Full wwPDB X-ray Structure Validation Report (i)

Jan 2, 2024 – 05:55 pm GMT

PDB ID	:	4WU1
Title	:	Complex of 70S ribosome with tRNA-Tyr and mRNA with G-U mismatch in the second position in the P-site
Authors	:	Rozov, A.; Demeshkina, N.; Yusupov, M.; Yusupova, G.
Deposited on	:	2014-10-30
Resolution	:	3.20 Å(reported)

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

We welcome your comments at *validation@mail.wwpdb.org*
A user guide is available at
https://www.wwpdb.org/validation/2017/XrayValidationReportHelp
with specific help available everywhere you see the (i) symbol.

The types of validation reports are described at
http://www.wwpdb.org/validation/2017/FAQs#types.

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

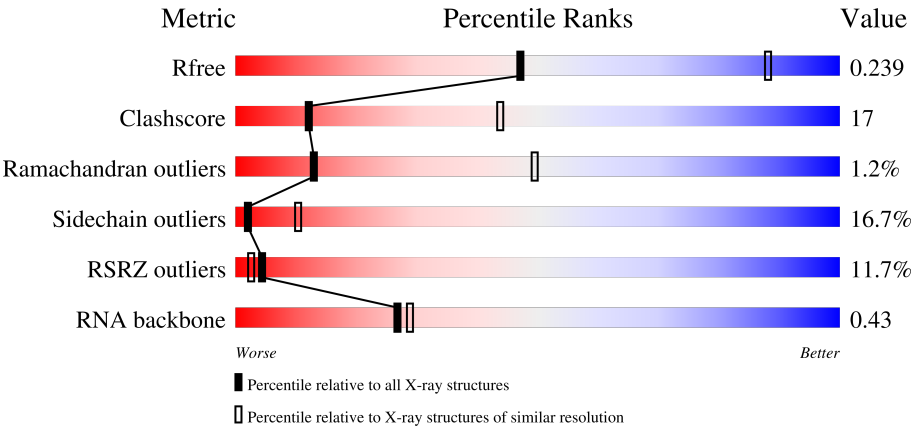
MolProbity	:	4.02b-467
Mogul	:	1.8.4, CSD as541be (2020)
Xtriage (Phenix)	:	1.13
EDS	:	2.36
Percentile statistics	:	20191225.v01 (using entries in the PDB archive December 25th 2019)
Refmac	:	5.8.0158
CCP4	:	7.0.044 (Gargrove)
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP)	:	2.36

1 Overall quality at a glance (i)

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

The reported resolution of this entry is 3.20 Å.

Percentile scores (ranging between 0-100) for global validation metrics of the entry are shown in the following graphic. The table shows the number of entries on which the scores are based.



Metric	Whole archive (#Entries)	Similar resolution (#Entries, resolution range(Å))
R_{free}	130704	1133 (3.20-3.20)
Clashscore	141614	1253 (3.20-3.20)
Ramachandran outliers	138981	1234 (3.20-3.20)
Sidechain outliers	138945	1233 (3.20-3.20)
RSRZ outliers	127900	1095 (3.20-3.20)
RNA backbone	3102	1010 (3.50-2.90)

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

Mol	Chain	Length	Quality of chain
1	13	1522	2% 33% 46% 17%
2	12	256	12% 42% 42% 8% 7%
2	1E	256	15% 43% 38% 12% 7%
3	22	239	12% 49% 29% 8% 14%

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Mol	Chain	Length	Quality of chain
3	2E	239	10% 50% 31% 5% 14%
4	32	209	28% 47% 44% 9%
4	3E	209	25% 56% 36% 7%
5	42	162	10% 44% 40% 9% 7%
5	4E	162	10% 56% 31% 6% 7%
6	52	101	% 66% 29%
6	5E	101	3% 51% 43% 5%
7	62	156	21% 58% 37%
7	6E	156	17% 60% 36%
8	72	138	18% 58% 38%
8	7E	138	30% 53% 42% 5%
9	82	128	54% 47% 42% 9%
9	8E	128	36% 55% 37% 6%
10	1A	105	29% 55% 30% 9% 6%
10	1I	105	23% 53% 36% 5% 6%
11	2A	129	9% 57% 33% 8%
11	2I	129	6% 51% 36% 10%
12	3A	132	30% 58% 28% 8% 5%
12	3I	132	22% 58% 31% 6% 5%
13	4A	126	23% 37% 48% 8% 7%
13	4I	126	21% 48% 40% 8%
14	5A	61	62% 49% 48%
14	5I	61	62% 44% 48% 7%
15	6A	89	26% 58% 37%
15	6I	89	8% 58% 35% 6%

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Mol	Chain	Length	Quality of chain
16	7A	88	17% 52% 39% 5% 5%
16	7I	88	33% 36% 51% 8% 5%
17	8A	105	23% 57% 30% 9% 5%
17	8I	105	13% 55% 32% 8% 5%
18	9A	88	43% 35% 18%
18	9I	88	5% 41% 39% 18%
19	AA	93	48% 33% 47% 6% 12%
19	AI	93	32% 43% 39% 8% 11%
20	BA	106	36% 53% 36% 5% 7%
20	BI	106	41% 37% 53% 7%
21	1B	27	70% 52% 41% 7%
21	1F	27	56% 56% 37% 7%
22	2K	85	9% 29% 35% 27% 5%
22	2L	85	5% 26% 25% 35% 6% 8%
22	3K	85	34% 38% 21% 7%
22	3L	85	29% 46% 21%
23	4K	27	7% 15% 7% 19% 59%
23	4L	27	11% 15% 78%
24	14	2917	30% 44% 21%
24	1H	2917	27% 44% 24% 5%
25	16	122	42% 34% 18% 6%
25	1J	122	24% 50% 21% 5%
26	71	229	15% 41% 16% 41%
26	79	229	17% 40% 19% 41%
27	11	276	6% 50% 37% 11%

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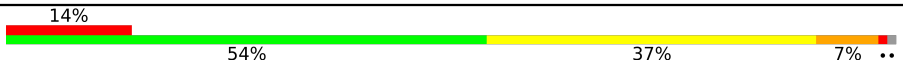
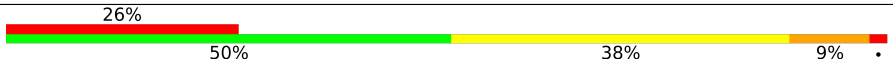
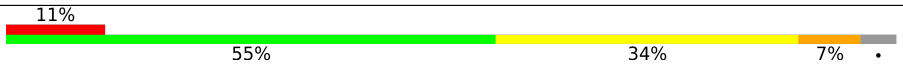
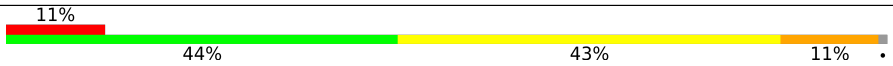
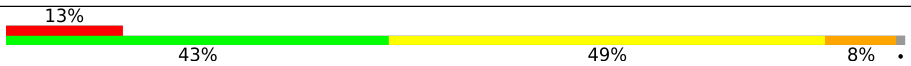
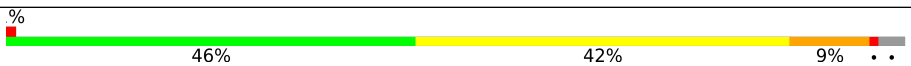
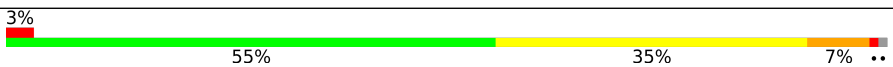
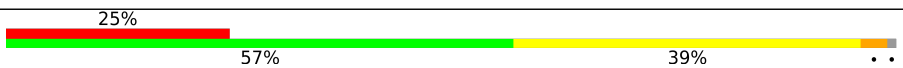
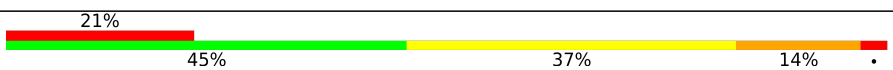
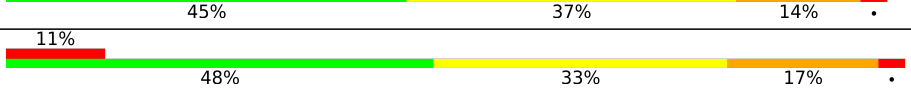
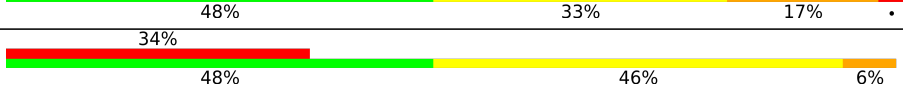
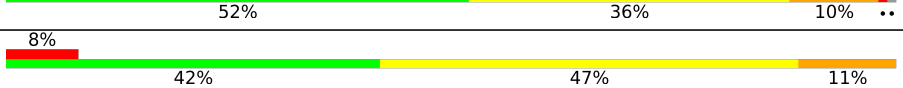
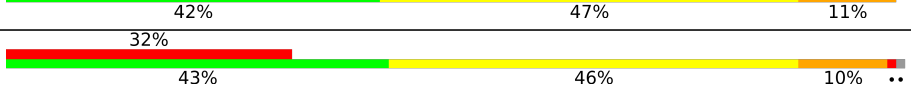
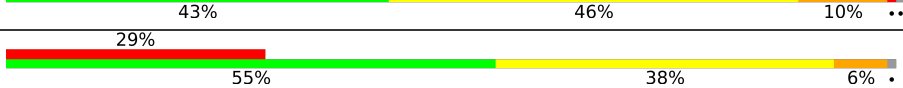
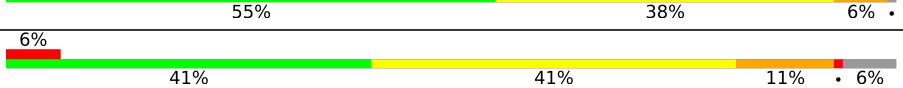
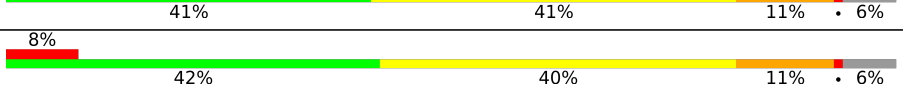
Mol	Chain	Length	Quality of chain
27	19	276	
28	21	206	
28	29	206	
29	31	210	
29	39	210	
30	41	182	
30	49	182	
31	51	180	
31	59	180	
32	61	148	
32	69	148	
33	15	140	
33	58	140	
34	25	122	
34	68	122	
35	35	150	
35	78	150	
36	45	141	
36	88	141	
37	55	118	
37	98	118	
38	65	112	
38	A8	112	
39	75	146	
39	B8	146	

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Mol	Chain	Length	Quality of chain
40	85	118	11% 58% 31% 10%
40	C8	118	27% 59% 34% 6%
41	95	101	10% 44% 44% 11%
41	D8	101	23% 49% 41% 10%
42	A5	113	18% 59% 36%
42	E8	113	11% 54% 33% 13%
43	B5	96	5% 65% 26% 6%
43	F8	96	5% 53% 34% 9%
44	C5	110	19% 29% 50% 15% 5%
44	G8	110	11% 40% 45% 7% 5%
45	D5	206	17% 33% 45% 8% 13%
45	H8	206	6% 38% 35% 11% 15%
46	E5	85	36% 48% 32% 9% 9%
46	I8	85	29% 54% 33% 11%
47	F5	98	32% 57% 32% 8%
47	J8	98	45% 47% 40% 11%
48	G5	72	4% 50% 35% 8%
48	K8	72	36% 42% 12% 8%
49	H5	60	27% 40% 47% 12%
49	L8	60	17% 40% 42% 17%
50	I5	71	25% 28% 42% 15% 11%
50	M8	71	48% 44% 42% 7% 7%
51	J5	60	12% 62% 27% 8%
51	N8	60	10% 48% 35% 15%
52	L5	49	24% 41% 49% 10%

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Mol	Chain	Length	Quality of chain
52	P8	49	8% 43% 41% 10%
53	M5	65	62% 48% 28% 14% 8%
53	Q8	65	20% 38% 35% 17% 5% 5%
54	1G	1522	3% 36% 45% 16%

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

Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
55	MG	13	1635	-	-	-	X
55	MG	13	1686	-	-	-	X
55	MG	13	1694	-	-	-	X
55	MG	14	3029	-	-	-	X
55	MG	14	3098	-	-	-	X
55	MG	14	3264	-	-	-	X
55	MG	14	3271	-	-	-	X
55	MG	14	3295	-	-	-	X
55	MG	14	3299	-	-	-	X
55	MG	14	3306	-	-	-	X
55	MG	14	3326	-	-	-	X
55	MG	14	3339	-	-	-	X
55	MG	14	3446	-	-	-	X
55	MG	1G	1628	-	-	-	X
55	MG	1G	1678	-	-	-	X
55	MG	1G	1692	-	-	-	X
55	MG	1G	1693	-	-	-	X
55	MG	1G	1711	-	-	-	X
55	MG	1G	1740	-	-	-	X
55	MG	1H	3051	-	-	-	X
55	MG	1H	3071	-	-	-	X
55	MG	1H	3131	-	-	-	X
55	MG	1H	3135	-	-	-	X
55	MG	1H	3139	-	-	-	X
55	MG	1H	3158	-	-	-	X
55	MG	1H	3175	-	-	-	X
55	MG	1H	3178	-	-	-	X
55	MG	1H	3192	-	-	-	X
55	MG	1H	3208	-	-	-	X
55	MG	1H	3227	-	-	-	X

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Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
55	MG	1H	3253	-	-	-	X
55	MG	1H	3256	-	-	-	X
55	MG	1H	3273	-	-	-	X
55	MG	1H	3294	-	-	-	X
55	MG	1H	3314	-	-	-	X
55	MG	1H	3332	-	-	-	X
55	MG	1H	3333	-	-	-	X
55	MG	1H	3342	-	-	-	X
55	MG	1H	3344	-	-	-	X
55	MG	1H	3351	-	-	-	X
55	MG	1H	3353	-	-	-	X
55	MG	1H	3358	-	-	-	X
55	MG	1H	3370	-	-	-	X
55	MG	1H	3505	-	-	-	X
55	MG	29	303	-	-	-	X
55	MG	78	202	-	-	-	X

2 Entry composition (i)

There are 57 unique types of molecules in this entry. The entry contains 299678 atoms, of which 0 are hydrogens and 0 are deuteriums.

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

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	P			
1	13	1501	32334	14391	5996	10443	1504	0	3	0

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
2	1E	237	1924	1228	344	347	5	0	0	0
			Total	C	N	O	S			
2	12	237	1924	1228	344	347	5	0	0	0

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
3	2E	205	1605	1011	313	280	1	0	0	0
			Total	C	N	O	S			
3	22	206	1612	1016	314	281	1	0	0	0

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
4	3E	208	1702	1066	339	290	7	0	0	0
			Total	C	N	O	S			
4	32	208	1702	1066	339	290	7	0	0	0

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

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

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Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
5	42	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	5E	101	Total	C	N	O	S	0	0	0
			842	531	155	153	3			
6	52	101	Total	C	N	O	S	0	0	0
			842	531	155	153	3			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
7	6E	155	Total	C	N	O	S	0	0	0
			1256	781	252	217	6			
7	62	155	Total	C	N	O	S	0	0	0
			1256	781	252	217	6			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
8	7E	138	Total	C	N	O	S	0	0	0
			1115	705	215	192	3			
8	72	138	Total	C	N	O	S	0	0	0
			1115	705	215	192	3			

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

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
9	8E	127	Total	C	N	O	0	0	0
			1009	639	197	173			
9	82	126	Total	C	N	O	0	0	0
			998	633	193	172			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
10	1I	99	Total	C	N	O	S	0	0	0
			801	504	157	139	1			
10	1A	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	2I	116	Total	C	N	O	S	0	0	0
			864	537	164	160	3			
11	2A	119	Total	C	N	O	S	0	0	0
			884	549	168	164	3			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
12	3I	125	Total	C	N	O	S	0	0	0
			975	614	196	164	1			
12	3A	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	4I	116	Total	C	N	O	S	0	0	0
			928	574	191	161	2			
13	4A	117	Total	C	N	O	S	0	0	0
			933	577	192	162	2			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
14	5I	60	Total	C	N	O	S	0	0	0
			491	312	104	71	4			
14	5A	60	Total	C	N	O	S	0	0	0
			491	312	104	71	4			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
15	6I	88	Total	C	N	O	S	0	0	0
			733	459	147	125	2			
15	6A	88	Total	C	N	O	S	0	0	0
			733	459	147	125	2			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
16	7I	84	Total	C	N	O	S	0	0	0
			705	446	140	118	1			
16	7A	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	8I	100	Total	C	N	O	S	0	0	0
			834	534	155	143	2			
17	8A	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	9I	72	Total	C	N	O	0	0	0
			590	376	117	97			
18	9A	72	Total	C	N	O	0	0	0
			590	376	117	97			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
19	AI	83	Total	C	N	O	S	0	0	0
			665	424	124	115	2			
19	AA	82	Total	C	N	O	S	0	0	0
			644	410	119	113	2			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
20	BI	99	Total	C	N	O	S	0	0	0
			762	470	162	128	2			
20	BA	99	Total	C	N	O	S	0	0	0
			762	470	162	128	2			

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

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
21	1F	25	Total	C	N	O	0	0	0
			217	134	52	31			

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Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
21	1B	25	Total	C	N	O	0	0	0
			217	134	52	31			

- Molecule 22 is a RNA chain called tRNA-Tyr.

Mol	Chain	Residues	Atoms						ZeroOcc	AltConf	Trace
22	2K	82	Total	C	N	O	P	S	0	0	0
			1765	795	315	571	82	2			
22	3K	85	Total	C	N	O	P	S	0	0	0
			1825	822	323	593	85	2			
22	2L	78	Total	C	N	O	P	S	0	0	0
			1678	756	297	545	78	2			
22	3L	85	Total	C	N	O	P	S	0	0	0
			1825	822	323	593	85	2			

- Molecule 23 is a RNA chain called mRNA.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
23	4K	11	Total	C	N	O	P	0	0	0
			239	108	50	70	11			
23	4L	6	Total	C	N	O	P	0	0	0
			129	58	25	40	6			

- Molecule 24 is a RNA chain called 23S ribosomal RNA.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
24	1H	2912	Total	C	N	O	P	0	1	0
			62729	27921	11727	20169	2912			
24	14	2909	Total	C	N	O	P	0	1	0
			62669	27894	11721	20145	2909			

There are 6 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
1H	161	U	-	insertion	GB 48268
1H	493	G	-	insertion	GB 48268
1H	1228	G	-	insertion	GB 48268
14	161	U	-	insertion	GB 48268
14	493	G	-	insertion	GB 48268
14	1228	G	-	insertion	GB 48268

- Molecule 25 is a RNA chain called 5S ribosomal RNA.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
25	16	122	Total	C	N	O	P	0	0	0
			2617	1166	486	844	121			
25	1J	122	Total	C	N	O	P	0	0	0
			2617	1166	486	844	121			

- Molecule 26 is a protein called 50S ribosomal protein L1.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
26	71	135	Total	C	N	O	S	0	0	0
			1049	662	197	189	1			
26	79	135	Total	C	N	O	S	0	0	0
			1049	662	197	189	1			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
27	11	272	Total	C	N	O	S	0	0	0
			2115	1335	420	357	3			
27	19	273	Total	C	N	O	S	0	0	0
			2120	1338	421	358	3			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
28	21	205	Total	C	N	O	S	0	0	0
			1568	991	300	271	6			
28	29	205	Total	C	N	O	S	0	0	0
			1568	991	300	271	6			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
29	31	202	Total	C	N	O	S	0	0	0
			1585	1011	297	275	2			
29	39	208	Total	C	N	O	S	0	0	0
			1627	1037	304	283	3			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
30	41	181	Total	C	N	O	S	0	0	0
			1473	942	268	259	4			

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Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
30	49	181	Total	C	N	O	S	0	0	0
			1473	942	268	259	4			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
31	51	174	Total	C	N	O	S	0	0	0
			1336	848	251	236	1			
31	59	171	Total	C	N	O	S	0	0	0
			1312	832	246	233	1			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
32	61	146	Total	C	N	O	S	0	0	0
			1136	726	201	208	1			
32	69	146	Total	C	N	O	S	0	0	0
			1136	726	201	208	1			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
33	58	138	Total	C	N	O	S	0	0	0
			1104	712	206	182	4			
33	15	138	Total	C	N	O	S	0	0	0
			1104	712	206	182	4			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
34	68	122	Total	C	N	O	S	0	0	0
			932	588	171	169	4			
34	25	122	Total	C	N	O	S	0	0	0
			932	588	171	169	4			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
35	78	150	Total	C	N	O	S	0	0	0
			1144	712	232	197	3			
35	35	150	Total	C	N	O	S	0	0	0
			1144	712	232	197	3			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
36	88	141	Total	C	N	O	S	0	0	0
			1121	715	212	187	7			
36	45	141	Total	C	N	O	S	0	0	0
			1121	715	212	187	7			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
37	98	118	Total	C	N	O	S	0	0	0
			967	604	203	159	1			
37	55	117	Total	C	N	O		0	0	0
			959	599	202	158				

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

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
38	A8	111	Total	C	N	O	0	0	0
			881	556	176	149			
38	65	111	Total	C	N	O	0	0	0
			881	556	176	149			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
39	B8	137	Total	C	N	O	S	0	0	0
			1141	710	234	196	1			
39	75	137	Total	C	N	O		0	0	0
			1131	704	232	195				

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
40	C8	117	Total	C	N	O	S	0	0	0
			963	610	202	150	1			
40	85	117	Total	C	N	O	S	0	0	0
			963	610	202	150	1			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
41	D8	101	Total	C	N	O	S	0	0	0
			778	501	142	134	1			
41	95	101	Total	C	N	O	S	0	0	0
			778	501	142	134	1			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
42	E8	113	Total	C	N	O	S	0	0	0
			899	566	177	154	2			
42	A5	113	Total	C	N	O	S	0	0	0
			899	566	177	154	2			

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

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
43	F8	94	Total	C	N	O	0	0	0
			738	480	133	125			
43	B5	93	Total	C	N	O	0	0	0
			730	474	132	124			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
44	G8	104	Total	C	N	O	S	0	0	0
			791	510	149	127	5			
44	C5	104	Total	C	N	O	S	0	0	0
			794	510	152	127	5			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
45	H8	175	Total	C	N	O	S	0	0	0
			1397	892	251	251	3			
45	D5	179	Total	C	N	O	S	0	0	0
			1428	911	255	259	3			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
46	I8	83	Total	C	N	O	S	0	0	0
			639	395	135	108	1			

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Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
46	E5	77	Total	C	N	O	S	0	0	0
			612	379	129	103	1			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
47	J8	97	Total	C	N	O	S	0	0	0
			762	481	150	130	1			
47	F5	97	Total	C	N	O	S	0	0	0
			762	481	150	130	1			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
48	K8	66	Total	C	N	O	S	0	0	0
			558	346	113	98	1			
48	G5	69	Total	C	N	O	S	0	0	0
			580	358	118	103	1			

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

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
49	L8	59	Total	C	N	O	0	0	0
			468	298	90	80			
49	H5	59	Total	C	N	O	0	0	0
			468	298	90	80			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
50	M8	66	Total	C	N	O	S	0	0	0
			533	335	96	97	5			
50	I5	63	Total	C	N	O	S	0	0	0
			515	326	93	91	5			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
51	N8	59	Total	C	N	O	S	0	0	0
			458	288	90	75	5			
51	J5	59	Total	C	N	O	S	0	0	0
			458	288	90	75	5			

- Molecule 52 is a protein called 50S ribosomal protein L34.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
52	P8	47	Total 409	C 251	N 102	O 54	S 2	0	0	0
52	L5	49	Total 429	C 263	N 108	O 56	S 2	0	0	0

- Molecule 53 is a protein called 50S ribosomal protein L35.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
53	Q8	62	Total 495	C 317	N 100	O 76	S 2	0	0	0
53	M5	63	Total 507	C 326	N 101	O 78	S 2	0	0	0

- Molecule 54 is a RNA chain called 16S ribosomal RNA.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
54	1G	1504	Total 32329	C 14390	N 5993	O 10443	P 1503	0	0	0

- Molecule 55 is MAGNESIUM ION (three-letter code: MG) (formula: Mg).

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
55	13	129	Total 129	Mg 129	0	0
55	5E	2	Total 2	Mg 2	0	0
55	3I	1	Total 1	Mg 1	0	0
55	2K	4	Total 4	Mg 4	0	0
55	1H	548	Total 548	Mg 548	0	0
55	16	12	Total 12	Mg 12	0	0
55	11	2	Total 2	Mg 2	0	0
55	21	1	Total 1	Mg 1	0	0
55	78	2	Total 2	Mg 2	0	0
55	88	2	Total 2	Mg 2	0	0

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Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
55	I8	3	Total Mg 3 3	0	0
55	J8	1	Total Mg 1 1	0	0
55	Q8	1	Total Mg 1 1	0	0
55	1G	147	Total Mg 147 147	0	0
55	32	1	Total Mg 1 1	0	0
55	42	1	Total Mg 1 1	0	0
55	2L	3	Total Mg 3 3	0	0
55	3L	2	Total Mg 2 2	0	0
55	14	489	Total Mg 489 489	0	0
55	1J	11	Total Mg 11 11	0	0
55	19	1	Total Mg 1 1	0	0
55	29	5	Total Mg 5 5	0	0
55	39	1	Total Mg 1 1	0	0
55	49	1	Total Mg 1 1	0	0
55	15	1	Total Mg 1 1	0	0
55	25	1	Total Mg 1 1	0	0
55	45	1	Total Mg 1 1	0	0
55	55	3	Total Mg 3 3	0	0
55	C5	1	Total Mg 1 1	0	0
55	E5	2	Total Mg 2 2	0	0
55	F5	1	Total Mg 1 1	0	0

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Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
55	M5	1	Total Mg 1 1	0	0

- Molecule 56 is ZINC ION (three-letter code: ZN) (formula: Zn).

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
56	3E	1	Total Zn 1 1	0	0
56	5I	1	Total Zn 1 1	0	0
56	G8	1	Total Zn 1 1	0	0
56	32	1	Total Zn 1 1	0	0
56	5A	1	Total Zn 1 1	0	0
56	C5	1	Total Zn 1 1	0	0

- Molecule 57 is water.

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
57	13	3	Total O 3 3	0	0
57	13	6	Total O 6 6	0	0
57	13	6	Total O 6 6	0	0
57	13	6	Total O 6 6	0	0
57	13	6	Total O 6 6	0	0
57	13	6	Total O 6 6	0	0
57	13	6	Total O 6 6	0	0
57	13	6	Total O 6 6	0	0
57	13	6	Total O 6 6	0	0
57	13	6	Total O 6 6	0	0

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Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
57	13	6	Total O 6 6	0	0
57	13	6	Total O 6 6	0	0
57	13	6	Total O 6 6	0	0
57	13	5	Total O 5 5	0	0
57	13	6	Total O 6 6	0	0
57	13	6	Total O 6 6	0	0
57	13	6	Total O 6 6	0	0
57	13	6	Total O 6 6	0	0
57	13	6	Total O 6 6	0	0
57	13	6	Total O 6 6	0	0
57	13	6	Total O 6 6	0	0
57	13	6	Total O 6 6	0	0
57	13	6	Total O 6 6	0	0
57	13	6	Total O 6 6	0	0
57	13	6	Total O 6 6	0	0
57	13	6	Total O 6 6	0	0
57	13	6	Total O 6 6	0	0
57	13	6	Total O 6 6	0	0
57	13	6	Total O 6 6	0	0
57	13	6	Total O 6 6	0	0

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Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
57	13	6	Total O 6 6	0	0
57	2K	6	Total O 6 6	0	0
57	1H	6	Total O 6 6	0	0
57	1H	6	Total O 6 6	0	0
57	1H	6	Total O 6 6	0	0
57	1H	6	Total O 6 6	0	0
57	1H	6	Total O 6 6	0	0
57	1H	6	Total O 6 6	0	0
57	1H	5	Total O 5 5	0	0
57	1H	6	Total O 6 6	0	0
57	1H	6	Total O 6 6	0	0
57	1H	6	Total O 6 6	0	0
57	1H	6	Total O 6 6	0	0
57	1H	6	Total O 6 6	0	0
57	1H	6	Total O 6 6	0	0
57	1H	6	Total O 6 6	0	0
57	1H	6	Total O 6 6	0	0
57	1H	6	Total O 6 6	0	0
57	1H	6	Total O 6 6	0	0
57	1H	6	Total O 6 6	0	0
57	1H	6	Total O 6 6	0	0

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Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
57	1H	6	Total O 6 6	0	0
57	1H	6	Total O 6 6	0	0
57	1H	5	Total O 5 5	0	0
57	1H	6	Total O 6 6	0	0
57	1H	6	Total O 6 6	0	0
57	1H	6	Total O 6 6	0	0
57	1H	6	Total O 6 6	0	0
57	1H	6	Total O 6 6	0	0
57	1H	6	Total O 6 6	0	0
57	1H	6	Total O 6 6	0	0
57	1H	6	Total O 6 6	0	0
57	1H	5	Total O 5 5	0	0
57	1H	6	Total O 6 6	0	0
57	1H	6	Total O 6 6	0	0
57	1H	6	Total O 6 6	0	0
57	1H	6	Total O 6 6	0	0
57	1H	6	Total O 6 6	0	0
57	1H	6	Total O 6 6	0	0
57	1H	6	Total O 6 6	0	0
57	1H	6	Total O 6 6	0	0

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Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
57	1H	6	Total O 6 6	0	0
57	1H	6	Total O 6 6	0	0
57	1H	6	Total O 6 6	0	0
57	1H	5	Total O 5 5	0	0
57	1H	6	Total O 6 6	0	0
57	1H	6	Total O 6 6	0	0
57	1H	6	Total O 6 6	0	0
57	1H	6	Total O 6 6	0	0
57	1H	6	Total O 6 6	0	0
57	1H	6	Total O 6 6	0	0
57	1H	4	Total O 4 4	0	0
57	1H	6	Total O 6 6	0	0
57	1H	6	Total O 6 6	0	0
57	1H	6	Total O 6 6	0	0
57	1H	6	Total O 6 6	0	0
57	1H	6	Total O 6 6	0	0
57	1H	6	Total O 6 6	0	0
57	1H	6	Total O 6 6	0	0
57	1H	6	Total O 6 6	0	0
57	1H	6	Total O 6 6	0	0

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Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
57	1H	6	Total O 6 6	0	0
57	1H	6	Total O 6 6	0	0
57	1H	6	Total O 6 6	0	0
57	1H	6	Total O 6 6	0	0
57	1H	6	Total O 6 6	0	0
57	1H	6	Total O 6 6	0	0
57	1H	6	Total O 6 6	0	0
57	1H	6	Total O 6 6	0	0
57	1H	6	Total O 6 6	0	0
57	1H	6	Total O 6 6	0	0
57	1H	6	Total O 6 6	0	0
57	1H	6	Total O 6 6	0	0
57	1H	6	Total O 6 6	0	0
57	1H	6	Total O 6 6	0	0
57	1H	6	Total O 6 6	0	0
57	1H	6	Total O 6 6	0	0
57	1H	6	Total O 6 6	0	0
57	1H	6	Total O 6 6	0	0
57	1H	6	Total O 6 6	0	0
57	1H	6	Total O 6 6	0	0

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Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
57	1H	6	Total O 6 6	0	0
57	1H	6	Total O 6 6	0	0
57	1H	6	Total O 6 6	0	0
57	1H	6	Total O 6 6	0	0
57	1H	6	Total O 6 6	0	0
57	1H	6	Total O 6 6	0	0
57	1H	6	Total O 6 6	0	0
57	1H	6	Total O 6 6	0	0
57	1H	6	Total O 6 6	0	0
57	1H	6	Total O 6 6	0	0
57	1H	6	Total O 6 6	0	0
57	1H	6	Total O 6 6	0	0
57	1H	6	Total O 6 6	0	0
57	1H	6	Total O 6 6	0	0
57	1H	6	Total O 6 6	0	0
57	1H	6	Total O 6 6	0	0
57	1H	6	Total O 6 6	0	0
57	1H	6	Total O 6 6	0	0
57	1H	6	Total O 6 6	0	0
57	1H	6	Total O 6 6	0	0

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Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
57	1H	6	Total O 6 6	0	0
57	1H	6	Total O 6 6	0	0
57	1H	6	Total O 6 6	0	0
57	1H	6	Total O 6 6	0	0
57	1H	6	Total O 6 6	0	0
57	1H	6	Total O 6 6	0	0
57	1H	6	Total O 6 6	0	0
57	1H	6	Total O 6 6	0	0
57	1H	6	Total O 6 6	0	0
57	1H	6	Total O 6 6	0	0
57	1H	6	Total O 6 6	0	0
57	1H	6	Total O 6 6	0	0
57	1H	6	Total O 6 6	0	0
57	1H	6	Total O 6 6	0	0
57	1H	6	Total O 6 6	0	0
57	1H	6	Total O 6 6	0	0
57	1H	6	Total O 6 6	0	0
57	1H	6	Total O 6 6	0	0
57	1H	6	Total O 6 6	0	0
57	1H	6	Total O 6 6	0	0

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Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
57	1H	6	Total O 6 6	0	0
57	1H	6	Total O 6 6	0	0
57	1H	6	Total O 6 6	0	0
57	1H	6	Total O 6 6	0	0
57	1H	6	Total O 6 6	0	0
57	1H	6	Total O 6 6	0	0
57	1H	6	Total O 6 6	0	0
57	1H	6	Total O 6 6	0	0
57	1H	6	Total O 6 6	0	0
57	1H	6	Total O 6 6	0	0
57	1H	6	Total O 6 6	0	0
57	1H	6	Total O 6 6	0	0
57	1H	6	Total O 6 6	0	0
57	1H	6	Total O 6 6	0	0
57	1H	6	Total O 6 6	0	0
57	1H	6	Total O 6 6	0	0
57	1H	6	Total O 6 6	0	0
57	1H	6	Total O 6 6	0	0
57	1H	6	Total O 6 6	0	0
57	1H	6	Total O 6 6	0	0
57	1H	6	Total O 6 6	0	0

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Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
57	1H	6	Total O 6 6	0	0
57	1H	6	Total O 6 6	0	0
57	1H	6	Total O 6 6	0	0
57	1H	6	Total O 6 6	0	0
57	1H	6	Total O 6 6	0	0
57	1H	6	Total O 6 6	0	0
57	1H	6	Total O 6 6	0	0
57	1H	6	Total O 6 6	0	0
57	1H	6	Total O 6 6	0	0
57	1H	6	Total O 6 6	0	0
57	1H	6	Total O 6 6	0	0
57	1H	6	Total O 6 6	0	0
57	1H	6	Total O 6 6	0	0
57	1H	6	Total O 6 6	0	0
57	1H	6	Total O 6 6	0	0
57	1H	6	Total O 6 6	0	0
57	1H	6	Total O 6 6	0	0
57	1H	6	Total O 6 6	0	0
57	1H	6	Total O 6 6	0	0
57	1H	6	Total O 6 6	0	0

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Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
57	1H	6	Total O 6 6	0	0
57	1H	6	Total O 6 6	0	0
57	1H	6	Total O 6 6	0	0
57	1H	6	Total O 6 6	0	0
57	1H	6	Total O 6 6	0	0
57	1H	6	Total O 6 6	0	0
57	1H	6	Total O 6 6	0	0
57	1H	6	Total O 6 6	0	0
57	16	6	Total O 6 6	0	0
57	16	6	Total O 6 6	0	0
57	J8	6	Total O 6 6	0	0
57	1G	6	Total O 6 6	0	0
57	1G	6	Total O 6 6	0	0
57	1G	6	Total O 6 6	0	0
57	1G	6	Total O 6 6	0	0
57	1G	6	Total O 6 6	0	0
57	1G	6	Total O 6 6	0	0
57	1G	6	Total O 6 6	0	0
57	1G	6	Total O 6 6	0	0
57	1G	6	Total O 6 6	0	0
57	1G	6	Total O 6 6	0	0

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Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
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57	1G	6	Total O 6 6	0	0
57	1G	6	Total O 6 6	0	0
57	1G	6	Total O 6 6	0	0
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57	1G	6	Total O 6 6	0	0
57	1G	6	Total O 6 6	0	0
57	1G	6	Total O 6 6	0	0
57	2L	6	Total O 6 6	0	0
57	14	6	Total O 6 6	0	0
57	14	6	Total O 6 6	0	0
57	14	6	Total O 6 6	0	0
57	14	4	Total O 4 4	0	0

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Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
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57	14	6	Total O 6 6	0	0
57	14	6	Total O 6 6	0	0
57	14	6	Total O 6 6	0	0
57	14	6	Total O 6 6	0	0
57	14	6	Total O 6 6	0	0
57	14	6	Total O 6 6	0	0
57	14	6	Total O 6 6	0	0
57	14	6	Total O 6 6	0	0
57	14	6	Total O 6 6	0	0
57	14	6	Total O 6 6	0	0
57	14	6	Total O 6 6	0	0
57	14	6	Total O 6 6	0	0
57	14	6	Total O 6 6	0	0
57	14	6	Total O 6 6	0	0
57	14	6	Total O 6 6	0	0
57	14	6	Total O 6 6	0	0
57	14	6	Total O 6 6	0	0
57	14	5	Total O 5 5	0	0
57	14	6	Total O 6 6	0	0
57	14	6	Total O 6 6	0	0

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Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
57	14	6	Total O 6 6	0	0
57	14	6	Total O 6 6	0	0
57	14	6	Total O 6 6	0	0
57	14	6	Total O 6 6	0	0
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57	14	6	Total O 6 6	0	0
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57	14	6	Total O 6 6	0	0
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57	14	6	Total O 6 6	0	0
57	14	6	Total O 6 6	0	0
57	14	6	Total O 6 6	0	0
57	14	6	Total O 6 6	0	0
57	14	6	Total O 6 6	0	0
57	14	6	Total O 6 6	0	0
57	14	6	Total O 6 6	0	0
57	14	6	Total O 6 6	0	0
57	14	6	Total O 6 6	0	0
57	14	6	Total O 6 6	0	0

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Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
57	14	6	Total O 6 6	0	0
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57	14	6	Total O 6 6	0	0
57	14	6	Total O 6 6	0	0
57	14	4	Total O 4 4	0	0
57	14	6	Total O 6 6	0	0
57	14	6	Total O 6 6	0	0
57	14	6	Total O 6 6	0	0
57	14	4	Total O 4 4	0	0
57	14	6	Total O 6 6	0	0
57	14	6	Total O 6 6	0	0
57	14	6	Total O 6 6	0	0
57	14	6	Total O 6 6	0	0
57	14	6	Total O 6 6	0	0
57	14	6	Total O 6 6	0	0
57	14	6	Total O 6 6	0	0
57	14	6	Total O 6 6	0	0
57	14	6	Total O 6 6	0	0
57	14	6	Total O 6 6	0	0

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Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
57	14	6	Total O 6 6	0	0
57	14	6	Total O 6 6	0	0
57	14	6	Total O 6 6	0	0
57	14	6	Total O 6 6	0	0
57	14	6	Total O 6 6	0	0
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57	14	6	Total O 6 6	0	0
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57	14	6	Total O 6 6	0	0
57	14	6	Total O 6 6	0	0
57	14	6	Total O 6 6	0	0
57	14	6	Total O 6 6	0	0
57	14	6	Total O 6 6	0	0
57	14	6	Total O 6 6	0	0

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Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
57	14	6	Total O 6 6	0	0
57	14	6	Total O 6 6	0	0
57	14	6	Total O 6 6	0	0
57	14	6	Total O 6 6	0	0
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57	14	6	Total O 6 6	0	0
57	14	6	Total O 6 6	0	0
57	14	6	Total O 6 6	0	0
57	14	6	Total O 6 6	0	0
57	14	6	Total O 6 6	0	0
57	14	6	Total O 6 6	0	0

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Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
57	14	6	Total O 6 6	0	0
57	14	6	Total O 6 6	0	0
57	14	6	Total O 6 6	0	0
57	14	6	Total O 6 6	0	0
57	14	6	Total O 6 6	0	0
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57	14	6	Total O 6 6	0	0
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57	14	6	Total O 6 6	0	0
57	14	6	Total O 6 6	0	0
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57	14	6	Total O 6 6	0	0
57	14	6	Total O 6 6	0	0
57	14	6	Total O 6 6	0	0
57	14	6	Total O 6 6	0	0
57	14	6	Total O 6 6	0	0
57	14	6	Total O 6 6	0	0

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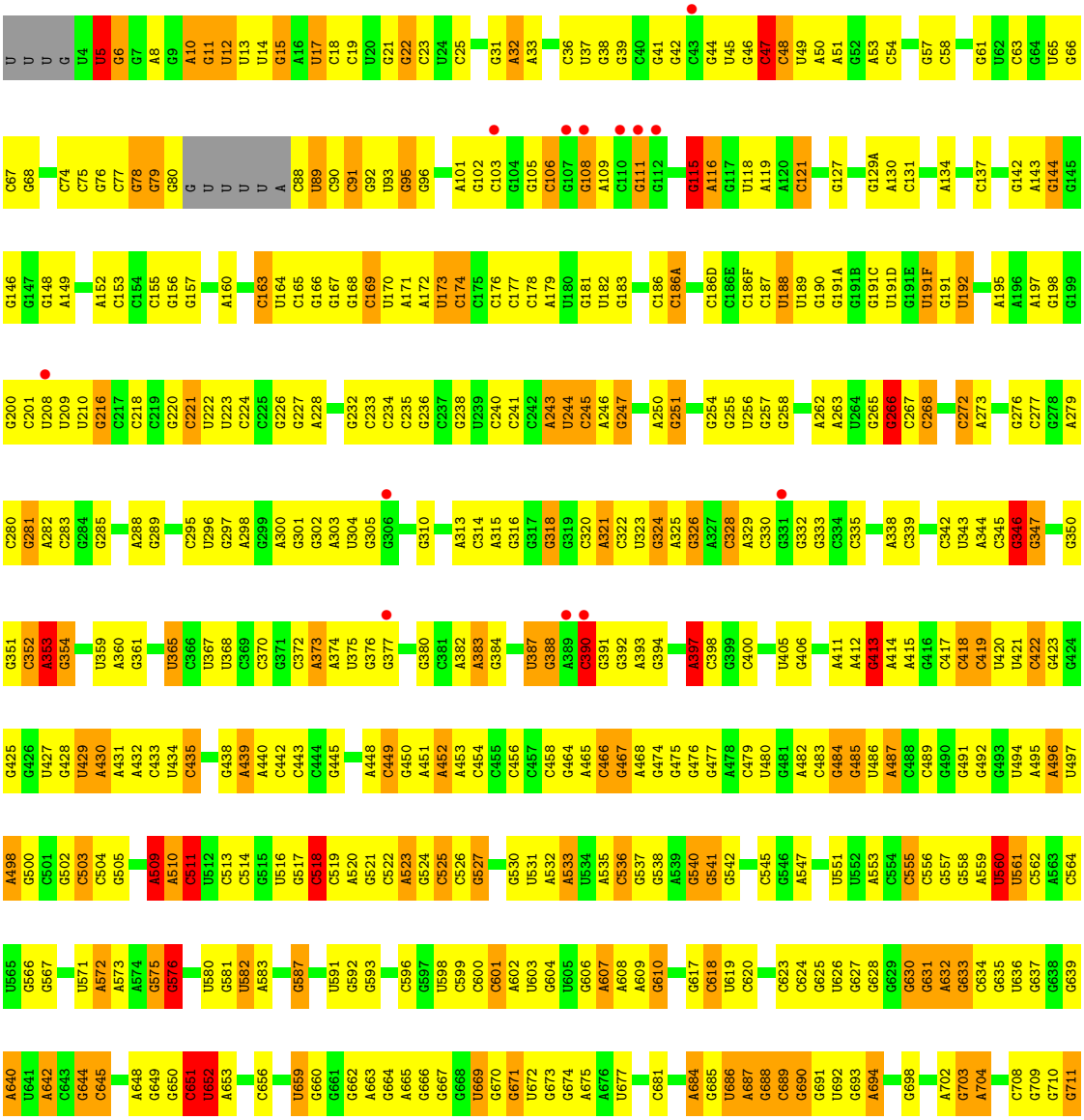
Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
57	14	6	Total O 6 6	0	0
57	14	6	Total O 6 6	0	0
57	14	6	Total O 6 6	0	0
57	14	6	Total O 6 6	0	0
57	14	6	Total O 6 6	0	0
57	14	6	Total O 6 6	0	0
57	14	6	Total O 6 6	0	0
57	14	6	Total O 6 6	0	0
57	1J	6	Total O 6 6	0	0
57	1J	6	Total O 6 6	0	0
57	1J	6	Total O 6 6	0	0
57	1J	6	Total O 6 6	0	0
57	25	6	Total O 6 6	0	0
57	E5	6	Total O 6 6	0	0

