:C:O4'	2.20	0.42
22:RA:2050:C:N4	22:RA:2051:A:C6	2.88	0.42
22:RA:2066:C:H42	22:RA:2444:G:H1	1.66	0.42
22:RA:2630:G:C2	22:RA:2894:G:N2	2.88	0.42
22:RA:2653:U:O2'	28:RH:110:SER:HB2	2.20	0.42
22:RA:536:A:C2	22:RA:558:G:C2	3.08	0.42

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:RA:852:G:C6	22:RA:853:G:C6	3.07	0.42
22:RA:879:G:H2'	22:RA:880:G:O4'	2.19	0.42
22:RA:931:G:O2'	46:R3:24:LYS:HD3	2.20	0.42
23:RB:82:G:O2'	23:RB:83:G:H5'	2.19	0.42
25:RE:9:VAL:HG23	25:RE:26:ILE:HA	2.00	0.42
30:RN:30:ILE:HG23	30:RN:52:VAL:HG11	2.00	0.42
22:RA:637:A:O5'	32:RP:116:GLY:HA2	2.19	0.42
42:RZ:153:SER:H	42:RZ:167:PRO:HB2	1.85	0.42
42:RZ:54:HIS:CE1	42:RZ:101:PRO:HG3	2.54	0.42
1:XA:1420:C:H6	1:XA:1420:C:O5'	2.02	0.42
1:XA:167:G:O2'	1:XA:168:G:H5'	2.20	0.42
2:XB:223:ILE:HA	2:XB:226:ARG:HB3	2.02	0.42
2:XB:68:ILE:HB	2:XB:70:PHE:HE1	1.84	0.42
4:XD:112:VAL:N	4:XD:116:GLN:OE1	2.38	0.42
13:XM:121:LYS:HA	13:XM:121:LYS:HD3	1.90	0.42
13:XM:40:ASN:ND2	13:XM:43:THR:HG23	2.34	0.42
22:YA:489:G:C5	22:YA:1284:A:C2	3.08	0.42
22:YA:1429:G:N3	22:YA:1568:G:C2	2.88	0.42
22:YA:1494:A:H2'	22:YA:1495:A:H8	1.84	0.42
22:YA:1527:G:O2'	22:YA:1545(A):A:N6	2.51	0.42
22:YA:1672:C:N4	22:YA:1673:U:O4	2.53	0.42
22:YA:341:G:H2'	22:YA:342:G:O4'	2.19	0.42
22:YA:350:U:H2'	22:YA:351:G:O4'	2.20	0.42
22:YA:372:G:HO2'	22:YA:373:U:H5	1.67	0.42
24:YD:36:PRO:CB	24:YD:61:LEU:HB3	2.50	0.42
29:YI:61:ARG:O	29:YI:64:GLU:HB3	2.20	0.42
32:YP:1:MET:HB3	32:YP:2:LYS:H	1.61	0.42
22:YA:2019:A:H4'	37:YU:34:LYS:HD2	2.01	0.42
22:YA:896:A:H61	42:YZ:112:ARG:HD2	1.84	0.42
1:QA:1099:G:C6	1:QA:1100:C:N3	2.87	0.42
1:QA:1187:G:H2'	1:QA:1187:G:N3	2.35	0.42
1:QA:949:A:C4	1:QA:1233:G:N2	2.86	0.42
1:QA:1442:G:C6	1:QA:1446:A:N6	2.87	0.42
1:QA:1503:A:O2'	1:QA:1504:G:H5'	2.20	0.42
1:QA:259:G:H2'	1:QA:260:G:O4'	2.20	0.42
1:QA:616:G:C2	1:QA:617:G:C8	3.07	0.42
1:QA:687:A:N1	1:QA:704:A:N7	2.67	0.42
1:QA:945:G:C2	1:QA:946:A:C8	3.07	0.42
3:QC:59:ARG:HH12	3:QC:97:LYS:HE3	1.84	0.42
5:QE:152:ARG:HG2	8:QH:79:VAL:HG13	2.02	0.42
13:QM:4:ILE:H	13:QM:9:ILE:HG22	1.84	0.42
15:QO:87:ILE:HG22	15:QO:88:ARG:N	2.35	0.42

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:QA:474:G:H5''	16:QP:81:ARG:NE	2.34	0.42
39:RW:34:ASN:ND2	48:R5:39:MET:HG3	2.34	0.42
48:R5:56:LYS:HB3	48:R5:56:LYS:HE3	1.79	0.42
51:R8:59:LYS:NZ	51:R8:59:LYS:HB2	2.35	0.42
22:RA:443:A:H1'	22:RA:1201:C:O4'	2.20	0.42
22:RA:693:C:O2'	22:RA:1353:A:N3	2.42	0.42
22:RA:1410:G:H3'	22:RA:1411:C:H6	1.85	0.42
22:RA:1971:A:H5'	22:RA:1972:A:H5''	2.00	0.42
22:RA:2273:A:O2'	22:RA:2274:A:H5'	2.18	0.42
22:RA:266:G:C2	22:RA:267:C:H1'	2.55	0.42
22:RA:2698:U:H2'	22:RA:2699:C:C6	2.54	0.42
22:RA:628:G:HO2'	22:RA:651:G:HO2'	1.61	0.42
24:RD:123:ALA:HA	24:RD:124:PRO:HD2	1.77	0.42
24:RD:96:HIS:NE2	24:RD:102:LYS:HE2	2.34	0.42
26:RF:182:ASN:O	26:RF:186:ILE:HG12	2.20	0.42
27:RG:173:LEU:O	27:RG:178:PHE:HB2	2.20	0.42
28:RH:153:LYS:N	28:RH:153:LYS:HD2	2.33	0.42
29:RI:130:TYR:HA	29:RI:130:TYR:HD1	1.67	0.42
36:RT:26:ASP:HB3	36:RT:92:GLY:N	2.18	0.42
40:RX:44:GLU:O	40:RX:48:LYS:N	2.52	0.42
42:RZ:29:TYR:HA	42:RZ:33:LEU:O	2.19	0.42
42:RZ:5:LEU:HB3	42:RZ:6:LYS:H	1.51	0.42
1:XA:815:A:O2'	1:XA:1527:C:H1'	2.20	0.42
1:XA:179:A:H2'	1:XA:180:U:C6	2.55	0.42
1:XA:127:G:N2	1:XA:234:C:O2	2.52	0.42
1:XA:580:U:H2'	1:XA:581:G:O4'	2.19	0.42
1:XA:60:A:P	1:XA:60:A:H8	2.42	0.42
1:XA:730:G:C6	1:XA:731:G:H1'	2.55	0.42
2:XB:19:HIS:CE1	2:XB:206:ASP:HB2	2.54	0.42
4:XD:120:LEU:HA	4:XD:120:LEU:HD23	1.89	0.42
9:XI:91:ASP:C	9:XI:93:ARG:H	2.21	0.42
1:XA:1152:A:OP1	10:XJ:68:HIS:CD2	2.73	0.42
18:XR:43:PHE:CE2	18:XR:58:LEU:HD11	2.54	0.42
20:XT:50:GLU:HG3	20:XT:51:GLU:N	2.33	0.42
53:XV:45:G:H8	53:XV:45:G:O5'	2.02	0.42
53:XV:15:G:N2	53:XV:48:C:H42	2.18	0.42
45:Y2:8:LYS:HB2	45:Y2:8:LYS:HE3	1.84	0.42
46:Y3:8:LEU:HB3	46:Y3:31:LEU:HA	2.01	0.42
51:Y8:60:LEU:C	51:Y8:63:PRO:HD2	2.40	0.42
22:YA:1198:U:H2'	22:YA:1199:U:C6	2.55	0.42
22:YA:1215:G:C4	22:YA:1216:G:C8	3.08	0.42
22:YA:2055:C:O2	22:YA:2572:A:N6	2.53	0.42

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:YA:229:A:HO2'	22:YA:230:U:P	2.42	0.42
22:YA:2330:G:H2'	22:YA:2331:G:O4'	2.20	0.42
22:YA:2532:G:H2'	22:YA:2533:A:C8	2.54	0.42
22:YA:2883:A:H3'	22:YA:2884:U:H5'	2.02	0.42
23:YB:39:A:C4	23:YB:44:G:N2	2.87	0.42
24:YD:35:LYS:HE3	24:YD:64:ILE:N	2.35	0.42
27:YG:64:THR:CG2	27:YG:66:GLN:H	2.28	0.42
35:YS:81:GLY:O	35:YS:83:LYS:N	2.53	0.42
35:YS:83:LYS:NZ	35:YS:109:GLY:HA2	2.33	0.42
37:YU:109:LEU:HD23	37:YU:109:LEU:HA	1.89	0.42
22:YA:18:C:O3'	37:YU:23:GLY:HA2	2.19	0.42
38:YV:65:GLY:O	38:YV:90:PRO:HA	2.20	0.42
1:QA:262:A:H2'	1:QA:263:A:C8	2.55	0.42
1:QA:37:U:H3	1:QA:397:A:H61	1.67	0.42
1:QA:64:G:H4'	1:QA:65:U:H5'	2.00	0.42
1:QA:778:G:H2'	1:QA:779:C:O4'	2.19	0.42
2:QB:60:ASP:O	2:QB:64:ARG:HG2	2.19	0.42
3:QC:56:ASP:O	3:QC:66:VAL:HA	2.19	0.42
1:QA:719:C:O2'	18:QR:49:LYS:HB3	2.19	0.42
49:R6:28:ARG:HB3	49:R6:30:THR:H	1.84	0.42
22:RA:1122:G:H2'	22:RA:1123:C:H5'	2.01	0.42
22:RA:1816:G:H8	24:RD:62:TYR:CZ	2.38	0.42
22:RA:1903:G:O2'	22:RA:1904:G:H5'	2.19	0.42
22:RA:2778:A:H4'	22:RA:2779:U:OP1	2.18	0.42
22:RA:565:C:H2'	22:RA:566:U:O4'	2.20	0.42
22:RA:681:G:H2'	22:RA:682:G:O4'	2.19	0.42
22:RA:719:C:H2'	22:RA:720:C:C6	2.55	0.42
22:RA:754:C:O2'	22:RA:755:C:H5'	2.19	0.42
22:RA:802:A:C5	22:RA:803:U:C4	3.07	0.42
22:RA:840:C:H2'	22:RA:841:A:H8	1.85	0.42
22:RA:862:G:H4'	23:RB:79:C:H4'	2.02	0.42
24:RD:33:LEU:HB3	24:RD:34:VAL:H	1.64	0.42
28:RH:164:TYR:O	28:RH:166:GLY:N	2.52	0.42
28:RH:16:SER:OG	28:RH:26:VAL:O	2.30	0.42
29:RI:7:GLU:HA	29:RI:15:VAL:HG13	2.01	0.42
30:RN:35:ARG:HB2	30:RN:42:TRP:CZ3	2.54	0.42
35:RS:78:LEU:HD23	35:RS:78:LEU:HA	1.86	0.42
37:RU:83:LEU:HD12	37:RU:113:ALA:HB2	2.01	0.42
41:RY:50:ARG:H	41:RY:50:ARG:HG2	1.67	0.42
42:RZ:13:GLU:HB3	42:RZ:18:LEU:HD11	2.01	0.42
1:XA:1017:G:H2'	1:XA:1018:C:C6	2.54	0.42
1:XA:1084:G:C5	1:XA:1085:U:C4	3.07	0.42

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:XA:1158:C:H4'	2:XB:133:LYS:HZ1	1.85	0.42
1:XA:1162:C:H2'	1:XA:1163:C:C6	2.55	0.42
1:XA:340:U:O2	1:XA:350:G:N2	2.53	0.42
1:XA:663:A:H5'	1:XA:836:G:OP1	2.20	0.42
3:XC:32:LEU:HD22	3:XC:59:ARG:NH1	2.34	0.42
7:XG:15:ASP:O	7:XG:19:GLY:HA2	2.20	0.42
9:XI:4:TYR:CE1	9:XI:88:TYR:HB2	2.55	0.42
13:XM:77:ASN:HA	47:Y4:71:ARG:HH22	1.85	0.42
20:XT:39:LYS:H	20:XT:39:LYS:HG3	1.63	0.42
47:Y4:68:ARG:HB2	47:Y4:69:LYS:H	1.51	0.42
49:Y6:14:THR:HG21	49:Y6:19:ARG:HH21	1.85	0.42
22:YA:1053:C:H5'	22:YA:1054:A:OP2	2.20	0.42
22:YA:1353:A:C5	22:YA:1378:A:C5	3.08	0.42
22:YA:1824:G:H5''	24:YD:52:ARG:NH1	2.35	0.42
22:YA:1871:A:H2'	22:YA:1872:A:C8	2.55	0.42
22:YA:270(M):U:O2'	22:YA:270(N):G:O5'	2.34	0.42
22:YA:341:G:C5	22:YA:342:G:C8	3.08	0.42
22:YA:442:G:C6	22:YA:444:C:C4	3.08	0.42
22:YA:470:A:H2'	22:YA:471:A:O4'	2.19	0.42
22:YA:611:C:H2'	22:YA:612:G:O4'	2.19	0.42
22:YA:606:U:H4'	22:YA:658:C:H4'	2.02	0.42
23:YB:74:U:H2'	23:YB:75:G:O4'	2.19	0.42
24:YD:25:THR:HG22	24:YD:82:ILE:H	1.84	0.42
24:YD:25:THR:HG21	24:YD:81:ALA:HA	2.02	0.42
30:YN:137:LYS:HD2	30:YN:137:LYS:HA	1.77	0.42
30:YN:46:VAL:HG13	30:YN:48:MET:HG3	2.02	0.42
31:YO:21:CYS:O	31:YO:22:ILE:HD13	2.20	0.42
32:YP:36:LYS:HB3	32:YP:40:SER:CB	2.49	0.42
36:YT:26:ASP:HB2	36:YT:91:ARG:HA	2.00	0.42
22:YA:300:A:OP1	41:YY:84:ARG:NH2	2.52	0.42
1:QA:1316:G:N2	1:QA:1319:A:H5''	2.28	0.42
1:QA:137:C:N3	1:QA:226:G:N2	2.51	0.42
1:QA:888:G:O2'	1:QA:1488:G:O2'	2.35	0.42
1:QA:347:G:O2'	1:QA:348:G:OP2	2.27	0.42
1:QA:693:G:C6	1:QA:694:A:C5	3.08	0.42
1:QA:575:G:O2'	1:QA:821:G:H5'	2.20	0.42
1:QA:830:G:C6	1:QA:831:U:N3	2.88	0.42
2:QB:92:TYR:CD1	2:QB:151:GLY:HA3	2.55	0.42
2:QB:88:ALA:HB2	2:QB:219:VAL:HG13	2.02	0.42
3:QC:36:ASP:HA	3:QC:39:ILE:HD12	2.02	0.42
4:QD:11:LEU:HD22	4:QD:66:ARG:HD3	2.02	0.42
13:QM:40:ASN:HA	13:QM:41:PRO:HD3	1.89	0.42

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
15:QO:2:PRO:HB2	15:QO:3:ILE:H	1.56	0.42
18:QR:53:ARG:HE	18:QR:59:SER:C	2.22	0.42
1:QA:1318:A:C5'	19:QS:11:VAL:HG11	2.50	0.42
44:R1:90:ILE:O	44:R1:94:LEU:HB2	2.20	0.42
45:R2:70:GLN:O	45:R2:71:ASN:HB2	2.19	0.42
27:RG:6:ALA:N	47:R4:23:GLU:HG2	2.31	0.42
48:R5:56:LYS:H	48:R5:56:LYS:CD	2.31	0.42
22:RA:1448:G:H2'	22:RA:1449:A:C8	2.55	0.42
22:RA:1701:A:H5''	22:RA:1702:G:OP2	2.19	0.42
22:RA:2580:U:C5	22:RA:2581:G:C6	3.08	0.42
22:RA:2636:U:H2'	22:RA:2637:U:H6	1.84	0.42
22:RA:2532:G:N2	22:RA:2663:G:O2'	2.53	0.42
22:RA:2754:U:H2'	22:RA:2755:C:H5''	2.02	0.42
22:RA:2791:C:H42	22:RA:2803:C:N4	2.17	0.42
22:RA:2883:A:H3'	22:RA:2884:U:H5'	2.01	0.42
22:RA:318:C:H2'	22:RA:319:C:C6	2.54	0.42
22:RA:343:C:H5'	22:RA:344:G:OP2	2.19	0.42
23:RB:75:G:N1	23:RB:102:G:N2	2.68	0.42
25:RE:188:VAL:HG23	25:RE:189:PRO:HD2	2.01	0.42
25:RE:78:LEU:HG	25:RE:79:ARG:NE	2.35	0.42
27:RG:116:ASP:N	27:RG:116:ASP:OD1	2.53	0.42
27:RG:151:ALA:HB3	27:RG:153:ARG:NH1	2.35	0.42
29:RI:86:THR:HA	29:RI:123:LEU:HD12	2.01	0.42
32:RP:100:LEU:HD22	32:RP:100:LEU:HA	1.77	0.42
22:RA:2406:U:N3	32:RP:73:GLY:O	2.39	0.42
34:RR:63:ARG:HA	34:RR:80:PHE:CZ	2.54	0.42
36:RT:51:ARG:HG3	36:RT:98:LYS:HG3	2.02	0.42
39:RW:75:TYR:CZ	39:RW:104:THR:HG21	2.54	0.42
42:RZ:180:VAL:HG23	42:RZ:181:GLU:H	1.85	0.42
1:XA:1216:G:H5''	14:YN:5:ALA:CB	2.49	0.42
1:XA:988:G:C2	1:XA:1218:C:C2	3.07	0.42
1:XA:444:C:H2'	1:XA:445:G:H8	1.84	0.42
1:XA:448:A:C4	1:XA:487:A:C2	3.07	0.42
1:XA:487:A:H2'	1:XA:488:C:O4'	2.19	0.42
1:XA:503:C:H2'	1:XA:504:C:C6	2.53	0.42
1:XA:68:G:C2	1:XA:69:G:C4	3.07	0.42
8:XH:121:ASP:N	8:XH:121:ASP:OD1	2.46	0.42
22:YA:1039:G:H2'	22:YA:1040:C:C6	2.54	0.42
22:YA:1252:G:C2	22:YA:1253:A:C2	3.08	0.42
22:YA:1627:G:C2	22:YA:1628:G:C8	3.08	0.42
22:YA:1728:G:H5'	22:YA:1729:A:OP2	2.20	0.42
22:YA:1728:G:H8	22:YA:1732:A:H62	1.68	0.42

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:YA:1889:A:C6	22:YA:1890:A:C6	3.08	0.42
22:YA:2271:G:H8	22:YA:2271:G:O5'	2.03	0.42
22:YA:2875:C:H4'	36:YT:5:ALA:HB2	2.01	0.42
22:YA:753:C:H2'	22:YA:754:C:H6	1.85	0.42
24:YD:89:SER:O	24:YD:198:ASN:ND2	2.52	0.42
28:YH:30:LYS:HE2	28:YH:81:GLU:H	1.85	0.42
29:YI:7:GLU:HA	29:YI:15:VAL:HG12	2.00	0.42
35:YS:106:ARG:HA	35:YS:110:LEU:CD2	2.47	0.42
40:YX:84:ALA:HB1	40:YX:85:PRO:HD2	2.02	0.42
1:QA:1527:C:O2'	1:QA:1528:U:H5'	2.20	0.42
1:QA:32:A:C2	1:QA:33:A:C4	3.07	0.42
1:QA:358:U:H6	1:QA:358:U:O5'	2.03	0.42
1:QA:842:C:O2'	1:QA:848:C:N4	2.53	0.42
1:QA:909:A:H2'	1:QA:910:C:O4'	2.18	0.42
2:QB:130:ARG:HA	2:QB:131:PRO:HD3	1.81	0.42
8:QH:59:LEU:O	8:QH:61:VAL:HG23	2.20	0.42
10:QJ:81:THR:C	10:QJ:83:GLU:H	2.23	0.42
11:QK:41:THR:HG22	11:QK:42:TRP:N	2.34	0.42
11:QK:48:ILE:HG23	11:QK:63:LEU:HD22	2.01	0.42
12:QL:38:THR:HG21	12:QL:65:GLU:OE2	2.19	0.42
53:QV:6:G:H1	53:QV:67:C:N4	2.05	0.42
46:R3:35:ARG:HB3	46:R3:37:LEU:HD21	2.01	0.42
47:R4:55:ARG:O	47:R4:59:PHE:HB3	2.20	0.42
22:RA:1344:G:C2	22:RA:1404:C:C2	3.08	0.42
22:RA:1668:A:C8	22:RA:1674:G:C6	3.07	0.42
22:RA:1752:C:H5''	22:RA:2862:G:H5'	2.00	0.42
22:RA:1977:A:N6	22:RA:1978:A:C6	2.88	0.42
22:RA:242:G:C8	51:R8:5:LYS:HG2	2.54	0.42
22:RA:2718:G:C6	22:RA:2719:G:C5	3.08	0.42
22:RA:2745:C:N4	22:RA:2759:G:H1	2.17	0.42
22:RA:373:U:O2	22:RA:373:U:H2'	2.19	0.42
22:RA:414:C:H2'	22:RA:415:A:C8	2.55	0.42
22:RA:64:A:H2'	22:RA:65:C:O4'	2.19	0.42
22:RA:691:C:O2'	22:RA:692:C:H5'	2.19	0.42
22:RA:784:A:O2'	22:RA:785:G:H5''	2.20	0.42
22:RA:959:A:C6	22:RA:960:A:N1	2.88	0.42
25:RE:34:VAL:HG23	25:RE:64:LYS:HZ2	1.85	0.42
26:RF:184:TYR:O	26:RF:188:ARG:HG3	2.19	0.42
30:RN:10:GLU:HA	30:RN:11:PRO:HD3	1.65	0.42
32:RP:20:GLY:HA2	32:RP:27:HIS:O	2.19	0.42
35:RS:14:VAL:HG11	35:RS:90:GLY:O	2.19	0.42
42:RZ:109:ALA:O	42:RZ:112:ARG:HB2	2.19	0.42

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:XA:1299:A:C2'	1:XA:1301:U:H1'	2.34	0.42
1:XA:1321:C:H5''	1:XA:1322:C:H5'	2.02	0.42
1:XA:1369:C:H2'	1:XA:1370:G:C8	2.55	0.42
1:XA:1434:A:H2'	1:XA:1435:G:O4'	2.20	0.42
1:XA:1524:C:N4	1:XA:1525:G:O6	2.53	0.42
1:XA:157:G:H2'	1:XA:158:G:C8	2.55	0.42
1:XA:282:A:OP2	1:XA:283:C:N4	2.36	0.42
1:XA:298:A:H2'	1:XA:299:G:O4'	2.20	0.42
1:XA:327:A:C6	1:XA:329:A:C5	3.07	0.42
1:XA:352:C:H4'	1:XA:354:G:OP1	2.20	0.42
1:XA:951:G:H1'	1:XA:970:C:O2'	2.20	0.42
3:XC:91:LEU:O	3:XC:95:THR:OG1	2.19	0.42
5:XE:79:GLU:H	5:XE:79:GLU:HG3	1.46	0.42
9:XI:125:TYR:HD2	9:XI:126:SER:H	1.68	0.42
11:XK:109:VAL:HG11	18:XR:84:LYS:HD3	2.02	0.42
19:XS:78:ARG:HG2	19:XS:78:ARG:H	1.56	0.42
43:Y0:48:GLY:N	43:Y0:79:VAL:O	2.46	0.42
47:Y4:16:CYS:SG	47:Y4:36:CYS:HB3	2.59	0.42
48:Y5:31:VAL:HG13	48:Y5:42:PRO:HG3	2.01	0.42
51:Y8:44:LYS:HD2	51:Y8:44:LYS:N	2.34	0.42
22:YA:1374:G:H2'	22:YA:1375:C:C6	2.55	0.42
22:YA:136:G:H2'	22:YA:137:C:H6	1.85	0.42
22:YA:1449:A:N6	22:YA:1449(A):G:C4	2.88	0.42
22:YA:1586:A:H3'	22:YA:1587:A:C8	2.45	0.42
22:YA:1668:A:O4'	22:YA:1669:A:C2	2.73	0.42
22:YA:1832:C:N4	22:YA:1833:U:C4	2.87	0.42
22:YA:2163:C:N4	22:YA:2164:C:H41	2.18	0.42
22:YA:2747:G:O6	22:YA:2755:C:H5''	2.19	0.42
22:YA:396:G:O5'	22:YA:396:G:H8	2.03	0.42
22:YA:648:G:H2'	22:YA:649:G:C8	2.55	0.42
22:YA:196:A:O2'	22:YA:805:G:O6	2.16	0.42
24:YD:221:VAL:HG22	24:YD:226:MET:CE	2.49	0.42
24:YD:34:VAL:HG22	24:YD:35:LYS:HG3	2.00	0.42
25:YE:167:VAL:HG21	25:YE:187:ALA:HB1	2.01	0.42
29:YI:130:TYR:HD1	29:YI:130:TYR:HA	1.71	0.42
29:YI:63:ALA:HA	29:YI:66:GLU:HG2	2.02	0.42
35:YS:30:ARG:NH2	35:YS:92:TYR:CD1	2.87	0.42
35:YS:38:GLN:HG3	35:YS:47:THR:HG21	2.02	0.42
42:YZ:37:VAL:HG23	42:YZ:38:TYR:N	2.35	0.42
1:QA:1363:A:H1'	1:QA:1365:G:N7	2.35	0.42
1:QA:411:A:C4	1:QA:413:G:H1'	2.53	0.42
1:QA:401:C:O2'	1:QA:621:A:N3	2.50	0.42

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:QA:807:A:H2'	1:QA:808:C:O4'	2.19	0.42
2:QB:27:LYS:HD2	2:QB:193:ASP:CB	2.46	0.42
3:QC:134:ILE:HD11	3:QC:153:VAL:HG21	2.02	0.42
4:QD:165:MET:SD	4:QD:168:ARG:HD2	2.60	0.42
4:QD:171:GLY:HA2	4:QD:172:PRO:HD3	1.87	0.42
4:QD:63:LYS:HE3	4:QD:63:LYS:HB2	1.77	0.42
7:QG:13:GLN:O	7:QG:24:THR:HG21	2.20	0.42
8:QH:54:ASP:N	8:QH:54:ASP:OD1	2.53	0.42
14:QN:23:ARG:NH1	14:QN:30:ALA:HB2	2.35	0.42
44:R1:85:LEU:HA	44:R1:87:PRO:HD2	2.01	0.42
22:RA:1306:C:C2	22:RA:1623:G:C2	3.08	0.42
22:RA:188:G:H1	22:RA:208:C:H42	1.67	0.42
22:RA:2209:C:O2	22:RA:2216:G:C2	2.73	0.42
22:RA:227:A:C5	22:RA:2407:G:O4'	2.73	0.42
22:RA:2400:G:N2	22:RA:2417:C:C2	2.88	0.42
22:RA:2630:G:H2'	22:RA:2631:G:C8	2.55	0.42
22:RA:69:C:O5'	22:RA:69:C:H6	2.03	0.42
22:RA:725:G:H8	22:RA:725:G:O5'	2.03	0.42
22:RA:774:A:HO2'	22:RA:775:G:P	2.41	0.42
22:RA:774:A:O2'	22:RA:775:G:H8	2.02	0.42
22:RA:804:A:H2'	22:RA:806:C:C4	2.55	0.42
24:RD:35:LYS:HB3	24:RD:36:PRO:HA	2.01	0.42
24:RD:43:ARG:HB2	24:RD:54:ARG:HB2	2.02	0.42
26:RF:46:ARG:HH11	26:RF:46:ARG:HG2	1.84	0.42
26:RF:93:LYS:HB3	26:RF:94:PRO:HD2	2.01	0.42
28:RH:105:LEU:HD22	28:RH:113:VAL:HB	2.01	0.42
28:RH:125:VAL:HA	28:RH:126:PRO:HA	1.90	0.42
29:RI:102:SER:C	29:RI:104:GLN:H	2.23	0.42
37:RU:58:ARG:NH1	37:RU:93:LYS:HE2	2.35	0.42
42:RZ:150:LEU:H	42:RZ:150:LEU:HD22	1.84	0.42
1:XA:1367:C:OP1	9:XI:115:GLY:N	2.47	0.42
1:XA:606:G:N2	1:XA:631:G:C8	2.88	0.42
1:XA:658:G:C2	1:XA:749:C:N3	2.88	0.42
10:XJ:3:LYS:HB2	10:XJ:75:ILE:O	2.19	0.42
13:XM:3:ARG:HG3	13:XM:9:ILE:HG21	2.02	0.42
1:XA:982:U:H5''	14:XN:6:LEU:HD21	2.02	0.42
51:Y8:26:LYS:HB3	51:Y8:44:LYS:HG3	2.01	0.42
22:YA:1077:A:H3'	22:YA:1078:U:H5''	2.02	0.42
22:YA:1162:G:H2'	22:YA:1163:G:C8	2.52	0.42
22:YA:1952:A:C6	22:YA:1953:A:C6	3.08	0.42
22:YA:2170:A:H2'	22:YA:2171:A:O4'	2.20	0.42
22:YA:2396:G:OP1	44:Y1:25:LYS:NZ	2.52	0.42