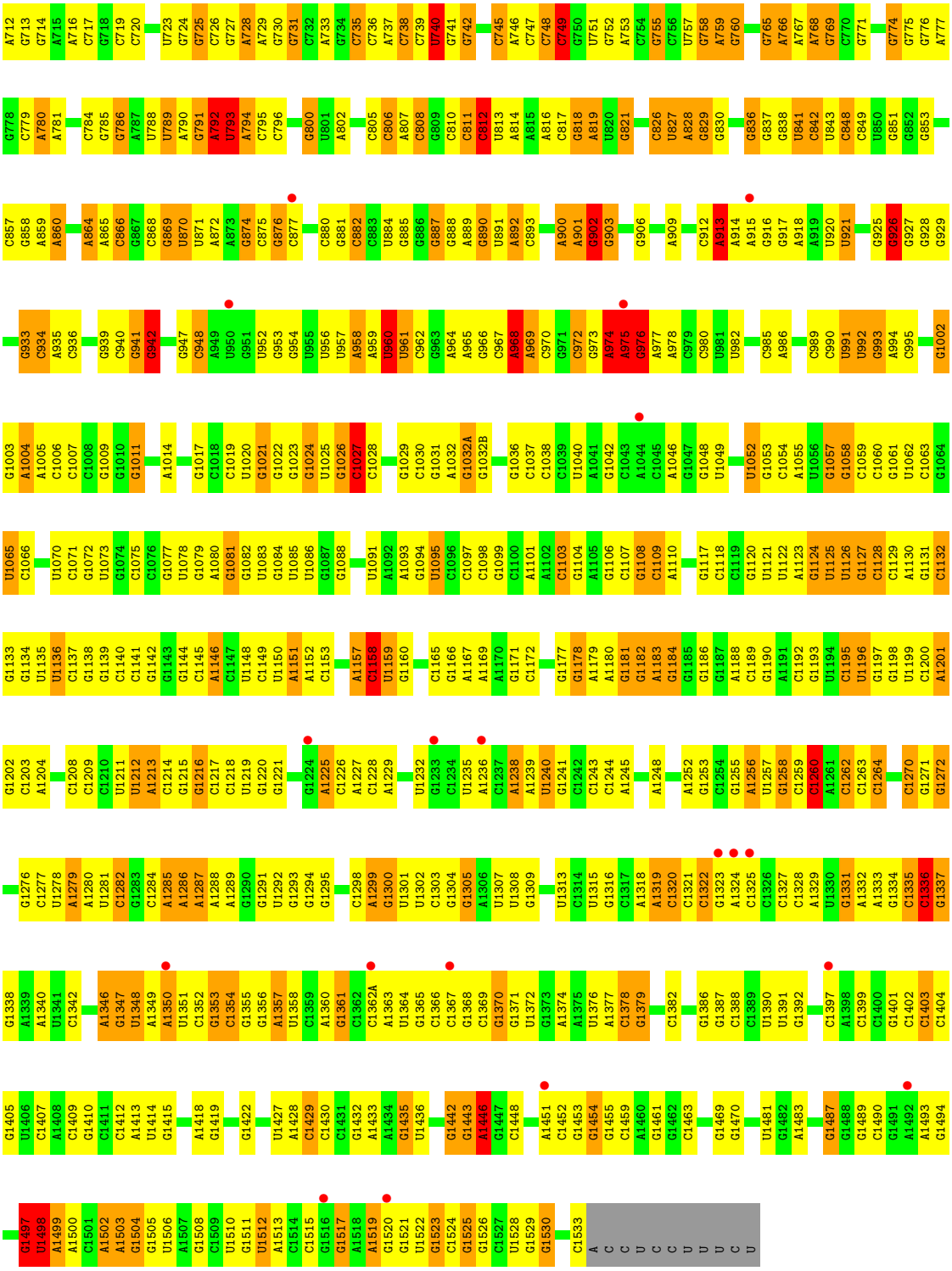
3 Residue-property plots (i)

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

- Molecule 1: 16S ribosomal RNA

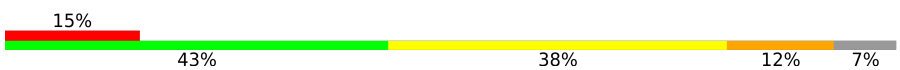
Chain 13:

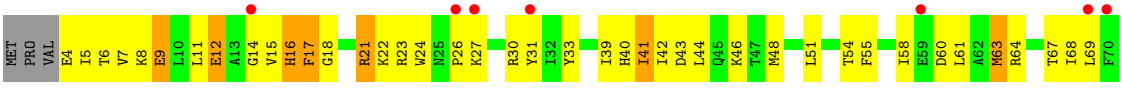


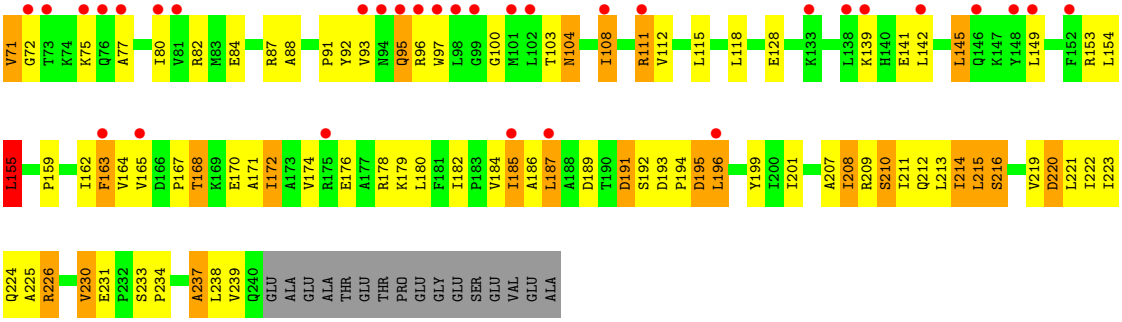


• Molecule 2: 30S ribosomal protein S2

Chain 1E:

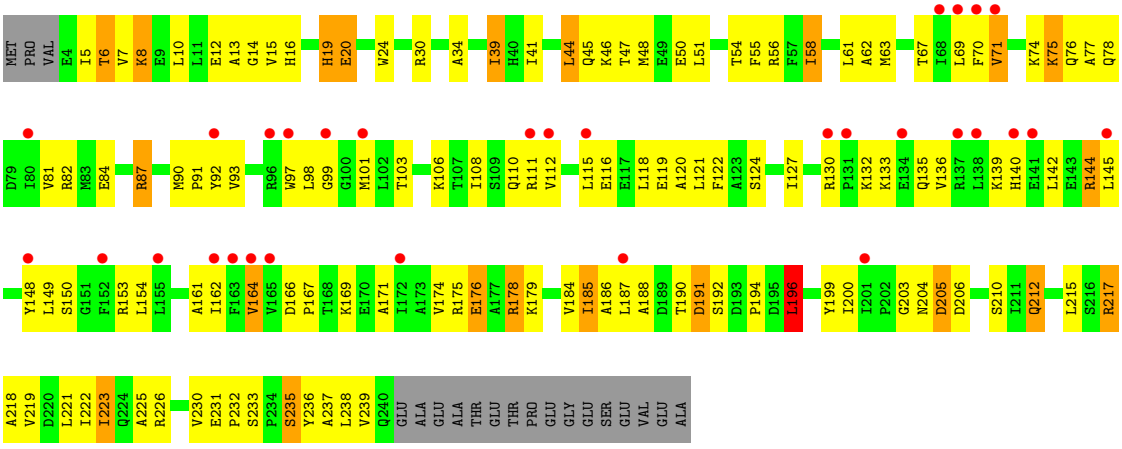






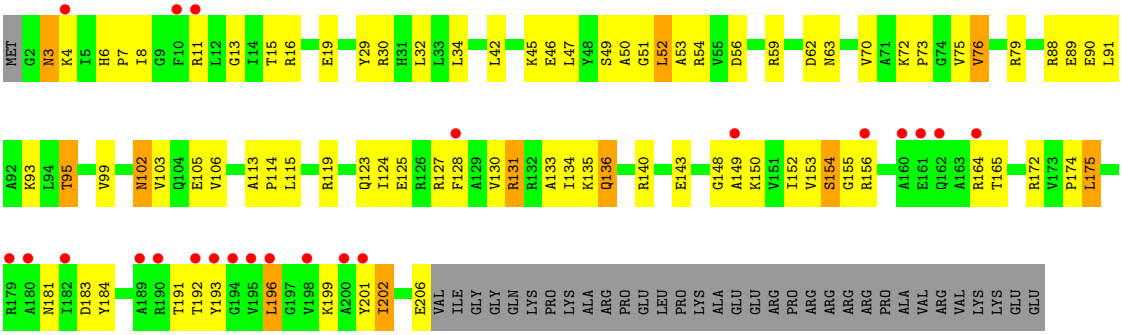
• Molecule 2: 30S ribosomal protein S2

Chain 12:



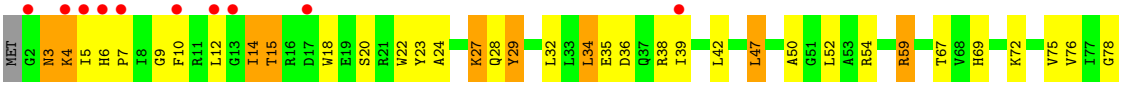
• Molecule 3: 30S ribosomal protein S3

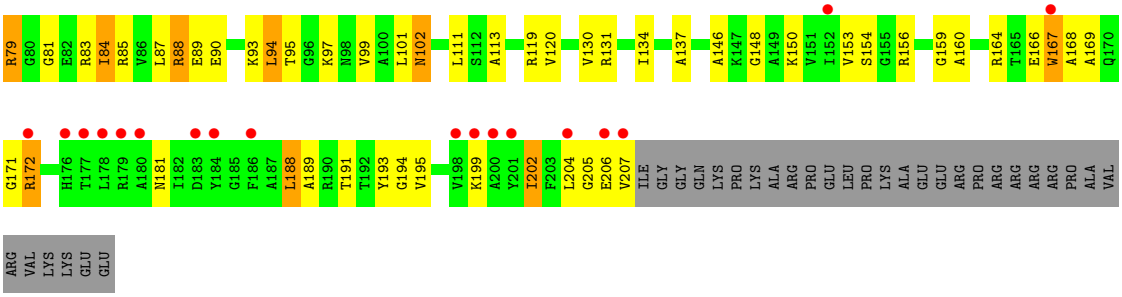
Chain 2E:



• Molecule 3: 30S ribosomal protein S3

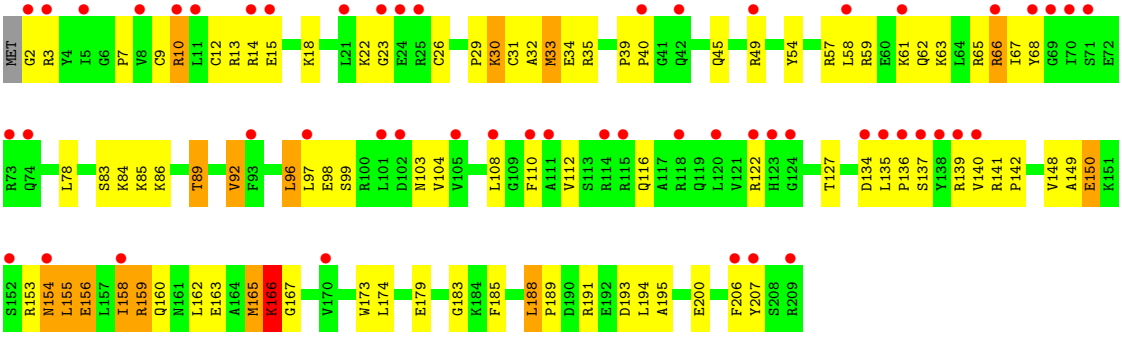
Chain 22:





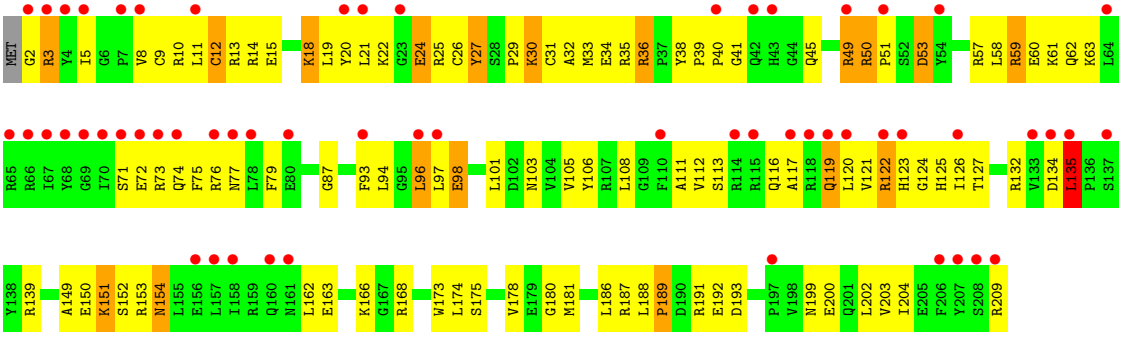
• Molecule 4: 30S ribosomal protein S4

Chain 3E:



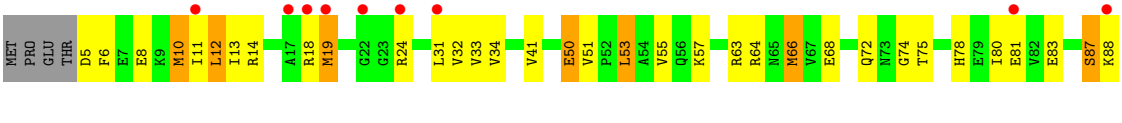
• Molecule 4: 30S ribosomal protein S4

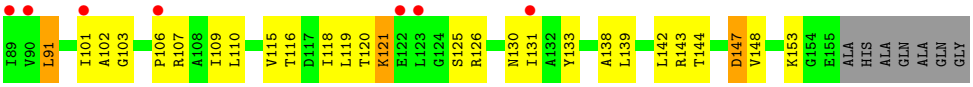
Chain 32:



• Molecule 5: 30S ribosomal protein S5

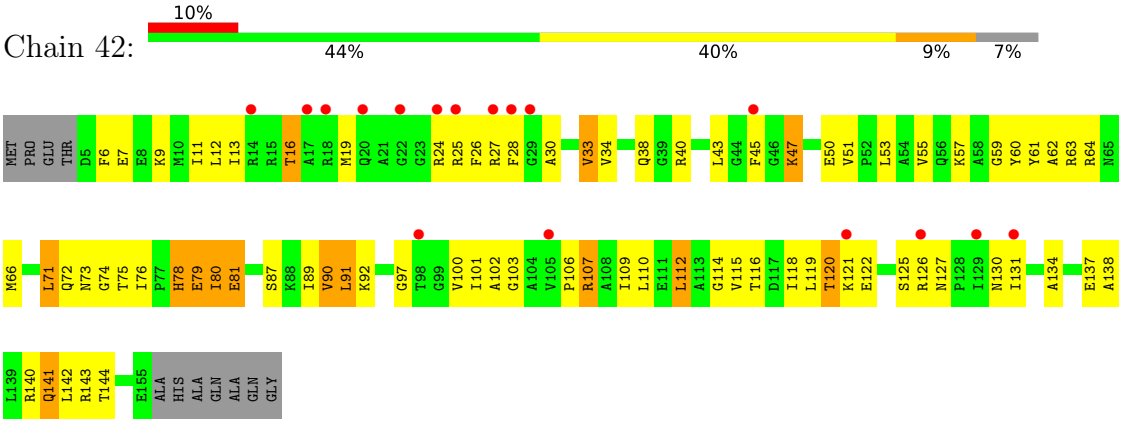
Chain 4E:





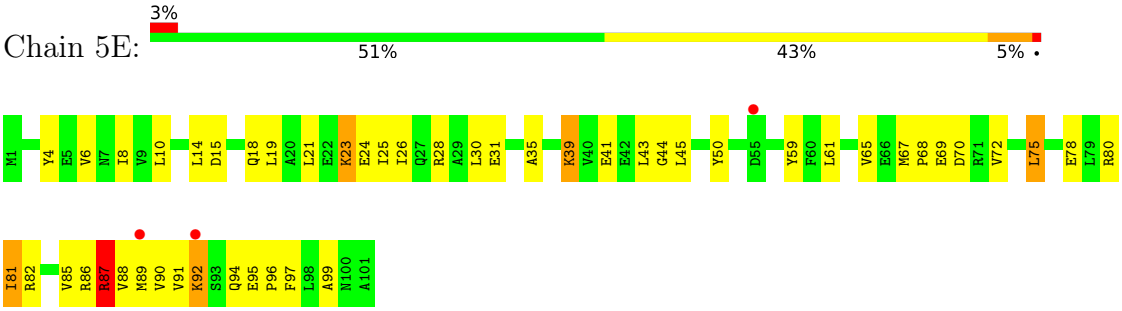
• Molecule 5: 30S ribosomal protein S5

Chain 42:



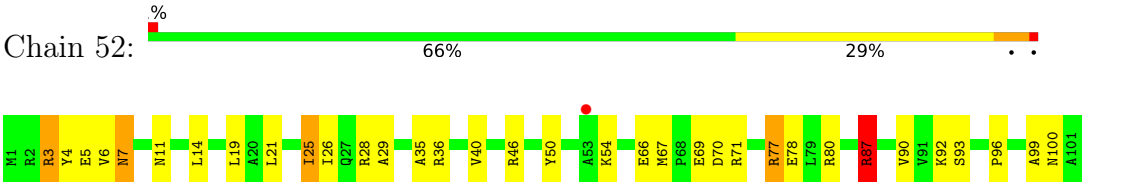
• Molecule 6: 30S ribosomal protein S6

Chain 5E:



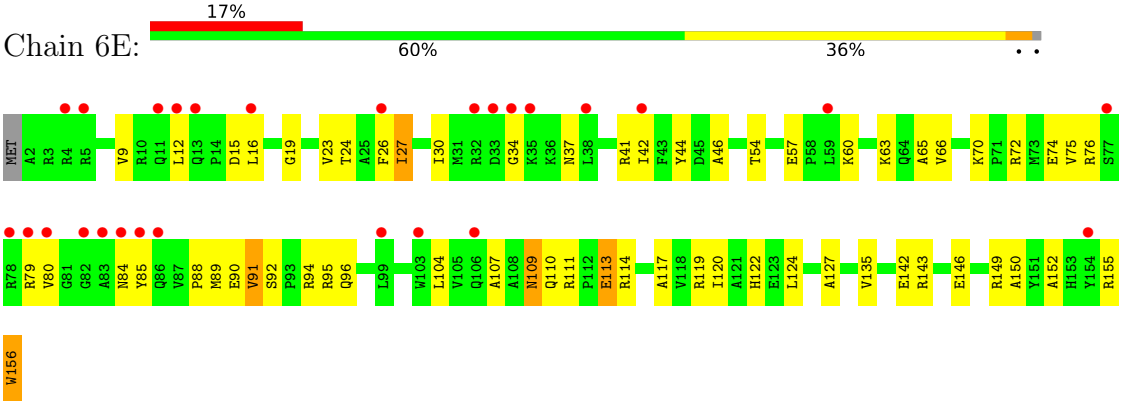
• Molecule 6: 30S ribosomal protein S6

Chain 52:



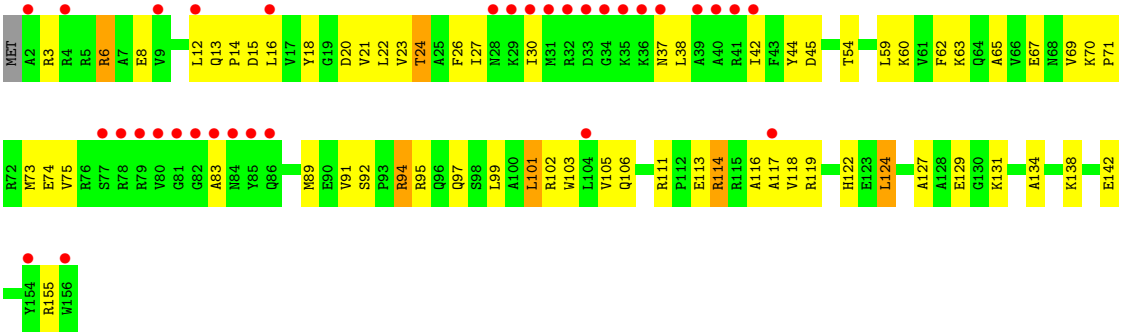
• Molecule 7: 30S ribosomal protein S7

Chain 6E:

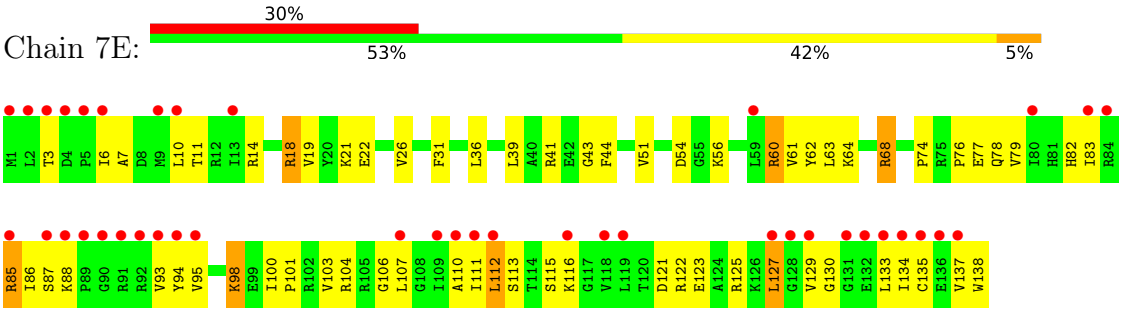


• Molecule 7: 30S ribosomal protein S7

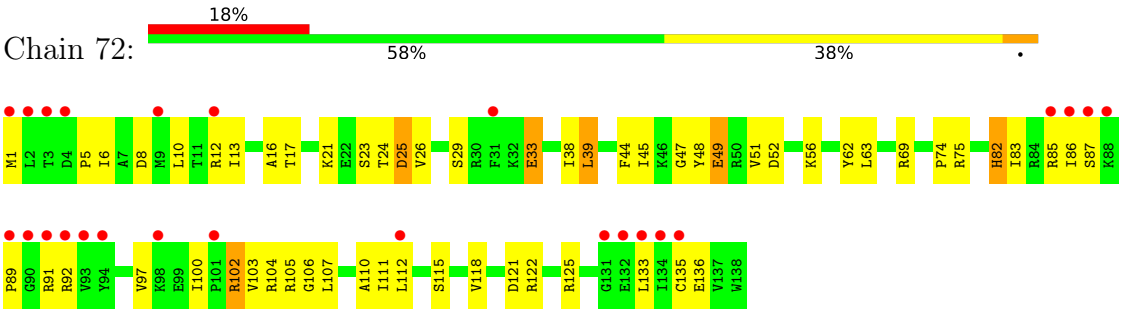
Chain 62:



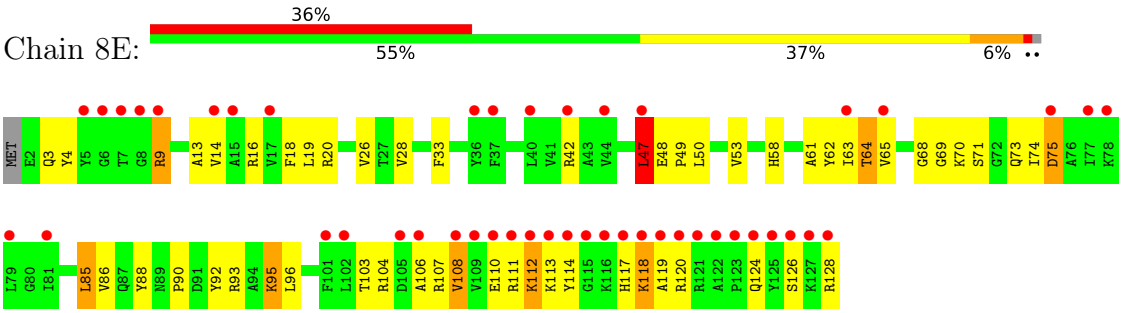
• Molecule 8: 30S ribosomal protein S8



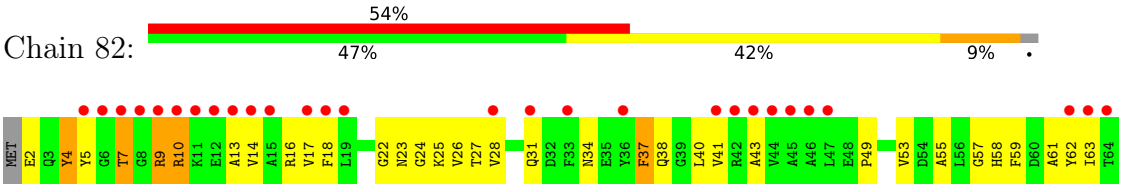
• Molecule 8: 30S ribosomal protein S8

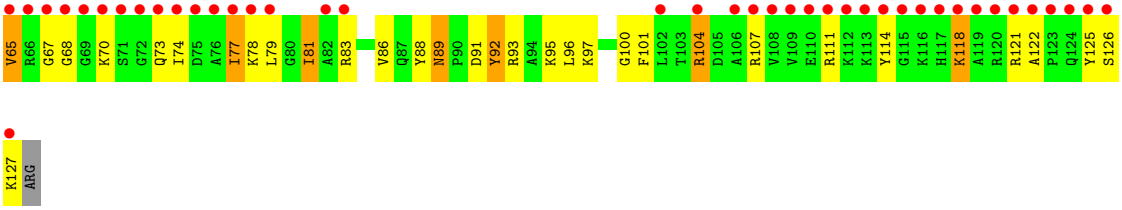


• Molecule 9: 30S ribosomal protein S9



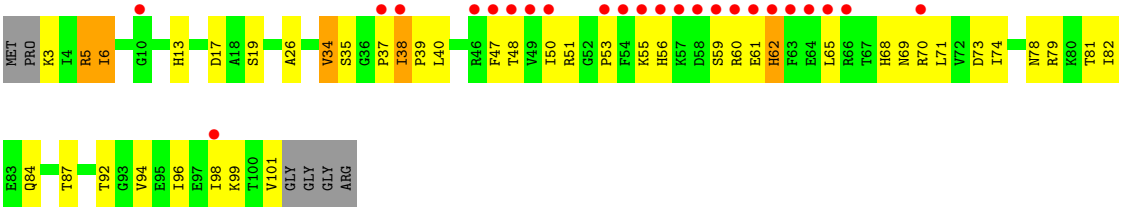
• Molecule 9: 30S ribosomal protein S9





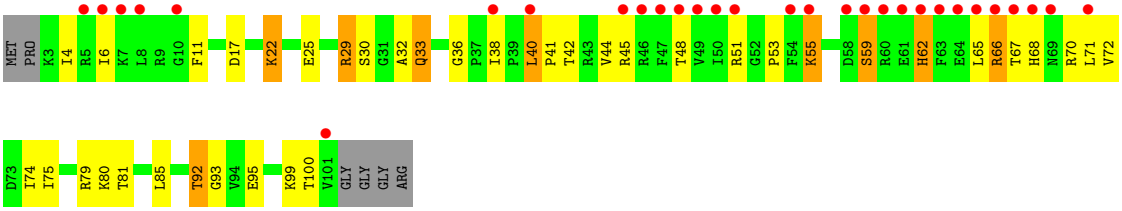
• Molecule 10: 30S ribosomal protein S10

Chain 1I:



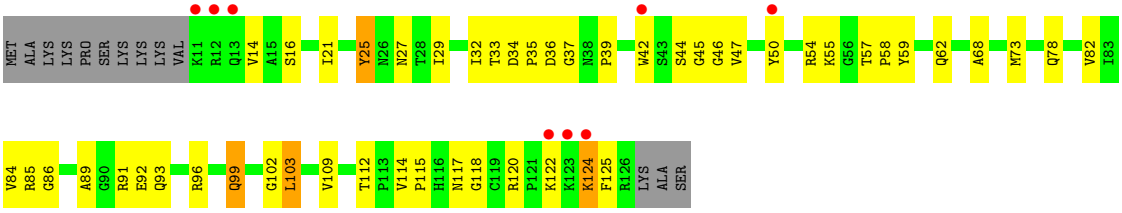
• Molecule 10: 30S ribosomal protein S10

Chain 1A:



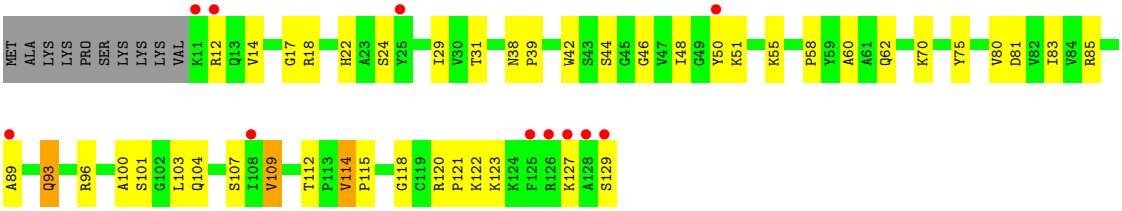
• Molecule 11: 30S ribosomal protein S11

Chain 2I:



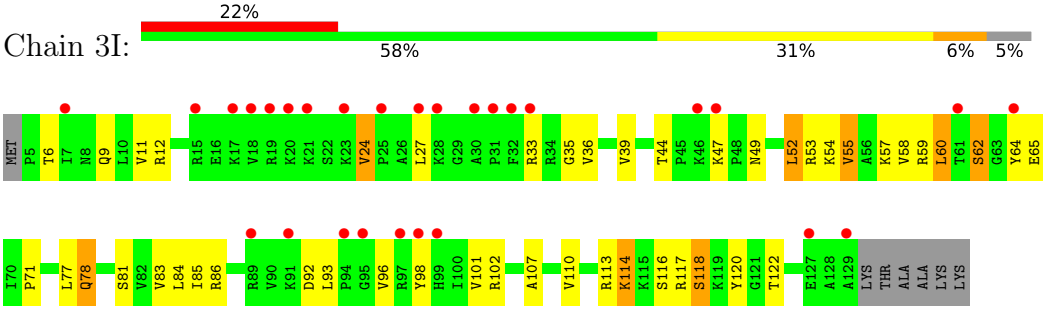
• Molecule 11: 30S ribosomal protein S11

Chain 2A:



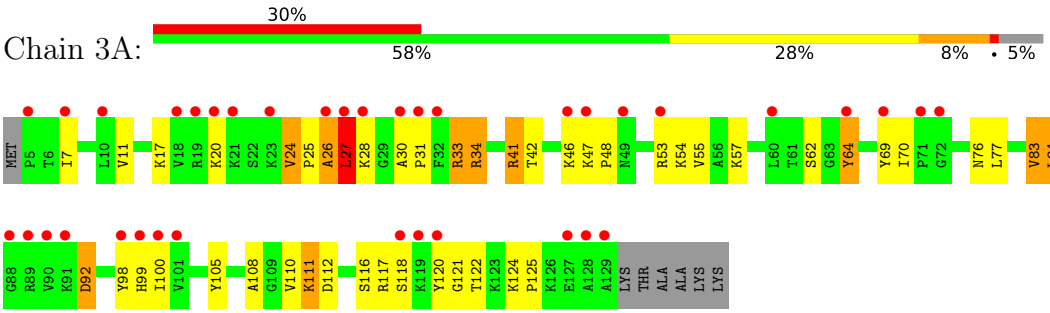
• Molecule 12: 30S ribosomal protein S12

Chain 3I:



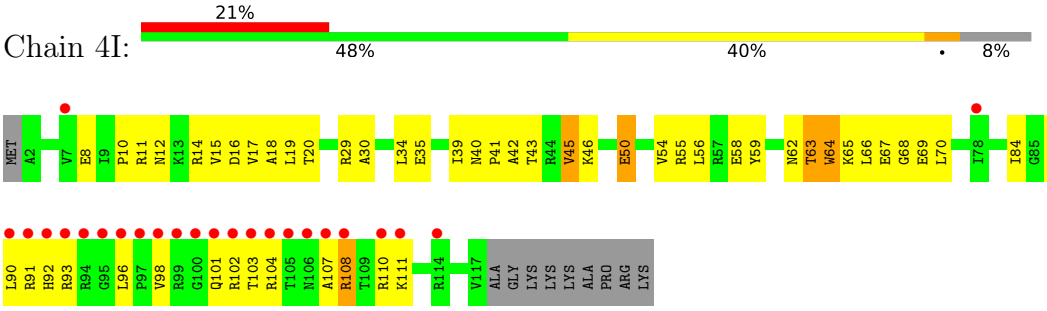
• Molecule 12: 30S ribosomal protein S12

Chain 3A:



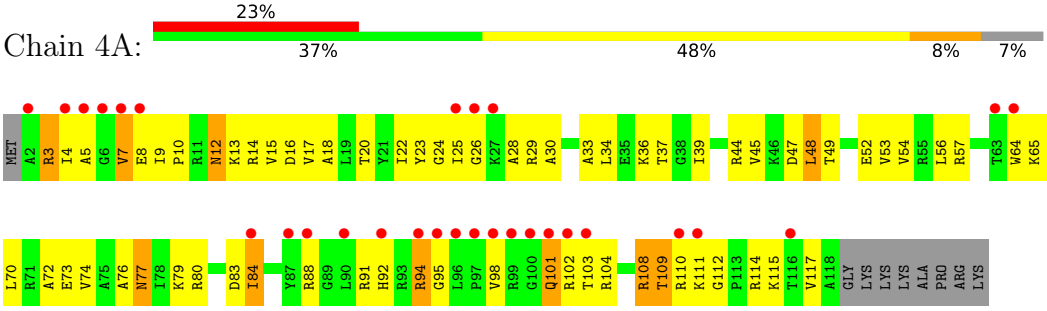
• Molecule 13: 30S ribosomal protein S13

Chain 4I:



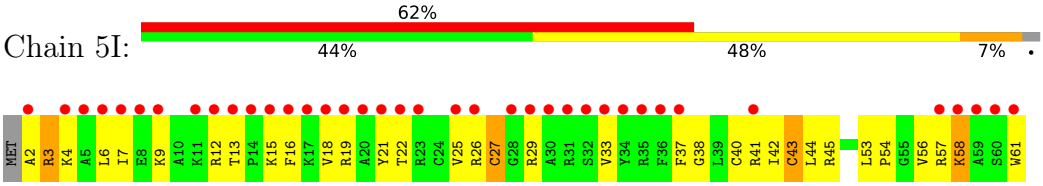
• Molecule 13: 30S ribosomal protein S13

Chain 4A:



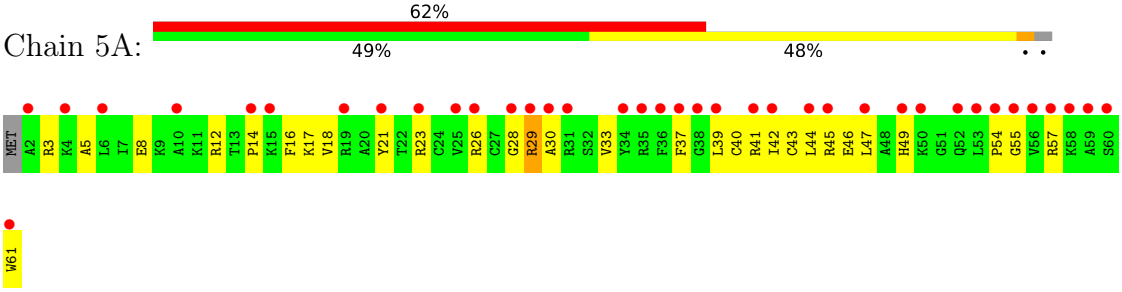
• Molecule 14: 30S ribosomal protein S14 type Z

Chain 5I:



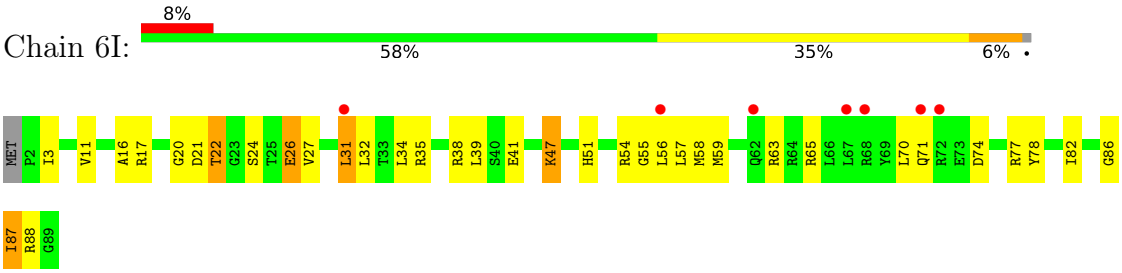
• Molecule 14: 30S ribosomal protein S14 type Z

Chain 5A:



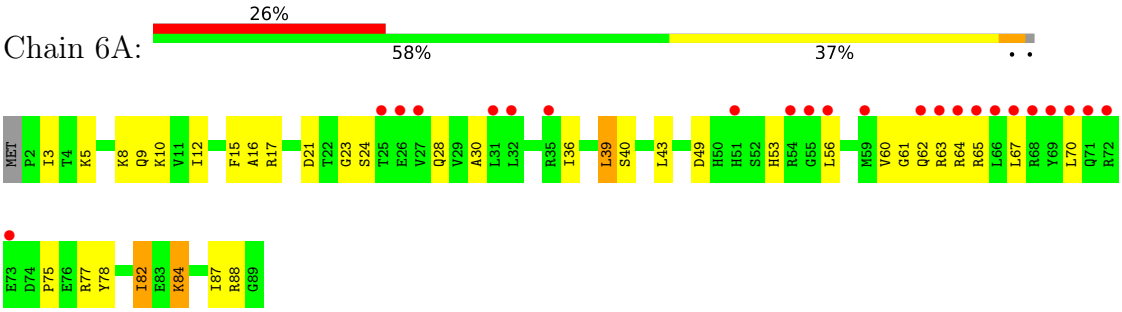
• Molecule 15: 30S ribosomal protein S15

Chain 6I:



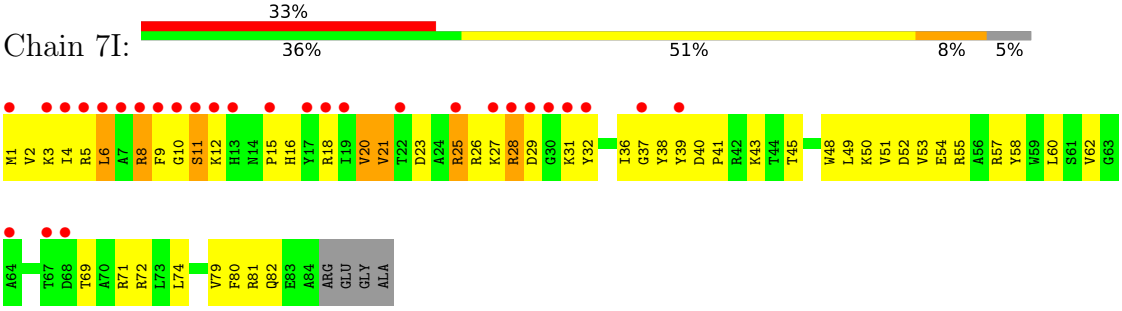
• Molecule 15: 30S ribosomal protein S15

Chain 6A:



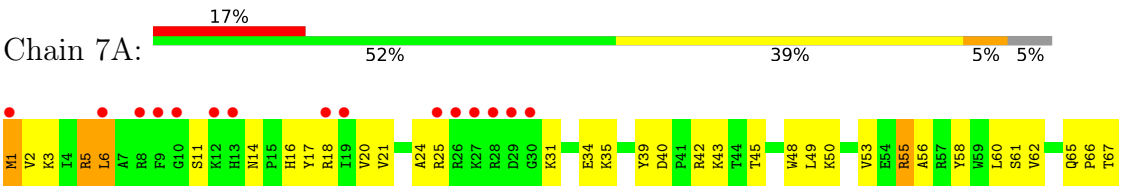
• Molecule 16: 30S ribosomal protein S16

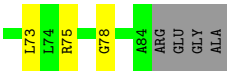
Chain 7I:



• Molecule 16: 30S ribosomal protein S16

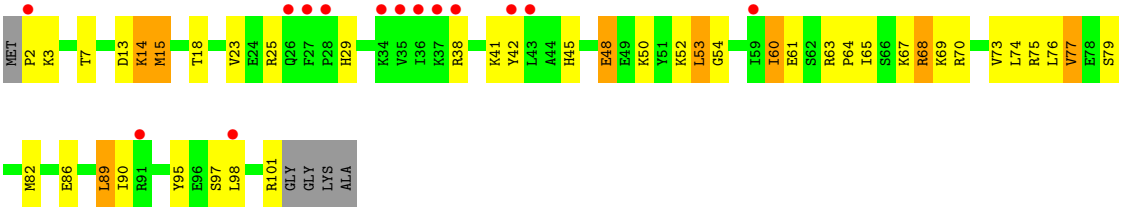
Chain 7A:





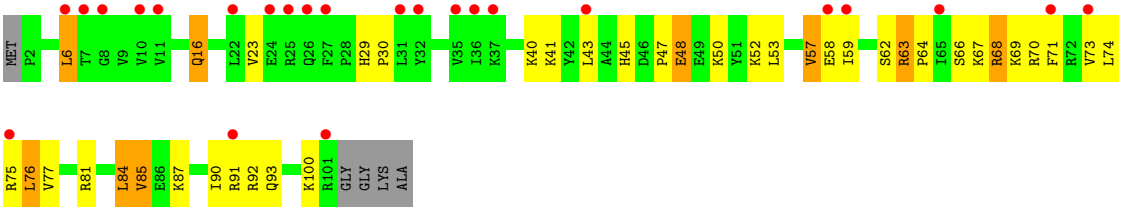
• Molecule 17: 30S ribosomal protein S17

Chain 8I:



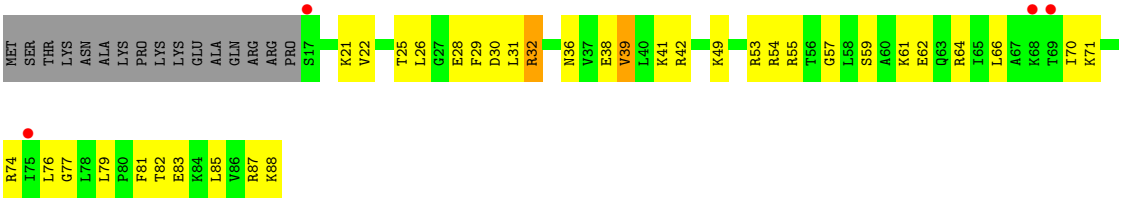
• Molecule 17: 30S ribosomal protein S17

Chain 8A:



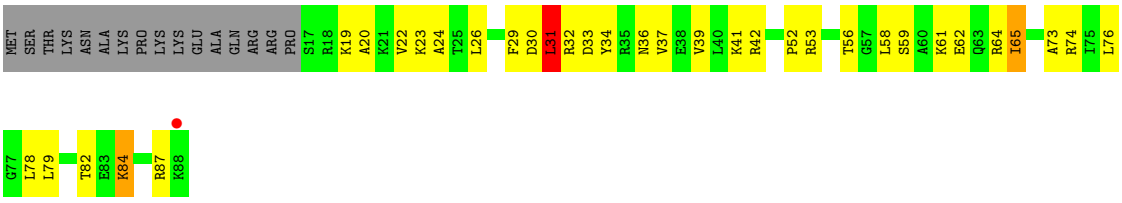
• Molecule 18: 30S ribosomal protein S18

Chain 9I:



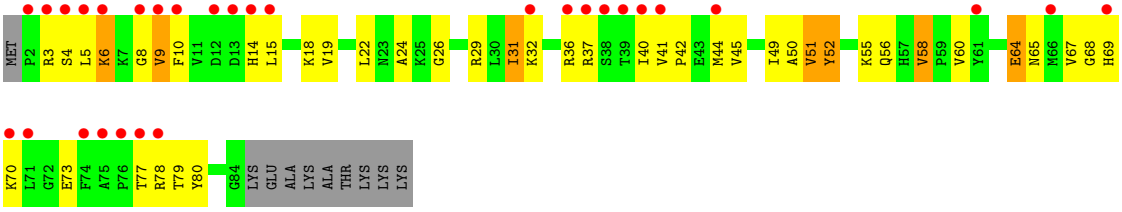
• Molecule 18: 30S ribosomal protein S18

Chain 9A:



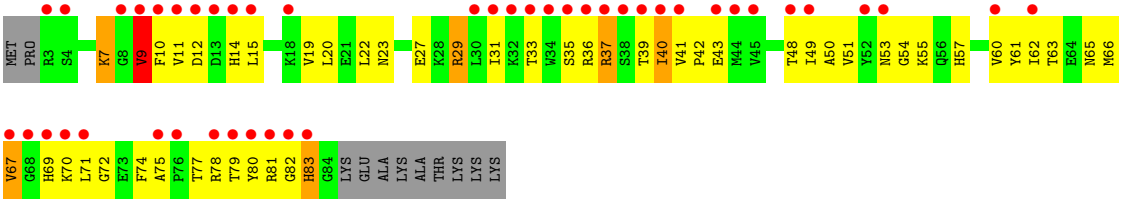
• Molecule 19: 30S ribosomal protein S19

Chain AI:



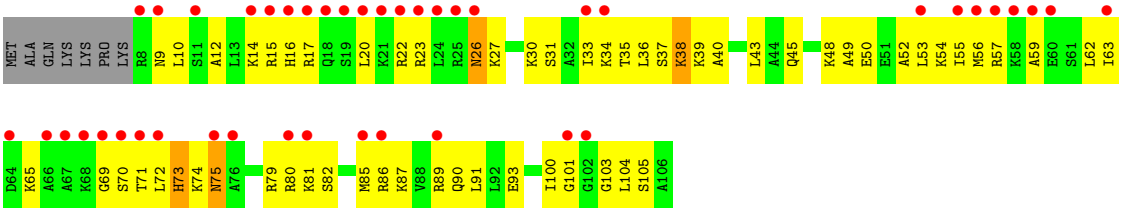
• Molecule 19: 30S ribosomal protein S19

Chain AA:



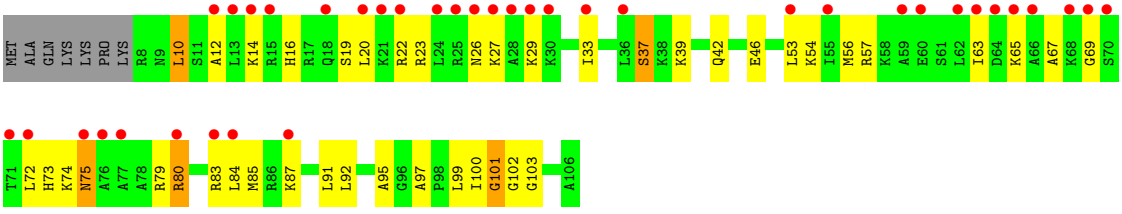
• Molecule 20: 30S ribosomal protein S20

Chain BI:



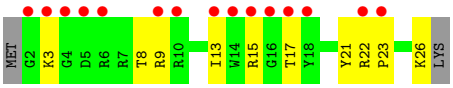
• Molecule 20: 30S ribosomal protein S20

Chain BA:



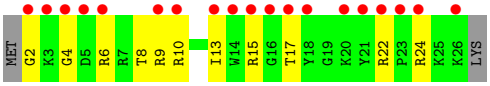
• Molecule 21: 30S ribosomal protein Thx

Chain 1F:

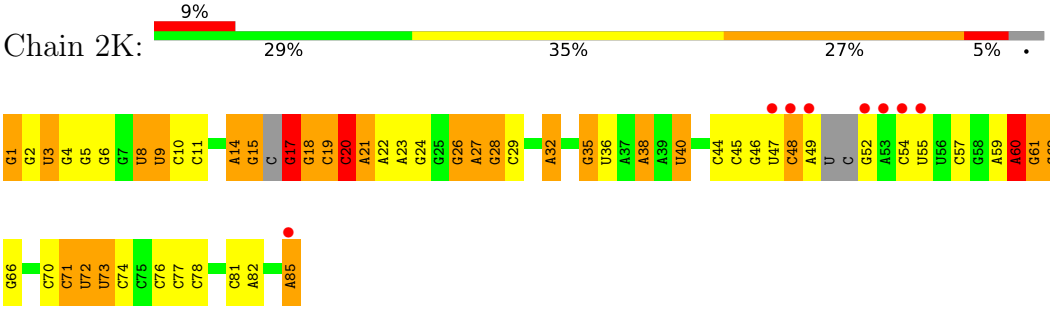


• Molecule 21: 30S ribosomal protein Thx

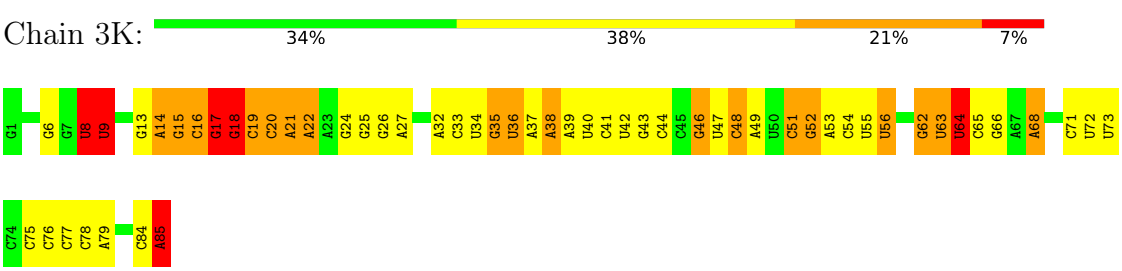
Chain 1B:



• Molecule 22: tRNA-Tyr



• Molecule 22: tRNA-Tyr



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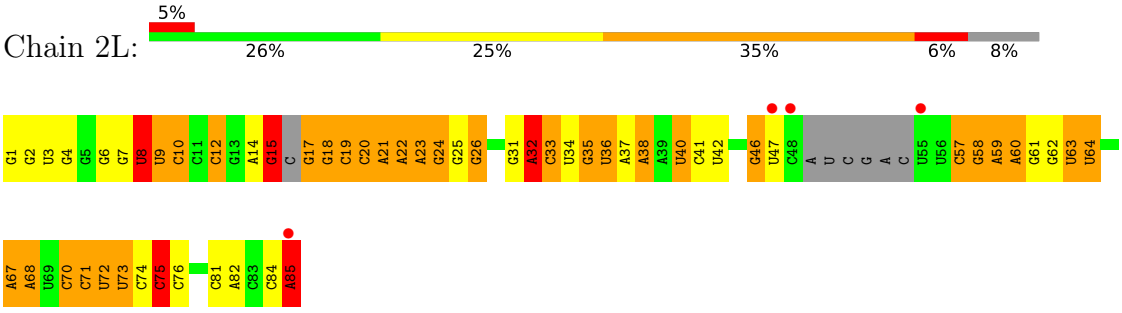

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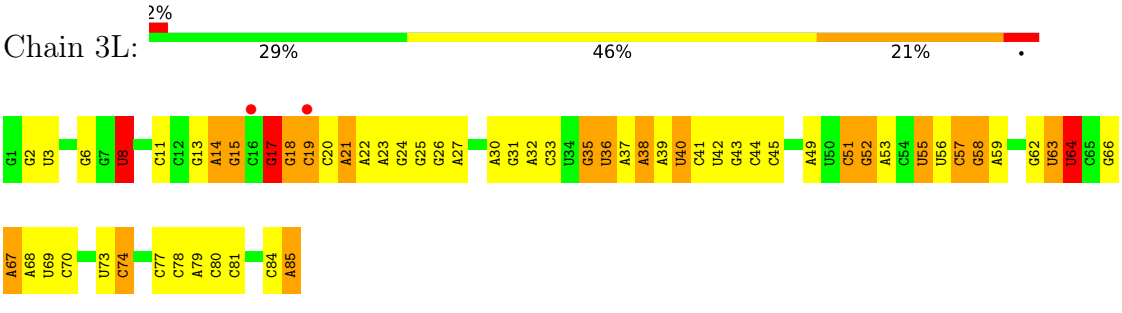
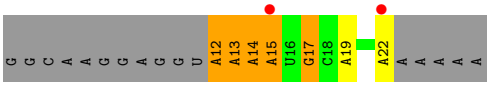
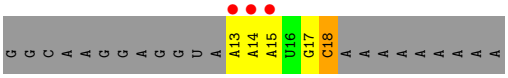


• Molecule 23: mRNA



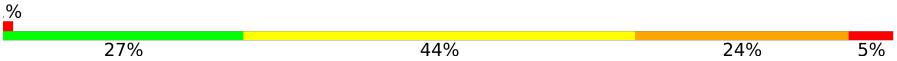
• Molecule 23: mRNA

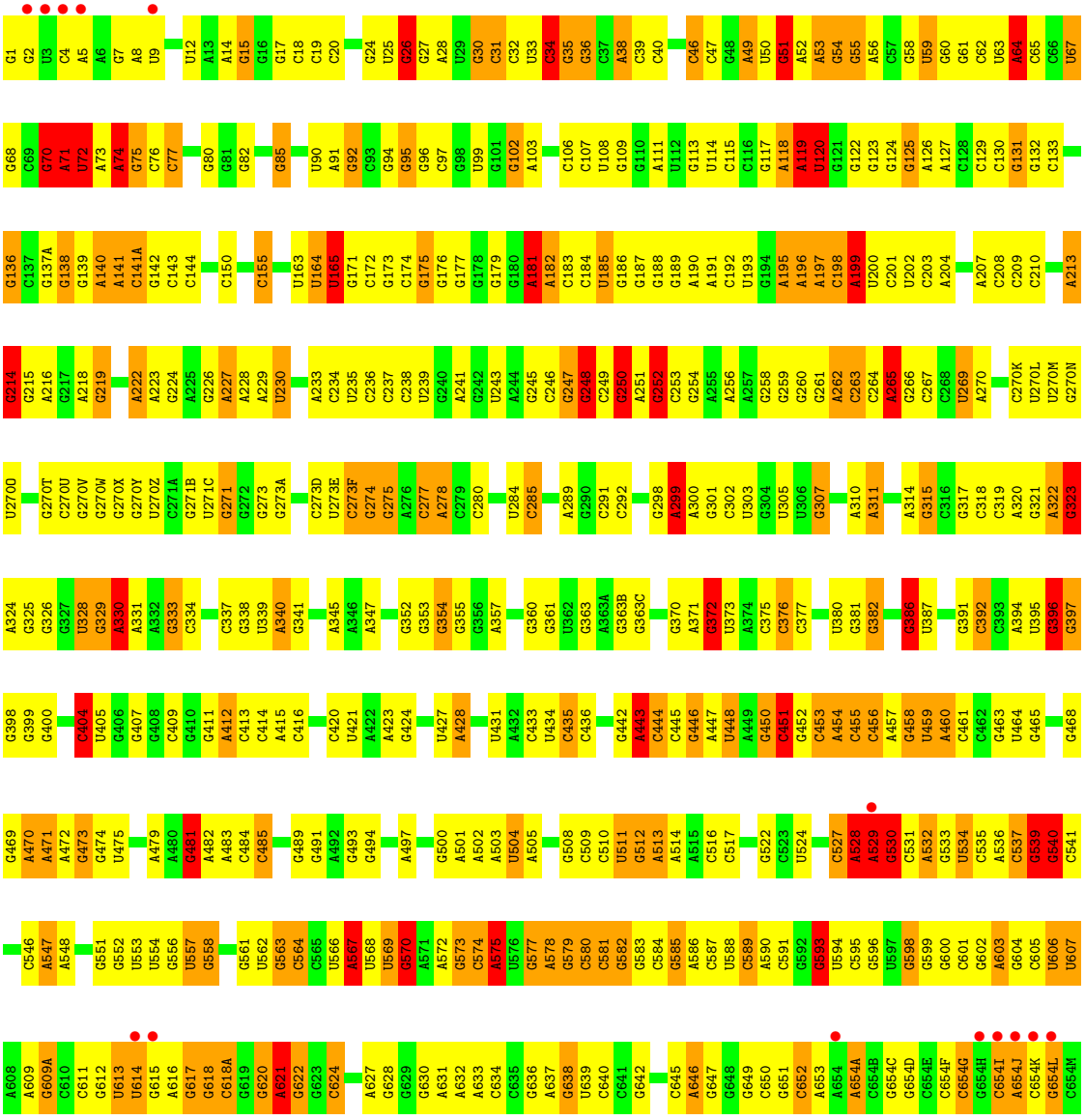
Chain 4L:

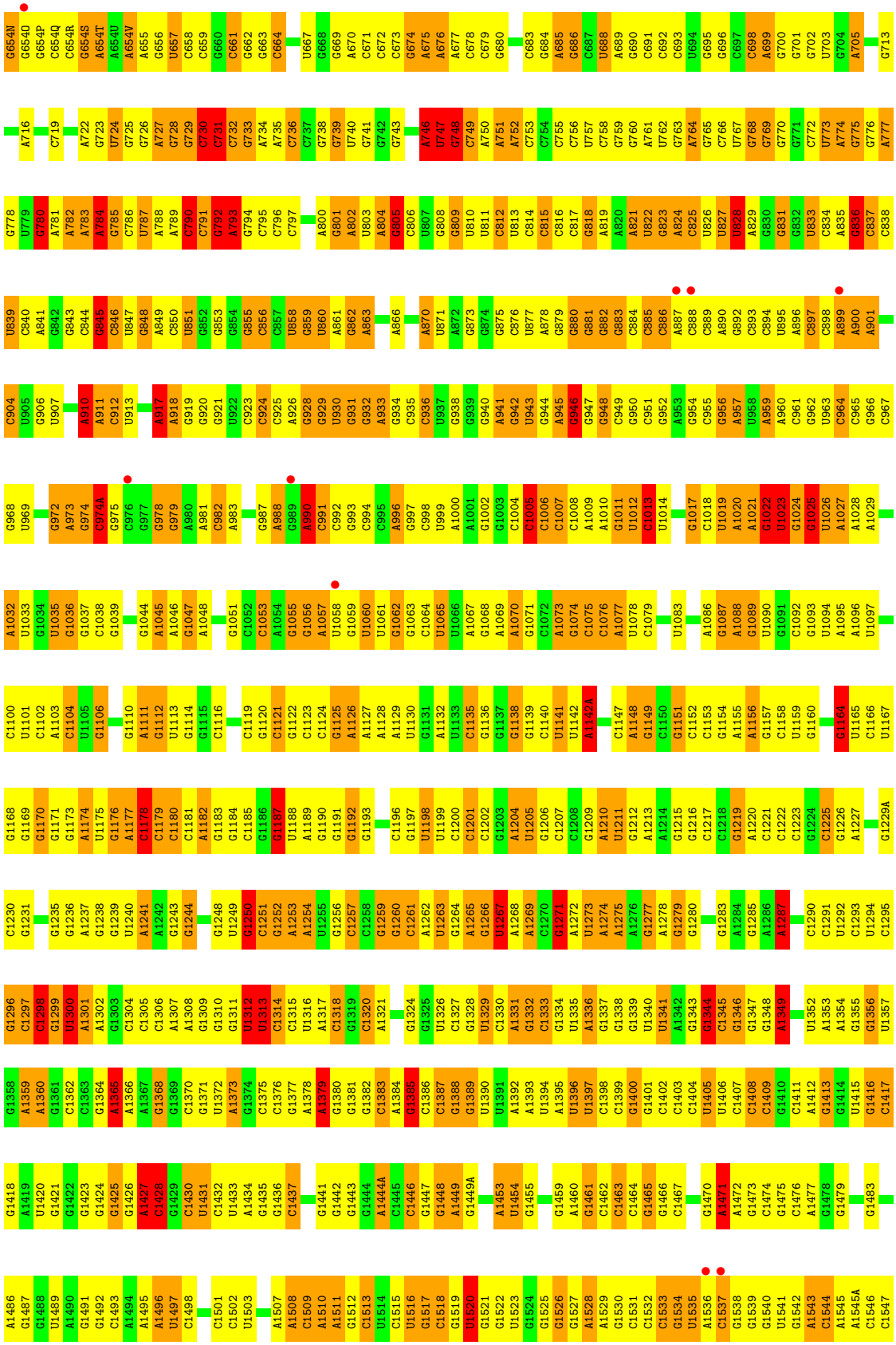


• Molecule 24: 23S ribosomal RNA

Chain 1H:



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A716 C719 A722 G723 U724 G725 G726 A727 G728 G729 C730 C731 G732 G733 A734 A735 C736 C737 G738 G739 U740 G741 G742 G743 A746 U747 G748 C749 A750 A751 A752 C753 C754 C755 C756 U757 C758 G759 G760 A761 U762 G763 A764 G765 C766 U767 G768 G769 G770 G771 C772 U773 A774 G775 A777
G778 U779 G780 A781 A782 A783 A784 G785 C786 U787 A788 A789 C790 C791 G792 A793 G794 C795 C796 C797 A800 G801 A802 U803 A804 G805 C806 U807 G808 G809 U810 U811 C812 U813 C814 C815 C816 C817 G818 A819 A820 A821 U822 G823 A824 C825 U826 U827 U828 A829 G830 G831 G832 U833 C834 A835 G836 C837 C838
U839 C840 A841 G842 G843 C844 G845 C846 U847 G848 A849 C850 U851 G852 G853 G854 G855 C856 C857 U858 G859 U860 A861 G862 A863 A866 A870 U871 A872 G873 G874 G875 C876 U877 A878 G879 G880 G881 G882 G883 C884 C885 C886 A887 C888 C889 A890 G892 C893 C894 U895 A896 C897 C898 A899 A900 A901
C904 U905 G906 U907 A910 A911 C912 U913 A917 A918 G919 G920 G921 U922 C923 G924 C925 A926 G928 G929 U930 G931 G932 A933 G934 C935 C936 U937 G938 G939 G940 A941 G942 U943 G944 A945 G946 G947 G948 G949 G950 C951 G952 A953 G954 C955 G956 A957 U958 A959 A960 C961 G962 U963 C964 G965 G966 C967
G968 U969 G972 A973 G974 C974A G975 G976 G977 G978 G979 A980 A981 C982 A983 G987 A988 G989 A990 C991 C992 G993 C994 C995 A996 G997 C998 U999 A1000 A1001 G1002 G1003 C1004 C1005 C1006 C1007 C1008 A1009 A1010 G1011 U1012 C1013 U1014 G1017 C1018 U1019 A1020 A1021 G1022 U1023 G1024 G1025 U1026 A1027 A1028 A1029
A1032 U1033 G1034 U1035 G1036 G1037 C1038 G1039 G1044 A1045 A1046 G1047 A1048 G1051 C1052 C1053 A1054 G1055 G1056 A1057 U1058 G1059 U1060 U1061 G1062 G1063 C1064 U1065 U1066 A1067 G1068 A1069 A1070 G1071 C1072 A1073 G1074 C1075 C1076 A1077 U1078 C1079 U1083 A1086 G1087 A1088 G1089 U1090 G1091 C1092 G1093 U1094 A1095 A1096 U1097
C1100 U1101 C1102 A1103 C1104 U1105 G1106 G1110 A1111 G1112 U1113 G1114 G1115 C1116 C1119 G1120 C1121 G1122 C1123 C1124 G1125 A1126 A1127 A1128 A1129 U1130 G1131 A1132 U1133 C1135 G1136 G1137 G1138 G1139 C1140 U1141 U1142 A1142A C1147 A1148 G1149 C1150 G1151 C1152 C1153 G1154 A1155 A1156 G1157 C1158 U1159 G1160 G1184 U1165 C1166 U1167
G1168 G1169 G1170 G1171 G1173 A1174 U1175 G1176 A1177 C1178 C1179 C1180 C1181 A1182 G1183 G1184 C1185 G1186 G1187 U1188 A1189 G1190 G1191 G1192 G1193 C1196 G1197 U1198 U1199 C1200 C1201 C1202 G1203 A1204 U1205 G1206 C1207 C1208 G1209 A1210 U1211 G1212 A1213 A1214 G1215 G1216 C1217 C1218 G1219 A1220 C1221 C1222 C1223 G1224 C1225 G1226 A1227 G1229A
C1230 G1231 G1235 G1236 A1237 G1238 G1239 U1240 A1241 A1242 G1243 G1244 G1248 U1249 G1250 C1251 G1252 A1253 A1254 U1255 G1256 C1257 C1258 G1259 G1260 C1261 A1262 U1263 G1264 A1265 G1266 U1267 A1268 A1269 C1270 G1271 A1272 U1273 A1274 A1275 A1276 G1277 A1278 G1279 G1280 G1283 A1284 A1285 A1286 A1287 C1290 C1291 U1292 C1293 U1294 C1295
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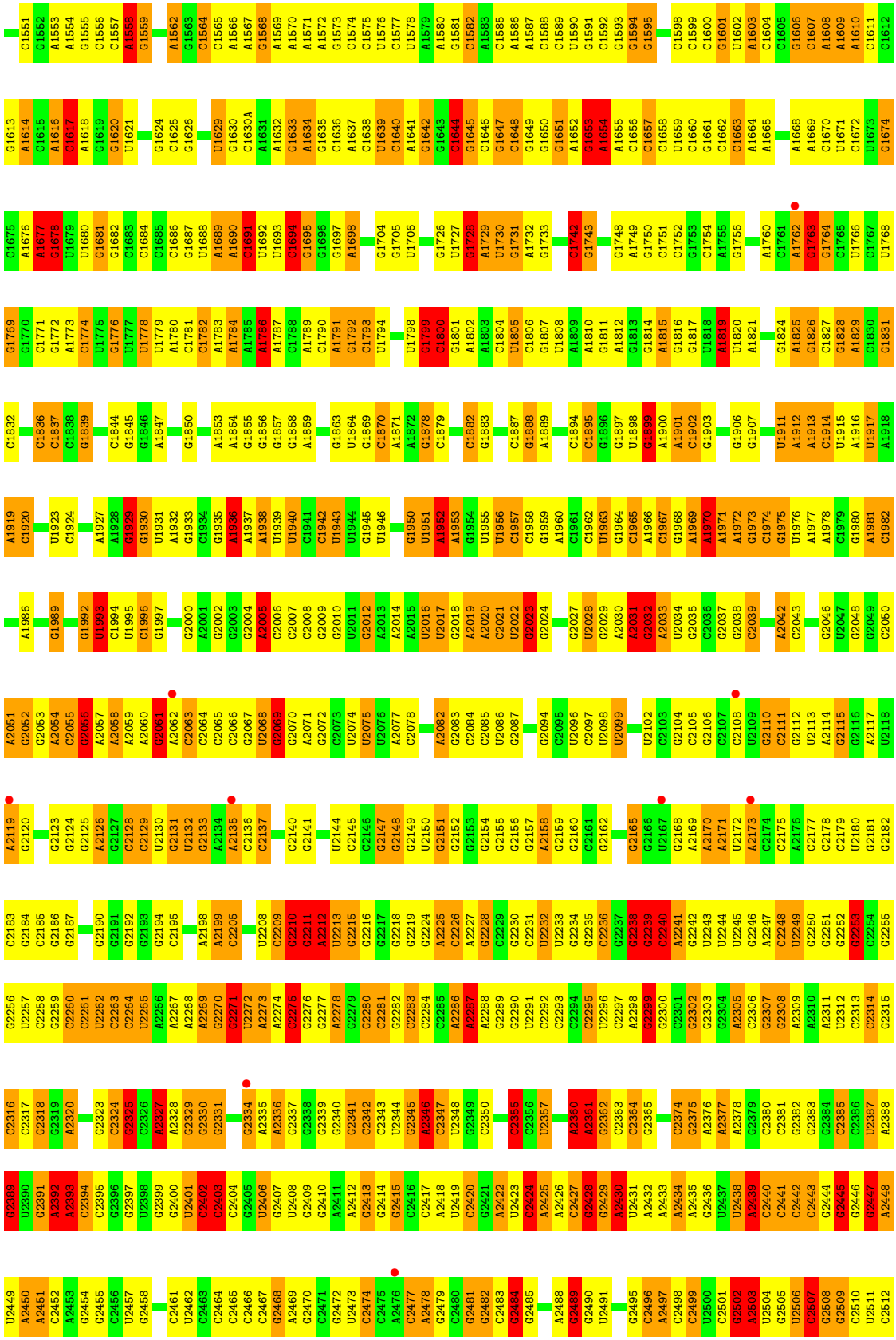
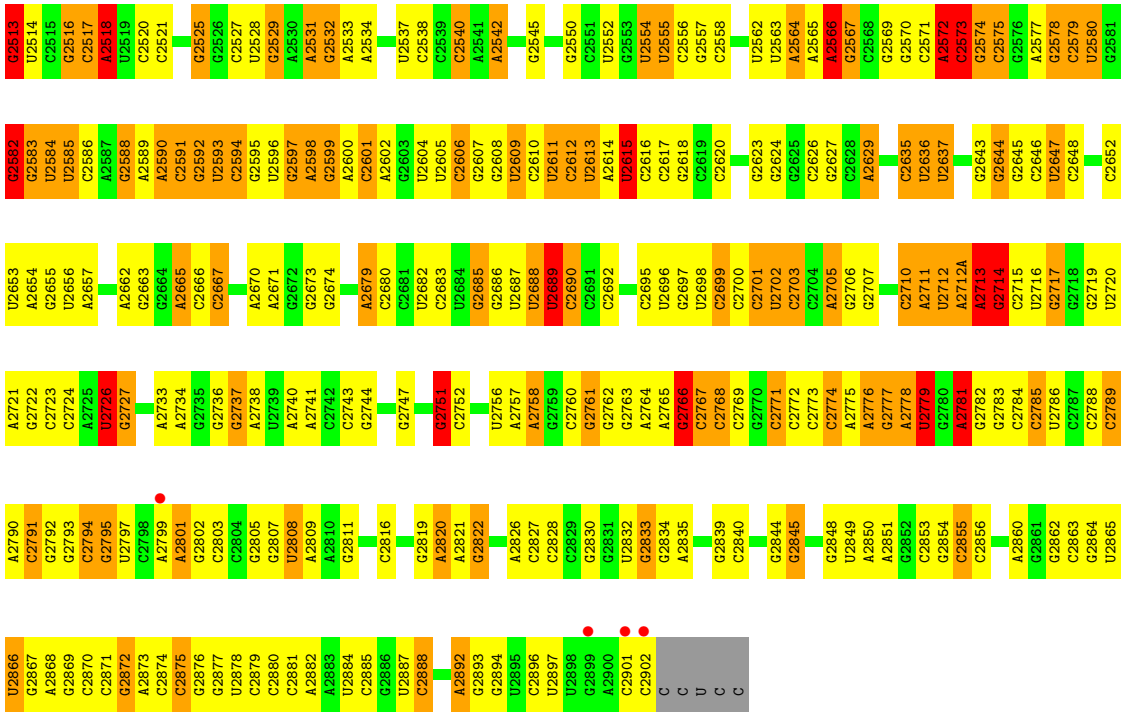
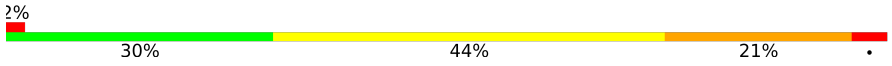
A1486 G1487 G1488 U1489 A1490 G1491 G1492 C1493 A1494 A1495 A1496 U1497 C1498 C1501 C1502 U1503 A1507 A1508 C1509 A1510 A1511 G1512 C1513 U1514 C1515 U1516 G1517 C1518 G1519 U1520 G1521 G1522 U1523 G1524 G1525 G1526 G1527 A1528 A1529 G1530 C1531 C1532 C1533 G1534 U1535 A1536 C1537 G1538 G1539 G1540 U1541 G1542 A1543 C1544 A1545 A1545A C1546 C1547

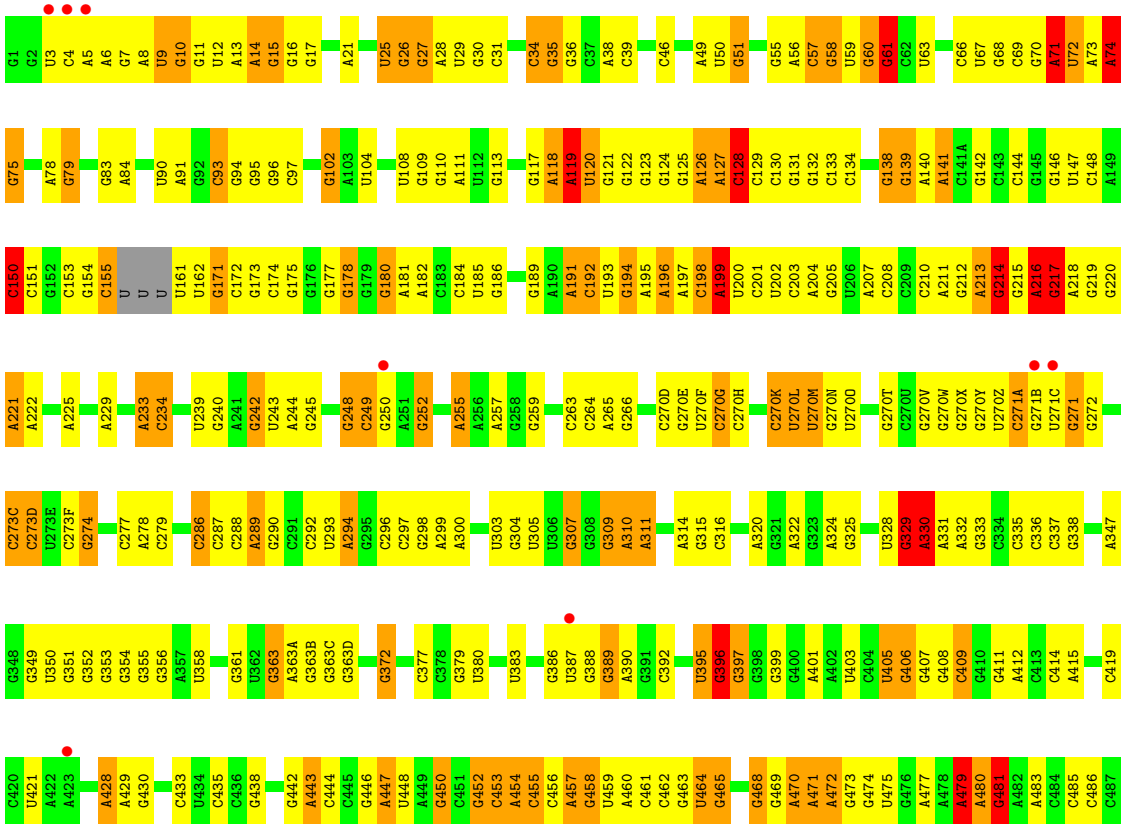


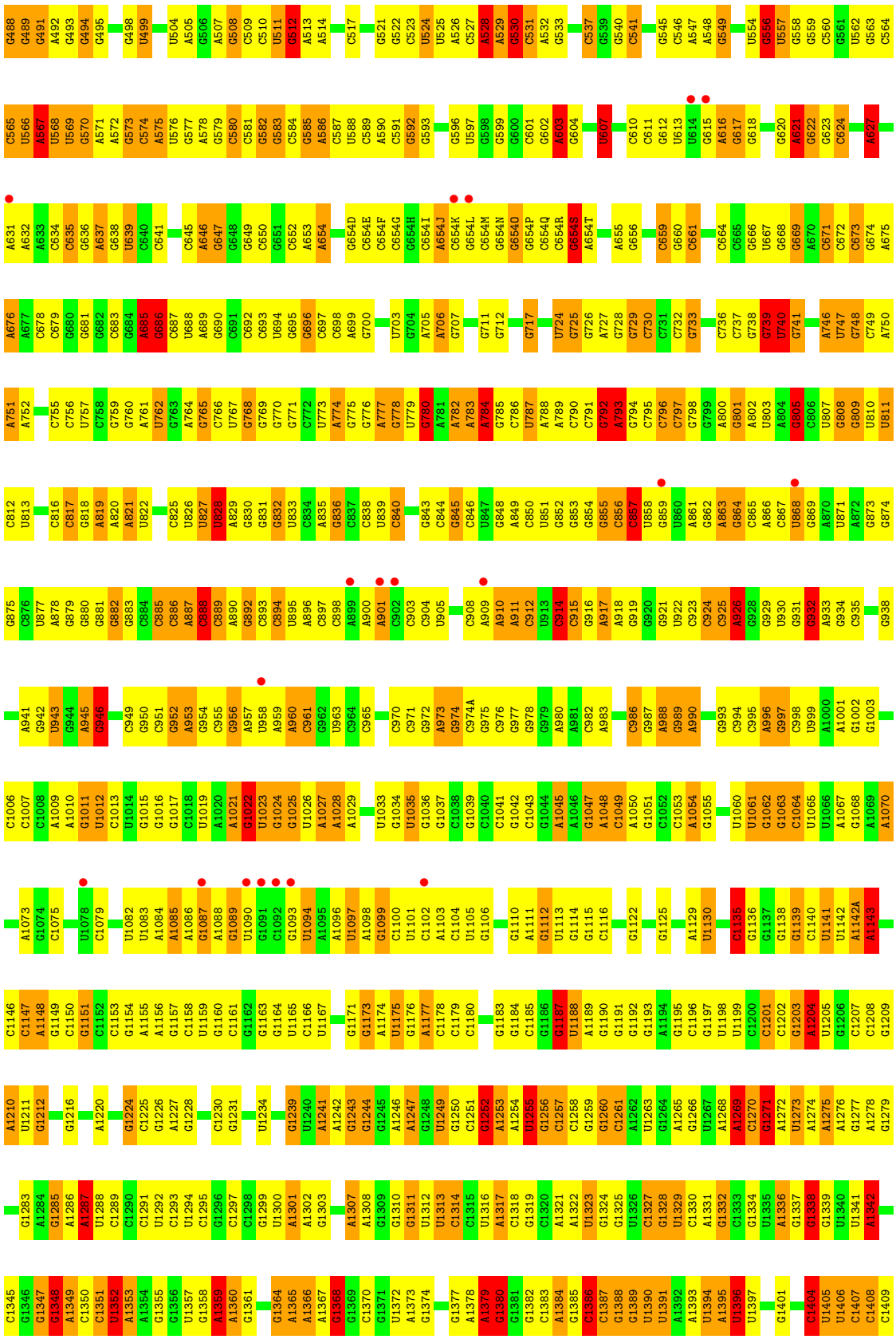


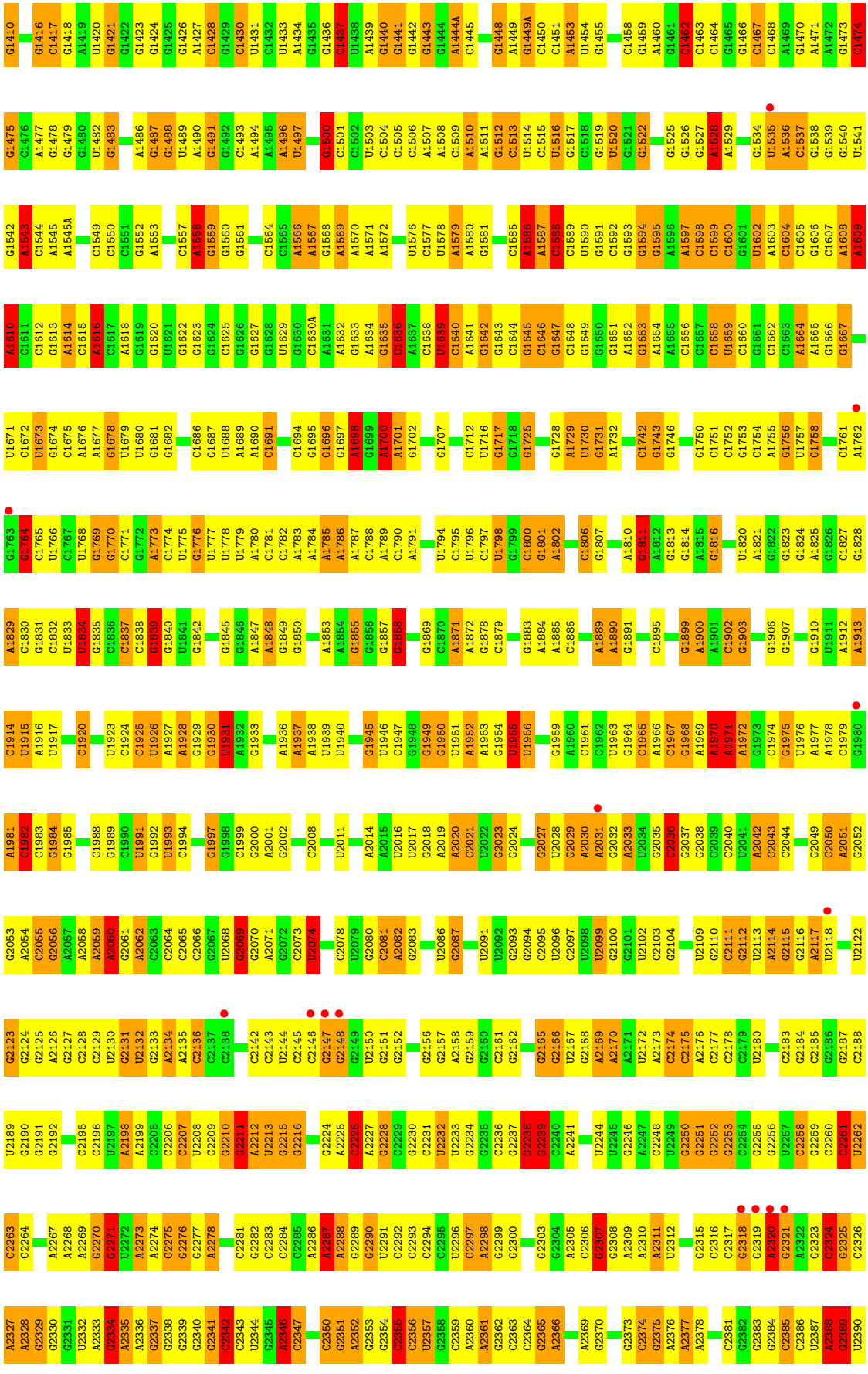
• Molecule 24: 23S ribosomal RNA

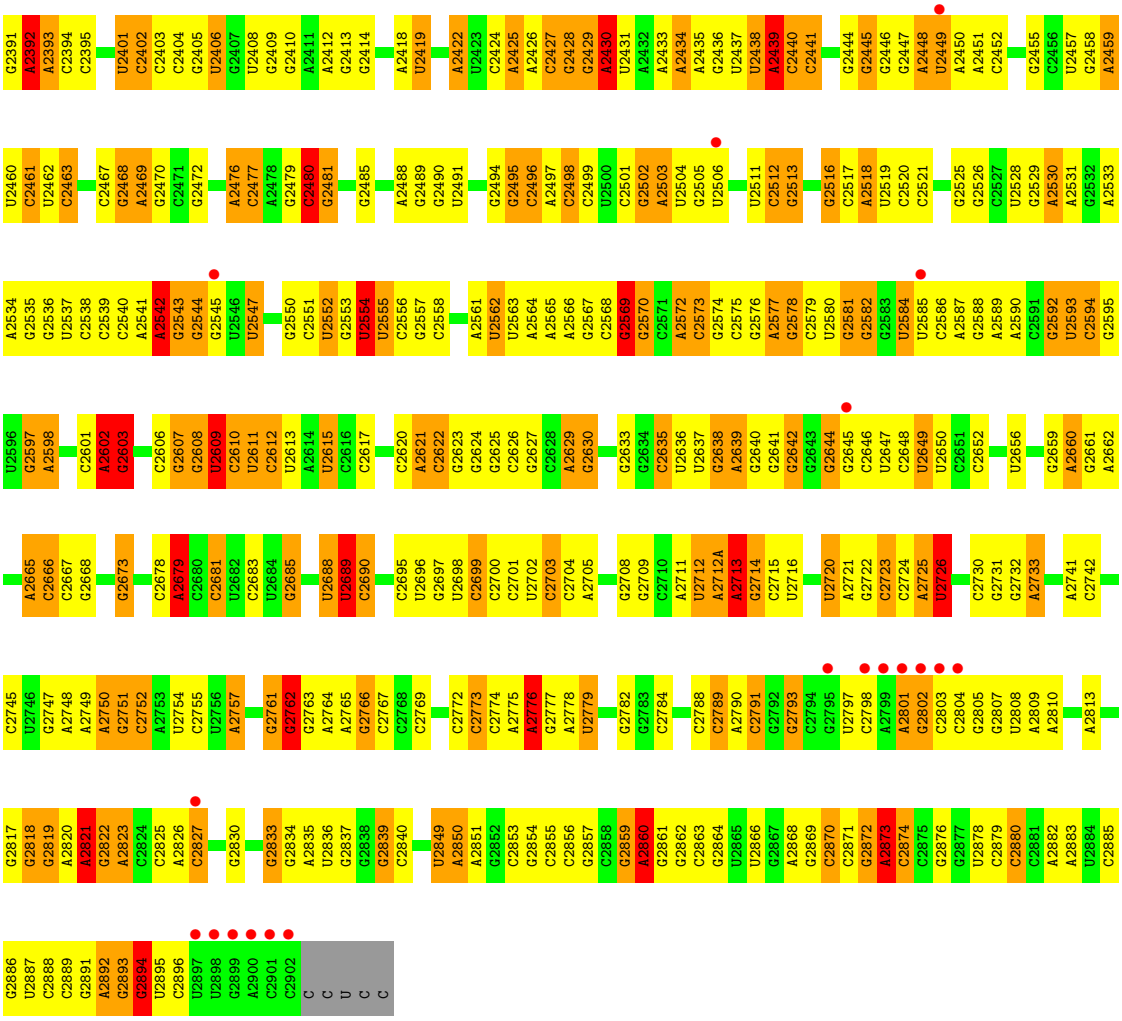
Chain 14:





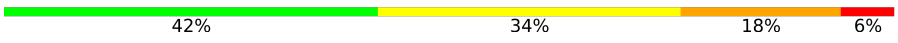


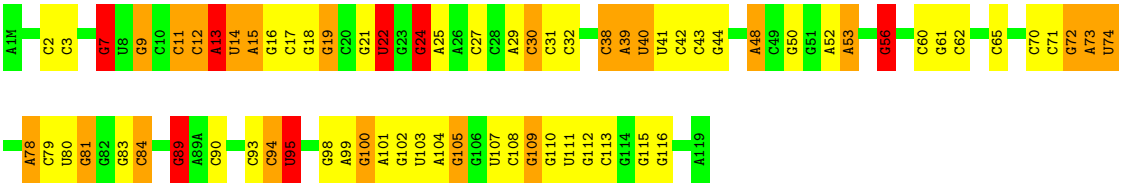




• Molecule 25: 5S ribosomal RNA

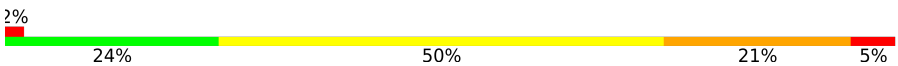
Chain 16:

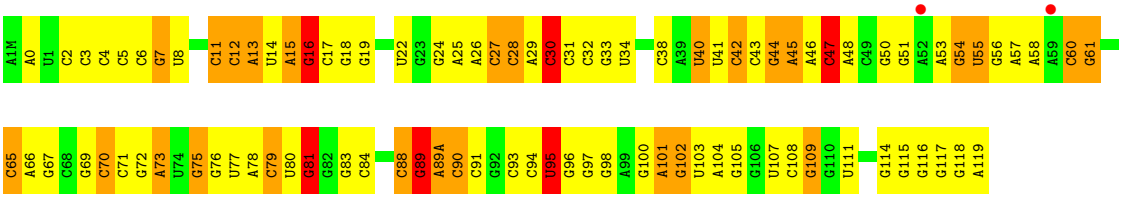




• Molecule 25: 5S ribosomal RNA

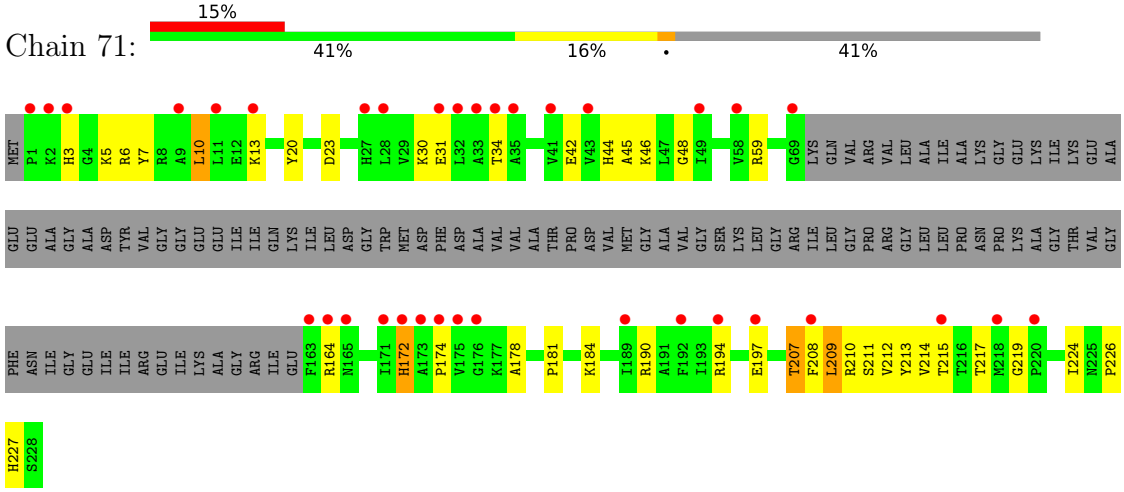
Chain 1J:





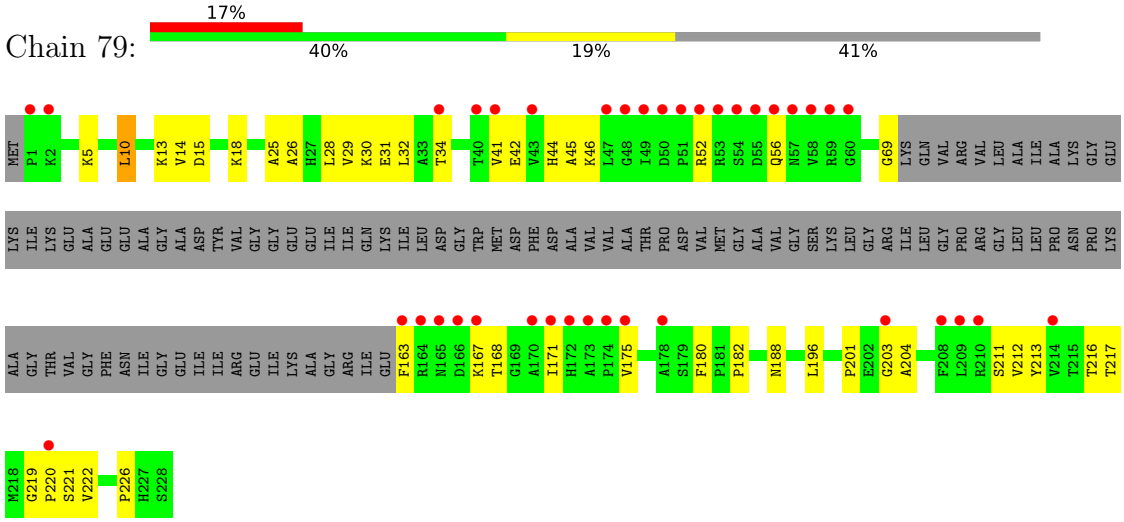
• Molecule 26: 50S ribosomal protein L1

Chain 71:



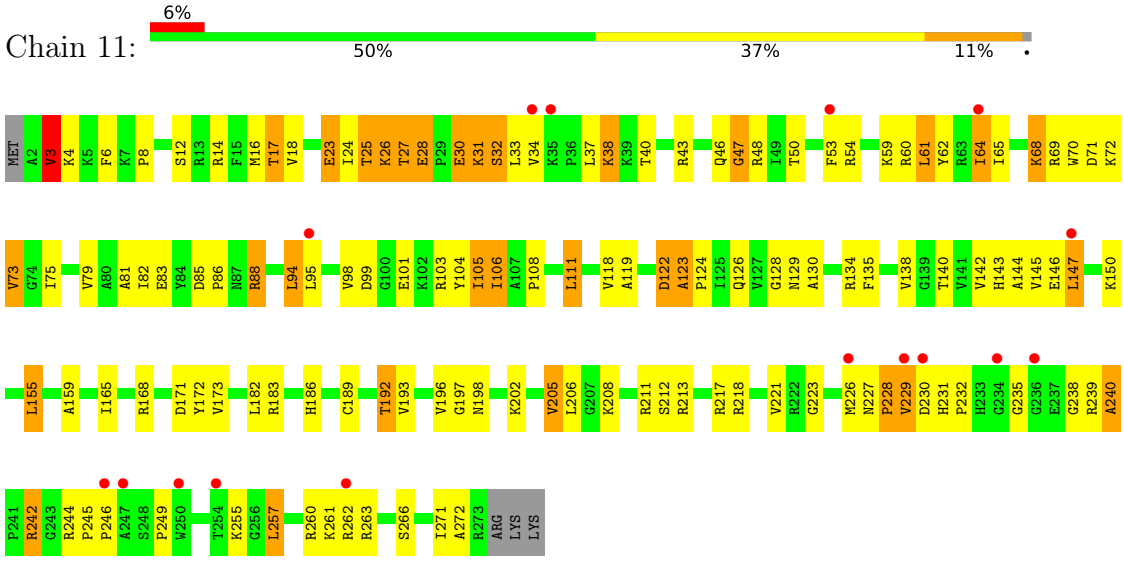
• Molecule 26: 50S ribosomal protein L1

Chain 79:



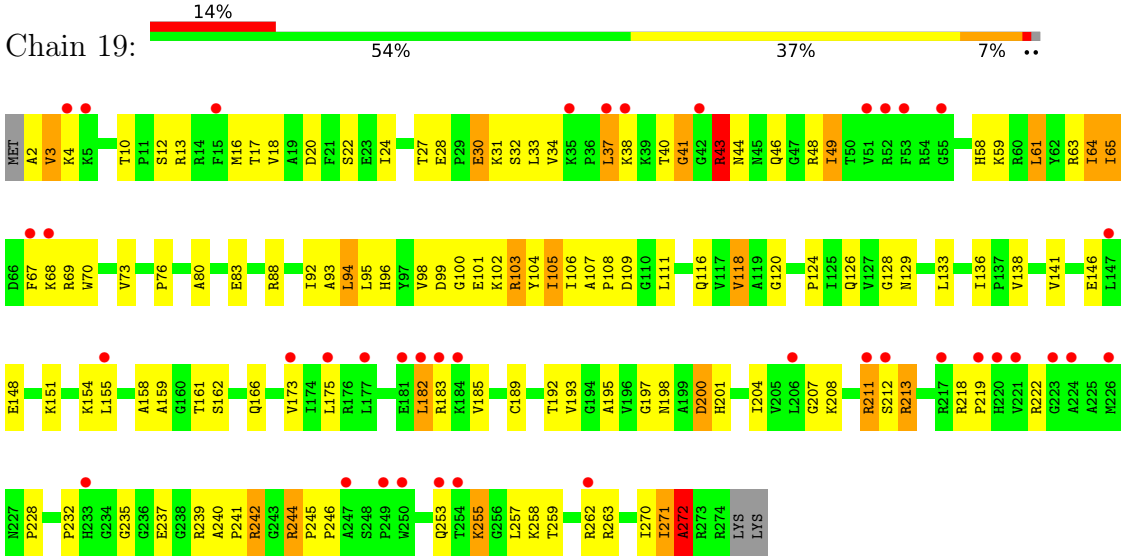
• Molecule 27: 50S ribosomal protein L2

Chain 11:



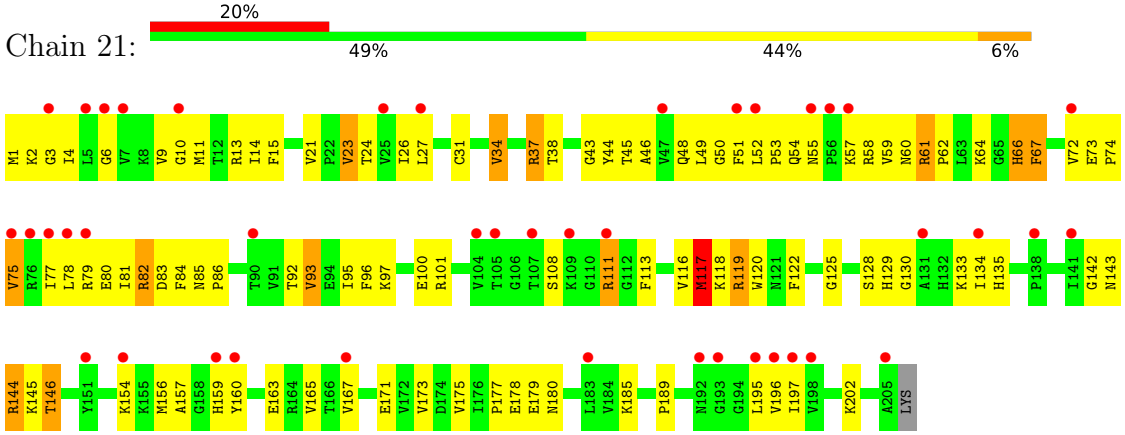
• Molecule 27: 50S ribosomal protein L2

Chain 19:



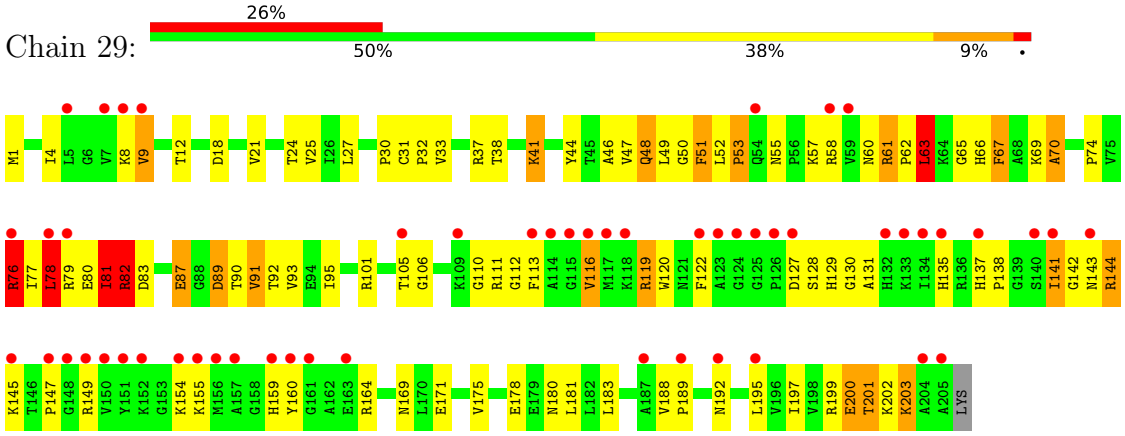
• Molecule 28: 50S ribosomal protein L3

Chain 21:



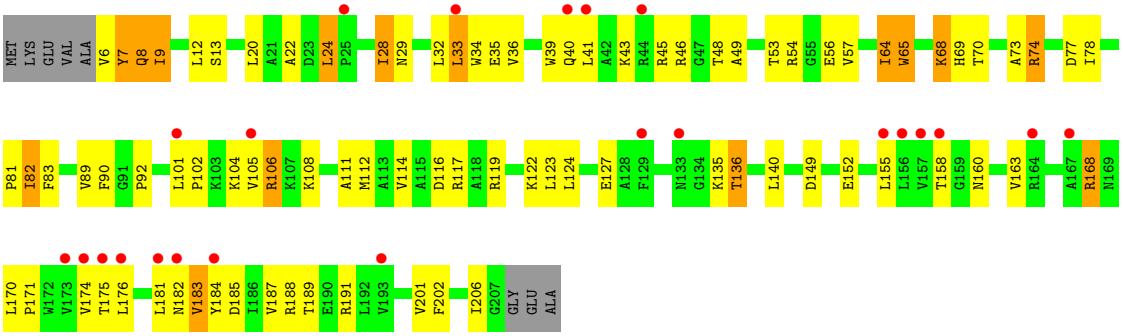
• Molecule 28: 50S ribosomal protein L3

Chain 29:



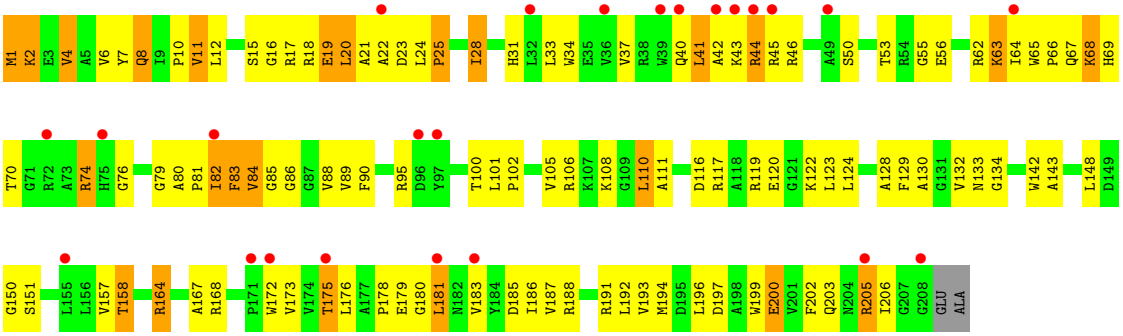
• Molecule 29: 50S ribosomal protein L4

Chain 31:



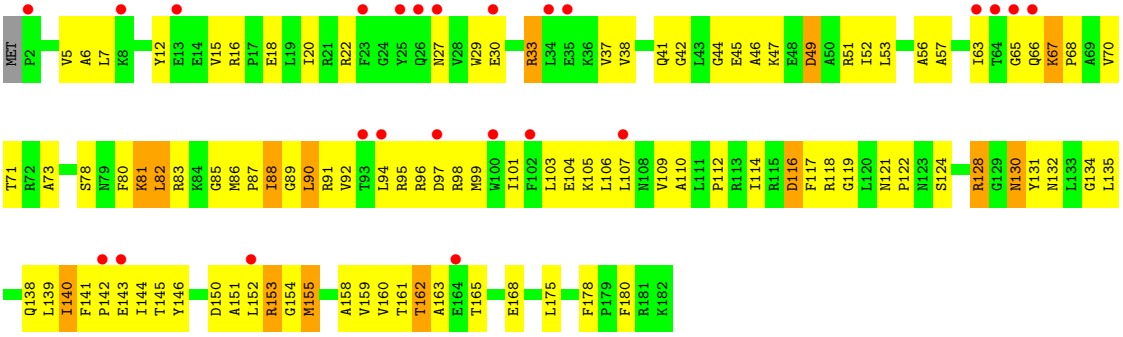
• Molecule 29: 50S ribosomal protein L4

Chain 39:



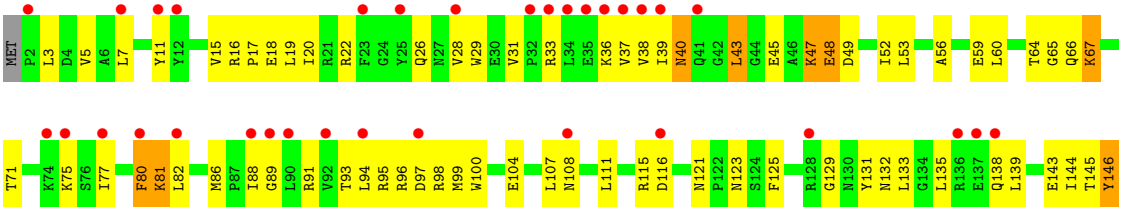
• Molecule 30: 50S ribosomal protein L5

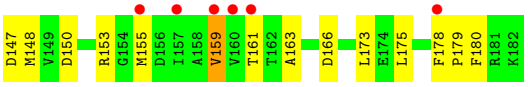
Chain 41:



• Molecule 30: 50S ribosomal protein L5

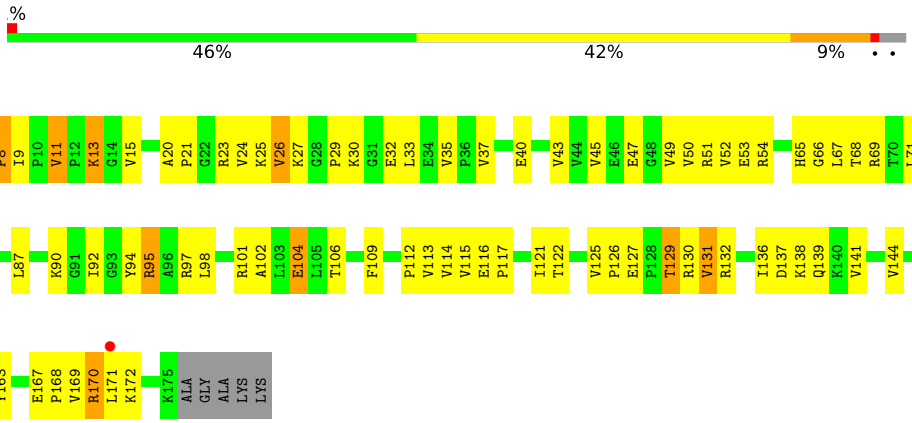
Chain 49:





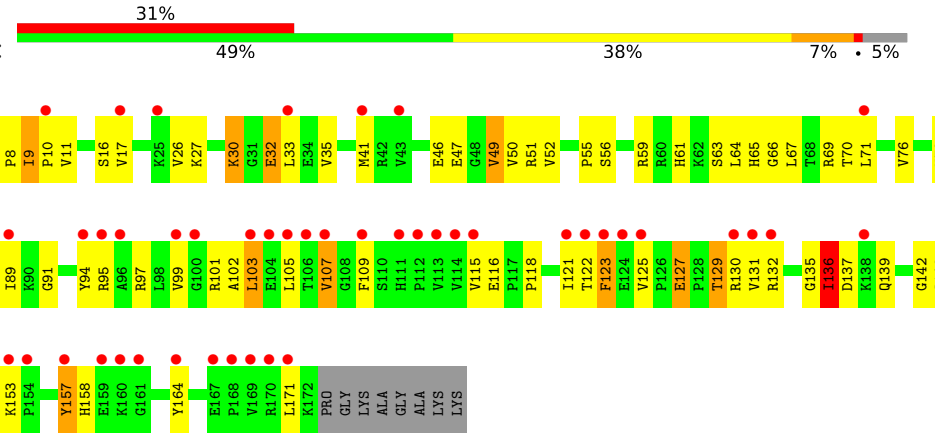
• Molecule 31: 50S ribosomal protein L6

Chain 51:



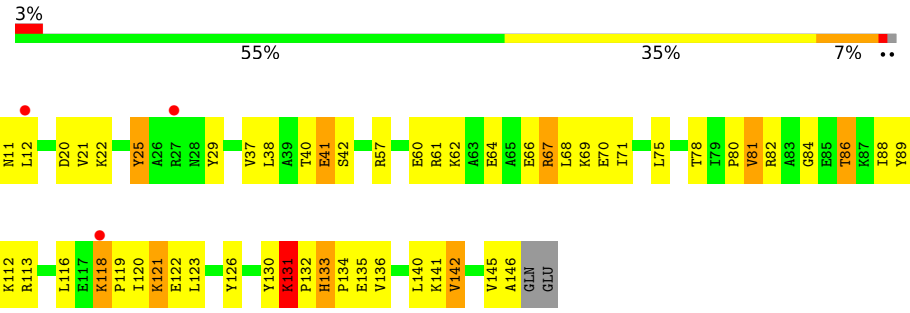
• Molecule 31: 50S ribosomal protein L6

Chain 59:



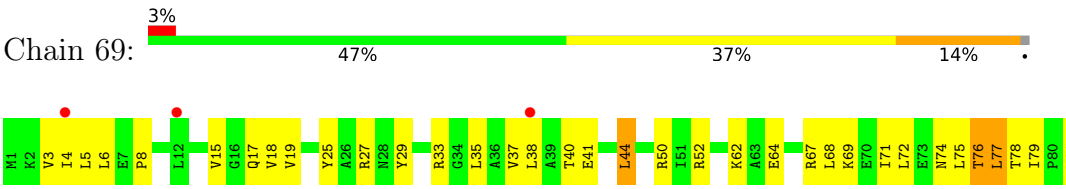
• Molecule 32: 50S ribosomal protein L9

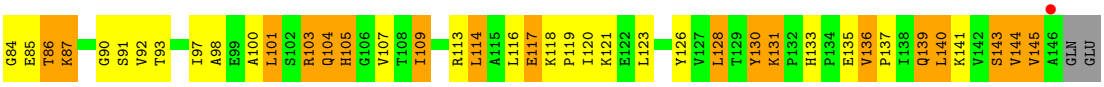
Chain 61:



• Molecule 32: 50S ribosomal protein L9

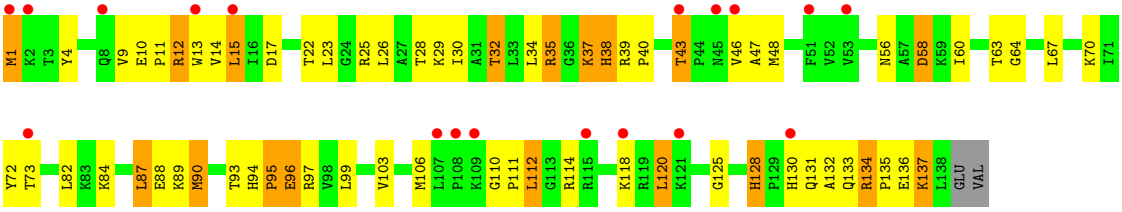
Chain 69:





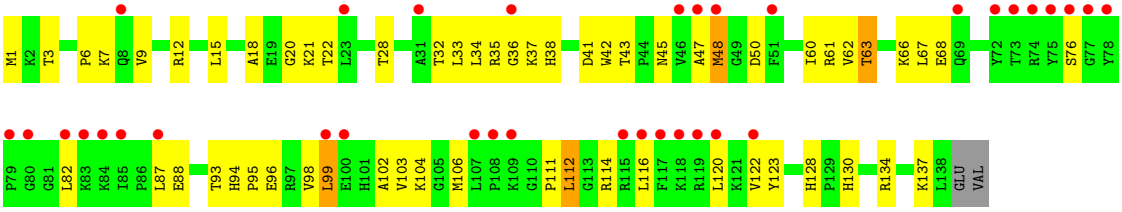
• Molecule 33: 50S ribosomal protein L13

Chain 58:



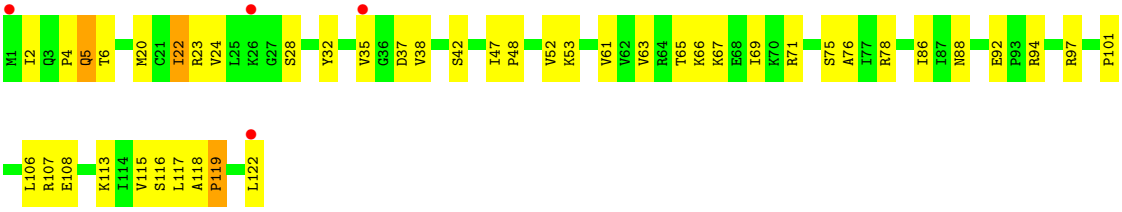
• Molecule 33: 50S ribosomal protein L13

Chain 15:



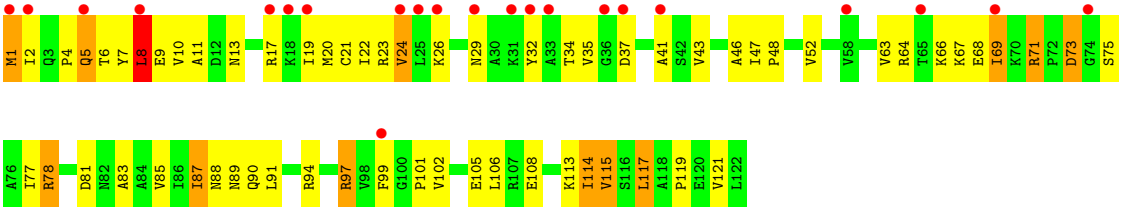
• Molecule 34: 50S ribosomal protein L14

Chain 68:



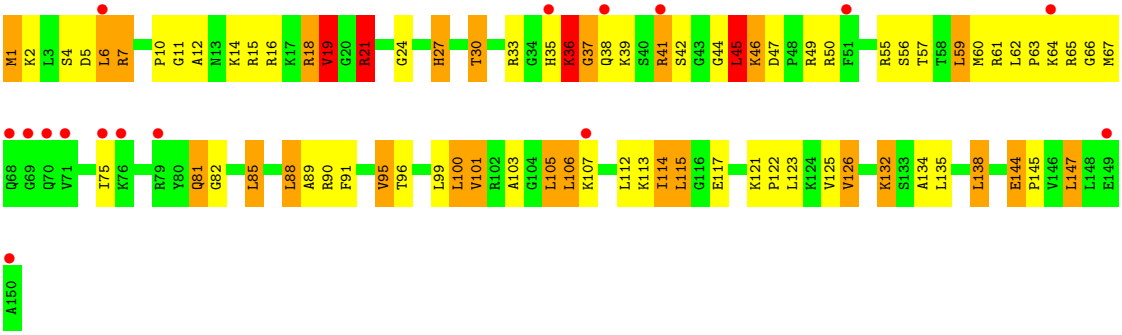
• Molecule 34: 50S ribosomal protein L14

Chain 25:

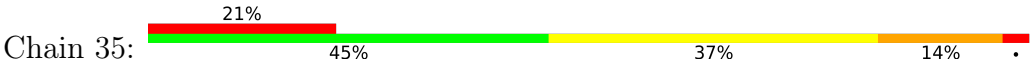


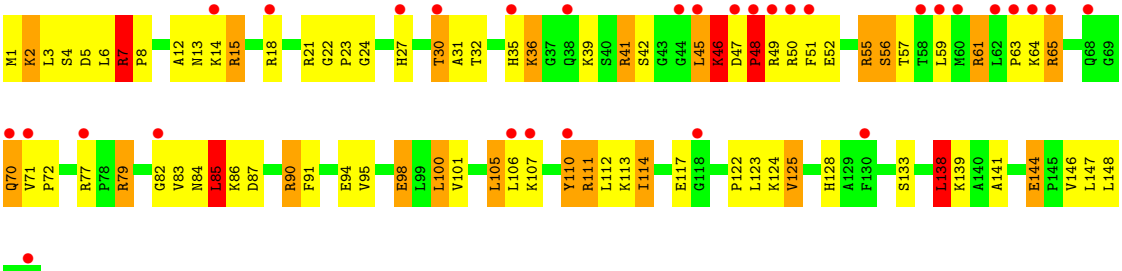
• Molecule 35: 50S ribosomal protein L15

Chain 78:

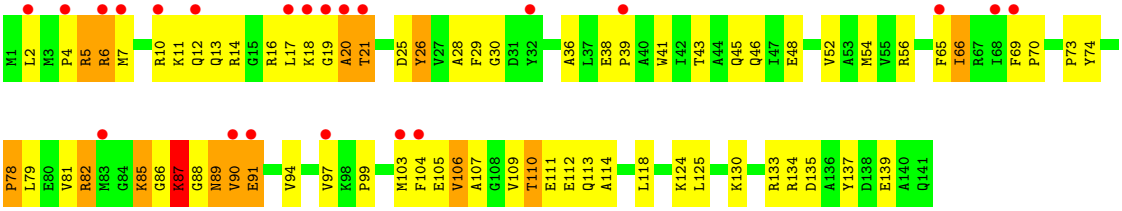


• Molecule 35: 50S ribosomal protein L15

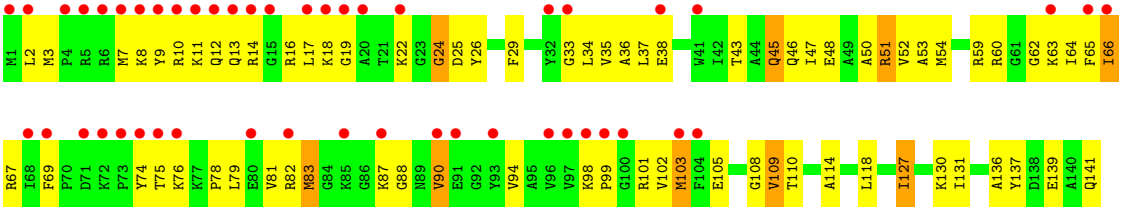




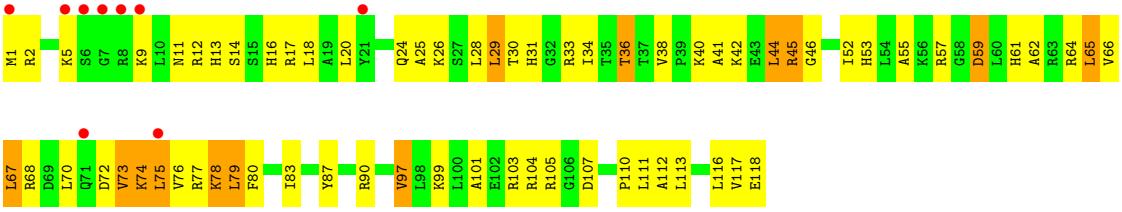
• Molecule 36: 50S ribosomal protein L16



• Molecule 36: 50S ribosomal protein L16

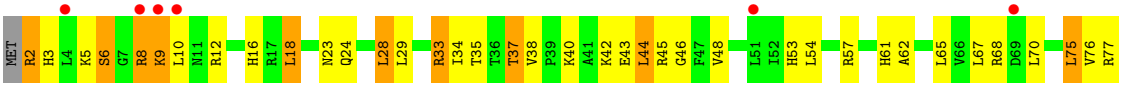


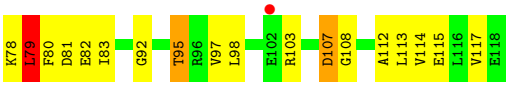
• Molecule 37: 50S ribosomal protein L17



• Molecule 37: 50S ribosomal protein L17

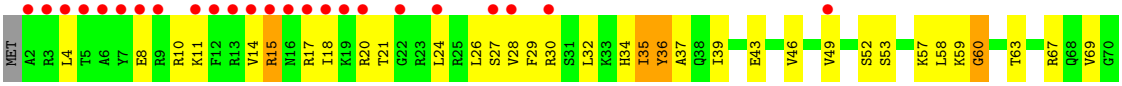
Chain 55:

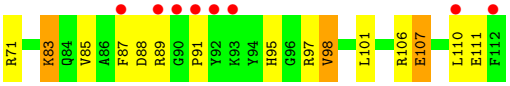




• Molecule 38: 50S ribosomal protein L18

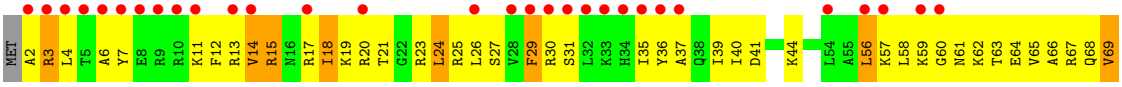
Chain A8:





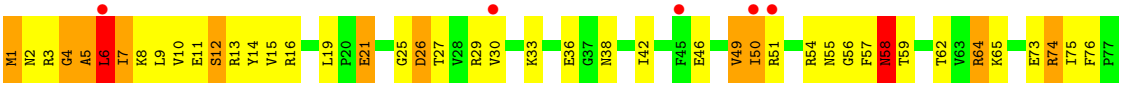
• Molecule 38: 50S ribosomal protein L18

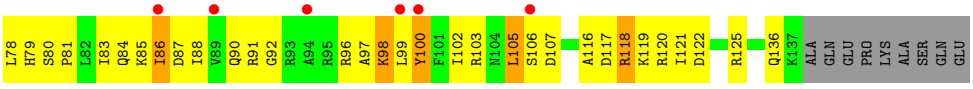
Chain 65:



• Molecule 39: 50S ribosomal protein L19

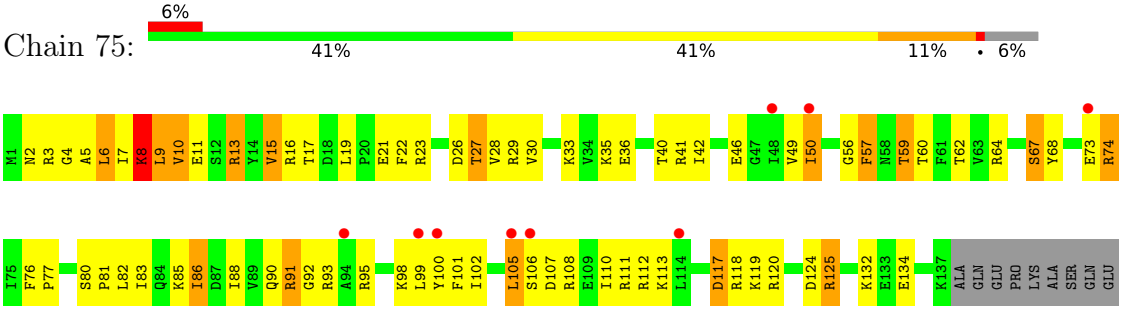
Chain B8:





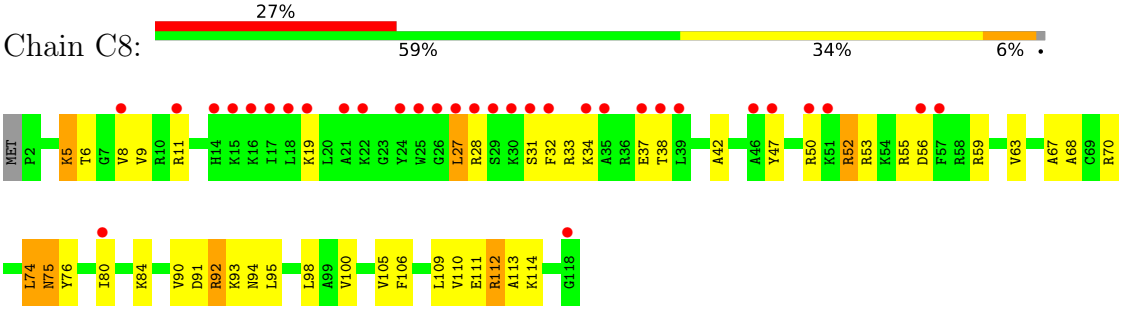
• Molecule 39: 50S ribosomal protein L19

Chain 75:



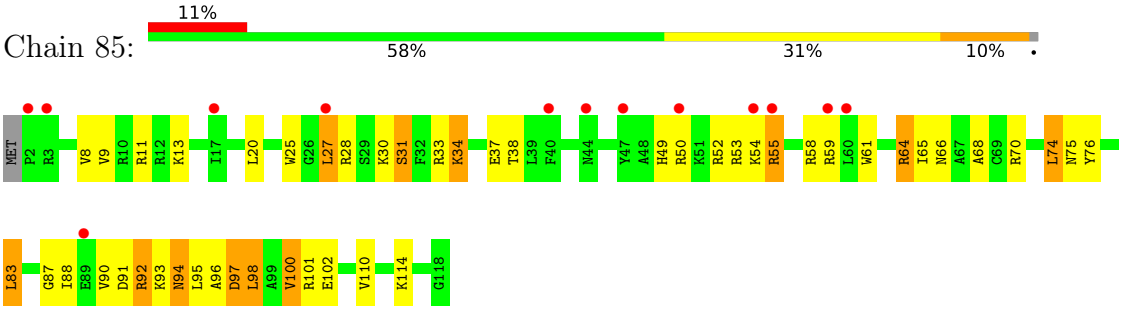
• Molecule 40: 50S ribosomal protein L20

Chain C8:



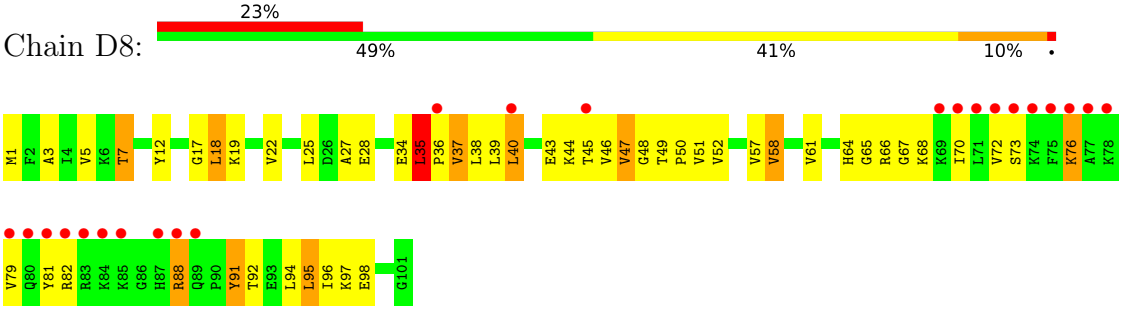
• Molecule 40: 50S ribosomal protein L20

Chain 85:



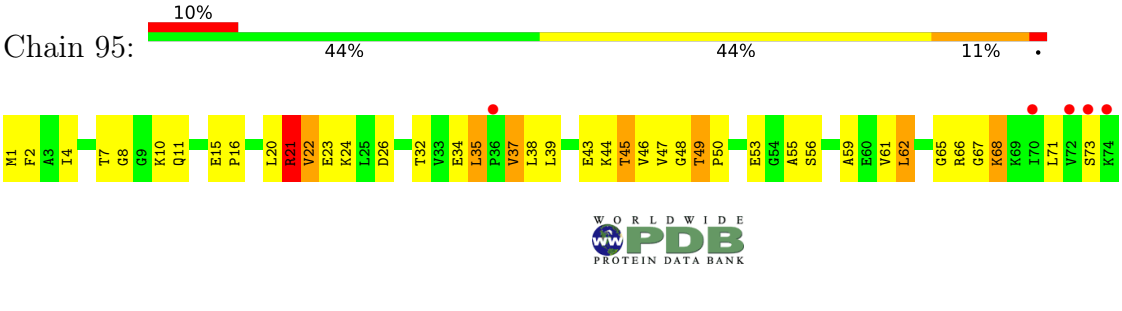
• Molecule 41: 50S ribosomal protein L21

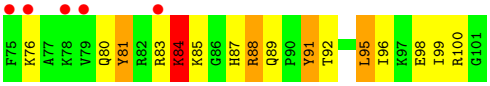
Chain D8:



• Molecule 41: 50S ribosomal protein L21

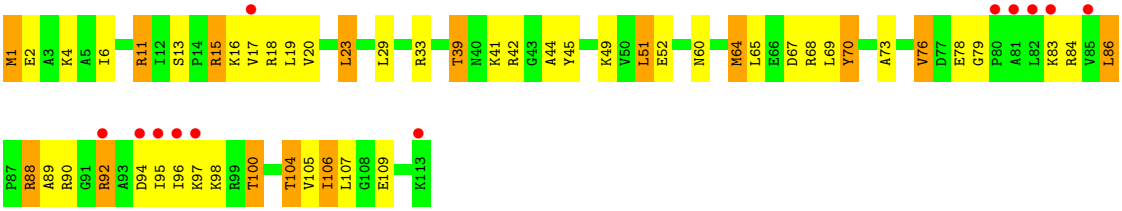
Chain 95:





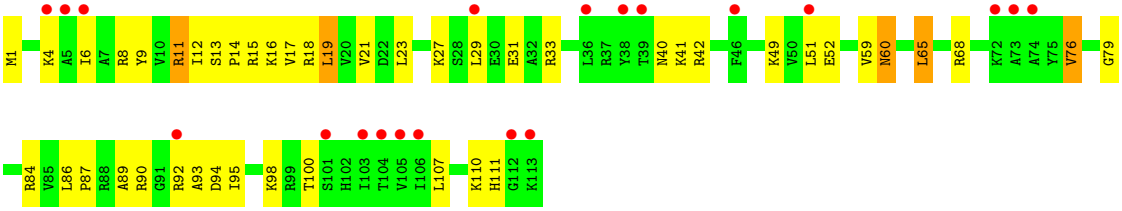
• Molecule 42: 50S ribosomal protein L22

Chain E8:



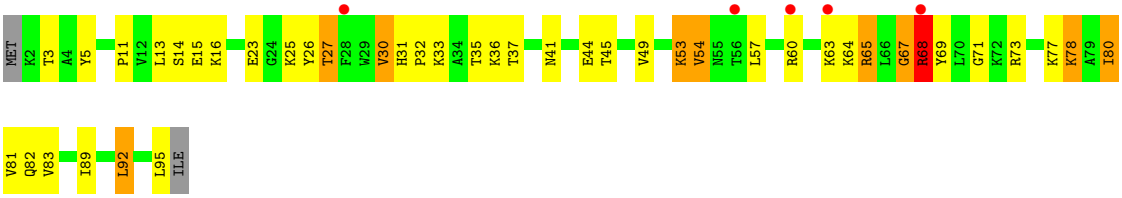
• Molecule 42: 50S ribosomal protein L22

Chain A5:



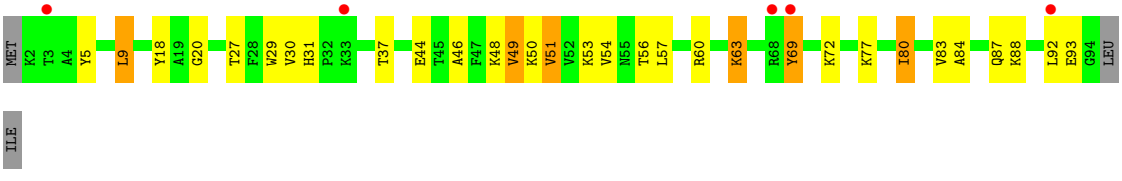
• Molecule 43: 50S ribosomal protein L23

Chain F8:



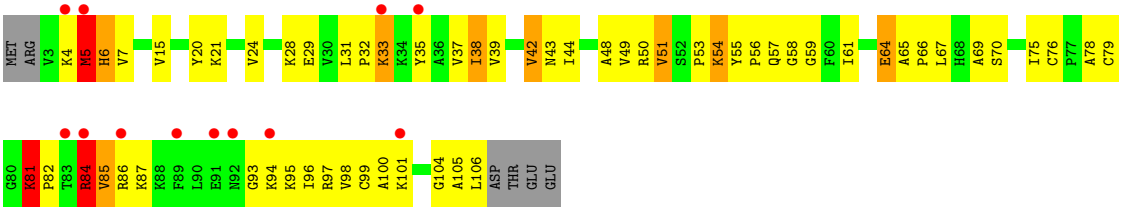
• Molecule 43: 50S ribosomal protein L23

Chain B5:



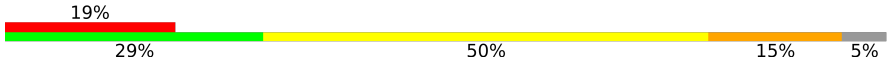
• Molecule 44: 50S ribosomal protein L24

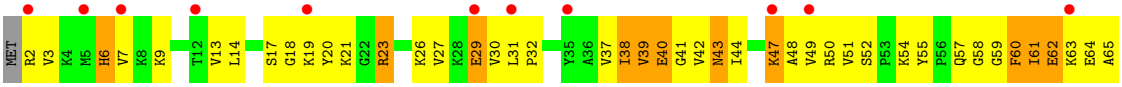
Chain G8:

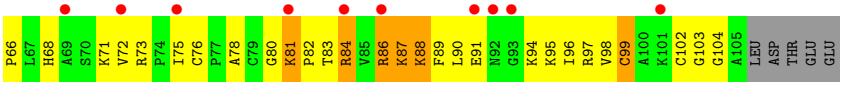


• Molecule 44: 50S ribosomal protein L24

Chain C5:

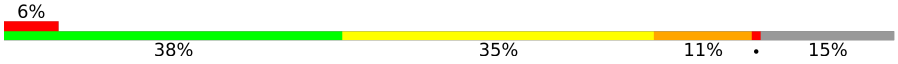


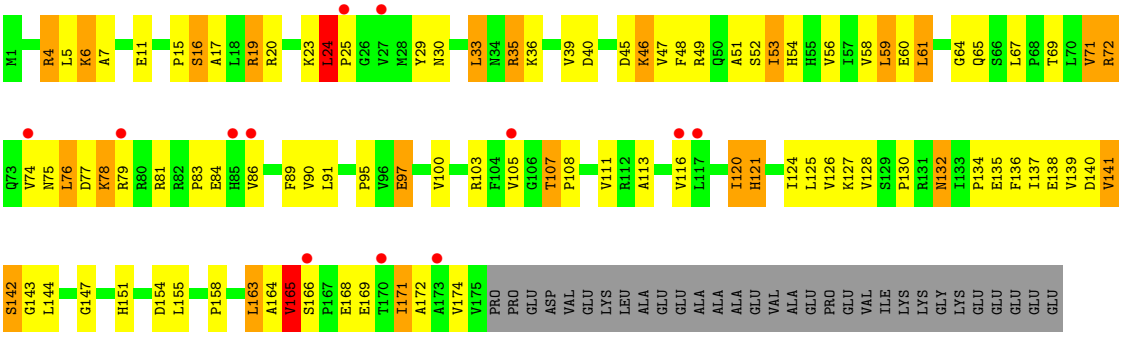




• Molecule 45: 50S ribosomal protein L25

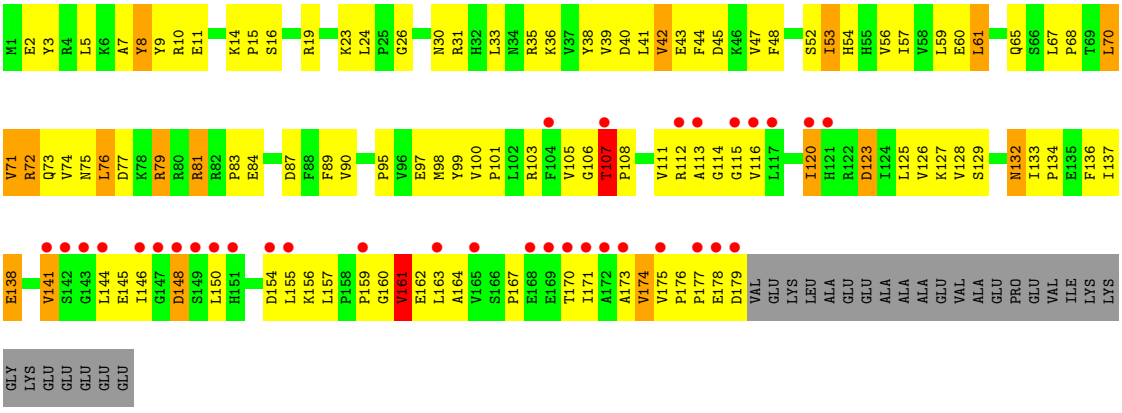
Chain H8:





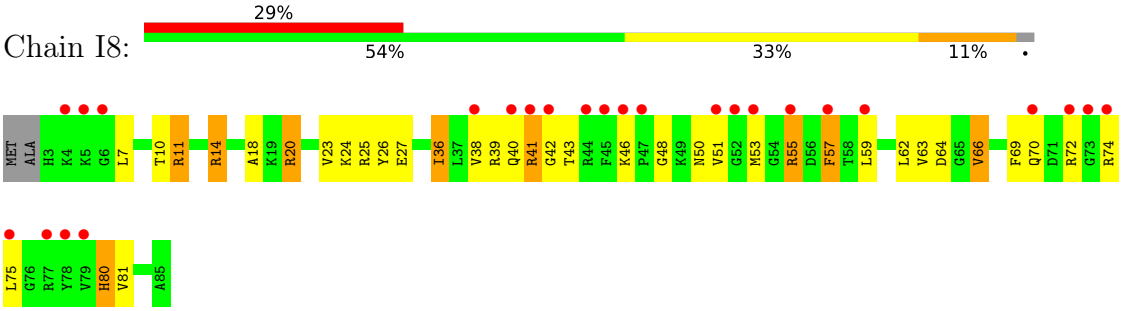
• Molecule 45: 50S ribosomal protein L25

Chain D5:



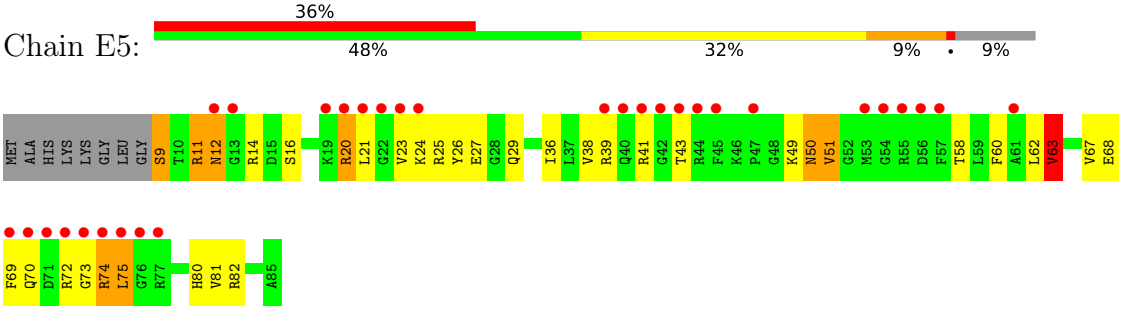
• Molecule 46: 50S ribosomal protein L27

Chain I8:



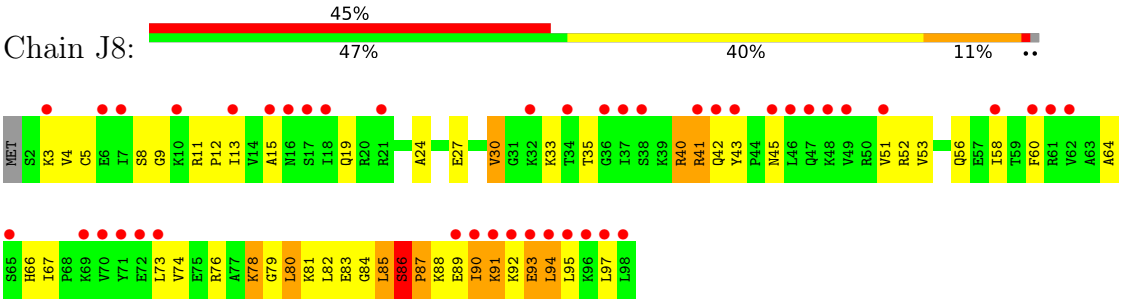
• Molecule 46: 50S ribosomal protein L27

Chain E5:



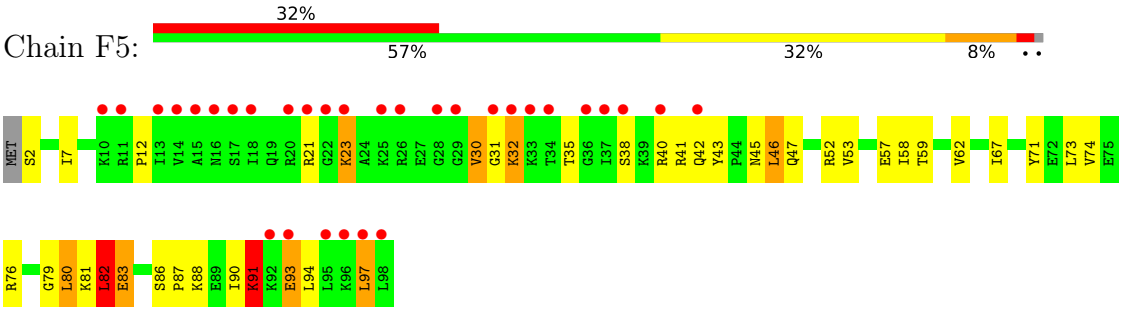
• Molecule 47: 50S ribosomal protein L28

Chain J8:



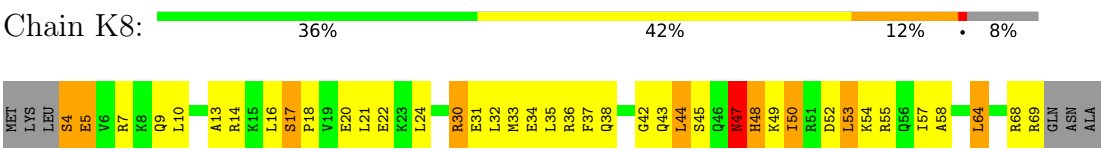
• Molecule 47: 50S ribosomal protein L28

Chain F5:



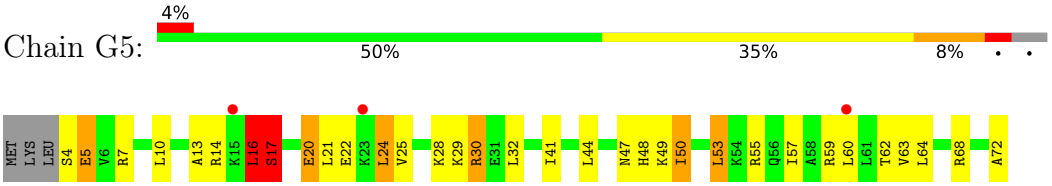
• Molecule 48: 50S ribosomal protein L29

Chain K8:



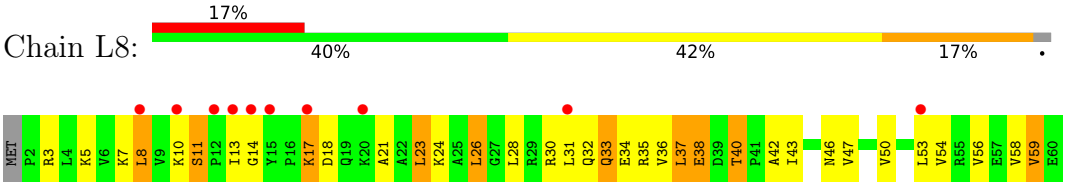
• Molecule 48: 50S ribosomal protein L29

Chain G5:



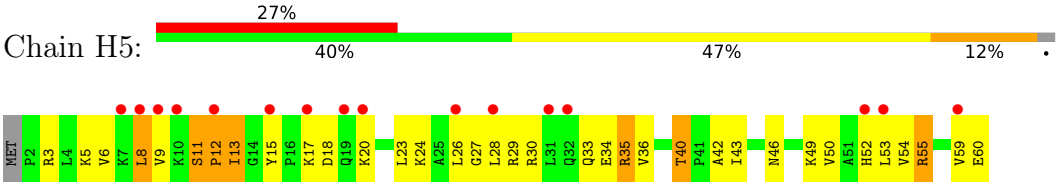
• Molecule 49: 50S ribosomal protein L30

Chain L8:



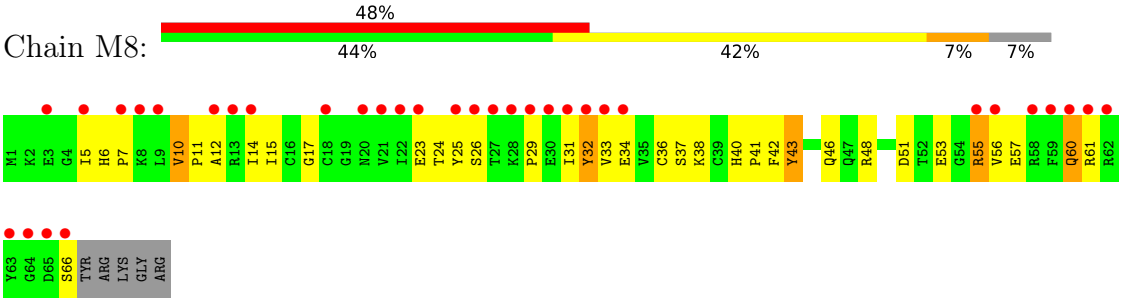
• Molecule 49: 50S ribosomal protein L30

Chain H5:



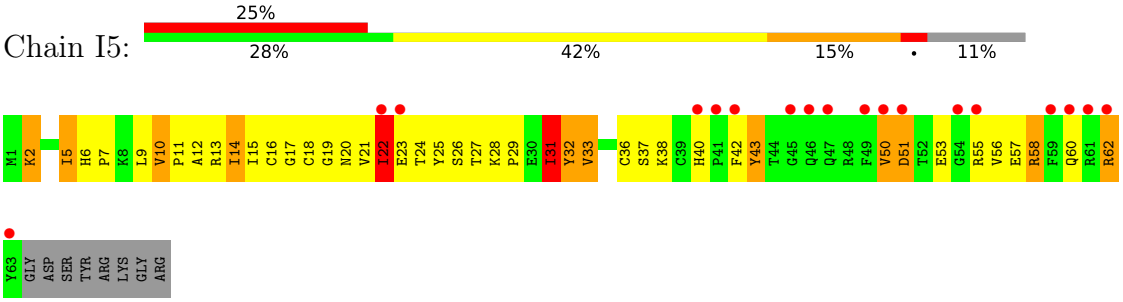
• Molecule 50: 50S ribosomal protein L31

Chain M8:



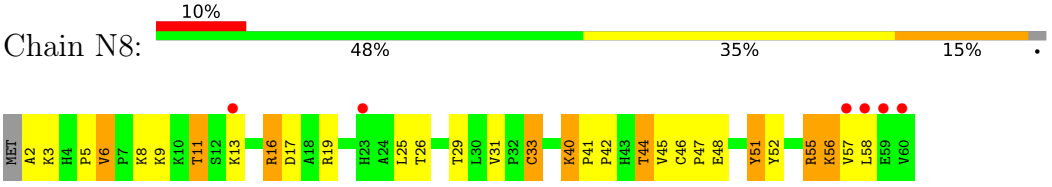
• Molecule 50: 50S ribosomal protein L31

Chain I5:



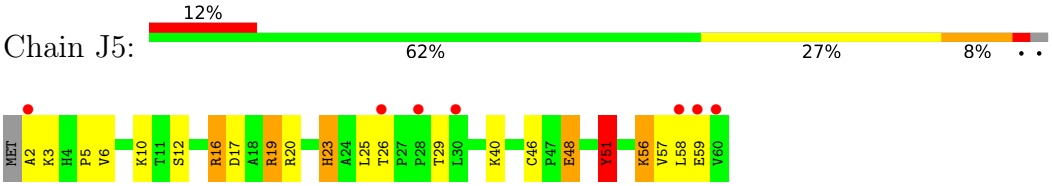
• Molecule 51: 50S ribosomal protein L32

Chain N8:



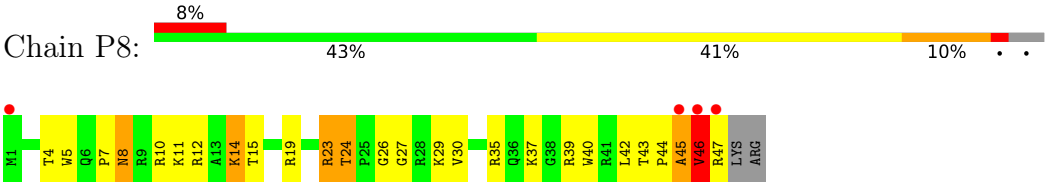
• Molecule 51: 50S ribosomal protein L32

Chain J5:



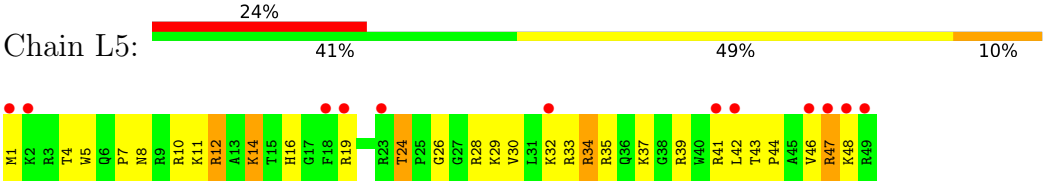
• Molecule 52: 50S ribosomal protein L34

Chain P8:



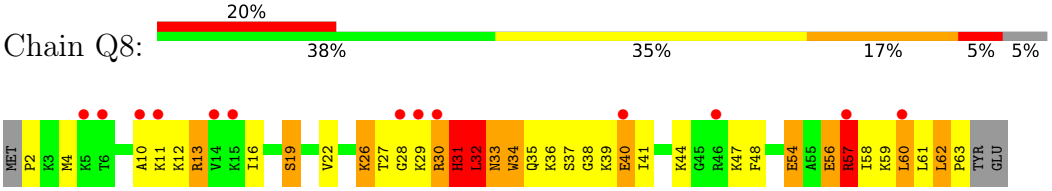
• Molecule 52: 50S ribosomal protein L34

Chain L5:



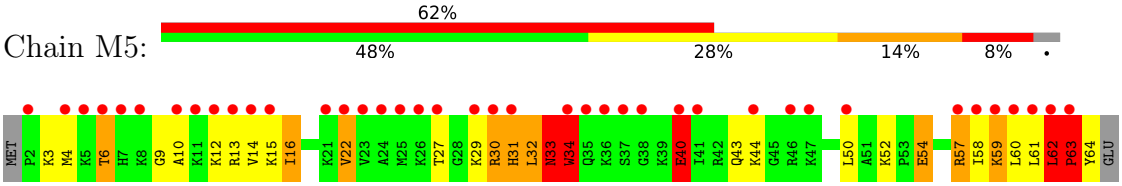
• Molecule 53: 50S ribosomal protein L35

Chain Q8:



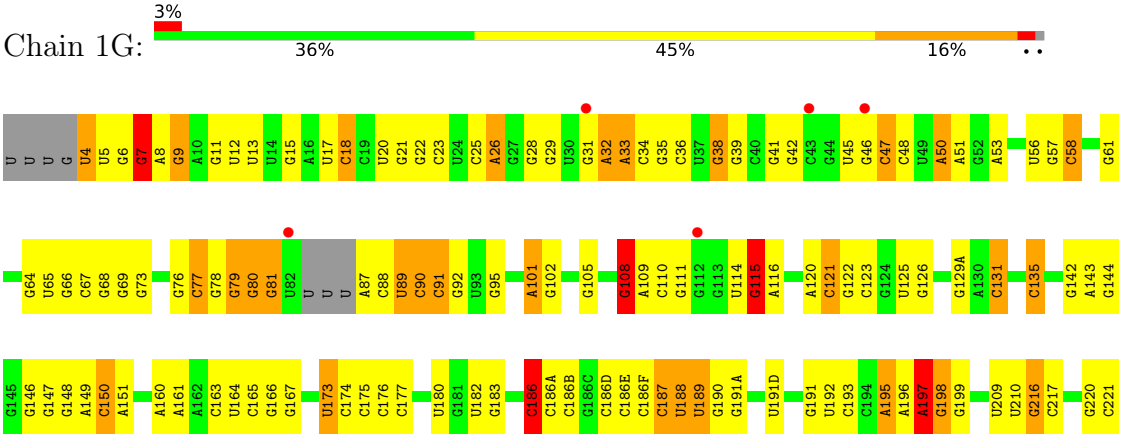
• Molecule 53: 50S ribosomal protein L35

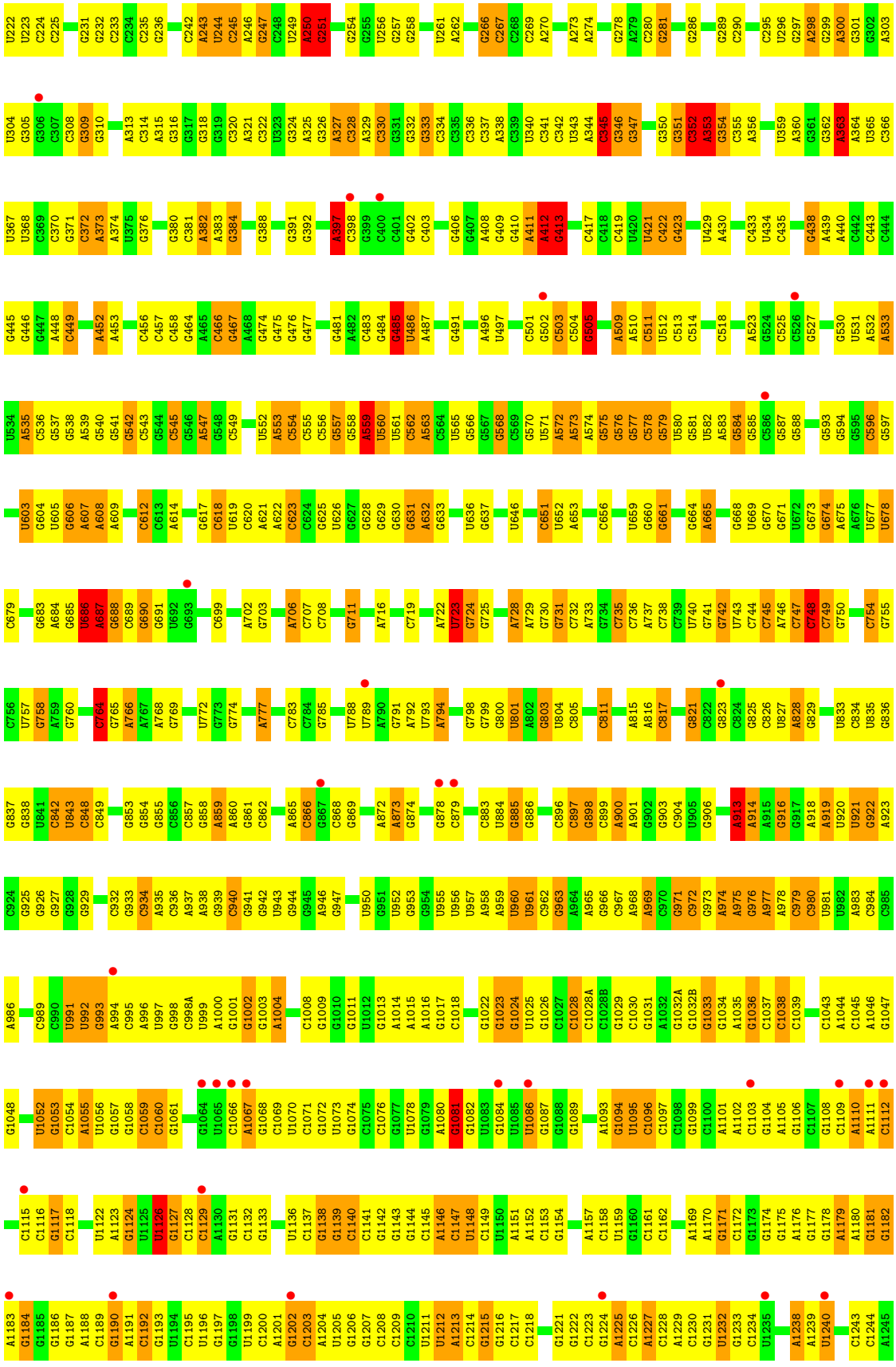
Chain M5:

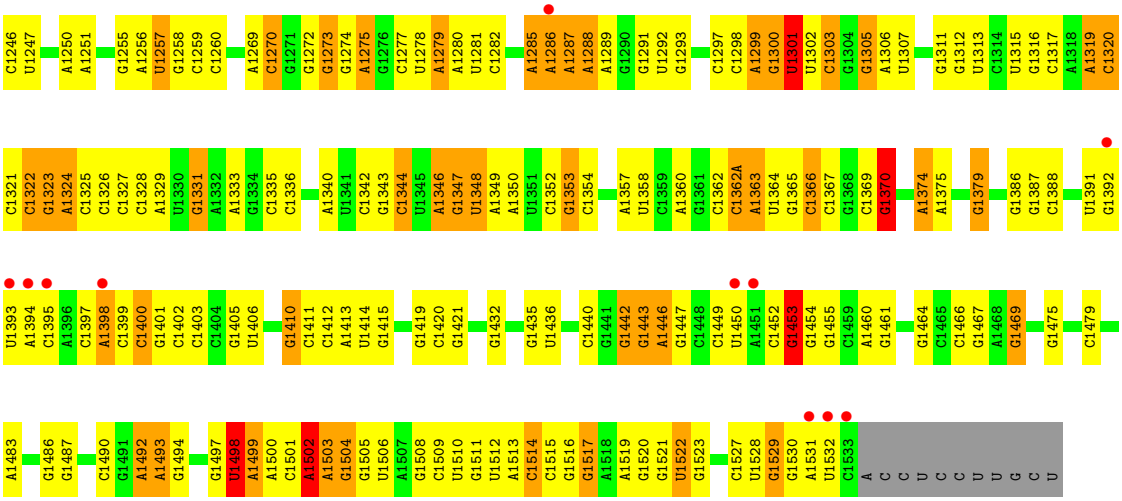


• Molecule 54: 16S ribosomal RNA

Chain 1G:




U222 U223 C224 C225 G231 G232 C233 C234 C235 G236 C242 A243 U244 C245 A246 G247 C248 U249 A250 G251 G254 G255 U256 G257 G258 U261 A262 G266 C267 C268 C269 A270 A273 A274 G278 A279 C280 G281 G286 G289 C290 C295 U296 G297 A298 G299 A300 G301 G302 A303
U304 G305 G306 C307 C308 G309 G310 A313 C314 A315 G316 G317 G318 G319 C320 A321 C322 U323 G324 A325 G326 A327 C328 A329 C330 G331 G332 G333 C334 C335 C336 C337 A338 C339 U340 C341 C342 U343 A344 C345 G346 G347 G350 G351 C352 A353 G354 C355 A356 U359 A360 G361 G362 A363 A364 U365 C366
U367 U368 C369 C370 G371 C372 A373 A374 U375 G376 G380 C381 A382 A383 G384 G388 G391 G392 A397 C398 G399 C400 C401 G402 C403 G406 G407 A408 G409 G410 A411 A412 G413 C417 C418 C419 U420 U421 C422 G423 U429 A430 C433 U434 C435 G438 A439 A440 C442 C443 C444
G445 G446 G447 A448 C449 A452 A453 C456 C457 C458 G464 A465 C466 G467 A468 G474 G475 G476 G477 G481 A482 C483 G484 G485 U486 A487 G491 A496 U497 C501 G502 C503 C504 G505 A509 A510 C511 U512 C513 C514 C518 A523 G524 C525 G526 G527 G530 U531 A532 A533
U534 A535 C536 G537 G538 A539 G540 G541 G542 C543 G544 C545 G546 A547 G548 C549 U552 A553 C554 C555 C556 G557 G558 A559 U560 U561 C562 A563 C564 U565 G566 G567 G568 C569 C570 U571 A572 A573 A574 G575 G576 G577 C578 G579 U580 G581 U582 A583 G584 G585 C586 G587 G588 G593 G594 G595 C596 G597
U603 G604 U605 G606 A607 A608 A609 C612 C613 A614 G617 C618 U619 C620 A621 A622 C623 G624 G625 U626 G627 G628 G629 G630 G631 A632 G633 U636 G637 U646 C651 U652 A653 C656 U659 G660 G661 C664 A665 G668 U669 G670 G671 U672 G673 G674 A675 A676 U677 U678
C679 G683 A684 G685 U686 A687 G688 C689 G690 G691 U692 G693 C699 A702 G703 A706 C707 C708 G711 A716 C719 A722 U723 G724 G725 A728 A729 G730 G731 C732 A733 G734 C735 C736 A737 C738 G739 U740 G741 G742 U743 C744 G745 A746 C747 C748 C749 G750 C754 G755
C756 U757 G758 A759 G760 C764 G765 A766 A767 A768 G769 U772 G773 G774 A777 C783 C784 G785 U788 U789 A790 G791 A792 U793 A794 G798 G799 G800 U801 A802 G803 U804 C805 C811 A815 A816 C817 G821 C822 G823 C824 G825 C826 U827 A828 G829 U833 C834 U835 G836
G837 G838 U841 C842 U843 C848 C849 G853 G854 G855 C856 C857 G858 A859 A860 G861 C862 A865 C866 G867 C868 G869 A872 A873 G874 G878 C879 C883 U884 G885 G886 C896 C897 G898 C899 A900 A901 G902 G903 C904 U905 G906 A913 A914 A915 G916 G917 A918 A919 U920 U921 G922 A923
C924 G925 G926 G927 G928 G929 C932 G933 C934 A935 C936 A937 A938 G939 C940 G941 G942 U943 G944 G945 A946 G947 U950 G951 U952 G953 G954 U955 U956 U957 A958 A959 U960 U961 C962 G963 A964 A965 G966 C967 A968 A969 C970 G971 C972 G973 A974 A975 G976 A977 A978 C979 C980 U981 U982 A983 C984 C985
A986 C989 C990 U991 U992 G993 A994 C995 A996 U997 G998 C998A U999 A1000 G1001 G1002 A1004 C1008 G1009 G1010 G1011 U1012 G1013 A1014 A1015 A1016 G1017 C1018 G1022 G1023 G1024 U1025 G1026 C1027 C1028 C1028A C1028B G1029 C1030 G1031 A1032 G1032A G1032B G1033 G1034 A1035 G1036 C1037 C1038 C1039 C1043 A1044 C1045 A1046 G1047
G1048 U1052 G1053 C1054 A1055 U1056 G1057 G1058 C1059 C1060 G1061 G1064 U1065 C1066 A1067 G1068 C1069 U1070 C1071 G1072 U1073 G1074 C1075 C1076 G1077 U1078 G1079 A1080 G1081 G1082 U1083 G1084 U1085 U1086 G1087 G1088 G1089 A1093 G1094 U1095 C1096 C1097 G1098 G1099 C1100 A1101 A1102 C1103 G1104 A1105 G1106 C1107 G1108 C1109 A1110 A1111 C1112
C1115 C1116 G1117 C1118 U1122 A1123 G1124 U1125 U1126 G1127 C1128 C1129 A1130 G1131 C1132 G1133 U1136 C1137 G1138 G1139 C1140 C1141 G1142 G1143 G1144 C1145 A1146 C1147 U1148 C1149 U1150 A1151 A1152 C1153 G1154 A1157 C1158 U1159 G1160 C1161 C1162 A1169 A1170 G1171 C1172 G1173 G1174 G1175 A1176 G1177 G1178 A1179 A1180 G1181 G1182
A1183 G1184 G1185 G1186 G1187 A1188 C1189 G1190 A1191 C1192 G1193 U1194 C1195 U1196 G1197 G1198 U1199 C1200 A1201 G1202 C1203 A1204 A1205 G1206 G1207 C1208 C1209 C1210 U1211 U1212 A1213 C1214 G1215 G1216 C1217 C1218 G1221 G1222 C1223 G1224 A1225 C1226 A1227 C1228 A1229 C1230 G1231 U1232 G1233 C1234 U1235 A1238 A1239 U1240 C1243 C1244 A1245


C1246 U1247 A1250 A1251 G1255 A1256 U1257 G1258 C1259 C1260 A1269 C1270 G1271 G1272 G1273 G1274 A1275 G1276 C1277 U1278 A1279 A1280 U1281 C1282 A1285 A1286 A1287 A1288 A1289 G1290 G1291 U1292 G1293 C1297 C1298 A1299 G1300 U1301 U1302 C1303 G1304 G1305 A1306 U1307 G1311 G1312 U1313 C1314 U1315 G1316 C1317 A1318 A1319 C1320
C1321 C1322 G1323 A1324 C1325 C1326 C1327 C1328 A1329 U1330 G1331 A1332 A1333 G1334 C1335 C1336 A1340 U1341 C1342 G1343 C1344 U1345 A1346 G1347 U1348 A1349 A1350 U1351 C1352 G1353 C1354 A1357 U1358 C1359 A1360 G1361 C1362 C1362A A1363 U1364 G1365 C1366 C1367 G1368 C1369 G1370 A1374 A1375 G1379 G1386 G1387 C1388 U1391 G1392
U1393 A1394 C1395 A1396 C1397 A1398 C1399 C1400 G1401 C1402 C1403 C1404 G1405 U1406 G1410 C1411 C1412 A1413 U1414 G1415 G1419 C1420 G1421 G1432 G1435 U1436 C1440 G1441 G1442 G1443 A1446 G1447 C1448 C1449 U1450 A1451 C1452 G1453 G1454 G1455 C1459 A1460 G1461 G1464 C1465 C1466 G1467 A1468 G1469 G1475 C1479
A1483 G1486 G1487 C1490 G1491 A1492 A1493 G1494 G1497 U1498 A1499 A1500 C1501 A1502 A1503 G1504 G1505 U1506 A1507 G1508 C1509 U1510 G1511 U1512 A1513 C1514 C1515 G1516 G1517 A1518 A1519 G1520 G1521 U1522 G1523 C1527 U1528 G1529 G1530 A1531 U1532 C1533 A C C U C C U U G C U

4 Data and refinement statistics (i)

Property	Value	Source
Space group	P 21 21 21	Depositor
Cell constants a, b, c, α, β, γ	210.00Å 451.50Å 616.70Å 90.00° 90.00° 90.00°	Depositor
Resolution (Å)	198.79 – 3.20 254.63 – 3.20	Depositor EDS
% Data completeness (in resolution range)	100.0 (198.79-3.20) 92.9 (254.63-3.20)	Depositor EDS
R_{merge}	0.37	Depositor
R_{sym}	(Not available)	Depositor
$< I/\sigma(I) >$ [1]	0.96 (at 3.19Å)	Xtriage
Refinement program	PHENIX	Depositor
R, R_{free}	0.188 , 0.238 0.188 , 0.239	Depositor DCC
R_{free} test set	2000 reflections (0.21%)	wwPDB-VP
Wilson B-factor (Å^2)	99.4	Xtriage
Anisotropy	0.200	Xtriage
Bulk solvent k_{sol}(e/Å^3), B_{sol}(Å^2)	0.26 , 83.7	EDS
L-test for twinning[2]	$< \|L\| > = 0.44$, $< L^2 > = 0.27$	Xtriage
Estimated twinning fraction	No twinning to report.	Xtriage
F_o,F_c correlation	0.89	EDS
Total number of atoms	299678	wwPDB-VP
Average B, all atoms (Å^2)	126.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 1.46% of the height of the origin peak. No significant pseudotranslation is detected.*

[1] Intensities estimated from amplitudes.

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

5 Model quality

5.1 Standard geometry

Bond lengths and bond angles in the following residue types are not validated in this section: 5MU, MG, ZN, PSU, QUO, MIA, 4SU, OMG

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	13	0.73	3/36195 (0.0%)	1.37	334/56491 (0.6%)
2	12	0.38	0/1959	0.63	1/2642 (0.0%)
2	1E	0.42	0/1959	0.65	2/2642 (0.1%)
3	22	0.43	0/1636	0.62	0/2205
3	2E	0.45	0/1629	0.62	0/2195
4	32	0.52	0/1732	0.74	1/2318 (0.0%)
4	3E	0.58	1/1732 (0.1%)	0.74	1/2318 (0.0%)
5	42	0.53	0/1171	0.72	0/1576
5	4E	0.52	0/1171	0.71	0/1576
6	52	0.54	0/855	0.74	2/1154 (0.2%)
6	5E	0.56	0/855	0.70	1/1154 (0.1%)
7	62	0.45	0/1275	0.59	0/1709
7	6E	0.44	0/1275	0.60	0/1709
8	72	0.48	0/1135	0.68	0/1527
8	7E	0.49	0/1135	0.71	0/1527
9	82	0.45	0/1017	0.62	0/1365
9	8E	0.43	0/1028	0.61	1/1379 (0.1%)
10	1A	0.39	0/814	0.60	0/1095
10	1I	0.41	0/814	0.60	0/1095
11	2A	0.50	0/899	0.66	0/1213
11	2I	0.54	0/879	0.69	0/1187
12	3A	0.60	0/991	0.81	0/1327
12	3I	0.63	0/991	0.83	0/1327
13	4A	0.35	0/943	0.60	0/1265
13	4I	0.38	0/938	0.62	0/1258
14	5A	0.47	0/500	0.65	0/664
14	5I	0.62	2/500 (0.4%)	0.67	0/664
15	6A	0.53	0/744	0.64	0/992
15	6I	0.53	0/744	0.74	0/992
16	7A	0.54	0/721	0.73	0/970
16	7I	0.47	0/721	0.71	0/970
17	8A	0.54	0/847	0.71	0/1131

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	#|Z| >5	RMSZ	#|Z| >5
17	8I	0.53	0/847	0.66	0/1131
18	9A	0.50	0/595	0.68	1/790 (0.1%)
18	9I	0.51	0/595	0.68	0/790
19	AA	0.39	0/658	0.70	0/888
19	AI	0.38	0/680	0.67	0/915
20	BA	0.52	0/764	0.76	1/1007 (0.1%)
20	BI	0.42	0/764	0.70	0/1007
21	1B	0.41	0/221	0.56	0/288
21	1F	0.41	0/221	0.59	0/288
22	2K	0.72	0/1784	1.40	18/2771 (0.6%)
22	2L	0.68	0/1686	1.32	12/2618 (0.5%)
22	3K	0.46	0/1851	1.01	3/2877 (0.1%)
22	3L	0.47	0/1851	1.07	5/2877 (0.2%)
23	4K	0.92	1/269 (0.4%)	1.43	8/417 (1.9%)
23	4L	0.81	0/144	1.51	4/222 (1.8%)
24	14	0.99	89/70192 (0.1%)	1.66	1744/109580 (1.6%)
24	1H	1.08	133/70258 (0.2%)	1.78	2275/109682 (2.1%)
25	16	0.81	0/2928	1.50	41/4568 (0.9%)
25	1J	0.77	0/2928	1.47	35/4568 (0.8%)
26	71	0.29	0/1072	0.48	0/1447
26	79	0.29	0/1072	0.48	0/1447
27	11	0.83	0/2165	1.01	6/2919 (0.2%)
27	19	0.79	2/2170 (0.1%)	0.94	4/2926 (0.1%)
28	21	0.71	0/1601	0.89	1/2160 (0.0%)
28	29	0.69	0/1601	0.93	3/2160 (0.1%)
29	31	0.78	1/1620 (0.1%)	0.91	1/2194 (0.0%)
29	39	0.67	0/1662	0.87	0/2249
30	41	0.44	0/1498	0.65	1/2016 (0.0%)
30	49	0.40	0/1498	0.63	0/2016
31	51	0.60	0/1362	0.86	2/1841 (0.1%)
31	59	0.39	0/1337	0.68	0/1809
32	61	0.53	0/1151	0.78	3/1558 (0.2%)
32	69	0.51	0/1151	0.72	1/1558 (0.1%)
33	15	0.55	0/1131	0.73	0/1525
33	58	0.63	0/1131	0.82	1/1525 (0.1%)
34	25	0.74	0/942	0.82	1/1269 (0.1%)
34	68	0.70	0/942	0.79	0/1269
35	35	0.61	0/1161	0.92	2/1544 (0.1%)
35	78	0.73	0/1161	1.07	3/1544 (0.2%)
36	45	0.63	0/1142	0.88	1/1527 (0.1%)
36	88	0.78	2/1142 (0.2%)	0.97	3/1527 (0.2%)
37	55	0.73	0/973	0.99	2/1302 (0.2%)
37	98	0.61	0/981	0.82	0/1312

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	#|Z| >5	RMSZ	#|Z| >5
38	65	0.57	0/891	0.85	1/1187 (0.1%)
38	A8	0.64	0/891	0.87	1/1187 (0.1%)
39	75	0.64	0/1145	0.82	0/1531
39	B8	0.65	0/1155	0.89	0/1542
40	85	0.64	1/981 (0.1%)	0.77	1/1306 (0.1%)
40	C8	0.70	0/981	0.79	0/1306
41	95	4.11	8/789 (1.0%)	1.36	6/1057 (0.6%)
41	D8	0.69	0/789	0.88	3/1057 (0.3%)
42	A5	0.70	0/910	0.85	1/1220 (0.1%)
42	E8	0.74	0/910	1.02	4/1220 (0.3%)
43	B5	0.76	0/744	0.80	0/1000
43	F8	0.83	0/752	0.94	1/1011 (0.1%)
44	C5	0.67	0/807	0.86	0/1076
44	G8	0.74	0/804	0.98	2/1073 (0.2%)
45	D5	0.43	0/1460	0.66	0/1982
45	H8	0.45	0/1427	0.71	3/1935 (0.2%)
46	E5	0.69	0/620	0.86	0/827
46	I8	0.73	0/647	0.89	0/864
47	F5	0.69	0/769	0.87	3/1022 (0.3%)
47	J8	0.73	0/769	0.93	0/1022
48	G5	0.60	0/582	0.78	0/771
48	K8	0.85	2/560 (0.4%)	0.95	0/741
49	H5	0.51	0/473	0.70	0/635
49	L8	0.61	0/473	0.79	0/635
50	I5	0.43	0/527	0.64	0/709
50	M8	0.36	0/545	0.56	0/733
51	J5	0.68	0/472	0.83	1/639 (0.2%)
51	N8	0.67	0/472	0.88	0/639
52	L5	0.75	0/437	0.95	2/575 (0.3%)
52	P8	0.89	0/417	1.17	1/550 (0.2%)
53	M5	0.99	1/515 (0.2%)	1.11	2/679 (0.3%)
53	Q8	0.90	1/502 (0.2%)	1.12	5/661 (0.8%)
54	1G	0.72	1/36189 (0.0%)	1.34	311/56482 (0.6%)
All	All	0.87	248/321112 (0.1%)	1.42	4873/480439 (1.0%)

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

Mol	Chain	#Chirality outliers	#Planarity outliers
2	12	0	1

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Mol	Chain	#Chirality outliers	#Planarity outliers
2	1E	0	1
4	3E	0	1
10	1A	0	1
12	3A	0	2
14	5I	0	1
19	AI	0	2
20	BA	0	1
27	11	0	4
27	19	0	4
28	29	0	9
31	59	0	1
32	61	0	1
35	35	0	6
35	78	0	3
36	45	0	2
36	88	0	2
38	65	0	1
39	75	0	3
39	B8	0	4
40	85	0	1
41	95	0	2
44	C5	0	1
45	D5	0	1
47	F5	0	1
48	G5	0	2
48	K8	0	1
49	H5	0	1
51	J5	0	1
52	P8	0	1
53	M5	0	5
53	Q8	0	1
All	All	0	68

All (248) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
41	95	91	TYR	CD1-CE1	60.61	2.30	1.39
41	95	91	TYR	CD2-CE2	59.53	2.28	1.39
41	95	91	TYR	CE1-CZ	39.54	1.90	1.38
41	95	91	TYR	CE2-CZ	38.39	1.88	1.38
41	95	91	TYR	CG-CD1	31.53	1.80	1.39
41	95	91	TYR	CG-CD2	30.86	1.79	1.39

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
41	95	21	ARG	CD-NE	23.29	1.86	1.46
41	95	21	ARG	NE-CZ	14.81	1.52	1.33
24	1H	774	A	N9-C4	-13.10	1.29	1.37
24	1H	676	A	N9-C4	-12.81	1.30	1.37
24	14	783	A	N9-C4	-11.25	1.31	1.37
24	14	774	A	N9-C4	-10.96	1.31	1.37
24	1H	783	A	N9-C4	-10.66	1.31	1.37
24	14	528	A	N9-C4	-10.30	1.31	1.37
24	1H	2430	A	N9-C4	-10.13	1.31	1.37
24	14	1786	A	N9-C4	-10.11	1.31	1.37
24	1H	71	A	N9-C4	-9.86	1.31	1.37
24	1H	1142(A)	A	N9-C4	-9.85	1.31	1.37
24	1H	784	A	N3-C4	-9.60	1.29	1.34
24	1H	330	A	N9-C4	-9.07	1.32	1.37
53	M5	34	TRP	CB-CG	9.04	1.66	1.50
24	1H	784	A	C6-N1	-8.76	1.29	1.35
24	14	1786	A	N3-C4	-8.69	1.29	1.34
24	1H	1786	A	N3-C4	-8.68	1.29	1.34
24	1H	1614	A	N9-C4	-8.64	1.32	1.37
24	1H	1332	G	N9-C4	-8.61	1.31	1.38
24	14	2287	A	N9-C4	-8.50	1.32	1.37
24	1H	74	A	N9-C4	-8.43	1.32	1.37
24	1H	783	A	N3-C4	-8.37	1.29	1.34
24	14	2688	U	N3-C4	-8.17	1.31	1.38
24	14	71	A	N9-C4	-8.04	1.33	1.37
24	1H	678	C	N1-C6	-7.74	1.32	1.37
24	1H	574	C	N1-C6	-7.73	1.32	1.37
24	14	1142(A)	A	N9-C4	-7.63	1.33	1.37
24	1H	1960	A	N7-C5	-7.54	1.34	1.39
24	1H	1204	A	N9-C4	-7.48	1.33	1.37
24	1H	140	A	C5-C6	-7.44	1.34	1.41
24	1H	676	A	N9-C8	7.39	1.43	1.37
48	K8	5	GLU	CG-CD	7.38	1.63	1.51
24	14	676	A	N9-C8	7.36	1.43	1.37
24	1H	676	A	C5-C4	7.32	1.43	1.38
24	14	1616	A	N9-C4	-7.29	1.33	1.37
24	1H	1308	A	C6-N1	-7.25	1.30	1.35
24	1H	2287	A	N9-C4	-7.22	1.33	1.37
24	14	1681	G	N9-C4	-7.19	1.32	1.38
24	14	204	A	N3-C4	-7.18	1.30	1.34
24	14	528	A	N3-C4	-7.16	1.30	1.34
24	14	828	U	N3-C4	-7.13	1.32	1.38

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
24	14	1988	C	N1-C6	-7.11	1.32	1.37
24	14	1786	A	C5-C6	-7.10	1.34	1.41
24	1H	140	A	N9-C4	-7.09	1.33	1.37
24	14	676	A	C5-C4	7.09	1.43	1.38
24	14	783	A	N7-C5	-7.05	1.35	1.39
24	1H	1786	A	C5-C6	-7.03	1.34	1.41
24	1H	2346	A	N9-C4	-7.00	1.33	1.37
24	14	74	A	N9-C4	-6.94	1.33	1.37
14	5I	43	CYS	CB-SG	-6.91	1.70	1.82
24	14	752	A	N9-C4	-6.87	1.33	1.37
24	1H	330	A	N3-C4	-6.85	1.30	1.34
24	1H	1332	G	N3-C4	-6.84	1.30	1.35
24	1H	1786	A	N9-C4	-6.82	1.33	1.37
24	1H	1210	A	N9-C4	-6.82	1.33	1.37
24	14	2430	A	N9-C4	-6.79	1.33	1.37
24	1H	775	G	N9-C8	-6.72	1.33	1.37
24	1H	2688	U	N3-C4	-6.71	1.32	1.38
24	1H	528	A	N9-C4	-6.66	1.33	1.37
24	1H	236	C	N1-C6	-6.65	1.33	1.37
24	1H	1379	A	N7-C5	-6.57	1.35	1.39
36	88	91	GLU	CG-CD	6.54	1.61	1.51
24	1H	783	A	C5-C6	-6.53	1.35	1.41
24	1H	828	U	N3-C4	-6.51	1.32	1.38
24	1H	2506	U	N1-C2	6.46	1.44	1.38
24	1H	784	A	N9-C4	-6.45	1.33	1.37
24	1H	2490	G	N9-C8	6.43	1.42	1.37
24	14	528	A	C5-C6	-6.43	1.35	1.41
24	1H	138	G	N9-C8	6.40	1.42	1.37
24	1H	1346	G	N1-C2	-6.39	1.32	1.37
24	1H	2346	A	N3-C4	-6.37	1.31	1.34
24	14	746	A	N3-C4	-6.37	1.31	1.34
24	14	1021	A	N9-C4	-6.35	1.34	1.37
24	1H	1366	A	C5-C6	-6.34	1.35	1.41
24	1H	2713	A	N9-C4	-6.32	1.34	1.37
24	14	1678	G	N9-C4	-6.32	1.32	1.38
24	14	2518	A	N9-C4	-6.31	1.34	1.37
48	K8	5	GLU	CB-CG	6.29	1.64	1.52
24	1H	1616	A	C5-C6	-6.28	1.35	1.41
24	14	2542	A	N7-C5	6.26	1.43	1.39
24	1H	1660	C	N3-C4	-6.26	1.29	1.33
24	1H	1616	A	N9-C4	-6.25	1.34	1.37
24	1H	1899	G	N9-C4	-6.25	1.32	1.38