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:YA:2422:A:H4'	22:YA:2423:U:OP1	2.19	0.42
22:YA:2469:A:C8	22:YA:2482:G:C4	3.08	0.42
22:YA:254:G:O6	51:Y8:5:LYS:HG2	2.19	0.42
22:YA:2556:C:H2'	22:YA:2557:G:O4'	2.20	0.42
25:YE:144:ARG:HB3	25:YE:145:LYS:H	1.45	0.42
30:YN:59:LYS:HE3	30:YN:61:ARG:HH22	1.84	0.42
32:YP:29:LYS:HD2	32:YP:30:THR:CG2	2.50	0.42
33:YQ:85:LYS:O	33:YQ:86:GLY:C	2.58	0.42
34:YR:2:ARG:HG2	34:YR:5:LYS:NZ	2.35	0.42
40:YX:26:TYR:HB3	40:YX:92:LEU:HD12	2.02	0.42
41:YY:51:VAL:HG23	41:YY:57:GLN:N	2.35	0.42
1:QA:151:A:H2'	1:QA:152:A:O4'	2.20	0.41
1:QA:735:C:H2'	1:QA:736:C:C6	2.55	0.41
2:QB:230:VAL:HB	2:QB:231:GLU:H	1.60	0.41
8:QH:38:ILE:HD12	8:QH:118:VAL:HG12	2.02	0.41
8:QH:54:ASP:O	8:QH:56:LYS:HG3	2.20	0.41
8:QH:51:VAL:HG21	8:QH:60:ARG:HG2	2.02	0.41
14:QN:29:ARG:HG2	14:QN:31:ARG:O	2.20	0.41
53:QV:23:C:H2'	53:QV:24:U:H6	1.84	0.41
51:R8:23:VAL:CG1	51:R8:46:ARG:HD3	2.49	0.41
22:RA:1040:C:H2'	22:RA:1041:C:H6	1.85	0.41
22:RA:1113:U:H2'	22:RA:1114:G:C8	2.54	0.41
22:RA:1440:G:H2'	22:RA:1441:G:H8	1.84	0.41
22:RA:1466:G:N2	22:RA:1547:C:C2	2.88	0.41
22:RA:1702:G:H2'	22:RA:1703:G:O4'	2.19	0.41
22:RA:1794:U:H2'	22:RA:1795:C:C6	2.55	0.41
22:RA:2043:C:C2	22:RA:2044:C:C5	3.08	0.41
22:RA:2080:G:C5	22:RA:2081:C:C5	3.08	0.41
22:RA:2666:C:H5''	22:RA:2667:C:OP2	2.20	0.41
22:RA:2723:C:OP2	25:RE:109:LYS:NZ	2.52	0.41
22:RA:996:A:OP2	37:RU:92:ARG:NH2	2.53	0.41
24:RD:101:GLU:OE1	24:RD:103:ARG:NH1	2.53	0.41
26:RF:78:ILE:HG13	26:RF:78:ILE:H	1.66	0.41
29:RI:132:PRO:HB2	29:RI:133:HIS:ND1	2.34	0.41
29:RI:29:TYR:O	29:RI:32:PRO:HD2	2.19	0.41
31:RO:7:TYR:CE1	31:RO:20:MET:HB2	2.55	0.41
1:XA:1147:C:O2	9:XI:16:ARG:NH1	2.52	0.41
1:XA:1469:G:H2'	1:XA:1470:G:H8	1.84	0.41
1:XA:1523:G:OP1	11:XK:123:LYS:NZ	2.44	0.41
1:XA:200:G:H1	1:XA:217:C:N4	2.18	0.41
1:XA:938:A:H8	1:XA:938:A:O5'	2.02	0.41
4:XD:127:THR:HA	4:XD:132:ARG:HA	2.02	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
13:XM:20:THR:O	13:XM:22:ILE:N	2.51	0.41
13:XM:16:ASP:HB3	13:XM:41:PRO:HB3	2.01	0.41
47:Y4:37:SER:HB3	47:Y4:42:PHE:HB3	2.00	0.41
47:Y4:39:CYS:O	47:Y4:40:HIS:HB2	2.20	0.41
48:Y5:56:LYS:CD	48:Y5:56:LYS:H	2.30	0.41
22:YA:1085:A:O2'	22:YA:1086:A:P	2.78	0.41
22:YA:142:G:H1'	40:YX:37:THR:CG2	2.50	0.41
22:YA:1480:G:C6	22:YA:1482:U:C4	3.08	0.41
22:YA:1488:G:N2	22:YA:1502:C:C2	2.87	0.41
22:YA:1587:A:H2'	22:YA:1588:C:C6	2.56	0.41
22:YA:2019:A:C4'	37:YU:34:LYS:HD2	2.50	0.41
22:YA:2146:C:H6	22:YA:2146:C:OP2	2.03	0.41
22:YA:2620:C:H2'	22:YA:2621:A:O4'	2.19	0.41
22:YA:2659:G:O2'	22:YA:2661:G:N7	2.40	0.41
24:YD:232:PRO:HB3	24:YD:244:ARG:CZ	2.50	0.41
29:YI:69:LYS:HE2	29:YI:73:GLU:OE1	2.20	0.41
32:YP:82:GLY:HA3	32:YP:115:LEU:HD21	2.01	0.41
37:YU:30:LYS:HA	37:YU:30:LYS:HD3	1.90	0.41
38:YV:72:VAL:HG13	38:YV:85:LYS:HG2	2.01	0.41
41:YY:96:ILE:HG13	41:YY:98:VAL:H	1.85	0.41
42:YZ:70:LEU:HD23	42:YZ:70:LEU:HA	1.65	0.41
1:QA:15:G:H2'	1:QA:16:A:O4'	2.20	0.41
1:QA:187:C:H2'	1:QA:188:U:O4'	2.20	0.41
1:QA:270:A:C5	1:QA:271:C:C4	3.08	0.41
1:QA:44:G:N1	1:QA:45:U:O2	2.53	0.41
1:QA:746:A:H2'	1:QA:747:C:C6	2.55	0.41
1:QA:824:C:H2'	1:QA:825:G:H8	1.83	0.41
1:QA:947:G:H2'	1:QA:948:C:O4'	2.20	0.41
4:QD:169:LYS:HE2	4:QD:169:LYS:HB3	1.88	0.41
8:QH:36:LEU:HD12	8:QH:59:LEU:HD13	2.02	0.41
11:QK:120:ARG:HA	11:QK:121:PRO:HD3	1.87	0.41
14:QN:4:LYS:O	14:QN:7:ILE:HG12	2.20	0.41
15:QO:31:LEU:O	15:QO:35:ARG:HG3	2.20	0.41
18:QR:56:THR:HB	18:QR:58:LEU:CD1	2.50	0.41
19:QS:28:LYS:HA	19:QS:47:HIS:HE1	1.86	0.41
46:R3:7:LYS:HA	46:R3:33:GLN:O	2.20	0.41
50:R7:47:ARG:HB2	50:R7:48:LYS:H	1.68	0.41
32:RP:63:PRO:HA	51:R8:13:ARG:HB3	2.02	0.41
22:RA:551:G:O4'	22:RA:1220:A:N3	2.53	0.41
22:RA:1248:G:C5	37:RU:3:ARG:HB2	2.55	0.41
22:RA:1392:A:C6	22:RA:1393:A:C6	3.08	0.41
22:RA:1620:G:H2'	22:RA:1621:U:H6	1.83	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:RA:189:G:H2'	22:RA:205:G:N2	2.35	0.41
22:RA:2320:A:C8	22:RA:2333:A:N6	2.88	0.41
22:RA:2838:G:C6	22:RA:2839:G:C5	3.08	0.41
22:RA:336:C:H2'	22:RA:337:C:H6	1.83	0.41
22:RA:409:C:H2'	22:RA:410:G:H8	1.84	0.41
22:RA:460:A:C2	22:RA:470:A:C4	3.08	0.41
22:RA:534:U:H2'	22:RA:535:C:C6	2.55	0.41
26:RF:129:PHE:O	26:RF:130:ALA:HB3	2.20	0.41
26:RF:177:ALA:HB1	26:RF:178:PRO:HD2	2.02	0.41
26:RF:113:ALA:HB1	26:RF:186:ILE:HG21	2.02	0.41
27:RG:47:LYS:HD3	27:RG:81:LYS:CB	2.49	0.41
22:RA:2531:A:H4'	28:RH:157:TYR:CE2	2.55	0.41
41:RY:39:VAL:HB	41:RY:40:GLU:H	1.57	0.41
42:RZ:125:LEU:HD23	42:RZ:164:ALA:O	2.21	0.41
1:XA:1171:G:H2'	1:XA:1172:C:H6	1.84	0.41
1:XA:253:U:H2'	1:XA:254:G:H8	1.84	0.41
1:XA:262:A:C6	1:XA:263:A:C6	3.08	0.41
1:XA:339:C:H2'	1:XA:340:U:C6	2.55	0.41
1:XA:691:G:H2'	1:XA:692:U:C6	2.55	0.41
1:XA:977:A:C8	1:XA:1223:C:C4	3.08	0.41
9:XI:40:LEU:O	9:XI:42:ARG:N	2.48	0.41
16:XP:60:LEU:HD23	16:XP:60:LEU:HA	1.80	0.41
18:XR:38:GLU:O	18:XR:42:ARG:NH1	2.53	0.41
44:Y1:89:GLU:HA	44:Y1:93:GLU:HB2	2.02	0.41
47:Y4:24:THR:OG1	47:Y4:25:TYR:N	2.53	0.41
22:YA:593:G:C4'	51:Y8:4:MET:HE1	2.50	0.41
22:YA:1173:G:H5''	22:YA:1174:A:OP1	2.20	0.41
22:YA:1204:A:C2	22:YA:1241:A:N1	2.84	0.41
22:YA:1483:G:C6	22:YA:1507:A:C8	3.08	0.41
22:YA:1657:C:H2'	22:YA:1658:C:H6	1.84	0.41
22:YA:1729:A:N6	22:YA:1731:G:C2	2.88	0.41
22:YA:1824:G:OP1	24:YD:52:ARG:HD3	2.21	0.41
22:YA:1956:U:H2'	22:YA:1957:C:H5'	2.01	0.41
22:YA:2261:C:OP1	43:Y0:17:GLN:HB2	2.19	0.41
22:YA:230:U:H2'	22:YA:231:C:H6	1.86	0.41
22:YA:2531:A:H2'	22:YA:2532:G:C8	2.54	0.41
22:YA:2740:A:H2'	22:YA:2741:A:C8	2.55	0.41
22:YA:307:G:O5'	22:YA:307:G:H8	2.02	0.41
22:YA:363(A):A:H2'	22:YA:363(B):G:C8	2.55	0.41
22:YA:422:A:C6	22:YA:423:A:C6	3.08	0.41
22:YA:519:U:H2'	22:YA:520:G:C8	2.54	0.41
22:YA:654:A:HO2'	22:YA:654(A):G:P	2.44	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:YA:74:A:H5'	22:YA:75:G:O4'	2.19	0.41
22:YA:875:G:H2'	22:YA:876:C:O4'	2.20	0.41
23:YB:63:G:C6	23:YB:64:C:C4	3.08	0.41
24:YD:245:PRO:HA	24:YD:246:PRO:HD3	1.87	0.41
27:YG:86:MET:HA	27:YG:87:PRO:HD2	1.95	0.41
29:YI:23:PRO:O	29:YI:27:ARG:HG2	2.20	0.41
29:YI:6:LEU:HD13	29:YI:36:ALA:HA	2.01	0.41
30:YN:35:ARG:HB2	30:YN:42:TRP:CZ3	2.55	0.41
30:YN:65:LYS:O	30:YN:69:GLN:HG2	2.19	0.41
22:YA:389:G:H22	32:YP:72:PRO:CG	2.33	0.41
34:YR:3:HIS:O	34:YR:5:LYS:N	2.53	0.41
42:YZ:152:ALA:HA	42:YZ:167:PRO:HB2	2.03	0.41
1:QA:1194:U:H4'	5:QE:22:GLY:O	2.20	0.41
1:QA:224:C:H2'	1:QA:225:C:H6	1.85	0.41
1:QA:230:G:N2	1:QA:231:G:C4	2.88	0.41
1:QA:371:G:H1	1:QA:390:C:H42	1.69	0.41
1:QA:407:G:H2'	1:QA:408:A:C8	2.56	0.41
2:QB:219:VAL:O	2:QB:223:ILE:HG13	2.19	0.41
5:QE:47:LYS:HB2	5:QE:47:LYS:HE2	1.82	0.41
8:QH:12:ARG:NH1	8:QH:27:PRO:HD2	2.35	0.41
8:QH:20:TYR:CE2	8:QH:75:ARG:HD2	2.54	0.41
12:QL:27:LEU:HG	12:QL:62:SER:HB3	2.01	0.41
16:QP:53:VAL:O	16:QP:57:ARG:HG2	2.21	0.41
19:QS:50:ALA:HB1	19:QS:57:HIS:HB3	2.02	0.41
53:QV:19:G:C4	53:QV:57:A:C2	3.08	0.41
22:RA:2423:U:OP2	49:R6:5:VAL:HG23	2.20	0.41
22:RA:1204:A:H2	22:RA:1241:A:C2	2.38	0.41
22:RA:1342:A:C5	22:RA:1397:U:C6	3.08	0.41
22:RA:1785:A:N7	22:RA:1787:A:C5	2.88	0.41
22:RA:2266:A:H5'	22:RA:2267:A:N7	2.35	0.41
22:RA:297:C:H5''	41:RY:85:VAL:CG2	2.50	0.41
22:RA:462:C:C4	22:RA:463:G:N7	2.88	0.41
22:RA:571:A:C5	22:RA:575:A:C8	3.08	0.41
22:RA:581:C:H2'	22:RA:582:G:C8	2.55	0.41
22:RA:65:C:H1'	22:RA:456:C:H42	1.84	0.41
22:RA:731:C:H2'	22:RA:732:C:H6	1.84	0.41
22:RA:750:A:C4	22:RA:753:C:H1'	2.56	0.41
22:RA:872:A:C6	22:RA:906:G:C2	3.08	0.41
23:RB:44:G:C2	23:RB:48:A:C2	3.08	0.41
25:RE:76:ARG:HD2	25:RE:76:ARG:N	2.35	0.41
26:RF:178:PRO:HB2	26:RF:201:VAL:CG1	2.50	0.41
27:RG:6:ALA:HB3	27:RG:104:GLU:OE2	2.20	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
28:RH:4:ILE:HB	28:RH:6:ARG:HG2	2.02	0.41
28:RH:10:PRO:HD2	28:RH:50:VAL:O	2.20	0.41
29:RI:52:ARG:O	29:RI:56:LYS:HB3	2.19	0.41
31:RO:73:ASP:OD2	36:RT:32:TYR:OH	2.28	0.41
32:RP:81:GLN:HG2	32:RP:106:LEU:HD23	2.02	0.41
33:RQ:40:ALA:O	33:RQ:42:ILE:HD12	2.21	0.41
33:RQ:58:PHE:HD1	33:RQ:61:GLY:HA3	1.85	0.41
33:RQ:68:ILE:HD13	33:RQ:103:MET:HG2	2.02	0.41
35:RS:108:GLY:O	35:RS:110:LEU:HG	2.20	0.41
40:RX:40:LYS:C	40:RX:42:ALA:H	2.23	0.41
41:RY:88:LYS:HA	41:RY:88:LYS:NZ	2.35	0.41
1:XA:114:U:H1'	1:XA:353:A:H1'	2.01	0.41
1:XA:1160:G:N3	1:XA:1160:G:H2'	2.35	0.41
1:XA:1352:C:OP1	21:XU:3:LYS:NZ	2.47	0.41
1:XA:1367:C:OP2	9:XI:112:LYS:NZ	2.47	0.41
1:XA:1368:G:H5''	9:XI:112:LYS:HB3	2.01	0.41
1:XA:540:G:H2'	1:XA:541:G:O4'	2.18	0.41
1:XA:739:C:HO2'	15:XO:42:HIS:CE1	2.38	0.41
8:XH:104:ARG:HD2	8:XH:138:TRP:CG	2.56	0.41
1:XA:1372:U:H5''	9:XI:71:SER:HB3	2.02	0.41
9:XI:46:ALA:HB2	9:XI:74:ILE:HG23	2.02	0.41
13:XM:12:ASN:N	13:XM:45:VAL:HG13	2.35	0.41
16:XP:56:ALA:HB1	16:XP:74:LEU:HD13	2.02	0.41
20:XT:53:LEU:HD12	20:XT:100:ILE:HG23	2.02	0.41
53:XV:20:U:H2'	53:XV:21:A:H5'	2.01	0.41
50:Y7:47:ARG:HE	50:Y7:47:ARG:HB2	1.58	0.41
22:YA:1001:A:H2'	22:YA:1002:G:O4'	2.20	0.41
22:YA:1337:G:H2'	22:YA:1338:G:O4'	2.20	0.41
22:YA:2207:C:H2'	22:YA:2208:U:O4'	2.20	0.41
22:YA:2657:A:H1'	22:YA:2665:A:N6	2.35	0.41
22:YA:2749:A:C5	22:YA:2750:A:N7	2.88	0.41
22:YA:2777:G:OP2	22:YA:2781:A:O2'	2.22	0.41
22:YA:935:C:H2'	22:YA:936:C:C6	2.55	0.41
26:YF:117:ARG:HD2	26:YF:120:GLU:OE2	2.20	0.41
27:YG:165:THR:OG1	27:YG:168:GLU:HG3	2.21	0.41
28:YH:19:VAL:HG22	28:YH:24:VAL:HG12	2.02	0.41
30:YN:18:ALA:HB3	30:YN:55:VAL:O	2.19	0.41
30:YN:7:LYS:H	30:YN:7:LYS:HD2	1.84	0.41
33:YQ:54:MET:HB3	33:YQ:64:ILE:HD13	2.01	0.41
22:YA:1216:G:P	37:YU:12:ARG:HH21	2.43	0.41
38:YV:22:VAL:HG12	38:YV:23:GLU:H	1.85	0.41
1:QA:1182:G:H4'	1:QA:1183:A:H5''	2.02	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:QA:752:G:H1'	1:QA:754:C:H41	1.84	0.41
9:QI:111:ARG:HG2	9:QI:112:LYS:N	2.35	0.41
1:QA:943:U:H1'	9:QI:124:GLN:HE22	1.86	0.41
13:QM:7:VAL:HB	27:RG:115:ARG:HH11	1.84	0.41
17:QQ:83:ASP:O	17:QQ:87:LYS:HG2	2.20	0.41
20:QT:64:ASP:CG	20:QT:81:LYS:HZ2	2.23	0.41
53:QV:4:G:C4	53:QV:5:G:C8	3.09	0.41
50:R7:1:MET:SD	50:R7:3:ARG:NH2	2.93	0.41
22:RA:1239:G:H2'	22:RA:1240:U:O4'	2.20	0.41
22:RA:1270:C:H5''	22:RA:1271:G:H5'	2.01	0.41
22:RA:1526:G:C6	22:RA:1527:G:C2	3.09	0.41
22:RA:1651:G:OP2	34:RR:40:LYS:NZ	2.53	0.41
22:RA:17:G:C6	22:RA:18:C:N4	2.88	0.41
22:RA:2212:A:H1'	22:RA:2215:G:C4	2.56	0.41
22:RA:304:G:C2	22:RA:314:A:C2	3.08	0.41
22:RA:573:G:O2'	22:RA:574:C:H3'	2.21	0.41
22:RA:675:A:N6	22:RA:676:A:N6	2.68	0.41
22:RA:704:G:H1'	22:RA:726:G:N2	2.35	0.41
22:RA:74:A:H8	22:RA:74:A:O5'	2.04	0.41
22:RA:918:A:H1'	23:RB:80:U:O2'	2.20	0.41
29:RI:76:THR:HG21	29:RI:141:LYS:HE3	2.02	0.41
33:RQ:17:LEU:HD21	33:RQ:41:TRP:HD1	1.84	0.41
34:RR:22:ARG:HA	34:RR:47:PHE:HE2	1.86	0.41
38:RV:76:LYS:HB2	38:RV:81:TYR:HB3	2.01	0.41
1:XA:1301:U:O2'	1:XA:1302:U:OP1	2.31	0.41
1:XA:191:G:C4	20:XT:105:SER:HB3	2.54	0.41
1:XA:44:G:C2	1:XA:45:U:H1'	2.56	0.41
1:XA:503:C:O2'	1:XA:504:C:H5'	2.20	0.41
1:XA:895:G:H2'	1:XA:896:C:C6	2.55	0.41
3:XC:150:LYS:HE3	3:XC:167:TRP:HE1	1.84	0.41
9:XI:125:TYR:HD2	9:XI:126:SER:N	2.18	0.41
11:XK:18:ARG:HA	11:XK:81:ASP:H	1.86	0.41
11:XK:88:GLY:C	11:XK:90:GLY:H	2.23	0.41
16:XP:17:TYR:HE1	16:XP:41:PRO:HG3	1.85	0.41
1:XA:134:A:N6	16:XP:25:ARG:NH1	2.61	0.41
19:XS:40:ILE:CG1	19:XS:41:VAL:HG13	2.47	0.41
43:Y0:7:LEU:O	53:XV:2:G:H4'	2.20	0.41
44:Y1:76:ARG:H	44:Y1:76:ARG:HD2	1.84	0.41
46:Y3:35:ARG:HB3	46:Y3:37:LEU:HD21	2.01	0.41
22:YA:1022:G:C5	22:YA:1140:C:N4	2.88	0.41
22:YA:1166:C:H2'	22:YA:1167:U:C6	2.55	0.41
22:YA:1287:A:C5	22:YA:1288:U:C4	3.09	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:YA:1411:C:H5'	22:YA:1412:A:OP2	2.20	0.41
22:YA:1759:A:H4'	22:YA:2715:C:O4'	2.21	0.41
22:YA:2078:C:H42	22:YA:2241:A:N6	2.18	0.41
22:YA:2115:G:H4'	22:YA:2166:G:H4'	2.01	0.41
22:YA:2720:U:H2'	22:YA:2721:A:H8	1.86	0.41
22:YA:811:U:O2'	32:YP:21:ARG:HG3	2.20	0.41
23:YB:32:C:C2	23:YB:51:G:N2	2.88	0.41
23:YB:82:G:N3	23:YB:83:G:C8	2.88	0.41
23:YB:80:U:H3	23:YB:96:G:H1	1.69	0.41
24:YD:105:ILE:HD12	24:YD:105:ILE:HA	1.55	0.41
25:YE:86:PRO:HB2	25:YE:87:GLU:H	1.66	0.41
27:YG:166:ASP:OD1	27:YG:166:ASP:N	2.54	0.41
23:YB:42:C:H5''	27:YG:69:ALA:HB2	2.00	0.41
29:YI:21:VAL:HG22	29:YI:22:LYS:H	1.85	0.41
29:YI:69:LYS:HE2	29:YI:73:GLU:CD	2.41	0.41
22:YA:1654:A:OP2	34:YR:2:ARG:HD2	2.20	0.41
35:YS:107:GLU:N	35:YS:110:LEU:HD11	2.35	0.41
35:YS:51:ALA:HB1	35:YS:69:VAL:HG23	2.03	0.41
37:YU:69:CYS:HB3	37:YU:106:PHE:CZ	2.56	0.41
42:YZ:158:PRO:HA	42:YZ:159:PRO:HD2	1.82	0.41
1:QA:1077:G:C6	1:QA:1081:G:O6	2.73	0.41
1:QA:1327:C:H2'	1:QA:1328:C:C6	2.56	0.41
1:QA:1336:C:H1'	1:QA:1337:G:C2	2.56	0.41
1:QA:280:C:H3'	1:QA:281:G:H5'	2.03	0.41
1:QA:567:G:C2	1:QA:568:G:H1'	2.55	0.41
2:QB:184:VAL:N	2:QB:198:ASP:OD1	2.44	0.41
1:QA:1199:U:H4'	10:QJ:54:PHE:CZ	2.55	0.41
10:QJ:79:ARG:HA	10:QJ:79:ARG:HD3	1.78	0.41
1:QA:564:C:P	12:QL:15:ARG:HH21	2.43	0.41
16:QP:20:VAL:HG21	16:QP:32:TYR:CD1	2.56	0.41
21:QU:2:GLY:O	21:QU:5:ASP:N	2.47	0.41
53:QV:41:C:C2	53:QV:42:G:C8	3.08	0.41
43:R0:50:ASN:C	43:R0:62:LEU:HD12	2.41	0.41
22:RA:2422:A:OP2	49:R6:6:ARG:NH1	2.53	0.41
22:RA:1026:U:H1'	22:RA:1027:A:H5''	2.03	0.41
22:RA:1042:G:C6	22:RA:1043:C:N4	2.89	0.41
22:RA:1441:G:H2'	22:RA:1442:G:H8	1.84	0.41
22:RA:1484:G:H2'	22:RA:1485:G:H5''	2.02	0.41
22:RA:1568:G:H21	24:RD:58:HIS:HE2	1.67	0.41
22:RA:2120:G:N2	22:RA:2179:C:N3	2.69	0.41
22:RA:2307:G:C5	22:RA:2311:A:C2	3.09	0.41
22:RA:2464:C:H2'	22:RA:2465:C:O4'	2.21	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:RA:2749:A:H2'	28:RH:59:ARG:HE	1.84	0.41
22:RA:2836:U:H2'	22:RA:2837:G:C8	2.55	0.41
22:RA:2850:A:H3'	22:RA:2851:A:H8	1.85	0.41
22:RA:690:G:H21	24:RD:43:ARG:HH22	1.68	0.41
23:RB:11:C:H3'	23:RB:12:C:C6	2.56	0.41
24:RD:35:LYS:HE3	24:RD:63:ARG:C	2.41	0.41
27:RG:27:ASN:HB3	27:RG:30:GLU:HG3	2.01	0.41
33:RQ:18:LYS:HB3	33:RQ:19:GLY:H	1.50	0.41
34:RR:109:ALA:HA	34:RR:110:PRO:HD2	1.95	0.41
1:XA:1301:U:HO2'	1:XA:1302:U:P	2.41	0.41
1:XA:464:G:O6	1:XA:466:C:H5'	2.20	0.41
1:XA:588:G:C6	1:XA:589:C:C4	3.08	0.41
1:XA:991:U:O2'	1:XA:992:U:P	2.78	0.41
8:XH:44:PHE:HE2	8:XH:109:ILE:CG2	2.34	0.41
12:XL:102:ARG:HB3	12:XL:102:ARG:HE	1.71	0.41
12:XL:62:SER:HB2	12:XL:64:TYR:CD1	2.56	0.41
12:XL:68:ALA:HB2	12:XL:85:ILE:HD11	2.03	0.41
17:XQ:59:ILE:HB	17:XQ:71:PHE:HB3	2.03	0.41
22:YA:72:U:H3	45:Y2:62:THR:HG22	1.84	0.41
22:YA:1449:A:N6	22:YA:1449(A):G:C2	2.88	0.41
22:YA:1635:G:C2	22:YA:1636:C:C2	3.09	0.41
22:YA:2018:G:C6	22:YA:2019:A:C5	3.08	0.41
22:YA:1854:A:C2	22:YA:2087:G:N3	2.86	0.41
22:YA:2633:G:C6	22:YA:2634:G:C5	3.08	0.41
22:YA:2639:A:C2	22:YA:2640:G:H1'	2.56	0.41
22:YA:483:A:H5'	41:YY:49:VAL:HG22	2.02	0.41
22:YA:868:U:H3	22:YA:909:A:H61	1.67	0.41
22:YA:888:C:C3'	22:YA:889:C:H4'	2.51	0.41
25:YE:181:LEU:HA	25:YE:181:LEU:HD13	1.85	0.41
26:YF:107:LYS:CD	26:YF:207:GLY:H	2.30	0.41
22:YA:2094:G:H4'	29:YI:25:TYR:CZ	2.56	0.41
32:YP:101:VAL:C	32:YP:103:ALA:H	2.23	0.41
38:YV:38:LEU:O	38:YV:51:VAL:HA	2.20	0.41
41:YY:84:ARG:O	41:YY:95:LYS:HD3	2.21	0.41
1:QA:103:C:P	20:QT:17:ARG:HH21	2.43	0.41
1:QA:1135:U:H4'	1:QA:1136:U:C5	2.55	0.41
1:QA:1259:C:N4	1:QA:1260:C:O2	2.54	0.41
1:QA:1293:G:H2'	1:QA:1294:G:C8	2.56	0.41
1:QA:1371:G:O3'	9:QL:69:GLY:HA3	2.20	0.41
1:QA:236:G:H2'	1:QA:237:C:O4'	2.21	0.41
2:QB:120:ALA:C	2:QB:122:PHE:H	2.23	0.41
2:QB:210:SER:O	2:QB:214:ILE:HG12	2.21	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
4:QD:122:ARG:HD3	4:QD:122:ARG:O	2.20	0.41
5:QE:110:LEU:HD13	5:QE:118:ILE:HG12	2.02	0.41
5:QE:127:ASN:HA	5:QE:128:PRO:HD3	1.89	0.41
11:QK:99:GLN:HG2	11:QK:105:VAL:HG21	2.03	0.41
13:QM:91:ARG:HB2	13:QM:98:VAL:HG13	2.03	0.41
20:QT:89:ARG:HH21	20:QT:104:LEU:HG	1.85	0.41
53:QV:75:C:H2'	53:QV:76:A:O4'	2.20	0.41
22:RA:1053:C:H2'	22:RA:1054:A:O4'	2.21	0.41
22:RA:1054:A:N6	22:RA:1055:G:C6	2.88	0.41
22:RA:1070:A:C8	22:RA:1096:A:H2'	2.55	0.41
22:RA:1492:G:H3'	22:RA:1493:C:C5'	2.51	0.41
22:RA:2020:A:O2'	22:RA:2021:C:H5'	2.20	0.41
22:RA:2584:U:H2'	22:RA:2585:U:C6	2.55	0.41
22:RA:2631:G:N3	22:RA:2810:A:H2	2.17	0.41
22:RA:2822:G:H8	22:RA:2822:G:O5'	2.02	0.41
22:RA:422:A:C6	22:RA:423:A:C6	3.09	0.41
22:RA:55:G:H2'	22:RA:56:A:H8	1.85	0.41
22:RA:806:C:OP2	32:RP:41:ARG:NH1	2.32	0.41
22:RA:838:C:H2'	22:RA:839:U:H6	1.86	0.41
22:RA:890:A:H2'	22:RA:892:G:H8	1.86	0.41
22:RA:1490:A:O2'	24:RD:99:ASP:OD2	2.39	0.41
26:RF:29:ASN:O	26:RF:112:MET:HE1	2.20	0.41
26:RF:33:LEU:HA	26:RF:33:LEU:HD12	1.83	0.41
27:RG:124:SER:HB2	27:RG:131:TYR:CE1	2.56	0.41
35:RS:14:VAL:HG21	35:RS:89:ARG:HG2	2.02	0.41
40:RX:51:VAL:HG13	40:RX:81:VAL:HG23	2.03	0.41
41:RY:54:LYS:HB3	41:RY:55:TYR:CE2	2.55	0.41
41:RY:84:ARG:HD3	41:RY:86:ARG:NH1	2.35	0.41
1:XA:1235:U:H6	1:XA:1235:U:O5'	2.04	0.41
1:XA:1286:A:H2'	1:XA:1287:A:H4'	2.03	0.41
1:XA:11:G:C6	1:XA:12:U:C4	3.08	0.41
1:XA:147:G:C2	1:XA:148:G:C4	3.09	0.41
1:XA:237:C:H5''	17:XQ:25:ARG:CZ	2.50	0.41
1:XA:452:A:H62	1:XA:480:U:H3	1.67	0.41
1:XA:827:U:C5	1:XA:870:U:C4	3.09	0.41
6:XF:46:ARG:HB3	6:XF:60:PHE:CE1	2.55	0.41
16:XP:23:ASP:O	16:XP:26:ARG:HB2	2.21	0.41
16:XP:8:ARG:C	16:XP:9:PHE:HD2	2.24	0.41
53:XV:19:G:C2	53:XV:57:A:N3	2.89	0.41
47:Y4:48:ARG:NH1	47:Y4:52:THR:H	2.19	0.41
22:YA:1050:A:C8	22:YA:2751:G:C4	3.09	0.41
22:YA:1288:U:O2'	22:YA:1647:G:N2	2.54	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:YA:1535:U:H5''	22:YA:1537:C:N4	2.36	0.41
22:YA:1696:G:C6	22:YA:1697:G:C4	3.08	0.41
22:YA:1804:C:H42	22:YA:1813:G:H1	1.67	0.41
22:YA:2248:C:H3'	22:YA:2249:U:H6	1.85	0.41
22:YA:626:U:O4	32:YP:81:GLN:NE2	2.53	0.41
22:YA:815:C:H2'	22:YA:816:C:C6	2.55	0.41
23:YB:26:A:H2'	23:YB:27:C:O4'	2.20	0.41
23:YB:71:C:H2'	23:YB:72:G:H8	1.85	0.41
22:YA:1805:U:O2	24:YD:50:THR:HB	2.21	0.41
33:YQ:16:ARG:HB3	33:YQ:17:LEU:H	1.76	0.41
33:YQ:19:GLY:O	33:YQ:21:THR:OG1	2.23	0.41
35:YS:43:GLU:OE2	43:Y0:49:LYS:HE2	2.20	0.41
35:YS:88:ASP:O	35:YS:89:ARG:HB3	2.21	0.41
1:XA:1463:C:OP1	36:YT:111:ARG:HD2	2.20	0.41
22:YA:2847:U:OP2	36:YT:98:LYS:NZ	2.54	0.41
37:YU:98:LEU:HD23	37:YU:99:ALA:N	2.36	0.41
38:YV:72:VAL:CG1	38:YV:85:LYS:HG2	2.50	0.41
41:YY:63:LYS:HD2	41:YY:63:LYS:HA	1.86	0.41
42:YZ:107:THR:HA	42:YZ:108:PRO:HD3	1.75	0.41
1:QA:1098:C:H2'	1:QA:1099:G:O4'	2.21	0.41
1:QA:1238:A:C2	1:QA:1241:G:N3	2.89	0.41
1:QA:129(A):G:C2	1:QA:188:U:O2'	2.74	0.41
1:QA:21:G:H2'	1:QA:22:G:C8	2.56	0.41
1:QA:626:U:H2'	1:QA:627:G:O4'	2.21	0.41
1:QA:865:A:O5'	1:QA:865:A:H8	2.04	0.41
2:QB:104:ASN:OD1	2:QB:107:THR:OG1	2.30	0.41
2:QB:208:ILE:HA	2:QB:211:ILE:HD12	2.03	0.41
4:QD:38:TYR:HB2	4:QD:44:GLY:O	2.21	0.41
10:QJ:61:GLU:HG3	14:QN:58:LYS:HZ1	1.85	0.41
15:QO:32:LEU:HA	15:QO:32:LEU:HD23	1.76	0.41
49:R6:13:CYS:O	49:R6:21:TYR:HA	2.20	0.41
22:RA:1421:G:C2	22:RA:1422:G:C8	3.09	0.41
22:RA:2046:G:H2'	22:RA:2047:U:H6	1.84	0.41
22:RA:2352:A:C4	22:RA:2366:A:C2	3.09	0.41
22:RA:2477:C:C6	52:R9:1:MET:HE3	2.56	0.41
22:RA:2022:U:HO2'	22:RA:2617:C:H5'	1.84	0.41
22:RA:2760:C:C2'	22:RA:2761:G:H5''	2.50	0.41
22:RA:2776:A:OP1	22:RA:2776:A:H3'	2.21	0.41
22:RA:30:G:C5	22:RA:31:C:C4	3.09	0.41
22:RA:413:C:H6	22:RA:413:C:O5'	2.03	0.41
22:RA:483:A:H5''	41:RY:49:VAL:HG13	2.02	0.41
22:RA:18:C:O2'	22:RA:553:U:OP1	2.28	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:RA:558:G:OP1	30:RN:111:PRO:HD2	2.21	0.41
22:RA:603:A:O4'	22:RA:655:A:N6	2.53	0.41
22:RA:623:G:H2'	22:RA:624:C:C6	2.56	0.41
22:RA:768:G:H2'	22:RA:769:G:C8	2.54	0.41
22:RA:852:G:C2	22:RA:926:A:N3	2.89	0.41
23:RB:97:G:C4	23:RB:98:G:C8	3.08	0.41
24:RD:127:VAL:HA	24:RD:193:VAL:HG22	2.02	0.41
25:RE:92:THR:HB	25:RE:93:VAL:H	1.54	0.41
26:RF:164:ARG:HG3	26:RF:175:THR:OG1	2.20	0.41
29:RI:37:VAL:HG12	29:RI:38:LEU:H	1.86	0.41
30:RN:71:ILE:HG21	30:RN:84:LYS:HB3	2.02	0.41
22:RA:1278:A:H5''	34:RR:36:THR:HG22	2.03	0.41
42:RZ:116:VAL:HG12	42:RZ:117:LEU:O	2.21	0.41
1:XA:1104:G:H2'	1:XA:1105:A:O4'	2.20	0.41
1:XA:1122:U:O4	1:XA:1123:A:N6	2.53	0.41
1:XA:1250:A:H2'	1:XA:1251:A:C8	2.56	0.41
1:XA:358:U:H2'	1:XA:359:U:O4'	2.20	0.41
1:XA:678:U:O4	1:XA:679:C:N4	2.53	0.41
1:XA:750:G:O2'	15:XO:21:ASP:OD2	2.39	0.41
1:XA:792:A:H4'	1:XA:793:U:O5'	2.21	0.41
1:XA:957:U:N3	1:XA:960:U:OP2	2.53	0.41
2:XB:80:ILE:HD11	2:XB:208:ILE:HG12	2.02	0.41
3:XC:119:ARG:HH21	3:XC:140:ARG:CZ	2.34	0.41
10:XJ:3:LYS:HD2	10:XJ:77:PRO:HD3	2.01	0.41
11:XK:48:ILE:HD13	11:XK:48:ILE:HA	1.83	0.41
12:XL:70:ILE:HA	12:XL:71:PRO:HD3	1.81	0.41
14:XN:51:GLY:O	14:XN:53:LEU:N	2.53	0.41
17:XQ:62:SER:CB	17:XQ:72:ARG:HE	2.33	0.41
18:XR:85:LEU:HD23	18:XR:88:LYS:HD2	2.03	0.41
53:XV:16:C:O2	53:XV:60:U:H4'	2.20	0.41
53:XV:66:C:H2'	53:XV:67:C:C6	2.56	0.41
1:XA:1397:C:O4'	54:XX:8:A:N6	2.54	0.41
51:Y8:37:SER:O	51:Y8:40:GLU:HB3	2.20	0.41
22:YA:1210:A:N3	22:YA:1212:G:N2	2.69	0.41
22:YA:1535:U:H3	22:YA:1537:C:H1'	1.85	0.41
22:YA:1955:U:O4	22:YA:2554:U:H5	2.04	0.41
22:YA:2494:G:C4	22:YA:2495:G:C8	3.08	0.41
22:YA:2695:C:H2'	22:YA:2696:U:H6	1.84	0.41
22:YA:301:G:C4	22:YA:302:C:C5	3.09	0.41
22:YA:478:A:C6	22:YA:480:A:C6	3.09	0.41
22:YA:894:C:H2'	22:YA:895:U:C6	2.55	0.41
26:YF:125:LEU:HA	26:YF:194:MET:O	2.20	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
27:YG:103:LEU:O	27:YG:107:LEU:HG	2.21	0.41
29:YI:120:ILE:HG12	29:YI:126:TYR:CE1	2.55	0.41
29:YI:2:LYS:HA	29:YI:20:ASP:HA	2.02	0.41
37:YU:8:VAL:O	37:YU:12:ARG:HG3	2.20	0.41
42:YZ:180:VAL:HA	42:YZ:181:GLU:HA	1.84	0.41
1:QA:1391:U:H2'	1:QA:1392:G:C8	2.56	0.41
1:QA:147:G:H1	1:QA:175:C:N4	2.09	0.41
1:QA:364:A:H2'	1:QA:365:U:O2	2.21	0.41
1:QA:555:C:H2'	1:QA:556:C:C6	2.55	0.41
1:QA:676:A:C2	1:QA:677:U:C4	3.08	0.41
1:QA:688:G:H2'	1:QA:689:C:H6	1.85	0.41
1:QA:789:U:H1'	1:QA:792:A:C2	2.56	0.41
2:QB:47:THR:HA	2:QB:202:PRO:HG2	2.00	0.41
3:QC:122:GLU:HA	3:QC:125:GLU:OE1	2.21	0.41
4:QD:173:TRP:CD1	4:QD:174:LEU:HG	2.55	0.41
5:QE:12:LEU:O	5:QE:13:ILE:HD12	2.21	0.41
10:QJ:31:GLY:HA3	10:QJ:78:ASN:CG	2.40	0.41
19:QS:36:ARG:HA	19:QS:71:LEU:HB2	2.03	0.41
19:QS:5:LEU:HD12	19:QS:5:LEU:HA	1.93	0.41
22:RA:2602:A:OP1	53:QV:75:C:OP1	2.39	0.41
44:R1:58:ILE:CD1	44:R1:86:SER:HB2	2.50	0.41
22:RA:1059:G:C5	22:RA:1060:U:H1'	2.56	0.41
22:RA:2105:C:H2'	22:RA:2106:G:C8	2.55	0.41
22:RA:2674:G:H2'	22:RA:2675:A:O4'	2.21	0.41
22:RA:2853:C:O2'	22:RA:2854:G:H5'	2.21	0.41
22:RA:646:A:H2'	22:RA:647:G:O4'	2.21	0.41
24:RD:111:LEU:HA	24:RD:111:LEU:HD23	1.78	0.41
24:RD:150:LYS:N	24:RD:150:LYS:HD3	2.36	0.41
25:RE:35:GLN:HB3	25:RE:48:GLN:HB2	2.02	0.41
29:RI:9:LEU:N	29:RI:9:LEU:HD22	2.36	0.41
30:RN:47:ALA:HB2	30:RN:112:LEU:HD11	2.02	0.41
33:RQ:66:ILE:HG13	33:RQ:67:ARG:N	2.36	0.41
34:RR:10:LEU:O	34:RR:12:ARG:HG3	2.21	0.41
34:RR:70:LEU:C	34:RR:72:ASP:H	2.21	0.41
36:RT:91:ARG:HB2	36:RT:121:ILE:HG13	2.03	0.41
1:XA:1306:A:H61	1:XA:1331:G:H1'	1.84	0.41
1:XA:665:A:H1'	1:XA:733:A:O4'	2.20	0.41
1:XA:715:A:H2'	1:XA:716:A:C8	2.54	0.41
1:XA:7:G:C5	1:XA:298:A:C2	3.08	0.41
1:XA:924:C:H2'	1:XA:925:G:C8	2.56	0.41
3:XC:138:VAL:HG13	3:XC:149:ALA:HB3	2.02	0.41
1:XA:1055:A:H1'	3:XC:156:ARG:NH1	2.35	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:XA:878:G:OP1	8:XH:88:LYS:HB3	2.20	0.41
10:XJ:54:PHE:CD2	10:XJ:55:LYS:HG3	2.56	0.41
10:XJ:76:ASN:HA	10:XJ:77:PRO:HD2	1.96	0.41
1:XA:667:G:H4'	15:XO:51:HIS:ND1	2.36	0.41
22:YA:103:A:H8	22:YA:103:A:O5'	2.02	0.41
22:YA:1056:G:O2'	22:YA:1086:A:H1'	2.20	0.41
22:YA:1324:G:C4	22:YA:1328:G:O6	2.73	0.41
22:YA:2111:C:H5	22:YA:2147:G:H22	1.68	0.41
22:YA:2232:U:OP1	44:Y1:40:ARG:NH1	2.49	0.41
22:YA:2712:U:C1'	22:YA:2712(A):A:C8	3.01	0.41
22:YA:2768:C:C4	22:YA:2769:C:C5	3.08	0.41
22:YA:2810:A:H2'	22:YA:2811:G:O4'	2.21	0.41
22:YA:2844:G:H8	22:YA:2844:G:O5'	2.04	0.41
22:YA:729:G:C4	22:YA:1775:U:O2	2.74	0.41
22:YA:795:C:H2'	22:YA:796:C:C6	2.55	0.41
22:YA:828:U:H2'	22:YA:829:A:C8	2.55	0.41
24:YD:102:LYS:C	24:YD:103:ARG:HG2	2.40	0.41
24:YD:3:VAL:HG13	24:YD:17:THR:HG23	2.03	0.41
25:YE:64:LYS:C	25:YE:66:HIS:H	2.24	0.41
26:YF:67:GLN:HG3	26:YF:67:GLN:O	2.20	0.41
26:YF:9:ILE:HD11	26:YF:125:LEU:HG	2.03	0.41
27:YG:124:SER:HB2	27:YG:131:TYR:CE1	2.56	0.41
30:YN:29:LYS:HG2	30:YN:29:LYS:H	1.53	0.41
22:YA:29:U:H4'	37:YU:7:GLY:O	2.20	0.41
42:YZ:182:LYS:HG3	42:YZ:183:LEU:HD23	2.03	0.41
1:QA:340:U:C4	1:QA:341:C:C4	3.08	0.41
1:QA:785:G:N2	1:QA:798:G:C4	2.89	0.41
7:QG:45:ASP:O	7:QG:48:LYS:HB3	2.21	0.41
8:QH:41:ARG:NH2	8:QH:123:GLU:OE2	2.54	0.41
12:QL:103:GLY:N	12:QL:107:ALA:O	2.49	0.41
1:QA:529:G:O6	12:QL:49:ASN:HA	2.21	0.41
13:QM:105:THR:OG1	13:QM:106:ASN:N	2.54	0.41
1:QA:1245:A:OP2	21:QU:9:ARG:NH2	2.54	0.41
53:QV:64:G:C2	53:QV:65:C:C2	3.08	0.41
49:R6:24:GLU:HB3	49:R6:25:LYS:H	1.74	0.41
22:RA:1248:G:N7	37:RU:3:ARG:HB2	2.36	0.41
22:RA:1542:G:N7	22:RA:1543:A:C5	2.89	0.41
22:RA:1589:C:H2'	22:RA:1590:U:C6	2.56	0.41
22:RA:1649:G:H2'	22:RA:1650:G:O4'	2.21	0.41
22:RA:2816:C:O3'	34:RR:99:LYS:NZ	2.54	0.41
22:RA:40:C:H2'	22:RA:41:C:O4'	2.21	0.41
22:RA:439:G:N2	22:RA:440:G:C4	2.89	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:RA:617:G:H5'	26:RF:40:GLN:NE2	2.36	0.41
23:RB:115:G:H2'	23:RB:115:G:N3	2.36	0.41
24:RD:226:MET:HB3	24:RD:230:ASP:HB2	2.03	0.41
27:RG:103:LEU:HA	27:RG:103:LEU:HD23	1.89	0.41
28:RH:33:LEU:HD11	28:RH:136:ILE:O	2.20	0.41
29:RI:102:SER:OG	29:RI:108:THR:HG22	2.21	0.41
30:RN:57:ALA:C	30:RN:60:ILE:HD11	2.40	0.41
30:RN:57:ALA:O	30:RN:60:ILE:HD11	2.21	0.41
31:RO:26:LYS:HB2	31:RO:30:ALA:HB2	2.02	0.41
35:RS:83:LYS:C	35:RS:109:GLY:HA3	2.41	0.41
1:XA:1109:C:OP2	3:XC:176:HIS:ND1	2.54	0.41
1:XA:1189:C:H5''	1:XA:1190:G:OP2	2.21	0.41
1:XA:1336:C:O2'	1:XA:1337:G:P	2.78	0.41
1:XA:1348:U:H3	1:XA:1374:A:H2	1.66	0.41
1:XA:34:C:H1'	12:XL:32:PHE:CZ	2.56	0.41
1:XA:354:G:C2	1:XA:355:C:C5	3.09	0.41
1:XA:376:G:O3'	16:XP:5:ARG:HD2	2.21	0.41
1:XA:812:C:H4'	1:XA:813:U:H5'	2.03	0.41
1:XA:881:G:P	12:XL:12:ARG:NH2	2.92	0.41
2:XB:118:LEU:CB	2:XB:142:LEU:HD12	2.50	0.41
4:XD:186:LEU:HD23	4:XD:186:LEU:HA	1.95	0.41
4:XD:52:SER:O	4:XD:55:ALA:HB3	2.21	0.41
5:XE:82:VAL:HB	5:XE:138:ALA:HB2	2.03	0.41
9:XI:79:LEU:O	9:XI:83:ARG:HG2	2.19	0.41
19:XS:36:ARG:HA	19:XS:71:LEU:HB2	2.02	0.41
20:XT:11:SER:HA	20:XT:13:LEU:HD12	2.01	0.41
20:XT:43:LEU:HA	20:XT:43:LEU:HD23	1.88	0.41
43:Y0:37:LEU:O	43:Y0:38:VAL:HG23	2.21	0.41
22:YA:1053:C:N4	22:YA:1106:G:H1	2.16	0.41
22:YA:1120:G:H2'	22:YA:1121:C:C6	2.56	0.41
22:YA:1275:A:O2'	22:YA:1645:G:N3	2.54	0.41
22:YA:1754:C:H2'	22:YA:1755:A:O4'	2.21	0.41
22:YA:1878:G:H2'	22:YA:1879:C:H6	1.83	0.41
22:YA:2309:A:C6	22:YA:2310:A:C2	3.08	0.41
22:YA:2334:G:C2	35:YS:12:PHE:CE2	3.09	0.41
22:YA:2473:U:OP1	22:YA:2529:G:N2	2.53	0.41
22:YA:2525:G:N3	22:YA:2525:G:H2'	2.35	0.41
22:YA:2584:U:H2'	22:YA:2585:U:C6	2.56	0.41
22:YA:2621:A:C6	22:YA:2622:C:C4	3.09	0.41
22:YA:221:A:C4	22:YA:266:G:C8	3.09	0.41
22:YA:2681:C:C4	22:YA:2724:C:H5	2.38	0.41
22:YA:2743:C:C2	22:YA:2762:G:N2	2.89	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:YA:2812:G:H2'	22:YA:2813:A:H8	1.86	0.41
22:YA:2858:C:H2'	22:YA:2859:G:O4'	2.21	0.41
22:YA:581:C:C2	22:YA:582:G:C8	3.08	0.41
22:YA:706:A:H2'	22:YA:707:G:O4'	2.21	0.41
24:YD:36:PRO:HB3	24:YD:61:LEU:HB3	2.03	0.41
25:YE:41:LYS:HA	25:YE:41:LYS:HE2	2.02	0.41
26:YF:64:ILE:HA	26:YF:64:ILE:HD12	1.80	0.41
30:YN:7:LYS:H	30:YN:7:LYS:NZ	2.18	0.41
37:YU:96:ALA:HA	37:YU:98:LEU:HD23	2.03	0.41
42:YZ:62:PRO:C	42:YZ:64:GLY:N	2.74	0.41
1:QA:1049:U:H5'	1:QA:1201:A:OP1	2.21	0.41
1:QA:1178:G:H5''	9:QI:93:ARG:HH21	1.85	0.41
1:QA:348:G:H2'	1:QA:349:A:C8	2.54	0.41
1:QA:682:G:N3	1:QA:709:G:C2	2.88	0.41
1:QA:763:G:C6	1:QA:764:C:C4	3.09	0.41
1:QA:949:A:C2	1:QA:1233:G:N3	2.89	0.41
3:QC:42:LEU:HA	3:QC:42:LEU:HD12	1.80	0.41
3:QC:83:ARG:O	3:QC:86:VAL:HG22	2.21	0.41
6:QF:35:ALA:HA	6:QF:67:MET:HB3	2.02	0.41
1:QA:1128:C:H4'	9:QI:16:ARG:HH22	1.85	0.41
11:QK:25:TYR:CZ	11:QK:87:THR:HB	2.55	0.41
13:QM:3:ARG:CZ	27:RG:113:ARG:HH21	2.34	0.41
15:QO:4:THR:HB	15:QO:6:GLU:CD	2.41	0.41
1:QA:189:U:O2	17:QQ:63:ARG:NH2	2.54	0.41
47:R4:39:CYS:HB2	47:R4:41:PRO:HD2	2.02	0.41
22:RA:1015:G:N1	22:RA:1016:G:C5	2.89	0.41
22:RA:1034:G:C6	22:RA:1035:U:C4	3.08	0.41
22:RA:1283:G:N2	22:RA:1286:A:OP2	2.49	0.41
22:RA:1751:C:H2'	22:RA:1752:C:C6	2.55	0.41
22:RA:528:A:C2	22:RA:2042:A:H2'	2.55	0.41
22:RA:2485:G:C2	22:RA:2486:G:C8	3.09	0.41
22:RA:2568:C:H2'	22:RA:2569:G:O4'	2.21	0.41
22:RA:26:G:N1	22:RA:27:G:N2	2.69	0.41
22:RA:2869:G:H2'	22:RA:2870:C:O4'	2.21	0.41
22:RA:30:G:C6	22:RA:31:C:C4	3.09	0.41
22:RA:667:U:H2'	22:RA:668:G:O4'	2.20	0.41
22:RA:966:G:H2'	22:RA:967:C:H6	1.86	0.41
24:RD:34:VAL:C	24:RD:35:LYS:HG3	2.40	0.41
27:RG:131:TYR:O	27:RG:159:VAL:HG13	2.21	0.41
29:RI:60:GLU:HG3	29:RI:61:ARG:NH1	2.36	0.41
30:RN:9:VAL:HG21	30:RN:48:MET:HB3	2.02	0.41
30:RN:73:THR:HB	30:RN:82:LEU:HD11	2.02	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
32:RP:62:LEU:N	32:RP:62:LEU:HD13	2.36	0.41
37:RU:61:TRP:O	37:RU:65:ILE:HG13	2.21	0.41
42:RZ:165:VAL:HG12	42:RZ:166:SER:N	2.36	0.41
1:XA:1343:G:H4'	9:XI:122:ALA:HB3	2.03	0.41
1:XA:186:C:H2'	1:XA:186(A):C:C6	2.56	0.41
1:XA:36:C:C4	1:XA:37:U:C4	3.09	0.41
1:XA:731:G:H5'	1:XA:766:A:H4'	2.02	0.41
1:XA:820:U:H4'	1:XA:821:G:OP2	2.21	0.41
2:XB:126:GLU:O	2:XB:129:GLU:HB2	2.20	0.41
1:XA:1223:C:P	19:XS:78:ARG:HH12	2.43	0.41
44:Y1:83:GLU:C	44:Y1:85:LEU:H	2.24	0.41
49:Y6:36:LEU:HD13	49:Y6:50:ARG:CZ	2.51	0.41
22:YA:1058:G:H2'	22:YA:1058:G:N3	2.36	0.41
22:YA:1811:G:H2'	22:YA:1812:A:O4'	2.20	0.41
22:YA:1844:C:H2'	22:YA:1845:G:C8	2.33	0.41
22:YA:2320:A:C2	22:YA:2333:A:C8	3.09	0.41
22:YA:2666:C:H5''	22:YA:2667:C:OP2	2.21	0.41
22:YA:2683:C:H5''	22:YA:2684:U:OP2	2.20	0.41
22:YA:2742:C:N4	22:YA:2763:G:N2	2.69	0.41
22:YA:2867:G:O2'	22:YA:2868:A:OP2	2.33	0.41
22:YA:450:G:O6	22:YA:453:C:OP1	2.38	0.41
22:YA:649:G:C5	22:YA:650:C:C5	3.09	0.41
24:YD:130:ALA:C	24:YD:131:LEU:HD12	2.42	0.41
25:YE:32:PRO:HA	25:YE:90:THR:HA	2.03	0.41
25:YE:95:ILE:H	25:YE:95:ILE:CD1	2.31	0.41
29:YI:79:ILE:HA	29:YI:80:PRO:HD3	1.79	0.41
30:YN:96:GLU:O	30:YN:100:GLU:HG3	2.20	0.41
34:YR:44:LEU:HD22	34:YR:48:VAL:HG23	2.02	0.41
37:YU:17:ILE:HG23	37:YU:39:LEU:HD12	2.02	0.41
37:YU:92:ARG:HD2	37:YU:95:LEU:HD12	2.02	0.41
42:YZ:165:VAL:HG12	42:YZ:166:SER:N	2.36	0.41
1:QA:144:G:H1	1:QA:178:C:N4	2.18	0.41
1:QA:230:G:N2	1:QA:231:G:N3	2.68	0.41
1:QA:324:G:N2	1:QA:327:A:C8	2.89	0.41
1:QA:1240:U:H1'	7:QG:42:ILE:HD11	2.03	0.41
7:QG:93:PRO:O	7:QG:96:GLN:HB2	2.21	0.41
8:QH:44:PHE:HD1	8:QH:80:ILE:HG12	1.86	0.41
9:QI:40:LEU:HD11	9:QI:70:LYS:HG2	2.02	0.41
1:QA:1049:U:OP1	14:QN:3:ARG:HD3	2.20	0.41
21:QU:10:ARG:HA	21:QU:13:ILE:HB	2.02	0.41
54:QX:6:G:H1	55:QY:34:C:N4	2.18	0.41
43:R0:50:ASN:HB3	43:R0:63:VAL:HG22	2.03	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:RA:1040:C:H2'	22:RA:1041:C:C6	2.55	0.41
22:RA:1222:C:C2	22:RA:1229(A):G:C2	3.09	0.41
22:RA:2046:G:H2'	22:RA:2047:U:C6	2.55	0.41
22:RA:2441:C:O2'	22:RA:2442:C:H5'	2.21	0.41
22:RA:2452:C:H2'	22:RA:2453:A:C8	2.56	0.41
22:RA:2881:C:C2	22:RA:2882:A:C8	3.09	0.41
22:RA:337:C:H2'	22:RA:338:G:O4'	2.21	0.41
22:RA:746:A:HO2'	22:RA:747:U:P	2.43	0.41
22:RA:797:C:H2'	22:RA:798:G:O4'	2.21	0.41
22:RA:805:G:OP2	32:RP:41:ARG:HG2	2.21	0.41
23:RB:11:C:OP2	23:RB:12:C:N4	2.34	0.41
23:RB:75:G:H1	23:RB:102:G:N2	2.18	0.41
24:RD:257:LEU:HD23	24:RD:257:LEU:HA	1.90	0.41
25:RE:184:VAL:HB	25:RE:185:LYS:H	1.65	0.41
26:RF:107:LYS:HE3	26:RF:206:ILE:HD12	2.02	0.41
28:RH:107:VAL:HB	28:RH:153:LYS:HE3	2.03	0.41
22:RA:1162:G:O4'	38:RV:23:GLU:HG3	2.21	0.41
1:XA:105:G:H2'	1:XA:106:C:C6	2.56	0.41
1:XA:1358:U:H5''	14:XN:34:TYR:HA	2.01	0.41
1:XA:181:G:O2'	1:XA:182:U:H6	2.04	0.41
1:XA:300:A:C5	1:XA:301:G:H1'	2.56	0.41
1:XA:791:G:C6	1:XA:792:A:N1	2.88	0.41
1:XA:917:G:C2	1:XA:918:A:C4	3.09	0.41
1:XA:93:U:H2'	1:XA:95:G:C4'	2.51	0.41
1:XA:971:G:OP1	1:XA:971:G:H3'	2.20	0.41
5:XE:51:VAL:HB	5:XE:52:PRO:HD3	2.03	0.41
5:XE:68:GLU:HG3	5:XE:68:GLU:O	2.21	0.41
7:XG:89:MET:HE3	7:XG:155:ARG:HB2	2.03	0.41
8:XH:12:ARG:HD3	8:XH:26:VAL:HB	2.03	0.41
8:XH:6:ILE:HB	8:XH:85:ARG:NH1	2.36	0.41
47:Y4:48:ARG:HH12	47:Y4:52:THR:H	1.68	0.41
22:YA:1022:G:C6	22:YA:1140:C:N3	2.88	0.41
22:YA:1085:A:O2'	22:YA:1086:A:OP1	2.31	0.41
22:YA:1169:G:N2	22:YA:1181:C:C2	2.89	0.41
22:YA:330:A:H2	22:YA:1210:A:H2'	1.85	0.41
22:YA:1286:A:H1'	22:YA:1288:U:OP2	2.21	0.41
22:YA:2270:G:O5'	22:YA:2270:G:H8	2.03	0.41
22:YA:2320:A:C8	22:YA:2333:A:N6	2.89	0.41
22:YA:2493:U:H2'	22:YA:2494:G:O4'	2.21	0.41
22:YA:2686:G:C2	22:YA:2724:C:O2	2.74	0.41
22:YA:381:G:H2'	22:YA:382:G:H8	1.85	0.41
24:YD:145:VAL:HG11	24:YD:175:LEU:HD11	2.02	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
24:YD:62:TYR:HA	24:YD:87:ASN:OD1	2.21	0.41
26:YF:198:ALA:HA	26:YF:201:VAL:HG12	2.03	0.41
26:YF:28:ILE:H	26:YF:28:ILE:HG13	1.68	0.41
32:YP:106:LEU:O	32:YP:107:LYS:HB2	2.20	0.41
32:YP:29:LYS:HB3	32:YP:30:THR:H	1.59	0.41
37:YU:92:ARG:NH2	38:YV:11:GLN:H	2.18	0.41
40:YX:31:HIS:HB3	40:YX:34:ALA:HB2	2.03	0.41
42:YZ:108:PRO:O	42:YZ:111:VAL:N	2.45	0.41
42:YZ:150:LEU:H	42:YZ:150:LEU:HD13	1.86	0.41
1:QA:1263:C:H42	1:QA:1272:G:H1	1.70	0.40
1:QA:1224:G:N1	1:QA:1322:C:H1'	2.36	0.40
1:QA:1512:U:H3	1:QA:1523:G:H1	1.70	0.40
1:QA:505:G:C5	1:QA:506:G:N7	2.89	0.40
1:QA:591:U:H2'	1:QA:592:G:H8	1.86	0.40
1:QA:865:A:N3	1:QA:918:A:O2'	2.43	0.40
5:QE:147:ASP:O	5:QE:151:LEU:HG	2.21	0.40
7:QG:54:THR:O	7:QG:56:GLN:N	2.52	0.40
10:QJ:4:ILE:HA	10:QJ:100:THR:HG22	2.02	0.40
43:R0:18:ALA:O	43:R0:20:ARG:NH1	2.54	0.40
47:R4:13:ARG:O	47:R4:30:GLU:HA	2.21	0.40
47:R4:23:GLU:HG3	47:R4:25:TYR:HE2	1.85	0.40
22:RA:1003:G:N2	22:RA:1153:C:C2	2.89	0.40
22:RA:1120:G:H2'	22:RA:1121:C:O4'	2.21	0.40
22:RA:1412:A:C6	22:RA:1591:G:C6	3.09	0.40
22:RA:2481:G:HO2'	22:RA:2482:G:P	2.44	0.40
22:RA:2574:G:H2'	22:RA:2575:C:O4'	2.20	0.40
22:RA:342:G:H2'	22:RA:343:C:O4'	2.20	0.40
25:RE:55:ASN:HD22	25:RE:58:ARG:HB2	1.86	0.40
27:RG:47:LYS:HE3	27:RG:47:LYS:HB2	1.81	0.40
28:RH:103:LEU:HG	28:RH:105:LEU:HD12	2.02	0.40
28:RH:30:LYS:HD2	28:RH:81:GLU:H	1.85	0.40
29:RI:110:ASP:HB2	29:RI:130:TYR:OH	2.22	0.40
31:RO:63:VAL:HB	31:RO:106:LEU:HD11	2.02	0.40
1:XA:1091:U:H2'	1:XA:1093:A:OP2	2.20	0.40
1:XA:374:A:N3	1:XA:374:A:H2'	2.35	0.40
1:XA:493:G:N2	1:XA:494:U:O4	2.54	0.40
1:XA:534:U:O5'	1:XA:534:U:H6	2.04	0.40
1:XA:539:A:OP2	12:XL:115:LYS:HE3	2.21	0.40
1:XA:637:G:C6	1:XA:638:G:C5	3.09	0.40
1:XA:875:C:O2'	8:XH:14:ARG:NH1	2.54	0.40
1:XA:892:A:H2'	1:XA:893:C:C6	2.56	0.40
4:XD:131:ARG:HG2	4:XD:131:ARG:H	1.67	0.40

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
4:XD:165:MET:O	4:XD:167:GLY:N	2.54	0.40
4:XD:64:LEU:HD13	4:XD:198:VAL:HG11	2.02	0.40
6:XF:25:ILE:HD13	6:XF:28:ARG:NH1	2.36	0.40
11:XK:19:ALA:CB	11:XK:32:ILE:HG22	2.51	0.40
12:XL:38:THR:CG2	12:XL:57:LYS:HB3	2.49	0.40
22:YA:107:C:H2'	22:YA:108:U:C6	2.54	0.40
22:YA:1105:U:C2	22:YA:1106:G:C8	3.09	0.40
22:YA:1019:U:H3	22:YA:1142(A):A:H62	1.69	0.40
22:YA:1833:U:H2'	22:YA:1834:U:C6	2.54	0.40
22:YA:189:G:H1'	22:YA:207:A:H61	1.84	0.40
22:YA:1932:A:C2	22:YA:1969:A:C2	3.09	0.40
22:YA:1957:C:H2'	22:YA:1958:C:H6	1.85	0.40
22:YA:1273:U:C4	22:YA:2003:G:H1'	2.56	0.40
22:YA:2323:G:C6	22:YA:2324:C:C4	3.09	0.40
22:YA:258:G:C4	22:YA:259:G:C8	3.10	0.40
22:YA:271:G:C4	22:YA:272:G:N7	2.89	0.40
22:YA:26:G:C6	22:YA:27:G:C2	3.08	0.40
22:YA:2881:C:C2	22:YA:2882:A:C8	3.09	0.40
22:YA:321:G:H5''	26:YF:136:THR:HG23	2.03	0.40
22:YA:376:C:H2'	22:YA:377:C:C6	2.56	0.40
22:YA:460:A:C2	22:YA:470:A:C4	3.10	0.40
22:YA:604:G:H2'	22:YA:605:C:C6	2.57	0.40
22:YA:845:G:OP2	22:YA:845:G:H8	2.04	0.40
23:YB:63:G:C2	23:YB:64:C:C2	3.09	0.40
24:YD:201:HIS:O	24:YD:204:ILE:HG12	2.21	0.40
25:YE:49:LEU:HD12	25:YE:49:LEU:HA	1.72	0.40
27:YG:7:LEU:HD12	27:YG:104:GLU:HA	2.03	0.40
27:YG:18:GLU:OE1	27:YG:22:ARG:NH1	2.49	0.40
27:YG:61:ALA:HA	27:YG:64:THR:HG22	2.02	0.40
30:YN:65:LYS:HG2	30:YN:65:LYS:H	1.60	0.40
31:YO:4:PRO:O	31:YO:5:GLN:CB	2.69	0.40
1:QA:1256:A:OP1	3:QC:26:LYS:NZ	2.45	0.40
1:QA:1428:A:H2'	1:QA:1429:C:O4'	2.21	0.40
1:QA:148:G:H1	1:QA:174:C:H42	1.68	0.40
1:QA:250:A:O5'	1:QA:250:A:H8	2.03	0.40
1:QA:355:C:C4	1:QA:356:A:N7	2.89	0.40
1:QA:509:A:C8	1:QA:509:A:H3'	2.56	0.40
1:QA:540:G:H2'	1:QA:541:G:O4'	2.20	0.40
1:QA:781:A:C5	1:QA:802:A:C2	3.09	0.40
3:QC:71:ALA:HB2	3:QC:109:PRO:HB3	2.04	0.40
5:QE:50:GLU:HG3	5:QE:52:PRO:HD2	2.04	0.40
32:RP:62:LEU:O	51:R8:13:ARG:HB2	2.22	0.40

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
51:R8:49:VAL:HG23	51:R8:53:PRO:HB3	2.04	0.40
22:RA:2466:C:OP1	52:R9:4:ARG:HB2	2.20	0.40
22:RA:977:G:N3	22:RA:1001:A:H2	2.19	0.40
22:RA:1020:A:OP1	22:RA:1034:G:N2	2.42	0.40
22:RA:1303:G:H1'	22:RA:1641:A:N1	2.37	0.40
22:RA:1519:G:C6	22:RA:1520:U:C4	3.09	0.40
22:RA:1614:A:H62	39:RW:93:ALA:CA	2.34	0.40
22:RA:188:G:N2	22:RA:208:C:O2	2.54	0.40
22:RA:71:A:H2	40:RX:31:HIS:NE2	2.19	0.40
22:RA:84:A:C2	22:RA:103:A:C5	3.09	0.40
23:RB:14:U:H4'	23:RB:70:C:O2	2.21	0.40
24:RD:44:ASN:HB2	24:RD:49:ILE:HA	2.02	0.40
26:RF:181:LEU:HD22	26:RF:181:LEU:HA	1.79	0.40
22:RA:2751:G:C5	28:RH:2:SER:HB3	2.56	0.40
30:RN:17:ASP:O	30:RN:19:GLU:N	2.54	0.40
33:RQ:58:PHE:CD1	33:RQ:61:GLY:HA3	2.56	0.40
35:RS:62:LYS:HB3	35:RS:97:ARG:CD	2.44	0.40
36:RT:109:GLU:O	36:RT:113:LYS:HB2	2.21	0.40
36:RT:51:ARG:CG	36:RT:98:LYS:HG3	2.52	0.40
37:RU:83:LEU:HG	37:RU:88:ILE:HB	2.03	0.40
40:RX:67:GLY:C	40:RX:69:TYR:H	2.23	0.40
42:RZ:100:VAL:HA	42:RZ:101:PRO:HD3	1.84	0.40
42:RZ:117:LEU:HB2	42:RZ:174:VAL:HG22	2.03	0.40
1:XA:1120:G:C6	1:XA:1121:U:C4	3.10	0.40
1:XA:1137:C:H4'	1:XA:1137:C:OP1	2.21	0.40
1:XA:236:G:H2'	1:XA:237:C:C6	2.56	0.40
1:XA:344:A:O2'	1:XA:346:G:O6	2.22	0.40
1:XA:380:G:N2	1:XA:383:A:OP2	2.55	0.40
1:XA:57:G:H2'	1:XA:58:C:O4'	2.21	0.40
1:XA:735:C:H2'	1:XA:736:C:C6	2.50	0.40
1:XA:75:C:H2'	1:XA:76:G:O4'	2.21	0.40
1:XA:936:C:H42	1:XA:1379:G:H1	1.69	0.40
2:XB:120:ALA:C	2:XB:122:PHE:H	2.24	0.40
2:XB:166:ASP:HB3	2:XB:169:LYS:HB2	2.02	0.40
3:XC:42:LEU:HD12	3:XC:42:LEU:HA	1.87	0.40
5:XE:69:VAL:HA	5:XE:70:PRO:HD2	1.76	0.40
10:XJ:6:ILE:O	10:XJ:71:LEU:HD12	2.21	0.40
12:XL:90:VAL:O	12:XL:92:ASP:N	2.54	0.40
53:XV:17:C:N4	53:XV:17(A):U:O4	2.53	0.40
43:Y0:11:ARG:HG2	43:Y0:11:ARG:H	1.51	0.40
49:Y6:13:CYS:HB2	49:Y6:22:ALA:HB3	2.03	0.40
22:YA:1062:G:H1'	22:YA:1088:A:C6	2.56	0.40

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:YA:1087:G:C4	22:YA:1089:G:H1'	2.57	0.40
22:YA:1363:C:H2'	22:YA:1364:G:O4'	2.21	0.40
22:YA:1359:A:H62	22:YA:1372:U:H3	1.62	0.40
22:YA:1932:A:C2	22:YA:1969:A:C4	3.09	0.40
22:YA:219:G:H2'	22:YA:220:G:O4'	2.21	0.40
22:YA:676:A:H1'	22:YA:2443:C:H1'	2.03	0.40
22:YA:2477:C:O2	52:Y9:4:ARG:NH1	2.32	0.40
22:YA:2532:G:O2'	22:YA:2657:A:N1	2.45	0.40
22:YA:2715:C:H2'	22:YA:2716:U:H6	1.86	0.40
22:YA:2852:G:C6	22:YA:2853:C:C4	3.10	0.40
22:YA:389:G:H22	32:YP:72:PRO:HD3	1.86	0.40
22:YA:651:G:H4'	51:Y8:18:ALA:HB3	2.03	0.40
22:YA:681:G:H2'	22:YA:682:G:O4'	2.21	0.40
23:YB:12:C:O4'	23:YB:15:A:N6	2.53	0.40
24:YD:35:LYS:HZ1	24:YD:65:ILE:HA	1.86	0.40
28:YH:125:VAL:HG22	28:YH:131:VAL:HG13	2.02	0.40
28:YH:109:PHE:HZ	28:YH:152:ARG:HG2	1.86	0.40
33:YQ:80:GLU:HB2	33:YQ:81:VAL:H	1.69	0.40
1:QA:1160:G:H2'	1:QA:1160:G:N3	2.36	0.40
1:QA:1279:A:OP2	10:QJ:9:ARG:NH1	2.55	0.40
1:QA:185:A:H2'	1:QA:186:C:C6	2.56	0.40
1:QA:281:G:OP2	1:QA:281:G:H8	2.04	0.40
1:QA:439:A:OP2	1:QA:493:G:N1	2.43	0.40
1:QA:758:G:H5'	1:QA:880:C:H1'	2.02	0.40
1:QA:887:G:N2	1:QA:911:U:H1'	2.36	0.40
6:QF:30:LEU:HD23	6:QF:75:LEU:HD11	2.02	0.40
53:QV:29:G:C4	53:QV:30:G:C8	3.09	0.40
54:QX:1:A:C6	54:QX:2:U:C4	3.09	0.40
22:RA:1527:G:H5''	22:RA:1528:A:OP1	2.21	0.40
22:RA:2029:G:H2'	22:RA:2031:A:OP1	2.21	0.40
22:RA:2127:G:H22	22:RA:2162:G:H1'	1.86	0.40
22:RA:2500:U:H5''	22:RA:2501:C:OP2	2.21	0.40
22:RA:2819:G:C6	22:RA:2821:A:C2	3.08	0.40
22:RA:2842:G:H2'	22:RA:2843:G:O4'	2.21	0.40
22:RA:394:A:N1	22:RA:395:U:C2	2.89	0.40
22:RA:612:G:O2'	22:RA:616:A:N1	2.43	0.40
22:RA:654(B):C:H42	22:RA:654(T):C:H42	1.69	0.40
22:RA:764:A:C6	22:RA:781:A:C2	3.09	0.40
22:RA:960:A:N7	22:RA:962:G:C4	2.89	0.40
24:RD:209:ALA:O	24:RD:212:SER:HB2	2.22	0.40
25:RE:197:ILE:HD11	25:RE:199:ARG:CZ	2.50	0.40
25:RE:26:ILE:O	25:RE:26:ILE:HG12	2.18	0.40

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
25:RE:36:ARG:HB3	25:RE:36:ARG:HH11	1.87	0.40
26:RF:29:ASN:HB3	26:RF:32:LEU:HD23	2.04	0.40
27:RG:117:PHE:HE1	27:RG:120:LEU:HD23	1.87	0.40
28:RH:98:LEU:HB2	28:RH:125:VAL:HB	2.03	0.40
32:RP:114:ILE:HD11	32:RP:130:PHE:CD1	2.57	0.40
33:RQ:72:LYS:HB3	33:RQ:94:VAL:O	2.21	0.40
35:RS:23:ARG:HB2	35:RS:86:ALA:HB2	2.03	0.40
37:RU:66:ASN:CG	37:RU:70:ARG:HH21	2.21	0.40
41:RY:11:ASP:O	41:RY:26:LYS:HG3	2.21	0.40
42:RZ:5:LEU:HD21	42:RZ:44:PHE:HA	2.02	0.40
1:XA:129(A):G:C2	1:XA:188:U:O2'	2.74	0.40
1:XA:1390:U:H2'	1:XA:1391:U:C6	2.56	0.40
1:XA:452:A:H4'	16:XP:72:ARG:NH2	2.36	0.40
1:XA:450:G:N7	1:XA:481:G:C6	2.89	0.40
1:XA:509:A:H4'	1:XA:510:A:OP1	2.22	0.40
1:XA:955:U:H1'	1:XA:1227:A:H61	1.87	0.40
1:XA:96:G:H2'	1:XA:97:U:O4'	2.22	0.40
2:XB:19:HIS:NE2	2:XB:206:ASP:HB2	2.36	0.40
9:XI:95:LYS:NZ	9:XI:96:LEU:HD13	2.36	0.40
11:XK:18:ARG:HB3	11:XK:33:THR:OG1	2.21	0.40
17:XQ:58:GLU:O	17:XQ:74:LEU:N	2.40	0.40
46:Y3:12:PRO:O	46:Y3:14:GLY:N	2.55	0.40
47:Y4:43:TYR:O	47:Y4:46:GLN:HA	2.20	0.40
22:YA:2285:C:H5	49:Y6:27:LYS:HE2	1.85	0.40
52:Y9:2:LYS:HA	52:Y9:2:LYS:HD2	1.86	0.40
22:YA:1024:G:C8	22:YA:1025:G:H2'	2.56	0.40
22:YA:1448:G:H2'	22:YA:1449:A:C8	2.57	0.40
22:YA:1566:A:O2'	22:YA:1567:A:H5'	2.22	0.40
22:YA:1630(A):C:N3	22:YA:1635:G:N1	2.64	0.40
22:YA:1685:C:H2'	22:YA:1686:C:H5''	2.03	0.40
22:YA:1779:U:C6	22:YA:1783:A:N7	2.89	0.40
22:YA:2133:G:N2	22:YA:2157:G:H2'	2.37	0.40
22:YA:2466:C:H42	22:YA:2484:G:H1	1.70	0.40
22:YA:2532:G:H1'	22:YA:2663:G:N2	2.37	0.40
22:YA:2550:G:C6	22:YA:2551:C:C4	3.09	0.40
22:YA:2023:G:H4'	22:YA:2617:C:O3'	2.20	0.40
22:YA:2667:C:H1'	28:YH:109:PHE:HD2	1.86	0.40
22:YA:2674:G:H2'	22:YA:2675:A:C8	2.57	0.40
22:YA:2850:A:OP2	22:YA:2866:U:N3	2.54	0.40
22:YA:552:G:C6	22:YA:553:U:C4	3.09	0.40
22:YA:640:C:H2'	22:YA:641:C:C6	2.56	0.40
22:YA:795:C:H6	22:YA:795:C:O5'	2.04	0.40

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:YA:7:G:H2'	22:YA:8:A:O4'	2.20	0.40
22:YA:864:G:H1'	22:YA:914:C:N4	2.36	0.40
23:YB:27:C:H5'	23:YB:28:C:OP2	2.22	0.40
26:YF:168:ARG:HG3	26:YF:175:THR:HG21	2.02	0.40
27:YG:99:MET:HG3	27:YG:100:TRP:N	2.36	0.40
31:YO:68:GLU:H	31:YO:68:GLU:CD	2.24	0.40
37:YU:17:ILE:HA	37:YU:17:ILE:HD13	1.92	0.40
42:YZ:89:PHE:CE1	42:YZ:96:VAL:HG21	2.57	0.40
1:QA:119:A:H3'	1:QA:119:A:OP1	2.21	0.40
1:QA:148:G:H2'	1:QA:149:A:C8	2.55	0.40
1:QA:241:C:H42	1:QA:285:G:H1	1.69	0.40
1:QA:321:A:N6	1:QA:329:A:OP2	2.51	0.40
1:QA:503:C:H2'	1:QA:504:C:H6	1.86	0.40
1:QA:872:A:C2	1:QA:874:G:C6	3.10	0.40
1:QA:924:C:N4	1:QA:925:G:O6	2.55	0.40
3:QC:43:LEU:HD22	3:QC:47:LEU:HD22	2.02	0.40
10:QJ:61:GLU:OE1	14:QN:58:LYS:HE2	2.21	0.40
13:QM:13:LYS:HG3	13:QM:44:ARG:NH1	2.36	0.40
16:QP:34:GLU:OE2	16:QP:55:ARG:NH1	2.53	0.40
44:R1:87:PRO:O	44:R1:91:LYS:HB2	2.21	0.40
44:R1:95:LEU:HA	44:R1:95:LEU:HD23	1.94	0.40
22:RA:1007:C:H4'	30:RN:108:PRO:HD3	2.03	0.40
22:RA:1011:G:C6	22:RA:1013:C:C4	3.09	0.40
22:RA:1077:A:H3'	22:RA:1078:U:C5'	2.51	0.40
22:RA:1114:G:N1	22:RA:1115:G:C6	2.89	0.40
22:RA:1219:G:O2'	22:RA:1220:A:H5''	2.20	0.40
22:RA:1694:C:H2'	22:RA:1694:C:H6	1.65	0.40
22:RA:1937:A:C8	22:RA:1939:U:H2'	2.56	0.40
22:RA:227:A:O2'	22:RA:228:A:OP2	2.38	0.40
22:RA:2867:G:HO2'	22:RA:2868:A:P	2.41	0.40
22:RA:2885:C:N3	22:RA:2886:G:H1'	2.36	0.40
22:RA:2886:G:H2'	22:RA:2887:U:H6	1.87	0.40
22:RA:654(A):G:OP2	22:RA:654(A):G:H3'	2.21	0.40
24:RD:132:PRO:HG3	24:RD:190:TYR:CE1	2.56	0.40
24:RD:35:LYS:HB3	24:RD:63:ARG:HA	2.04	0.40
29:RI:93:THR:O	29:RI:97:ILE:HG12	2.21	0.40
31:RO:66:LYS:HA	31:RO:79:PHE:O	2.22	0.40
33:RQ:83:MET:H	43:R0:7:LEU:HD12	1.87	0.40
35:RS:69:VAL:HG13	35:RS:101:LEU:HD22	2.03	0.40
42:RZ:153:SER:N	42:RZ:167:PRO:HB2	2.37	0.40
1:XA:1002:G:N3	1:XA:1003:G:C8	2.89	0.40
1:XA:1004:A:N7	1:XA:1026:G:C8	2.89	0.40

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:XA:1151:A:O2'	1:XA:1152:A:O5'	2.34	0.40
1:XA:1342:C:H2'	1:XA:1343:G:C8	2.57	0.40
1:XA:619:U:O2	4:XD:135:LEU:HD23	2.21	0.40
1:XA:663:A:H61	1:XA:742:G:H1	1.69	0.40
1:XA:872:A:C5	1:XA:874:G:C8	3.10	0.40
1:XA:977:A:H8	1:XA:1223:C:C2	2.40	0.40
3:XC:188:LEU:HD13	3:XC:188:LEU:HA	1.90	0.40
3:XC:20:SER:HB2	3:XC:40:ARG:NH2	2.29	0.40
1:XA:403:C:OP2	4:XD:74:GLN:NE2	2.54	0.40
5:XE:31:LEU:HD23	5:XE:45:PHE:HD1	1.78	0.40
5:XE:34:VAL:HG11	5:XE:63:ARG:HG2	2.03	0.40
5:XE:89:ILE:HG12	5:XE:91:LEU:CD1	2.52	0.40
9:XI:75:ASP:HA	9:XI:78:LYS:HB3	2.04	0.40
13:XM:3:ARG:HG2	47:Y4:34:GLU:HB3	2.03	0.40
13:XM:68:GLY:HA3	27:YG:116:ASP:OD1	2.21	0.40
46:Y3:52:HIS:CD2	46:Y3:53:LEU:HG	2.57	0.40
47:Y4:14:ILE:HG23	47:Y4:14:ILE:O	2.21	0.40
49:Y6:11:LEU:HA	49:Y6:11:LEU:HD13	1.86	0.40
22:YA:2466:C:H5''	52:Y9:6:SER:CB	2.51	0.40
22:YA:1022:G:H22	22:YA:1142(A):A:H2	1.65	0.40
22:YA:1072:C:H42	22:YA:1092:C:N4	2.19	0.40
22:YA:1264:G:C3'	22:YA:1265:A:H5''	2.47	0.40
22:YA:2314:C:H2'	22:YA:2315:G:H8	1.87	0.40
22:YA:2467:C:H4'	33:YQ:123:HIS:CG	2.57	0.40
22:YA:2594:C:O2	22:YA:2594:C:H2'	2.21	0.40
22:YA:2634:G:H1	22:YA:2784:C:N4	2.18	0.40
22:YA:768:G:C6	22:YA:769:G:C5	3.08	0.40
24:YD:237:GLU:O	24:YD:238:GLY:C	2.59	0.40
28:YH:46:GLU:OE1	28:YH:51:ARG:NH1	2.54	0.40
29:YI:91:SER:OG	29:YI:92:VAL:N	2.54	0.40
35:YS:69:VAL:HA	35:YS:72:ALA:HB3	2.03	0.40
37:YU:19:LYS:O	37:YU:22:LYS:HB2	2.22	0.40
38:YV:21:ARG:HD2	38:YV:91:TYR:CE1	2.56	0.40
42:YZ:112:ARG:HG2	42:YZ:113:ALA:H	1.86	0.40
1:QA:1179:A:H2'	1:QA:1180:A:O4'	2.22	0.40
1:QA:1290:G:C4	1:QA:1291:G:C8	3.09	0.40
1:QA:266:G:H2'	1:QA:266:G:H8	1.81	0.40
1:QA:292:G:C5	1:QA:293:G:H1'	2.55	0.40
1:QA:899:C:O5'	1:QA:899:C:H6	2.05	0.40
1:QA:437:U:O2'	4:QD:123:HIS:HD2	2.04	0.40
6:QF:21:LEU:O	6:QF:25:ILE:HG12	2.21	0.40
6:QF:33:TYR:CE1	6:QF:78:GLU:HG2	2.57	0.40

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
8:QH:83:ILE:HB	8:QH:137:VAL:HG13	2.03	0.40
13:QM:4:ILE:H	13:QM:9:ILE:CG2	2.35	0.40
20:QT:86:ARG:O	20:QT:90:GLN:HG3	2.21	0.40
22:RA:270(R):G:H1'	44:R1:78:LYS:HZ1	1.86	0.40
50:R7:31:LEU:HA	50:R7:31:LEU:HD23	1.86	0.40
22:RA:2422:A:N7	51:R8:31:HIS:HE1	2.20	0.40
22:RA:1265:A:OP2	22:RA:2615:U:OP1	2.40	0.40
22:RA:1630:G:H2'	22:RA:1630(A):C:C6	2.57	0.40
22:RA:1668:A:N7	22:RA:1674:G:C6	2.89	0.40
22:RA:1790:C:H2'	22:RA:1791:A:C4	2.56	0.40
22:RA:2233:U:H2'	22:RA:2234:G:C8	2.57	0.40
22:RA:2474:C:H5''	22:RA:2475:C:H5	1.86	0.40
22:RA:2639:A:C2	22:RA:2778:A:C8	3.10	0.40
22:RA:304:G:H2'	22:RA:305:U:C6	2.56	0.40
22:RA:30:G:C6	22:RA:31:C:N4	2.90	0.40
22:RA:533:G:C6	22:RA:534:U:N3	2.90	0.40
22:RA:702:G:C2	22:RA:731:C:N3	2.90	0.40
13:QM:93:ARG:NH1	22:RA:888:C:OP1	2.50	0.40
24:RD:96:HIS:CD2	24:RD:102:LYS:HG2	2.57	0.40
24:RD:26:LYS:HD2	24:RD:26:LYS:H	1.87	0.40
24:RD:43:ARG:CB	24:RD:54:ARG:HB2	2.52	0.40
28:RH:167:GLU:HA	28:RH:168:PRO:HD3	1.90	0.40
30:RN:108:PRO:O	30:RN:113:GLY:HA3	2.21	0.40
32:RP:25:SER:OG	32:RP:26:GLY:O	2.38	0.40
42:RZ:166:SER:HB3	42:RZ:168:GLU:N	2.34	0.40
1:XA:1097:C:O2'	1:XA:1169:A:N3	2.44	0.40
1:XA:1179:A:C6	1:XA:1180:A:C2	3.10	0.40
1:XA:1189:C:O2'	3:XC:176:HIS:HD2	2.04	0.40
1:XA:1126:U:OP2	1:XA:1281:U:H1'	2.21	0.40
1:XA:1325:C:H2'	1:XA:1326:C:H6	1.87	0.40
1:XA:1502:A:H2'	1:XA:1504:G:C8	2.57	0.40
1:XA:191:G:C5	1:XA:192:U:C4	3.10	0.40
1:XA:28:G:O2'	1:XA:296:U:H5''	2.21	0.40
1:XA:514:C:H2'	1:XA:515:G:H8	1.84	0.40
1:XA:651:C:H2'	1:XA:652:U:C6	2.48	0.40
1:XA:675:A:H2'	1:XA:676:A:C8	2.51	0.40
4:XD:108:LEU:HB3	4:XD:110:PHE:CD1	2.57	0.40
5:XE:12:LEU:HB3	5:XE:31:LEU:CB	2.51	0.40
9:XI:5:TYR:HA	9:XI:17:VAL:O	2.21	0.40
10:XJ:77:PRO:O	10:XJ:79:ARG:NH1	2.54	0.40
11:XK:38:ASN:HA	11:XK:39:PRO:HD3	1.75	0.40
19:XS:15:LEU:HA	19:XS:18:LYS:HB3	2.04	0.40

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
48:Y5:41:PRO:HA	48:Y5:42:PRO:HD3	1.95	0.40
49:Y6:28:ARG:HB3	49:Y6:30:THR:C	2.41	0.40
22:YA:1027:A:C6	22:YA:1126:A:C5	3.09	0.40
22:YA:1050:A:C6	22:YA:1051:G:C5	3.10	0.40
22:YA:2139:C:H2'	22:YA:2140:C:O4'	2.21	0.40
22:YA:2369:A:C6	22:YA:2370:G:C6	3.10	0.40
22:YA:2392:A:H2'	22:YA:2393:A:O4'	2.21	0.40
22:YA:2399:G:H8	22:YA:2399:G:O5'	2.05	0.40
22:YA:244:A:H2'	22:YA:245:G:O4'	2.20	0.40
22:YA:270(J):G:H1	22:YA:270(P):C:H42	1.70	0.40
22:YA:270(Z):U:O2'	22:YA:271(A):C:C6	2.74	0.40
22:YA:2849:U:O4	36:YT:23:ARG:NH2	2.54	0.40
22:YA:984:A:H5''	22:YA:985:C:C5	2.38	0.40
23:YB:10:C:H2'	23:YB:11:C:H6	1.87	0.40
23:YB:21:G:N2	23:YB:63:G:C4	2.90	0.40
23:YB:85:G:C6	23:YB:86:G:N7	2.89	0.40
26:YF:122:LYS:HD3	26:YF:122:LYS:HA	1.86	0.40
29:YI:46:ALA:O	29:YI:50:ARG:HD3	2.21	0.40
30:YN:46:VAL:O	30:YN:47:ALA:HB3	2.21	0.40
32:YP:68:GLN:HG2	51:Y8:12:LYS:HD3	2.03	0.40
38:YV:3:ALA:HA	38:YV:40:LEU:O	2.21	0.40
41:YY:89:PHE:C	41:YY:90:LEU:HD13	2.42	0.40

All (1) symmetry-related close contacts are listed below. The label for Atom-2 includes the symmetry operator and encoded unit-cell translations to be applied.

Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:YA:1593:G:O2'	23:YB:54:G:OP1[1.655]	2.14	0.06

5.3 Torsion angles

5.3.1 Protein backbone ⓘ

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

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

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles
2	QB	235/256 (92%)	174 (74%)	44 (19%)	17 (7%)	2 29

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
2	XB	235/256 (92%)	178 (76%)	42 (18%)	15 (6%)	2	33
3	QC	203/239 (85%)	163 (80%)	34 (17%)	6 (3%)	7	57
3	XC	203/239 (85%)	171 (84%)	29 (14%)	3 (2%)	15	71
4	QD	206/209 (99%)	176 (85%)	24 (12%)	6 (3%)	7	57
4	XD	206/209 (99%)	177 (86%)	24 (12%)	5 (2%)	9	62
5	QE	149/162 (92%)	136 (91%)	8 (5%)	5 (3%)	6	54
5	XE	149/162 (92%)	133 (89%)	13 (9%)	3 (2%)	11	66
6	QF	99/101 (98%)	95 (96%)	4 (4%)	0	100	100
6	XF	99/101 (98%)	94 (95%)	5 (5%)	0	100	100
7	QG	153/156 (98%)	135 (88%)	16 (10%)	2 (1%)	18	74
7	XG	153/156 (98%)	138 (90%)	13 (8%)	2 (1%)	18	74
8	QH	136/138 (99%)	121 (89%)	14 (10%)	1 (1%)	30	84
8	XH	136/138 (99%)	120 (88%)	12 (9%)	4 (3%)	7	57
9	QI	125/128 (98%)	103 (82%)	17 (14%)	5 (4%)	5	48
9	XI	125/128 (98%)	97 (78%)	24 (19%)	4 (3%)	6	55
10	QJ	97/105 (92%)	75 (77%)	19 (20%)	3 (3%)	7	56
10	XJ	97/105 (92%)	79 (81%)	13 (13%)	5 (5%)	3	39
11	QK	117/129 (91%)	100 (86%)	14 (12%)	3 (3%)	8	60
11	XK	117/129 (91%)	101 (86%)	14 (12%)	2 (2%)	14	69
12	QL	123/132 (93%)	98 (80%)	18 (15%)	7 (6%)	3	37
12	XL	123/132 (93%)	98 (80%)	15 (12%)	10 (8%)	1	25
13	QM	119/126 (94%)	95 (80%)	15 (13%)	9 (8%)	2	27
13	XM	119/126 (94%)	94 (79%)	16 (13%)	9 (8%)	2	27
14	QN	58/61 (95%)	48 (83%)	6 (10%)	4 (7%)	2	31
14	XN	58/61 (95%)	46 (79%)	6 (10%)	6 (10%)	1	17
15	QO	86/89 (97%)	80 (93%)	5 (6%)	1 (1%)	19	76
15	XO	86/89 (97%)	80 (93%)	4 (5%)	2 (2%)	10	63
16	QP	82/88 (93%)	74 (90%)	7 (8%)	1 (1%)	19	76
16	XP	82/88 (93%)	71 (87%)	10 (12%)	1 (1%)	19	76
17	QQ	98/105 (93%)	91 (93%)	5 (5%)	2 (2%)	11	66
17	XQ	98/105 (93%)	88 (90%)	10 (10%)	0	100	100

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
18	QR	68/88 (77%)	56 (82%)	9 (13%)	3 (4%)	4	45
18	XR	68/88 (77%)	61 (90%)	6 (9%)	1 (2%)	15	71
19	QS	82/93 (88%)	56 (68%)	15 (18%)	11 (13%)	0	10
19	XS	82/93 (88%)	54 (66%)	17 (21%)	11 (13%)	0	10
20	QT	97/106 (92%)	76 (78%)	15 (16%)	6 (6%)	2	34
20	XT	97/106 (92%)	75 (77%)	16 (16%)	6 (6%)	2	34
21	QU	23/27 (85%)	19 (83%)	3 (13%)	1 (4%)	4	46
21	XU	23/27 (85%)	18 (78%)	4 (17%)	1 (4%)	4	46
24	RD	270/276 (98%)	226 (84%)	32 (12%)	12 (4%)	4	45
24	YD	270/276 (98%)	227 (84%)	34 (13%)	9 (3%)	6	54
25	RE	203/206 (98%)	147 (72%)	36 (18%)	20 (10%)	1	18
25	YE	203/206 (98%)	142 (70%)	41 (20%)	20 (10%)	1	18
26	RF	200/210 (95%)	167 (84%)	20 (10%)	13 (6%)	2	33
26	YF	200/210 (95%)	167 (84%)	25 (12%)	8 (4%)	5	48
27	RG	179/182 (98%)	139 (78%)	26 (14%)	14 (8%)	1	26
27	YG	179/182 (98%)	142 (79%)	25 (14%)	12 (7%)	2	32
28	RH	168/180 (93%)	114 (68%)	33 (20%)	21 (12%)	1	12
28	YH	168/180 (93%)	121 (72%)	23 (14%)	24 (14%)	0	9
29	RI	144/148 (97%)	94 (65%)	31 (22%)	19 (13%)	0	11
29	YI	144/148 (97%)	100 (69%)	23 (16%)	21 (15%)	0	8
30	RN	136/140 (97%)	104 (76%)	20 (15%)	12 (9%)	1	22
30	YN	136/140 (97%)	106 (78%)	16 (12%)	14 (10%)	1	17
31	RO	120/122 (98%)	109 (91%)	9 (8%)	2 (2%)	14	69
31	YO	120/122 (98%)	108 (90%)	10 (8%)	2 (2%)	14	69
32	RP	148/150 (99%)	107 (72%)	27 (18%)	14 (10%)	1	20
32	YP	148/150 (99%)	108 (73%)	23 (16%)	17 (12%)	1	13
33	RQ	139/141 (99%)	99 (71%)	22 (16%)	18 (13%)	0	11
33	YQ	139/141 (99%)	98 (70%)	22 (16%)	19 (14%)	0	10
34	RR	116/118 (98%)	106 (91%)	5 (4%)	5 (4%)	4	46
34	YR	116/118 (98%)	99 (85%)	11 (10%)	6 (5%)	3	39
35	RS	109/112 (97%)	76 (70%)	22 (20%)	11 (10%)	1	17

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
35	YS	109/112 (97%)	78 (72%)	18 (16%)	13 (12%)	1	13
36	RT	135/146 (92%)	106 (78%)	17 (13%)	12 (9%)	1	22
36	YT	135/146 (92%)	108 (80%)	17 (13%)	10 (7%)	2	28
37	RU	115/118 (98%)	102 (89%)	9 (8%)	4 (4%)	6	53
37	YU	115/118 (98%)	101 (88%)	10 (9%)	4 (4%)	6	53
38	RV	99/101 (98%)	82 (83%)	11 (11%)	6 (6%)	2	34
38	YV	99/101 (98%)	79 (80%)	12 (12%)	8 (8%)	1	25
39	RW	111/113 (98%)	99 (89%)	8 (7%)	4 (4%)	5	52
39	YW	111/113 (98%)	100 (90%)	9 (8%)	2 (2%)	13	68
40	RX	90/96 (94%)	77 (86%)	11 (12%)	2 (2%)	10	64
40	YX	90/96 (94%)	82 (91%)	6 (7%)	2 (2%)	10	64
41	RY	100/110 (91%)	71 (71%)	13 (13%)	16 (16%)	0	6
41	YY	100/110 (91%)	70 (70%)	18 (18%)	12 (12%)	1	13
42	RZ	181/206 (88%)	118 (65%)	35 (19%)	28 (16%)	0	7
42	YZ	181/206 (88%)	113 (62%)	46 (25%)	22 (12%)	1	12
43	R0	80/85 (94%)	61 (76%)	15 (19%)	4 (5%)	3	41
43	Y0	80/85 (94%)	66 (82%)	13 (16%)	1 (1%)	18	74
44	R1	95/98 (97%)	75 (79%)	11 (12%)	9 (10%)	1	20
44	Y1	95/98 (97%)	72 (76%)	17 (18%)	6 (6%)	2	34
45	R2	67/72 (93%)	53 (79%)	9 (13%)	5 (8%)	2	28
45	Y2	67/72 (93%)	55 (82%)	6 (9%)	6 (9%)	1	22
46	R3	57/60 (95%)	52 (91%)	3 (5%)	2 (4%)	6	53
46	Y3	57/60 (95%)	52 (91%)	4 (7%)	1 (2%)	13	68
47	R4	69/71 (97%)	35 (51%)	18 (26%)	16 (23%)	0	1
47	Y4	69/71 (97%)	35 (51%)	15 (22%)	19 (28%)	0	1
48	R5	57/60 (95%)	44 (77%)	11 (19%)	2 (4%)	6	53
48	Y5	57/60 (95%)	46 (81%)	9 (16%)	2 (4%)	6	53
49	R6	47/54 (87%)	23 (49%)	13 (28%)	11 (23%)	0	1
49	Y6	47/54 (87%)	22 (47%)	17 (36%)	8 (17%)	0	5
50	R7	47/49 (96%)	45 (96%)	1 (2%)	1 (2%)	11	65
50	Y7	47/49 (96%)	43 (92%)	3 (6%)	1 (2%)	11	65

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
51	R8	62/65 (95%)	51 (82%)	6 (10%)	5 (8%)	1	25
51	Y8	62/65 (95%)	48 (77%)	10 (16%)	4 (6%)	2	33
52	R9	35/37 (95%)	35 (100%)	0	0	100	100
52	Y9	35/37 (95%)	31 (89%)	4 (11%)	0	100	100
All	All	11470/12128 (95%)	9180 (80%)	1546 (14%)	744 (6%)	2	33

All (744) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
2	QB	236	TYR
3	QC	12	LEU
3	QC	190	ARG
4	QD	28	SER
13	QM	67	GLU
13	QM	106	ASN
13	QM	118	ALA
14	QN	16	PHE
19	QS	12	ASP
19	QS	45	VAL
20	QT	49	ALA
24	RD	26	LYS
24	RD	122	ASP
24	RD	242	ARG
25	RE	22	PRO
25	RE	53	PRO
25	RE	63	LEU
25	RE	68	ALA
25	RE	71	GLY
25	RE	93	VAL
28	RH	12	PRO
28	RH	86	GLU
28	RH	126	PRO
28	RH	127	GLU
28	RH	154	PRO
28	RH	168	PRO
28	RH	169	VAL
29	RI	15	VAL
29	RI	102	SER
29	RI	115	ALA
29	RI	133	HIS
30	RN	9	VAL

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Mol	Chain	Res	Type
30	RN	22	THR
30	RN	96	GLU
30	RN	131	GLN
31	RO	5	GLN
32	RP	6	LEU
32	RP	10	PRO
32	RP	15	ARG
32	RP	65	ARG
32	RP	95	VAL
32	RP	141	ALA
32	RP	148	LEU
33	RQ	22	LYS
33	RQ	66	ILE
33	RQ	78	PRO
33	RQ	90	VAL
33	RQ	139	GLU
34	RR	3	HIS
34	RR	4	LEU
35	RS	57	LYS
35	RS	88	ASP
35	RS	89	ARG
36	RT	2	ASN
36	RT	3	ARG
36	RT	106	SER
36	RT	112	ARG
36	RT	124	ASP
37	RU	91	ASP
38	RV	48	GLY
38	RV	50	PRO
38	RV	100	ARG
39	RW	111	HIS
41	RY	3	VAL
41	RY	50	ARG
41	RY	57	GLN
41	RY	77	PRO
41	RY	78	ALA
42	RZ	60	GLU
42	RZ	111	VAL
42	RZ	112	ARG
42	RZ	158	PRO
42	RZ	179	ASP
42	RZ	182	LYS

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Mol	Chain	Res	Type
43	R0	57	PHE
45	R2	47	ASN
45	R2	48	HIS
45	R2	70	GLN
45	R2	71	ASN
47	R4	16	CYS
47	R4	18	CYS
47	R4	40	HIS
47	R4	43	TYR
47	R4	49	PHE
47	R4	50	VAL
47	R4	53	GLU
48	R5	4	HIS
48	R5	47	PRO
49	R6	15	GLU
51	R8	34	TRP
51	R8	52	LYS
51	R8	62	LEU
2	XB	230	VAL
2	XB	236	TYR
3	XC	12	LEU
3	XC	79	ARG
4	XD	154	ASN
11	XK	91	ARG
12	XL	48	PRO
12	XL	64	TYR
13	XM	67	GLU
13	XM	106	ASN
13	XM	118	ALA
14	XN	14	PRO
14	XN	16	PHE
14	XN	52	GLN
19	XS	3	ARG
19	XS	12	ASP
20	XT	48	LYS
20	XT	96	GLY
24	YD	26	LYS
24	YD	28	GLU
24	YD	122	ASP
24	YD	123	ALA
25	YE	2	LYS
25	YE	19	ARG

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Mol	Chain	Res	Type
25	YE	22	PRO
25	YE	53	PRO
25	YE	63	LEU
25	YE	71	GLY
26	YF	73	ALA
26	YF	134	GLY
27	YG	96	ARG
28	YH	3	ARG
28	YH	12	PRO
28	YH	13	LYS
28	YH	86	GLU
28	YH	126	PRO
28	YH	127	GLU
28	YH	128	PRO
28	YH	168	PRO
28	YH	169	VAL
29	YI	113	ARG
29	YI	133	HIS
29	YI	145	VAL
30	YN	9	VAL
30	YN	22	THR
30	YN	36	GLY
32	YP	6	LEU
32	YP	10	PRO
32	YP	14	LYS
32	YP	15	ARG
32	YP	25	SER
32	YP	27	HIS
32	YP	95	VAL
32	YP	106	LEU
32	YP	148	LEU
33	YQ	18	LYS
33	YQ	22	LYS
33	YQ	25	ASP
33	YQ	79	LEU
33	YQ	86	GLY
33	YQ	90	VAL
33	YQ	134	ARG
34	YR	3	HIS
35	YS	82	ILE
35	YS	88	ASP
35	YS	107	GLU

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Mol	Chain	Res	Type
36	YT	2	ASN
36	YT	123	GLN
36	YT	124	ASP
37	YU	90	VAL
37	YU	91	ASP
37	YU	93	LYS
38	YV	45	THR
40	YX	68	ARG
41	YY	50	ARG
41	YY	57	GLN
41	YY	77	PRO
41	YY	78	ALA
42	YZ	7	ALA
42	YZ	53	ILE
42	YZ	152	ALA
42	YZ	159	PRO
42	YZ	165	VAL
44	Y1	30	VAL
44	Y1	84	GLY
44	Y1	91	LYS
44	Y1	95	LEU
45	Y2	16	LEU
45	Y2	43	GLN
45	Y2	47	ASN
45	Y2	48	HIS
47	Y4	24	THR
47	Y4	40	HIS
47	Y4	49	PHE
48	Y5	4	HIS
49	Y6	15	GLU
50	Y7	48	LYS
51	Y8	52	LYS
51	Y8	62	LEU
2	QB	15	VAL
2	QB	96	ARG
2	QB	229	VAL
2	QB	230	VAL
2	QB	237	ALA
3	QC	79	ARG
4	QD	51	PRO
4	QD	154	ASN
5	QE	115	VAL

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Mol	Chain	Res	Type
8	QH	129	VAL
9	QI	41	VAL
9	QI	117	HIS
11	QK	101	SER
12	QL	47	LYS
12	QL	91	LYS
13	QM	12	ASN
14	QN	12	ARG
17	QQ	74	LEU
17	QQ	81	ARG
19	QS	3	ARG
19	QS	11	VAL
19	QS	26	GLY
19	QS	31	ILE
19	QS	41	VAL
24	RD	32	SER
25	RE	50	GLY
25	RE	60	ASN
25	RE	66	HIS
25	RE	72	VAL
25	RE	90	THR
25	RE	92	THR
25	RE	187	ALA
26	RF	17	ARG
26	RF	67	GLN
26	RF	73	ALA
26	RF	89	VAL
26	RF	134	GLY
26	RF	198	ALA
27	RG	4	ASP
27	RG	5	VAL
27	RG	14	GLU
27	RG	96	ARG
27	RG	137	GLU
27	RG	146	TYR
28	RH	8	PRO
28	RH	128	PRO
28	RH	137	ASP
28	RH	153	LYS
28	RH	155	SER
29	RI	11	ASN
29	RI	13	GLY

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Mol	Chain	Res	Type
29	RI	116	LEU
29	RI	117	GLU
32	RP	11	GLY
32	RP	90	ARG
32	RP	103	ALA
32	RP	106	LEU
33	RQ	6	ARG
33	RQ	25	ASP
33	RQ	27	VAL
33	RQ	133	ARG
34	RR	107	ASP
35	RS	4	LEU
35	RS	107	GLU
36	RT	37	GLY
37	RU	90	VAL
38	RV	49	THR
38	RV	79	VAL
40	RX	41	ASN
41	RY	45	VAL
41	RY	48	ALA
41	RY	63	LYS
42	RZ	6	LYS
42	RZ	12	GLY
42	RZ	53	ILE
42	RZ	62	PRO
42	RZ	152	ALA
42	RZ	177	PRO
42	RZ	181	GLU
44	R1	30	VAL
44	R1	80	LEU
44	R1	84	GLY
44	R1	91	LYS
44	R1	95	LEU
45	R2	43	GLN
46	R3	26	LEU
47	R4	24	THR
47	R4	30	GLU
47	R4	51	ASP
47	R4	66	SER
49	R6	7	ILE
49	R6	45	LYS
2	XB	15	VAL

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Mol	Chain	Res	Type
4	XD	30	LYS
4	XD	166	LYS
5	XE	115	VAL
7	XG	55	GLY
8	XH	50	ARG
9	XI	41	VAL
9	XI	127	LYS
10	XJ	30	SER
10	XJ	86	MET
12	XL	63	GLY
12	XL	91	LYS
12	XL	115	LYS
13	XM	6	GLY
13	XM	21	TYR
19	XS	41	VAL
19	XS	45	VAL
20	XT	99	LEU
24	YD	238	GLY
24	YD	242	ARG
25	YE	7	VAL
25	YE	204	ALA
26	YF	128	ALA
26	YF	132	VAL
26	YF	181	LEU
27	YG	4	ASP
27	YG	36	LYS
28	YH	27	LYS
28	YH	50	VAL
28	YH	85	LYS
28	YH	152	ARG
28	YH	155	SER
29	YI	11	ASN
29	YI	84	GLY
29	YI	114	LEU
29	YI	122	GLU
30	YN	23	LEU
30	YN	96	GLU
31	YO	5	GLN
32	YP	66	GLY
32	YP	93	GLY
32	YP	141	ALA
33	YQ	6	ARG

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Mol	Chain	Res	Type
33	YQ	60	ARG
33	YQ	137	TYR
34	YR	4	LEU
34	YR	45	ARG
34	YR	107	ASP
35	YS	12	PHE
35	YS	57	LYS
35	YS	109	GLY
36	YT	13	ARG
36	YT	39	ARG
36	YT	106	SER
38	YV	31	ALA
38	YV	48	GLY
38	YV	79	VAL
39	YW	111	HIS
41	YY	58	GLY
41	YY	102	CYS
42	YZ	6	LYS
42	YZ	61	LEU
42	YZ	81	ARG
42	YZ	121	HIS
42	YZ	177	PRO
43	Y0	64	ASP
45	Y2	70	GLN
45	Y2	71	ASN
47	Y4	5	ILE
47	Y4	18	CYS
47	Y4	22	ILE
47	Y4	37	SER
47	Y4	43	TYR
47	Y4	50	VAL
49	Y6	7	ILE
49	Y6	16	CYS
49	Y6	33	LYS
2	QB	26	PRO
2	QB	87	ARG
2	QB	204	ASN
2	QB	207	ALA
3	QC	4	LYS
3	QC	51	GLY
4	QD	155	LEU
5	QE	77	PRO

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Mol	Chain	Res	Type
10	QJ	30	SER
11	QK	103	LEU
11	QK	125	PHE
12	QL	28	LYS
13	QM	13	LYS
13	QM	120	LYS
14	QN	14	PRO
15	QO	23	GLY
19	QS	9	VAL
19	QS	14	HIS
19	QS	28	LYS
20	QT	96	GLY
24	RD	46	GLN
24	RD	239	ARG
25	RE	79	ARG
25	RE	204	ALA
26	RF	133	ASN
27	RG	32	PRO
27	RG	116	ASP
28	RH	5	GLY
28	RH	27	LYS
28	RH	55	PRO
28	RH	87	LEU
28	RH	138	LYS
29	RI	12	LEU
29	RI	65	ALA
29	RI	109	ILE
30	RN	8	GLN
30	RN	23	LEU
30	RN	95	PRO
30	RN	130	HIS
31	RO	97	ARG
32	RP	29	LYS
32	RP	67	MET
33	RQ	11	LYS
33	RQ	19	GLY
33	RQ	137	TYR
34	RR	74	LYS
35	RS	12	PHE
35	RS	61	ASN
36	RT	12	SER
36	RT	97	ALA

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Mol	Chain	Res	Type
37	RU	117	GLN
40	RX	67	GLY
41	RY	58	GLY
42	RZ	13	GLU
42	RZ	30	ASN
42	RZ	63	ASP
42	RZ	92	SER
42	RZ	104	PHE
42	RZ	159	PRO
42	RZ	165	VAL
43	R0	12	ASN
44	R1	76	ARG
46	R3	27	GLY
49	R6	16	CYS
49	R6	33	LYS
49	R6	35	GLU
49	R6	49	HIS
51	R8	31	HIS
51	R8	51	ALA
2	XB	13	ALA
2	XB	22	LYS
2	XB	24	TRP
2	XB	135	GLN
2	XB	207	ALA
4	XD	73	ARG
4	XD	155	LEU
7	XG	7	ALA
8	XH	2	LEU
9	XI	56	LEU
9	XI	95	LYS
10	XJ	59	SER
11	XK	103	LEU
13	XM	4	ILE
13	XM	12	ASN
13	XM	42	ALA
19	XS	27	GLU
19	XS	28	LYS
24	YD	32	SER
25	YE	20	ALA
25	YE	50	GLY
25	YE	79	ARG
25	YE	90	THR

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Mol	Chain	Res	Type
25	YE	92	THR
25	YE	117	MET
25	YE	184	VAL
26	YF	198	ALA
28	YH	8	PRO
28	YH	10	PRO
28	YH	87	LEU
28	YH	137	ASP
28	YH	138	LYS
28	YH	153	LYS
28	YH	154	PRO
29	YI	10	GLU
29	YI	12	LEU
29	YI	15	VAL
29	YI	16	GLY
29	YI	83	ALA
29	YI	86	THR
29	YI	118	LYS
30	YN	7	LYS
30	YN	131	GLN
32	YP	16	ARG
32	YP	29	LYS
32	YP	65	ARG
33	YQ	19	GLY
33	YQ	105	GLU
33	YQ	133	ARG
34	YR	86	ARG
35	YS	4	LEU
35	YS	11	LYS
36	YT	97	ALA
38	YV	49	THR
38	YV	53	GLU
38	YV	100	ARG
41	YY	42	VAL
41	YY	63	LYS
42	YZ	62	PRO
42	YZ	112	ARG
42	YZ	115	GLY
46	Y3	3	ARG
47	Y4	9	LEU
47	Y4	23	GLU
47	Y4	30	GLU

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Mol	Chain	Res	Type
47	Y4	34	GLU
47	Y4	66	SER
48	Y5	47	PRO
49	Y6	19	ARG
49	Y6	49	HIS
51	Y8	30	ARG
51	Y8	34	TRP
2	QB	22	LYS
2	QB	126	GLU
2	QB	209	ARG
4	QD	171	GLY
9	QI	56	LEU
12	QL	27	LEU
12	QL	48	PRO
13	QM	6	GLY
18	QR	20	ALA
18	QR	54	ARG
20	QT	71	THR
21	QU	9	ARG
24	RD	3	VAL
24	RD	123	ALA
24	RD	237	GLU
25	RE	78	LEU
26	RF	66	PRO
26	RF	197	ASP
27	RG	36	LYS
27	RG	86	MET
28	RH	92	ILE
29	RI	10	GLU
29	RI	118	LYS
29	RI	122	GLU
32	RP	21	ARG
33	RQ	21	THR
33	RQ	28	ALA
33	RQ	86	GLY
33	RQ	104	PHE
33	RQ	105	GLU
34	RR	71	GLN
35	RS	109	GLY
36	RT	38	ASN
36	RT	39	ARG
37	RU	98	LEU

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Mol	Chain	Res	Type
39	RW	18	ARG
39	RW	63	ASP
39	RW	68	ARG
41	RY	4	LYS
41	RY	53	PRO
41	RY	99	CYS
42	RZ	81	ARG
42	RZ	83	PRO
42	RZ	108	PRO
42	RZ	151	HIS
43	R0	3	HIS
50	R7	48	LYS
2	XB	19	HIS
2	XB	101	MET
2	XB	155	LEU
5	XE	70	PRO
8	XH	129	VAL
12	XL	19	ARG
12	XL	28	LYS
14	XN	15	LYS
14	XN	32	SER
15	XO	88	ARG
18	XR	20	ALA
19	XS	9	VAL
20	XT	84	LEU
20	XT	98	PRO
21	XU	9	ARG
27	YG	14	GLU
27	YG	82	LEU
27	YG	86	MET
27	YG	116	ASP
28	YH	83	TYR
29	YI	115	ALA
30	YN	11	PRO
30	YN	28	THR
30	YN	47	ALA
33	YQ	104	PHE
33	YQ	140	ALA
35	YS	89	ARG
35	YS	96	GLY
36	YT	17	THR
40	YX	40	LYS

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Mol	Chain	Res	Type
41	YY	51	VAL
41	YY	53	PRO
42	YZ	13	GLU
42	YZ	92	SER
42	YZ	160	GLY
42	YZ	166	SER
47	Y4	16	CYS
47	Y4	25	TYR
47	Y4	54	GLY
47	Y4	60	GLN
49	Y6	35	GLU
2	QB	234	PRO
4	QD	42	GLN
5	QE	70	PRO
5	QE	96	PRO
7	QG	7	ALA
9	QI	121	ARG
12	QL	19	ARG
12	QL	121	GLY
13	QM	4	ILE
18	QR	26	LEU
20	QT	73	HIS
20	QT	97	ALA
24	RD	238	GLY
25	RE	54	GLN
26	RF	8	GLN
27	RG	82	LEU
28	RH	21	PRO
28	RH	83	TYR
29	RI	47	LEU
29	RI	145	VAL
30	RN	18	ALA
30	RN	57	ALA
30	RN	135	PRO
35	RS	97	ARG
35	RS	110	LEU
36	RT	40	THR
41	RY	39	VAL
41	RY	41	GLY
41	RY	62	GLU
42	RZ	116	VAL
44	R1	74	VAL

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Mol	Chain	Res	Type
44	R1	82	LEU
47	R4	5	ILE
47	R4	23	GLU
47	R4	28	LYS
47	R4	68	ARG
49	R6	9	LEU
49	R6	19	ARG
2	XB	121	LEU
3	XC	181	ASN
10	XJ	27	ALA
12	XL	27	LEU
12	XL	65	GLU
13	XM	101	GLN
15	XO	23	GLY
20	XT	97	ALA
24	YD	3	VAL
24	YD	46	GLN
25	YE	68	ALA
25	YE	82	ARG
25	YE	86	PRO
27	YG	5	VAL
27	YG	53	LEU
27	YG	117	PHE
28	YH	151	ILE
29	YI	18	VAL
29	YI	33	ARG
29	YI	80	PRO
29	YI	87	LYS
29	YI	112	LYS
30	YN	95	PRO
30	YN	127	ASP
30	YN	134	ARG
30	YN	135	PRO
32	YP	7	ARG
33	YQ	11	LYS
33	YQ	27	VAL
35	YS	94	TYR
35	YS	110	LEU
36	YT	86	ILE
37	YU	117	GLN
38	YV	50	PRO
41	YY	39	VAL

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Mol	Chain	Res	Type
42	YZ	168	GLU
44	Y1	74	VAL
47	Y4	14	ILE
49	Y6	21	TYR
2	QB	155	LEU
10	QJ	82	ILE
13	QM	10	PRO
14	QN	15	LYS
20	QT	98	PRO
24	RD	125	ILE
25	RE	82	ARG
26	RF	130	ALA
27	RG	52	ILE
27	RG	88	ILE
27	RG	117	PHE
29	RI	9	LEU
35	RS	82	ILE
41	RY	5	MET
42	RZ	61	LEU
44	R1	55	GLY
47	R4	11	PRO
49	R6	21	TYR
49	R6	34	LEU
2	XB	26	PRO
2	XB	126	GLU
2	XB	237	ALA
10	XJ	91	PRO
14	XN	60	SER
19	XS	7	LYS
25	YE	72	VAL
26	YF	58	ALA
29	YI	9	LEU
31	YO	97	ARG
33	YQ	62	GLY
33	YQ	81	VAL
41	YY	3	VAL
42	YZ	96	VAL
44	Y1	55	GLY
2	QB	5	ILE
16	QP	46	PRO
25	RE	21	VAL
25	RE	86	PRO

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Mol	Chain	Res	Type
26	RF	25	PRO
28	RH	166	GLY
29	RI	144	VAL
43	R0	8	GLY
5	XE	74	GLY
12	XL	18	VAL
3	QC	81	GLY
5	QE	74	GLY
19	QS	46	GLY
24	RD	35	LYS
19	XS	26	GLY
19	XS	46	GLY
26	YF	66	PRO
36	YT	37	GLY
42	YZ	137	ILE
7	QG	50	ILE
9	QI	89	ASN
10	QJ	37	PRO
30	RN	134	ARG
33	RQ	81	VAL
36	RT	86	ILE
42	RZ	141	VAL
8	XH	51	VAL
16	XP	46	PRO
19	XS	31	ILE
25	YE	21	VAL
39	YW	14	PRO
42	YZ	147	GLY
26	RF	132	VAL
29	RI	18	VAL
38	RV	54	GLY
42	RZ	94	GLU
27	YG	52	ILE
27	YG	88	ILE
28	YH	7	LEU
32	YP	24	GLY
34	YR	117	VAL
2	QB	227	GLY
35	YS	60	GLY
42	YZ	95	PRO

5.3.2 Protein sidechains ⓘ

In the following table, the Percentiles column shows the percent sidechain outliers of the chain as a percentile score with respect to all X-ray entries followed by that with respect to entries of similar resolution. The Analysed column shows the number of residues for which the sidechain conformation was analysed, and the total number of residues.