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
24	1H	448	U	N1-C6	-6.23	1.32	1.38
24	1H	1614	A	N7-C5	-6.21	1.35	1.39
24	1H	196	A	C6-N1	-6.20	1.31	1.35
24	1H	1950	G	N3-C4	-6.20	1.31	1.35
24	1H	739	G	C5-C4	-6.18	1.34	1.38
24	1H	453	C	N1-C6	-6.17	1.33	1.37
24	14	197	A	N9-C4	-6.17	1.34	1.37
24	14	74	A	N3-C4	-6.17	1.31	1.34
24	14	676	A	N9-C4	-6.14	1.34	1.37
24	1H	2451	A	C6-N1	-6.14	1.31	1.35
27	19	28	GLU	CG-CD	6.12	1.61	1.51
24	14	1698	A	N9-C4	-6.12	1.34	1.37
24	14	783	A	C5-C6	-6.12	1.35	1.41
24	14	2873	A	N7-C5	-6.11	1.35	1.39
24	14	1142(A)	A	N3-C4	-6.10	1.31	1.34
24	14	201	C	N1-C6	-6.06	1.33	1.37
24	14	2441	C	N3-C4	-6.02	1.29	1.33
24	1H	1251	C	N1-C6	-6.00	1.33	1.37
24	1H	783	A	N7-C5	-5.99	1.35	1.39
24	1H	696	G	N7-C5	5.97	1.42	1.39
24	14	1786	A	N7-C5	-5.97	1.35	1.39
24	1H	197	A	N3-C4	-5.96	1.31	1.34
24	1H	1313	U	C4-C5	-5.96	1.38	1.43
24	14	774	A	C5-C6	-5.94	1.35	1.41
24	1H	2590	A	N9-C4	-5.92	1.34	1.37
24	14	2518	A	C5-C6	-5.92	1.35	1.41
24	1H	2287	A	N3-C4	-5.91	1.31	1.34
24	14	1342	A	C5-C6	-5.89	1.35	1.41
24	1H	621	A	N9-C4	-5.87	1.34	1.37
24	1H	2455	G	N7-C5	5.86	1.42	1.39
24	1H	774	A	C5-C6	-5.85	1.35	1.41
24	14	2346	A	N3-C4	-5.85	1.31	1.34
24	14	1600	C	N1-C6	-5.83	1.33	1.37
24	1H	1960	A	C5-C6	-5.80	1.35	1.41
24	1H	621	A	N7-C5	-5.78	1.35	1.39
24	14	1332	G	N3-C4	-5.78	1.31	1.35
24	1H	784	A	C5-C4	-5.76	1.34	1.38
24	1H	451	C	N1-C6	-5.75	1.33	1.37
24	14	1204	A	N9-C4	-5.75	1.34	1.37
24	1H	2448	A	C5-C4	-5.74	1.34	1.38
24	1H	1142(A)	A	N3-C4	-5.72	1.31	1.34
24	1H	2249	U	C2-N3	-5.72	1.33	1.37

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
24	1H	1969	A	N9-C8	-5.70	1.33	1.37
24	14	1616	A	C5-C6	-5.69	1.35	1.41
24	1H	1624	G	N9-C8	-5.68	1.33	1.37
24	1H	140	A	N7-C5	-5.68	1.35	1.39
24	14	2688	U	C2-N3	-5.65	1.33	1.37
24	1H	2064	C	N1-C6	-5.64	1.33	1.37
24	1H	2058	A	N9-C4	-5.64	1.34	1.37
24	1H	534	U	N1-C2	-5.63	1.33	1.38
24	1H	621	A	C5-C6	-5.60	1.36	1.41
24	1H	1678	G	N9-C8	5.60	1.41	1.37
24	1H	1021	A	N9-C4	-5.60	1.34	1.37
24	1H	71	A	C5-C6	-5.59	1.36	1.41
24	1H	727	A	N3-C4	-5.59	1.31	1.34
24	14	2595	G	N9-C4	-5.58	1.33	1.38
27	19	28	GLU	CB-CG	5.58	1.62	1.52
24	1H	775	G	N7-C5	-5.58	1.35	1.39
24	1H	1365	A	N3-C4	-5.57	1.31	1.34
24	1H	1614	A	N3-C4	-5.56	1.31	1.34
29	31	65	TRP	CB-CG	-5.56	1.40	1.50
24	14	2287	A	N3-C4	-5.55	1.31	1.34
24	1H	1332	G	C5-C4	5.55	1.42	1.38
24	1H	1202	C	C4-C5	-5.53	1.38	1.43
1	13	808	C	N1-C6	-5.53	1.33	1.37
24	1H	1826	G	N7-C5	-5.51	1.35	1.39
24	14	189	G	C6-N1	-5.51	1.35	1.39
53	Q8	56	GLU	CG-CD	5.50	1.60	1.51
24	1H	1271	G	N9-C8	-5.49	1.34	1.37
24	1H	1366	A	N7-C5	-5.48	1.35	1.39
24	1H	1349	A	N9-C8	5.48	1.42	1.37
24	1H	2597	G	C6-N1	-5.47	1.35	1.39
24	1H	1899	G	N3-C4	-5.46	1.31	1.35
24	1H	2610	C	N3-C4	-5.46	1.30	1.33
24	1H	1786	A	N7-C5	-5.45	1.35	1.39
24	14	795	C	N3-C4	-5.45	1.30	1.33
4	3E	12	CYS	CB-SG	5.44	1.91	1.82
24	1H	1626	G	N3-C4	-5.44	1.31	1.35
24	1H	74	A	C5-C6	-5.43	1.36	1.41
24	14	2623	G	N3-C4	-5.42	1.31	1.35
24	14	821	A	N7-C5	-5.42	1.36	1.39
54	1G	690	G	N9-C4	-5.41	1.33	1.38
24	14	1323	U	N1-C2	-5.38	1.33	1.38
1	13	810	C	N1-C6	-5.38	1.33	1.37

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
24	1H	567	A	N9-C4	-5.37	1.34	1.37
24	14	1988	C	C4-C5	-5.36	1.38	1.43
24	14	2392	A	C5-C4	5.36	1.42	1.38
24	14	512	G	N9-C4	-5.35	1.33	1.38
24	14	2713	A	N3-C4	-5.35	1.31	1.34
24	1H	2507	C	N3-C4	-5.35	1.30	1.33
24	1H	2490	G	N9-C4	-5.34	1.33	1.38
24	14	216	A	N3-C4	-5.34	1.31	1.34
24	1H	2273	A	C5-C4	-5.34	1.35	1.38
24	1H	2550	G	C2-N3	-5.33	1.28	1.32
24	1H	759	G	N7-C5	-5.32	1.36	1.39
24	1H	1614	A	C5-C6	-5.32	1.36	1.41
24	14	2023	G	N3-C4	-5.31	1.31	1.35
24	14	2713	A	N9-C8	5.31	1.42	1.37
24	14	2639	A	N9-C4	-5.30	1.34	1.37
24	14	1645	G	N9-C8	-5.29	1.34	1.37
23	4K	19	A	N9-C4	5.28	1.41	1.37
14	5I	27	CYS	CB-SG	-5.26	1.73	1.81
24	14	2713	A	N9-C4	-5.26	1.34	1.37
24	14	2058	A	C5-C4	-5.25	1.35	1.38
24	1H	1967	C	N3-C4	-5.25	1.30	1.33
24	14	805	G	N7-C5	-5.25	1.36	1.39
24	1H	1332	G	N9-C8	5.22	1.41	1.37
24	14	2232	U	C4-O4	5.20	1.27	1.23
24	1H	2031	A	N9-C4	5.20	1.41	1.37
36	88	91	GLU	CB-CG	5.20	1.62	1.52
24	1H	2020	A	N7-C5	-5.19	1.36	1.39
24	1H	2503	A	C5-C6	-5.18	1.36	1.41
24	14	752	A	N3-C4	-5.18	1.31	1.34
24	1H	2606	C	N1-C6	-5.18	1.34	1.37
24	1H	1347	G	C5-C4	-5.17	1.34	1.38
24	14	1559	G	N9-C4	-5.17	1.33	1.38
24	14	1807	G	N7-C5	-5.17	1.36	1.39
24	14	2450	A	C6-N1	-5.16	1.31	1.35
1	13	1523	G	N3-C4	-5.15	1.31	1.35
24	1H	1204	A	C5-C6	-5.15	1.36	1.41
24	14	1966	A	N9-C4	-5.14	1.34	1.37
24	14	2681	C	N3-C4	-5.14	1.30	1.33
24	1H	1378	A	N9-C4	-5.14	1.34	1.37
24	1H	431	U	C2-N3	-5.14	1.34	1.37
24	1H	751	A	P-OP1	-5.14	1.40	1.49
24	1H	1269	A	C6-N1	-5.14	1.31	1.35

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
24	1H	2442	C	N1-C6	-5.14	1.34	1.37
24	1H	1967	C	N1-C6	-5.14	1.34	1.37
24	14	2070	G	N7-C5	-5.14	1.36	1.39
24	1H	695	G	C2-N3	-5.13	1.28	1.32
24	1H	766	C	N1-C6	-5.11	1.34	1.37
24	1H	1366	A	C5-C4	-5.11	1.35	1.38
24	1H	1698	A	N3-C4	-5.11	1.31	1.34
24	1H	2070	G	N9-C8	-5.11	1.34	1.37
24	1H	2573	C	N1-C2	5.11	1.45	1.40
24	1H	1973	G	N1-C2	-5.09	1.33	1.37
24	1H	1698	A	C5-C6	-5.08	1.36	1.41
24	14	587	C	N1-C6	-5.08	1.34	1.37
24	14	2690	C	N1-C6	-5.08	1.34	1.37
24	14	783	A	N3-C4	-5.08	1.31	1.34
24	1H	663	G	N3-C4	-5.07	1.31	1.35
24	14	2430	A	C5-C6	-5.07	1.36	1.41
24	14	472	A	N3-C4	-5.06	1.31	1.34
24	14	1807	G	N9-C8	-5.06	1.34	1.37
24	14	796	C	N1-C6	-5.05	1.34	1.37
24	1H	2336	A	N3-C4	5.05	1.37	1.34
24	14	676	A	C5-C6	-5.04	1.36	1.41
24	1H	2434	A	N9-C4	-5.04	1.34	1.37
24	14	74	A	N7-C5	-5.04	1.36	1.39
24	14	1890	A	N9-C4	-5.04	1.34	1.37
24	1H	1969	A	N7-C5	-5.03	1.36	1.39
24	14	1605	C	N1-C6	-5.02	1.34	1.37
24	14	329	G	C6-O6	-5.02	1.19	1.24
24	14	471	A	N9-C4	-5.02	1.34	1.37
40	85	25	TRP	CB-CG	5.01	1.59	1.50
24	14	204	A	N9-C4	-5.01	1.34	1.37
24	1H	2246	G	C8-N7	-5.01	1.27	1.30
24	14	2639	A	C5-C6	-5.00	1.36	1.41