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
2	QB	205/220 (93%)	172 (84%)	33 (16%)	3	24
2	XB	205/220 (93%)	180 (88%)	25 (12%)	7	38
3	QC	159/188 (85%)	145 (91%)	14 (9%)	14	58
3	XC	159/188 (85%)	146 (92%)	13 (8%)	17	62
4	QD	180/181 (99%)	157 (87%)	23 (13%)	6	35
4	XD	180/181 (99%)	154 (86%)	26 (14%)	5	29
5	QE	116/123 (94%)	104 (90%)	12 (10%)	10	48
5	XE	116/123 (94%)	104 (90%)	12 (10%)	10	48
6	QF	90/90 (100%)	78 (87%)	12 (13%)	6	33
6	XF	90/90 (100%)	82 (91%)	8 (9%)	14	57
7	QG	126/127 (99%)	114 (90%)	12 (10%)	12	53
7	XG	126/127 (99%)	114 (90%)	12 (10%)	12	53
8	QH	119/119 (100%)	109 (92%)	10 (8%)	16	61
8	XH	119/119 (100%)	106 (89%)	13 (11%)	9	45
9	QI	98/99 (99%)	81 (83%)	17 (17%)	3	19
9	XI	98/99 (99%)	80 (82%)	18 (18%)	2	16
10	QJ	89/92 (97%)	77 (86%)	12 (14%)	6	33
10	XJ	89/92 (97%)	74 (83%)	15 (17%)	3	21
11	QK	90/99 (91%)	81 (90%)	9 (10%)	11	50
11	XK	90/99 (91%)	82 (91%)	8 (9%)	14	57
12	QL	104/109 (95%)	87 (84%)	17 (16%)	3	23
12	XL	104/109 (95%)	93 (89%)	11 (11%)	10	46
13	QM	97/101 (96%)	73 (75%)	24 (25%)	1	7
13	XM	97/101 (96%)	78 (80%)	19 (20%)	2	13
14	QN	49/50 (98%)	40 (82%)	9 (18%)	2	16
14	XN	49/50 (98%)	42 (86%)	7 (14%)	5	30
15	QO	79/80 (99%)	72 (91%)	7 (9%)	14	57

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
15	XO	79/80 (99%)	69 (87%)	10 (13%)	6	36
16	QP	72/74 (97%)	63 (88%)	9 (12%)	7	37
16	XP	72/74 (97%)	63 (88%)	9 (12%)	7	37
17	QQ	95/97 (98%)	87 (92%)	8 (8%)	16	61
17	XQ	95/97 (98%)	89 (94%)	6 (6%)	25	74
18	QR	61/77 (79%)	50 (82%)	11 (18%)	2	17
18	XR	61/77 (79%)	52 (85%)	9 (15%)	4	28
19	QS	73/80 (91%)	59 (81%)	14 (19%)	2	13
19	XS	73/80 (91%)	57 (78%)	16 (22%)	1	9
20	QT	76/82 (93%)	67 (88%)	9 (12%)	8	39
20	XT	76/82 (93%)	66 (87%)	10 (13%)	6	34
21	QU	20/22 (91%)	20 (100%)	0	100	100
21	XU	20/22 (91%)	19 (95%)	1 (5%)	34	80
24	RD	214/218 (98%)	174 (81%)	40 (19%)	2	15
24	YD	214/218 (98%)	181 (85%)	33 (15%)	4	26
25	RE	165/166 (99%)	126 (76%)	39 (24%)	1	7
25	YE	165/166 (99%)	137 (83%)	28 (17%)	3	21
26	RF	161/166 (97%)	132 (82%)	29 (18%)	2	17
26	YF	161/166 (97%)	137 (85%)	24 (15%)	4	28
27	RG	155/156 (99%)	134 (86%)	21 (14%)	6	33
27	YG	155/156 (99%)	133 (86%)	22 (14%)	5	30
28	RH	142/148 (96%)	120 (84%)	22 (16%)	4	25
28	YH	142/148 (96%)	117 (82%)	25 (18%)	3	18
29	RI	122/124 (98%)	86 (70%)	36 (30%)	0	4
29	YI	122/124 (98%)	85 (70%)	37 (30%)	0	4
30	RN	117/119 (98%)	97 (83%)	20 (17%)	3	20
30	YN	117/119 (98%)	96 (82%)	21 (18%)	2	17
31	RO	100/100 (100%)	90 (90%)	10 (10%)	11	50
31	YO	100/100 (100%)	88 (88%)	12 (12%)	7	38
32	RP	116/116 (100%)	85 (73%)	31 (27%)	1	5
32	YP	116/116 (100%)	82 (71%)	34 (29%)	0	4

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
33	RQ	111/111 (100%)	95 (86%)	16 (14%)	5	29
33	YQ	111/111 (100%)	92 (83%)	19 (17%)	3	20
34	RR	101/101 (100%)	83 (82%)	18 (18%)	2	18
34	YR	101/101 (100%)	81 (80%)	20 (20%)	2	12
35	RS	87/88 (99%)	69 (79%)	18 (21%)	2	10
35	YS	87/88 (99%)	68 (78%)	19 (22%)	1	9
36	RT	120/127 (94%)	102 (85%)	18 (15%)	4	28
36	YT	120/127 (94%)	98 (82%)	22 (18%)	2	16
37	RU	93/94 (99%)	78 (84%)	15 (16%)	3	24
37	YU	93/94 (99%)	77 (83%)	16 (17%)	3	20
38	RV	82/82 (100%)	66 (80%)	16 (20%)	2	13
38	YV	82/82 (100%)	67 (82%)	15 (18%)	2	16
39	RW	92/92 (100%)	73 (79%)	19 (21%)	2	10
39	YW	92/92 (100%)	76 (83%)	16 (17%)	3	19
40	RX	74/78 (95%)	64 (86%)	10 (14%)	6	33
40	YX	74/78 (95%)	60 (81%)	14 (19%)	2	14
41	RY	85/91 (93%)	63 (74%)	22 (26%)	1	6
41	YY	85/91 (93%)	64 (75%)	21 (25%)	1	7
42	RZ	162/179 (90%)	131 (81%)	31 (19%)	2	14
42	YZ	162/179 (90%)	121 (75%)	41 (25%)	1	6
43	R0	65/67 (97%)	56 (86%)	9 (14%)	5	31
43	Y0	65/67 (97%)	53 (82%)	12 (18%)	2	15
44	R1	82/83 (99%)	73 (89%)	9 (11%)	9	44
44	Y1	82/83 (99%)	70 (85%)	12 (15%)	5	28
45	R2	64/67 (96%)	57 (89%)	7 (11%)	9	45
45	Y2	64/67 (96%)	47 (73%)	17 (27%)	1	6
46	R3	51/52 (98%)	45 (88%)	6 (12%)	8	39
46	Y3	51/52 (98%)	43 (84%)	8 (16%)	4	25
47	R4	63/63 (100%)	45 (71%)	18 (29%)	0	4
47	Y4	63/63 (100%)	43 (68%)	20 (32%)	0	3
48	R5	51/52 (98%)	37 (72%)	14 (28%)	0	5

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
48	Y5	51/52 (98%)	37 (72%)	14 (28%)	0	5
49	R6	48/52 (92%)	35 (73%)	13 (27%)	1	5
49	Y6	48/52 (92%)	38 (79%)	10 (21%)	2	10
50	R7	42/42 (100%)	34 (81%)	8 (19%)	2	14
50	Y7	42/42 (100%)	35 (83%)	7 (17%)	3	22
51	R8	54/55 (98%)	44 (82%)	10 (18%)	2	15
51	Y8	54/55 (98%)	41 (76%)	13 (24%)	1	7
52	R9	34/34 (100%)	32 (94%)	2 (6%)	28	75
52	Y9	34/34 (100%)	32 (94%)	2 (6%)	28	75
All	All	9702/10066 (96%)	8111 (84%)	1591 (16%)	3	23

All (1591) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
2	QB	5	ILE
2	QB	6	THR
2	QB	7	VAL
2	QB	8	LYS
2	QB	15	VAL
2	QB	23	ARG
2	QB	24	TRP
2	QB	32	ILE
2	QB	33	TYR
2	QB	53	ARG
2	QB	60	ASP
2	QB	67	THR
2	QB	82	ARG
2	QB	87	ARG
2	QB	92	TYR
2	QB	94	ASN
2	QB	101	MET
2	QB	109	SER
2	QB	119	GLU
2	QB	121	LEU
2	QB	150	SER
2	QB	155	LEU
2	QB	158	LEU
2	QB	163	PHE
2	QB	165	VAL

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Mol	Chain	Res	Type
2	QB	168	THR
2	QB	172	ILE
2	QB	175	ARG
2	QB	187	LEU
2	QB	196	LEU
2	QB	204	ASN
2	QB	215	LEU
2	QB	217	ARG
3	QC	3	ASN
3	QC	5	ILE
3	QC	12	LEU
3	QC	16	ARG
3	QC	21	ARG
3	QC	45	LYS
3	QC	52	LEU
3	QC	76	VAL
3	QC	94	LEU
3	QC	127	ARG
3	QC	131	ARG
3	QC	154	SER
3	QC	165	THR
3	QC	206	GLU
4	QD	3	ARG
4	QD	14	ARG
4	QD	22	LYS
4	QD	26	CYS
4	QD	30	LYS
4	QD	33	MET
4	QD	50	ARG
4	QD	58	LEU
4	QD	73	ARG
4	QD	76	ARG
4	QD	86	LYS
4	QD	94	LEU
4	QD	96	LEU
4	QD	122	ARG
4	QD	127	THR
4	QD	131	ARG
4	QD	135	LEU
4	QD	154	ASN
4	QD	175	SER
4	QD	187	ARG

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Mol	Chain	Res	Type
4	QD	190	ASP
4	QD	191	ARG
4	QD	192	GLU
5	QE	10	MET
5	QE	12	LEU
5	QE	31	LEU
5	QE	34	VAL
5	QE	41	VAL
5	QE	51	VAL
5	QE	68	GLU
5	QE	79	GLU
5	QE	81	GLU
5	QE	98	THR
5	QE	101	ILE
5	QE	153	LYS
6	QF	16	GLN
6	QF	21	LEU
6	QF	23	LYS
6	QF	43	LEU
6	QF	45	LEU
6	QF	47	ARG
6	QF	55	ASP
6	QF	69	GLU
6	QF	70	ASP
6	QF	72	VAL
6	QF	75	LEU
6	QF	98	LEU
7	QG	8	GLU
7	QG	54	THR
7	QG	80	VAL
7	QG	92	SER
7	QG	94	ARG
7	QG	104	LEU
7	QG	113	GLU
7	QG	114	ARG
7	QG	135	VAL
7	QG	136	LYS
7	QG	137	LYS
7	QG	155	ARG
8	QH	1	MET
8	QH	24	THR
8	QH	25	ASP

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Mol	Chain	Res	Type
8	QH	26	VAL
8	QH	41	ARG
8	QH	99	GLU
8	QH	109	ILE
8	QH	112	LEU
8	QH	125	ARG
8	QH	129	VAL
9	QI	9	ARG
9	QI	10	ARG
9	QI	11	LYS
9	QI	23	ASN
9	QI	47	LEU
9	QI	56	LEU
9	QI	64	THR
9	QI	65	VAL
9	QI	75	ASP
9	QI	95	LYS
9	QI	104	ARG
9	QI	105	ASP
9	QI	113	LYS
9	QI	114	TYR
9	QI	121	ARG
9	QI	125	TYR
9	QI	128	ARG
10	QJ	22	LYS
10	QJ	47	PHE
10	QJ	54	PHE
10	QJ	57	LYS
10	QJ	58	ASP
10	QJ	62	HIS
10	QJ	73	ASP
10	QJ	74	ILE
10	QJ	80	LYS
10	QJ	84	GLN
10	QJ	92	THR
10	QJ	96	ILE
11	QK	26	ASN
11	QK	29	ILE
11	QK	32	ILE
11	QK	34	ASP
11	QK	63	LEU
11	QK	92	GLU

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Mol	Chain	Res	Type
11	QK	103	LEU
11	QK	109	VAL
11	QK	127	LYS
12	QL	17	LYS
12	QL	18	VAL
12	QL	20	LYS
12	QL	27	LEU
12	QL	33	ARG
12	QL	38	THR
12	QL	42	THR
12	QL	50	SER
12	QL	54	LYS
12	QL	59	ARG
12	QL	60	LEU
12	QL	73	GLU
12	QL	83	VAL
12	QL	85	ILE
12	QL	89	ARG
12	QL	102	ARG
12	QL	113	ARG
13	QM	8	GLU
13	QM	11	ARG
13	QM	13	LYS
13	QM	17	VAL
13	QM	19	LEU
13	QM	45	VAL
13	QM	47	ASP
13	QM	48	LEU
13	QM	56	LEU
13	QM	57	ARG
13	QM	64	TRP
13	QM	66	LEU
13	QM	70	LEU
13	QM	77	ASN
13	QM	84	ILE
13	QM	88	ARG
13	QM	90	LEU
13	QM	98	VAL
13	QM	108	ARG
13	QM	111	LYS
13	QM	114	ARG
13	QM	115	LYS

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Mol	Chain	Res	Type
13	QM	117	VAL
13	QM	122	LYS
14	QN	6	LEU
14	QN	12	ARG
14	QN	13	THR
14	QN	18	VAL
14	QN	33	VAL
14	QN	43	CYS
14	QN	44	LEU
14	QN	46	GLU
14	QN	57	ARG
15	QO	3	ILE
15	QO	4	THR
15	QO	26	GLU
15	QO	31	LEU
15	QO	39	LEU
15	QO	64	ARG
15	QO	84	LYS
16	QP	2	VAL
16	QP	20	VAL
16	QP	26	ARG
16	QP	28	ARG
16	QP	33	ILE
16	QP	53	VAL
16	QP	67	THR
16	QP	69	THR
16	QP	71	ARG
17	QQ	37	LYS
17	QQ	38	ARG
17	QQ	52	LYS
17	QQ	59	ILE
17	QQ	62	SER
17	QQ	68	ARG
17	QQ	74	LEU
17	QQ	101	ARG
18	QR	26	LEU
18	QR	29	PHE
18	QR	31	LEU
18	QR	32	ARG
18	QR	36	ASN
18	QR	46	GLU
18	QR	54	ARG

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Mol	Chain	Res	Type
18	QR	76	LEU
18	QR	82	THR
18	QR	83	GLU
18	QR	86	VAL
19	QS	5	LEU
19	QS	10	PHE
19	QS	12	ASP
19	QS	21	GLU
19	QS	28	LYS
19	QS	29	ARG
19	QS	30	LEU
19	QS	37	ARG
19	QS	43	GLU
19	QS	44	MET
19	QS	63	THR
19	QS	67	VAL
19	QS	77	THR
19	QS	83	HIS
20	QT	17	ARG
20	QT	24	LEU
20	QT	45	GLN
20	QT	72	LEU
20	QT	73	HIS
20	QT	75	ASN
20	QT	80	ARG
20	QT	84	LEU
20	QT	93	GLU
24	RD	5	LYS
24	RD	10	THR
24	RD	17	THR
24	RD	25	THR
24	RD	40	THR
24	RD	43	ARG
24	RD	44	ASN
24	RD	46	GLN
24	RD	49	ILE
24	RD	61	LEU
24	RD	65	ILE
24	RD	69	ARG
24	RD	71	ASP
24	RD	73	VAL
24	RD	83	GLU

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Mol	Chain	Res	Type
24	RD	87	ASN
24	RD	88	ARG
24	RD	95	LEU
24	RD	103	ARG
24	RD	105	ILE
24	RD	106	ILE
24	RD	111	LEU
24	RD	134	ARG
24	RD	150	LYS
24	RD	155	LEU
24	RD	157	ARG
24	RD	173	VAL
24	RD	192	THR
24	RD	211	ARG
24	RD	212	SER
24	RD	221	VAL
24	RD	229	VAL
24	RD	237	GLU
24	RD	242	ARG
24	RD	257	LEU
24	RD	259	THR
24	RD	261	LYS
24	RD	268	ARG
24	RD	271	ILE
24	RD	273	ARG
25	RE	2	LYS
25	RE	4	ILE
25	RE	7	VAL
25	RE	12	THR
25	RE	13	ARG
25	RE	16	ARG
25	RE	26	ILE
25	RE	27	LEU
25	RE	33	VAL
25	RE	34	VAL
25	RE	38	THR
25	RE	41	LYS
25	RE	42	ASP
25	RE	47	VAL
25	RE	49	LEU
25	RE	52	LEU
25	RE	54	GLN

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Mol	Chain	Res	Type
25	RE	63	LEU
25	RE	77	ILE
25	RE	79	ARG
25	RE	80	GLU
25	RE	82	ARG
25	RE	92	THR
25	RE	101	ARG
25	RE	113	PHE
25	RE	116	VAL
25	RE	119	ARG
25	RE	127	ASP
25	RE	144	ARG
25	RE	146	THR
25	RE	167	VAL
25	RE	175	VAL
25	RE	179	GLU
25	RE	181	LEU
25	RE	184	VAL
25	RE	197	ILE
25	RE	200	GLU
25	RE	202	LYS
25	RE	203	LYS
26	RF	9	ILE
26	RF	13	SER
26	RF	24	LEU
26	RF	28	ILE
26	RF	32	LEU
26	RF	33	LEU
26	RF	45	ARG
26	RF	57	VAL
26	RF	65	TRP
26	RF	68	LYS
26	RF	70	THR
26	RF	74	ARG
26	RF	77	ASP
26	RF	78	ILE
26	RF	84	VAL
26	RF	104	LYS
26	RF	107	LYS
26	RF	117	ARG
26	RF	127	GLU
26	RF	149	ASP

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Mol	Chain	Res	Type
26	RF	158	THR
26	RF	161	GLU
26	RF	165	ARG
26	RF	174	VAL
26	RF	176	LEU
26	RF	181	LEU
26	RF	192	LEU
26	RF	194	MET
26	RF	197	ASP
27	RG	7	LEU
27	RG	10	LYS
27	RG	20	ILE
27	RG	26	GLN
27	RG	33	ARG
27	RG	34	LEU
27	RG	43	LEU
27	RG	53	LEU
27	RG	54	GLU
27	RG	67	LYS
27	RG	71	THR
27	RG	88	ILE
27	RG	94	LEU
27	RG	98	ARG
27	RG	116	ASP
27	RG	118	ARG
27	RG	133	LEU
27	RG	147	ASP
27	RG	159	VAL
27	RG	167	GLU
27	RG	174	GLU
28	RH	3	ARG
28	RH	4	ILE
28	RH	7	LEU
28	RH	9	ILE
28	RH	27	LYS
28	RH	42	ARG
28	RH	43	VAL
28	RH	51	ARG
28	RH	59	ARG
28	RH	64	LEU
28	RH	77	LYS
28	RH	81	GLU

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Mol	Chain	Res	Type
28	RH	88	LEU
28	RH	89	ILE
28	RH	105	LEU
28	RH	107	VAL
28	RH	132	ARG
28	RH	139	GLN
28	RH	152	ARG
28	RH	153	LYS
28	RH	158	HIS
28	RH	169	VAL
29	RI	3	VAL
29	RI	6	LEU
29	RI	9	LEU
29	RI	10	GLU
29	RI	15	VAL
29	RI	25	TYR
29	RI	27	ARG
29	RI	33	ARG
29	RI	35	LEU
29	RI	38	LEU
29	RI	40	THR
29	RI	42	SER
29	RI	57	ARG
29	RI	58	LEU
29	RI	68	LEU
29	RI	69	LYS
29	RI	70	GLU
29	RI	72	LEU
29	RI	79	ILE
29	RI	81	VAL
29	RI	85	GLU
29	RI	86	THR
29	RI	88	ILE
29	RI	92	VAL
29	RI	97	ILE
29	RI	102	SER
29	RI	112	LYS
29	RI	113	ARG
29	RI	118	LYS
29	RI	129	THR
29	RI	130	TYR
29	RI	131	LYS

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Mol	Chain	Res	Type
29	RI	133	HIS
29	RI	135	GLU
29	RI	138	ILE
29	RI	142	VAL
30	RN	1	MET
30	RN	2	LYS
30	RN	5	VAL
30	RN	7	LYS
30	RN	12	ARG
30	RN	32	THR
30	RN	34	LEU
30	RN	43	THR
30	RN	48	MET
30	RN	60	ILE
30	RN	61	ARG
30	RN	62	VAL
30	RN	87	LEU
30	RN	90	MET
30	RN	96	GLU
30	RN	98	VAL
30	RN	109	LYS
30	RN	120	LEU
30	RN	127	ASP
30	RN	136	GLU
31	RO	3	GLN
31	RO	9	GLU
31	RO	19	ILE
31	RO	24	VAL
31	RO	31	LYS
31	RO	49	ARG
31	RO	53	LYS
31	RO	69	ILE
31	RO	91	LEU
31	RO	102	VAL
32	RP	5	ASP
32	RP	6	LEU
32	RP	9	ASN
32	RP	14	LYS
32	RP	15	ARG
32	RP	16	ARG
32	RP	19	VAL
32	RP	21	ARG

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Mol	Chain	Res	Type
32	RP	30	THR
32	RP	36	LYS
32	RP	41	ARG
32	RP	45	LEU
32	RP	50	ARG
32	RP	56	SER
32	RP	61	ARG
32	RP	62	LEU
32	RP	64	LYS
32	RP	70	GLN
32	RP	71	VAL
32	RP	75	ILE
32	RP	81	GLN
32	RP	88	LEU
32	RP	91	PHE
32	RP	100	LEU
32	RP	105	LEU
32	RP	107	LYS
32	RP	112	LEU
32	RP	133	SER
32	RP	138	LEU
32	RP	144	GLU
32	RP	146	VAL
33	RQ	17	LEU
33	RQ	26	TYR
33	RQ	27	VAL
33	RQ	35	VAL
33	RQ	45	GLN
33	RQ	54	MET
33	RQ	60	ARG
33	RQ	79	LEU
33	RQ	81	VAL
33	RQ	82	ARG
33	RQ	83	MET
33	RQ	85	LYS
33	RQ	96	VAL
33	RQ	112	GLU
33	RQ	135	ASP
33	RQ	139	GLU
34	RR	1	MET
34	RR	6	SER
34	RR	9	LYS

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Mol	Chain	Res	Type
34	RR	18	LEU
34	RR	29	LEU
34	RR	35	THR
34	RR	44	LEU
34	RR	63	ARG
34	RR	71	GLN
34	RR	75	LEU
34	RR	79	LEU
34	RR	91	GLN
34	RR	95	THR
34	RR	100	LEU
34	RR	104	ARG
34	RR	105	ARG
34	RR	117	VAL
34	RR	118	GLU
35	RS	3	ARG
35	RS	4	LEU
35	RS	12	PHE
35	RS	17	ARG
35	RS	20	ARG
35	RS	27	SER
35	RS	39	ILE
35	RS	44	LYS
35	RS	50	SER
35	RS	54	LEU
35	RS	56	LEU
35	RS	57	LYS
35	RS	58	LEU
35	RS	59	LYS
35	RS	98	VAL
35	RS	101	LEU
35	RS	103	GLU
35	RS	106	ARG
36	RT	18	ASP
36	RT	27	THR
36	RT	30	VAL
36	RT	41	ARG
36	RT	42	ILE
36	RT	50	ILE
36	RT	51	ARG
36	RT	62	THR
36	RT	65	LYS

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Mol	Chain	Res	Type
36	RT	74	ARG
36	RT	88	ILE
36	RT	89	VAL
36	RT	99	LEU
36	RT	105	LEU
36	RT	107	ASP
36	RT	112	ARG
36	RT	125	ARG
36	RT	128	GLU
37	RU	52	ARG
37	RU	55	ARG
37	RU	59	ARG
37	RU	60	LEU
37	RU	64	ARG
37	RU	69	CYS
37	RU	74	LEU
37	RU	90	VAL
37	RU	92	ARG
37	RU	94	ASN
37	RU	98	LEU
37	RU	108	GLU
37	RU	111	GLU
37	RU	114	LYS
37	RU	117	GLN
38	RV	13	ARG
38	RV	19	LYS
38	RV	21	ARG
38	RV	22	VAL
38	RV	24	LYS
38	RV	35	LEU
38	RV	37	VAL
38	RV	45	THR
38	RV	47	VAL
38	RV	57	VAL
38	RV	61	VAL
38	RV	62	LEU
38	RV	64	HIS
38	RV	78	LYS
38	RV	79	VAL
38	RV	99	ILE
39	RW	11	ARG
39	RW	16	LYS

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Mol	Chain	Res	Type
39	RW	18	ARG
39	RW	19	LEU
39	RW	20	VAL
39	RW	23	LEU
39	RW	27	LYS
39	RW	30	GLU
39	RW	40	ASN
39	RW	51	LEU
39	RW	60	ASN
39	RW	63	ASP
39	RW	67	ASP
39	RW	76	VAL
39	RW	82	LEU
39	RW	92	ARG
39	RW	100	THR
39	RW	106	ILE
39	RW	107	LEU
40	RX	12	VAL
40	RX	23	GLU
40	RX	27	THR
40	RX	30	VAL
40	RX	35	THR
40	RX	49	VAL
40	RX	65	ARG
40	RX	70	LEU
40	RX	80	ILE
40	RX	81	VAL
41	RY	2	ARG
41	RY	13	VAL
41	RY	14	LEU
41	RY	27	VAL
41	RY	34	LYS
41	RY	37	VAL
41	RY	38	ILE
41	RY	43	ASN
41	RY	45	VAL
41	RY	55	TYR
41	RY	57	GLN
41	RY	61	ILE
41	RY	67	LEU
41	RY	70	SER
41	RY	75	ILE

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Mol	Chain	Res	Type
41	RY	76	CYS
41	RY	87	LYS
41	RY	90	LEU
41	RY	95	LYS
41	RY	96	ILE
41	RY	97	ARG
41	RY	102	CYS
42	RZ	5	LEU
42	RZ	20	ARG
42	RZ	24	LEU
42	RZ	29	TYR
42	RZ	35	ARG
42	RZ	38	TYR
42	RZ	53	ILE
42	RZ	70	LEU
42	RZ	80	ARG
42	RZ	81	ARG
42	RZ	87	ASP
42	RZ	89	PHE
42	RZ	94	GLU
42	RZ	98	MET
42	RZ	112	ARG
42	RZ	117	LEU
42	RZ	119	GLU
42	RZ	121	HIS
42	RZ	145	GLU
42	RZ	146	ILE
42	RZ	150	LEU
42	RZ	151	HIS
42	RZ	163	LEU
42	RZ	166	SER
42	RZ	168	GLU
42	RZ	169	GLU
42	RZ	171	ILE
42	RZ	180	VAL
42	RZ	181	GLU
42	RZ	182	LYS
42	RZ	183	LEU
43	R0	5	LYS
43	R0	7	LEU
43	R0	10	THR
43	R0	14	ARG

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Mol	Chain	Res	Type
43	R0	17	GLN
43	R0	31	VAL
43	R0	36	ILE
43	R0	66	VAL
43	R0	74	ARG
44	R1	21	ARG
44	R1	41	ARG
44	R1	51	VAL
44	R1	62	VAL
44	R1	78	LYS
44	R1	80	LEU
44	R1	90	ILE
44	R1	91	LYS
44	R1	92	LYS
45	R2	17	SER
45	R2	24	LEU
45	R2	27	GLU
45	R2	32	LEU
45	R2	50	ILE
45	R2	53	LEU
45	R2	62	THR
46	R3	6	VAL
46	R3	8	LEU
46	R3	18	ASP
46	R3	32	GLN
46	R3	40	THR
46	R3	56	VAL
47	R4	13	ARG
47	R4	15	ILE
47	R4	23	GLU
47	R4	33	VAL
47	R4	34	GLU
47	R4	37	SER
47	R4	42	PHE
47	R4	48	ARG
47	R4	49	PHE
47	R4	50	VAL
47	R4	52	THR
47	R4	57	GLU
47	R4	61	ARG
47	R4	62	ARG
47	R4	63	TYR

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Mol	Chain	Res	Type
47	R4	66	SER
47	R4	67	TYR
47	R4	68	ARG
48	R5	4	HIS
48	R5	6	VAL
48	R5	11	THR
48	R5	21	SER
48	R5	23	HIS
48	R5	25	LEU
48	R5	29	THR
48	R5	36	CYS
48	R5	40	LYS
48	R5	51	TYR
48	R5	52	TYR
48	R5	56	LYS
48	R5	58	LEU
48	R5	60	VAL
49	R6	6	ARG
49	R6	8	LYS
49	R6	9	LEU
49	R6	10	LEU
49	R6	11	LEU
49	R6	17	LYS
49	R6	19	ARG
49	R6	23	THR
49	R6	27	LYS
49	R6	30	THR
49	R6	34	LEU
49	R6	37	ARG
49	R6	44	ARG
50	R7	1	MET
50	R7	2	LYS
50	R7	4	THR
50	R7	9	ARG
50	R7	10	ARG
50	R7	14	LYS
50	R7	43	THR
50	R7	46	VAL
51	R8	14	VAL
51	R8	15	LYS
51	R8	34	TRP
51	R8	35	GLN

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Mol	Chain	Res	Type
51	R8	44	LYS
51	R8	47	LYS
51	R8	49	VAL
51	R8	52	LYS
51	R8	64	TYR
51	R8	65	GLU
52	R9	1	MET
52	R9	29	ASN
2	XB	5	ILE
2	XB	7	VAL
2	XB	8	LYS
2	XB	15	VAL
2	XB	23	ARG
2	XB	24	TRP
2	XB	33	TYR
2	XB	36	ARG
2	XB	67	THR
2	XB	71	VAL
2	XB	82	ARG
2	XB	92	TYR
2	XB	113	HIS
2	XB	145	LEU
2	XB	155	LEU
2	XB	163	PHE
2	XB	172	ILE
2	XB	175	ARG
2	XB	178	ARG
2	XB	187	LEU
2	XB	195	ASP
2	XB	196	LEU
2	XB	204	ASN
2	XB	215	LEU
2	XB	235	SER
3	XC	3	ASN
3	XC	5	ILE
3	XC	12	LEU
3	XC	21	ARG
3	XC	45	LYS
3	XC	47	LEU
3	XC	56	ASP
3	XC	94	LEU
3	XC	95	THR

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Mol	Chain	Res	Type
3	XC	131	ARG
3	XC	178	LEU
3	XC	184	TYR
3	XC	192	THR
4	XD	3	ARG
4	XD	9	CYS
4	XD	15	GLU
4	XD	19	LEU
4	XD	30	LYS
4	XD	33	MET
4	XD	50	ARG
4	XD	53	ASP
4	XD	58	LEU
4	XD	73	ARG
4	XD	76	ARG
4	XD	84	LYS
4	XD	86	LYS
4	XD	96	LEU
4	XD	108	LEU
4	XD	122	ARG
4	XD	127	THR
4	XD	131	ARG
4	XD	137	SER
4	XD	150	GLU
4	XD	154	ASN
4	XD	175	SER
4	XD	187	ARG
4	XD	190	ASP
4	XD	193	ASP
4	XD	208	SER
5	XE	6	PHE
5	XE	7	GLU
5	XE	10	MET
5	XE	11	ILE
5	XE	18	ARG
5	XE	31	LEU
5	XE	41	VAL
5	XE	73	ASN
5	XE	79	GLU
5	XE	101	ILE
5	XE	147	ASP
5	XE	153	LYS

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Mol	Chain	Res	Type
6	XF	21	LEU
6	XF	23	LYS
6	XF	36	ARG
6	XF	71	ARG
6	XF	74	ASP
6	XF	91	VAL
6	XF	92	LYS
6	XF	98	LEU
7	XG	5	ARG
7	XG	8	GLU
7	XG	35	LYS
7	XG	54	THR
7	XG	63	LYS
7	XG	78	ARG
7	XG	104	LEU
7	XG	113	GLU
7	XG	114	ARG
7	XG	136	LYS
7	XG	137	LYS
7	XG	155	ARG
8	XH	1	MET
8	XH	12	ARG
8	XH	19	VAL
8	XH	24	THR
8	XH	26	VAL
8	XH	41	ARG
8	XH	54	ASP
8	XH	63	LEU
8	XH	80	ILE
8	XH	85	ARG
8	XH	109	ILE
8	XH	112	LEU
8	XH	137	VAL
9	XI	9	ARG
9	XI	38	GLN
9	XI	44	VAL
9	XI	56	LEU
9	XI	65	VAL
9	XI	95	LYS
9	XI	96	LEU
9	XI	102	LEU
9	XI	104	ARG

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Mol	Chain	Res	Type
9	XI	105	ASP
9	XI	108	VAL
9	XI	111	ARG
9	XI	112	LYS
9	XI	114	TYR
9	XI	121	ARG
9	XI	124	GLN
9	XI	125	TYR
9	XI	128	ARG
10	XJ	3	LYS
10	XJ	17	ASP
10	XJ	22	LYS
10	XJ	45	ARG
10	XJ	47	PHE
10	XJ	49	VAL
10	XJ	54	PHE
10	XJ	57	LYS
10	XJ	62	HIS
10	XJ	70	ARG
10	XJ	74	ILE
10	XJ	80	LYS
10	XJ	84	GLN
10	XJ	96	ILE
10	XJ	98	ILE
11	XK	26	ASN
11	XK	29	ILE
11	XK	31	THR
11	XK	32	ILE
11	XK	36	ASP
11	XK	57	THR
11	XK	114	VAL
11	XK	116	HIS
12	XL	17	LYS
12	XL	18	VAL
12	XL	20	LYS
12	XL	27	LEU
12	XL	33	ARG
12	XL	59	ARG
12	XL	62	SER
12	XL	81	SER
12	XL	89	ARG
12	XL	91	LYS

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Mol	Chain	Res	Type
12	XL	126	LYS
13	XM	3	ARG
13	XM	13	LYS
13	XM	17	VAL
13	XM	19	LEU
13	XM	32	GLU
13	XM	45	VAL
13	XM	48	LEU
13	XM	56	LEU
13	XM	64	TRP
13	XM	66	LEU
13	XM	70	LEU
13	XM	84	ILE
13	XM	88	ARG
13	XM	98	VAL
13	XM	108	ARG
13	XM	114	ARG
13	XM	115	LYS
13	XM	117	VAL
13	XM	122	LYS
14	XN	6	LEU
14	XN	12	ARG
14	XN	32	SER
14	XN	33	VAL
14	XN	40	CYS
14	XN	41	ARG
14	XN	44	LEU
15	XO	3	ILE
15	XO	8	LYS
15	XO	24	SER
15	XO	26	GLU
15	XO	39	LEU
15	XO	62	GLN
15	XO	64	ARG
15	XO	66	LEU
15	XO	82	ILE
15	XO	87	ILE
16	XP	2	VAL
16	XP	11	SER
16	XP	20	VAL
16	XP	28	ARG
16	XP	32	TYR

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Mol	Chain	Res	Type
16	XP	67	THR
16	XP	69	THR
16	XP	72	ARG
16	XP	82	GLN
17	XQ	52	LYS
17	XQ	59	ILE
17	XQ	62	SER
17	XQ	68	ARG
17	XQ	74	LEU
17	XQ	101	ARG
18	XR	26	LEU
18	XR	29	PHE
18	XR	36	ASN
18	XR	41	LYS
18	XR	46	GLU
18	XR	54	ARG
18	XR	76	LEU
18	XR	82	THR
18	XR	86	VAL
19	XS	5	LEU
19	XS	10	PHE
19	XS	11	VAL
19	XS	12	ASP
19	XS	13	ASP
19	XS	21	GLU
19	XS	28	LYS
19	XS	29	ARG
19	XS	30	LEU
19	XS	31	ILE
19	XS	37	ARG
19	XS	44	MET
19	XS	63	THR
19	XS	78	ARG
19	XS	81	ARG
19	XS	83	HIS
20	XT	10	LEU
20	XT	13	LEU
20	XT	24	LEU
20	XT	37	SER
20	XT	41	ILE
20	XT	45	GLN
20	XT	50	GLU

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Mol	Chain	Res	Type
20	XT	73	HIS
20	XT	84	LEU
20	XT	93	GLU
21	XU	6	ARG
24	YD	5	LYS
24	YD	17	THR
24	YD	27	THR
24	YD	28	GLU
24	YD	30	GLU
24	YD	38	LYS
24	YD	43	ARG
24	YD	44	ASN
24	YD	49	ILE
24	YD	65	ILE
24	YD	73	VAL
24	YD	88	ARG
24	YD	94	LEU
24	YD	95	LEU
24	YD	103	ARG
24	YD	105	ILE
24	YD	106	ILE
24	YD	111	LEU
24	YD	112	GLN
24	YD	141	VAL
24	YD	192	THR
24	YD	200	ASP
24	YD	202	LYS
24	YD	212	SER
24	YD	217	ARG
24	YD	218	ARG
24	YD	221	VAL
24	YD	229	VAL
24	YD	237	GLU
24	YD	242	ARG
24	YD	257	LEU
24	YD	259	THR
24	YD	273	ARG
25	YE	4	ILE
25	YE	12	THR
25	YE	13	ARG
25	YE	16	ARG
25	YE	17	ASP

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Mol	Chain	Res	Type
25	YE	26	ILE
25	YE	27	LEU
25	YE	41	LYS
25	YE	42	ASP
25	YE	49	LEU
25	YE	77	ILE
25	YE	79	ARG
25	YE	82	ARG
25	YE	92	THR
25	YE	113	PHE
25	YE	116	VAL
25	YE	117	MET
25	YE	119	ARG
25	YE	127	ASP
25	YE	128	SER
25	YE	144	ARG
25	YE	146	THR
25	YE	154	LYS
25	YE	175	VAL
25	YE	197	ILE
25	YE	200	GLU
25	YE	202	LYS
25	YE	203	LYS
26	YF	9	ILE
26	YF	32	LEU
26	YF	33	LEU
26	YF	38	ARG
26	YF	45	ARG
26	YF	65	TRP
26	YF	70	THR
26	YF	78	ILE
26	YF	105	VAL
26	YF	106	ARG
26	YF	107	LYS
26	YF	117	ARG
26	YF	127	GLU
26	YF	161	GLU
26	YF	164	ARG
26	YF	165	ARG
26	YF	170	LEU
26	YF	174	VAL
26	YF	176	LEU

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Mol	Chain	Res	Type
26	YF	181	LEU
26	YF	183	VAL
26	YF	196	LEU
26	YF	197	ASP
26	YF	206	ILE
27	YG	3	LEU
27	YG	7	LEU
27	YG	22	ARG
27	YG	31	VAL
27	YG	34	LEU
27	YG	43	LEU
27	YG	45	GLU
27	YG	58	GLN
27	YG	63	ILE
27	YG	66	GLN
27	YG	67	LYS
27	YG	80	PHE
27	YG	82	LEU
27	YG	84	LYS
27	YG	88	ILE
27	YG	90	LEU
27	YG	94	LEU
27	YG	116	ASP
27	YG	118	ARG
27	YG	145	THR
27	YG	147	ASP
27	YG	167	GLU
28	YH	3	ARG
28	YH	4	ILE
28	YH	6	ARG
28	YH	9	ILE
28	YH	27	LYS
28	YH	32	GLU
28	YH	37	VAL
28	YH	40	GLU
28	YH	41	MET
28	YH	59	ARG
28	YH	77	LYS
28	YH	88	LEU
28	YH	89	ILE
28	YH	103	LEU
28	YH	105	LEU

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Mol	Chain	Res	Type
28	YH	122	THR
28	YH	129	THR
28	YH	132	ARG
28	YH	136	ILE
28	YH	143	GLN
28	YH	149	ARG
28	YH	152	ARG
28	YH	153	LYS
28	YH	155	SER
28	YH	169	VAL
29	YI	1	MET
29	YI	3	VAL
29	YI	9	LEU
29	YI	10	GLU
29	YI	12	LEU
29	YI	25	TYR
29	YI	31	LEU
29	YI	33	ARG
29	YI	38	LEU
29	YI	40	THR
29	YI	41	GLU
29	YI	42	SER
29	YI	45	LYS
29	YI	56	LYS
29	YI	57	ARG
29	YI	67	ARG
29	YI	70	GLU
29	YI	72	LEU
29	YI	75	LEU
29	YI	77	LEU
29	YI	81	VAL
29	YI	82	ARG
29	YI	85	GLU
29	YI	92	VAL
29	YI	96	ASP
29	YI	99	GLU
29	YI	102	SER
29	YI	113	ARG
29	YI	123	LEU
29	YI	128	LEU
29	YI	130	TYR
29	YI	131	LYS

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Mol	Chain	Res	Type
29	YI	135	GLU
29	YI	138	ILE
29	YI	139	GLN
29	YI	142	VAL
29	YI	144	VAL
30	YN	2	LYS
30	YN	5	VAL
30	YN	7	LYS
30	YN	32	THR
30	YN	34	LEU
30	YN	43	THR
30	YN	48	MET
30	YN	60	ILE
30	YN	61	ARG
30	YN	62	VAL
30	YN	65	LYS
30	YN	67	LEU
30	YN	73	THR
30	YN	90	MET
30	YN	96	GLU
30	YN	99	LEU
30	YN	109	LYS
30	YN	112	LEU
30	YN	116	LEU
30	YN	120	LEU
30	YN	136	GLU
31	YO	9	GLU
31	YO	19	ILE
31	YO	20	MET
31	YO	23	ARG
31	YO	24	VAL
31	YO	28	SER
31	YO	31	LYS
31	YO	47	ILE
31	YO	49	ARG
31	YO	53	LYS
31	YO	66	LYS
31	YO	91	LEU
32	YP	6	LEU
32	YP	7	ARG
32	YP	9	ASN
32	YP	14	LYS

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Mol	Chain	Res	Type
32	YP	16	ARG
32	YP	19	VAL
32	YP	21	ARG
32	YP	27	HIS
32	YP	29	LYS
32	YP	32	THR
32	YP	36	LYS
32	YP	45	LEU
32	YP	49	ARG
32	YP	50	ARG
32	YP	61	ARG
32	YP	64	LYS
32	YP	65	ARG
32	YP	71	VAL
32	YP	75	ILE
32	YP	88	LEU
32	YP	91	PHE
32	YP	94	GLU
32	YP	98	GLU
32	YP	100	LEU
32	YP	101	VAL
32	YP	112	LEU
32	YP	115	LEU
32	YP	117	GLU
32	YP	123	LEU
32	YP	135	LEU
32	YP	144	GLU
32	YP	146	VAL
32	YP	147	LEU
32	YP	149	GLU
33	YQ	5	ARG
33	YQ	10	ARG
33	YQ	25	ASP
33	YQ	45	GLN
33	YQ	55	VAL
33	YQ	59	ARG
33	YQ	71	ASP
33	YQ	75	THR
33	YQ	76	LYS
33	YQ	79	LEU
33	YQ	81	VAL
33	YQ	82	ARG

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Mol	Chain	Res	Type
33	YQ	83	MET
33	YQ	87	LYS
33	YQ	103	MET
33	YQ	112	GLU
33	YQ	132	VAL
33	YQ	135	ASP
33	YQ	139	GLU
34	YR	1	MET
34	YR	18	LEU
34	YR	28	LEU
34	YR	29	LEU
34	YR	34	ILE
34	YR	36	THR
34	YR	40	LYS
34	YR	44	LEU
34	YR	51	LEU
34	YR	54	LEU
34	YR	57	ARG
34	YR	63	ARG
34	YR	65	LEU
34	YR	79	LEU
34	YR	83	ILE
34	YR	95	THR
34	YR	100	LEU
34	YR	102	GLU
34	YR	104	ARG
34	YR	105	ARG
35	YS	10	ARG
35	YS	12	PHE
35	YS	14	VAL
35	YS	15	ARG
35	YS	20	ARG
35	YS	25	ARG
35	YS	27	SER
35	YS	44	LYS
35	YS	54	LEU
35	YS	56	LEU
35	YS	58	LEU
35	YS	69	VAL
35	YS	78	LEU
35	YS	83	LYS
35	YS	85	VAL

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Mol	Chain	Res	Type
35	YS	89	ARG
35	YS	103	GLU
35	YS	106	ARG
35	YS	111	GLU
36	YT	17	THR
36	YT	23	ARG
36	YT	27	THR
36	YT	28	VAL
36	YT	40	THR
36	YT	41	ARG
36	YT	42	ILE
36	YT	51	ARG
36	YT	58	ASN
36	YT	65	LYS
36	YT	66	VAL
36	YT	74	ARG
36	YT	86	ILE
36	YT	87	ASP
36	YT	88	ILE
36	YT	89	VAL
36	YT	110	ILE
36	YT	112	ARG
36	YT	115	ARG
36	YT	125	ARG
36	YT	128	GLU
36	YT	134	GLU
37	YU	5	LYS
37	YU	11	ARG
37	YU	27	LEU
37	YU	51	LYS
37	YU	52	ARG
37	YU	60	LEU
37	YU	64	ARG
37	YU	70	ARG
37	YU	74	LEU
37	YU	88	ILE
37	YU	91	ASP
37	YU	98	LEU
37	YU	104	GLN
37	YU	111	GLU
37	YU	112	ARG
37	YU	114	LYS

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Mol	Chain	Res	Type
38	YV	7	THR
38	YV	10	LYS
38	YV	13	ARG
38	YV	19	LYS
38	YV	35	LEU
38	YV	39	LEU
38	YV	40	LEU
38	YV	45	THR
38	YV	61	VAL
38	YV	66	ARG
38	YV	72	VAL
38	YV	73	SER
38	YV	78	LYS
38	YV	79	VAL
38	YV	99	ILE
39	YW	11	ARG
39	YW	16	LYS
39	YW	23	LEU
39	YW	37	ARG
39	YW	40	ASN
39	YW	51	LEU
39	YW	67	ASP
39	YW	69	LEU
39	YW	76	VAL
39	YW	88	ARG
39	YW	92	ARG
39	YW	95	ILE
39	YW	96	ILE
39	YW	100	THR
39	YW	106	ILE
39	YW	107	LEU
40	YX	6	ASP
40	YX	12	VAL
40	YX	15	GLU
40	YX	27	THR
40	YX	36	LYS
40	YX	43	VAL
40	YX	49	VAL
40	YX	57	LEU
40	YX	59	VAL
40	YX	63	LYS
40	YX	65	ARG