All (4873) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
41	95	21	ARG	CD-NE-CZ	22.50	155.09	123.60
41	95	21	ARG	NE-CZ-NH1	22.20	131.40	120.30
24	1H	676	A	C2-N3-C4	-19.76	100.72	110.60
24	1H	783	A	C2-N3-C4	-18.90	101.15	110.60
24	1H	1332	G	C2-N3-C4	-18.73	102.53	111.90
24	1H	774	A	C2-N3-C4	-18.27	101.46	110.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
24	1H	1332	G	C5-N7-C8	-17.61	95.49	104.30
24	14	1786	A	N7-C8-N9	17.58	122.59	113.80
24	14	1786	A	C5-N7-C8	-17.47	95.17	103.90
24	1H	2430	A	C2-N3-C4	-17.45	101.87	110.60
24	1H	1899	G	N3-C4-N9	-17.40	115.56	126.00
24	14	1786	A	C2-N3-C4	-17.23	101.98	110.60
24	1H	1786	A	C2-N3-C4	-16.34	102.43	110.60
24	14	774	A	C2-N3-C4	-16.28	102.46	110.60
24	1H	676	A	C5-N7-C8	-16.25	95.77	103.90
24	1H	140	A	C5-N7-C8	-16.22	95.79	103.90
24	1H	74	A	C2-N3-C4	-16.20	102.50	110.60
24	1H	1617	C	O5'-P-OP1	-15.93	91.37	105.70
24	1H	783	A	C5-N7-C8	-15.77	96.02	103.90
24	1H	1786	A	N7-C8-N9	15.51	121.56	113.80
24	1H	676	A	N3-C4-C5	15.37	137.56	126.80
24	1H	1332	G	N1-C6-O6	15.33	129.10	119.90
24	14	676	A	C2-N3-C4	-15.27	102.96	110.60
24	14	828	U	C5-C4-O4	14.85	134.81	125.90
24	14	676	A	C5-N7-C8	-14.81	96.50	103.90
24	14	2699	C	C6-N1-C2	14.69	126.17	120.30
24	1H	1786	A	C5-N7-C8	-14.67	96.57	103.90
24	1H	71	A	C2-N3-C4	-14.66	103.27	110.60
24	14	783	A	C5-N7-C8	-14.60	96.60	103.90
24	1H	621	A	C2-N3-C4	-14.60	103.30	110.60
24	1H	1332	G	C4-C5-N7	14.49	116.60	110.80
24	14	528	A	C2-N3-C4	-14.46	103.37	110.60
24	14	783	A	C2-N3-C4	-14.15	103.52	110.60
24	1H	828	U	C5-C4-O4	14.15	134.39	125.90
24	14	1616	A	C5-N7-C8	-14.13	96.84	103.90
24	14	774	A	N1-C6-N6	13.98	126.99	118.60
24	1H	1204	A	C2-N3-C4	-13.74	103.73	110.60
24	1H	140	A	N7-C8-N9	13.71	120.66	113.80
24	1H	1332	G	N7-C8-N9	13.65	119.92	113.10
24	1H	1332	G	C6-C5-N7	-13.44	122.33	130.40
24	14	71	A	C2-N3-C4	-13.41	103.89	110.60
24	1H	783	A	N7-C8-N9	13.33	120.46	113.80
24	1H	330	A	C2-N3-C4	-13.26	103.97	110.60
24	1H	783	A	N1-C6-N6	13.22	126.53	118.60
24	1H	2331	G	N1-C6-O6	13.21	127.83	119.90
24	1H	1356	G	O5'-P-OP1	-13.18	93.84	105.70
24	14	676	A	N7-C8-N9	13.17	120.38	113.80
24	1H	784	A	N1-C6-N6	-13.14	110.71	118.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
24	1H	676	A	N3-C4-N9	-13.08	116.93	127.40
24	1H	676	A	N7-C8-N9	12.98	120.29	113.80
24	14	2688	U	C5-C4-O4	12.97	133.68	125.90
24	1H	71	A	C5-N7-C8	-12.96	97.42	103.90
24	1H	774	A	N3-C4-C5	12.93	135.85	126.80
24	1H	1616	A	N1-C6-N6	12.89	126.34	118.60
24	14	1616	A	C4-C5-N7	12.83	117.11	110.70
24	1H	2503	A	C5-C6-N6	-12.75	113.50	123.70
24	1H	593	G	O5'-P-OP2	-12.71	94.26	105.70
24	1H	1899	G	N3-C4-C5	12.71	134.95	128.60
24	1H	140	A	C4-C5-N7	12.69	117.05	110.70
24	14	2430	A	N1-C6-N6	12.65	126.19	118.60
24	14	827	U	O5'-P-OP2	-12.59	94.37	105.70
24	1H	2503	A	N1-C6-N6	12.46	126.07	118.60
24	14	1678	G	N3-C4-C5	12.42	134.81	128.60
24	1H	2509	G	C5-C6-O6	-12.37	121.18	128.60
24	1H	2688	U	C5-C4-O4	12.35	133.31	125.90
24	14	2287	A	C2-N3-C4	-12.33	104.44	110.60
24	14	74	A	C2-N3-C4	-12.24	104.48	110.60
24	14	1328	G	C5-C6-O6	-12.23	121.26	128.60
24	1H	2507	C	N3-C2-O2	-12.17	113.38	121.90
24	1H	2238	G	O5'-P-OP2	-12.13	94.78	105.70
24	1H	2490	G	N3-C4-C5	12.13	134.66	128.60
24	1H	1332	G	N3-C4-C5	12.09	134.64	128.60
24	1H	784	A	N9-C4-C5	12.03	110.61	105.80
24	14	774	A	N3-C4-C5	12.03	135.22	126.80
24	14	2518	A	N1-C6-N6	12.03	125.82	118.60
24	14	2688	U	N3-C2-O2	-11.96	113.83	122.20
24	1H	31	C	O5'-P-OP1	-11.91	94.98	105.70
24	1H	1786	A	C8-N9-C4	-11.88	101.05	105.80
24	14	2542	A	N7-C8-N9	-11.79	107.90	113.80
24	1H	1616	A	C5-N7-C8	-11.76	98.02	103.90
24	14	2873	A	N1-C2-N3	11.73	135.17	129.30
24	1H	241	A	O5'-P-OP2	-11.70	95.17	105.70
24	14	1786	A	C8-N9-C4	-11.68	101.13	105.80
24	14	1332	G	C2-N3-C4	-11.68	106.06	111.90
24	14	2032	G	N1-C6-O6	11.66	126.89	119.90
24	14	2688	U	N3-C4-O4	-11.63	111.26	119.40
24	14	1616	A	N1-C6-N6	11.62	125.57	118.60
24	1H	140	A	N1-C6-N6	11.48	125.49	118.60
24	1H	774	A	C5-C6-N1	-11.48	111.96	117.70
24	1H	1899	G	C2-N3-C4	-11.48	106.16	111.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
24	14	2036	C	O5'-P-OP2	-11.48	95.37	105.70
24	1H	1192	G	O5'-P-OP2	-11.44	95.40	105.70
24	1H	2490	G	C5-N7-C8	-11.44	98.58	104.30
24	1H	120	U	C5-C6-N1	-11.42	116.99	122.70
24	14	2542	A	C8-N9-C4	11.40	110.36	105.80
24	14	2713	A	C5-N7-C8	-11.40	98.20	103.90
24	1H	752	A	N1-C2-N3	11.39	135.00	129.30
24	1H	2507	C	C6-N1-C2	-11.38	115.75	120.30
24	14	783	A	N7-C8-N9	11.36	119.48	113.80
24	14	2873	A	C2-N3-C4	-11.36	104.92	110.60
24	14	621	A	C2-N3-C4	-11.33	104.93	110.60
53	M5	62	LEU	CA-CB-CG	-11.32	89.25	115.30
24	14	1829	A	O5'-P-OP2	-11.32	95.51	105.70
24	1H	124	G	N1-C6-O6	11.26	126.66	119.90
24	1H	2490	G	C4-C5-N7	11.25	115.30	110.80
24	1H	1950	G	C5-N7-C8	-11.23	98.68	104.30
24	1H	917	A	C2-N3-C4	-11.23	104.99	110.60
24	1H	1899	G	C8-N9-C1'	11.22	141.59	127.00
24	1H	1786	A	N1-C2-N3	11.21	134.91	129.30
24	1H	2374	C	O5'-P-OP2	-11.21	95.61	105.70
24	1H	189	G	C8-N9-C4	11.19	110.87	106.40
24	14	1965	C	N3-C4-C5	11.18	126.37	121.90
24	1H	2554	U	O5'-P-OP1	-11.17	95.64	105.70
24	1H	1678	G	C2-N3-C4	-11.17	106.32	111.90
24	1H	991	C	O5'-P-OP1	-11.15	95.67	105.70
24	14	783	A	N1-C6-N6	11.15	125.29	118.60
24	1H	2439	A	O5'-P-OP2	-11.15	95.67	105.70
24	14	71	A	C5-N7-C8	-11.13	98.34	103.90
24	14	2827	C	C6-N1-C2	11.07	124.73	120.30
24	1H	676	A	C5-C6-N1	-11.01	112.19	117.70
24	14	2713	A	N7-C8-N9	10.98	119.29	113.80
24	14	774	A	C5-N7-C8	-10.94	98.43	103.90
24	1H	774	A	N1-C6-N6	10.91	125.15	118.60
24	14	2689	U	N3-C4-O4	-10.89	111.78	119.40
24	1H	2450	A	O5'-P-OP2	-10.88	95.91	105.70
24	14	1970	A	O5'-P-OP2	-10.88	95.91	105.70
24	1H	2509	G	N1-C6-O6	10.88	126.43	119.90
24	14	330	A	C2-N3-C4	-10.80	105.20	110.60
24	1H	783	A	C4-C5-N7	10.79	116.09	110.70
24	1H	1616	A	C4-C5-N7	10.77	116.09	110.70
24	1H	1496	A	N7-C8-N9	10.76	119.18	113.80
24	1H	1210	A	C5-N7-C8	-10.72	98.54	103.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
24	14	783	A	C4-C5-N7	10.71	116.06	110.70
24	14	774	A	C4-C5-N7	10.71	116.06	110.70
24	14	828	U	N3-C4-O4	-10.71	111.90	119.40
24	14	676	A	C4-C5-N7	10.70	116.05	110.70
24	1H	2403	C	C6-N1-C2	-10.69	116.03	120.30
24	14	1271	G	O5'-P-OP2	-10.67	96.10	105.70
24	14	2569	G	O5'-P-OP2	-10.67	96.10	105.70
24	1H	943	U	O5'-P-OP1	-10.66	96.11	105.70
1	13	758	G	N1-C6-O6	10.65	126.29	119.90
24	1H	140	A	C2-N3-C4	-10.65	105.27	110.60
24	14	1342	A	C2-N3-C4	-10.63	105.29	110.60
24	14	2873	A	C6-C5-N7	-10.62	124.86	132.30
24	1H	2331	G	C8-N9-C4	10.61	110.64	106.40
24	1H	614	U	N3-C2-O2	-10.60	114.78	122.20
24	14	2741	A	C8-N9-C4	10.60	110.04	105.80
24	14	2430	A	C2-N3-C4	-10.56	105.32	110.60
24	1H	746	A	C8-N9-C4	-10.54	101.58	105.80
24	1H	2712	U	N3-C4-O4	-10.52	112.04	119.40
24	1H	1021	A	C2-N3-C4	-10.52	105.34	110.60
24	1H	120	U	C4-C5-C6	10.50	126.00	119.70
24	14	1790	C	N1-C2-O2	-10.49	112.60	118.90
24	1H	853	G	C8-N9-C4	10.47	110.59	106.40
24	14	2346	A	C2-N3-C4	-10.47	105.36	110.60
24	14	1678	G	C2-N3-C4	-10.46	106.67	111.90
24	1H	2327	A	N1-C6-N6	-10.45	112.33	118.60
24	1H	71	A	C4-C5-N7	10.45	115.92	110.70
54	1G	197	A	C8-N9-C4	-10.45	101.62	105.80
24	14	1379	A	N1-C6-N6	10.42	124.85	118.60
24	1H	783	A	C6-C5-N7	-10.41	125.01	132.30
24	1H	2008	C	O5'-P-OP2	-10.41	96.33	105.70
24	14	676	A	N3-C4-C5	10.41	134.09	126.80
24	1H	1602	U	C5-C6-N1	-10.40	117.50	122.70
24	14	1496	A	C5-N7-C8	-10.38	98.71	103.90
24	14	1758	G	N9-C4-C5	10.38	109.55	105.40
24	1H	141	A	C5-N7-C8	-10.37	98.72	103.90
24	1H	2346	A	C2-N3-C4	-10.37	105.42	110.60
24	14	1899	G	C2-N3-C4	-10.35	106.73	111.90
24	1H	2688	U	N3-C2-O2	-10.34	114.96	122.20
54	1G	623	C	C6-N1-C2	-10.34	116.17	120.30
24	1H	1332	G	N1-C2-N3	10.33	130.10	123.90
24	1H	1496	A	C8-N9-C4	-10.32	101.67	105.80
24	14	689	A	O5'-P-OP2	-10.32	96.41	105.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
24	14	1496	A	N7-C8-N9	10.30	118.95	113.80
24	14	1786	A	C6-C5-N7	-10.27	125.11	132.30
24	1H	2392	A	N7-C8-N9	10.25	118.92	113.80
22	2K	85	A	N1-C6-N6	10.23	124.74	118.60
24	1H	1899	G	N9-C4-C5	10.20	109.48	105.40
24	14	528	A	C5-N7-C8	-10.20	98.80	103.90
24	1H	74	A	N1-C6-N6	10.18	124.71	118.60
24	14	2699	C	C5-C6-N1	-10.18	115.91	121.00
24	14	1021	A	C2-N3-C4	-10.16	105.52	110.60
24	1H	1698	A	C2-N3-C4	-10.16	105.52	110.60
24	1H	2513	G	C5-C6-O6	-10.16	122.50	128.60
24	14	2346	A	N1-C2-N3	10.13	134.37	129.30
24	14	1790	C	N3-C2-O2	10.13	128.99	121.90
24	1H	1606	G	N9-C4-C5	-10.12	101.35	105.40
24	1H	2037	G	O5'-P-OP2	-10.12	96.60	105.70
24	1H	575	A	C8-N9-C4	10.09	109.84	105.80
24	14	1698	A	C2-N3-C4	-10.09	105.56	110.60
24	1H	51	G	O5'-P-OP1	-10.09	96.62	105.70
24	1H	1614	A	C5-N7-C8	-10.09	98.86	103.90
24	14	2713	A	C8-N9-C4	-10.09	101.77	105.80
24	14	1758	G	N1-C6-O6	-10.08	113.85	119.90
24	14	863	A	O5'-P-OP2	-10.07	96.64	105.70
24	1H	774	A	N3-C4-N9	-10.06	119.35	127.40
24	14	2609	U	O5'-P-OP2	-10.05	96.66	105.70
24	1H	2430	A	N1-C2-N3	10.04	134.32	129.30
24	1H	784	A	C5-C6-N6	10.04	131.73	123.70
24	1H	140	A	C8-N9-C4	-10.03	101.79	105.80
24	1H	2584	U	N3-C2-O2	-9.99	115.21	122.20
24	14	1902	C	N3-C4-N4	-9.99	111.01	118.00
23	4L	18	C	C6-N1-C2	-9.98	116.31	120.30
24	1H	1950	G	C4-C5-N7	9.97	114.79	110.80
24	1H	2712	U	C5-C4-O4	9.96	131.88	125.90
24	14	1786	A	C4-C5-N7	9.95	115.67	110.70
24	1H	783	A	N3-C4-C5	9.93	133.75	126.80
24	1H	676	A	C4-C5-N7	9.90	115.65	110.70
24	1H	2430	A	C5-C6-N1	-9.90	112.75	117.70
24	14	1328	G	C4-C5-N7	9.90	114.76	110.80
24	14	2363	C	C6-N1-C2	9.90	124.26	120.30
24	14	140	A	C5-N7-C8	-9.90	98.95	103.90
24	1H	1193	G	C8-N9-C4	9.89	110.36	106.40
24	1H	2591	C	N1-C2-O2	-9.89	112.97	118.90
24	14	1698	A	C5-N7-C8	-9.87	98.96	103.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
24	1H	621	A	N1-C6-N6	9.86	124.52	118.60
24	1H	1957	C	O5'-P-OP2	-9.86	96.82	105.70
24	14	783	A	N3-C4-C5	9.86	133.70	126.80
24	1H	567	A	O5'-P-OP1	-9.86	96.83	105.70
24	1H	1678	G	N3-C4-C5	9.85	133.53	128.60
24	1H	140	A	C6-C5-N7	-9.84	125.41	132.30
24	1H	2362	G	C8-N9-C4	9.82	110.33	106.40
24	14	2639	A	N1-C6-N6	9.81	124.49	118.60
54	1G	337	C	C6-N1-C2	-9.81	116.38	120.30
24	1H	621	A	C5-N7-C8	-9.80	99.00	103.90
24	14	2232	U	N3-C4-C5	-9.79	108.73	114.60
24	14	2688	U	C5-C6-N1	-9.77	117.81	122.70
24	1H	675	A	O5'-P-OP2	-9.77	96.91	105.70
24	1H	124	G	C5-C6-O6	-9.77	122.74	128.60
24	14	827	U	O5'-P-OP1	9.76	122.41	110.70
25	16	81	G	C4-C5-N7	9.76	114.70	110.80
24	1H	1786	A	C6-C5-N7	-9.75	125.47	132.30
24	14	1786	A	N1-C2-N3	9.75	134.18	129.30
24	1H	2331	G	C5-C6-O6	-9.74	122.75	128.60
24	14	1678	G	N3-C4-N9	-9.74	120.16	126.00
24	1H	783	A	C5-C6-N1	-9.73	112.83	117.70
24	1H	783	A	C8-N9-C4	-9.73	101.91	105.80
24	1H	2507	C	N1-C2-O2	9.72	124.73	118.90
24	1H	1614	A	N1-C6-N6	9.72	124.43	118.60
24	1H	783	A	N1-C2-N3	9.70	134.15	129.30
24	1H	2503	A	C4-C5-N7	9.69	115.55	110.70
24	14	750	A	N7-C8-N9	9.67	118.64	113.80
24	1H	71	A	N1-C6-N6	9.65	124.39	118.60
24	1H	973	A	C2-N3-C4	-9.65	105.77	110.60
24	14	621	A	C5-C6-N1	-9.65	112.88	117.70
24	14	2873	A	N1-C6-N6	9.64	124.38	118.60
24	1H	774	A	C5-N7-C8	-9.63	99.08	103.90
24	14	2392	A	C2-N3-C4	-9.63	105.78	110.60
24	14	801	G	C6-C5-N7	9.63	136.18	130.40
1	13	542	G	O5'-P-OP1	-9.60	97.06	105.70
24	1H	1606	G	C8-N9-C4	9.60	110.24	106.40
24	14	783	A	C5-C6-N1	-9.60	112.90	117.70
54	1G	26	A	O5'-P-OP2	-9.59	97.07	105.70
24	14	2873	A	N7-C8-N9	9.57	118.59	113.80
1	13	720	C	C6-N1-C2	-9.57	116.47	120.30
24	1H	743	G	C8-N9-C4	-9.53	102.59	106.40
24	14	2873	A	C4-C5-C6	9.52	121.76	117.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
24	1H	1950	G	C6-C5-N7	-9.52	124.69	130.40
1	13	1336	C	N1-C2-O2	9.50	124.60	118.90
24	14	211	A	N1-C6-N6	9.50	124.30	118.60
24	1H	746	A	O4'-C1'-N9	9.48	115.78	108.20
24	1H	2571	C	N1-C2-O2	9.48	124.59	118.90
54	1G	300	A	O5'-P-OP1	-9.47	97.18	105.70
24	1H	1204	A	C5-C6-N1	-9.44	112.98	117.70
24	1H	1210	A	N7-C8-N9	9.44	118.52	113.80
24	14	801	G	N1-C6-O6	-9.43	114.24	119.90
24	14	750	A	C5-N7-C8	-9.42	99.19	103.90
1	13	115	G	P-O3'-C3'	9.42	131.00	119.70
24	1H	1899	G	N3-C2-N2	-9.41	113.31	119.90
24	1H	2430	A	N1-C6-N6	9.41	124.24	118.60
24	14	1379	A	C5-N7-C8	-9.40	99.20	103.90
24	1H	946	G	C8-N9-C4	9.40	110.16	106.40
24	1H	1974	C	O5'-P-OP2	-9.38	97.26	105.70
24	14	74	A	C5-C6-N1	-9.37	113.02	117.70
24	1H	613	U	C5-C4-O4	9.36	131.52	125.90
24	14	1786	A	C5-C6-N1	-9.36	113.02	117.70
24	1H	2597	G	N9-C4-C5	-9.33	101.67	105.40
54	1G	197	A	N7-C8-N9	9.31	118.45	113.80
24	1H	2287	A	C2-N3-C4	-9.30	105.95	110.60
24	1H	2571	C	N3-C2-O2	-9.30	115.39	121.90
24	1H	2430	A	N3-C4-C5	9.30	133.31	126.80
24	1H	1950	G	N7-C8-N9	9.29	117.75	113.10
24	14	676	A	C8-N9-C4	-9.29	102.08	105.80
24	1H	1698	A	N1-C6-N6	9.27	124.16	118.60
24	14	752	A	N1-C2-N3	9.26	133.93	129.30
24	1H	2620	C	N3-C4-N4	9.25	124.47	118.00
24	14	801	G	O5'-P-OP2	-9.24	97.38	105.70
24	14	242	G	N1-C6-O6	9.23	125.44	119.90
25	1J	95	U	N1-C2-O2	-9.23	116.33	122.80
24	1H	329	G	O5'-P-OP2	-9.23	97.40	105.70
24	1H	2361	A	O5'-P-OP2	-9.23	97.40	105.70
24	14	1609	A	N1-C6-N6	-9.22	113.07	118.60
24	1H	74	A	C5-N7-C8	-9.22	99.29	103.90
24	14	530	G	C4-C5-N7	9.21	114.48	110.80
24	14	1342	A	N1-C6-N6	9.20	124.12	118.60
24	14	1950	G	C5-N7-C8	-9.20	99.70	104.30
24	14	242	G	C8-N9-C4	9.20	110.08	106.40
24	14	1558	A	C2-N3-C4	-9.18	106.01	110.60
24	14	2503	A	C5-C6-N6	-9.18	116.36	123.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
24	14	1332	G	N7-C8-N9	9.17	117.69	113.10
24	14	2078	C	O5'-P-OP2	9.17	121.70	110.70
24	14	2542	A	C5-N7-C8	9.17	108.48	103.90
24	1H	2392	A	C5-N7-C8	-9.16	99.32	103.90
24	1H	2330	G	C8-N9-C4	9.16	110.06	106.40
24	14	1786	A	N1-C6-N6	9.16	124.09	118.60
24	1H	1607	C	O5'-P-OP2	-9.15	97.46	105.70
24	1H	1965	C	N3-C4-C5	9.15	125.56	121.90
54	1G	525	C	C5-C6-N1	9.15	125.57	121.00
24	1H	860	U	C4-C5-C6	9.14	125.19	119.70
24	14	783	A	C6-C5-N7	-9.14	125.90	132.30
24	14	1616	A	N7-C8-N9	9.13	118.37	113.80
24	14	2518	A	C5-N7-C8	-9.12	99.34	103.90
24	1H	189	G	C5-C6-O6	-9.09	123.14	128.60
24	14	74	A	N1-C6-N6	9.08	124.05	118.60
24	1H	260	G	C5-C6-O6	-9.07	123.16	128.60
22	2K	85	A	C5-C6-N6	-9.07	116.45	123.70
24	14	1821	A	C6-N1-C2	-9.07	113.16	118.60
24	14	508	G	O5'-P-OP1	-9.06	97.54	105.70
24	1H	788	A	N1-C6-N6	9.05	124.03	118.60
25	16	81	G	C6-C5-N7	-9.05	124.97	130.40
24	1H	1251	C	C4-C5-C6	9.04	121.92	117.40
24	1H	930	U	C5-C4-O4	9.03	131.31	125.90
24	1H	141	A	C4-C5-N7	9.02	115.21	110.70
24	14	1528	A	N7-C8-N9	9.02	118.31	113.80
24	14	128	C	C6-N1-C2	-9.01	116.70	120.30
24	14	988	A	N1-C6-N6	9.01	124.00	118.60
24	1H	1543	A	N1-C6-N6	9.00	124.00	118.60
1	13	690	G	C2-N3-C4	-8.99	107.40	111.90
24	1H	966	G	O5'-P-OP2	-8.99	97.61	105.70
24	1H	1895	C	C6-N1-C2	-8.99	116.70	120.30
24	1H	2427	C	N1-C2-O2	-8.98	113.51	118.90
24	1H	330	A	N1-C2-N3	8.97	133.79	129.30
24	14	2518	A	C2-N3-C4	-8.97	106.11	110.60
2	1E	155	LEU	CA-CB-CG	8.96	135.91	115.30
1	13	1336	C	C2-N1-C1'	8.96	128.66	118.80
24	1H	2429	G	O5'-P-OP1	8.94	121.42	110.70
24	1H	204	A	N1-C2-N3	8.93	133.77	129.30
24	1H	1600	C	O5'-P-OP2	-8.93	97.66	105.70
24	14	71	A	N1-C6-N6	8.92	123.95	118.60
1	13	251	G	N1-C6-O6	8.91	125.25	119.90
24	1H	453	C	C5-C4-N4	-8.91	113.96	120.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
24	1H	2331	G	N9-C4-C5	-8.91	101.83	105.40
24	14	1681	G	C5-N7-C8	-8.91	99.84	104.30
24	1H	330	A	C5-N7-C8	-8.90	99.45	103.90
24	1H	2271	G	N3-C4-N9	8.89	131.34	126.00
24	1H	2713	A	N7-C8-N9	8.89	118.25	113.80
24	1H	1204	A	N1-C6-N6	8.88	123.93	118.60
1	13	254	G	O5'-P-OP1	-8.88	97.71	105.70
1	13	1158	C	C2-N1-C1'	8.87	128.55	118.80
24	14	2032	G	C6-C5-N7	-8.87	125.08	130.40
24	1H	1781	C	N3-C4-N4	-8.85	111.80	118.00
24	14	2689	U	C5-C4-O4	8.85	131.21	125.90
24	1H	1786	A	C4-C5-N7	8.85	115.12	110.70
24	1H	444	C	C6-N1-C2	-8.85	116.76	120.30
54	1G	899	C	N1-C2-O2	8.85	124.21	118.90
24	14	1681	G	N3-C4-C5	8.84	133.02	128.60
24	1H	1602	U	O5'-P-OP2	8.82	121.28	110.70
24	1H	1614	A	C2-N3-C4	-8.82	106.19	110.60
24	14	2685	G	C8-N9-C4	8.82	109.93	106.40
24	14	1694	C	C6-N1-C2	8.81	123.82	120.30
24	1H	2029	G	O5'-P-OP1	-8.80	97.78	105.70
24	1H	189	G	N1-C6-O6	8.79	125.18	119.90
24	1H	2713	A	C5-N7-C8	-8.79	99.50	103.90
24	1H	1227	A	C8-N9-C4	8.79	109.31	105.80
24	14	2438	U	O5'-P-OP2	-8.78	97.79	105.70
24	1H	1404	C	O5'-P-OP1	-8.78	97.80	105.70
24	14	2375	G	C8-N9-C4	8.77	109.91	106.40
24	1H	1798	U	O5'-P-OP2	-8.77	97.81	105.70
24	1H	1663	C	C6-N1-C2	8.76	123.80	120.30
24	14	140	A	C4-C5-N7	8.76	115.08	110.70
24	14	1328	G	N1-C6-O6	8.75	125.15	119.90
24	1H	2430	A	O5'-P-OP1	-8.75	97.83	105.70
24	14	2439	A	O5'-P-OP2	-8.75	97.83	105.70
24	14	1903	G	O5'-P-OP1	-8.74	97.83	105.70
24	14	1332	G	C5-N7-C8	-8.74	99.93	104.30
24	1H	1142(A)	A	C2-N3-C4	-8.74	106.23	110.60
24	14	2503	A	N1-C6-N6	8.74	123.84	118.60
24	1H	1332	G	N3-C4-N9	-8.73	120.76	126.00
24	14	621	A	N1-C6-N6	8.73	123.84	118.60
24	1H	1393	A	O5'-P-OP2	-8.73	97.84	105.70
24	1H	946	G	N7-C8-N9	-8.72	108.74	113.10
24	14	453	C	C6-N1-C2	8.71	123.79	120.30
24	14	1332	G	C8-N9-C4	-8.72	102.91	106.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
24	14	2699	C	N3-C4-C5	8.71	125.38	121.90
24	14	510	C	O5'-P-OP2	-8.71	97.87	105.70
24	14	1649	G	C8-N9-C4	-8.70	102.92	106.40
1	13	690	G	O4'-C1'-N9	8.69	115.15	108.20
24	14	208	C	N1-C2-O2	-8.69	113.68	118.90
24	1H	621	A	N7-C8-N9	8.69	118.14	113.80
24	14	528	A	N3-C4-C5	8.69	132.88	126.80
24	1H	71	A	N1-C2-N3	8.68	133.64	129.30
24	1H	74	A	C5-C6-N1	-8.68	113.36	117.70
24	1H	1772	G	N1-C6-O6	-8.68	114.69	119.90
24	14	1342	A	C6-C5-N7	-8.66	126.24	132.30
24	14	856	C	O5'-P-OP1	-8.66	97.91	105.70
24	1H	978	G	C2-N3-C4	-8.65	107.57	111.90
24	14	1579	A	N1-C6-N6	8.65	123.79	118.60
24	1H	1366	A	N1-C6-N6	8.65	123.79	118.60
24	14	213	A	C5-C6-N6	-8.64	116.78	123.70
24	1H	1564	C	C6-N1-C2	-8.64	116.84	120.30
24	1H	1614	A	C6-C5-N7	-8.64	126.25	132.30
24	1H	736	C	N1-C2-O2	-8.63	113.72	118.90
24	14	489	G	C8-N9-C4	-8.63	102.95	106.40
1	13	974	A	O4'-C1'-N9	8.63	115.10	108.20
54	1G	1502	A	N1-C2-N3	8.63	133.61	129.30
24	1H	1298	C	N1-C2-O2	8.63	124.08	118.90
24	14	141	A	C5-N7-C8	-8.63	99.59	103.90
24	14	530	G	C5-N7-C8	-8.60	100.00	104.30
25	16	14	U	O5'-P-OP2	-8.60	97.97	105.70
24	1H	1616	A	C6-C5-N7	-8.59	126.28	132.30
24	1H	593	G	C6-C5-N7	-8.59	125.25	130.40
24	14	1373	A	C8-N9-C4	8.59	109.24	105.80
24	1H	1786	A	N1-C6-N6	8.59	123.75	118.60
24	1H	676	A	O4'-C1'-N9	8.58	115.07	108.20
24	1H	1616	A	N7-C8-N9	8.57	118.09	113.80
24	1H	1307	A	N1-C6-N6	8.56	123.74	118.60
24	1H	757	U	O5'-P-OP2	-8.55	98.00	105.70
24	14	330	A	N1-C2-N3	8.55	133.58	129.30
24	1H	1899	G	C4-N9-C1'	-8.55	115.39	126.50
54	1G	690	G	N3-C4-C5	8.55	132.87	128.60
24	1H	1306	C	O5'-P-OP1	-8.55	98.01	105.70
1	13	1499	A	C8-N9-C4	8.54	109.22	105.80
24	1H	1624	G	C8-N9-C4	8.54	109.82	106.40
24	1H	2689	U	N3-C4-O4	-8.54	113.42	119.40
24	14	2029	G	N1-C6-O6	-8.54	114.78	119.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
24	14	2430	A	C6-C5-N7	-8.54	126.33	132.30
24	1H	1989	G	N3-C2-N2	-8.53	113.93	119.90
24	14	1899	G	N3-C4-N9	-8.52	120.89	126.00
24	1H	1613	G	N3-C2-N2	8.51	125.86	119.90
24	14	213	A	N1-C6-N6	8.51	123.70	118.60
24	1H	1178	C	N1-C2-O2	8.50	124.00	118.90
1	13	1158	C	N1-C2-O2	8.49	124.00	118.90
24	14	330	A	N1-C6-N6	8.49	123.70	118.60
24	14	783	A	C8-N9-C4	-8.49	102.40	105.80
24	1H	1604	C	N1-C2-O2	-8.49	113.81	118.90
24	14	1950	G	N7-C8-N9	8.48	117.34	113.10
24	14	661	C	N3-C4-C5	-8.48	118.51	121.90
24	1H	2247	A	O5'-P-OP1	-8.48	98.07	105.70
24	1H	1309	G	O5'-P-OP1	8.47	120.86	110.70
1	13	745	C	C6-N1-C2	-8.47	116.91	120.30
24	1H	1899	G	C8-N9-C4	-8.46	103.01	106.40
24	14	2822	G	N3-C4-N9	8.46	131.07	126.00
24	1H	662	G	C4-C5-N7	-8.46	107.42	110.80
24	1H	1313	U	C5-C6-N1	8.43	126.92	122.70
24	14	71	A	N1-C2-N3	8.43	133.52	129.30
24	1H	125	G	C5-C6-O6	-8.43	123.54	128.60
24	14	2518	A	C4-C5-N7	8.43	114.91	110.70
24	1H	2503	A	N9-C4-C5	-8.42	102.43	105.80
24	14	1950	G	C4-C5-N7	8.41	114.17	110.80
24	1H	691	C	N3-C2-O2	8.40	127.78	121.90
24	14	1520	U	C5-C4-O4	8.40	130.94	125.90
24	14	1285	G	C5-C6-O6	-8.40	123.56	128.60
1	13	690	G	C8-N9-C4	-8.40	103.04	106.40
24	14	329	G	C5-C6-N1	8.40	115.70	111.50
24	1H	1568	G	N1-C6-O6	8.39	124.94	119.90
24	1H	917	A	N1-C6-N6	8.39	123.63	118.60
24	1H	1332	G	C5-C6-N1	-8.39	107.31	111.50
24	1H	1989	G	N1-C6-O6	8.39	124.94	119.90
24	1H	120	U	C5-C4-O4	8.38	130.93	125.90
24	14	1332	G	N1-C2-N3	8.38	128.93	123.90
24	1H	222	A	P-O3'-C3'	8.38	129.76	119.70
24	1H	1368	G	O5'-P-OP2	-8.38	98.16	105.70
24	14	1142(A)	A	C2-N3-C4	-8.37	106.41	110.60
24	1H	1250	G	N1-C6-O6	-8.37	114.88	119.90
24	1H	1942	C	C5-C6-N1	8.36	125.18	121.00
24	1H	2422	A	C8-N9-C4	-8.36	102.45	105.80
24	14	2001	A	C5-N7-C8	-8.36	99.72	103.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
24	14	2584	U	N3-C2-O2	-8.36	116.35	122.20
24	1H	859	G	N3-C4-C5	8.36	132.78	128.60
24	14	2859	G	C8-N9-C4	-8.35	103.06	106.40
24	1H	2490	G	N3-C4-N9	-8.35	120.99	126.00
24	1H	1332	G	C5-C6-O6	-8.35	123.59	128.60
54	1G	366	C	C6-N1-C2	8.34	123.64	120.30
24	14	512	G	O5'-P-OP1	-8.34	98.20	105.70
24	14	621	A	C5-N7-C8	-8.33	99.73	103.90
24	1H	210	C	C6-N1-C2	8.33	123.63	120.30
24	14	1348	G	O5'-P-OP2	8.32	120.69	110.70
24	1H	2446	G	N1-C6-O6	8.32	124.89	119.90
24	1H	783	A	N3-C4-N9	-8.32	120.75	127.40
24	14	2545	G	N1-C6-O6	8.32	124.89	119.90
24	1H	26	G	O5'-P-OP2	-8.31	98.22	105.70
24	1H	1379	A	N1-C6-N6	8.31	123.59	118.60
24	14	583	G	C5-C6-O6	-8.31	123.61	128.60
24	1H	1950	G	C2-N3-C4	-8.31	107.75	111.90
54	1G	690	G	C5-N7-C8	-8.31	100.14	104.30
24	1H	863	A	O5'-P-OP2	-8.30	98.23	105.70
24	1H	1337	G	OP1-P-O3'	8.30	123.46	105.20
24	1H	1611	C	C6-N1-C2	8.29	123.62	120.30
24	1H	1821	A	N1-C2-N3	8.29	133.44	129.30
24	1H	659	C	C5-C6-N1	-8.28	116.86	121.00
24	14	1241	A	C2-N3-C4	-8.28	106.46	110.60
24	1H	930	U	O5'-P-OP2	-8.28	98.25	105.70
54	1G	309	G	N1-C6-O6	8.28	124.87	119.90
24	1H	2573	C	C2-N1-C1'	8.27	127.90	118.80
24	1H	252	G	O5'-P-OP2	-8.27	98.26	105.70
24	1H	1193	G	O5'-P-OP2	-8.27	98.26	105.70
24	1H	2679	A	O5'-P-OP2	-8.27	98.26	105.70
36	88	88	GLY	N-CA-C	-8.27	92.44	113.10
24	1H	461	C	N1-C2-O2	-8.26	113.94	118.90
24	14	2463	C	C6-N1-C2	8.26	123.61	120.30
24	14	2518	A	C6-C5-N7	-8.26	126.52	132.30
24	1H	1496	A	C5-N7-C8	-8.26	99.77	103.90
24	1H	510	C	C6-N1-C2	8.26	123.60	120.30
54	1G	1517	G	O5'-P-OP2	-8.25	98.27	105.70
24	14	1790	C	C6-N1-C2	8.25	123.60	120.30
24	1H	2392	A	C8-N9-C4	-8.25	102.50	105.80
24	1H	508	G	C4-C5-N7	8.24	114.10	110.80
24	14	2439	A	P-O3'-C3'	8.24	129.59	119.70
24	1H	621	A	C5-C6-N1	-8.24	113.58	117.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
24	1H	2513	G	O5'-P-OP2	-8.23	98.29	105.70
24	14	1260	G	N1-C6-O6	8.23	124.84	119.90
24	14	1644	C	N1-C2-O2	8.23	123.84	118.90
24	1H	226	G	N1-C6-O6	8.23	124.84	119.90
24	1H	930	U	N3-C4-O4	-8.23	113.64	119.40
24	1H	2527	C	C5-C6-N1	8.22	125.11	121.00
24	1H	1178	C	N3-C2-O2	-8.22	116.15	121.90
24	14	2253	G	O5'-P-OP2	-8.22	98.30	105.70
41	D8	18	LEU	CA-CB-CG	8.21	134.18	115.30
24	1H	621	A	C6-C5-N7	-8.20	126.56	132.30
24	14	2273	A	O5'-P-OP2	-8.20	98.32	105.70
24	14	2688	U	N1-C2-N3	8.19	119.82	114.90
24	14	805	G	C8-N9-C4	-8.19	103.12	106.40
24	14	676	A	O4'-C1'-N9	8.19	114.75	108.20
24	14	1528	A	C5-N7-C8	-8.18	99.81	103.90
24	14	383	U	C5-C6-N1	-8.18	118.61	122.70
24	14	562	U	N1-C2-N3	8.18	119.81	114.90
24	1H	1669	A	N7-C8-N9	8.18	117.89	113.80
24	1H	1786	A	C5-C6-N1	-8.17	113.62	117.70
24	14	582	G	N1-C6-O6	8.17	124.80	119.90
24	1H	672	C	O5'-P-OP1	8.16	120.50	110.70
24	1H	2012	G	O5'-P-OP1	-8.16	98.36	105.70
24	14	783	A	N3-C4-N9	-8.15	120.88	127.40
24	14	1931	U	C5-C6-N1	8.14	126.77	122.70
24	1H	1021	A	C5-N7-C8	-8.14	99.83	103.90
24	14	1758	G	C8-N9-C4	-8.13	103.15	106.40
24	1H	2590	A	C2-N3-C4	-8.12	106.54	110.60
24	14	71	A	C4-C5-N7	8.12	114.76	110.70
24	14	1681	G	C2-N3-C4	-8.12	107.84	111.90
24	1H	481	G	O4'-C1'-N9	8.12	114.70	108.20
24	1H	71	A	N3-C4-C5	8.11	132.48	126.80
24	14	566	U	C5-C6-N1	-8.11	118.64	122.70
24	14	676	A	N3-C4-N9	-8.11	120.91	127.40
24	14	1323	U	N3-C2-O2	8.10	127.87	122.20
24	1H	1829	A	O5'-P-OP1	-8.10	98.41	105.70
24	1H	1413	G	C8-N9-C4	-8.10	103.16	106.40
24	1H	729	G	C8-N9-C4	-8.10	103.16	106.40
24	1H	2331	G	N3-C4-C5	8.10	132.65	128.60
24	1H	1327	C	O5'-P-OP2	-8.09	98.42	105.70
24	14	140	A	N1-C6-N6	8.09	123.45	118.60
24	1H	1210	A	N1-C6-N6	8.09	123.45	118.60
24	1H	2443	C	O5'-P-OP2	8.09	120.41	110.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	13	725	G	O5'-P-OP1	-8.08	98.43	105.70
24	1H	1331	A	N1-C6-N6	-8.07	113.75	118.60
24	14	687	C	O5'-P-OP1	-8.07	98.43	105.70
24	14	1950	G	C6-C5-N7	-8.07	125.56	130.40
24	1H	1275	A	C5-C6-N6	-8.07	117.25	123.70
24	1H	831	G	C8-N9-C4	8.06	109.63	106.40
24	1H	2705	A	C8-N9-C4	8.06	109.03	105.80
24	14	1379	A	C4-C5-N7	8.06	114.73	110.70
24	14	1764	G	C5-C6-N1	8.06	115.53	111.50
24	1H	396	G	N3-C2-N2	-8.06	114.26	119.90
24	1H	840	C	C6-N1-C2	8.05	123.52	120.30
24	1H	38	A	C8-N9-C4	-8.05	102.58	105.80
24	14	1899	G	N1-C2-N3	8.05	128.73	123.90
24	1H	74	A	N1-C2-N3	8.05	133.32	129.30
24	1H	1616	A	O4'-C1'-N9	8.05	114.64	108.20
24	1H	2573	C	N3-C2-O2	-8.05	116.27	121.90
24	14	1187	G	C8-N9-C4	-8.05	103.18	106.40
24	1H	189	G	N9-C4-C5	-8.04	102.18	105.40
24	1H	2688	U	N1-C2-N3	8.04	119.72	114.90
24	1H	1950	G	C8-N9-C4	-8.04	103.19	106.40
1	13	882	C	C6-N1-C2	-8.03	117.09	120.30
24	1H	1965	C	C4-C5-C6	-8.03	113.39	117.40
24	14	1616	A	O4'-C1'-N9	8.03	114.62	108.20
24	1H	1385	G	N3-C4-N9	-8.02	121.19	126.00
24	1H	2271	G	C5-C6-O6	-8.02	123.79	128.60
24	1H	445	C	C6-N1-C2	-8.02	117.09	120.30
24	1H	1616	A	C5-C6-N6	-8.02	117.28	123.70
25	16	81	G	C5-N7-C8	-8.02	100.29	104.30
24	1H	1807	G	C8-N9-C4	8.01	109.61	106.40
24	1H	2688	U	C6-N1-C2	-8.01	116.19	121.00
24	1H	71	A	N7-C8-N9	8.01	117.81	113.80
24	1H	1513	C	C6-N1-C2	-8.01	117.10	120.30
24	1H	380	U	O5'-P-OP2	-8.01	98.49	105.70
24	14	1830	C	C5-C4-N4	-8.00	114.60	120.20
24	14	2779	U	N3-C4-O4	-8.00	113.80	119.40
24	14	583	G	C4-C5-N7	7.99	114.00	110.80
24	1H	773	U	N1-C2-N3	7.99	119.69	114.90
24	1H	1629	U	N3-C4-C5	-7.99	109.81	114.60
24	1H	575	A	N7-C8-N9	-7.98	109.81	113.80
24	14	2584	U	C2-N1-C1'	7.98	127.27	117.70
24	1H	2713	A	C8-N9-C4	-7.98	102.61	105.80
54	1G	579	G	O5'-P-OP2	-7.98	98.52	105.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
24	1H	1698	A	C6-C5-N7	-7.97	126.72	132.30
25	1J	61	G	O5'-P-OP1	-7.97	98.53	105.70
24	1H	978	G	N3-C4-C5	7.96	132.58	128.60
24	14	1616	A	N9-C4-C5	-7.96	102.61	105.80
22	2L	10	C	N3-C2-O2	-7.96	116.33	121.90
24	14	1758	G	C5-C6-O6	7.96	133.37	128.60
24	1H	2211	G	N1-C6-O6	7.95	124.67	119.90
24	1H	2439	A	C8-N9-C4	-7.95	102.62	105.80
24	1H	1936	A	C5-C6-N6	-7.95	117.34	123.70
24	1H	2518	A	C5-N7-C8	-7.95	99.92	103.90
24	1H	736	C	N3-C2-O2	7.95	127.46	121.90
24	1H	1250	G	C5-C6-O6	7.95	133.37	128.60
24	1H	2346	A	C5-C6-N1	-7.95	113.73	117.70
24	14	1332	G	N3-C4-N9	-7.94	121.23	126.00
24	1H	1298	C	C5-C6-N1	7.94	124.97	121.00
24	1H	1142(A)	A	N3-C4-N9	-7.93	121.05	127.40
24	1H	1812	A	N1-C2-N3	7.93	133.27	129.30
24	1H	74	A	C6-C5-N7	-7.93	126.75	132.30
24	1H	917	A	N1-C2-N3	7.93	133.26	129.30
24	1H	2347	C	O5'-P-OP2	-7.93	98.57	105.70
24	14	1614	A	N7-C8-N9	7.92	117.76	113.80
24	14	1681	G	C4-C5-N7	7.92	113.97	110.80
24	1H	2685	G	C5-C6-N1	-7.92	107.54	111.50
24	1H	2434	A	C8-N9-C4	7.91	108.97	105.80
24	14	2723	C	C6-N1-C2	-7.91	117.13	120.30
24	14	912	C	C6-N1-C2	-7.91	117.14	120.30
24	1H	1950	G	O4'-C1'-N9	7.91	114.53	108.20
1	13	689	C	C6-N1-C2	-7.91	117.14	120.30
24	14	1602	U	N3-C4-C5	-7.90	109.86	114.60
24	1H	1528	A	N7-C8-N9	7.90	117.75	113.80
24	14	192	C	C2-N3-C4	7.90	123.85	119.90
24	1H	621	A	N1-C2-N3	7.90	133.25	129.30
25	16	22	U	C5-C6-N1	7.90	126.65	122.70
24	14	954	G	O5'-P-OP2	7.90	120.18	110.70
24	14	922	U	O5'-P-OP1	-7.88	98.60	105.70
54	1G	13	U	C5-C6-N1	-7.88	118.76	122.70
24	1H	752	A	C6-N1-C2	-7.88	113.87	118.60
24	14	797	C	C5-C4-N4	-7.87	114.69	120.20
24	14	943	U	O5'-P-OP1	-7.87	98.62	105.70
24	14	676	A	N1-C6-N6	7.87	123.32	118.60
24	1H	839	U	O5'-P-OP2	-7.86	98.63	105.70
24	1H	853	G	N9-C4-C5	-7.86	102.26	105.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
24	1H	617	G	C8-N9-C4	7.85	109.54	106.40
24	1H	141	A	N7-C8-N9	7.85	117.72	113.80
24	14	2498	C	C6-N1-C2	7.85	123.44	120.30
24	14	528	A	N3-C4-N9	-7.84	121.13	127.40
24	1H	933	A	C8-N9-C4	-7.84	102.67	105.80
24	14	2502	G	O5'-P-OP1	-7.84	98.64	105.70
24	1H	2779	U	C5-C4-O4	7.83	130.60	125.90
24	1H	71	A	O4'-C1'-N9	-7.83	101.93	108.20
24	14	1319	G	C8-N9-C4	-7.83	103.27	106.40
24	1H	2238	G	C8-N9-C4	7.83	109.53	106.40
24	14	974(A)	C	N3-C2-O2	-7.83	116.42	121.90
24	1H	109	G	N1-C6-O6	-7.83	115.20	119.90
24	14	71	A	N7-C8-N9	7.83	117.71	113.80
24	14	2822	G	N3-C4-C5	-7.81	124.69	128.60
24	1H	1296	G	OP2-P-O3'	7.81	122.38	105.20
24	1H	2689	U	C5-C4-O4	7.81	130.58	125.90
24	1H	1202	C	N3-C2-O2	7.80	127.36	121.90
24	1H	1614	A	C4-C5-N7	7.80	114.60	110.70
24	14	2032	G	C4-C5-N7	7.80	113.92	110.80
24	14	1773	A	O5'-P-OP1	7.80	120.06	110.70
24	1H	920	G	C8-N9-C4	7.79	109.52	106.40
24	14	2375	G	N9-C4-C5	-7.79	102.28	105.40
24	1H	1383	C	N1-C2-O2	-7.79	114.22	118.90
24	14	1496	A	N1-C6-N6	7.79	123.27	118.60
24	1H	954	G	O5'-P-OP2	7.79	120.05	110.70
24	14	2477	C	C2-N1-C1'	7.79	127.37	118.80
54	1G	1200	C	N1-C2-O2	7.79	123.57	118.90
24	14	2387	U	C5-C6-N1	-7.78	118.81	122.70
24	14	2429	G	C8-N9-C4	-7.78	103.29	106.40
24	1H	2618	G	N3-C4-C5	-7.78	124.71	128.60
24	1H	2584	U	C2-N1-C1'	7.78	127.04	117.70
24	1H	1463	C	C6-N1-C2	-7.77	117.19	120.30
24	1H	2232	U	C6-N1-C2	-7.77	116.34	121.00
24	14	1302	A	OP1-P-OP2	7.77	131.26	119.60
22	2K	85	A	C4-C5-N7	7.77	114.58	110.70
24	1H	1790	C	C6-N1-C2	7.77	123.41	120.30
24	14	1698	A	N7-C8-N9	7.77	117.68	113.80
1	13	1433	A	N1-C2-N3	7.77	133.18	129.30
24	1H	1518	C	C5-C6-N1	7.76	124.88	121.00
24	1H	2417	C	O5'-P-OP2	-7.76	98.71	105.70
24	14	1353	A	N9-C4-C5	7.76	108.91	105.80
24	1H	513	A	C8-N9-C4	-7.76	102.70	105.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
24	14	113	G	C8-N9-C4	7.76	109.50	106.40
24	1H	1678	G	N3-C4-N9	-7.76	121.34	126.00
24	14	1790	C	C5-C4-N4	-7.76	114.77	120.20
24	1H	40	C	O5'-P-OP2	-7.76	98.72	105.70
24	1H	2085	C	O5'-P-OP2	-7.76	98.72	105.70
24	14	1260	G	C5-C6-O6	-7.76	123.95	128.60
22	3L	33	C	C6-N1-C2	-7.75	117.20	120.30
24	14	774	A	N3-C4-N9	-7.75	121.20	127.40
24	1H	1626	G	N3-C2-N2	-7.75	114.48	119.90
1	13	866	C	N1-C2-O2	-7.74	114.26	118.90
24	1H	1614	A	N7-C8-N9	7.73	117.67	113.80
1	13	690	G	N7-C8-N9	7.73	116.97	113.10
24	14	1678	G	C5-N7-C8	-7.73	100.44	104.30
24	1H	2618	G	C8-N9-C4	-7.73	103.31	106.40
25	16	81	G	C5-C6-O6	-7.72	123.97	128.60
24	14	583	G	N1-C6-O6	7.72	124.53	119.90
24	1H	1204	A	N3-C4-C5	7.72	132.20	126.80
24	1H	705	A	N1-C6-N6	7.71	123.23	118.60
1	13	789	U	N3-C2-O2	-7.71	116.81	122.20
24	1H	264	C	N1-C2-O2	7.71	123.52	118.90
24	1H	719	C	C6-N1-C2	-7.70	117.22	120.30
25	16	81	G	N1-C6-O6	7.69	124.52	119.90
24	14	2032	G	C5-C6-O6	-7.69	123.98	128.60
24	1H	2573	C	C6-N1-C2	-7.69	117.22	120.30
24	14	1997	G	C8-N9-C4	7.69	109.48	106.40
24	1H	2054	A	OP2-P-O3'	7.68	122.10	105.20
24	1H	2430	A	C5-N7-C8	-7.68	100.06	103.90
24	14	1500	G	C6-C5-N7	-7.68	125.79	130.40
1	13	1354	C	C6-N1-C2	-7.68	117.23	120.30
1	13	1517	G	O5'-P-OP2	-7.68	98.79	105.70
24	14	2699	C	C2-N3-C4	-7.67	116.06	119.90
24	1H	1611	C	C5-C6-N1	-7.67	117.16	121.00
24	14	2818	G	C5-C6-O6	-7.67	124.00	128.60
24	14	2342	C	C6-N1-C2	-7.66	117.23	120.30
24	14	2455	G	C5-C6-O6	-7.66	124.00	128.60
24	1H	49	A	C5-N7-C8	7.66	107.73	103.90
24	1H	2023	G	N3-C2-N2	-7.66	114.54	119.90
24	1H	74	A	N3-C4-C5	7.66	132.16	126.80
24	14	1192	G	C5-C6-N1	-7.66	107.67	111.50
24	1H	1428	C	O5'-P-OP2	7.64	119.87	110.70
24	1H	772	C	N3-C4-C5	-7.64	118.84	121.90
24	14	138	G	C8-N9-C4	-7.64	103.35	106.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
24	1H	2550	G	N3-C2-N2	-7.63	114.56	119.90
24	1H	2455	G	C8-N9-C4	7.63	109.45	106.40
24	14	1614	A	C8-N9-C4	-7.63	102.75	105.80
24	14	1022	G	N3-C2-N2	-7.63	114.56	119.90
24	14	1616	A	N3-C4-C5	7.62	132.14	126.80
24	1H	1299	G	N7-C8-N9	7.62	116.91	113.10
24	14	140	A	N7-C8-N9	7.62	117.61	113.80
24	1H	1204	A	C5-N7-C8	-7.62	100.09	103.90
24	14	2542	A	O5'-P-OP2	-7.62	98.85	105.70
24	1H	2502	G	O5'-P-OP2	-7.61	98.85	105.70
54	1G	904	C	O5'-P-OP1	-7.61	98.85	105.70
25	1J	55	U	O5'-P-OP1	-7.60	98.86	105.70
24	14	138	G	N3-C4-C5	-7.60	124.80	128.60
24	14	2001	A	C4-C5-N7	7.60	114.50	110.70
54	1G	1200	C	C2-N1-C1'	7.59	127.15	118.80
24	14	692	C	N3-C4-C5	7.59	124.94	121.90
24	1H	248	G	O5'-P-OP2	-7.59	98.87	105.70
24	14	1698	A	C4-C5-N7	7.59	114.50	110.70
24	1H	746	A	N9-C4-C5	7.58	108.83	105.80
24	1H	1413	G	N7-C8-N9	7.58	116.89	113.10
24	1H	2330	G	N1-C6-O6	7.58	124.45	119.90
24	1H	508	G	C5-N7-C8	-7.58	100.51	104.30
24	1H	676	A	C8-N9-C4	-7.58	102.77	105.80
24	1H	2287	A	N1-C2-N3	7.58	133.09	129.30
24	1H	2497	A	C6-N1-C2	-7.58	114.06	118.60
24	1H	2451	A	N1-C6-N6	-7.57	114.06	118.60
24	1H	2554	U	N1-C2-O2	-7.57	117.50	122.80
24	14	197	A	C2-N3-C4	-7.57	106.82	110.60
24	14	1610	A	O5'-P-OP2	-7.57	98.89	105.70
24	1H	1005	C	O5'-P-OP1	-7.56	98.89	105.70
1	13	826	C	C6-N1-C2	-7.56	117.28	120.30
24	1H	2714	G	N1-C6-O6	7.56	124.44	119.90
24	14	148	C	C6-N1-C2	7.56	123.32	120.30
24	14	1698	A	N3-C4-C5	7.56	132.09	126.80
24	14	2029	G	N9-C4-C5	7.56	108.42	105.40
24	14	2724	C	C6-N1-C2	7.55	123.32	120.30
24	1H	2509	G	O5'-P-OP1	-7.55	98.90	105.70
24	1H	1379	A	C6-C5-N7	-7.55	127.02	132.30
24	1H	1313	U	C2-N1-C1'	7.54	126.75	117.70
24	14	2060	A	C8-N9-C4	-7.54	102.78	105.80
24	1H	201	C	N3-C4-N4	7.54	123.28	118.00
24	14	1786	A	N3-C4-C5	7.54	132.08	126.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
24	1H	730	C	O5'-P-OP2	-7.54	98.92	105.70
24	1H	614	U	N1-C2-O2	7.54	128.07	122.80
24	1H	1672	C	O5'-P-OP1	-7.54	98.92	105.70
24	1H	49	A	N7-C8-N9	-7.53	110.03	113.80
24	1H	1669	A	C8-N9-C4	-7.53	102.79	105.80
24	1H	1882	C	C5-C6-N1	7.52	124.76	121.00
24	14	528	A	N1-C6-N6	7.52	123.11	118.60
24	14	2502	G	N3-C4-C5	-7.52	124.84	128.60
24	1H	528	A	C2-N3-C4	-7.51	106.84	110.60
24	1H	1332	G	C8-N9-C4	-7.51	103.39	106.40
24	1H	2573	C	N1-C2-O2	7.51	123.41	118.90
24	14	377	C	N1-C2-O2	-7.51	114.39	118.90
24	14	139	G	N1-C6-O6	-7.51	115.40	119.90
24	1H	621	A	C4-C5-N7	7.50	114.45	110.70
24	1H	1210	A	C4-C5-N7	7.50	114.45	110.70
24	1H	2232	U	N3-C4-C5	-7.50	110.10	114.60
24	1H	790	C	N3-C2-O2	7.49	127.14	121.90
24	1H	913	U	O5'-P-OP2	-7.49	98.96	105.70
24	14	1500	G	N1-C6-O6	7.49	124.39	119.90
24	14	2023	G	O5'-P-OP2	-7.49	98.96	105.70
24	1H	719	C	C5-C6-N1	7.49	124.74	121.00
24	1H	1698	A	C4-C5-N7	7.49	114.44	110.70
24	14	1528	A	C8-N9-C4	-7.49	102.81	105.80
24	14	2307	G	O4'-C1'-N9	7.49	114.19	108.20
24	1H	2362	G	N7-C8-N9	-7.48	109.36	113.10
24	14	2554	U	O5'-P-OP1	-7.48	98.97	105.70
24	1H	2597	G	C4-C5-N7	7.47	113.79	110.80
24	1H	2737	G	N1-C6-O6	7.47	124.39	119.90
24	1H	471	A	N1-C6-N6	7.47	123.08	118.60
24	1H	1513	C	C5-C6-N1	7.47	124.73	121.00
24	1H	676	A	C6-N1-C2	7.47	123.08	118.60
24	14	1259	G	C8-N9-C4	7.47	109.39	106.40
1	13	601	C	C6-N1-C2	-7.46	117.31	120.30
24	14	565	C	OP1-P-OP2	7.46	130.79	119.60
24	14	1313	U	C2-N1-C1'	7.46	126.65	117.70
24	14	2056	G	C5-C6-O6	-7.46	124.12	128.60
24	1H	1969	A	OP1-P-OP2	-7.46	108.42	119.60
24	14	2000	G	O5'-P-OP1	7.45	119.64	110.70
24	1H	1250	G	C4-C5-N7	-7.45	107.82	110.80
24	14	1379	A	N7-C8-N9	7.45	117.52	113.80
24	1H	204	A	C6-N1-C2	-7.44	114.14	118.60
24	14	1241	A	N1-C6-N6	7.44	123.06	118.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
24	1H	972	G	N1-C6-O6	-7.44	115.44	119.90
54	1G	1519	A	C5-C6-N6	7.44	129.65	123.70
25	16	7	G	C5-C6-O6	-7.44	124.14	128.60
24	14	949	C	C5-C6-N1	-7.44	117.28	121.00
24	14	2873	A	C5-N7-C8	-7.43	100.19	103.90
24	14	2592	G	O5'-P-OP2	-7.43	99.02	105.70
24	14	213	A	N9-C4-C5	-7.43	102.83	105.80
22	2K	60	A	O4'-C1'-N9	7.42	114.14	108.20
24	14	1616	A	C5-C6-N6	-7.42	117.76	123.70
24	1H	1373	A	N7-C8-N9	-7.42	110.09	113.80
1	13	1158	C	N3-C2-O2	-7.42	116.71	121.90
24	14	197	A	C5-N7-C8	-7.42	100.19	103.90
24	1H	2318	G	N7-C8-N9	7.42	116.81	113.10
24	14	2287	A	N1-C2-N3	7.41	133.01	129.30
24	1H	2518	A	N7-C8-N9	7.41	117.50	113.80
24	1H	774	A	C4-C5-N7	7.41	114.40	110.70
24	1H	1936	A	N1-C6-N6	7.41	123.05	118.60
24	1H	2438	U	C5-C6-N1	-7.41	119.00	122.70
24	14	74	A	O4'-C1'-N9	-7.41	102.28	108.20
24	1H	727	A	C2-N3-C4	-7.40	106.90	110.60
41	95	21	ARG	NE-CZ-NH2	-7.40	116.60	120.30
24	1H	62	C	C5-C6-N1	-7.40	117.30	121.00
24	14	1342	A	N1-C2-N3	7.39	133.00	129.30
24	14	1679	U	C5-C6-N1	-7.39	119.00	122.70
24	1H	1266	G	C5-C6-O6	-7.39	124.17	128.60