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Mol	Chain	Res	Type
40	YX	66	LEU
40	YX	80	ILE
40	YX	88	LYS
41	YY	14	LEU
41	YY	26	LYS
41	YY	27	VAL
41	YY	28	LYS
41	YY	29	GLU
41	YY	34	LYS
41	YY	38	ILE
41	YY	44	ILE
41	YY	57	GLN
41	YY	61	ILE
41	YY	64	GLU
41	YY	67	LEU
41	YY	71	LYS
41	YY	73	ARG
41	YY	75	ILE
41	YY	86	ARG
41	YY	87	LYS
41	YY	89	PHE
41	YY	90	LEU
41	YY	95	LYS
41	YY	97	ARG
42	YZ	5	LEU
42	YZ	6	LYS
42	YZ	8	TYR
42	YZ	20	ARG
42	YZ	24	LEU
42	YZ	35	ARG
42	YZ	42	VAL
42	YZ	52	SER
42	YZ	53	ILE
42	YZ	59	LEU
42	YZ	66	SER
42	YZ	71	VAL
42	YZ	72	ARG
42	YZ	76	LEU
42	YZ	78	LYS
42	YZ	81	ARG
42	YZ	86	VAL
42	YZ	88	PHE

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Mol	Chain	Res	Type
42	YZ	91	LEU
42	YZ	94	GLU
42	YZ	105	VAL
42	YZ	119	GLU
42	YZ	121	HIS
42	YZ	122	ARG
42	YZ	124	ILE
42	YZ	128	VAL
42	YZ	131	ARG
42	YZ	133	ILE
42	YZ	139	VAL
42	YZ	140	ASP
42	YZ	144	LEU
42	YZ	145	GLU
42	YZ	146	ILE
42	YZ	150	LEU
42	YZ	151	HIS
42	YZ	153	SER
42	YZ	156	LYS
42	YZ	166	SER
42	YZ	168	GLU
42	YZ	178	GLU
42	YZ	182	LYS
43	Y0	9	SER
43	Y0	10	THR
43	Y0	12	ASN
43	Y0	19	LYS
43	Y0	29	GLN
43	Y0	35	ASN
43	Y0	36	ILE
43	Y0	41	ARG
43	Y0	55	ARG
43	Y0	74	ARG
43	Y0	77	ARG
43	Y0	82	ARG
44	Y1	30	VAL
44	Y1	46	LEU
44	Y1	50	ARG
44	Y1	51	VAL
44	Y1	56	GLN
44	Y1	62	VAL
44	Y1	78	LYS

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Mol	Chain	Res	Type
44	Y1	80	LEU
44	Y1	82	LEU
44	Y1	83	GLU
44	Y1	91	LYS
44	Y1	92	LYS
45	Y2	4	SER
45	Y2	7	ARG
45	Y2	9	GLN
45	Y2	16	LEU
45	Y2	23	LYS
45	Y2	24	LEU
45	Y2	27	GLU
45	Y2	32	LEU
45	Y2	34	GLU
45	Y2	41	ILE
45	Y2	47	ASN
45	Y2	50	ILE
45	Y2	51	ARG
45	Y2	52	ASP
45	Y2	53	LEU
45	Y2	64	LEU
45	Y2	65	ASN
46	Y3	6	VAL
46	Y3	8	LEU
46	Y3	23	LEU
46	Y3	30	ARG
46	Y3	31	LEU
46	Y3	36	VAL
46	Y3	37	LEU
46	Y3	56	VAL
47	Y4	6	HIS
47	Y4	10	VAL
47	Y4	15	ILE
47	Y4	16	CYS
47	Y4	22	ILE
47	Y4	27	THR
47	Y4	34	GLU
47	Y4	39	CYS
47	Y4	42	PHE
47	Y4	43	TYR
47	Y4	48	ARG
47	Y4	49	PHE

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Mol	Chain	Res	Type
47	Y4	53	GLU
47	Y4	57	GLU
47	Y4	58	ARG
47	Y4	61	ARG
47	Y4	63	TYR
47	Y4	67	TYR
47	Y4	68	ARG
47	Y4	71	ARG
48	Y5	3	LYS
48	Y5	4	HIS
48	Y5	6	VAL
48	Y5	11	THR
48	Y5	29	THR
48	Y5	36	CYS
48	Y5	37	LYS
48	Y5	40	LYS
48	Y5	48	GLU
48	Y5	49	CYS
48	Y5	51	TYR
48	Y5	52	TYR
48	Y5	56	LYS
48	Y5	58	LEU
49	Y6	6	ARG
49	Y6	8	LYS
49	Y6	11	LEU
49	Y6	19	ARG
49	Y6	23	THR
49	Y6	30	THR
49	Y6	33	LYS
49	Y6	34	LEU
49	Y6	37	ARG
49	Y6	44	ARG
50	Y7	1	MET
50	Y7	4	THR
50	Y7	8	ASN
50	Y7	9	ARG
50	Y7	10	ARG
50	Y7	14	LYS
50	Y7	47	ARG
51	Y8	13	ARG
51	Y8	14	VAL
51	Y8	15	LYS

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Mol	Chain	Res	Type
51	Y8	29	LYS
51	Y8	30	ARG
51	Y8	34	TRP
51	Y8	43	GLN
51	Y8	44	LYS
51	Y8	47	LYS
51	Y8	56	GLU
51	Y8	58	ILE
51	Y8	64	TYR
51	Y8	65	GLU
52	Y9	1	MET
52	Y9	17	ILE

Some sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (20) such sidechains are listed below:

Mol	Chain	Res	Type
2	QB	19	HIS
2	QB	204	ASN
2	QB	212	GLN
10	QJ	13	HIS
10	QJ	78	ASN
13	QM	92	HIS
19	QS	47	HIS
25	RE	143	ASN
28	RH	143	GLN
28	RH	147	ASN
29	RI	104	GLN
35	RS	34	HIS
43	R0	12	ASN
52	R9	29	ASN
52	R9	32	HIS
2	XB	19	HIS
2	XB	204	ASN
2	XB	212	GLN
10	XJ	78	ASN
36	YT	58	ASN

5.3.3 RNA ⓘ

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
1	QA	1498/1522 (98%)	341 (22%)	0
1	XA	1498/1522 (98%)	352 (23%)	0
22	RA	2879/2916 (98%)	747 (25%)	0
22	YA	2880/2916 (98%)	734 (25%)	0
23	RB	119/122 (97%)	29 (24%)	0
23	YB	119/122 (97%)	32 (26%)	0
53	QV	76/77 (98%)	22 (28%)	0
53	XV	76/77 (98%)	24 (31%)	0
54	QX	7/25 (28%)	4 (57%)	0
54	XX	7/25 (28%)	3 (42%)	0
55	QY	7/17 (41%)	3 (42%)	0
55	XY	7/17 (41%)	2 (28%)	0
56	Z6	1/3 (33%)	0	0
56	Z8	1/3 (33%)	0	0
All	All	9175/9364 (97%)	2293 (24%)	0

All (2293) RNA backbone outliers are listed below:

Mol	Chain	Res	Type
1	QA	7	G
1	QA	9	G
1	QA	22	G
1	QA	32	A
1	QA	39	G
1	QA	43	C
1	QA	44	G
1	QA	47	C
1	QA	48	C
1	QA	50	A
1	QA	51	A
1	QA	64	G
1	QA	65	U
1	QA	66	G
1	QA	73	G
1	QA	79	G
1	QA	89	U
1	QA	91	C
1	QA	101	A
1	QA	105	G
1	QA	108	G
1	QA	116	A
1	QA	120	A
1	QA	121	C

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Mol	Chain	Res	Type
1	QA	122	G
1	QA	129(A)	G
1	QA	130	A
1	QA	135	C
1	QA	144	G
1	QA	146	G
1	QA	163	C
1	QA	173	U
1	QA	174	C
1	QA	182	U
1	QA	189	U
1	QA	190	G
1	QA	191(C)	G
1	QA	195	A
1	QA	197	A
1	QA	201	C
1	QA	208	U
1	QA	209	U
1	QA	210	U
1	QA	216	G
1	QA	244	U
1	QA	245	C
1	QA	247	G
1	QA	250	A
1	QA	251	G
1	QA	260	G
1	QA	266	G
1	QA	267	C
1	QA	270	A
1	QA	271	C
1	QA	280	C
1	QA	281	G
1	QA	289	G
1	QA	298	A
1	QA	309	G
1	QA	314	C
1	QA	318	G
1	QA	321	A
1	QA	328	C
1	QA	329	A
1	QA	332	G
1	QA	344	A

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Mol	Chain	Res	Type
1	QA	346	G
1	QA	347	G
1	QA	351	G
1	QA	352	C
1	QA	353	A
1	QA	354	G
1	QA	367	U
1	QA	369	C
1	QA	372	C
1	QA	373	A
1	QA	384	G
1	QA	388	G
1	QA	390	C
1	QA	397	A
1	QA	398	C
1	QA	406	G
1	QA	411	A
1	QA	412	A
1	QA	413	G
1	QA	414	A
1	QA	419	C
1	QA	422	C
1	QA	423	G
1	QA	429	U
1	QA	430	A
1	QA	440	A
1	QA	442	C
1	QA	453	A
1	QA	466	C
1	QA	467	G
1	QA	468	A
1	QA	478	A
1	QA	485	G
1	QA	486	U
1	QA	496	A
1	QA	497	U
1	QA	500	G
1	QA	505	G
1	QA	509	A
1	QA	510	A
1	QA	511	C
1	QA	518	C

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Mol	Chain	Res	Type
1	QA	521	G
1	QA	527	G
1	QA	531	U
1	QA	532	A
1	QA	533	A
1	QA	536	C
1	QA	545	C
1	QA	547	A
1	QA	558	G
1	QA	559	A
1	QA	561	U
1	QA	562	C
1	QA	563	A
1	QA	565	U
1	QA	566	G
1	QA	572	A
1	QA	573	A
1	QA	576	G
1	QA	577	G
1	QA	579	G
1	QA	604	G
1	QA	614	A
1	QA	618	C
1	QA	630	G
1	QA	631	G
1	QA	633	G
1	QA	652	U
1	QA	653	A
1	QA	665	A
1	QA	687	A
1	QA	688	G
1	QA	698	G
1	QA	701	C
1	QA	702	A
1	QA	703	G
1	QA	704	A
1	QA	723	U
1	QA	728	A
1	QA	729	A
1	QA	731	G
1	QA	748	C
1	QA	749	C

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Mol	Chain	Res	Type
1	QA	753	A
1	QA	754	C
1	QA	755	G
1	QA	760	G
1	QA	763	G
1	QA	778	G
1	QA	784	C
1	QA	792	A
1	QA	793	U
1	QA	794	A
1	QA	817	C
1	QA	819	A
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	870	U
1	QA	871	U
1	QA	872	A
1	QA	873	A
1	QA	884	U
1	QA	889	A
1	QA	891	U
1	QA	902	G
1	QA	914	A
1	QA	927	G
1	QA	934	C
1	QA	935	A
1	QA	940	C
1	QA	960	U
1	QA	961	U
1	QA	968	A
1	QA	969	A
1	QA	971	G
1	QA	972	C
1	QA	974	A
1	QA	976	G
1	QA	977	A
1	QA	978	A

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Mol	Chain	Res	Type
1	QA	981	U
1	QA	991	U
1	QA	992	U
1	QA	993	G
1	QA	994	A
1	QA	995	C
1	QA	1001	G
1	QA	1004	A
1	QA	1006	C
1	QA	1009	G
1	QA	1010	G
1	QA	1020	U
1	QA	1023	G
1	QA	1024	G
1	QA	1025	U
1	QA	1026	G
1	QA	1028	C
1	QA	1029	G
1	QA	1031	G
1	QA	1032(A)	G
1	QA	1036	G
1	QA	1038	C
1	QA	1040	U
1	QA	1042	G
1	QA	1043	C
1	QA	1046	A
1	QA	1054	C
1	QA	1055	A
1	QA	1057	G
1	QA	1066	C
1	QA	1067	A
1	QA	1070	U
1	QA	1079	G
1	QA	1081	G
1	QA	1086	U
1	QA	1094	G
1	QA	1095	U
1	QA	1096	C
1	QA	1101	A
1	QA	1112	C
1	QA	1121	U
1	QA	1124	G

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Mol	Chain	Res	Type
1	QA	1125	U
1	QA	1126	U
1	QA	1127	G
1	QA	1129	C
1	QA	1130	A
1	QA	1131	G
1	QA	1136	U
1	QA	1137	C
1	QA	1138	G
1	QA	1139	G
1	QA	1140	C
1	QA	1157	A
1	QA	1158	C
1	QA	1159	U
1	QA	1160	G
1	QA	1161	C
1	QA	1163	C
1	QA	1170	A
1	QA	1171	G
1	QA	1177	G
1	QA	1178	G
1	QA	1181	G
1	QA	1182	G
1	QA	1183	A
1	QA	1185	G
1	QA	1186	G
1	QA	1187	G
1	QA	1191	A
1	QA	1193	G
1	QA	1194	U
1	QA	1196	U
1	QA	1197	G
1	QA	1200	C
1	QA	1201	A
1	QA	1202	G
1	QA	1204	A
1	QA	1212	U
1	QA	1213	A
1	QA	1214	C
1	QA	1215	G
1	QA	1225	A
1	QA	1227	A

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Mol	Chain	Res	Type
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	1263	C
1	QA	1267	C
1	QA	1268	A
1	QA	1270	C
1	QA	1273	G
1	QA	1280	A
1	QA	1281	U
1	QA	1282	C
1	QA	1286	A
1	QA	1287	A
1	QA	1288	A
1	QA	1297	C
1	QA	1298	C
1	QA	1299	A
1	QA	1300	G
1	QA	1301	U
1	QA	1302	U
1	QA	1303	C
1	QA	1305	G
1	QA	1319	A
1	QA	1320	C
1	QA	1322	C
1	QA	1323	G
1	QA	1331	G
1	QA	1334	G
1	QA	1335	C
1	QA	1336	C
1	QA	1337	G
1	QA	1338	G
1	QA	1346	A
1	QA	1347	G
1	QA	1348	U
1	QA	1353	G
1	QA	1362(A)	C
1	QA	1368	G
1	QA	1370	G

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Mol	Chain	Res	Type
1	QA	1379	G
1	QA	1394	A
1	QA	1397	C
1	QA	1398	A
1	QA	1411	C
1	QA	1419	G
1	QA	1442	G
1	QA	1446	A
1	QA	1447	G
1	QA	1452	C
1	QA	1453	G
1	QA	1454	G
1	QA	1492	A
1	QA	1499	A
1	QA	1503	A
1	QA	1504	G
1	QA	1505	G
1	QA	1506	U
1	QA	1517	G
1	QA	1519	A
1	QA	1520	G
1	QA	1529	G
1	QA	1530	G
22	RA	10	G
22	RA	15	G
22	RA	28	A
22	RA	34	C
22	RA	35	G
22	RA	43	G
22	RA	46	C
22	RA	51	G
22	RA	55	G
22	RA	61	G
22	RA	64	A
22	RA	71	A
22	RA	72	U
22	RA	74	A
22	RA	75	G
22	RA	81	G
22	RA	82	G
22	RA	83	G
22	RA	95	G

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Mol	Chain	Res	Type
22	RA	96	G
22	RA	101	G
22	RA	102	G
22	RA	103	A
22	RA	118	A
22	RA	120	U
22	RA	125	G
22	RA	127	A
22	RA	135	G
22	RA	138	G
22	RA	140	A
22	RA	161	U
22	RA	177	G
22	RA	181	A
22	RA	188	G
22	RA	196	A
22	RA	199	A
22	RA	201	C
22	RA	206	U
22	RA	214	G
22	RA	215	G
22	RA	216	A
22	RA	221	A
22	RA	222	A
22	RA	223	A
22	RA	225	A
22	RA	228	A
22	RA	229	A
22	RA	230	U
22	RA	232	G
22	RA	233	A
22	RA	242	G
22	RA	243	U
22	RA	248	G
22	RA	249	C
22	RA	250	G
22	RA	252	G
22	RA	264	C
22	RA	265	A
22	RA	266	G
22	RA	269	U
22	RA	270(L)	U

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Mol	Chain	Res	Type
22	RA	270(M)	U
22	RA	270(N)	G
22	RA	270(P)	C
22	RA	270(T)	G
22	RA	271(C)	U
22	RA	271	G
22	RA	272	G
22	RA	273(F)	C
22	RA	275	G
22	RA	276	A
22	RA	277	C
22	RA	278	A
22	RA	286	C
22	RA	299	A
22	RA	311	A
22	RA	312	G
22	RA	317	G
22	RA	323	G
22	RA	324	A
22	RA	327	G
22	RA	329	G
22	RA	330	A
22	RA	331	A
22	RA	332	A
22	RA	333	G
22	RA	342	G
22	RA	343	C
22	RA	345	A
22	RA	346	A
22	RA	347	A
22	RA	352	G
22	RA	357	A
22	RA	364	C
22	RA	371	A
22	RA	372	G
22	RA	373	U
22	RA	394	A
22	RA	405	U
22	RA	407	G
22	RA	411	G
22	RA	412	A
22	RA	428	A

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Mol	Chain	Res	Type
22	RA	434	U
22	RA	442	G
22	RA	444	C
22	RA	447	A
22	RA	448	U
22	RA	454	A
22	RA	455	C
22	RA	456	C
22	RA	457	A
22	RA	458	G
22	RA	470	A
22	RA	481	G
22	RA	496	G
22	RA	504	U
22	RA	505	A
22	RA	509	C
22	RA	513	A
22	RA	521	G
22	RA	527	C
22	RA	529	A
22	RA	530	G
22	RA	532	A
22	RA	533	G
22	RA	537	C
22	RA	539	G
22	RA	540	G
22	RA	541	C
22	RA	544	C
22	RA	546	C
22	RA	549	G
22	RA	550	G
22	RA	554	U
22	RA	556	G
22	RA	563	G
22	RA	571	A
22	RA	573	G
22	RA	574	C
22	RA	575	A
22	RA	588	U
22	RA	603	A
22	RA	607	U
22	RA	609(A)	G

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Mol	Chain	Res	Type
22	RA	613	U
22	RA	614	U
22	RA	615	G
22	RA	617	G
22	RA	621	A
22	RA	622	G
22	RA	627	A
22	RA	628	G
22	RA	631	A
22	RA	634	C
22	RA	637	A
22	RA	638	G
22	RA	645	C
22	RA	646	A
22	RA	647	G
22	RA	651	G
22	RA	652	C
22	RA	654	A
22	RA	654(A)	G
22	RA	654(T)	C
22	RA	657	U
22	RA	659	C
22	RA	668	G
22	RA	669	G
22	RA	686	G
22	RA	701	G
22	RA	702	G
22	RA	704	G
22	RA	714	U
22	RA	717	G
22	RA	722	A
22	RA	726	G
22	RA	730	C
22	RA	747	U
22	RA	753	C
22	RA	758	C
22	RA	764	A
22	RA	771	G
22	RA	775	G
22	RA	776	G
22	RA	782	A
22	RA	784	A

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Mol	Chain	Res	Type
22	RA	785	G
22	RA	788	A
22	RA	790	C
22	RA	792	G
22	RA	793	A
22	RA	800	A
22	RA	801	G
22	RA	805	G
22	RA	809	G
22	RA	812	C
22	RA	819	A
22	RA	827	U
22	RA	828	U
22	RA	831	G
22	RA	846	C
22	RA	847	U
22	RA	856	C
22	RA	857	C
22	RA	859	G
22	RA	860	U
22	RA	882	G
22	RA	884	C
22	RA	885	C
22	RA	886	C
22	RA	888	C
22	RA	889	C
22	RA	893	C
22	RA	896	A
22	RA	897	C
22	RA	898	C
22	RA	899	A
22	RA	900	A
22	RA	901	A
22	RA	902	C
22	RA	904	C
22	RA	907	U
22	RA	910	A
22	RA	917	A
22	RA	918	A
22	RA	932	G
22	RA	933	A
22	RA	938	G

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Mol	Chain	Res	Type
22	RA	941	A
22	RA	944	G
22	RA	945	A
22	RA	946	G
22	RA	958	U
22	RA	961	C
22	RA	962	G
22	RA	972	G
22	RA	973	A
22	RA	974	G
22	RA	974(A)	C
22	RA	975	G
22	RA	980	A
22	RA	983	A
22	RA	990	A
22	RA	996	A
22	RA	1003	G
22	RA	1010	A
22	RA	1011	G
22	RA	1012	U
22	RA	1013	C
22	RA	1015	G
22	RA	1019	U
22	RA	1020	A
22	RA	1022	G
22	RA	1023	U
22	RA	1025	G
22	RA	1026	U
22	RA	1027	A
22	RA	1033	U
22	RA	1034	G
22	RA	1037	G
22	RA	1044	G
22	RA	1045	A
22	RA	1046	A
22	RA	1047	G
22	RA	1050	A
22	RA	1051	G
22	RA	1054	A
22	RA	1055	G
22	RA	1057	A
22	RA	1059	G

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Mol	Chain	Res	Type
22	RA	1060	U
22	RA	1061	U
22	RA	1065	U
22	RA	1066	U
22	RA	1067	A
22	RA	1068	G
22	RA	1070	A
22	RA	1071	G
22	RA	1073	A
22	RA	1077	A
22	RA	1078	U
22	RA	1079	C
22	RA	1080	C
22	RA	1082	U
22	RA	1083	U
22	RA	1084	A
22	RA	1085	A
22	RA	1086	A
22	RA	1087	G
22	RA	1088	A
22	RA	1091	G
22	RA	1093	G
22	RA	1095	A
22	RA	1096	A
22	RA	1101	U
22	RA	1104	C
22	RA	1105	U
22	RA	1110	G
22	RA	1111	A
22	RA	1112	G
22	RA	1115	G
22	RA	1122	G
22	RA	1128	A
22	RA	1130	U
22	RA	1131	G
22	RA	1135	C
22	RA	1136	G
22	RA	1139	G
22	RA	1142	U
22	RA	1142(A)	A
22	RA	1155	A
22	RA	1158	C

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Mol	Chain	Res	Type
22	RA	1161	C
22	RA	1169	G
22	RA	1173	G
22	RA	1174	A
22	RA	1175	U
22	RA	1176	G
22	RA	1178	C
22	RA	1179	C
22	RA	1183	G
22	RA	1186	G
22	RA	1191	G
22	RA	1195	G
22	RA	1196	C
22	RA	1204	A
22	RA	1205	U
22	RA	1206	G
22	RA	1210	A
22	RA	1211	U
22	RA	1212	G
22	RA	1219	G
22	RA	1220	A
22	RA	1221	C
22	RA	1225	C
22	RA	1227	A
22	RA	1236	G
22	RA	1238	G
22	RA	1246	A
22	RA	1247	A
22	RA	1248	G
22	RA	1252	G
22	RA	1253	A
22	RA	1256	G
22	RA	1265	A
22	RA	1271	G
22	RA	1272	A
22	RA	1273	U
22	RA	1282	U
22	RA	1287	A
22	RA	1300	U
22	RA	1301	A
22	RA	1302	A
22	RA	1312	U

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Mol	Chain	Res	Type
22	RA	1313	U
22	RA	1314	C
22	RA	1319	G
22	RA	1321	A
22	RA	1329	U
22	RA	1349	A
22	RA	1352	U
22	RA	1365	A
22	RA	1379	A
22	RA	1380	G
22	RA	1384	A
22	RA	1385	G
22	RA	1386	C
22	RA	1390	U
22	RA	1395	A
22	RA	1406	U
22	RA	1407	C
22	RA	1408	C
22	RA	1411	C
22	RA	1416	G
22	RA	1419	A
22	RA	1420	U
22	RA	1421	G
22	RA	1428	C
22	RA	1444(A)	A
22	RA	1445	C
22	RA	1449	A
22	RA	1449(A)	G
22	RA	1451	C
22	RA	1455	G
22	RA	1460	A
22	RA	1461	G
22	RA	1467	C
22	RA	1471	A
22	RA	1474	C
22	RA	1480	G
22	RA	1483	G
22	RA	1485	G
22	RA	1486	A
22	RA	1487	G
22	RA	1493	C
22	RA	1495	A

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Mol	Chain	Res	Type
22	RA	1497	U
22	RA	1502	C
22	RA	1504	C
22	RA	1505	C
22	RA	1506	C
22	RA	1507	A
22	RA	1508	A
22	RA	1510	A
22	RA	1513	C
22	RA	1514	U
22	RA	1515	C
22	RA	1522	G
22	RA	1523	U
22	RA	1534	G
22	RA	1535	U
22	RA	1536	A
22	RA	1537	C
22	RA	1538	G
22	RA	1543	A
22	RA	1544	C
22	RA	1545	A
22	RA	1548	C
22	RA	1558	A
22	RA	1559	G
22	RA	1560	G
22	RA	1569	A
22	RA	1578	U
22	RA	1579	A
22	RA	1580	A
22	RA	1581	G
22	RA	1585	C
22	RA	1586	A
22	RA	1593	G
22	RA	1598	C
22	RA	1608	A
22	RA	1609	A
22	RA	1610	A
22	RA	1616	A
22	RA	1617	C
22	RA	1618	A
22	RA	1630(A)	C
22	RA	1634	A

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Mol	Chain	Res	Type
22	RA	1648	C
22	RA	1651	G
22	RA	1653	G
22	RA	1654	A
22	RA	1655	A
22	RA	1664	A
22	RA	1667	G
22	RA	1673	U
22	RA	1674	G
22	RA	1688	U
22	RA	1695	G
22	RA	1696	G
22	RA	1697	G
22	RA	1701	A
22	RA	1703	G
22	RA	1725	G
22	RA	1728	G
22	RA	1729	A
22	RA	1730	U
22	RA	1731	G
22	RA	1733	G
22	RA	1742	C
22	RA	1746	G
22	RA	1752	C
22	RA	1763	G
22	RA	1764	G
22	RA	1766	U
22	RA	1769	G
22	RA	1773	A
22	RA	1776	G
22	RA	1780	A
22	RA	1782	C
22	RA	1791	A
22	RA	1799	G
22	RA	1800	C
22	RA	1815	A
22	RA	1816	G
22	RA	1820	U
22	RA	1829	A
22	RA	1834	U
22	RA	1835	G
22	RA	1847	A

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Mol	Chain	Res	Type
22	RA	1858	G
22	RA	1864	U
22	RA	1869	G
22	RA	1872	A
22	RA	1878	G
22	RA	1882	C
22	RA	1885	A
22	RA	1886	C
22	RA	1888	G
22	RA	1889	A
22	RA	1905	C
22	RA	1906	G
22	RA	1913	A
22	RA	1914	C
22	RA	1919	A
22	RA	1920	C
22	RA	1927	A
22	RA	1929	G
22	RA	1931	U
22	RA	1934	C
22	RA	1936	A
22	RA	1938	A
22	RA	1940	U
22	RA	1944	U
22	RA	1947	C
22	RA	1955	U
22	RA	1963	U
22	RA	1964	G
22	RA	1967	C
22	RA	1969	A
22	RA	1970	A
22	RA	1971	A
22	RA	1972	A
22	RA	1981	A
22	RA	1982	C
22	RA	1991	U
22	RA	1992	G
22	RA	1993	U
22	RA	1996	C
22	RA	2020	A
22	RA	2023	G
22	RA	2031	A

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Mol	Chain	Res	Type
22	RA	2032	G
22	RA	2033	A
22	RA	2039	C
22	RA	2043	C
22	RA	2049	G
22	RA	2051	A
22	RA	2054	A
22	RA	2055	C
22	RA	2056	G
22	RA	2059	A
22	RA	2060	A
22	RA	2061	G
22	RA	2062	A
22	RA	2063	C
22	RA	2067	G
22	RA	2069	G
22	RA	2080	G
22	RA	2089	U
22	RA	2099	U
22	RA	2101	G
22	RA	2102	U
22	RA	2107	C
22	RA	2111	C
22	RA	2112	G
22	RA	2113	U
22	RA	2114	A
22	RA	2115	G
22	RA	2116	G
22	RA	2117	A
22	RA	2119	A
22	RA	2126	A
22	RA	2127	G
22	RA	2128	C
22	RA	2131	G
22	RA	2132	U
22	RA	2133	G
22	RA	2134	A
22	RA	2135	A
22	RA	2136	C
22	RA	2145	C
22	RA	2147	G
22	RA	2148	G

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Mol	Chain	Res	Type
22	RA	2150	U
22	RA	2160	G
22	RA	2161	C
22	RA	2166	G
22	RA	2167	U
22	RA	2168	G
22	RA	2170	A
22	RA	2173	A
22	RA	2178	C
22	RA	2179	C
22	RA	2189	U
22	RA	2190	G
22	RA	2192	G
22	RA	2198	A
22	RA	2199	A
22	RA	2207	C
22	RA	2208	U
22	RA	2210	G
22	RA	2211	G
22	RA	2212	A
22	RA	2213	U
22	RA	2215	G
22	RA	2225	A
22	RA	2227	A
22	RA	2238	G
22	RA	2239	G
22	RA	2241	A
22	RA	2243	U
22	RA	2246	G
22	RA	2273	A
22	RA	2275	C
22	RA	2283	C
22	RA	2286	A
22	RA	2287	A
22	RA	2288	A
22	RA	2297	C
22	RA	2299	G
22	RA	2300	G
22	RA	2303	G
22	RA	2307	G
22	RA	2308	G
22	RA	2311	A

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Mol	Chain	Res	Type
22	RA	2319	G
22	RA	2320	A
22	RA	2321	G
22	RA	2325	G
22	RA	2334	G
22	RA	2336	A
22	RA	2345	G
22	RA	2346	A
22	RA	2347	C
22	RA	2350	C
22	RA	2352	A
22	RA	2353	G
22	RA	2354	G
22	RA	2358	G
22	RA	2383	G
22	RA	2384	G
22	RA	2385	C
22	RA	2387	U
22	RA	2392	A
22	RA	2398	U
22	RA	2402	C
22	RA	2403	C
22	RA	2405	G
22	RA	2406	U
22	RA	2410	G
22	RA	2422	A
22	RA	2423	U
22	RA	2424	C
22	RA	2425	A
22	RA	2429	G
22	RA	2430	A
22	RA	2431	U
22	RA	2435	A
22	RA	2439	A
22	RA	2440	C
22	RA	2441	C
22	RA	2443	C
22	RA	2445	G
22	RA	2448	A
22	RA	2469	A
22	RA	2470	G
22	RA	2474	C

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Mol	Chain	Res	Type
22	RA	2475	C
22	RA	2482	G
22	RA	2487	G
22	RA	2490	G
22	RA	2494	G
22	RA	2502	G
22	RA	2505	G
22	RA	2513	G
22	RA	2519	U
22	RA	2525	G
22	RA	2529	G
22	RA	2540	C
22	RA	2542	A
22	RA	2543	G
22	RA	2545	G
22	RA	2546	U
22	RA	2554	U
22	RA	2556	C
22	RA	2558	C
22	RA	2564	A
22	RA	2567	G
22	RA	2572	A
22	RA	2573	C
22	RA	2574	G
22	RA	2582	G
22	RA	2585	U
22	RA	2602	A
22	RA	2608	G
22	RA	2609	U
22	RA	2610	C
22	RA	2611	U
22	RA	2612	C
22	RA	2615	U
22	RA	2621	A
22	RA	2623	G
22	RA	2629	A
22	RA	2641	G
22	RA	2655	G
22	RA	2665	A
22	RA	2666	C
22	RA	2667	C
22	RA	2673	G

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Mol	Chain	Res	Type
22	RA	2675	A
22	RA	2679	A
22	RA	2682	U
22	RA	2689	U
22	RA	2690	C
22	RA	2702	U
22	RA	2703	C
22	RA	2707	G
22	RA	2712	U
22	RA	2712(A)	A
22	RA	2713	A
22	RA	2714	G
22	RA	2726	U
22	RA	2733	A
22	RA	2747	G
22	RA	2748	A
22	RA	2750	A
22	RA	2752	C
22	RA	2758	A
22	RA	2761	G
22	RA	2764	A
22	RA	2765	A
22	RA	2767	C
22	RA	2770	G
22	RA	2777	G
22	RA	2778	A
22	RA	2779	U
22	RA	2780	G
22	RA	2790	A
22	RA	2791	C
22	RA	2793	G
22	RA	2797	U
22	RA	2807	G
22	RA	2810	A
22	RA	2811	G
22	RA	2813	A
22	RA	2818	G
22	RA	2820	A
22	RA	2821	A
22	RA	2831	G
22	RA	2833	G
22	RA	2834	G

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Mol	Chain	Res	Type
22	RA	2835	A
22	RA	2836	U
22	RA	2839	G
22	RA	2849	U
22	RA	2867	G
22	RA	2868	A
22	RA	2872	G
22	RA	2876	G
22	RA	2880	C
22	RA	2885	C
22	RA	2886	G
22	RA	2891	G
22	RA	2892	A
22	RA	2894	G
23	RB	2	C
23	RB	9	G
23	RB	13	A
23	RB	15	A
23	RB	16	G
23	RB	21	G
23	RB	22	U
23	RB	24	G
23	RB	25	A
23	RB	26	A
23	RB	27	C
23	RB	29	A
23	RB	31	C
23	RB	32	C
23	RB	33	G
23	RB	40	U
23	RB	41	U
23	RB	42	C
23	RB	43	C
23	RB	44	G
23	RB	45	A
23	RB	56	G
23	RB	67	G
23	RB	73	A
23	RB	81	G
23	RB	89	G
23	RB	91	C
23	RB	109	G

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Mol	Chain	Res	Type
23	RB	115	G
1	XA	6	G
1	XA	9	G
1	XA	10	A
1	XA	12	U
1	XA	19	C
1	XA	32	A
1	XA	34	C
1	XA	39	G
1	XA	47	C
1	XA	48	C
1	XA	50	A
1	XA	51	A
1	XA	59	A
1	XA	61	G
1	XA	64	G
1	XA	65	U
1	XA	66	G
1	XA	78	G
1	XA	79	G
1	XA	81	G
1	XA	89	U
1	XA	90	C
1	XA	91	C
1	XA	92	G
1	XA	95	G
1	XA	108	G
1	XA	115	G
1	XA	116	A
1	XA	121	C
1	XA	129(A)	G
1	XA	130	A
1	XA	138	G
1	XA	144	G
1	XA	147	G
1	XA	163	C
1	XA	168	G
1	XA	172	A
1	XA	173	U
1	XA	174	C
1	XA	182	U
1	XA	189	U

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Mol	Chain	Res	Type
1	XA	190	G
1	XA	191(C)	G
1	XA	191(E)	G
1	XA	195	A
1	XA	197	A
1	XA	199	G
1	XA	201	C
1	XA	209	U
1	XA	216	G
1	XA	218	C
1	XA	220	G
1	XA	222	U
1	XA	226	G
1	XA	240	C
1	XA	244	U
1	XA	245	C
1	XA	247	G
1	XA	251	G
1	XA	253	U
1	XA	266	G
1	XA	267	C
1	XA	270	A
1	XA	271	C
1	XA	280	C
1	XA	281	G
1	XA	289	G
1	XA	298	A
1	XA	299	G
1	XA	306	G
1	XA	314	C
1	XA	318	G
1	XA	321	A
1	XA	328	C
1	XA	329	A
1	XA	330	C
1	XA	332	G
1	XA	338	A
1	XA	345	C
1	XA	346	G
1	XA	347	G
1	XA	348	G
1	XA	349	A

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Mol	Chain	Res	Type
1	XA	352	C
1	XA	353	A
1	XA	354	G
1	XA	367	U
1	XA	372	C
1	XA	373	A
1	XA	384	G
1	XA	389	A
1	XA	397	A
1	XA	398	C
1	XA	406	G
1	XA	408	A
1	XA	409	G
1	XA	411	A
1	XA	412	A
1	XA	413	G
1	XA	414	A
1	XA	422	C
1	XA	423	G
1	XA	424	G
1	XA	427	U
1	XA	429	U
1	XA	430	A
1	XA	434	U
1	XA	452	A
1	XA	466	C
1	XA	467	G
1	XA	481	G
1	XA	482	A
1	XA	485	G
1	XA	486	U
1	XA	496	A
1	XA	497	U
1	XA	505	G
1	XA	509	A
1	XA	510	A
1	XA	511	C
1	XA	513	C
1	XA	518	C
1	XA	527	G
1	XA	529	G
1	XA	531	U

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Mol	Chain	Res	Type
1	XA	532	A
1	XA	533	A
1	XA	542	G
1	XA	545	C
1	XA	546	G
1	XA	547	A
1	XA	548	G
1	XA	559	A
1	XA	561	U
1	XA	562	C
1	XA	563	A
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	607	A
1	XA	617	G
1	XA	620	C
1	XA	630	G
1	XA	631	G
1	XA	633	G
1	XA	653	A
1	XA	657	G
1	XA	665	A
1	XA	688	G
1	XA	702	A
1	XA	703	G
1	XA	704	A
1	XA	721	G
1	XA	724	G
1	XA	731	G
1	XA	748	C
1	XA	749	C
1	XA	755	G
1	XA	760	G
1	XA	763	G
1	XA	777	A
1	XA	792	A
1	XA	793	U
1	XA	794	A

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Mol	Chain	Res	Type
1	XA	796	C
1	XA	799	G
1	XA	813	U
1	XA	816	A
1	XA	817	C
1	XA	818	G
1	XA	819	A
1	XA	821	G
1	XA	828	A
1	XA	838	G
1	XA	841	U
1	XA	842	C
1	XA	843	U
1	XA	848	C
1	XA	853	G
1	XA	859	A
1	XA	864	A
1	XA	870	U
1	XA	871	U
1	XA	872	A
1	XA	873	A
1	XA	902	G
1	XA	914	A
1	XA	927	G
1	XA	934	C
1	XA	935	A
1	XA	936	C
1	XA	939	G
1	XA	950	U
1	XA	960	U
1	XA	961	U
1	XA	966	G
1	XA	967	C
1	XA	968	A
1	XA	969	A
1	XA	971	G
1	XA	972	C
1	XA	974	A
1	XA	975	A
1	XA	976	G
1	XA	977	A
1	XA	983	A

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Mol	Chain	Res	Type
1	XA	991	U
1	XA	992	U
1	XA	993	G
1	XA	994	A
1	XA	1000	A
1	XA	1001	G
1	XA	1002	G
1	XA	1004	A
1	XA	1006	C
1	XA	1008	C
1	XA	1016	A
1	XA	1021	G
1	XA	1024	G
1	XA	1026	G
1	XA	1028	C
1	XA	1029	G
1	XA	1032(A)	G
1	XA	1032(B)	G
1	XA	1036	G
1	XA	1039	C
1	XA	1040	U
1	XA	1042	G
1	XA	1053	G
1	XA	1054	C
1	XA	1055	A
1	XA	1064	G
1	XA	1066	C
1	XA	1081	G
1	XA	1085	U
1	XA	1089	G
1	XA	1094	G
1	XA	1095	U
1	XA	1101	A
1	XA	1103	C
1	XA	1124	G
1	XA	1125	U
1	XA	1126	U
1	XA	1127	G
1	XA	1130	A
1	XA	1131	G
1	XA	1136	U
1	XA	1137	C

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Mol	Chain	Res	Type
1	XA	1138	G
1	XA	1139	G
1	XA	1140	C
1	XA	1146	A
1	XA	1152	A
1	XA	1157	A
1	XA	1158	C
1	XA	1159	U
1	XA	1160	G
1	XA	1161	C
1	XA	1162	C
1	XA	1170	A
1	XA	1176	A
1	XA	1177	G
1	XA	1181	G
1	XA	1182	G
1	XA	1183	A
1	XA	1187	G
1	XA	1188	A
1	XA	1189	C
1	XA	1190	G
1	XA	1193	G
1	XA	1195	C
1	XA	1196	U
1	XA	1201	A
1	XA	1211	U
1	XA	1212	U
1	XA	1214	C
1	XA	1220	G
1	XA	1225	A
1	XA	1226	C
1	XA	1238	A
1	XA	1240	U
1	XA	1256	A
1	XA	1257	U
1	XA	1258	G
1	XA	1264	C
1	XA	1270	C
1	XA	1272	G
1	XA	1275	A
1	XA	1277	C
1	XA	1278	U

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Mol	Chain	Res	Type
1	XA	1280	A
1	XA	1281	U
1	XA	1282	C
1	XA	1285	A
1	XA	1286	A
1	XA	1287	A
1	XA	1288	A
1	XA	1290	G
1	XA	1298	C
1	XA	1299	A
1	XA	1300	G
1	XA	1301	U
1	XA	1302	U
1	XA	1305	G
1	XA	1306	A
1	XA	1318	A
1	XA	1320	C
1	XA	1321	C
1	XA	1322	C
1	XA	1323	G
1	XA	1329	A
1	XA	1331	G
1	XA	1336	C
1	XA	1337	G
1	XA	1338	G
1	XA	1346	A
1	XA	1347	G
1	XA	1348	U
1	XA	1353	G
1	XA	1359	C
1	XA	1362(A)	C
1	XA	1363	A
1	XA	1378	C
1	XA	1379	G
1	XA	1394	A
1	XA	1397	C
1	XA	1401	G
1	XA	1419	G
1	XA	1442	G
1	XA	1443	G
1	XA	1446	A
1	XA	1452	C

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Mol	Chain	Res	Type
1	XA	1453	G
1	XA	1482	G
1	XA	1483	A
1	XA	1487	G
1	XA	1492	A
1	XA	1497	G
1	XA	1499	A
1	XA	1503	A
1	XA	1504	G
1	XA	1506	U
1	XA	1517	G
1	XA	1518	A
1	XA	1519	A
1	XA	1520	G
1	XA	1528	U
1	XA	1529	G
1	XA	1530	G
22	YA	9	U
22	YA	13	A
22	YA	15	G
22	YA	28	A
22	YA	34	C
22	YA	35	G
22	YA	46	C
22	YA	49	A
22	YA	55	G
22	YA	61	G
22	YA	63	U
22	YA	71	A
22	YA	72	U
22	YA	74	A
22	YA	75	G
22	YA	96	G
22	YA	97	C
22	YA	99	U
22	YA	101	G
22	YA	102	G
22	YA	103	A
22	YA	118	A
22	YA	119	A
22	YA	120	U
22	YA	121	G

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Mol	Chain	Res	Type
22	YA	134	C
22	YA	155	C
22	YA	161	U
22	YA	162	U
22	YA	173	G
22	YA	181	A
22	YA	188	G
22	YA	196	A
22	YA	199	A
22	YA	215	G
22	YA	216	A
22	YA	221	A
22	YA	222	A
22	YA	223	A
22	YA	224	G
22	YA	226	G
22	YA	228	A
22	YA	229	A
22	YA	230	U
22	YA	232	G
22	YA	242	G
22	YA	243	U
22	YA	248	G
22	YA	249	C
22	YA	250	G
22	YA	252	G
22	YA	261	G
22	YA	264	C
22	YA	265	A
22	YA	266	G
22	YA	269	U
22	YA	270(K)	C
22	YA	270(L)	U
22	YA	270(M)	U
22	YA	270(N)	G
22	YA	270(O)	U
22	YA	270(P)	C
22	YA	270(Q)	C
22	YA	270(W)	G
22	YA	270(Y)	G
22	YA	270(Z)	U
22	YA	271(A)	C

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Mol	Chain	Res	Type
22	YA	271(C)	U
22	YA	271	G
22	YA	274	G
22	YA	275	G
22	YA	276	A
22	YA	278	A
22	YA	279	C
22	YA	299	A
22	YA	300	A
22	YA	311	A
22	YA	312	G
22	YA	315	G
22	YA	316	C
22	YA	323	G
22	YA	324	A
22	YA	329	G
22	YA	330	A
22	YA	332	A
22	YA	342	G
22	YA	345	A
22	YA	352	G
22	YA	356	G
22	YA	363	G
22	YA	364	C
22	YA	371	A
22	YA	372	G
22	YA	373	U
22	YA	380	U
22	YA	386	G
22	YA	387	U
22	YA	394	A
22	YA	396	G
22	YA	405	U
22	YA	406	G
22	YA	411	G
22	YA	412	A
22	YA	428	A
22	YA	429	A
22	YA	442	G
22	YA	443	A
22	YA	444	C
22	YA	448	U

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Mol	Chain	Res	Type
22	YA	451	C
22	YA	454	A
22	YA	457	A
22	YA	470	A
22	YA	472	A
22	YA	479	A
22	YA	480	A
22	YA	481	G
22	YA	483	A
22	YA	494	G
22	YA	496	G
22	YA	501	A
22	YA	503	A
22	YA	504	U
22	YA	505	A
22	YA	508	G
22	YA	509	C
22	YA	512	G
22	YA	513	A
22	YA	518	G
22	YA	528	A
22	YA	531	C
22	YA	532	A
22	YA	533	G
22	YA	537	C
22	YA	539	G
22	YA	540	G
22	YA	546	C
22	YA	547	A
22	YA	549	G
22	YA	562	U
22	YA	563	G
22	YA	571	A
22	YA	573	G
22	YA	574	C
22	YA	575	A
22	YA	580	C
22	YA	586	A
22	YA	587	C
22	YA	588	U
22	YA	591	C
22	YA	599	G

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Mol	Chain	Res	Type
22	YA	603	A
22	YA	607	U
22	YA	613	U
22	YA	614	U
22	YA	615	G
22	YA	617	G
22	YA	618	G
22	YA	622	G
22	YA	627	A
22	YA	634	C
22	YA	637	A
22	YA	638	G
22	YA	645	C
22	YA	646	A
22	YA	649	G
22	YA	651	G
22	YA	654	A
22	YA	654(A)	G
22	YA	654(B)	C
22	YA	654(T)	C
22	YA	657	U
22	YA	664	C
22	YA	668	G
22	YA	670	A
22	YA	685	A
22	YA	686	G
22	YA	701	G
22	YA	702	G
22	YA	704	G
22	YA	716	A
22	YA	717	G
22	YA	719	C
22	YA	721	C
22	YA	722	A
22	YA	730	C
22	YA	740	U
22	YA	762	U
22	YA	776	G
22	YA	777	A
22	YA	782	A
22	YA	784	A
22	YA	785	G

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Mol	Chain	Res	Type
22	YA	788	A
22	YA	789	A
22	YA	790	C
22	YA	791	C
22	YA	792	G
22	YA	793	A
22	YA	800	A
22	YA	805	G
22	YA	812	C
22	YA	813	U
22	YA	819	A
22	YA	827	U
22	YA	828	U
22	YA	830	G
22	YA	845	G
22	YA	846	C
22	YA	847	U
22	YA	856	C
22	YA	857	C
22	YA	858	U
22	YA	860	U
22	YA	869	G
22	YA	880	G
22	YA	881	G
22	YA	882	G
22	YA	883	G
22	YA	884	C
22	YA	885	C
22	YA	886	C
22	YA	887	A
22	YA	889	C
22	YA	896	A
22	YA	897	C
22	YA	899	A
22	YA	900	A
22	YA	901	A
22	YA	907	U
22	YA	910	A
22	YA	914	C
22	YA	915	C
22	YA	917	A
22	YA	932	G

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Mol	Chain	Res	Type
22	YA	938	G
22	YA	941	A
22	YA	945	A
22	YA	946	G
22	YA	957	A
22	YA	959	A
22	YA	961	C
22	YA	973	A
22	YA	974	G
22	YA	974(A)	C
22	YA	975	G
22	YA	980	A
22	YA	983	A
22	YA	986	C
22	YA	995	C
22	YA	996	A
22	YA	1003	G
22	YA	1005	C
22	YA	1010	A
22	YA	1011	G
22	YA	1012	U
22	YA	1013	C
22	YA	1016	G
22	YA	1020	A
22	YA	1022	G
22	YA	1023	U
22	YA	1025	G
22	YA	1026	U
22	YA	1027	A
22	YA	1033	U
22	YA	1043	C
22	YA	1045	A
22	YA	1046	A
22	YA	1047	G
22	YA	1050	A
22	YA	1053	C
22	YA	1054	A
22	YA	1057	A
22	YA	1059	G
22	YA	1060	U
22	YA	1061	U
22	YA	1065	U

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Mol	Chain	Res	Type
22	YA	1066	U
22	YA	1067	A
22	YA	1068	G
22	YA	1069	A
22	YA	1070	A
22	YA	1071	G
22	YA	1077	A
22	YA	1078	U
22	YA	1079	C
22	YA	1082	U
22	YA	1083	U
22	YA	1084	A
22	YA	1085	A
22	YA	1086	A
22	YA	1088	A
22	YA	1089	G
22	YA	1090	U
22	YA	1091	G
22	YA	1095	A
22	YA	1096	A
22	YA	1097	U
22	YA	1099	G
22	YA	1103	A
22	YA	1104	C
22	YA	1110	G
22	YA	1111	A
22	YA	1122	G
22	YA	1126	A
22	YA	1128	A
22	YA	1130	U
22	YA	1131	G
22	YA	1135	C
22	YA	1136	G
22	YA	1139	G
22	YA	1142	U
22	YA	1142(A)	A
22	YA	1143	A
22	YA	1155	A
22	YA	1168	G
22	YA	1170	G
22	YA	1173	G
22	YA	1174	A

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Mol	Chain	Res	Type
22	YA	1175	U
22	YA	1176	G
22	YA	1178	C
22	YA	1179	C
22	YA	1194	A
22	YA	1195	G
22	YA	1204	A
22	YA	1205	U
22	YA	1210	A
22	YA	1211	U
22	YA	1218	C
22	YA	1220	A
22	YA	1221	C
22	YA	1228	G
22	YA	1230	C
22	YA	1236	G
22	YA	1237	A
22	YA	1238	G
22	YA	1240	U
22	YA	1241	A
22	YA	1242	A
22	YA	1244	G
22	YA	1250	G
22	YA	1252	G
22	YA	1253	A
22	YA	1255	U
22	YA	1256	G
22	YA	1257	C
22	YA	1265	A
22	YA	1271	G
22	YA	1272	A
22	YA	1273	U
22	YA	1300	U
22	YA	1301	A
22	YA	1306	C
22	YA	1309	G
22	YA	1313	U
22	YA	1319	G
22	YA	1321	A
22	YA	1329	U
22	YA	1349	A
22	YA	1352	U

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Mol	Chain	Res	Type
22	YA	1365	A
22	YA	1368	G
22	YA	1371	G
22	YA	1372	U
22	YA	1379	A
22	YA	1383	C
22	YA	1384	A
22	YA	1385	G
22	YA	1386	C
22	YA	1389	G
22	YA	1391	U
22	YA	1395	A
22	YA	1407	C
22	YA	1411	C
22	YA	1416	G
22	YA	1417	C
22	YA	1419	A
22	YA	1420	U
22	YA	1421	G
22	YA	1428	C
22	YA	1429	G
22	YA	1444(A)	A
22	YA	1445	C
22	YA	1449	A
22	YA	1449(A)	G
22	YA	1455	G
22	YA	1458	C
22	YA	1459	G
22	YA	1460	A
22	YA	1461	G
22	YA	1467	C
22	YA	1471	A
22	YA	1475	G
22	YA	1482	U
22	YA	1483	G
22	YA	1484	G
22	YA	1487	G
22	YA	1489	U
22	YA	1493	C
22	YA	1496	A
22	YA	1497	U
22	YA	1504	C

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Mol	Chain	Res	Type
22	YA	1506	C
22	YA	1507	A
22	YA	1508	A
22	YA	1510	A
22	YA	1511	A
22	YA	1515	C
22	YA	1516	U
22	YA	1522	G
22	YA	1525	G
22	YA	1533	C
22	YA	1534	G
22	YA	1535	U
22	YA	1536	A
22	YA	1537	C
22	YA	1540	G
22	YA	1543	A
22	YA	1544	C
22	YA	1545	A
22	YA	1545(A)	A
22	YA	1549	C
22	YA	1554	A
22	YA	1558	A
22	YA	1559	G
22	YA	1560	G
22	YA	1569	A
22	YA	1578	U
22	YA	1579	A
22	YA	1585	C
22	YA	1586	A
22	YA	1587	A
22	YA	1591	G
22	YA	1592	C
22	YA	1597	A
22	YA	1598	C
22	YA	1608	A
22	YA	1609	A
22	YA	1610	A
22	YA	1617	C
22	YA	1640	C
22	YA	1648	C
22	YA	1654	A
22	YA	1674	G

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Mol	Chain	Res	Type
22	YA	1678	G
22	YA	1682	G
22	YA	1686	C
22	YA	1693	U
22	YA	1694	C
22	YA	1695	G
22	YA	1698	A
22	YA	1699	G
22	YA	1700	A
22	YA	1701	A
22	YA	1725	G
22	YA	1729	A
22	YA	1730	U
22	YA	1731	G
22	YA	1732	A
22	YA	1733	G
22	YA	1742	C
22	YA	1743	G
22	YA	1750	G
22	YA	1753	G
22	YA	1754	C
22	YA	1756	G
22	YA	1762	A
22	YA	1763	G
22	YA	1764	G
22	YA	1773	A
22	YA	1780	A
22	YA	1781	C
22	YA	1787	A
22	YA	1791	A
22	YA	1799	G
22	YA	1800	C
22	YA	1801	G
22	YA	1805	U
22	YA	1816	G
22	YA	1824	G
22	YA	1826	G
22	YA	1829	A
22	YA	1835	G
22	YA	1847	A
22	YA	1848	A
22	YA	1858	G

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Mol	Chain	Res	Type
22	YA	1869	G
22	YA	1871	A
22	YA	1872	A
22	YA	1878	G
22	YA	1882	C
22	YA	1889	A
22	YA	1896	G
22	YA	1899	G
22	YA	1900	A
22	YA	1903	G
22	YA	1906	G
22	YA	1913	A
22	YA	1919	A
22	YA	1929	G
22	YA	1930	G
22	YA	1931	U
22	YA	1935	G
22	YA	1936	A
22	YA	1938	A
22	YA	1939	U
22	YA	1941	C
22	YA	1955	U
22	YA	1956	U
22	YA	1963	U
22	YA	1965	C
22	YA	1967	C
22	YA	1968	G
22	YA	1969	A
22	YA	1970	A
22	YA	1971	A
22	YA	1972	A
22	YA	1976	U
22	YA	1982	C
22	YA	1985	G
22	YA	1987	G
22	YA	1991	U
22	YA	1992	G
22	YA	1993	U
22	YA	1996	C
22	YA	2020	A
22	YA	2023	G
22	YA	2031	A

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Mol	Chain	Res	Type
22	YA	2033	A
22	YA	2043	C
22	YA	2055	C
22	YA	2056	G
22	YA	2059	A
22	YA	2060	A
22	YA	2061	G
22	YA	2062	A
22	YA	2063	C
22	YA	2069	G
22	YA	2072	G
22	YA	2098	U
22	YA	2107	C
22	YA	2108	C
22	YA	2111	C
22	YA	2112	G
22	YA	2113	U
22	YA	2114	A
22	YA	2115	G
22	YA	2116	G
22	YA	2117	A
22	YA	2119	A
22	YA	2120	G
22	YA	2126	A
22	YA	2127	G
22	YA	2128	C
22	YA	2131	G
22	YA	2132	U
22	YA	2133	G
22	YA	2136	C
22	YA	2145	C
22	YA	2147	G
22	YA	2148	G
22	YA	2158	A
22	YA	2159	G
22	YA	2166	G
22	YA	2167	U
22	YA	2168	G
22	YA	2173	A
22	YA	2177	C
22	YA	2183	C
22	YA	2189	U

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Mol	Chain	Res	Type
22	YA	2190	G
22	YA	2192	G
22	YA	2194	G
22	YA	2195	C
22	YA	2198	A
22	YA	2209	C
22	YA	2210	G
22	YA	2211	G
22	YA	2212	A
22	YA	2215	G
22	YA	2225	A
22	YA	2238	G
22	YA	2239	G
22	YA	2242	G
22	YA	2243	U
22	YA	2263	C
22	YA	2267	A
22	YA	2269	A
22	YA	2274	A
22	YA	2275	C
22	YA	2278	A
22	YA	2280	G
22	YA	2283	C
22	YA	2287	A
22	YA	2288	A
22	YA	2299	G
22	YA	2305	A
22	YA	2307	G
22	YA	2308	G
22	YA	2311	A
22	YA	2319	G
22	YA	2320	A
22	YA	2325	G
22	YA	2334	G
22	YA	2336	A
22	YA	2342	C
22	YA	2346	A
22	YA	2347	C
22	YA	2358	G
22	YA	2377	A
22	YA	2379	G
22	YA	2383	G

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Mol	Chain	Res	Type
22	YA	2385	C
22	YA	2392	A
22	YA	2394	C
22	YA	2398	U
22	YA	2402	C
22	YA	2403	C
22	YA	2406	U
22	YA	2410	G
22	YA	2423	U
22	YA	2424	C
22	YA	2425	A
22	YA	2429	G
22	YA	2430	A
22	YA	2431	U
22	YA	2435	A
22	YA	2439	A
22	YA	2440	C
22	YA	2441	C
22	YA	2448	A
22	YA	2453	A
22	YA	2468	G
22	YA	2469	A
22	YA	2475	C
22	YA	2491	U
22	YA	2494	G
22	YA	2497	A
22	YA	2502	G
22	YA	2505	G
22	YA	2518	A
22	YA	2524	G
22	YA	2525	G
22	YA	2529	G
22	YA	2531	A
22	YA	2542	A
22	YA	2543	G
22	YA	2554	U
22	YA	2562	U
22	YA	2566	A
22	YA	2567	G
22	YA	2573	C
22	YA	2574	G
22	YA	2582	G

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Mol	Chain	Res	Type
22	YA	2585	U
22	YA	2595	G
22	YA	2596	U
22	YA	2602	A
22	YA	2609	U
22	YA	2611	U
22	YA	2612	C
22	YA	2615	U
22	YA	2621	A
22	YA	2623	G
22	YA	2626	C
22	YA	2629	A
22	YA	2632	A
22	YA	2640	G
22	YA	2646	C
22	YA	2651	C
22	YA	2654	A
22	YA	2660	A
22	YA	2665	A
22	YA	2666	C
22	YA	2673	G
22	YA	2675	A
22	YA	2679	A
22	YA	2682	U
22	YA	2683	C
22	YA	2689	U
22	YA	2690	C
22	YA	2691	C
22	YA	2702	U
22	YA	2703	C
22	YA	2707	G
22	YA	2712	U
22	YA	2712(A)	A
22	YA	2713	A
22	YA	2714	G
22	YA	2718	G
22	YA	2719	G
22	YA	2720	U
22	YA	2726	U
22	YA	2733	A
22	YA	2734	A
22	YA	2739	U

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Mol	Chain	Res	Type
22	YA	2742	C
22	YA	2749	A
22	YA	2750	A
22	YA	2751	G
22	YA	2752	C
22	YA	2758	A
22	YA	2761	G
22	YA	2765	A
22	YA	2766	G
22	YA	2770	G
22	YA	2771	C
22	YA	2777	G
22	YA	2778	A
22	YA	2779	U
22	YA	2789	C
22	YA	2790	A
22	YA	2791	C
22	YA	2793	G
22	YA	2795	G
22	YA	2797	U
22	YA	2798	C
22	YA	2804	C
22	YA	2807	G
22	YA	2808	U
22	YA	2818	G
22	YA	2820	A
22	YA	2821	A
22	YA	2833	G
22	YA	2834	G
22	YA	2835	A
22	YA	2836	U
22	YA	2867	G
22	YA	2868	A
22	YA	2872	G
22	YA	2880	C
22	YA	2892	A
22	YA	2893	G
23	YB	2	C
23	YB	8	U
23	YB	13	A
23	YB	15	A
23	YB	16	G

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Mol	Chain	Res	Type
23	YB	21	G
23	YB	22	U
23	YB	24	G
23	YB	25	A
23	YB	29	A
23	YB	31	C
23	YB	32	C
23	YB	39	A
23	YB	40	U
23	YB	41	U
23	YB	42	C
23	YB	44	G
23	YB	45	A
23	YB	52	A
23	YB	53	A
23	YB	65	C
23	YB	67	G
23	YB	72	G
23	YB	73	A
23	YB	81	G
23	YB	82	G
23	YB	90	C
23	YB	91	C
23	YB	107	U
23	YB	108	C
23	YB	109	G
23	YB	115	G
53	QV	5	G
53	QV	7	G
53	QV	8	U
53	QV	16	C
53	QV	17(A)	U
53	QV	18	G
53	QV	19	G
53	QV	21	A
53	QV	22	G
53	QV	31	G
53	QV	41	C
53	QV	44	A
53	QV	47	U
53	QV	48	C
53	QV	50	U

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Mol	Chain	Res	Type
53	QV	54	U
53	QV	59	A
53	QV	63	G
53	QV	64	G
53	QV	67	C
53	QV	75	C
53	QV	76	A
54	QX	2	U
54	QX	3	G
54	QX	4	C
54	QX	7	G
55	QY	34	C
55	QY	36	G
55	QY	38	A
53	XV	4	G
53	XV	5	G
53	XV	7	G
53	XV	10	G
53	XV	11	A
53	XV	16	C
53	XV	17(A)	U
53	XV	18	G
53	XV	19	G
53	XV	21	A
53	XV	30	G
53	XV	31	G
53	XV	47	U
53	XV	48	C
53	XV	49	G
53	XV	50	U
53	XV	52	G
53	XV	54	U
53	XV	58	A
53	XV	63	G
53	XV	64	G
53	XV	66	C
53	XV	75	C
53	XV	76	A
54	XX	3	G
54	XX	4	C
54	XX	7	G
55	XY	34	C

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Mol	Chain	Res	Type
55	XY	36	G

There are no RNA pucker outliers to report.

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	$\# Z > 2$
56	PPU	Z6	76	56,22	38,40,41	1.41	3 (7%)	54,57,60	2.40	18 (33%)
56	PPU	Z8	76	56,22	38,40,41	1.47	4 (10%)	54,57,60	2.18	18 (33%)

In the following table, the Chirals column lists the number of chiral outliers, the number of chiral centers analysed, the number of these observed in the model and the number defined in the chemical component dictionary. Similar counts are reported in the Torsion and Rings columns. '-' means no outliers of that kind were identified.

Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
56	PPU	Z6	76	56,22	-	0/26/43/44	0/4/4/4
56	PPU	Z8	76	56,22	-	0/26/43/44	0/4/4/4

All (7) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
56	Z8	76	PPU	P-OP1	4.76	1.52	1.46
56	Z6	76	PPU	P-OP1	4.70	1.52	1.46
56	Z8	76	PPU	C4-N9	-4.11	1.31	1.37
56	Z6	76	PPU	C4-N9	-3.46	1.32	1.37
56	Z6	76	PPU	C5-C4	3.02	1.47	1.40
56	Z8	76	PPU	C5-C4	2.71	1.46	1.40
56	Z8	76	PPU	C2'-C3'	-2.39	1.49	1.53

All (36) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
56	Z6	76	PPU	C5-C4-N3	-7.07	119.09	125.98
56	Z8	76	PPU	C5-C4-N3	-6.70	119.44	125.98
56	Z6	76	PPU	C3'-N3'-C	-5.64	114.20	123.19
56	Z6	76	PPU	N3-C4-N9	5.47	134.78	125.39
56	Z8	76	PPU	N3-C4-N9	5.11	134.16	125.39
56	Z6	76	PPU	N3-C2-N1	-4.88	124.60	128.89
56	Z8	76	PPU	C2-N1-C6	4.78	121.88	111.52
56	Z6	76	PPU	N1-C6-N6	4.60	121.89	117.04
56	Z8	76	PPU	N1-C6-N6	4.54	121.83	117.04
56	Z6	76	PPU	C2-N1-C6	4.53	121.34	111.52
56	Z8	76	PPU	N3-C2-N1	-4.36	125.05	128.89
56	Z6	76	PPU	C4'-C3'-N3'	-4.16	104.81	113.56
56	Z8	76	PPU	C2'-C3'-N3'	-3.59	104.75	113.08
56	Z6	76	PPU	C10-N6-C6	-3.34	109.56	119.88
56	Z6	76	PPU	O4'-C1'-N9	-3.15	101.24	108.10
56	Z6	76	PPU	CM-OC-CZ	3.02	124.55	117.54
56	Z8	76	PPU	C4-C5-N7	-2.99	106.53	109.41
56	Z8	76	PPU	O2'-C2'-C3'	-2.90	103.55	110.69
56	Z8	76	PPU	C8-N9-C4	2.85	109.28	106.96
56	Z8	76	PPU	C3'-N3'-C	-2.84	118.67	123.19
56	Z6	76	PPU	C2'-C3'-C4'	2.83	105.77	102.27
56	Z8	76	PPU	C10-N6-C6	-2.69	111.56	119.88
56	Z6	76	PPU	CB-CA-C	2.68	113.58	108.33
56	Z6	76	PPU	C4-C5-N7	-2.67	106.83	109.41
56	Z8	76	PPU	C4'-C3'-N3'	-2.63	108.03	113.56
56	Z6	76	PPU	C9-N6-C6	-2.61	111.81	119.88
56	Z6	76	PPU	CG-CB-CA	-2.59	108.28	114.32
56	Z8	76	PPU	C9-N6-C6	-2.49	112.19	119.88
56	Z6	76	PPU	C2-N3-C4	2.38	120.13	113.27
56	Z6	76	PPU	C8-N9-C4	2.34	108.86	106.96
56	Z6	76	PPU	O-C-N3'	-2.32	118.42	122.91
56	Z8	76	PPU	C1'-C2'-C3'	2.23	106.39	102.19
56	Z8	76	PPU	P-O5'-C5'	-2.22	114.23	122.98
56	Z8	76	PPU	O4'-C4'-C3'	2.22	107.03	103.83
56	Z8	76	PPU	C2'-C3'-C4'	2.10	104.88	102.27
56	Z8	76	PPU	C2-N3-C4	2.08	119.25	113.27

There are no chirality outliers.

There are no torsion outliers.

There are no ring outliers.

5.5 Carbohydrates ⓘ

There are no carbohydrates in this entry.

5.6 Ligand geometry ⓘ

Of 706 ligands modelled in this entry, 704 are monoatomic - leaving 2 for Mogul analysis.

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

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	$\# Z > 2$	Counts	RMSZ	$\# Z > 2$
57	PAR	QA	1601	-	45,45,45	1.31	6 (13%)	67,67,67	1.39	8 (11%)
57	PAR	XA	1601	-	45,45,45	1.35	6 (13%)	67,67,67	1.33	5 (7%)

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
57	PAR	QA	1601	-	-	0/18/94/94	0/4/4/4
57	PAR	XA	1601	-	-	0/18/94/94	0/4/4/4

All (12) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
57	QA	1601	PAR	C52-C42	3.28	1.58	1.52
57	XA	1601	PAR	C52-C42	2.94	1.58	1.52
57	QA	1601	PAR	C64-C54	2.89	1.59	1.51
57	QA	1601	PAR	O54-C14	2.86	1.49	1.41
57	XA	1601	PAR	O54-C14	2.85	1.49	1.41
57	XA	1601	PAR	C11-C21	2.78	1.57	1.52
57	XA	1601	PAR	C64-C54	2.76	1.58	1.51
57	XA	1601	PAR	O51-C11	2.62	1.48	1.41
57	QA	1601	PAR	O51-C11	2.35	1.47	1.41
57	QA	1601	PAR	C11-C21	2.29	1.57	1.52
57	XA	1601	PAR	C14-C24	2.12	1.56	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
57	QA	1601	PAR	C14-C24	2.01	1.56	1.52

All (13) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
57	QA	1601	PAR	O52-C13-C23	4.70	115.89	107.50
57	XA	1601	PAR	C14-O54-C54	4.34	122.13	113.73
57	XA	1601	PAR	O52-C13-C23	4.25	115.09	107.50
57	XA	1601	PAR	O33-C14-C24	4.19	116.37	108.08
57	QA	1601	PAR	C14-O54-C54	3.82	121.13	113.73
57	QA	1601	PAR	O33-C14-C24	3.34	114.69	108.08
57	QA	1601	PAR	O11-C42-C52	3.11	115.34	107.42
57	QA	1601	PAR	O11-C42-C32	-3.03	101.71	108.97
57	QA	1601	PAR	O54-C54-C64	2.93	111.56	105.97
57	XA	1601	PAR	O54-C54-C64	2.82	111.35	105.97
57	XA	1601	PAR	C11-O51-C51	2.58	118.72	113.73
57	QA	1601	PAR	C22-C32-C42	2.18	114.77	109.37
57	QA	1601	PAR	O54-C54-C44	-2.09	105.85	109.73

There are no chirality outliers.

There are no torsion outliers.

There are no ring outliers.

5.7 Other polymers ⓘ

There are no such residues in this entry.

5.8 Polymer linkage issues

There are no chain breaks in this entry.

6 Fit of model and data ⓘ

6.1 Protein, DNA and RNA chains ⓘ

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

Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å ²)	Q<0.9
1	QA	1500/1522 (98%)	0.18	65 (4%) 34 21	28, 70, 146, 264	0
1	XA	1500/1522 (98%)	0.17	41 (2%) 52 32	18, 64, 151, 247	0
2	QB	237/256 (92%)	0.28	5 (2%) 60 37	48, 115, 166, 191	0
2	XB	237/256 (92%)	-0.10	0 100 100	35, 98, 150, 194	0
3	QC	205/239 (85%)	0.80	12 (5%) 22 14	45, 105, 149, 166	0
3	XC	205/239 (85%)	0.55	8 (3%) 37 23	35, 78, 130, 168	0
4	QD	208/209 (99%)	0.48	4 (1%) 64 40	27, 79, 119, 169	0
4	XD	208/209 (99%)	0.44	6 (2%) 49 30	34, 75, 127, 151	0
5	QE	151/162 (93%)	0.53	5 (3%) 44 27	37, 88, 135, 167	0
5	XE	151/162 (93%)	0.30	3 (1%) 62 38	29, 65, 115, 148	0
6	QF	101/101 (100%)	0.11	0 100 100	21, 76, 112, 185	0
6	XF	101/101 (100%)	0.27	1 (0%) 79 57	32, 72, 115, 153	0
7	QG	155/156 (99%)	0.88	22 (14%) 3 4	46, 96, 152, 185	0
7	XG	155/156 (99%)	0.77	10 (6%) 18 12	40, 87, 145, 167	0
8	QH	138/138 (100%)	0.70	4 (2%) 49 30	41, 90, 125, 153	0
8	XH	138/138 (100%)	0.32	2 (1%) 72 47	33, 72, 108, 149	0
9	QI	127/128 (99%)	1.84	47 (37%) 1 1	67, 109, 148, 172	0
9	XI	127/128 (99%)	0.92	18 (14%) 3 4	28, 99, 147, 164	0
10	QJ	99/105 (94%)	1.33	24 (24%) 1 2	59, 114, 165, 205	0
10	XJ	99/105 (94%)	1.34	31 (31%) 1 1	41, 103, 147, 171	0
11	QK	119/129 (92%)	1.09	12 (10%) 7 7	35, 79, 130, 177	0
11	XK	119/129 (92%)	1.08	10 (8%) 11 8	24, 71, 125, 182	0
12	QL	125/132 (94%)	1.16	16 (12%) 4 4	30, 70, 120, 182	0
12	XL	125/132 (94%)	1.03	16 (12%) 4 4	15, 58, 120, 182	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å²)		Q<0.9	
13	QM	121/126 (96%)	1.99	49 (40%)	1	1	36, 106, 144, 196	0
13	XM	121/126 (96%)	1.34	30 (24%)	1	2	38, 88, 137, 187	0
14	QN	60/61 (98%)	2.55	40 (66%)	0	1	58, 97, 124, 142	0
14	XN	60/61 (98%)	1.52	14 (23%)	1	2	34, 75, 109, 125	0
15	QO	88/89 (98%)	0.56	1 (1%)	77	54	30, 79, 123, 154	0
15	XO	88/89 (98%)	0.41	0	100	100	28, 73, 108, 124	0
16	QP	84/88 (95%)	1.10	7 (8%)	11	9	35, 69, 107, 152	0
16	XP	84/88 (95%)	1.23	22 (26%)	1	2	34, 74, 129, 163	0
17	QQ	100/105 (95%)	2.10	53 (53%)	0	1	24, 83, 122, 140	0
17	XQ	100/105 (95%)	1.44	23 (23%)	1	2	39, 78, 113, 165	0
18	QR	70/88 (79%)	0.38	3 (4%)	34	21	26, 78, 137, 167	0
18	XR	70/88 (79%)	0.51	3 (4%)	34	21	24, 70, 120, 147	0
19	QS	84/93 (90%)	2.88	62 (73%)	0	1	68, 111, 151, 176	0
19	XS	84/93 (90%)	1.25	13 (15%)	3	3	32, 97, 148, 177	0
20	QT	99/106 (93%)	1.90	40 (40%)	1	1	34, 79, 133, 144	0
20	XT	99/106 (93%)	2.30	56 (56%)	0	1	44, 88, 140, 174	0
21	QU	25/27 (92%)	3.14	22 (88%)	0	1	36, 102, 144, 147	0
21	XU	25/27 (92%)	2.40	14 (56%)	0	1	67, 92, 119, 132	0
22	RA	2882/2916 (98%)	0.28	113 (3%)	37	23	14, 51, 198, 261	0
22	YA	2883/2916 (98%)	0.21	81 (2%)	50	31	8, 43, 187, 292	0
23	RB	120/122 (98%)	-0.37	1 (0%)	83	63	53, 81, 118, 144	0
23	YB	120/122 (98%)	-0.22	1 (0%)	83	63	36, 67, 98, 136	0
24	RD	272/276 (98%)	1.02	28 (10%)	7	7	9, 50, 100, 155	0
24	YD	272/276 (98%)	0.87	12 (4%)	33	20	2, 42, 86, 187	0
25	RE	205/206 (99%)	0.56	8 (3%)	37	23	17, 61, 126, 193	0
25	YE	205/206 (99%)	0.42	4 (1%)	62	38	3, 56, 124, 170	0
26	RF	202/210 (96%)	0.40	2 (0%)	79	57	9, 61, 124, 182	0
26	YF	202/210 (96%)	0.27	1 (0%)	88	72	10, 53, 113, 148	0
27	RG	181/182 (99%)	0.95	24 (13%)	4	4	42, 97, 145, 178	0
27	YG	181/182 (99%)	0.89	23 (12%)	4	4	40, 80, 130, 201	0
28	RH	170/180 (94%)	1.28	35 (20%)	1	2	67, 134, 177, 201	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å ²)	Q<0.9
28	YH	170/180 (94%)	0.08	1 (0%) 86 68	24, 76, 126, 177	0
29	RI	146/148 (98%)	0.44	9 (6%) 20 13	24, 87, 130, 181	0
29	YI	146/148 (98%)	0.13	3 (2%) 60 37	19, 86, 127, 152	0
30	RN	138/140 (98%)	0.61	6 (4%) 34 21	29, 68, 121, 174	0
30	YN	138/140 (98%)	0.25	0 100 100	13, 56, 111, 173	0
31	RO	122/122 (100%)	0.87	8 (6%) 18 12	11, 55, 102, 158	0
31	YO	122/122 (100%)	1.28	19 (15%) 3 3	9, 51, 88, 123	0
32	RP	150/150 (100%)	0.95	21 (14%) 3 4	13, 69, 133, 176	0
32	YP	150/150 (100%)	0.88	13 (8%) 10 8	12, 61, 122, 182	0
33	RQ	141/141 (100%)	1.64	36 (25%) 1 2	29, 71, 124, 164	0
33	YQ	141/141 (100%)	0.59	4 (2%) 50 31	16, 56, 115, 152	0
34	RR	118/118 (100%)	0.77	9 (7%) 14 10	3, 55, 102, 136	0
34	YR	118/118 (100%)	1.19	20 (16%) 2 3	27, 57, 95, 140	0
35	RS	111/112 (99%)	0.65	6 (5%) 25 15	34, 80, 124, 162	0
35	YS	111/112 (99%)	0.50	3 (2%) 52 32	27, 73, 113, 138	0
36	RT	137/146 (93%)	1.06	16 (11%) 5 6	27, 67, 143, 169	0
36	YT	137/146 (93%)	0.99	19 (13%) 4 4	19, 65, 135, 172	0
37	RU	117/118 (99%)	0.51	3 (2%) 53 32	12, 62, 111, 167	0
37	YU	117/118 (99%)	0.61	4 (3%) 43 26	13, 45, 111, 172	0
38	RV	101/101 (100%)	0.43	4 (3%) 36 23	16, 78, 131, 186	0
38	YV	101/101 (100%)	0.79	10 (9%) 8 7	21, 68, 139, 214	0
39	RW	113/113 (100%)	0.85	2 (1%) 65 42	15, 47, 106, 158	0
39	YW	113/113 (100%)	0.61	3 (2%) 52 32	16, 46, 106, 168	0
40	RX	92/96 (95%)	0.87	4 (4%) 34 21	17, 56, 103, 130	0
40	YX	92/96 (95%)	0.46	1 (1%) 77 54	9, 42, 86, 138	0
41	RY	102/110 (92%)	0.61	3 (2%) 49 30	28, 86, 142, 176	0
41	YY	102/110 (92%)	0.45	2 (1%) 62 38	30, 73, 138, 185	0
42	RZ	183/206 (88%)	0.79	20 (10%) 6 6	45, 92, 141, 160	0
42	YZ	183/206 (88%)	0.14	1 (0%) 88 72	21, 82, 136, 178	0
43	R0	82/85 (96%)	1.02	10 (12%) 5 5	9, 51, 88, 102	0
43	Y0	82/85 (96%)	0.63	1 (1%) 75 52	20, 48, 73, 92	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å ²)	Q<0.9
44	R1	97/98 (98%)	1.16	11 (11%) 6 6	13, 60, 144, 182	0
44	Y1	97/98 (98%)	1.17	19 (19%) 2 2	7, 53, 136, 172	0
45	R2	69/72 (95%)	0.33	0 100 100	36, 77, 136, 164	0
45	Y2	69/72 (95%)	0.17	0 100 100	18, 57, 116, 159	0
46	R3	59/60 (98%)	1.19	9 (15%) 3 3	33, 76, 118, 142	0
46	Y3	59/60 (98%)	0.25	1 (1%) 67 43	19, 57, 109, 169	0
47	R4	71/71 (100%)	1.47	14 (19%) 2 2	61, 142, 196, 236	0
47	Y4	71/71 (100%)	0.75	8 (11%) 6 6	58, 131, 182, 223	0
48	R5	59/60 (98%)	0.81	5 (8%) 11 8	12, 66, 149, 160	0
48	Y5	59/60 (98%)	0.88	7 (11%) 5 6	17, 64, 166, 185	0
49	R6	49/54 (90%)	4.11	46 (93%) 0 0	101, 159, 184, 200	0
49	Y6	49/54 (90%)	3.96	43 (87%) 0 1	95, 152, 182, 209	0
50	R7	49/49 (100%)	0.86	4 (8%) 12 9	11, 41, 95, 153	0
50	Y7	49/49 (100%)	0.75	4 (8%) 12 9	6, 33, 78, 135	0
51	R8	64/65 (98%)	0.90	6 (9%) 9 7	18, 59, 121, 163	0
51	Y8	64/65 (98%)	1.25	12 (18%) 2 2	16, 52, 108, 164	0
52	R9	37/37 (100%)	7.31	37 (100%) 0 0	92, 141, 184, 204	0
52	Y9	37/37 (100%)	4.93	36 (97%) 0 0	102, 132, 168, 182	0
53	QV	77/77 (100%)	-0.31	1 (1%) 74 50	35, 82, 137, 160	0
53	XV	77/77 (100%)	-0.27	1 (1%) 74 50	11, 71, 111, 159	0
54	QX	8/25 (32%)	0.17	0 100 100	44, 56, 107, 137	0
54	XX	8/25 (32%)	0.90	1 (12%) 5 5	37, 46, 104, 148	0
55	QY	8/17 (47%)	1.40	3 (37%) 1 1	62, 74, 124, 144	0
55	XY	8/17 (47%)	0.41	0 100 100	54, 71, 109, 122	0
56	Z6	3/3 (100%)	5.26	1 (33%) 1 1	38, 38, 45, 52	0
56	Z8	3/3 (100%)	4.82	1 (33%) 1 1	30, 30, 30, 32	0
All	All	20863/21492 (97%)	0.58	1678 (8%) 12 9	2, 66, 150, 292	0

All (1678) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
52	R9	11	CYS	19.6
52	R9	14	CYS	16.1

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Mol	Chain	Res	Type	RSRZ
56	Z6	76	PPU	14.3
56	Z8	76	PPU	12.6
52	R9	15	LYS	12.3
52	R9	9	ARG	12.1
22	RA	2146	C	10.2
52	R9	16	VAL	10.1
52	R9	13	LYS	10.0
47	R4	68	ARG	9.9
52	Y9	1	MET	9.7
52	R9	12	ASP	9.5
52	R9	36	GLN	9.5
52	R9	37	GLY	9.5
49	R6	13	CYS	9.4
52	R9	17	ILE	9.3
22	RA	2121	G	9.1
11	QK	11	LYS	9.1
47	R4	67	TYR	9.0
52	R9	30	PRO	8.9
49	Y6	49	HIS	8.9
47	R4	71	ARG	8.8
52	Y9	34	GLN	8.6
49	Y6	43	CYS	8.6
52	R9	25	VAL	8.5
52	R9	26	ILE	8.5
49	R6	14	THR	8.4
52	R9	24	TYR	8.4
47	R4	49	PHE	8.4
52	R9	28	GLU	8.3
22	YA	2188	C	8.2
11	XK	12	ARG	8.2
52	R9	27	CYS	8.2
22	RA	2148	G	8.2
49	Y6	53	LYS	8.0
13	QM	6	GLY	8.0
52	R9	34	GLN	8.0
49	Y6	13	CYS	7.9
13	QM	7	VAL	7.8
22	RA	2159	G	7.8
19	QS	85	LYS	7.8
22	YA	2105	C	7.8
22	RA	2112	G	7.8
49	Y6	42	TRP	7.7

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Mol	Chain	Res	Type	RSRZ
18	QR	88	LYS	7.6
49	R6	50	ARG	7.6
52	R9	33	LYS	7.5
52	Y9	27	CYS	7.4
47	R4	69	LYS	7.3
52	Y9	28	GLU	7.3
22	RA	2145	C	7.2
47	Y4	69	LYS	7.2
52	R9	10	ILE	7.2
52	Y9	9	ARG	7.2
22	YA	2113	U	7.1
22	RA	2142	C	7.1
22	RA	2160	G	7.0
11	XK	129	SER	6.9
49	R6	43	CYS	6.9
19	QS	69	HIS	6.9
52	Y9	26	ILE	6.9
49	R6	49	HIS	6.8
22	RA	2175	C	6.8
42	RZ	113	ALA	6.8
10	QJ	64	GLU	6.7
12	XL	129	ALA	6.7
13	QM	101	GLN	6.7
49	Y6	18	ARG	6.6
52	R9	32	HIS	6.6
22	RA	2135	A	6.6
22	RA	2141	G	6.6
11	XK	11	LYS	6.6
9	QI	10	ARG	6.5
52	Y9	14	CYS	6.5
22	RA	2144	U	6.5
22	RA	2147	G	6.5
7	QG	32	ARG	6.5
52	Y9	24	TYR	6.5
19	QS	71	LEU	6.4
22	RA	2136	C	6.4
22	RA	2139	C	6.4
52	Y9	15	LYS	6.3
22	RA	2120	G	6.3
47	Y4	68	ARG	6.2
9	QI	110	GLU	6.2
12	QL	128	ALA	6.2

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Mol	Chain	Res	Type	RSRZ
13	QM	122	LYS	6.1
52	Y9	32	HIS	6.1
13	QM	88	ARG	6.0
19	QS	70	LYS	6.0
13	QM	102	ARG	6.0
28	RH	43	VAL	6.0
22	RA	887	A	6.0
19	QS	66	MET	5.9
52	R9	2	LYS	5.9
33	RQ	32	TYR	5.9
11	QK	127	LYS	5.9
7	QG	78	ARG	5.9
21	QU	6	ARG	5.9
7	QG	82	GLY	5.9
21	XU	15	ARG	5.8
12	QL	129	ALA	5.8
11	QK	128	ALA	5.8
49	R6	25	LYS	5.8
22	RA	889	C	5.7
22	RA	2179	C	5.7
52	R9	35	ARG	5.7
20	XT	72	LEU	5.6
52	Y9	29	ASN	5.6
52	R9	22	ARG	5.6
52	Y9	25	VAL	5.6
22	YA	2116	G	5.6
49	R6	7	ILE	5.6
22	RA	2170	A	5.6
10	QJ	46	ARG	5.5
52	Y9	12	ASP	5.5
10	XJ	5	ARG	5.5
47	R4	66	SER	5.5
22	RA	2138	C	5.5
22	RA	2169	A	5.5
49	Y6	44	ARG	5.5
49	Y6	26	ASN	5.5
12	XL	128	ALA	5.5
49	R6	21	TYR	5.5
19	QS	36	ARG	5.4
49	R6	6	ARG	5.4
14	QN	35	ARG	5.4
22	RA	1103	A	5.4

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Mol	Chain	Res	Type	RSRZ
33	RQ	63	LYS	5.4
52	Y9	33	LYS	5.4
44	Y1	96	LYS	5.4
13	QM	121	LYS	5.4
49	R6	52	VAL	5.3
22	RA	2129	C	5.3
19	QS	73	GLU	5.3
52	R9	19	ARG	5.3
27	RG	138	GLN	5.3
52	R9	1	MET	5.3
22	RA	2156	G	5.3
49	Y6	36	LEU	5.3
49	R6	12	GLU	5.3
14	QN	39	LEU	5.3
22	YA	2141	G	5.3
20	XT	18	GLN	5.3
20	XT	17	ARG	5.3
20	XT	9	ASN	5.3
12	QL	127	GLU	5.3
49	R6	29	ASN	5.3
13	QM	91	ARG	5.3
20	XT	79	ARG	5.3
52	Y9	10	ILE	5.3
52	Y9	36	GLN	5.3
49	R6	20	ASN	5.3
52	Y9	8	LYS	5.2
38	YV	36	PRO	5.2
21	QU	15	ARG	5.2
49	R6	53	LYS	5.2
12	QL	28	LYS	5.2
22	RA	2117	A	5.2
32	RP	79	ARG	5.2
19	QS	64	GLU	5.2
49	Y6	37	ARG	5.2
44	Y1	97	LEU	5.2
22	YA	277	C	5.1
22	RA	2167	U	5.1
49	Y6	22	ALA	5.1
19	QS	81	ARG	5.1
1	XA	1451	A	5.1
42	RZ	155	LEU	5.1
52	Y9	35	ARG	5.1

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Mol	Chain	Res	Type	RSRZ
47	R4	70	GLY	5.1
29	RI	12	LEU	5.1
19	QS	29	ARG	5.1
22	RA	2122	U	5.0
20	XT	16	HIS	5.0
13	XM	94	ARG	5.0
49	Y6	48	VAL	5.0
20	XT	73	HIS	5.0
20	QT	80	ARG	5.0
22	YA	2146	C	4.9
14	QN	34	TYR	4.9
22	RA	2116	G	4.9
22	YA	887	A	4.9
12	XL	19	ARG	4.9
22	RA	2166	G	4.9
49	Y6	16	CYS	4.9
42	YZ	113	ALA	4.9
50	Y7	48	LYS	4.9
7	XG	5	ARG	4.9
22	RA	2168	G	4.9
10	QJ	65	LEU	4.9
22	RA	2140	C	4.9
22	RA	2143	C	4.9
19	QS	15	LEU	4.8
49	Y6	15	GLU	4.8
20	XT	80	ARG	4.8
52	R9	29	ASN	4.8
24	YD	26	LYS	4.8
7	QG	79	ARG	4.8
33	RQ	112	GLU	4.8
52	Y9	7	VAL	4.8
16	XP	1	MET	4.8
9	QI	111	ARG	4.8
22	RA	2155	G	4.7
22	RA	2189	U	4.7
46	R3	60	GLU	4.7
22	RA	2109	U	4.7
44	R1	98	LEU	4.7
22	RA	2123	G	4.7
13	QM	80	ARG	4.7
22	YA	2189	U	4.7
7	XG	78	ARG	4.7

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Mol	Chain	Res	Type	RSRZ
14	QN	31	ARG	4.7
49	R6	34	LEU	4.7
9	QI	42	ARG	4.7
12	XL	21	LYS	4.7
52	Y9	16	VAL	4.7
42	RZ	112	ARG	4.7
13	QM	97	PRO	4.7
22	YA	2179	C	4.6
1	QA	1451	A	4.6
49	R6	9	LEU	4.6
49	R6	40	CYS	4.6
13	QM	8	GLU	4.6
22	RA	2158	A	4.6
49	Y6	50	ARG	4.6
22	YA	2166	G	4.6
50	R7	49	ARG	4.6
1	QA	1257	U	4.6
52	Y9	11	CYS	4.6
17	QQ	4	LYS	4.6
52	Y9	13	LYS	4.6
10	QJ	45	ARG	4.6
49	R6	36	LEU	4.6
11	QK	129	SER	4.6
53	QV	1	C	4.6
33	RQ	66	ILE	4.6
22	RA	2114	A	4.5
20	XT	21	LYS	4.5
27	RG	75	LYS	4.5
22	YA	2107	C	4.5
20	XT	8	ARG	4.5
29	RI	1	MET	4.5
22	RA	2110	G	4.5
49	R6	24	GLU	4.5
21	QU	10	ARG	4.5
52	R9	18	ARG	4.5
21	XU	26	LYS	4.5
48	R5	2	ALA	4.5
19	QS	61	TYR	4.4
20	XT	27	LYS	4.4
17	QQ	24	GLU	4.4
49	R6	11	LEU	4.4
22	RA	888	C	4.4

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Mol	Chain	Res	Type	RSRZ
19	QS	67	VAL	4.4
19	QS	39	THR	4.4
12	XL	127	GLU	4.4
34	YR	69	ASP	4.4
19	QS	80	TYR	4.4
27	RG	137	GLU	4.4
14	QN	38	GLY	4.4
20	QT	22	ARG	4.4
52	R9	4	ARG	4.4
13	QM	65	LYS	4.4
51	R8	65	GLU	4.3
20	QT	72	LEU	4.3
28	RH	89	ILE	4.3
32	RP	150	ALA	4.3
49	Y6	12	GLU	4.3
17	QQ	22	LEU	4.3
43	R0	2	ALA	4.3
49	R6	42	TRP	4.3
9	QI	9	ARG	4.3
1	QA	994	A	4.3
13	QM	92	HIS	4.3
33	RQ	80	GLU	4.3
52	R9	3	VAL	4.3
21	QU	26	LYS	4.3
13	QM	84	ILE	4.3
16	XP	35	LYS	4.3
22	RA	1177	A	4.3
52	R9	23	VAL	4.3
49	Y6	51	GLU	4.2
22	RA	2178	C	4.2
49	Y6	20	ASN	4.2
52	Y9	2	LYS	4.2
22	RA	2154	G	4.2
48	Y5	2	ALA	4.2
13	QM	120	LYS	4.2
19	QS	74	PHE	4.2
52	R9	7	VAL	4.2
22	RA	2128	C	4.2
27	RG	182	LYS	4.2
49	R6	27	LYS	4.2
32	RP	76	LYS	4.2
1	XA	106	C	4.2

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Mol	Chain	Res	Type	RSRZ
22	YA	2142	C	4.2
48	Y5	59	GLU	4.2
52	Y9	17	ILE	4.2
49	Y6	25	LYS	4.2
19	QS	32	LYS	4.2
13	QM	103	THR	4.2
47	R4	55	ARG	4.1
52	Y9	4	ARG	4.1
10	QJ	62	HIS	4.1
12	QL	19	ARG	4.1
20	XT	106	ALA	4.1
14	QN	26	ARG	4.1
19	QS	30	LEU	4.1
44	Y1	98	LEU	4.1
14	QN	37	PHE	4.1
22	RA	2111	C	4.1
22	RA	2137	C	4.1
47	R4	47	GLN	4.1
52	R9	20	HIS	4.1
49	R6	18	ARG	4.1
49	R6	8	LYS	4.1
49	R6	51	GLU	4.1
4	XD	209	ARG	4.1
20	XT	23	ARG	4.1
11	XK	128	ALA	4.1
22	RA	2118	U	4.0
31	YO	45	GLU	4.0
10	QJ	66	ARG	4.0
49	Y6	14	THR	4.0
49	Y6	47	THR	4.0
7	QG	16	LEU	4.0
28	RH	105	LEU	4.0
38	YV	101	GLY	4.0
52	Y9	21	GLY	4.0
52	Y9	30	PRO	4.0
24	RD	5	LYS	4.0
49	Y6	34	LEU	4.0
13	XM	8	GLU	4.0
19	QS	31	ILE	4.0
52	Y9	22	ARG	4.0
49	R6	41	PRO	4.0
13	XM	7	VAL	4.0

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Mol	Chain	Res	Type	RSRZ
1	XA	328	C	4.0
20	QT	38	LYS	4.0
22	RA	1176	G	4.0
22	RA	2797	U	4.0
49	Y6	38	LYS	4.0
54	XX	8	A	4.0
3	QC	193	TYR	4.0
1	QA	1450	U	4.0
22	YA	2106	G	3.9
13	QM	96	LEU	3.9
3	QC	190	ARG	3.9
14	QN	12	ARG	3.9
22	RA	2134	A	3.9
42	RZ	114	GLY	3.9
22	RA	2188	C	3.9
20	QT	25	ARG	3.9
49	Y6	19	ARG	3.9
7	XG	79	ARG	3.9
33	RQ	103	MET	3.9
22	RA	2108	C	3.9
7	QG	5	ARG	3.9
19	QS	79	THR	3.9
22	RA	2174	C	3.9
27	YG	137	GLU	3.9
31	RO	1	MET	3.9
17	QQ	101	ARG	3.9
14	QN	11	LYS	3.9
9	QI	70	LYS	3.9
22	YA	2180	U	3.8
19	QS	2	PRO	3.8
10	XJ	95	GLU	3.8
14	QN	13	THR	3.8
47	Y4	67	TYR	3.8
9	XI	8	GLY	3.8
49	Y6	52	VAL	3.8
12	XL	28	LYS	3.8
1	QA	131	C	3.8
50	Y7	49	ARG	3.8
20	XT	24	LEU	3.8
33	YQ	91	GLU	3.8
19	QS	28	LYS	3.8
20	QT	21	LYS	3.8

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Mol	Chain	Res	Type	RSRZ
7	QG	33	ASP	3.8
20	QT	45	GLN	3.8
20	XT	69	GLY	3.8
17	QQ	40	LYS	3.8
20	QT	26	ASN	3.8
13	QM	99	ARG	3.8
20	XT	22	ARG	3.8
21	QU	25	LYS	3.8
17	XQ	45	HIS	3.8
47	R4	48	ARG	3.8
19	QS	40	ILE	3.8
33	RQ	133	ARG	3.8
20	XT	14	LYS	3.7
49	Y6	33	LYS	3.7
14	QN	23	ARG	3.7
17	QQ	37	LYS	3.7
10	XJ	101	VAL	3.7
14	QN	15	LYS	3.7
19	XS	85	LYS	3.7
27	RG	152	LEU	3.7
22	RA	1104	C	3.7
18	XR	88	LYS	3.7
22	RA	2161	C	3.7
49	R6	47	THR	3.7
19	QS	49	ILE	3.7
19	QS	3	ARG	3.7
22	RA	2133	G	3.7
36	YT	51	ARG	3.7
8	QH	1	MET	3.7
19	QS	50	ALA	3.7
22	RA	2107	C	3.7
22	YA	2140	C	3.7
29	YI	117	GLU	3.7
10	XJ	60	ARG	3.7
20	QT	99	LEU	3.7
24	RD	26	LYS	3.7
19	QS	47	HIS	3.6
24	RD	4	LYS	3.6
32	RP	108	LYS	3.6
9	QI	65	VAL	3.6
10	QJ	47	PHE	3.6
1	QA	1226	C	3.6

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Mol	Chain	Res	Type	RSRZ
22	RA	2157	G	3.6
9	QI	36	TYR	3.6
17	QQ	8	GLY	3.6
13	QM	94	ARG	3.6
14	QN	8	GLU	3.6
22	YA	2117	A	3.6
21	QU	21	TYR	3.6
42	RZ	177	PRO	3.6
22	YA	1536	A	3.6
32	YP	149	GLU	3.6
22	YA	2145	C	3.6
50	R7	48	LYS	3.6
7	QG	41	ARG	3.6
10	QJ	48	THR	3.6
13	QM	81	LEU	3.6
16	XP	25	ARG	3.6
24	YD	262	ARG	3.6
22	RA	1083	U	3.6
20	XT	74	LYS	3.6
13	QM	86	CYS	3.6
9	QI	66	ARG	3.6
22	RA	2173	A	3.6
17	QQ	7	THR	3.6
21	QU	16	GLY	3.6
9	QI	43	ALA	3.5
39	YW	113	LYS	3.5
22	RA	2105	C	3.5
9	QI	116	LYS	3.5
31	YO	1	MET	3.5
20	XT	70	SER	3.5
11	QK	99	GLN	3.5
22	RA	2125	G	3.5
24	RD	2	ALA	3.5
17	QQ	86	GLU	3.5
21	XU	2	GLY	3.5
1	QA	262	A	3.5
19	QS	65	ASN	3.5
21	QU	2	GLY	3.5
22	YA	2112	G	3.5
55	QY	40	G	3.5
16	XP	34	GLU	3.5
9	QI	128	ARG	3.5

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Mol	Chain	Res	Type	RSRZ
22	RA	2799	A	3.5
49	R6	46	HIS	3.5
1	XA	260	G	3.5
14	XN	17	LYS	3.5
43	R0	5	LYS	3.5
1	QA	1320	C	3.5
22	RA	2165	G	3.5
33	RQ	104	PHE	3.5
7	QG	35	LYS	3.5
52	R9	31	LYS	3.5
1	QA	1531	A	3.5
50	R7	1	MET	3.5
52	Y9	5	ALA	3.5
20	XT	13	LEU	3.5
10	XJ	64	GLU	3.5
9	QI	11	LYS	3.4
16	QP	31	LYS	3.4
28	RH	81	GLU	3.4
14	QN	6	LEU	3.4
49	Y6	17	LYS	3.4
9	QI	117	HIS	3.4
34	YR	21	TYR	3.4
53	XV	1	C	3.4
14	XN	12	ARG	3.4
36	RT	112	ARG	3.4
52	Y9	23	VAL	3.4
13	QM	61	GLU	3.4
49	Y6	41	PRO	3.4
1	QA	995	C	3.4
12	XL	20	LYS	3.4
13	QM	5	ALA	3.4
27	YG	139	LEU	3.4
20	XT	42	GLN	3.4
50	R7	47	ARG	3.4
9	QI	119	ALA	3.4
49	Y6	23	THR	3.4
11	QK	12	ARG	3.4
7	QG	36	LYS	3.4
13	XM	122	LYS	3.4
21	QU	5	ASP	3.4
10	XJ	98	ILE	3.4
22	RA	2104	G	3.4

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Mol	Chain	Res	Type	RSRZ
1	XA	261	U	3.4
14	QN	17	LYS	3.4
17	QQ	60	ILE	3.4
10	XJ	47	PHE	3.4
34	YR	68	ARG	3.4
1	QA	1307	U	3.4
36	YT	104	ASN	3.4
20	XT	87	LYS	3.3
21	QU	13	ILE	3.3
22	YA	2161	C	3.3
20	XT	25	ARG	3.3
49	Y6	39	TYR	3.3
13	XM	100	GLY	3.3
17	XQ	36	ILE	3.3
13	QM	87	TYR	3.3
36	RT	115	ARG	3.3
27	YG	84	LYS	3.3
32	YP	16	ARG	3.3
49	Y6	21	TYR	3.3
14	XN	2	ALA	3.3
1	QA	1453	G	3.3
33	RQ	1	MET	3.3
2	QB	4	GLU	3.3
10	QJ	67	THR	3.3
16	XP	7	ALA	3.3
25	YE	205	ALA	3.3
9	QI	13	ALA	3.3
12	XL	64	TYR	3.3
14	QN	41	ARG	3.3
16	XP	28	ARG	3.3
22	YA	2122	U	3.3
44	R1	23	LYS	3.3
22	RA	2124	G	3.3
4	QD	49	ARG	3.3
21	QU	7	ARG	3.3
22	YA	2167	U	3.3
33	RQ	6	ARG	3.3
9	QI	124	GLN	3.3
7	XG	153	HIS	3.3
52	R9	8	LYS	3.3
22	YA	2108	C	3.3
13	XM	6	GLY	3.3

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Mol	Chain	Res	Type	RSRZ
9	QI	127	LYS	3.3
14	XN	14	PRO	3.3
17	XQ	7	THR	3.3
22	RA	2115	G	3.3
24	RD	28	GLU	3.3
33	YQ	80	GLU	3.3
37	YU	118	GLY	3.3
17	QQ	25	ARG	3.3
22	YA	2118	U	3.3
14	QN	19	ARG	3.2
20	QT	41	ILE	3.2
28	RH	159	GLU	3.2
22	RA	2176	A	3.2
49	R6	28	ARG	3.2
36	YT	109	GLU	3.2
49	R6	22	ALA	3.2
21	QU	22	ARG	3.2
33	RQ	5	ARG	3.2
13	XM	96	LEU	3.2
7	QG	85	TYR	3.2
22	YA	2144	U	3.2
9	QI	113	LYS	3.2
28	RH	95	ARG	3.2
33	RQ	34	LEU	3.2
33	YQ	1	MET	3.2
19	QS	72	GLY	3.2
33	RQ	62	GLY	3.2
1	QA	1348	U	3.2
1	XA	1450	U	3.2
33	RQ	91	GLU	3.2
20	XT	65	LYS	3.2
20	XT	75	ASN	3.2
22	RA	2149	G	3.2
20	XT	28	ALA	3.2
13	XM	97	PRO	3.2
10	XJ	4	ILE	3.2
48	Y5	55	ARG	3.2
1	QA	1286	A	3.2
28	RH	152	ARG	3.2
21	QU	14	TRP	3.2
22	YA	2804	C	3.2
1	QA	1324	A	3.2

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Mol	Chain	Res	Type	RSRZ
13	XM	98	VAL	3.2
22	YA	2114	A	3.2
48	Y5	54	GLY	3.2
49	Y6	46	HIS	3.2
33	RQ	64	ILE	3.2
20	XT	29	LYS	3.2
27	RG	118	ARG	3.2
33	RQ	105	GLU	3.2
1	QA	108	G	3.2
22	YA	2121	G	3.2
9	QI	44	VAL	3.2
9	QI	109	VAL	3.2
52	Y9	37	GLY	3.2
20	XT	55	ILE	3.2
1	QA	1321	C	3.2
20	QT	104	LEU	3.2
16	QP	1	MET	3.2
17	XQ	37	LYS	3.2
17	XQ	32	TYR	3.2
33	RQ	130	LYS	3.2
43	R0	4	LYS	3.2
28	RH	97	ARG	3.1
31	YO	80	ASP	3.1
21	XU	3	LYS	3.1
10	XJ	61	GLU	3.1
13	QM	111	LYS	3.1
17	QQ	11	VAL	3.1
20	QT	42	GLN	3.1
20	XT	20	LEU	3.1
16	XP	29	ASP	3.1
20	QT	30	LYS	3.1
13	QM	71	ARG	3.1
1	QA	232	G	3.1
10	XJ	65	LEU	3.1
7	QG	31	MET	3.1
14	QN	5	ALA	3.1
22	RA	885	C	3.1
31	YO	17	ARG	3.1
51	Y8	64	TYR	3.1
36	RT	46	GLU	3.1
9	QI	102	LEU	3.1
16	XP	27	LYS	3.1

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Mol	Chain	Res	Type	RSRZ
20	XT	58	LYS	3.1
20	XT	71	THR	3.1
14	XN	15	LYS	3.1
1	XA	1531	A	3.1
17	QQ	68	ARG	3.1
22	RA	1762	A	3.1
1	XA	108	G	3.1
19	QS	75	ALA	3.1
28	RH	96	ALA	3.1
31	YO	49	ARG	3.1
10	XJ	8	LEU	3.1
22	RA	1536	A	3.1
17	XQ	101	ARG	3.1
28	RH	29	PRO	3.1
9	QI	114	TYR	3.1
20	XT	63	ILE	3.1
35	YS	2	ALA	3.1
49	R6	39	TYR	3.1
13	XM	99	ARG	3.1
49	R6	30	THR	3.1
14	QN	7	ILE	3.1
28	RH	88	LEU	3.1
28	RH	103	LEU	3.1
1	QA	1224	G	3.1
19	QS	35	SER	3.1
1	QA	1032	A	3.1
13	QM	108	ARG	3.1
22	YA	1755	A	3.1
35	RS	20	ARG	3.1
17	QQ	6	LEU	3.1
52	R9	5	ALA	3.1
1	XA	324	G	3.0
20	XT	19	SER	3.0
13	QM	83	ASP	3.0
22	YA	1177	A	3.0
21	QU	24	ARG	3.0
44	Y1	93	GLU	3.0
47	Y4	70	GLY	3.0
49	R6	5	VAL	3.0
1	QA	328	C	3.0
19	QS	10	PHE	3.0
19	XS	56	GLN	3.0

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Mol	Chain	Res	Type	RSRZ
20	QT	74	LYS	3.0
12	QL	13	LYS	3.0
13	XM	30	ALA	3.0
22	RA	2119	A	3.0
24	RD	23	GLU	3.0
19	XS	74	PHE	3.0
36	YT	106	SER	3.0
24	RD	34	VAL	3.0
40	YX	68	ARG	3.0
10	QJ	63	PHE	3.0
44	Y1	92	LYS	3.0
13	QM	78	ILE	3.0
19	QS	53	ASN	3.0
49	Y6	9	LEU	3.0
16	XP	4	ILE	3.0
1	XA	1437	C	3.0
22	RA	886	C	3.0
22	YA	1762	A	3.0
18	QR	87	ARG	3.0
20	XT	83	ARG	3.0
48	Y5	60	VAL	3.0
22	YA	2709	G	3.0
7	QG	81	GLY	3.0
44	Y1	39	LYS	3.0
49	Y6	8	LYS	3.0
19	QS	27	GLU	3.0
13	XM	110	ARG	3.0
24	RD	52	ARG	3.0
50	Y7	1	MET	3.0
17	QQ	71	PHE	3.0
28	RH	104	GLU	3.0
30	RN	72	TYR	3.0
47	Y4	71	ARG	3.0
13	QM	79	LYS	3.0
14	QN	9	LYS	3.0
31	YO	66	LYS	3.0
34	YR	43	GLU	3.0
14	QN	36	PHE	3.0
21	XU	21	TYR	3.0
22	YA	2104	G	3.0
28	RH	112	PRO	3.0
3	XC	30	ARG	3.0

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Mol	Chain	Res	Type	RSRZ
32	YP	13	ASN	2.9
13	QM	4	ILE	2.9
17	QQ	58	GLU	2.9
32	RP	149	GLU	2.9
12	XL	23	LYS	2.9
27	RG	155	MET	2.9
32	RP	106	LEU	2.9
14	XN	19	ARG	2.9
10	XJ	46	ARG	2.9
49	R6	48	VAL	2.9
1	XA	262	A	2.9
19	QS	68	GLY	2.9
14	QN	2	ALA	2.9
36	RT	106	SER	2.9
19	QS	37	ARG	2.9
22	YA	2697	G	2.9
1	XA	134	A	2.9
20	QT	29	LYS	2.9
49	Y6	35	GLU	2.9
28	RH	90	LYS	2.9
16	QP	19	ILE	2.9
19	QS	62	ILE	2.9
42	RZ	178	GLU	2.9
11	QK	32	ILE	2.9
1	QA	310	G	2.9
1	XA	1438	G	2.9
3	XC	26	LYS	2.9
28	RH	109	PHE	2.9
22	RA	2182	G	2.9
36	RT	29	ARG	2.9
14	XN	13	THR	2.9
17	QQ	20	THR	2.9
21	QU	18	TYR	2.9
51	R8	64	TYR	2.9
22	RA	2127	G	2.9
43	R0	41	ARG	2.9
47	R4	65	ASP	2.9
36	YT	112	ARG	2.9
14	QN	61	TRP	2.9
49	R6	31	PRO	2.9
9	QI	27	THR	2.9
47	R4	50	VAL	2.9

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Mol	Chain	Res	Type	RSRZ
31	RO	97	ARG	2.9
32	RP	88	LEU	2.9
24	RD	17	THR	2.9
17	QQ	36	ILE	2.9
25	RE	205	ALA	2.9
19	XS	76	PRO	2.8
22	RA	1082	U	2.8
28	RH	148	ILE	2.8
10	XJ	57	LYS	2.8
17	QQ	5	VAL	2.8
34	RR	8	ARG	2.8
32	RP	105	LEU	2.8
17	QQ	42	TYR	2.8
32	YP	68	GLN	2.8
49	R6	33	LYS	2.8
1	XA	135	C	2.8
20	QT	71	THR	2.8
42	RZ	150	LEU	2.8
33	RQ	102	VAL	2.8
19	QS	77	THR	2.8
19	XS	71	LEU	2.8
5	QE	94	ALA	2.8
19	QS	44	MET	2.8
49	Y6	24	GLU	2.8
33	RQ	141	GLN	2.8
19	QS	78	ARG	2.8
20	XT	64	ASP	2.8
13	QM	93	ARG	2.8
49	R6	37	ARG	2.8
17	QQ	15	MET	2.8
49	R6	26	ASN	2.8
9	QI	101	PHE	2.8
17	QQ	89	LEU	2.8
14	QN	25	VAL	2.8
17	QQ	21	VAL	2.8
38	RV	74	LYS	2.8
42	RZ	119	GLU	2.8
1	QA	1235	U	2.8
27	RG	115	ARG	2.8
38	YV	45	THR	2.8
29	RI	2	LYS	2.8
49	R6	17	LYS	2.8

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Mol	Chain	Res	Type	RSRZ
13	QM	110	ARG	2.8
34	YR	17	ARG	2.8
14	QN	4	LYS	2.8
14	QN	29	ARG	2.8
21	QU	20	LYS	2.8
1	QA	975	A	2.8
51	Y8	15	LYS	2.8
19	QS	52	TYR	2.8
9	XI	105	ASP	2.8
19	QS	41	VAL	2.8
20	XT	15	ARG	2.8
1	QA	1354	C	2.8
1	QA	1367	C	2.8
27	RG	86	MET	2.8
17	QQ	57	VAL	2.8
27	YG	59	GLU	2.8
19	QS	33	THR	2.8
28	RH	141	VAL	2.8
46	R3	26	LEU	2.8
1	XA	325	A	2.8
12	XL	18	VAL	2.8
49	Y6	40	CYS	2.8
1	XA	111	G	2.8
17	QQ	59	ILE	2.8
17	QQ	9	VAL	2.7
36	RT	99	LEU	2.7
55	QY	39	C	2.7
21	XU	6	ARG	2.7
11	QK	13	GLN	2.7
20	QT	39	LYS	2.7
13	XM	25	ILE	2.7
39	YW	92	ARG	2.7
10	QJ	40	LEU	2.7
13	QM	73	GLU	2.7
33	RQ	33	GLY	2.7
4	XD	156	GLU	2.7
22	RA	896	A	2.7
9	QI	47	LEU	2.7
36	YT	65	LYS	2.7
1	XA	1436	U	2.7
12	XL	9	GLN	2.7
27	YG	116	ASP	2.7

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Mol	Chain	Res	Type	RSRZ
29	YI	12	LEU	2.7
17	QQ	81	ARG	2.7
51	Y8	2	PRO	2.7
22	YA	888	C	2.7
17	XQ	2	PRO	2.7
13	QM	90	LEU	2.7
46	Y3	60	GLU	2.7
22	RA	2171	A	2.7
24	RD	6	PHE	2.7
13	XM	91	ARG	2.7
32	YP	65	ARG	2.7
1	XA	306	G	2.7
22	RA	2162	G	2.7
13	XM	27	LYS	2.7
32	RP	110	TYR	2.7
32	YP	150	ALA	2.7
19	QS	59	PRO	2.7
34	YR	71	GLN	2.7
32	YP	79	ARG	2.7
47	R4	58	ARG	2.7
49	Y6	29	ASN	2.7
22	RA	1095	A	2.7
22	RA	2126	A	2.7
28	RH	47	GLU	2.7
3	QC	79	ARG	2.7
9	QI	121	ARG	2.7
43	R0	53	MET	2.7
1	QA	1220	G	2.7
8	QH	86	ILE	2.7
16	XP	31	LYS	2.7
36	YT	100	TYR	2.7
52	Y9	31	LYS	2.7
19	QS	82	GLY	2.7
52	Y9	6	SER	2.7
36	RT	111	ARG	2.7
20	QT	85	MET	2.7
22	YA	2708	G	2.7
27	YG	88	ILE	2.7
12	QL	64	TYR	2.7
33	YQ	90	VAL	2.7
30	RN	10	GLU	2.7
22	RA	1084	A	2.7

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Mol	Chain	Res	Type	RSRZ
1	QA	121	C	2.7
22	YA	1741	C	2.7
13	XM	3	ARG	2.7
13	XM	90	LEU	2.7
14	QN	55	GLY	2.7
7	XG	32	ARG	2.7
1	QA	263	A	2.7
17	QQ	32	TYR	2.6
28	RH	94	TYR	2.6
10	XJ	9	ARG	2.6
24	RD	262	ARG	2.6
17	QQ	14	LYS	2.6
19	QS	83	HIS	2.6
32	RP	1	MET	2.6
36	RT	91	ARG	2.6
19	QS	5	LEU	2.6
44	R1	5	CYS	2.6
20	XT	62	LEU	2.6
14	QN	14	PRO	2.6
9	QI	112	LYS	2.6
14	XN	30	ALA	2.6
1	XA	208	U	2.6
22	RA	2172	U	2.6
32	RP	109	GLY	2.6
12	XL	15	ARG	2.6
21	QU	9	ARG	2.6
25	YE	163	GLU	2.6
2	QB	133	LYS	2.6
27	RG	82	LEU	2.6
27	YG	89	GLY	2.6
9	QI	64	THR	2.6
11	XK	19	ALA	2.6
17	XQ	24	GLU	2.6
46	R3	29	ARG	2.6
1	QA	948	C	2.6
33	RQ	65	PHE	2.6
24	RD	64	ILE	2.6
10	QJ	60	ARG	2.6
16	XP	3	LYS	2.6
31	YO	108	GLU	2.6
48	Y5	58	LEU	2.6
50	Y7	47	ARG	2.6

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Mol	Chain	Res	Type	RSRZ
9	QI	77	ILE	2.6
21	QU	17	THR	2.6
21	XU	14	TRP	2.6
22	YA	276	A	2.6
3	QC	87	LEU	2.6
7	QG	4	ARG	2.6
17	XQ	38	ARG	2.6
1	XA	312	C	2.6
9	QI	123	PRO	2.6
49	R6	16	CYS	2.6
17	XQ	17	LYS	2.6
17	QQ	12	SER	2.6
36	RT	21	GLU	2.6
10	QJ	55	LYS	2.6
10	XJ	97	GLU	2.6
32	RP	35	HIS	2.6
1	QA	1437	C	2.6
11	XK	127	LYS	2.6
21	XU	10	ARG	2.6
31	YO	18	LYS	2.6
34	YR	8	ARG	2.6
9	QI	75	ASP	2.6
19	QS	58	VAL	2.6
9	QI	74	ILE	2.6
22	RA	899	A	2.6
42	RZ	145	GLU	2.6
22	RA	1092	C	2.6
20	QT	79	ARG	2.6
20	XT	30	LYS	2.6
1	XA	1257	U	2.6
10	XJ	99	LYS	2.6
22	RA	2113	U	2.6
36	YT	91	ARG	2.6
1	QA	1363	A	2.6
20	XT	85	MET	2.6
32	YP	74	GLU	2.6
7	QG	34	GLY	2.6
13	QM	100	GLY	2.6
13	QM	98	VAL	2.6
9	QI	118	LYS	2.5
10	XJ	70	ARG	2.5
13	XM	115	LYS	2.5

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Mol	Chain	Res	Type	RSRZ
17	QQ	10	VAL	2.5
17	QQ	34	LYS	2.5
19	QS	57	HIS	2.6
22	RA	1026	U	2.6
17	QQ	54	GLY	2.5
24	RD	55	GLY	2.5
7	XG	42	ILE	2.5
13	XM	102	ARG	2.5
16	QP	18	ARG	2.5
20	XT	68	LYS	2.5
24	YD	226	MET	2.5
34	YR	18	LEU	2.5
9	QI	115	GLY	2.5
16	XP	67	THR	2.5
18	QR	84	LYS	2.5
1	XA	313	A	2.5
20	QT	98	PRO	2.5
20	XT	67	ALA	2.5
22	RA	1755	A	2.5
14	XN	31	ARG	2.5
20	QT	23	ARG	2.5
20	QT	63	ILE	2.5
38	YV	74	LYS	2.5
17	XQ	11	VAL	2.5
19	QS	11	VAL	2.5
3	QC	196	LEU	2.5
49	R6	23	THR	2.5
1	QA	230	G	2.5
5	QE	81	GLU	2.5
20	QT	84	LEU	2.5
44	R1	97	LEU	2.5
24	RD	35	LYS	2.5
49	Y6	45	LYS	2.5
13	QM	75	ALA	2.5
14	QN	53	LEU	2.5
22	RA	2180	U	2.5
20	QT	100	ILE	2.5
11	XK	13	GLN	2.5
28	RH	24	VAL	2.5
33	RQ	90	VAL	2.5
22	RA	890	A	2.5
43	R0	37	LEU	2.5

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Mol	Chain	Res	Type	RSRZ
22	YA	2139	C	2.5
27	RG	74	LYS	2.5
31	RO	45	GLU	2.5
44	Y1	32	LYS	2.5
30	RN	8	GLN	2.5
49	R6	44	ARG	2.5
19	QS	76	PRO	2.5
8	QH	2	LEU	2.5
29	RI	38	LEU	2.5
21	XU	25	LYS	2.5
40	RX	26	TYR	2.5
31	YO	122	LEU	2.5
5	XE	21	ALA	2.5
20	XT	66	ALA	2.5
55	QY	33	U	2.5
20	QT	86	ARG	2.5
20	XT	86	ARG	2.5
28	YH	3	ARG	2.5
31	YO	68	GLU	2.5
34	YR	72	ASP	2.5
1	QA	1236	A	2.5
44	Y1	42	GLN	2.5
1	QA	233	C	2.5
1	XA	103	C	2.5
17	QQ	69	LYS	2.5
48	R5	59	GLU	2.5
3	QC	42	LEU	2.5
13	QM	64	TRP	2.5
9	XI	116	LYS	2.5
17	QQ	3	LYS	2.5
13	XM	19	LEU	2.5
20	XT	26	ASN	2.5
22	YA	2187	G	2.5
43	R0	42	GLY	2.5
1	XA	307	C	2.5
27	RG	84	LYS	2.5
14	QN	46	GLU	2.5
42	RZ	169	GLU	2.5
32	RP	81	GLN	2.5
17	XQ	25	ARG	2.5
24	YD	263	ARG	2.5
32	RP	119	GLU	2.5

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Mol	Chain	Res	Type	RSRZ
41	RY	64	GLU	2.5
9	QI	105	ASP	2.5
22	RA	2062	A	2.5
22	YA	1554	A	2.5
35	YS	11	LYS	2.5
10	XJ	45	ARG	2.5
19	QS	43	GLU	2.5
27	YG	52	ILE	2.5
36	YT	22	PHE	2.5
25	YE	204	ALA	2.5
17	QQ	65	ILE	2.5
21	XU	7	ARG	2.5
44	R1	50	ARG	2.5
21	QU	23	PRO	2.5
42	RZ	121	HIS	2.5
9	XI	128	ARG	2.5
22	RA	1102	C	2.5
11	XK	98	LEU	2.4
19	QS	63	THR	2.4
34	YR	70	LEU	2.4
12	QL	29	GLY	2.4
15	QO	88	ARG	2.4
27	YG	136	ARG	2.4
47	Y4	40	HIS	2.4
1	QA	1221	G	2.4
1	XA	110	C	2.4
1	XA	267	C	2.4
12	XL	89	ARG	2.4
14	XN	34	TYR	2.4
22	YA	1629	U	2.4
36	YT	111	ARG	2.4
52	Y9	18	ARG	2.4
11	QK	31	THR	2.4
13	XM	31	LYS	2.4
17	QQ	44	ALA	2.4
19	XS	44	MET	2.4
20	XT	39	LYS	2.4
10	XJ	6	ILE	2.4
33	RQ	68	ILE	2.4
24	RD	27	THR	2.4
42	RZ	176	PRO	2.4
38	YV	98	GLU	2.4

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Mol	Chain	Res	Type	RSRZ
22	RA	1305	C	2.4
24	YD	176	ARG	2.4
33	RQ	131	ILE	2.4
27	RG	39	ILE	2.4
2	QB	69	LEU	2.4
7	XG	85	TYR	2.4
17	QQ	92	ARG	2.4
19	XS	78	ARG	2.4
1	XA	1286	A	2.4
44	R1	96	LYS	2.4
20	QT	56	MET	2.4
22	YA	1059	G	2.4
27	RG	136	ARG	2.4
44	Y1	40	ARG	2.4
1	QA	1219	U	2.4
12	QL	17	LYS	2.4
31	YO	37	ASP	2.4
35	RS	33	LYS	2.4
39	RW	94	ASP	2.4
7	XG	156	TRP	2.4
27	YG	135	LEU	2.4
24	RD	83	GLU	2.4
27	RG	35	GLU	2.4
27	YG	74	LYS	2.4
17	QQ	85	VAL	2.4
51	Y8	56	GLU	2.4
9	XI	102	LEU	2.4
29	RI	35	LEU	2.4
33	RQ	12	GLN	2.4
34	YR	47	PHE	2.4
44	Y1	16	ASN	2.4
49	R6	19	ARG	2.4
7	QG	42	ILE	2.4
44	R1	69	LYS	2.4
44	Y1	27	GLU	2.4
22	YA	2706	G	2.4
16	QP	33	ILE	2.4
38	RV	76	LYS	2.4
10	QJ	71	LEU	2.4
1	QA	1357	A	2.4
9	XI	81	ILE	2.4
13	QM	2	ALA	2.4

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Mol	Chain	Res	Type	RSRZ
22	YA	2169	A	2.4
23	YB	1	U	2.4
8	XH	132	GLU	2.4
24	RD	181	GLU	2.4
29	RI	9	LEU	2.4
32	YP	119	GLU	2.4
1	QA	322	C	2.4
1	XA	107	G	2.4
31	YO	84	ALA	2.4
16	XP	20	VAL	2.4
21	XU	11	GLY	2.4
51	R8	40	GLU	2.4
7	QG	83	ALA	2.4
1	QA	1358	U	2.4
1	XA	975	A	2.4
27	RG	114	ILE	2.4
7	QG	153	HIS	2.4
24	RD	220	HIS	2.4
19	QS	84	GLY	2.4
51	Y8	63	PRO	2.4
28	RH	162	ILE	2.4
21	XU	16	GLY	2.4
31	RO	98	VAL	2.4
31	YO	65	THR	2.4
34	RR	69	ASP	2.4
10	XJ	21	GLN	2.4
13	QM	85	GLY	2.4
28	RH	115	VAL	2.4
3	XC	201	TYR	2.4
38	YV	81	TYR	2.4
1	XA	105	G	2.4
17	QQ	27	PHE	2.4
12	QL	68	ALA	2.4
16	XP	32	TYR	2.4
18	XR	31	LEU	2.4
22	YA	2696	U	2.4
24	YD	230	ASP	2.4
32	RP	29	LYS	2.4
9	XI	106	ALA	2.3
33	RQ	114	ALA	2.3
9	QI	33	PHE	2.3
17	XQ	34	LYS	2.3

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Mol	Chain	Res	Type	RSRZ
22	YA	2153	G	2.3
4	XD	207	TYR	2.3
9	QI	120	ARG	2.3
16	XP	24	ALA	2.3
22	YA	2062	A	2.3
37	YU	15	LYS	2.3
12	QL	27	LEU	2.3
3	XC	79	ARG	2.3
28	RH	42	ARG	2.3
19	QS	12	ASP	2.3
22	YA	1630	G	2.3
8	XH	91	ARG	2.3
13	QM	67	GLU	2.3
13	QM	69	GLU	2.3
20	QT	18	GLN	2.3
22	YA	764	A	2.3
1	XA	269	C	2.3
20	QT	83	ARG	2.3
22	RA	2695	C	2.3
22	YA	2699	C	2.3
27	RG	72	ARG	2.3
17	QQ	100	LYS	2.3
19	QS	6	LYS	2.3
28	RH	48	GLY	2.3
34	RR	102	GLU	2.3
36	RT	73	GLU	2.3
17	QQ	75	ARG	2.3
44	R1	61	ARG	2.3
25	RE	145	LYS	2.3
4	QD	209	ARG	2.3
22	YA	2175	C	2.3
27	YG	83	ARG	2.3
51	R8	21	LYS	2.3
17	XQ	35	VAL	2.3
17	XQ	87	LYS	2.3
34	RR	21	TYR	2.3
17	XQ	6	LEU	2.3
19	XS	57	HIS	2.3
36	YT	73	GLU	2.3
44	Y1	13	ILE	2.3
22	YA	889	C	2.3
41	RY	5	MET	2.3

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Mol	Chain	Res	Type	RSRZ
10	QJ	61	GLU	2.3
1	QA	809	G	2.3
27	YG	90	LEU	2.3
19	QS	7	LYS	2.3
19	QS	38	SER	2.3
34	RR	68	ARG	2.3
36	YT	93	ARG	2.3
43	R0	46	LYS	2.3
1	QA	1251	A	2.3
9	QI	125	TYR	2.3
14	QN	21	TYR	2.3
9	QI	28	VAL	2.3
19	XS	69	HIS	2.3
26	YF	69	HIS	2.3
25	RE	79	ARG	2.3
20	QT	48	LYS	2.3
32	YP	61	ARG	2.3
33	RQ	60	ARG	2.3
12	XL	91	LYS	2.3
35	RS	57	LYS	2.3
44	Y1	33	LYS	2.3
5	XE	81	GLU	2.3
7	QG	44	TYR	2.3
14	XN	8	GLU	2.3
17	QQ	23	VAL	2.3
17	XQ	85	VAL	2.3
34	YR	51	LEU	2.3
14	QN	54	PRO	2.3
1	XA	311	C	2.3
9	XI	95	LYS	2.3
22	YA	2695	C	2.3
11	QK	98	LEU	2.3
27	YG	80	PHE	2.3
33	RQ	99	PRO	2.3
13	XM	29	ARG	2.3
48	Y5	3	LYS	2.3
7	QG	26	PHE	2.3
9	XI	10	ARG	2.3
27	YG	39	ILE	2.3
27	RG	53	LEU	2.3
36	YT	105	LEU	2.3
13	QM	23	TYR	2.3

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Mol	Chain	Res	Type	RSRZ
19	QS	60	VAL	2.3
9	QI	78	LYS	2.3
13	QM	72	ALA	2.3
16	QP	35	LYS	2.3
18	XR	42	ARG	2.3
4	QD	156	GLU	2.3
36	RT	1	MET	2.3
47	R4	57	GLU	2.3
1	XA	999	U	2.3
14	QN	47	LEU	2.3
14	QN	49	HIS	2.3
22	YA	790	C	2.3
25	RE	159	HIS	2.3
31	YO	44	LYS	2.3
24	RD	167	GLY	2.3
16	XP	22	THR	2.3
20	XT	60	GLU	2.3
35	YS	43	GLU	2.3
51	Y8	65	GLU	2.3
1	QA	947	G	2.2
25	RE	149	ARG	2.2
31	YO	69	ILE	2.2
38	YV	84	LYS	2.2
44	Y1	41	ARG	2.2
17	QQ	84	LEU	2.2
20	QT	53	LEU	2.2
32	RP	45	LEU	2.2
42	RZ	153	SER	2.2
49	R6	10	LEU	2.2
31	YO	81	ASP	2.2
49	Y6	30	THR	2.2
9	QI	73	GLN	2.2
17	QQ	51	TYR	2.2
22	YA	1082	U	2.2
30	RN	84	LYS	2.2
19	XS	39	THR	2.2
1	QA	1202	G	2.2
1	XA	1202	G	2.2
17	XQ	59	ILE	2.2
20	XT	33	ILE	2.2
14	XN	23	ARG	2.2
22	YA	2147	G	2.2

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Mol	Chain	Res	Type	RSRZ
22	YA	2707	G	2.2
28	RH	41	MET	2.2
34	RR	7	GLY	2.2
41	RY	46	LYS	2.2
13	XM	16	ASP	2.2
9	QI	17	VAL	2.2
14	XN	7	ILE	2.2
13	XM	88	ARG	2.2
1	QA	1234	C	2.2
20	XT	56	MET	2.2
20	XT	76	ALA	2.2
27	RG	34	LEU	2.2
38	YV	78	LYS	2.2
21	QU	8	THR	2.2
1	QA	1323	G	2.2
1	QA	1368	G	2.2
12	QL	47	LYS	2.2
13	QM	104	ARG	2.2
20	QT	57	ARG	2.2
22	YA	669	G	2.2
22	YA	2124	G	2.2
24	RD	184	LYS	2.2
28	RH	30	LYS	2.2
32	YP	29	LYS	2.2
10	QJ	44	VAL	2.2
47	Y4	5	ILE	2.2
16	XP	6	LEU	2.2
21	QU	3	LYS	2.2
51	Y8	3	LYS	2.2
51	Y8	57	ARG	2.2
10	XJ	38	ILE	2.2
37	RU	118	GLY	2.2
44	Y1	37	ILE	2.2
22	RA	1630	G	2.2
26	RF	83	PHE	2.2
32	RP	111	ARG	2.2
37	YU	16	LYS	2.2
42	RZ	82	ARG	2.2
51	Y8	12	LYS	2.2
1	XA	87	A	2.2
10	XJ	96	ILE	2.2
9	XI	117	HIS	2.2

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Mol	Chain	Res	Type	RSRZ
27	RG	80	PHE	2.2
31	RO	21	CYS	2.2
33	RQ	109	VAL	2.2
1	XA	63	C	2.2
3	QC	28	GLN	2.2
14	QN	22	THR	2.2
40	RX	89	ILE	2.2
3	XC	166	GLU	2.2
4	XD	76	ARG	2.2
20	XT	10	LEU	2.2
1	QA	1017	G	2.2
29	RI	11	ASN	2.2
34	YR	115	GLU	2.2
41	YY	103	GLY	2.2
10	QJ	11	PHE	2.2
12	XL	98	TYR	2.2
22	RA	575	A	2.2
3	XC	190	ARG	2.2
28	RH	98	LEU	2.2
34	YR	42	LYS	2.2
46	R3	3	ARG	2.2
51	Y8	7	HIS	2.2
52	R9	6	SER	2.2
14	QN	33	VAL	2.2
9	XI	49	PRO	2.2
16	XP	19	ILE	2.2
22	YA	2103	C	2.2
29	RI	20	ASP	2.2
27	RG	133	LEU	2.2
48	R5	3	LYS	2.2
22	YA	2694	G	2.2
27	YG	118	ARG	2.2
33	RQ	35	VAL	2.2
3	QC	6	HIS	2.2
5	QE	13	ILE	2.2
22	YA	2138	C	2.2
28	RH	106	THR	2.2
16	XP	2	VAL	2.2
17	XQ	44	ALA	2.2
31	YO	83	ALA	2.2
17	QQ	43	LEU	2.2
22	RA	2694	G	2.2

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Mol	Chain	Res	Type	RSRZ
22	YA	2162	G	2.2
5	QE	90	VAL	2.2
25	RE	151	TYR	2.2
30	RN	9	VAL	2.2
52	R9	21	GLY	2.2
3	QC	27	LYS	2.2
14	QN	57	ARG	2.2
19	QS	55	LYS	2.2
32	RP	16	ARG	2.2
32	YP	46	LYS	2.2
40	RX	53	LYS	2.2
19	QS	51	VAL	2.2
22	RA	1708	C	2.2
24	YD	233	HIS	2.2
36	YT	61	PHE	2.2
43	Y0	3	HIS	2.2
17	QQ	50	LYS	2.2
30	RN	83	LYS	2.2
34	YR	44	LEU	2.2
3	QC	194	GLY	2.2
4	QD	50	ARG	2.2
10	QJ	70	ARG	2.2
1	XA	104	G	2.2
1	XA	1227	A	2.2
22	RA	567	A	2.2
31	RO	32	TYR	2.2
42	RZ	118	GLN	2.2
33	RQ	129	THR	2.2
42	RZ	78	LYS	2.2
13	QM	24	GLY	2.2
1	XA	1321	C	2.2
22	YA	1754	C	2.2
24	RD	169	GLU	2.2
29	YI	1	MET	2.2
10	XJ	10	GLY	2.2
9	XI	46	ALA	2.2
23	RB	89(A)	A	2.2
35	RS	8	GLU	2.2
7	XG	82	GLY	2.2
16	XP	65	GLN	2.2
24	RD	16	MET	2.2
20	QT	27	LYS	2.2

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Mol	Chain	Res	Type	RSRZ
1	QA	311	C	2.1
22	RA	2177	C	2.1
22	YA	1742	C	2.1
28	RH	145	ALA	2.1
33	RQ	36	ALA	2.1
34	YR	40	LYS	2.1
24	YD	2	ALA	2.1
49	R6	15	GLU	2.1
9	XI	78	LYS	2.1
20	QT	73	HIS	2.1
34	RR	71	GLN	2.1
21	XU	22	ARG	2.1
13	QM	89	GLY	2.1
20	QT	16	HIS	2.1
24	RD	153	ALA	2.1
17	QQ	53	LEU	2.1
22	RA	2106	G	2.1
22	YA	196	A	2.1
32	RP	114	ILE	2.1
49	R6	32	ASN	2.1
24	RD	54	ARG	2.1
38	RV	81	TYR	2.1
48	R5	54	GLY	2.1
27	RG	54	GLU	2.1
3	QC	158	GLY	2.1
22	YA	1963	U	2.1
27	YG	72	ARG	2.1
9	QI	106	ALA	2.1
34	YR	14	SER	2.1
1	QA	251	G	2.1
10	QJ	88	LEU	2.1
36	RT	113	LYS	2.1
49	Y6	7	ILE	2.1
9	XI	120	ARG	2.1
20	XT	45	GLN	2.1
32	RP	118	GLY	2.1
46	R3	35	ARG	2.1
51	Y8	13	ARG	2.1
9	XI	36	TYR	2.1
14	QN	56	VAL	2.1
10	QJ	85	LEU	2.1
10	XJ	48	THR	2.1

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Mol	Chain	Res	Type	RSRZ
33	RQ	107	ALA	2.1
12	XL	27	LEU	2.1
16	QP	36	ILE	2.1
27	YG	146	TYR	2.1
22	YA	1296	G	2.1
22	YA	1633	G	2.1
14	QN	59	ALA	2.1
31	RO	64	ARG	2.1
32	RP	78	PRO	2.1
51	R8	63	PRO	2.1
1	QA	132	C	2.1
1	QA	312	C	2.1
3	XC	184	TYR	2.1
24	RD	174	ILE	2.1
27	RG	88	ILE	2.1
19	XS	67	VAL	2.1
24	YD	31	LYS	2.1
17	QQ	93	GLN	2.1
19	XS	13	ASP	2.1
20	QT	17	ARG	2.1
11	QK	20	TYR	2.1
12	QL	69	TYR	2.1
22	YA	229	A	2.1
28	RH	169	VAL	2.1
3	XC	90	GLU	2.1
22	RA	171	G	2.1
22	RA	1059	G	2.1
2	QB	68	ILE	2.1
10	XJ	53	PRO	2.1
27	YG	26	GLN	2.1
25	RE	195	LEU	2.1
29	RI	3	VAL	2.1
36	RT	114	LEU	2.1
44	R1	15	ALA	2.1
9	QI	14	VAL	2.1
10	QJ	72	VAL	2.1
10	QJ	98	ILE	2.1
27	YG	138	GLN	2.1
51	Y8	35	GLN	2.1
21	QU	12	LYS	2.1
38	YV	76	LYS	2.1
1	XA	1224	G	2.1

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Mol	Chain	Res	Type	RSRZ
7	XG	123	GLU	2.1
10	XJ	59	SER	2.1
34	YR	48	VAL	2.1
1	QA	1369	C	2.1
22	RA	161	U	2.1
4	XD	50	ARG	2.1
20	QT	75	ASN	2.1
52	Y9	19	ARG	2.1
17	QQ	39	SER	2.1
24	RD	40	THR	2.1
40	RX	92	LEU	2.1
44	Y1	19	GLN	2.1
44	Y1	95	LEU	2.1
6	XF	55	ASP	2.1
22	RA	1077	A	2.1
14	QN	30	ALA	2.1
20	QT	106	ALA	2.1
42	RZ	116	VAL	2.1
31	YO	120	GLU	2.1
36	YT	64	ARG	2.1
43	R0	3	HIS	2.1
44	R1	66	HIS	2.1
24	YD	50	THR	2.1
1	QA	1362	C	2.1
33	RQ	37	LEU	2.1
37	YU	117	GLN	2.1
13	XM	111	LYS	2.1
8	QH	58	TYR	2.1
13	XM	5	ALA	2.1
22	RA	1757	U	2.1
25	RE	143	ASN	2.1
35	RS	35	ILE	2.1
9	XI	17	VAL	2.1
20	QT	102	GLY	2.1
1	QA	949	A	2.1
1	QA	1225	A	2.1
13	QM	27	LYS	2.1
20	XT	34	LYS	2.1
22	RA	1085	A	2.1
1	QA	1309	G	2.1
2	QB	96	ARG	2.1
9	QI	20	ARG	2.1

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Mol	Chain	Res	Type	RSRZ
22	YA	1758	G	2.1
22	YA	2123	G	2.1
22	YA	2168	G	2.1
44	R1	37	ILE	2.1
34	YR	50	HIS	2.1
42	RZ	175	VAL	2.1
51	R8	53	PRO	2.1
27	YG	34	LEU	2.1
1	QA	323	U	2.1
22	RA	1761	C	2.1
38	RV	78	LYS	2.1
9	XI	121	ARG	2.1
10	QJ	50	ILE	2.1
10	QJ	10	GLY	2.1
16	XP	5	ARG	2.1
28	RH	52	VAL	2.1
36	YT	52	ILE	2.1
43	R0	55	ARG	2.1
49	Y6	6	ARG	2.1
49	Y6	28	ARG	2.1
17	XQ	61	GLU	2.1
34	YR	10	LEU	2.1
36	RT	109	GLU	2.1
1	QA	1306	A	2.0
9	XI	118	LYS	2.0
11	QK	42	TRP	2.0
19	XS	66	MET	2.0
28	RH	85	LYS	2.0
34	RR	40	LYS	2.0
9	QI	83	ARG	2.0
22	YA	700	G	2.0
24	YD	36	PRO	2.0
25	YE	151	TYR	2.0
27	RG	139	LEU	2.0
27	YG	43	LEU	2.0
35	RS	43	GLU	2.0
41	YY	102	CYS	2.0
3	QC	135	LYS	2.0
22	YA	2691	C	2.0
33	RQ	72	LYS	2.0
20	XT	41	ILE	2.0
28	RH	100	GLY	2.0

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Mol	Chain	Res	Type	RSRZ
52	Y9	3	VAL	2.0
20	QT	9	ASN	2.0
46	R3	15	TYR	2.0
34	RR	43	GLU	2.0
1	QA	1227	A	2.0
1	XA	327	A	2.0
1	QA	1353	G	2.0
5	QE	12	LEU	2.0
13	XM	23	TYR	2.0
46	R3	12	PRO	2.0
1	QA	1018	C	2.0
10	XJ	7	LYS	2.0
11	XK	99	GLN	2.0
17	QQ	29	HIS	2.0
17	QQ	87	LYS	2.0
22	YA	2137	C	2.0
24	RD	39	LYS	2.0
47	Y4	47	GLN	2.0
24	YD	13	ARG	2.0
27	YG	152	LEU	2.0
36	YT	115	ARG	2.0
7	QG	86	GLN	2.0
12	QL	85	ILE	2.0
17	QQ	26	GLN	2.0
17	XQ	16	GLN	2.0
10	XJ	100	THR	2.0
11	XK	81	ASP	2.0
21	XU	5	ASP	2.0
14	XN	25	VAL	2.0
1	QA	378	G	2.0
13	XM	87	TYR	2.0
1	QA	307	C	2.0
1	QA	813	U	2.0
22	RA	1061	U	2.0
32	YP	118	GLY	2.0
37	RU	43	GLY	2.0
22	YA	1712	C	2.0
46	R3	10	LYS	2.0
17	XQ	29	HIS	2.0
39	YW	111	HIS	2.0
12	QL	86	ARG	2.0
12	QL	94	PRO	2.0

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Mol	Chain	Res	Type	RSRZ
44	Y1	9	GLY	2.0
44	Y1	11	ARG	2.0
46	R3	28	LEU	2.0
24	RD	261	LYS	2.0
36	RT	110	ILE	2.0
36	YT	97	ALA	2.0
36	YT	103	ARG	2.0
38	YV	82	ARG	2.0
42	RZ	115	GLY	2.0
5	XE	134	ALA	2.0
10	XJ	50	ILE	2.0
10	XJ	63	PHE	2.0
20	XT	40	ALA	2.0
22	RA	1090	U	2.0
17	XQ	86	GLU	2.0
22	RA	1093	G	2.0
22	YA	701	G	2.0
31	YO	46	ALA	2.0
36	RT	98	LYS	2.0
37	RU	13	LYS	2.0
10	XJ	69	ASN	2.0
20	QT	36	LEU	2.0
20	XT	84	LEU	2.0
33	RQ	51	ARG	2.0
16	XP	33	ILE	2.0
7	QG	156	TRP	2.0
13	XM	69	GLU	2.0
19	QS	13	ASP	2.0
20	XT	32	ALA	2.0
26	RF	78	ILE	2.0
28	RH	163	TYR	2.0
31	RO	18	LYS	2.0
22	YA	699	A	2.0
39	RW	31	GLU	2.0
42	RZ	181	GLU	2.0
13	XM	24	GLY	2.0
4	XD	159	ARG	2.0
48	R5	55	ARG	2.0

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

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. LLDF column lists the quality of electron density of the group with respect to its neighbouring residues in protein, DNA or RNA chains. 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	RSR	LLDF	B-factors(Å ²)	Q<0.9
56	PPU	Z6	76	37/38	0.44	-	37,37,37,37	0
56	PPU	Z8	76	37/38	0.40	-	30,30,30,30	0

6.3 Carbohydrates ⓘ

There are no carbohydrates in this entry.

6.4 Ligands ⓘ

In the following table, the Atoms column lists the number of modelled atoms in the group and the number defined in the chemical component dictionary. LLDF column lists the quality of electron density of the group with respect to its neighbouring residues in protein, DNA or RNA chains. 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	RSR	LLDF	B-factors(Å ²)	Q<0.9
58	MG	YA	3135	1/1	0.14	-	6,6,6,6	0
58	MG	YA	3089	1/1	0.27	-	13,13,13,13	0
58	MG	YA	3259	1/1	0.32	-	5,5,5,5	0
58	MG	RA	3033	1/1	0.33	-	6,6,6,6	0
58	MG	RA	3227	1/1	0.56	-	60,60,60,60	0
58	MG	YA	3084	1/1	0.15	-	12,12,12,12	0
58	MG	RA	3160	1/1	0.15	-	19,19,19,19	0
58	MG	QA	1605	1/1	0.27	-	6,6,6,6	0
58	MG	RA	3098	1/1	0.12	-	10,10,10,10	0
58	MG	RA	3112	1/1	0.16	-	7,7,7,7	0
58	MG	RA	3013	1/1	0.20	-	29,29,29,29	0
58	MG	YA	3028	1/1	0.20	-	15,15,15,15	0
58	MG	XA	1630	1/1	0.16	-	15,15,15,15	0
59	ZN	XD	301	1/1	0.28	-	10,10,10,10	0
58	MG	YA	3012	1/1	0.30	-	10,10,10,10	0
58	MG	XA	1644	1/1	0.11	-	4,4,4,4	0
57	PAR	XA	1601	42/42	0.27	-	38,38,38,38	0

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Mol	Type	Chain	Res	Atoms	RSR	LLDF	B-factors(\AA^2)	Q<0.9
58	MG	YA	3126	1/1	0.16	-	0,0,0,0	0
58	MG	QA	1676	1/1	0.19	-	13,13,13,13	0
58	MG	QA	1638	1/1	0.12	-	14,14,14,14	0
58	MG	RA	3034	1/1	0.22	-	6,6,6,6	0
58	MG	YA	3191	1/1	0.34	-	9,9,9,9	0
58	MG	RA	3083	1/1	0.24	-	32,32,32,32	0
58	MG	QA	1662	1/1	0.10	-	0,0,0,0	0
58	MG	QA	1625	1/1	0.30	-	29,29,29,29	0
58	MG	RA	3155	1/1	0.15	-	54,54,54,54	0
58	MG	QA	1610	1/1	0.12	-	21,21,21,21	0
58	MG	YA	3193	1/1	0.08	-	14,14,14,14	0
58	MG	RA	3020	1/1	0.20	-	4,4,4,4	0
58	MG	QA	1668	1/1	0.18	-	0,0,0,0	0
58	MG	XA	1661	1/1	0.12	-	2,2,2,2	0
58	MG	RA	3017	1/1	0.32	-	18,18,18,18	0
58	MG	QA	1655	1/1	0.21	-	14,14,14,14	0
58	MG	YA	3065	1/1	0.21	-	31,31,31,31	0
58	MG	QA	1659	1/1	0.14	-	42,42,42,42	0
58	MG	RA	3055	1/1	0.11	-	10,10,10,10	0
58	MG	XA	1628	1/1	0.20	-	18,18,18,18	0
58	MG	RA	3024	1/1	0.26	-	11,11,11,11	0
58	MG	YA	3113	1/1	0.20	-	17,17,17,17	0
58	MG	RA	3048	1/1	0.17	-	2,2,2,2	0
58	MG	QA	1675	1/1	0.32	-	32,32,32,32	0
58	MG	YA	3088	1/1	0.18	-	6,6,6,6	0
58	MG	RA	3072	1/1	0.27	-	18,18,18,18	0
58	MG	XA	1657	1/1	0.14	-	19,19,19,19	0
58	MG	QA	1656	1/1	0.36	-	44,44,44,44	0
58	MG	QA	1617	1/1	0.14	-	46,46,46,46	0
58	MG	RA	3110	1/1	0.12	-	19,19,19,19	0
58	MG	YA	3039	1/1	0.16	-	20,20,20,20	0
58	MG	XA	1621	1/1	0.11	-	19,19,19,19	0
58	MG	RA	3075	1/1	0.18	-	9,9,9,9	0
58	MG	YA	3133	1/1	0.18	-	32,32,32,32	0
58	MG	YA	3203	1/1	0.18	-	18,18,18,18	0
58	MG	YA	3241	1/1	0.21	-	18,18,18,18	0
58	MG	YA	3204	1/1	0.49	-	42,42,42,42	0
58	MG	YA	3081	1/1	0.25	-	10,10,10,10	0
58	MG	YA	3013	1/1	0.32	-	3,3,3,3	0
58	MG	YA	3034	1/1	0.19	-	7,7,7,7	0
58	MG	RA	3153	1/1	0.12	-	0,0,0,0	0
58	MG	YA	3073	1/1	0.08	-	4,4,4,4	0

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Mol	Type	Chain	Res	Atoms	RSR	LLDF	B-factors(\AA^2)	Q<0.9
58	MG	YA	3186	1/1	0.20	-	25,25,25,25	0
58	MG	RA	3192	1/1	0.22	-	17,17,17,17	0
58	MG	RA	3117	1/1	0.09	-	11,11,11,11	0
58	MG	YA	3114	1/1	0.21	-	6,6,6,6	0
58	MG	RA	3178	1/1	0.13	-	25,25,25,25	0
58	MG	RA	3108	1/1	0.09	-	6,6,6,6	0
58	MG	QA	1643	1/1	0.22	-	21,21,21,21	0
58	MG	R8	101	1/1	0.10	-	6,6,6,6	0
58	MG	YA	3091	1/1	0.24	-	29,29,29,29	0
58	MG	YA	3211	1/1	0.42	-	55,55,55,55	0
58	MG	YA	3174	1/1	0.12	-	10,10,10,10	0
58	MG	YA	3003	1/1	0.44	-	74,74,74,74	0
58	MG	YA	3252	1/1	0.36	-	1,1,1,1	0
58	MG	YA	3110	1/1	0.17	-	4,4,4,4	0
58	MG	XA	1633	1/1	0.15	-	7,7,7,7	0
58	MG	YA	3217	1/1	0.13	-	18,18,18,18	0
58	MG	RA	3002	1/1	0.38	-	30,30,30,30	0
58	MG	XA	1670	1/1	0.24	-	27,27,27,27	0
58	MG	RA	3202	1/1	0.25	-	0,0,0,0	0
58	MG	RA	3245	1/1	0.35	-	7,7,7,7	0
58	MG	YA	3043	1/1	0.28	-	5,5,5,5	0
58	MG	RA	3003	1/1	0.17	-	4,4,4,4	0
58	MG	XA	1648	1/1	0.18	-	19,19,19,19	0
58	MG	RA	3062	1/1	0.44	-	21,21,21,21	0
58	MG	QA	1657	1/1	0.10	-	19,19,19,19	0
58	MG	YA	3009	1/1	0.17	-	15,15,15,15	0
58	MG	XA	1675	1/1	0.31	-	14,14,14,14	0
58	MG	RA	3151	1/1	0.36	-	3,3,3,3	0
58	MG	YA	3070	1/1	0.19	-	1,1,1,1	0
58	MG	XA	1606	1/1	0.38	-	3,3,3,3	0
58	MG	RA	3208	1/1	0.13	-	30,30,30,30	0
58	MG	YA	3152	1/1	0.36	-	27,27,27,27	0
58	MG	YA	3020	1/1	0.42	-	8,8,8,8	0
58	MG	YA	3156	1/1	0.60	-	29,29,29,29	0
58	MG	RA	3200	1/1	0.15	-	9,9,9,9	0
58	MG	RA	3182	1/1	0.36	-	22,22,22,22	0
58	MG	RA	3116	1/1	0.13	-	8,8,8,8	0
58	MG	RA	3081	1/1	0.38	-	18,18,18,18	0
58	MG	RA	3077	1/1	0.16	-	6,6,6,6	0
58	MG	XA	1663	1/1	0.31	-	32,32,32,32	0
58	MG	YA	3159	1/1	0.17	-	12,12,12,12	0
58	MG	YA	3051	1/1	0.25	-	13,13,13,13	0

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Mol	Type	Chain	Res	Atoms	RSR	LLDF	B-factors(\AA^2)	Q<0.9
58	MG	XA	1643	1/1	0.28	-	74,74,74,74	0
58	MG	XA	1641	1/1	0.28	-	11,11,11,11	0
58	MG	RA	3231	1/1	0.16	-	16,16,16,16	0
58	MG	QA	1620	1/1	0.07	-	3,3,3,3	0
58	MG	XA	1614	1/1	0.09	-	21,21,21,21	0
58	MG	RA	3069	1/1	0.12	-	19,19,19,19	0
58	MG	YA	3032	1/1	0.20	-	1,1,1,1	0
58	MG	RA	3052	1/1	0.13	-	1,1,1,1	0
58	MG	RA	3095	1/1	0.23	-	18,18,18,18	0
58	MG	RA	3007	1/1	0.37	-	8,8,8,8	0
58	MG	YA	3118	1/1	0.41	-	8,8,8,8	0
58	MG	YA	3246	1/1	0.23	-	0,0,0,0	0
58	MG	RA	3194	1/1	0.29	-	0,0,0,0	0
58	MG	YA	3098	1/1	0.31	-	8,8,8,8	0
58	MG	YA	3072	1/1	0.19	-	22,22,22,22	0
57	PAR	QA	1601	42/42	0.27	-	42,42,42,42	0
58	MG	QA	1612	1/1	0.23	-	15,15,15,15	0
58	MG	YA	3238	1/1	0.19	-	76,76,76,76	0
58	MG	YA	3208	1/1	0.26	-	35,35,35,35	0
58	MG	YA	3145	1/1	0.20	-	20,20,20,20	0
58	MG	RA	3158	1/1	0.19	-	15,15,15,15	0
58	MG	RA	3214	1/1	0.39	-	24,24,24,24	0
58	MG	XA	1683	1/1	0.20	-	10,10,10,10	0
58	MG	QA	1660	1/1	0.11	-	36,36,36,36	0
58	MG	RA	3111	1/1	0.17	-	12,12,12,12	0
58	MG	RA	3063	1/1	0.23	-	19,19,19,19	0
58	MG	RA	3107	1/1	0.10	-	2,2,2,2	0
58	MG	YA	3016	1/1	0.10	-	7,7,7,7	0
58	MG	XA	1639	1/1	0.13	-	45,45,45,45	0
58	MG	RA	3027	1/1	0.20	-	15,15,15,15	0
58	MG	RA	3004	1/1	0.41	-	40,40,40,40	0
58	MG	QA	1636	1/1	0.19	-	1,1,1,1	0
58	MG	YA	3205	1/1	0.38	-	62,62,62,62	0
58	MG	RA	3137	1/1	0.17	-	14,14,14,14	0
58	MG	YA	3153	1/1	0.10	-	14,14,14,14	0
58	MG	RA	3193	1/1	0.17	-	47,47,47,47	0
58	MG	RA	3036	1/1	0.45	-	18,18,18,18	0
58	MG	RA	3044	1/1	0.17	-	8,8,8,8	0
58	MG	YA	3076	1/1	0.39	-	10,10,10,10	0
58	MG	YA	3134	1/1	0.13	-	19,19,19,19	0
58	MG	YA	3125	1/1	0.13	-	11,11,11,11	0
58	MG	YA	3248	1/1	0.19	-	8,8,8,8	0

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Mol	Type	Chain	Res	Atoms	RSR	LLDF	B-factors(\AA^2)	Q<0.9
58	MG	RA	3154	1/1	0.24	-	59,59,59,59	0
58	MG	QA	1667	1/1	0.24	-	35,35,35,35	0
58	MG	RA	3124	1/1	0.15	-	2,2,2,2	0
58	MG	XA	1659	1/1	0.10	-	36,36,36,36	0
58	MG	RA	3011	1/1	0.20	-	0,0,0,0	0
58	MG	QA	1650	1/1	0.15	-	53,53,53,53	0
58	MG	RA	3134	1/1	0.18	-	17,17,17,17	0
58	MG	YA	3111	1/1	0.09	-	26,26,26,26	0
58	MG	RA	3076	1/1	0.12	-	7,7,7,7	0
58	MG	YA	3216	1/1	0.38	-	55,55,55,55	0
58	MG	YA	3112	1/1	0.35	-	13,13,13,13	0
58	MG	YA	3206	1/1	0.32	-	52,52,52,52	0
58	MG	RA	3211	1/1	0.18	-	16,16,16,16	0
58	MG	XA	1634	1/1	0.16	-	7,7,7,7	0
58	MG	RA	3138	1/1	0.26	-	38,38,38,38	0
58	MG	RA	3029	1/1	0.18	-	2,2,2,2	0
58	MG	YA	3015	1/1	0.51	-	74,74,74,74	0
58	MG	RA	3022	1/1	0.20	-	24,24,24,24	0
58	MG	YA	3105	1/1	0.22	-	19,19,19,19	0
58	MG	XM	201	1/1	0.44	-	98,98,98,98	0
58	MG	YA	3102	1/1	0.13	-	8,8,8,8	0
58	MG	RA	3074	1/1	0.18	-	6,6,6,6	0
58	MG	RP	202	1/1	0.48	-	76,76,76,76	0
58	MG	YA	3250	1/1	0.33	-	15,15,15,15	0
58	MG	RA	3005	1/1	0.21	-	24,24,24,24	0
58	MG	YA	3006	1/1	0.17	-	26,26,26,26	0
58	MG	YA	3030	1/1	0.65	-	18,18,18,18	0
58	MG	RA	3213	1/1	0.17	-	9,9,9,9	0
58	MG	XA	1651	1/1	0.27	-	33,33,33,33	0
58	MG	RA	3122	1/1	0.13	-	5,5,5,5	0
58	MG	RA	3204	1/1	0.23	-	50,50,50,50	0
58	MG	YA	3107	1/1	0.17	-	9,9,9,9	0
58	MG	RA	3141	1/1	0.62	-	40,40,40,40	0
58	MG	XA	1629	1/1	0.18	-	4,4,4,4	0
58	MG	RA	3173	1/1	0.36	-	35,35,35,35	0
58	MG	YA	3045	1/1	0.22	-	5,5,5,5	0
58	MG	QA	1607	1/1	0.18	-	22,22,22,22	0
58	MG	YA	3087	1/1	0.19	-	5,5,5,5	0
58	MG	QA	1648	1/1	0.10	-	43,43,43,43	0
58	MG	RA	3247	1/1	0.28	-	9,9,9,9	0
58	MG	QA	1672	1/1	0.34	-	19,19,19,19	0
58	MG	YA	3008	1/1	0.25	-	8,8,8,8	0

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Mol	Type	Chain	Res	Atoms	RSR	LLDF	B-factors(\AA^2)	Q<0.9
58	MG	XA	1673	1/1	0.11	-	6,6,6,6	0
58	MG	XA	1620	1/1	0.21	-	15,15,15,15	0
58	MG	YA	3249	1/1	0.39	-	20,20,20,20	0
59	ZN	QD	301	1/1	0.22	-	27,27,27,27	0
58	MG	QA	1622	1/1	0.08	-	12,12,12,12	0
58	MG	RA	3132	1/1	0.21	-	9,9,9,9	0
58	MG	YA	3169	1/1	0.18	-	16,16,16,16	0
58	MG	RA	3166	1/1	0.27	-	5,5,5,5	0
58	MG	RA	3102	1/1	0.26	-	21,21,21,21	0
58	MG	YA	3054	1/1	0.30	-	14,14,14,14	0
58	MG	QA	1645	1/1	0.21	-	4,4,4,4	0
58	MG	RA	3070	1/1	0.14	-	4,4,4,4	0
58	MG	RA	3037	1/1	0.84	-	74,74,74,74	0
58	MG	YA	3080	1/1	0.59	-	74,74,74,74	0
58	MG	YA	3037	1/1	0.15	-	16,16,16,16	0
58	MG	RA	3051	1/1	0.28	-	1,1,1,1	0
58	MG	YB	201	1/1	0.33	-	33,33,33,33	0
58	MG	YB	202	1/1	0.34	-	19,19,19,19	0
58	MG	XA	1610	1/1	0.19	-	6,6,6,6	0
58	MG	YA	3005	1/1	0.26	-	26,26,26,26	0
58	MG	YA	3234	1/1	0.21	-	17,17,17,17	0
58	MG	RA	3180	1/1	0.21	-	17,17,17,17	0
58	MG	RA	3053	1/1	0.07	-	2,2,2,2	0
58	MG	QA	1613	1/1	0.31	-	8,8,8,8	0
58	MG	XA	1632	1/1	0.15	-	9,9,9,9	0
58	MG	RA	3198	1/1	0.20	-	26,26,26,26	0
58	MG	YA	3244	1/1	0.24	-	0,0,0,0	0
58	MG	RE	302	1/1	0.16	-	15,15,15,15	0
58	MG	YA	3170	1/1	0.39	-	33,33,33,33	0
58	MG	RA	3094	1/1	0.29	-	16,16,16,16	0
58	MG	YA	3097	1/1	0.16	-	11,11,11,11	0
58	MG	QA	1631	1/1	0.14	-	50,50,50,50	0
58	MG	RA	3064	1/1	0.22	-	4,4,4,4	0
58	MG	QA	1652	1/1	0.11	-	13,13,13,13	0
59	ZN	QN	101	1/1	0.06	-	86,86,86,86	0
58	MG	YA	3236	1/1	0.27	-	18,18,18,18	0
58	MG	YA	3104	1/1	0.09	-	0,0,0,0	0
58	MG	RA	3140	1/1	0.44	-	34,34,34,34	0
58	MG	YA	3143	1/1	0.09	-	0,0,0,0	0
58	MG	YA	3139	1/1	0.17	-	8,8,8,8	0
58	MG	RA	3181	1/1	0.44	-	21,21,21,21	0
58	MG	RA	3019	1/1	0.18	-	8,8,8,8	0

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Mol	Type	Chain	Res	Atoms	RSR	LLDF	B-factors(\AA^2)	Q<0.9
58	MG	QA	1633	1/1	0.12	-	15,15,15,15	0
58	MG	YA	3124	1/1	0.20	-	6,6,6,6	0
58	MG	YA	3219	1/1	0.43	-	22,22,22,22	0
58	MG	YA	3201	1/1	0.07	-	57,57,57,57	0
58	MG	XA	1622	1/1	0.26	-	6,6,6,6	0
58	MG	YA	3160	1/1	0.14	-	16,16,16,16	0
58	MG	RA	3079	1/1	0.07	-	25,25,25,25	0
58	MG	RA	3221	1/1	0.22	-	30,30,30,30	0
58	MG	YA	3221	1/1	0.13	-	19,19,19,19	0
58	MG	RA	3082	1/1	0.19	-	10,10,10,10	0
58	MG	YA	3075	1/1	0.18	-	12,12,12,12	0
58	MG	RA	3042	1/1	0.20	-	1,1,1,1	0
58	MG	RA	3242	1/1	0.32	-	13,13,13,13	0
58	MG	QA	1644	1/1	0.09	-	26,26,26,26	0
58	MG	YA	3074	1/1	0.12	-	1,1,1,1	0
58	MG	RA	3114	1/1	0.14	-	10,10,10,10	0
58	MG	XA	1625	1/1	0.08	-	5,5,5,5	0
58	MG	RA	3043	1/1	0.22	-	10,10,10,10	0
58	MG	RA	3139	1/1	0.18	-	12,12,12,12	0
58	MG	YA	3128	1/1	0.46	-	6,6,6,6	0
58	MG	YA	3140	1/1	0.37	-	8,8,8,8	0
58	MG	YA	3017	1/1	0.12	-	11,11,11,11	0
58	MG	RA	3203	1/1	0.18	-	15,15,15,15	0
58	MG	YA	3092	1/1	0.12	-	28,28,28,28	0
58	MG	RA	3025	1/1	0.20	-	3,3,3,3	0
58	MG	RA	3234	1/1	0.38	-	69,69,69,69	0
58	MG	RA	3149	1/1	0.20	-	4,4,4,4	0
58	MG	XA	1605	1/1	0.35	-	15,15,15,15	0
58	MG	YA	3048	1/1	0.13	-	4,4,4,4	0
58	MG	XA	1678	1/1	0.18	-	2,2,2,2	0
58	MG	RA	3101	1/1	0.19	-	18,18,18,18	0
58	MG	XA	1637	1/1	0.17	-	14,14,14,14	0
58	MG	YA	3026	1/1	0.22	-	5,5,5,5	0
58	MG	RA	3121	1/1	0.13	-	36,36,36,36	0
58	MG	XV	102	1/1	0.18	-	2,2,2,2	0
58	MG	YA	3154	1/1	0.49	-	11,11,11,11	0
58	MG	RA	3088	1/1	0.14	-	7,7,7,7	0
58	MG	RA	3199	1/1	0.71	-	63,63,63,63	0
58	MG	YA	3185	1/1	0.32	-	22,22,22,22	0
58	MG	YA	3117	1/1	0.13	-	28,28,28,28	0
58	MG	QA	1618	1/1	0.17	-	17,17,17,17	0
58	MG	RA	3065	1/1	0.16	-	0,0,0,0	0

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Mol	Type	Chain	Res	Atoms	RSR	LLDF	B-factors(\AA^2)	Q<0.9
58	MG	RP	201	1/1	0.98	-	118,118,118,118	0
59	ZN	XN	101	1/1	0.08	-	70,70,70,70	0
58	MG	YA	3022	1/1	0.27	-	7,7,7,7	0
58	MG	QA	1670	1/1	0.41	-	5,5,5,5	0
58	MG	QA	1639	1/1	0.27	-	33,33,33,33	0
58	MG	QA	1604	1/1	0.24	-	5,5,5,5	0
58	MG	QA	1651	1/1	0.17	-	5,5,5,5	0
58	MG	YA	3058	1/1	0.17	-	20,20,20,20	0
58	MG	QA	1649	1/1	0.14	-	32,32,32,32	0
58	MG	YA	3227	1/1	0.37	-	39,39,39,39	0
58	MG	RE	301	1/1	0.21	-	9,9,9,9	0
58	MG	XA	1624	1/1	0.09	-	22,22,22,22	0
58	MG	YA	3035	1/1	0.34	-	12,12,12,12	0
58	MG	QA	1611	1/1	0.10	-	1,1,1,1	0
58	MG	RA	3237	1/1	0.32	-	6,6,6,6	0
58	MG	YA	3157	1/1	0.13	-	0,0,0,0	0
58	MG	R5	101	1/1	0.29	-	11,11,11,11	0
58	MG	QA	1609	1/1	0.13	-	32,32,32,32	0
58	MG	RA	3135	1/1	0.18	-	12,12,12,12	0
58	MG	RA	3222	1/1	0.15	-	2,2,2,2	0
58	MG	YA	3150	1/1	0.32	-	16,16,16,16	0
58	MG	YA	3218	1/1	0.70	-	59,59,59,59	0
58	MG	RA	3152	1/1	0.22	-	14,14,14,14	0
58	MG	RA	3058	1/1	0.11	-	5,5,5,5	0
58	MG	XA	1666	1/1	0.62	-	85,85,85,85	0
58	MG	RA	3085	1/1	0.18	-	7,7,7,7	0
58	MG	YA	3068	1/1	0.22	-	20,20,20,20	0
58	MG	RA	3210	1/1	0.19	-	8,8,8,8	0
58	MG	XA	1676	1/1	0.46	-	19,19,19,19	0
58	MG	XA	1631	1/1	0.17	-	4,4,4,4	0
58	MG	RA	3212	1/1	0.92	-	73,73,73,73	0
58	MG	RA	3040	1/1	0.17	-	13,13,13,13	0
58	MG	RA	3018	1/1	0.15	-	5,5,5,5	0
58	MG	YA	3146	1/1	0.20	-	40,40,40,40	0
58	MG	XV	101	1/1	0.12	-	3,3,3,3	0
58	MG	RA	3219	1/1	0.19	-	8,8,8,8	0
58	MG	XA	1619	1/1	0.25	-	5,5,5,5	0
58	MG	YA	3251	1/1	0.57	-	10,10,10,10	0
58	MG	RA	3147	1/1	0.21	-	32,32,32,32	0
58	MG	XA	1656	1/1	0.24	-	17,17,17,17	0
58	MG	RA	3078	1/1	0.20	-	16,16,16,16	0
58	MG	XA	1623	1/1	0.11	-	28,28,28,28	0

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Mol	Type	Chain	Res	Atoms	RSR	LLDF	B-factors(\AA^2)	Q<0.9
58	MG	YA	3144	1/1	0.15	-	6,6,6,6	0
58	MG	YA	3069	1/1	0.24	-	12,12,12,12	0
58	MG	YA	3060	1/1	0.24	-	8,8,8,8	0
58	MG	QA	1641	1/1	0.16	-	43,43,43,43	0
58	MG	QA	1654	1/1	0.18	-	12,12,12,12	0
58	MG	YA	3121	1/1	0.10	-	6,6,6,6	0
58	MG	RA	3038	1/1	0.20	-	4,4,4,4	0
58	MG	YA	3127	1/1	0.34	-	23,23,23,23	0
58	MG	YA	3082	1/1	0.13	-	17,17,17,17	0
58	MG	YA	3047	1/1	0.26	-	3,3,3,3	0
58	MG	RA	3031	1/1	0.31	-	9,9,9,9	0
58	MG	QA	1665	1/1	0.13	-	37,37,37,37	0
58	MG	QA	1608	1/1	0.09	-	4,4,4,4	0
58	MG	XA	1615	1/1	0.07	-	19,19,19,19	0
58	MG	YA	3136	1/1	0.15	-	0,0,0,0	0
58	MG	RA	3097	1/1	0.20	-	5,5,5,5	0
58	MG	YA	3189	1/1	0.07	-	30,30,30,30	0
58	MG	RA	3217	1/1	0.11	-	8,8,8,8	0
58	MG	RA	3164	1/1	0.39	-	45,45,45,45	0
58	MG	YA	3078	1/1	0.15	-	9,9,9,9	0
58	MG	XA	1679	1/1	0.19	-	18,18,18,18	0
58	MG	XB	301	1/1	0.20	-	41,41,41,41	0
58	MG	Y0	101	1/1	0.41	-	74,74,74,74	0
58	MG	RA	3142	1/1	0.34	-	20,20,20,20	0
58	MG	RA	3215	1/1	0.30	-	13,13,13,13	0
58	MG	RA	3106	1/1	0.13	-	6,6,6,6	0
58	MG	QA	1664	1/1	0.17	-	56,56,56,56	0
58	MG	YA	3151	1/1	0.18	-	3,3,3,3	0
58	MG	XA	1649	1/1	0.12	-	17,17,17,17	0
58	MG	RA	3145	1/1	0.15	-	3,3,3,3	0
58	MG	QA	1642	1/1	0.16	-	38,38,38,38	0
58	MG	RA	3186	1/1	0.33	-	17,17,17,17	0
58	MG	RA	3039	1/1	0.23	-	7,7,7,7	0
58	MG	XA	1609	1/1	0.24	-	51,51,51,51	0
58	MG	QA	1669	1/1	0.21	-	18,18,18,18	0
58	MG	XA	1617	1/1	0.43	-	74,74,74,74	0
58	MG	YA	3207	1/1	0.38	-	55,55,55,55	0
58	MG	QA	1653	1/1	0.22	-	0,0,0,0	0
58	MG	YA	3181	1/1	0.34	-	0,0,0,0	0
58	MG	RA	3183	1/1	0.43	-	11,11,11,11	0
58	MG	XA	1669	1/1	0.06	-	55,55,55,55	0
58	MG	XA	1671	1/1	0.31	-	33,33,33,33	0

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Mol	Type	Chain	Res	Atoms	RSR	LLDF	B-factors(\AA^2)	Q<0.9
58	MG	YA	3158	1/1	0.44	-	21,21,21,21	0
58	MG	RA	3244	1/1	0.17	-	0,0,0,0	0
58	MG	RA	3115	1/1	0.25	-	21,21,21,21	0
58	MG	RA	3184	1/1	0.29	-	23,23,23,23	0
58	MG	RA	3057	1/1	0.13	-	4,4,4,4	0
58	MG	YA	3119	1/1	0.27	-	9,9,9,9	0
58	MG	YA	3229	1/1	0.13	-	14,14,14,14	0
58	MG	YA	3010	1/1	0.26	-	15,15,15,15	0
58	MG	QA	1619	1/1	0.34	-	12,12,12,12	0
58	MG	RA	3220	1/1	0.12	-	13,13,13,13	0
58	MG	QA	1602	1/1	0.25	-	6,6,6,6	0
58	MG	YA	3188	1/1	0.13	-	13,13,13,13	0
58	MG	XA	1658	1/1	0.13	-	3,3,3,3	0
58	MG	RA	3195	1/1	0.10	-	7,7,7,7	0
58	MG	RA	3136	1/1	0.18	-	5,5,5,5	0
58	MG	RA	3189	1/1	0.10	-	14,14,14,14	0
58	MG	YA	3083	1/1	0.23	-	5,5,5,5	0
58	MG	YA	3254	1/1	0.30	-	16,16,16,16	0
58	MG	YP	201	1/1	1.24	-	54,54,54,54	0
58	MG	YA	3214	1/1	0.53	-	50,50,50,50	0
58	MG	RA	3243	1/1	0.24	-	1,1,1,1	0
58	MG	YA	3209	1/1	0.14	-	7,7,7,7	0
58	MG	RA	3071	1/1	0.23	-	11,11,11,11	0
58	MG	QA	1626	1/1	0.08	-	17,17,17,17	0
58	MG	RA	3091	1/1	0.30	-	9,9,9,9	0
58	MG	YA	3093	1/1	0.24	-	10,10,10,10	0
58	MG	YA	3177	1/1	0.12	-	4,4,4,4	0
58	MG	RA	3167	1/1	0.15	-	1,1,1,1	0
58	MG	RA	3100	1/1	0.13	-	0,0,0,0	0
58	MG	YA	3137	1/1	0.15	-	10,10,10,10	0
58	MG	YA	3053	1/1	0.26	-	8,8,8,8	0
58	MG	XA	1647	1/1	0.17	-	22,22,22,22	0
58	MG	YA	3141	1/1	0.13	-	19,19,19,19	0
58	MG	RA	3087	1/1	0.15	-	10,10,10,10	0
58	MG	XA	1667	1/1	0.25	-	34,34,34,34	0
58	MG	RA	3123	1/1	0.08	-	10,10,10,10	0
58	MG	YA	3095	1/1	0.23	-	19,19,19,19	0
58	MG	RA	3014	1/1	0.24	-	28,28,28,28	0
58	MG	YA	3067	1/1	0.26	-	17,17,17,17	0
58	MG	YA	3199	1/1	0.30	-	12,12,12,12	0
58	MG	YA	3163	1/1	0.31	-	21,21,21,21	0
58	MG	YA	3167	1/1	0.14	-	15,15,15,15	0

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Mol	Type	Chain	Res	Atoms	RSR	LLDF	B-factors(\AA^2)	Q<0.9
58	MG	YA	3077	1/1	0.25	-	6,6,6,6	0
58	MG	XA	1636	1/1	0.15	-	8,8,8,8	0
58	MG	RA	3046	1/1	0.34	-	24,24,24,24	0
58	MG	RA	3159	1/1	0.12	-	23,23,23,23	0
58	MG	YA	3148	1/1	0.18	-	15,15,15,15	0
58	MG	RA	3045	1/1	0.12	-	2,2,2,2	0
58	MG	RA	3096	1/1	0.25	-	17,17,17,17	0
58	MG	QA	1658	1/1	0.17	-	39,39,39,39	0
58	MG	RA	3128	1/1	0.08	-	9,9,9,9	0
58	MG	YA	3036	1/1	0.27	-	11,11,11,11	0
58	MG	QA	1637	1/1	0.13	-	17,17,17,17	0
58	MG	YA	3090	1/1	0.34	-	26,26,26,26	0
58	MG	QA	1628	1/1	0.16	-	10,10,10,10	0
58	MG	RA	3188	1/1	0.72	-	48,48,48,48	0
58	MG	RA	3059	1/1	0.22	-	8,8,8,8	0
58	MG	YP	202	1/1	0.11	-	1,1,1,1	0
58	MG	YA	3243	1/1	0.19	-	13,13,13,13	0
58	MG	XA	1626	1/1	0.10	-	15,15,15,15	0
58	MG	XA	1668	1/1	0.16	-	0,0,0,0	0
58	MG	RA	3225	1/1	0.56	-	33,33,33,33	0
58	MG	YA	3226	1/1	0.17	-	11,11,11,11	0
58	MG	RA	3236	1/1	0.39	-	13,13,13,13	0
58	MG	RA	3176	1/1	0.05	-	21,21,21,21	0
58	MG	YA	3192	1/1	0.34	-	21,21,21,21	0
58	MG	QA	1640	1/1	0.25	-	13,13,13,13	0
58	MG	YA	3212	1/1	0.08	-	10,10,10,10	0
58	MG	RA	3089	1/1	0.15	-	6,6,6,6	0
58	MG	RA	3174	1/1	0.07	-	17,17,17,17	0
58	MG	XA	1638	1/1	0.12	-	4,4,4,4	0
58	MG	RA	3218	1/1	0.13	-	17,17,17,17	0
58	MG	QA	1673	1/1	0.25	-	9,9,9,9	0
58	MG	YA	3120	1/1	0.38	-	46,46,46,46	0
58	MG	YA	3222	1/1	0.23	-	13,13,13,13	0
58	MG	RA	3105	1/1	0.16	-	14,14,14,14	0
58	MG	RA	3205	1/1	0.48	-	17,17,17,17	0
58	MG	RA	3032	1/1	0.21	-	14,14,14,14	0
58	MG	YA	3001	1/1	0.20	-	23,23,23,23	0
58	MG	YA	3046	1/1	0.47	-	74,74,74,74	0
58	MG	QA	1630	1/1	0.19	-	7,7,7,7	0
58	MG	RA	3049	1/1	0.21	-	12,12,12,12	0
58	MG	QA	1627	1/1	0.24	-	30,30,30,30	0
58	MG	RB	202	1/1	0.22	-	29,29,29,29	0

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Mol	Type	Chain	Res	Atoms	RSR	LLDF	B-factors(\AA^2)	Q<0.9
58	MG	YA	3168	1/1	0.20	-	3,3,3,3	0
58	MG	RA	3179	1/1	0.13	-	4,4,4,4	0
58	MG	XA	1640	1/1	0.28	-	27,27,27,27	0
58	MG	YA	3055	1/1	0.30	-	6,6,6,6	0
58	MG	YA	3108	1/1	0.33	-	7,7,7,7	0
58	MG	XA	1672	1/1	0.12	-	16,16,16,16	0
58	MG	RA	3185	1/1	0.18	-	16,16,16,16	0
58	MG	YA	3260	1/1	0.80	-	74,74,74,74	0
58	MG	YA	3264	1/1	0.44	-	5,5,5,5	0
58	MG	RA	3068	1/1	0.21	-	13,13,13,13	0
58	MG	YA	3019	1/1	0.37	-	13,13,13,13	0
58	MG	RA	3224	1/1	1.02	-	142,142,142,142	0
58	MG	YA	3180	1/1	0.31	-	19,19,19,19	0
58	MG	R0	101	1/1	0.09	-	2,2,2,2	0
58	MG	RA	3041	1/1	0.22	-	9,9,9,9	0
58	MG	RA	3021	1/1	0.18	-	18,18,18,18	0
58	MG	YA	3258	1/1	0.40	-	4,4,4,4	0
58	MG	RA	3169	1/1	0.19	-	13,13,13,13	0
58	MG	QA	1614	1/1	0.17	-	2,2,2,2	0
58	MG	YA	3031	1/1	0.21	-	5,5,5,5	0
58	MG	RA	3206	1/1	0.08	-	5,5,5,5	0
58	MG	RA	3233	1/1	0.19	-	42,42,42,42	0
58	MG	QA	1674	1/1	0.21	-	8,8,8,8	0
58	MG	QA	1677	1/1	0.19	-	47,47,47,47	0
58	MG	XA	1616	1/1	0.20	-	5,5,5,5	0
58	MG	RA	3093	1/1	0.23	-	12,12,12,12	0
58	MG	YA	3062	1/1	0.20	-	4,4,4,4	0
58	MG	YA	3106	1/1	0.23	-	16,16,16,16	0
58	MG	QA	1624	1/1	0.10	-	26,26,26,26	0
58	MG	XA	1645	1/1	0.16	-	5,5,5,5	0
58	MG	YA	3200	1/1	0.14	-	6,6,6,6	0
58	MG	YA	3184	1/1	0.21	-	23,23,23,23	0
58	MG	RA	3060	1/1	0.17	-	15,15,15,15	0
58	MG	RA	3223	1/1	0.39	-	54,54,54,54	0
58	MG	RA	3239	1/1	0.13	-	0,0,0,0	0
58	MG	YA	3040	1/1	0.17	-	19,19,19,19	0
58	MG	XA	1681	1/1	0.19	-	31,31,31,31	0
58	MG	YA	3103	1/1	0.26	-	8,8,8,8	0
58	MG	RA	3161	1/1	0.20	-	10,10,10,10	0
58	MG	XA	1607	1/1	0.30	-	7,7,7,7	0
58	MG	RA	3168	1/1	0.17	-	3,3,3,3	0
58	MG	RA	3009	1/1	0.92	-	74,74,74,74	0

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Mol	Type	Chain	Res	Atoms	RSR	LLDF	B-factors(\AA^2)	Q<0.9
58	MG	QA	1629	1/1	0.22	-	11,11,11,11	0
58	MG	YA	3261	1/1	0.41	-	16,16,16,16	0
58	MG	RA	3241	1/1	0.12	-	8,8,8,8	0
58	MG	XA	1654	1/1	0.33	-	54,54,54,54	0
58	MG	RA	3016	1/1	0.14	-	8,8,8,8	0
58	MG	RA	3216	1/1	0.32	-	2,2,2,2	0
58	MG	RA	3130	1/1	0.18	-	15,15,15,15	0
58	MG	YA	3038	1/1	0.35	-	16,16,16,16	0
58	MG	XA	1646	1/1	0.14	-	21,21,21,21	0
58	MG	YA	3257	1/1	0.25	-	14,14,14,14	0
58	MG	YA	3085	1/1	0.28	-	17,17,17,17	0
58	MG	YA	3130	1/1	0.31	-	21,21,21,21	0
58	MG	YA	3131	1/1	0.17	-	16,16,16,16	0
58	MG	XA	1618	1/1	0.12	-	0,0,0,0	0
58	MG	RA	3118	1/1	0.22	-	16,16,16,16	0
58	MG	YA	3002	1/1	0.24	-	0,0,0,0	0
58	MG	XA	1664	1/1	0.18	-	22,22,22,22	0
58	MG	XA	1613	1/1	0.16	-	8,8,8,8	0
58	MG	YA	3011	1/1	0.21	-	9,9,9,9	0
58	MG	YA	3116	1/1	0.23	-	14,14,14,14	0
58	MG	RA	3232	1/1	0.10	-	15,15,15,15	0
58	MG	YA	3223	1/1	0.24	-	34,34,34,34	0
58	MG	YA	3109	1/1	0.08	-	10,10,10,10	0
58	MG	RA	3175	1/1	0.23	-	14,14,14,14	0
58	MG	YA	3220	1/1	0.14	-	1,1,1,1	0
58	MG	YA	3165	1/1	0.28	-	1,1,1,1	0
58	MG	XA	1611	1/1	0.14	-	11,11,11,11	0
58	MG	RA	3127	1/1	0.14	-	22,22,22,22	0
58	MG	YA	3194	1/1	0.38	-	36,36,36,36	0
58	MG	YA	3210	1/1	0.16	-	17,17,17,17	0
58	MG	YA	3004	1/1	0.14	-	11,11,11,11	0
58	MG	YA	3129	1/1	0.14	-	20,20,20,20	0
58	MG	R8	102	1/1	0.22	-	2,2,2,2	0
58	MG	YA	3233	1/1	0.28	-	34,34,34,34	0
58	MG	RA	3006	1/1	0.38	-	10,10,10,10	0
58	MG	RA	3209	1/1	0.26	-	47,47,47,47	0
58	MG	YA	3122	1/1	0.23	-	9,9,9,9	0
58	MG	RB	201	1/1	0.10	-	16,16,16,16	0
58	MG	YA	3247	1/1	0.81	-	34,34,34,34	0
58	MG	YA	3162	1/1	0.23	-	11,11,11,11	0
58	MG	YA	3239	1/1	0.17	-	41,41,41,41	0
58	MG	RA	3162	1/1	0.49	-	18,18,18,18	0

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Mol	Type	Chain	Res	Atoms	RSR	LLDF	B-factors(\AA^2)	Q<0.9
58	MG	YD	301	1/1	0.44	-	74,74,74,74	0
58	MG	YA	3166	1/1	0.11	-	11,11,11,11	0
58	MG	YQ	201	1/1	0.10	-	90,90,90,90	0
58	MG	YA	3101	1/1	0.33	-	5,5,5,5	0
58	MG	YA	3179	1/1	0.23	-	26,26,26,26	0
58	MG	XA	1627	1/1	0.14	-	12,12,12,12	0
58	MG	YA	3187	1/1	0.31	-	41,41,41,41	0
58	MG	RA	3030	1/1	0.34	-	8,8,8,8	0
58	MG	YA	3142	1/1	0.51	-	31,31,31,31	0
58	MG	YA	3190	1/1	0.18	-	8,8,8,8	0
58	MG	YA	3155	1/1	0.34	-	45,45,45,45	0
58	MG	QA	1647	1/1	0.39	-	38,38,38,38	0
58	MG	XA	1674	1/1	0.16	-	4,4,4,4	0
58	MG	QF	201	1/1	0.14	-	36,36,36,36	0
58	MG	YA	3197	1/1	1.04	-	42,42,42,42	0
58	MG	YA	3099	1/1	0.62	-	74,74,74,74	0
58	MG	RA	3067	1/1	0.88	-	74,74,74,74	0
58	MG	YA	3232	1/1	0.28	-	35,35,35,35	0
58	MG	YA	3231	1/1	0.23	-	34,34,34,34	0
58	MG	RA	3240	1/1	0.32	-	5,5,5,5	0
58	MG	YA	3079	1/1	0.20	-	22,22,22,22	0
58	MG	YA	3147	1/1	0.44	-	9,9,9,9	0
58	MG	QA	1661	1/1	0.12	-	50,50,50,50	0
58	MG	YA	3240	1/1	0.13	-	12,12,12,12	0
58	MG	YA	3052	1/1	0.14	-	12,12,12,12	0
58	MG	RA	3190	1/1	0.05	-	40,40,40,40	0
58	MG	XA	1662	1/1	0.14	-	12,12,12,12	0
58	MG	RA	3228	1/1	0.12	-	13,13,13,13	0
58	MG	RA	3092	1/1	0.24	-	0,0,0,0	0
58	MG	YA	3171	1/1	0.27	-	22,22,22,22	0
58	MG	RA	3196	1/1	0.33	-	63,63,63,63	0
58	MG	YA	3025	1/1	0.11	-	16,16,16,16	0
58	MG	YA	3033	1/1	0.21	-	12,12,12,12	0
58	MG	YA	3066	1/1	0.32	-	6,6,6,6	0
58	MG	QA	1615	1/1	0.21	-	9,9,9,9	0
58	MG	RA	3143	1/1	0.14	-	5,5,5,5	0
58	MG	RA	3157	1/1	0.47	-	37,37,37,37	0
58	MG	RF	301	1/1	0.20	-	13,13,13,13	0
58	MG	RA	3028	1/1	0.28	-	17,17,17,17	0
58	MG	RA	3104	1/1	0.17	-	11,11,11,11	0
58	MG	YA	3182	1/1	0.25	-	3,3,3,3	0
58	MG	XA	1603	1/1	0.09	-	1,1,1,1	0

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Mol	Type	Chain	Res	Atoms	RSR	LLDF	B-factors(\AA^2)	Q<0.9
58	MG	YA	3256	1/1	0.66	-	74,74,74,74	0
58	MG	YA	3235	1/1	0.32	-	26,26,26,26	0
58	MG	QA	1635	1/1	0.61	-	76,76,76,76	0
58	MG	XA	1665	1/1	0.18	-	33,33,33,33	0
58	MG	RA	3008	1/1	0.55	-	6,6,6,6	0
58	MG	RA	3113	1/1	0.11	-	1,1,1,1	0
58	MG	XA	1655	1/1	0.43	-	68,68,68,68	0
58	MG	YA	3071	1/1	0.13	-	1,1,1,1	0
58	MG	YA	3195	1/1	0.18	-	5,5,5,5	0
58	MG	XA	1652	1/1	0.06	-	32,32,32,32	0
58	MG	RA	3035	1/1	0.08	-	2,2,2,2	0
58	MG	QA	1663	1/1	0.18	-	19,19,19,19	0
58	MG	RA	3148	1/1	0.26	-	47,47,47,47	0
58	MG	RA	3001	1/1	0.26	-	16,16,16,16	0
58	MG	YA	3173	1/1	0.31	-	15,15,15,15	0
58	MG	RA	3080	1/1	0.22	-	10,10,10,10	0
58	MG	RA	3226	1/1	0.28	-	1,1,1,1	0
58	MG	YA	3100	1/1	0.23	-	8,8,8,8	0
58	MG	YB	203	1/1	0.15	-	4,4,4,4	0
58	MG	RA	3129	1/1	0.25	-	21,21,21,21	0
58	MG	YX	101	1/1	0.14	-	47,47,47,47	0
58	MG	YA	3014	1/1	0.41	-	74,74,74,74	0
58	MG	RA	3133	1/1	0.16	-	7,7,7,7	0
58	MG	YA	3175	1/1	0.25	-	14,14,14,14	0
58	MG	RA	3061	1/1	0.12	-	0,0,0,0	0
58	MG	YD	302	1/1	0.21	-	5,5,5,5	0
58	MG	YA	3042	1/1	0.21	-	15,15,15,15	0
58	MG	RA	3125	1/1	0.42	-	19,19,19,19	0
58	MG	YA	3198	1/1	0.29	-	18,18,18,18	0
58	MG	RA	3066	1/1	0.16	-	7,7,7,7	0
58	MG	RA	3050	1/1	0.16	-	9,9,9,9	0
58	MG	XA	1680	1/1	0.26	-	45,45,45,45	0
58	MG	RA	3172	1/1	0.25	-	42,42,42,42	0
58	MG	QA	1606	1/1	0.45	-	10,10,10,10	0
58	MG	XA	1602	1/1	0.25	-	15,15,15,15	0
58	MG	RA	3056	1/1	0.46	-	74,74,74,74	0
58	MG	YA	3086	1/1	0.14	-	3,3,3,3	0
58	MG	QM	201	1/1	0.06	-	51,51,51,51	0
58	MG	RA	3131	1/1	0.35	-	7,7,7,7	0
58	MG	YA	3149	1/1	0.23	-	16,16,16,16	0
58	MG	YA	3024	1/1	0.21	-	10,10,10,10	0
58	MG	YA	3041	1/1	0.58	-	74,74,74,74	0

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Mol	Type	Chain	Res	Atoms	RSR	LLDF	B-factors(\AA^2)	Q<0.9
58	MG	RA	3099	1/1	0.28	-	11,11,11,11	0
58	MG	QA	1603	1/1	0.26	-	11,11,11,11	0
58	MG	RA	3187	1/1	0.25	-	42,42,42,42	0
58	MG	YA	3215	1/1	0.16	-	42,42,42,42	0
58	MG	XA	1608	1/1	0.23	-	1,1,1,1	0
58	MG	RA	3010	1/1	0.49	-	14,14,14,14	0
58	MG	YA	3228	1/1	0.15	-	9,9,9,9	0
58	MG	RA	3119	1/1	0.10	-	20,20,20,20	0
58	MG	QA	1671	1/1	0.20	-	6,6,6,6	0
58	MG	YA	3061	1/1	0.12	-	15,15,15,15	0
58	MG	RA	3230	1/1	0.22	-	41,41,41,41	0
58	MG	RA	3156	1/1	0.09	-	9,9,9,9	0
58	MG	YA	3044	1/1	0.27	-	2,2,2,2	0
58	MG	RA	3047	1/1	0.17	-	19,19,19,19	0
58	MG	YA	3115	1/1	0.24	-	17,17,17,17	0
58	MG	YA	3242	1/1	0.13	-	9,9,9,9	0
58	MG	RA	3090	1/1	0.20	-	6,6,6,6	0
58	MG	RA	3109	1/1	0.23	-	0,0,0,0	0
58	MG	RA	3073	1/1	0.21	-	10,10,10,10	0
58	MG	YA	3265	1/1	0.15	-	24,24,24,24	0
58	MG	RA	3144	1/1	0.38	-	32,32,32,32	0
58	MG	YA	3225	1/1	0.12	-	12,12,12,12	0
58	MG	YA	3262	1/1	0.26	-	26,26,26,26	0
58	MG	QA	1634	1/1	0.48	-	23,23,23,23	0
58	MG	YA	3064	1/1	0.15	-	4,4,4,4	0
58	MG	YA	3094	1/1	0.23	-	12,12,12,12	0
58	MG	QA	1666	1/1	0.10	-	68,68,68,68	0
58	MG	RA	3163	1/1	0.17	-	34,34,34,34	0
58	MG	YA	3056	1/1	0.26	-	5,5,5,5	0
58	MG	RA	3086	1/1	0.23	-	22,22,22,22	0
58	MG	YA	3049	1/1	0.42	-	74,74,74,74	0
58	MG	RA	3120	1/1	0.14	-	4,4,4,4	0
58	MG	RA	3197	1/1	0.16	-	81,81,81,81	0
58	MG	QV	101	1/1	0.18	-	22,22,22,22	0
58	MG	RA	3023	1/1	0.21	-	9,9,9,9	0
58	MG	RA	3170	1/1	0.14	-	9,9,9,9	0
58	MG	YA	3183	1/1	0.10	-	19,19,19,19	0
58	MG	RA	3177	1/1	0.31	-	15,15,15,15	0
58	MG	XA	1660	1/1	0.09	-	22,22,22,22	0
58	MG	RA	3191	1/1	0.19	-	46,46,46,46	0
58	MG	YA	3123	1/1	0.22	-	1,1,1,1	0
58	MG	YA	3245	1/1	0.26	-	33,33,33,33	0

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Mol	Type	Chain	Res	Atoms	RSR	LLDF	B-factors(\AA^2)	Q<0.9
58	MG	RD	301	1/1	0.34	-	12,12,12,12	0
58	MG	YA	3027	1/1	0.21	-	21,21,21,21	0
58	MG	XA	1635	1/1	0.15	-	26,26,26,26	0
58	MG	RA	3235	1/1	0.39	-	74,74,74,74	0
58	MG	YA	3132	1/1	0.17	-	7,7,7,7	0
58	MG	XA	1677	1/1	0.15	-	2,2,2,2	0
58	MG	YA	3253	1/1	0.14	-	22,22,22,22	0
58	MG	RA	3054	1/1	0.25	-	18,18,18,18	0
58	MG	RA	3207	1/1	0.21	-	7,7,7,7	0
58	MG	YA	3230	1/1	0.15	-	42,42,42,42	0
58	MG	XA	1653	1/1	0.28	-	42,42,42,42	0
58	MG	YA	3255	1/1	0.45	-	12,12,12,12	0
58	MG	YA	3172	1/1	0.41	-	40,40,40,40	0
58	MG	YA	3178	1/1	0.28	-	17,17,17,17	0
58	MG	RA	3015	1/1	0.34	-	0,0,0,0	0
58	MG	YA	3202	1/1	0.20	-	38,38,38,38	0
58	MG	RA	3201	1/1	0.27	-	34,34,34,34	0
58	MG	YA	3007	1/1	0.17	-	8,8,8,8	0
58	MG	XA	1612	1/1	0.29	-	10,10,10,10	0
58	MG	YA	3029	1/1	0.24	-	12,12,12,12	0
58	MG	QA	1621	1/1	0.22	-	38,38,38,38	0
58	MG	RA	3246	1/1	0.14	-	33,33,33,33	0
58	MG	RA	3165	1/1	0.24	-	30,30,30,30	0
58	MG	RA	3171	1/1	0.27	-	31,31,31,31	0
58	MG	YA	3224	1/1	0.25	-	18,18,18,18	0
58	MG	YA	3096	1/1	0.21	-	6,6,6,6	0
58	MG	YA	3213	1/1	0.23	-	31,31,31,31	0
58	MG	RA	3150	1/1	0.20	-	27,27,27,27	0
58	MG	YA	3237	1/1	0.43	-	36,36,36,36	0
58	MG	YA	3176	1/1	0.12	-	45,45,45,45	0
58	MG	QA	1623	1/1	0.19	-	46,46,46,46	0
58	MG	RA	3103	1/1	0.23	-	5,5,5,5	0
58	MG	YA	3023	1/1	0.29	-	18,18,18,18	0
58	MG	YA	3057	1/1	0.39	-	11,11,11,11	0
58	MG	XA	1642	1/1	0.21	-	47,47,47,47	0
58	MG	QA	1616	1/1	0.19	-	52,52,52,52	0
58	MG	RA	3012	1/1	0.35	-	31,31,31,31	0
58	MG	QA	1646	1/1	0.06	-	28,28,28,28	0
58	MG	YA	3196	1/1	0.10	-	41,41,41,41	0
58	MG	YA	3063	1/1	0.37	-	12,12,12,12	0
58	MG	RA	3229	1/1	0.21	-	23,23,23,23	0
58	MG	XA	1650	1/1	0.27	-	14,14,14,14	0

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Mol	Type	Chain	Res	Atoms	RSR	LLDF	B-factors(\AA^2)	Q<0.9
58	MG	RA	3238	1/1	0.27	-	32,32,32,32	0
58	MG	YA	3050	1/1	0.25	-	5,5,5,5	0
58	MG	RA	3126	1/1	0.24	-	16,16,16,16	0
58	MG	YA	3263	1/1	0.31	-	40,40,40,40	0
58	MG	YA	3138	1/1	0.19	-	6,6,6,6	0
58	MG	QA	1632	1/1	0.27	-	42,42,42,42	0
58	MG	RA	3026	1/1	0.18	-	7,7,7,7	0
58	MG	YA	3164	1/1	0.38	-	44,44,44,44	0
58	MG	YA	3161	1/1	0.24	-	23,23,23,23	0
58	MG	XA	1682	1/1	0.16	-	35,35,35,35	0
58	MG	RA	3084	1/1	0.17	-	14,14,14,14	0
58	MG	YA	3059	1/1	0.15	-	11,11,11,11	0
58	MG	XA	1604	1/1	0.30	-	9,9,9,9	0
58	MG	Y5	101	1/1	0.26	-	13,13,13,13	0
58	MG	YA	3021	1/1	0.25	-	8,8,8,8	0
58	MG	RA	3146	1/1	0.14	-	25,25,25,25	0
58	MG	YA	3018	1/1	0.81	-	74,74,74,74	0

6.5 Other polymers ⓘ

There are no such residues in this entry.