54	1G	557	G	N3-C4-N9	7.39	130.43	126.00
24	14	122	G	N1-C6-O6	7.39	124.33	119.90
24	1H	1385	G	N3-C4-C5	7.39	132.29	128.60
24	1H	2377	A	C8-N9-C4	7.39	108.75	105.80
24	14	2639	A	C5-N7-C8	-7.39	100.21	103.90
24	14	1241	A	C5-C6-N1	-7.38	114.01	117.70
24	1H	2219	G	O5'-P-OP2	-7.38	99.06	105.70
24	1H	2713	A	C2-N3-C4	-7.38	106.91	110.60
1	13	1524	C	C6-N1-C2	7.38	123.25	120.30
24	1H	1253	A	C8-N9-C4	7.38	108.75	105.80
24	1H	1994	C	N3-C2-O2	-7.38	116.73	121.90
24	14	141	A	C4-C5-N7	7.38	114.39	110.70
24	1H	2620	C	N3-C4-C5	-7.37	118.95	121.90
24	1H	580	C	C6-N1-C2	-7.37	117.35	120.30
24	1H	568	U	N3-C4-C5	-7.37	110.18	114.60
24	1H	1791	A	OP1-P-OP2	-7.37	108.55	119.60
24	1H	382	G	C4-C5-N7	7.36	113.75	110.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
24	1H	74	A	C4-C5-N7	7.36	114.38	110.70
24	1H	397	G	N1-C6-O6	7.36	124.32	119.90
38	65	110	LEU	CA-CB-CG	7.36	132.22	115.30
24	1H	198	C	C5-C4-N4	-7.35	115.05	120.20
1	13	729	A	N1-C6-N6	7.35	123.01	118.60
1	13	789	U	C5-C4-O4	7.35	130.31	125.90
24	1H	684	G	C8-N9-C4	-7.34	103.46	106.40
24	14	494	G	N1-C6-O6	7.34	124.30	119.90
24	1H	1654	A	OP1-P-OP2	-7.33	108.60	119.60
24	1H	2005	A	N1-C6-N6	7.33	123.00	118.60
24	14	1786	A	N9-C1'-C2'	7.33	123.52	114.00
24	1H	593	G	O5'-P-OP1	7.32	119.49	110.70
24	14	1410	G	O5'-P-OP1	7.32	119.49	110.70
1	13	1058	G	C8-N9-C4	7.32	109.33	106.40
1	13	251	G	C5-C6-O6	-7.31	124.21	128.60
24	14	2335	A	O4'-C1'-N9	7.31	114.05	108.20
24	14	2501	C	C2-N1-C1'	-7.31	110.76	118.80
24	1H	1784	A	C5-C6-N6	7.30	129.54	123.70
24	14	1204	A	N1-C6-N6	7.30	122.98	118.60
24	1H	839	U	OP1-P-OP2	7.30	130.55	119.60
24	14	805	G	N3-C4-C5	-7.30	124.95	128.60
24	1H	1678	G	C5-N7-C8	-7.30	100.65	104.30
24	1H	34	C	O5'-P-OP1	-7.29	99.13	105.70
24	14	530	G	N7-C8-N9	7.29	116.75	113.10
24	14	2238	G	O5'-P-OP2	-7.29	99.14	105.70
24	1H	1626	G	C8-N9-C4	-7.29	103.48	106.40
24	14	1273	U	C2-N3-C4	-7.29	122.62	127.00
23	4K	17	G	C6-C5-N7	-7.29	126.03	130.40
24	1H	38	A	N7-C8-N9	7.29	117.44	113.80
24	1H	2392	A	C5-C6-N1	-7.28	114.06	117.70
24	14	738	G	O5'-P-OP2	-7.28	99.14	105.70
24	1H	28	A	C5-N7-C8	-7.28	100.26	103.90
24	1H	1193	G	O5'-P-OP1	7.28	119.44	110.70
24	1H	330	A	N3-C4-C5	7.27	131.89	126.80
24	14	1383	C	N3-C2-O2	7.27	126.99	121.90
24	14	2545	G	C5-C6-O6	-7.27	124.24	128.60
24	1H	2513	G	N1-C6-O6	7.27	124.26	119.90
24	14	1785	A	O5'-P-OP2	-7.27	99.16	105.70
24	14	2392	A	C5-N7-C8	-7.27	100.27	103.90
1	13	449	C	C6-N1-C2	-7.27	117.39	120.30
24	1H	561	G	C8-N9-C4	7.27	109.31	106.40
24	14	217	G	O5'-P-OP1	-7.26	99.16	105.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
24	1H	778	G	N3-C2-N2	-7.26	114.82	119.90
24	1H	930	U	N3-C2-O2	-7.26	117.12	122.20
24	14	528	A	N1-C2-N3	7.26	132.93	129.30
24	1H	691	C	N3-C4-N4	7.26	123.08	118.00
24	14	201	C	C6-N1-C2	7.26	123.20	120.30
24	1H	1613	G	N1-C2-N2	-7.26	109.67	116.20
24	1H	691	C	C5-C4-N4	-7.26	115.12	120.20
24	1H	828	U	N3-C4-O4	-7.26	114.32	119.40
24	14	1816	G	O5'-P-OP1	-7.26	99.17	105.70
54	1G	251	G	N1-C6-O6	7.25	124.25	119.90
24	1H	790	C	N1-C2-O2	-7.25	114.55	118.90
24	14	1327	C	N1-C2-O2	-7.25	114.55	118.90
24	1H	675	A	C8-N9-C4	7.25	108.70	105.80
24	1H	1332	G	N3-C2-N2	-7.25	114.83	119.90
24	1H	1793	C	O5'-P-OP2	-7.25	99.18	105.70
24	14	265	A	C2-N3-C4	-7.25	106.98	110.60
24	1H	2503	A	N1-C2-N3	-7.24	125.68	129.30
24	14	2441	C	N3-C4-N4	-7.24	112.93	118.00
24	14	1342	A	C4-C5-N7	7.24	114.32	110.70
24	1H	659	C	C2-N3-C4	-7.24	116.28	119.90
24	1H	1349	A	C2-N3-C4	-7.24	106.98	110.60
24	1H	1604	C	N3-C2-O2	7.24	126.97	121.90
24	1H	1829	A	N1-C6-N6	-7.23	114.26	118.60
24	14	139	G	C4-C5-N7	-7.23	107.91	110.80
24	1H	728	G	N1-C6-O6	7.22	124.23	119.90
24	1H	2374	C	C5-C6-N1	-7.22	117.39	121.00
24	14	71	A	O4'-C1'-N9	-7.22	102.42	108.20
24	14	528	A	C4-C5-N7	7.22	114.31	110.70
24	14	1559	G	N1-C6-O6	7.22	124.23	119.90
24	1H	743	G	N7-C8-N9	7.21	116.71	113.10
24	1H	1528	A	C5-N7-C8	-7.21	100.29	103.90
24	14	242	G	N9-C4-C5	-7.21	102.52	105.40
24	14	1902	C	N3-C4-C5	7.21	124.78	121.90
24	1H	125	G	N1-C6-O6	7.20	124.22	119.90
24	1H	596	G	N3-C2-N2	-7.19	114.86	119.90
24	1H	2726	U	C5-C4-O4	7.19	130.22	125.90
24	14	2587	A	N1-C6-N6	7.19	122.92	118.60
1	13	1497	G	O5'-P-OP2	-7.19	99.23	105.70
24	1H	1383	C	N3-C2-O2	7.19	126.93	121.90
24	1H	1790	C	N1-C2-O2	-7.19	114.59	118.90
24	14	1821	A	C5-C6-N1	7.19	121.29	117.70
24	14	2444	G	N3-C2-N2	-7.19	114.87	119.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
24	14	140	A	C2-N3-C4	-7.19	107.01	110.60
24	1H	1698	A	O4'-C1'-N9	7.18	113.95	108.20
24	14	1373	A	N7-C8-N9	-7.18	110.21	113.80
1	13	880	C	C6-N1-C2	7.18	123.17	120.30
24	1H	633	A	O5'-P-OP1	-7.18	99.24	105.70
24	1H	248	G	N1-C6-O6	7.18	124.21	119.90
24	1H	1660	C	N3-C4-N4	-7.18	112.97	118.00
24	1H	912	C	C6-N1-C2	-7.18	117.43	120.30
24	14	752	A	C6-N1-C2	-7.18	114.29	118.60
24	1H	2270	G	C6-C5-N7	-7.18	126.09	130.40
24	1H	1353	A	C5-C6-N6	-7.17	117.96	123.70
24	14	372	G	O4'-C1'-N9	7.17	113.94	108.20
25	1J	114	G	C8-N9-C4	7.17	109.27	106.40
24	1H	71	A	C6-C5-N7	-7.17	127.28	132.30
25	1J	81	G	C4-C5-N7	7.17	113.67	110.80
32	61	110	ASP	C-N-CD	-7.17	104.83	120.60
24	1H	566	U	C5-C4-O4	-7.16	121.60	125.90
24	1H	1819	A	C5-C6-N6	-7.16	117.97	123.70
24	1H	529	A	N1-C6-N6	7.16	122.90	118.60
24	14	1342	A	C5-N7-C8	-7.16	100.32	103.90
24	14	1558	A	C5-C6-N1	-7.16	114.12	117.70
24	1H	1626	G	N9-C4-C5	7.16	108.26	105.40
24	14	1441	G	O5'-P-OP1	-7.16	99.26	105.70
24	1H	2597	G	C8-N9-C4	7.15	109.26	106.40
24	14	1988	C	C5-C4-N4	-7.15	115.19	120.20
24	14	792	G	N3-C4-C5	-7.15	125.03	128.60
24	1H	688	U	O5'-P-OP2	-7.15	99.27	105.70
24	1H	2028	U	N3-C4-C5	-7.15	110.31	114.60
54	1G	121	C	N1-C2-O2	7.14	123.19	118.90
24	14	1328	G	N9-C4-C5	-7.14	102.54	105.40
24	1H	661	C	N1-C2-O2	-7.14	114.61	118.90
24	14	74	A	N1-C2-N3	7.14	132.87	129.30
24	1H	756	C	N1-C2-O2	-7.14	114.62	118.90
24	1H	1782	C	O5'-P-OP2	-7.14	99.27	105.70
24	1H	1799	G	P-O3'-C3'	7.14	128.26	119.70
54	1G	603	U	C6-N1-C2	-7.13	116.72	121.00
24	14	130	C	C6-N1-C2	7.13	123.15	120.30
24	14	2001	A	N1-C6-N6	7.13	122.88	118.60
1	13	452	A	C8-N9-C4	7.13	108.65	105.80
24	14	1204	A	C2-N3-C4	-7.13	107.03	110.60
24	1H	1252	G	O4'-C1'-N9	-7.13	102.50	108.20
24	14	1890	A	C8-N9-C4	7.13	108.65	105.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
24	1H	1800	C	O5'-P-OP2	7.12	119.25	110.70
24	1H	949	C	N1-C2-O2	-7.12	114.63	118.90
24	1H	1942	C	C4-C5-C6	-7.12	113.84	117.40
24	14	1379	A	C6-C5-N7	-7.12	127.31	132.30
24	1H	64	A	N1-C6-N6	-7.12	114.33	118.60
24	1H	2394	C	O5'-P-OP2	-7.11	99.30	105.70
24	1H	2592	G	O5'-P-OP2	-7.11	99.30	105.70
54	1G	1346	A	P-O3'-C3'	7.11	128.23	119.70
24	1H	1187	G	N1-C6-O6	7.11	124.17	119.90
1	13	810	C	N1-C2-O2	-7.11	114.64	118.90
24	14	801	G	N3-C4-N9	-7.11	121.74	126.00
24	1H	62	C	C6-N1-C2	7.11	123.14	120.30
24	14	1635	G	OP1-P-O3'	7.11	120.83	105.20
54	1G	509	A	C8-N9-C4	-7.10	102.96	105.80
6	52	87	ARG	NE-CZ-NH1	7.10	123.85	120.30
24	14	395	U	C6-N1-C2	7.10	125.26	121.00
24	14	2389	G	C8-N9-C4	-7.10	103.56	106.40
24	14	2712	U	C5-C6-N1	-7.10	119.15	122.70
24	1H	1800	C	N3-C4-C5	-7.10	119.06	121.90
24	14	1644	C	N3-C2-O2	-7.10	116.93	121.90
54	1G	557	G	N9-C4-C5	-7.09	102.56	105.40
1	13	1158	C	C6-N1-C2	-7.09	117.46	120.30
24	1H	1006	C	N1-C2-O2	-7.09	114.64	118.90
24	14	2741	A	N7-C8-N9	-7.09	110.25	113.80
24	14	2601	C	N3-C2-O2	-7.09	116.94	121.90
24	14	2607	G	N9-C4-C5	-7.08	102.57	105.40
1	13	511	C	N1-C2-O2	-7.08	114.65	118.90
24	14	2598	A	N9-C4-C5	-7.08	102.97	105.80
24	14	234	C	N1-C2-O2	7.08	123.15	118.90
24	14	2029	G	C5-C6-O6	7.07	132.84	128.60
24	1H	70	G	P-O3'-C3'	7.07	128.19	119.70
24	1H	1193	G	N7-C8-N9	-7.07	109.56	113.10
24	1H	1562	A	C2-N3-C4	-7.07	107.06	110.60
24	1H	2205	C	O5'-P-OP2	-7.07	99.34	105.70
24	14	736	C	N3-C2-O2	7.07	126.85	121.90
24	14	801	G	C8-N9-C1'	7.07	136.19	127.00
24	14	1204	A	C5-N7-C8	-7.07	100.36	103.90
24	1H	1837	C	O5'-P-OP1	-7.07	99.34	105.70
24	14	607	U	O5'-P-OP2	-7.06	99.35	105.70
24	14	2873	A	C5-C6-N1	-7.05	114.17	117.70
25	1J	54	G	C8-N9-C4	-7.05	103.58	106.40
27	19	43	ARG	NE-CZ-NH2	-7.05	116.77	120.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
24	1H	1364	G	N1-C6-O6	7.05	124.13	119.90
25	1J	102	G	C4-C5-N7	-7.05	107.98	110.80
24	1H	260	G	N3-C2-N2	-7.05	114.97	119.90
24	14	801	G	C4-N9-C1'	-7.05	117.34	126.50
24	1H	1819	A	N1-C6-N6	7.05	122.83	118.60
24	1H	2355	C	C2-N1-C1'	7.04	126.55	118.80
24	14	1682	G	O5'-P-OP2	-7.04	99.36	105.70
24	1H	1807	G	C5-C6-O6	-7.04	124.38	128.60
24	1H	965	C	C6-N1-C2	-7.04	117.48	120.30
24	14	1011	G	C8-N9-C4	7.04	109.22	106.40
1	13	1530	G	N3-C4-C5	7.04	132.12	128.60
24	1H	115	C	O5'-P-OP1	-7.04	99.37	105.70
24	1H	186	G	C5-C6-N1	7.04	115.02	111.50
24	1H	574	C	O5'-P-OP2	-7.04	99.36	105.70
54	1G	559	A	N1-C2-N3	7.04	132.82	129.30
24	1H	1516	U	N3-C2-O2	-7.04	117.27	122.20
24	14	1564	C	C6-N1-C2	-7.04	117.48	120.30
24	1H	1694	C	P-O3'-C3'	7.03	128.14	119.70
24	14	330	A	C5-N7-C8	-7.03	100.38	103.90
24	14	1614	A	O4'-C1'-N9	7.03	113.83	108.20
24	1H	1972	A	C2-N3-C4	7.03	114.12	110.60
24	14	1950	G	O4'-C1'-N9	7.03	113.83	108.20
24	1H	2330	G	C5-C6-O6	-7.03	124.38	128.60
24	14	2779	U	N3-C2-O2	-7.03	117.28	122.20
1	13	12	U	O5'-P-OP1	-7.03	99.38	105.70
54	1G	1344	C	C6-N1-C2	-7.03	117.49	120.30
24	1H	1606	G	C5-C6-O6	-7.02	124.39	128.60
24	14	139	G	C5-C6-O6	7.02	132.81	128.60
24	14	1678	G	C4-C5-N7	7.02	113.61	110.80
24	14	242	G	C5-C6-O6	-7.02	124.39	128.60
24	1H	803	U	C5-C6-N1	-7.02	119.19	122.70
24	14	2503	A	N1-C2-N3	-7.02	125.79	129.30
24	14	2477	C	N1-C2-O2	7.01	123.11	118.90
24	1H	1476	C	N1-C2-O2	-7.01	114.69	118.90
54	1G	18	C	O5'-P-OP1	-7.01	99.39	105.70
24	14	774	A	C5-C6-N1	-7.01	114.19	117.70
24	14	2490	G	C8-N9-C4	-7.01	103.60	106.40
24	14	57	C	C6-N1-C2	7.01	123.10	120.30
24	1H	1465	G	N1-C6-O6	7.00	124.10	119.90
24	1H	1568	G	C5-C6-O6	-7.00	124.40	128.60
24	1H	1021	A	C5-C6-N1	-7.00	114.20	117.70
24	14	1496	A	C4-C5-N7	7.00	114.20	110.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
24	14	1500	G	C5-C6-O6	-7.00	124.40	128.60
24	1H	2452	C	C5-C4-N4	-7.00	115.30	120.20
24	14	1953	A	O5'-P-OP2	7.00	119.10	110.70
24	1H	2446	G	C4-C5-N7	6.99	113.60	110.80
24	1H	2688	U	C4-C5-C6	6.99	123.90	119.70
24	14	307	G	O5'-P-OP2	-6.99	99.41	105.70
24	1H	2428	G	C5-C6-N1	-6.99	108.00	111.50
24	14	798	G	C5-C6-N1	-6.99	108.01	111.50
24	14	801	G	C5-C6-O6	6.99	132.79	128.60
24	1H	677	A	C6-N1-C2	-6.98	114.41	118.60
24	14	74	A	C6-C5-N7	-6.98	127.41	132.30
24	1H	2506	U	N1-C2-O2	6.98	127.68	122.80
24	14	2607	G	C6-C5-N7	-6.98	126.21	130.40
24	1H	2565	A	C8-N9-C4	6.97	108.59	105.80
24	14	707	G	N1-C6-O6	6.97	124.08	119.90
24	1H	190	A	N1-C6-N6	6.97	122.78	118.60
24	1H	1025	G	N1-C6-O6	-6.97	115.72	119.90
24	14	128	C	N3-C4-C5	-6.97	119.11	121.90
24	1H	1633	G	N9-C4-C5	-6.97	102.61	105.40
24	1H	2443	C	O5'-P-OP1	-6.97	99.43	105.70
24	1H	784	A	C4-C5-N7	-6.96	107.22	110.70
24	1H	1142(A)	A	N3-C4-C5	6.96	131.67	126.80
24	1H	120	U	O5'-P-OP2	6.96	119.05	110.70
24	1H	333	G	C4-N9-C1'	6.96	135.55	126.50
24	1H	1501	C	C6-N1-C2	-6.96	117.52	120.30
24	14	2589	A	C2-N3-C4	-6.96	107.12	110.60
54	1G	1519	A	C8-N9-C4	-6.95	103.02	105.80
24	14	2001	A	C5-C6-N6	-6.95	118.14	123.70
24	1H	2363	C	OP2-P-O3'	6.95	120.50	105.20
24	1H	1204	A	C4-C5-N7	6.95	114.17	110.70
24	14	442	G	N7-C8-N9	6.95	116.58	113.10
24	14	2496	C	OP1-P-O3'	6.95	120.49	105.20
24	1H	859	G	N3-C4-N9	-6.95	121.83	126.00
24	14	1924	C	N1-C2-O2	-6.95	114.73	118.90
1	13	525	C	C6-N1-C2	-6.95	117.52	120.30
1	13	687	A	P-O3'-C3'	6.95	128.03	119.70
24	1H	630	G	C8-N9-C4	6.95	109.18	106.40
24	14	1988	C	N3-C4-N4	6.95	122.86	118.00
24	14	2712	U	N3-C4-O4	-6.95	114.54	119.40
24	14	2713	A	C4-C5-N7	6.95	114.17	110.70
24	1H	265	A	C2-N3-C4	-6.94	107.13	110.60
24	1H	775	G	O4'-C1'-N9	6.94	113.75	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
24	1H	1629	U	C2-N3-C4	6.94	131.16	127.00
24	1H	2583	G	N9-C4-C5	6.94	108.17	105.40
24	14	1135	C	N1-C2-O2	6.94	123.06	118.90
24	14	1323	U	N1-C2-O2	-6.94	117.94	122.80
24	14	1339	G	O5'-P-OP2	6.94	119.03	110.70
24	14	673	C	O5'-P-OP1	6.93	119.02	110.70
24	1H	2318	G	O4'-C1'-N9	6.93	113.74	108.20
24	14	395	U	C5-C6-N1	-6.93	119.23	122.70
24	14	1359	A	C8-N9-C4	6.93	108.57	105.80
24	14	2228	G	N3-C4-C5	-6.93	125.14	128.60
24	14	963	U	O5'-P-OP1	-6.92	99.47	105.70
24	14	668	G	C8-N9-C4	6.92	109.17	106.40
24	1H	609	A	N1-C6-N6	6.92	122.75	118.60
24	14	585	G	C5-N7-C8	-6.92	100.84	104.30
24	14	2822	G	C8-N9-C1'	-6.92	118.00	127.00
1	13	300	A	O5'-P-OP1	-6.92	99.47	105.70
24	1H	1192	G	O5'-P-OP1	6.92	119.00	110.70
24	1H	1241	A	C5-C6-N1	-6.92	114.24	117.70
54	1G	345	C	C6-N1-C2	-6.92	117.53	120.30
24	14	1779	U	O5'-P-OP1	-6.92	99.47	105.70
24	14	2436	G	N3-C2-N2	-6.92	115.06	119.90
24	14	213	A	C4-C5-N7	6.92	114.16	110.70
24	1H	1678	G	C4-C5-N7	6.91	113.57	110.80
24	1H	1681	G	N3-C4-C5	6.91	132.06	128.60
24	1H	2441	C	N3-C4-C5	6.91	124.67	121.90
1	13	413	G	N1-C6-O6	-6.91	115.75	119.90
54	1G	1522	U	N3-C4-C5	-6.91	110.45	114.60
24	1H	528	A	N3-C4-N9	-6.91	121.87	127.40
27	11	111	LEU	CA-CB-CG	6.91	131.19	115.30
54	1G	449	C	C6-N1-C2	-6.91	117.54	120.30
24	1H	831	G	N7-C8-N9	-6.91	109.65	113.10
24	14	2822	G	C4-N9-C1'	6.90	135.48	126.50
24	1H	782	A	N1-C6-N6	-6.90	114.46	118.60
24	1H	1275	A	N1-C6-N6	6.90	122.74	118.60
54	1G	723	U	P-O3'-C3'	6.90	127.98	119.70
24	1H	1023	U	O5'-P-OP1	-6.90	99.49	105.70
24	1H	252	G	O5'-P-OP1	6.89	118.97	110.70
24	1H	200	U	C5-C6-N1	-6.89	119.25	122.70
24	14	2593	U	N3-C4-C5	6.89	118.73	114.60
24	1H	1518	C	C6-N1-C2	-6.89	117.55	120.30
1	13	503	C	C6-N1-C2	-6.89	117.55	120.30
24	1H	662	G	N9-C4-C5	6.89	108.16	105.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
24	14	463	G	C8-N9-C4	-6.89	103.64	106.40
24	14	2779	U	C5-C6-N1	-6.89	119.26	122.70
1	13	1515	C	C6-N1-C2	6.88	123.05	120.30
24	1H	1210	A	C8-N9-C4	-6.88	103.05	105.80
24	14	57	C	N3-C4-C5	6.88	124.65	121.90
24	14	2430	A	C4-C5-N7	6.88	114.14	110.70
24	14	1825	A	N1-C6-N6	-6.88	114.47	118.60
24	14	621	A	N7-C8-N9	6.88	117.24	113.80
24	14	2087	G	C8-N9-C4	6.88	109.15	106.40
24	1H	692	C	N3-C4-C5	6.88	124.65	121.90
24	1H	877	U	C5-C6-N1	6.88	126.14	122.70
1	13	745	C	C5-C6-N1	6.87	124.44	121.00
24	1H	1624	G	N7-C8-N9	-6.87	109.66	113.10
24	14	1559	G	C4-C5-N7	6.87	113.55	110.80
24	14	2724	C	C5-C6-N1	-6.87	117.56	121.00
24	1H	396	G	N1-C6-O6	6.87	124.02	119.90
24	1H	1241	A	C2-N3-C4	-6.87	107.17	110.60
54	1G	249	U	O5'-P-OP2	-6.87	99.52	105.70
54	1G	251	G	O4'-C1'-N9	-6.86	102.71	108.20
24	1H	1021	A	N3-C4-C5	6.86	131.60	126.80
24	14	311	A	N1-C6-N6	6.86	122.72	118.60
24	14	974(A)	C	C6-N1-C2	-6.86	117.56	120.30
24	1H	2579	C	O5'-P-OP2	-6.86	99.53	105.70
24	1H	2087	G	N9-C4-C5	-6.86	102.66	105.40
24	14	2497	A	C8-N9-C4	6.86	108.54	105.80
24	1H	1528	A	O4'-C1'-N9	6.86	113.68	108.20
1	13	819	A	O5'-P-OP1	-6.85	99.53	105.70
24	14	1696	G	C5-C6-N1	6.85	114.93	111.50
24	14	730	C	C6-N1-C2	-6.85	117.56	120.30
24	14	1698	A	C8-N9-C4	-6.85	103.06	105.80
28	29	78	LEU	CA-CB-CG	6.85	131.06	115.30
1	13	1058	G	N9-C4-C5	-6.85	102.66	105.40
24	1H	165	U	C2-N1-C1'	6.84	125.91	117.70
24	14	211	A	C5-C6-N6	-6.84	118.22	123.70
24	14	2386	C	C2-N3-C4	-6.84	116.48	119.90
36	88	87	LYS	N-CA-C	-6.84	92.53	111.00
24	14	1021	A	N3-C4-N9	-6.84	121.93	127.40
1	13	758	G	N3-C4-C5	6.84	132.02	128.60
24	14	795	C	O5'-P-OP2	-6.84	99.55	105.70
24	14	1249	U	O5'-P-OP1	-6.84	99.55	105.70
24	1H	248	G	C5-C6-O6	-6.84	124.50	128.60
24	1H	918	A	O5'-P-OP1	-6.84	99.55	105.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
24	1H	1227	A	N9-C4-C5	-6.84	103.06	105.80
1	13	1502	A	C8-N9-C4	-6.83	103.07	105.80
24	1H	1742	C	C5-C6-N1	6.83	124.42	121.00
24	1H	125	G	C4-C5-N7	6.83	113.53	110.80
24	1H	975	G	C5-C6-O6	-6.83	124.50	128.60
24	1H	2574	G	N9-C4-C5	-6.83	102.67	105.40
24	14	1950	G	C8-N9-C4	-6.83	103.67	106.40
24	14	932	G	N1-C6-O6	-6.83	115.80	119.90
24	14	2199	A	O5'-P-OP1	-6.83	99.56	105.70
24	1H	452	G	N1-C6-O6	-6.83	115.81	119.90
24	1H	813	U	O5'-P-OP2	-6.83	99.56	105.70
1	13	806	C	C6-N1-C2	-6.82	117.57	120.30
24	1H	2569	G	C4-N9-C1'	6.82	135.37	126.50
24	14	750	A	C8-N9-C4	-6.82	103.07	105.80
54	1G	1522	U	C6-N1-C2	-6.82	116.91	121.00
22	2L	10	C	N1-C2-O2	6.82	122.99	118.90
24	14	71	A	N3-C4-C5	6.82	131.57	126.80
24	14	2639	A	C4-C5-N7	6.82	114.11	110.70
24	14	786	C	OP2-P-O3'	6.82	120.20	105.20
24	14	1988	C	C6-N1-C2	6.82	123.03	120.30
24	14	2276	G	O5'-P-OP1	-6.82	99.56	105.70
24	14	2406	U	O4'-C1'-N1	-6.82	102.74	108.20
24	1H	1004	C	N3-C4-C5	-6.82	119.17	121.90
24	1H	1604	C	C5-C4-N4	-6.82	115.43	120.20
24	14	1353	A	N1-C6-N6	-6.82	114.51	118.60
24	14	2374	C	N3-C4-C5	6.82	124.63	121.90
24	1H	260	G	N1-C6-O6	6.82	123.99	119.90
24	1H	837	C	C6-N1-C2	-6.82	117.57	120.30
24	14	113	G	N3-C4-C5	6.82	132.01	128.60
24	1H	453	C	C6-N1-C2	6.81	123.03	120.30
24	1H	804	A	N9-C4-C5	6.81	108.53	105.80
1	13	1502	A	N7-C8-N9	6.81	117.21	113.80
24	1H	474	G	N3-C4-N9	-6.81	121.91	126.00
1	13	1336	C	N3-C2-O2	-6.81	117.13	121.90
24	14	2857	G	N9-C4-C5	-6.81	102.68	105.40
24	1H	910	A	O5'-P-OP2	-6.81	99.57	105.70
24	1H	1489	U	C5-C4-O4	6.81	129.98	125.90
24	1H	1821	A	C6-N1-C2	-6.81	114.52	118.60
24	1H	978	G	C8-N9-C4	6.80	109.12	106.40
24	1H	188	G	C5-C6-O6	-6.80	124.52	128.60
24	1H	443	A	O5'-P-OP2	-6.80	99.58	105.70
24	1H	464	U	O5'-P-OP2	6.80	118.86	110.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
24	1H	1663	C	O5'-P-OP2	-6.80	99.58	105.70
24	1H	2601	C	C6-N1-C2	-6.80	117.58	120.30
24	1H	1336	A	O5'-P-OP2	-6.80	99.58	105.70
24	14	130	C	N3-C4-C5	6.79	124.62	121.90
24	1H	1392	A	OP2-P-O3'	6.79	120.14	105.20
41	95	21	ARG	NH1-CZ-NH2	-6.79	111.93	119.40
1	13	63	C	C6-N1-C2	-6.79	117.58	120.30
24	14	2271	G	C5-C6-O6	-6.79	124.53	128.60
24	1H	1971	A	O5'-P-OP2	-6.79	99.59	105.70
24	14	929	G	C5-C6-O6	-6.79	124.53	128.60
1	13	1336	C	C6-N1-C2	-6.79	117.59	120.30
24	1H	568	U	N3-C4-O4	6.78	124.15	119.40
24	14	71	A	C6-C5-N7	-6.78	127.55	132.30
24	1H	2275	C	OP1-P-O3'	6.78	120.12	105.20
24	14	198	C	N3-C2-O2	-6.78	117.15	121.90
24	1H	1313	U	C6-N1-C2	-6.78	116.93	121.00
24	14	1396	U	N3-C2-O2	-6.78	117.46	122.20
24	1H	917	A	C5-C6-N1	-6.78	114.31	117.70
24	1H	1211	U	N1-C2-N3	-6.78	110.83	114.90
24	1H	684	G	N7-C8-N9	6.77	116.49	113.10
24	14	1497	U	O5'-P-OP2	-6.77	99.61	105.70
24	1H	219	G	C5-C6-N1	6.77	114.89	111.50
24	1H	529	A	C4-C5-N7	6.77	114.08	110.70
24	1H	1364	G	C5-C6-O6	-6.77	124.54	128.60
24	1H	2779	U	N1-C2-N3	6.76	118.96	114.90
24	14	2082	A	O5'-P-OP2	-6.76	99.61	105.70
1	13	1502	A	N1-C2-N3	6.76	132.68	129.30
24	1H	1698	A	C5-N7-C8	-6.76	100.52	103.90
24	14	141	A	N7-C8-N9	6.76	117.18	113.80
24	14	1982	C	C2-N1-C1'	6.76	126.24	118.80
24	1H	965	C	N3-C4-C5	-6.76	119.20	121.90
24	14	128	C	N3-C2-O2	-6.75	117.17	121.90
24	14	2593	U	N1-C2-O2	6.75	127.53	122.80
24	14	2430	A	C5-C6-N1	-6.75	114.32	117.70
24	14	2437	U	OP2-P-O3'	6.75	120.05	105.20
22	2K	3	U	N1-C2-O2	6.75	127.52	122.80
24	1H	1465	G	C5-C6-O6	-6.75	124.55	128.60
24	14	1609	A	C5-C6-N6	6.75	129.10	123.70
24	14	2440	C	O5'-P-OP2	6.75	118.80	110.70
24	1H	1626	G	N3-C4-N9	-6.75	121.95	126.00
1	13	690	G	N3-C4-N9	-6.74	121.95	126.00
24	1H	250	G	C8-N9-C4	-6.74	103.70	106.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
24	1H	2331	G	C4-C5-N7	6.74	113.50	110.80
24	14	737	C	N1-C2-O2	-6.74	114.86	118.90
1	13	1354	C	C5-C6-N1	6.74	124.37	121.00
54	1G	47	C	N1-C2-O2	-6.74	114.86	118.90
24	14	698	C	C4-C5-C6	6.74	120.77	117.40
24	1H	133	C	C6-N1-C2	6.73	122.99	120.30
24	14	685	A	O4'-C1'-N9	6.73	113.59	108.20
24	1H	839	U	C5-C6-N1	-6.73	119.33	122.70
24	1H	1297	C	C6-N1-C2	-6.73	117.61	120.30
24	14	1798	U	C2-N3-C4	-6.73	122.96	127.00
24	1H	585	G	N1-C6-O6	6.73	123.94	119.90
1	13	888	G	C8-N9-C4	6.73	109.09	106.40
24	14	932	G	C5-C6-O6	6.73	132.64	128.60
24	14	2490	G	N7-C8-N9	6.73	116.46	113.10
54	1G	337	C	C5-C6-N1	6.72	124.36	121.00
24	1H	1633	G	N3-C4-N9	6.72	130.03	126.00
24	1H	2503	A	C5-N7-C8	-6.72	100.54	103.90
54	1G	904	C	N3-C4-C5	6.72	124.59	121.90
24	14	1475	G	C8-N9-C4	-6.72	103.71	106.40
1	13	912	C	C6-N1-C2	6.72	122.99	120.30
24	1H	404	C	P-O3'-C3'	6.72	127.76	119.70
1	13	903	G	O5'-P-OP2	-6.72	99.66	105.70
24	1H	1939	U	N3-C4-C5	6.72	118.63	114.60
24	1H	1993	U	N1-C2-N3	6.72	118.93	114.90
24	1H	1790	C	OP1-P-O3'	6.71	119.97	105.20
24	14	2880	C	C6-N1-C2	-6.71	117.61	120.30
24	14	746	A	O5'-P-OP2	6.71	118.76	110.70
24	1H	593	G	C2-N3-C4	-6.71	108.54	111.90
24	1H	473	G	O5'-P-OP2	-6.71	99.66	105.70
24	1H	1653	G	N3-C4-N9	6.71	130.03	126.00
24	1H	203	C	C5-C4-N4	-6.71	115.51	120.20
24	1H	1637	A	C8-N9-C4	-6.71	103.12	105.80
24	1H	1784	A	N1-C6-N6	-6.71	114.58	118.60
24	14	2352	A	O5'-P-OP1	-6.71	99.67	105.70
1	13	717	C	C6-N1-C2	-6.70	117.62	120.30
24	1H	2674	G	N7-C8-N9	-6.70	109.75	113.10
24	14	1790	C	C2-N3-C4	-6.70	116.55	119.90
24	1H	1025	G	C5-C6-O6	6.70	132.62	128.60
24	1H	2424	C	OP1-P-OP2	6.70	129.65	119.60
24	1H	2430	A	N3-C4-N9	-6.70	122.04	127.40
24	1H	675	A	N9-C4-C5	-6.70	103.12	105.80
24	1H	1831	G	C8-N9-C4	-6.70	103.72	106.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
54	1G	690	G	C4-C5-N7	6.70	113.48	110.80
24	14	784	A	C6-N1-C2	6.70	122.62	118.60
54	1G	764	C	C6-N1-C2	-6.70	117.62	120.30
24	1H	1690	A	C4-C5-C6	6.70	120.35	117.00
24	1H	1929	G	C8-N9-C4	6.70	109.08	106.40
24	14	465	G	O5'-P-OP2	6.70	118.73	110.70
24	1H	786	C	C4-C5-C6	6.69	120.75	117.40
24	14	688	U	OP2-P-O3'	6.69	119.93	105.20
54	1G	53	A	N1-C6-N6	6.69	122.62	118.60
24	14	2216	G	N3-C2-N2	-6.69	115.22	119.90
24	14	2713	A	C2-N3-C4	-6.69	107.26	110.60
1	13	1336	C	C5-C6-N1	6.69	124.34	121.00
24	14	428	A	C8-N9-C4	-6.68	103.13	105.80
24	14	1821	A	N1-C2-N3	6.68	132.64	129.30
24	1H	382	G	N1-C6-O6	6.68	123.91	119.90
24	1H	2415	G	N7-C8-N9	6.68	116.44	113.10
24	14	1651	G	C4-C5-N7	6.68	113.47	110.80
24	1H	2320	A	C8-N9-C4	-6.68	103.13	105.80
24	14	1380	G	O5'-P-OP2	-6.68	99.69	105.70
24	1H	1353	A	N1-C6-N6	6.68	122.61	118.60
24	1H	1365	A	N1-C2-N3	6.68	132.64	129.30
24	1H	634	C	O5'-P-OP2	-6.68	99.69	105.70
24	14	450	G	N1-C6-O6	6.67	123.90	119.90
24	14	569	U	C5-C6-N1	-6.67	119.36	122.70
24	1H	1254	A	N1-C6-N6	6.67	122.60	118.60
24	1H	1790	C	C2-N3-C4	-6.67	116.56	119.90
24	1H	1633	G	C5-C6-O6	-6.67	124.60	128.60
24	14	1700	A	O5'-P-OP2	6.67	118.70	110.70
24	1H	825	C	N3-C2-O2	6.67	126.57	121.90
24	1H	2447	G	C5-C6-O6	-6.67	124.60	128.60
24	14	1614	A	C5-N7-C8	-6.67	100.57	103.90
24	14	583	G	C5-N7-C8	-6.67	100.97	104.30
24	14	929	G	N1-C6-O6	6.67	123.90	119.90
1	13	640	A	O5'-P-OP1	-6.66	99.70	105.70
24	14	2386	C	C5-C4-N4	-6.66	115.54	120.20
24	1H	1021	A	N1-C6-N6	6.66	122.60	118.60
24	1H	2392	A	C2-N3-C4	-6.66	107.27	110.60
24	14	1783	A	C8-N9-C4	-6.66	103.14	105.80
1	13	758	G	C5-C6-N1	-6.66	108.17	111.50
24	1H	1606	G	N1-C6-O6	6.66	123.89	119.90
24	14	122	G	C5-C6-O6	-6.66	124.61	128.60
25	1J	16	G	N1-C6-O6	6.66	123.89	119.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
25	1J	30	C	C6-N1-C2	-6.66	117.64	120.30
24	14	574	C	O5'-P-OP2	-6.65	99.71	105.70
24	14	1468	C	C6-N1-C2	-6.65	117.64	120.30
24	1H	572	A	OP1-P-OP2	-6.65	109.62	119.60
24	1H	739	G	O5'-P-OP1	-6.65	99.71	105.70
24	1H	1573	G	C8-N9-C4	6.65	109.06	106.40
24	14	1193	G	N1-C6-O6	6.65	123.89	119.90
24	14	1658	C	N3-C4-C5	-6.65	119.24	121.90
25	16	48	A	O5'-P-OP1	-6.65	99.72	105.70
24	14	2595	G	C4-C5-C6	-6.65	114.81	118.80
24	14	1275	A	O5'-P-OP1	-6.64	99.72	105.70
24	1H	386	G	C5-C6-O6	-6.64	124.62	128.60
24	1H	2262	U	N1-C2-O2	6.64	127.45	122.80
24	1H	2512	C	N3-C4-C5	6.64	124.56	121.90
24	1H	1366	A	O5'-P-OP1	6.64	118.66	110.70
24	1H	2392	A	N1-C6-N6	6.64	122.58	118.60
24	14	1572	A	N1-C6-N6	6.64	122.58	118.60
24	14	1653	G	P-O3'-C3'	6.64	127.66	119.70
54	1G	557	G	C8-N9-C4	6.63	109.05	106.40
24	14	2562	U	O5'-P-OP2	-6.63	99.73	105.70
24	14	196	A	O4'-C1'-N9	6.63	113.50	108.20
24	1H	982	C	OP1-P-O3'	6.63	119.78	105.20
24	1H	1807	G	N9-C4-C5	-6.63	102.75	105.40
24	1H	2374	C	C6-N1-C2	6.63	122.95	120.30
1	13	1515	C	C5-C6-N1	-6.62	117.69	121.00
24	1H	804	A	N1-C6-N6	-6.62	114.62	118.60
54	1G	1469	G	N1-C6-O6	6.62	123.88	119.90
24	14	2776	A	P-O3'-C3'	6.62	127.65	119.70
1	13	728	A	N1-C6-N6	6.62	122.58	118.60
24	1H	1559	G	N1-C6-O6	6.62	123.87	119.90
24	14	330	A	C6-C5-N7	-6.62	127.66	132.30
24	14	2032	G	C5-N7-C8	-6.62	100.99	104.30
24	1H	2571	C	C2-N1-C1'	6.62	126.08	118.80
25	16	7	G	N1-C6-O6	6.62	123.87	119.90
54	1G	623	C	C5-C6-N1	6.62	124.31	121.00
24	1H	973	A	N1-C2-N3	6.62	132.61	129.30
24	1H	1644	C	N1-C2-O2	6.62	122.87	118.90
54	1G	197	A	P-O3'-C3'	6.62	127.64	119.70
24	14	768	G	N1-C2-N2	-6.61	110.25	116.20
24	1H	2086	U	O5'-P-OP2	-6.61	99.75	105.70
24	14	740	U	O5'-P-OP1	6.61	118.63	110.70
24	14	1779	U	C2-N1-C1'	6.61	125.63	117.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
24	1H	2212	A	O4'-C1'-N9	6.61	113.49	108.20
24	14	1758	G	C2-N3-C4	6.61	115.20	111.90
24	1H	138	G	N7-C8-N9	6.61	116.40	113.10
24	1H	949	C	C2-N1-C1'	-6.61	111.53	118.80
1	13	690	G	C5-N7-C8	-6.60	101.00	104.30
24	1H	1787	A	O4'-C1'-N9	-6.60	102.92	108.20
24	14	2827	C	N3-C2-O2	6.60	126.52	121.90
24	1H	1821	A	N1-C6-N6	-6.60	114.64	118.60
24	14	1834	U	N3-C4-O4	6.60	124.02	119.40
24	1H	201	C	C5-C4-N4	-6.60	115.58	120.20
54	1G	1499	A	O5'-P-OP1	-6.60	99.76	105.70
24	14	1386	C	C6-N1-C2	-6.60	117.66	120.30
24	1H	575	A	N9-C4-C5	-6.59	103.16	105.80
24	1H	1254	A	C5-C6-N6	-6.59	118.42	123.70
24	14	857	C	C6-N1-C2	-6.59	117.66	120.30
24	14	1559	G	N9-C4-C5	-6.59	102.76	105.40
24	1H	117	G	C5-N7-C8	-6.59	101.00	104.30
24	1H	2054	A	OP1-P-O3'	-6.59	90.70	105.20
24	1H	2710	C	C6-N1-C2	6.59	122.94	120.30
35	78	45	LEU	CA-CB-CG	6.59	130.46	115.30
42	E8	23	LEU	CA-CB-CG	6.59	130.46	115.30
24	14	2683	C	N3-C4-C5	-6.59	119.26	121.90
24	1H	2295	C	C6-N1-C2	-6.59	117.67	120.30
24	1H	2771	C	C6-N1-C2	-6.59	117.67	120.30
24	14	1823	G	N3-C4-N9	-6.59	122.05	126.00
1	13	1530	G	C8-N9-C4	6.58	109.03	106.40
24	1H	2465	C	C5-C6-N1	-6.58	117.71	121.00
54	1G	309	G	C6-C5-N7	-6.58	126.45	130.40
1	13	990	C	C6-N1-C2	-6.58	117.67	120.30
24	1H	273(F)	C	N1-C2-O2	6.58	122.85	118.90
24	1H	752	A	C2-N3-C4	-6.58	107.31	110.60
1	13	766	A	O5'-P-OP2	-6.58	99.78	105.70
24	1H	2261	C	C6-N1-C2	-6.58	117.67	120.30
54	1G	609	A	O5'-P-OP1	-6.58	99.78	105.70
24	14	767	U	C5-C4-O4	6.58	129.85	125.90
24	14	1698	A	N3-C4-N9	-6.58	122.14	127.40
24	14	2070	G	C2-N3-C4	-6.58	108.61	111.90
24	14	1022	G	N9-C4-C5	6.58	108.03	105.40
24	1H	2439	A	P-O3'-C3'	6.58	127.59	119.70
54	1G	769	G	C8-N9-C1'	-6.57	118.45	127.00
24	1H	265	A	N1-C6-N6	6.57	122.54	118.60
24	14	1308	A	N9-C4-C5	6.57	108.43	105.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
24	14	1647	G	O4'-C1'-N9	-6.57	102.94	108.20
24	1H	1299	G	C5-N7-C8	-6.57	101.02	104.30
24	14	211	A	N9-C4-C5	-6.57	103.17	105.80
24	1H	1971	A	C5-C6-N1	6.56	120.98	117.70
24	1H	1784	A	O4'-C1'-N9	-6.56	102.95	108.20
24	14	1142(A)	A	N3-C4-N9	-6.56	122.15	127.40
24	14	1395	A	O4'-C1'-N9	6.56	113.45	108.20
24	14	828	U	N3-C2-O2	-6.56	117.61	122.20
24	14	2590	A	N1-C2-N3	6.56	132.58	129.30
1	13	576	G	N1-C6-O6	6.55	123.83	119.90
24	14	784	A	O5'-P-OP1	-6.55	99.80	105.70
24	14	2555	U	O5'-P-OP1	-6.55	99.80	105.70
24	14	2586	C	C5-C4-N4	-6.55	115.61	120.20
24	14	1379	A	C5-C6-N6	-6.55	118.46	123.70
24	14	2011	U	N3-C2-O2	6.55	126.79	122.20
24	1H	1261	C	C6-N1-C2	6.55	122.92	120.30
54	1G	754	C	N1-C2-O2	6.55	122.83	118.90
54	1G	1375	A	N1-C6-N6	-6.55	114.67	118.60
24	1H	1674	G	C8-N9-C4	-6.55	103.78	106.40
1	13	902	G	O5'-P-OP2	-6.55	99.81	105.70
24	1H	530	G	C2-N3-C4	-6.55	108.63	111.90
24	1H	1269	A	C5-N7-C8	-6.55	100.63	103.90
24	1H	2012	G	N3-C4-N9	6.55	129.93	126.00
1	13	1403	C	C6-N1-C2	6.54	122.92	120.30
24	1H	241	A	OP1-P-OP2	6.54	129.41	119.60
24	1H	2554	U	O5'-P-OP2	6.54	118.55	110.70
24	14	1639	U	N3-C2-O2	-6.54	117.62	122.20
24	1H	140	A	N3-C4-C5	6.54	131.38	126.80
24	1H	2584	U	N1-C2-N3	6.54	118.82	114.90
24	14	201	C	C5-C6-N1	-6.54	117.73	121.00
24	1H	456	C	O5'-P-OP2	-6.53	99.82	105.70
24	14	1430	C	O5'-P-OP1	-6.53	99.82	105.70
24	14	2297	C	OP1-P-OP2	6.53	129.40	119.60
24	1H	2490	G	N7-C8-N9	6.53	116.36	113.10
24	1H	1269	A	C2-N3-C4	-6.53	107.33	110.60
24	1H	1307	A	N9-C4-C5	-6.53	103.19	105.80
24	14	566	U	C6-N1-C2	6.53	124.92	121.00
24	14	738	G	C5-C6-O6	-6.53	124.68	128.60
24	1H	1308	A	C5-C6-N6	6.53	128.92	123.70
24	1H	2645	G	C5-C6-O6	6.53	132.51	128.60
24	1H	2737	G	C5-C6-O6	-6.53	124.68	128.60
25	1J	102	G	C5-C6-O6	6.53	132.51	128.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
24	1H	1606	G	N3-C4-N9	6.52	129.91	126.00
1	13	892	A	N1-C6-N6	6.52	122.51	118.60
25	16	7	G	C4-C5-N7	6.52	113.41	110.80
24	1H	613	U	N3-C4-O4	-6.52	114.84	119.40
24	1H	1776	G	C5-C6-O6	-6.52	124.69	128.60
24	14	1327	C	N3-C2-O2	6.52	126.46	121.90
1	13	33	A	O5'-P-OP1	-6.51	99.84	105.70
24	1H	239	U	C5-C6-N1	-6.51	119.44	122.70
24	1H	1346	G	N1-C6-O6	-6.51	115.99	119.90
24	14	2570	G	C5-C6-N1	-6.51	108.24	111.50
24	14	2392	A	C5-C6-N1	-6.51	114.44	117.70
24	1H	214	G	O4'-C1'-N9	6.51	113.41	108.20
24	1H	2550	G	C8-N9-C4	-6.51	103.80	106.40
24	14	489	G	N9-C4-C5	6.51	108.00	105.40
24	1H	686	G	N9-C4-C5	-6.51	102.80	105.40
24	14	197	A	C4-C5-N7	6.51	113.95	110.70
24	1H	2778	A	O5'-P-OP2	-6.51	99.84	105.70
1	13	318	G	N1-C6-O6	6.51	123.80	119.90
24	1H	1642	G	O5'-P-OP1	-6.51	99.84	105.70
45	H8	64	GLY	N-CA-C	-6.50	96.84	113.10
1	13	792	A	O4'-C1'-N9	6.50	113.40	108.20
24	1H	203	C	O5'-P-OP2	6.50	118.50	110.70
24	1H	285	C	C6-N1-C2	-6.50	117.70	120.30
24	1H	1277	G	N1-C6-O6	-6.50	116.00	119.90
24	1H	2496	C	OP1-P-OP2	-6.50	109.84	119.60
24	14	2554	U	O5'-P-OP2	6.50	118.50	110.70
24	1H	662	G	N1-C6-O6	-6.50	116.00	119.90
24	1H	1634	A	N1-C6-N6	6.50	122.50	118.60
1	13	888	G	N9-C4-C5	-6.50	102.80	105.40
24	1H	2031	A	C2-N3-C4	6.50	113.85	110.60
54	1G	525	C	C2-N3-C4	6.50	123.15	119.90
24	14	574	C	C6-N1-C2	6.50	122.90	120.30
24	14	2426	A	N7-C8-N9	6.50	117.05	113.80
24	1H	305	U	C5-C6-N1	6.50	125.95	122.70
24	14	1899	G	C5-C6-N1	-6.49	108.25	111.50
24	1H	1698	A	N1-C2-N3	6.49	132.55	129.30
24	1H	529	A	N9-C4-C5	-6.49	103.20	105.80
25	16	81	G	N7-C8-N9	6.49	116.35	113.10
24	14	2467	C	C6-N1-C2	-6.49	117.70	120.30
24	14	141	A	C2-N3-C4	-6.49	107.36	110.60
24	14	1930	G	C4-C5-N7	-6.49	108.20	110.80
24	14	2870	C	C6-N1-C2	-6.49	117.70	120.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
24	1H	115	C	C5-C4-N4	-6.49	115.66	120.20
24	1H	1769	G	N3-C4-N9	6.49	129.89	126.00
24	1H	1543	A	N9-C4-C5	-6.49	103.21	105.80
24	1H	2039	C	C2-N3-C4	6.49	123.14	119.90
24	14	438	G	C6-C5-N7	-6.49	126.51	130.40
24	14	1678	G	N1-C6-O6	6.49	123.79	119.90
24	1H	755	C	C5-C4-N4	-6.48	115.66	120.20
24	14	2452	C	N3-C2-O2	6.48	126.44	121.90
24	1H	317	G	OP1-P-O3'	6.48	119.46	105.20
24	1H	834	C	OP2-P-O3'	6.48	119.46	105.20
24	14	1204	A	C4-C5-N7	6.48	113.94	110.70
24	14	119	A	N1-C2-N3	6.48	132.54	129.30
1	13	555	C	C6-N1-C2	-6.48	117.71	120.30
22	2K	3	U	N3-C2-O2	-6.48	117.67	122.20
24	1H	859	G	C4-N9-C1'	-6.48	118.08	126.50
24	1H	444	C	O5'-P-OP1	6.48	118.47	110.70
24	1H	1781	C	N3-C4-C5	6.48	124.49	121.90
24	14	2357	U	O5'-P-OP2	-6.48	99.87	105.70
24	1H	1204	A	C6-C5-N7	-6.47	127.77	132.30
24	1H	851	U	N1-C2-O2	-6.47	118.27	122.80
24	14	2051	A	N1-C6-N6	6.47	122.48	118.60
24	1H	2346	A	O4'-C1'-N9	6.47	113.38	108.20
24	14	2617	C	O5'-P-OP2	-6.47	99.88	105.70
24	1H	245	G	O5'-P-OP1	-6.47	99.88	105.70
24	1H	453	C	N3-C4-N4	6.47	122.53	118.00
54	1G	754	C	C2-N1-C1'	6.47	125.91	118.80
24	14	2271	G	C8-N9-C4	6.47	108.99	106.40
24	1H	382	G	C6-C5-N7	-6.46	126.52	130.40
1	13	1519	A	C5-C6-N6	6.46	128.87	123.70
24	1H	1021	A	C4-C5-N7	6.46	113.93	110.70
24	1H	2647	U	C5-C6-N1	-6.46	119.47	122.70
24	1H	2785	C	C6-N1-C2	-6.46	117.72	120.30
24	14	693	C	C5-C6-N1	-6.46	117.77	121.00
52	L5	34	ARG	NE-CZ-NH1	-6.46	117.07	120.30
1	13	689	C	O5'-P-OP1	-6.46	99.89	105.70
24	1H	814	C	C5-C6-N1	-6.46	117.77	121.00
54	1G	1203	C	C6-N1-C2	6.46	122.88	120.30
1	13	1128	C	C5-C6-N1	6.46	124.23	121.00
24	1H	2050	C	N3-C4-C5	-6.46	119.32	121.90
24	1H	2232	U	N1-C2-N3	6.46	118.77	114.90
24	1H	2318	G	C5-N7-C8	-6.46	101.07	104.30
24	14	808	G	O5'-P-OP2	-6.46	99.89	105.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
24	1H	1782	C	C6-N1-C2	6.46	122.88	120.30
24	1H	727	A	C5-C6-N1	-6.45	114.47	117.70
24	1H	1653	G	N3-C4-C5	-6.45	125.37	128.60
54	1G	1519	A	N9-C4-C5	6.45	108.38	105.80
24	14	139	G	N9-C4-C5	6.45	107.98	105.40
24	1H	463	G	O5'-P-OP2	-6.45	99.89	105.70
24	14	664	C	C2-N3-C4	-6.45	116.67	119.90
24	14	1825	A	C5-C6-N1	6.45	120.92	117.70
24	14	2607	G	N1-C6-O6	6.45	123.77	119.90
24	1H	124	G	C4-C5-N7	6.45	113.38	110.80
24	1H	127	A	N1-C6-N6	6.45	122.47	118.60
24	1H	1300	U	OP1-P-O3'	6.45	119.38	105.20
24	14	2720	U	O5'-P-OP1	-6.45	99.90	105.70
24	1H	768	G	C6-C5-N7	-6.44	126.53	130.40
24	1H	2330	G	N3-C4-C5	6.44	131.82	128.60
24	1H	2451	A	C5-C6-N6	6.44	128.85	123.70
54	1G	1502	A	C2-N3-C4	-6.44	107.38	110.60
24	14	1776	G	O5'-P-OP1	6.44	118.43	110.70
24	1H	1825	A	N1-C6-N6	-6.44	114.74	118.60
24	14	728	G	N3-C4-N9	6.44	129.87	126.00
24	14	2519	U	C5-C6-N1	-6.44	119.48	122.70
24	14	1702	G	N3-C2-N2	-6.44	115.39	119.90
24	1H	323	G	O5'-P-OP1	-6.44	99.91	105.70
25	16	53	A	N7-C8-N9	6.44	117.02	113.80
24	14	1858	G	C8-N9-C4	-6.44	103.83	106.40
24	14	1971	A	O5'-P-OP1	-6.44	99.91	105.70
24	14	471	A	C2-N3-C4	-6.44	107.38	110.60
24	1H	445	C	O5'-P-OP1	-6.43	99.91	105.70
24	1H	801	G	N3-C4-N9	-6.43	122.14	126.00
24	1H	2022	U	OP1-P-OP2	-6.43	109.95	119.60
1	13	1519	A	C8-N9-C4	-6.43	103.23	105.80
24	1H	2540	C	N3-C4-C5	6.43	124.47	121.90
24	14	1606	G	O5'-P-OP1	6.43	118.42	110.70
24	14	1681	G	N1-C6-O6	6.43	123.76	119.90
24	14	2040	C	O5'-P-OP1	-6.43	99.91	105.70
54	1G	1200	C	C6-N1-C1'	-6.43	113.09	120.80
24	14	1500	G	C4-N9-C1'	6.43	134.86	126.50
24	1H	858	U	N3-C2-O2	-6.43	117.70	122.20
24	14	1543	A	O5'-P-OP1	6.43	118.41	110.70
54	1G	135	C	N1-C2-O2	-6.42	115.05	118.90
24	1H	566	U	C6-N1-C2	6.42	124.85	121.00
24	1H	593	G	N1-C2-N2	-6.42	110.42	116.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
24	14	1609	A	N9-C4-C5	6.42	108.37	105.80
1	13	365	U	N3-C4-O4	6.42	123.89	119.40
24	14	1258	C	OP2-P-O3'	6.42	119.32	105.20
24	1H	207	A	N1-C6-N6	6.42	122.45	118.60
24	1H	684	G	N1-C6-O6	-6.42	116.05	119.90
24	1H	1251	C	N3-C4-N4	6.42	122.49	118.00
24	1H	1950	G	N3-C4-C5	6.42	131.81	128.60
24	1H	2555	U	O5'-P-OP1	-6.42	99.93	105.70
1	13	812	C	P-O3'-C3'	6.42	127.40	119.70
22	2K	85	A	N9-C4-C5	-6.42	103.23	105.80
24	14	1500	G	C8-N9-C1'	-6.41	118.66	127.00
24	1H	1274	A	N1-C6-N6	6.41	122.45	118.60
24	1H	1751	C	C6-N1-C2	6.41	122.86	120.30
1	13	1498	U	P-O3'-C3'	6.41	127.39	119.70
24	1H	2265	U	O5'-P-OP1	-6.41	99.93	105.70
24	1H	2327	A	N9-C4-C5	6.41	108.36	105.80
54	1G	53	A	C4-C5-N7	6.41	113.90	110.70
24	14	676	A	C5-C6-N1	-6.41	114.50	117.70
24	1H	689	A	N1-C6-N6	6.41	122.44	118.60
24	1H	1653	G	P-O3'-C3'	6.40	127.39	119.70
24	1H	528	A	N3-C4-C5	6.40	131.28	126.80
54	1G	1469	G	C6-C5-N7	-6.40	126.56	130.40
24	14	857	C	N3-C4-C5	-6.40	119.34	121.90
1	13	365	U	C5-C4-O4	-6.40	122.06	125.90
24	1H	138	G	C5-C6-N1	6.40	114.70	111.50
24	1H	189	G	N7-C8-N9	-6.40	109.90	113.10
24	1H	1216	G	O5'-P-OP1	-6.40	99.94	105.70
24	1H	1551	C	N1-C2-O2	-6.40	115.06	118.90
54	1G	487	A	N1-C6-N6	6.40	122.44	118.60
24	1H	1373	A	C8-N9-C4	6.40	108.36	105.80
54	1G	1498	U	C6-N1-C2	-6.40	117.16	121.00
24	14	1636	C	C5-C6-N1	6.40	124.20	121.00
54	1G	121	C	C2-N1-C1'	6.40	125.84	118.80
1	13	765	G	C4-C5-N7	6.40	113.36	110.80
54	1G	1405	G	N1-C6-O6	-6.40	116.06	119.90
24	14	2374	C	C6-N1-C2	6.40	122.86	120.30
24	1H	2271	G	N9-C4-C5	-6.39	102.84	105.40
24	1H	2503	A	C2-N3-C4	6.39	113.80	110.60
1	13	1128	C	C6-N1-C2	-6.39	117.74	120.30
24	1H	1019	U	N3-C2-O2	-6.39	117.73	122.20
24	1H	115	C	N1-C2-O2	-6.39	115.07	118.90
1	13	301	G	N1-C6-O6	6.39	123.73	119.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
54	1G	1475	G	C8-N9-C4	-6.39	103.84	106.40
54	1G	1410	G	O5'-P-OP2	-6.38	99.95	105.70
24	14	1254	A	C5-C6-N6	-6.38	118.59	123.70
24	14	2584	U	N1-C2-O2	6.38	127.27	122.80
24	14	2873	A	C4-N9-C1'	6.38	137.79	126.30
24	1H	1263	U	C6-N1-C2	-6.38	117.17	121.00
24	14	750	A	C4-C5-N7	6.38	113.89	110.70
24	14	1377	G	C6-C5-N7	-6.38	126.57	130.40
24	14	1766	U	N1-C2-N3	6.38	118.73	114.90
25	1J	22	U	C5-C6-N1	6.38	125.89	122.70
24	14	203	C	N3-C2-O2	6.38	126.36	121.90
24	14	1899	G	N3-C2-N2	-6.38	115.44	119.90
24	14	2595	G	C4-N9-C1'	-6.38	118.21	126.50
24	1H	690	G	N1-C6-O6	6.37	123.72	119.90
24	1H	1365	A	C2-N3-C4	-6.37	107.41	110.60
24	1H	1267	U	OP2-P-O3'	6.37	119.22	105.20
24	1H	2433	A	N1-C6-N6	6.37	122.42	118.60
25	16	81	G	O4'-C1'-N9	6.37	113.30	108.20
24	14	2857	G	N1-C6-O6	6.37	123.72	119.90
1	13	900	A	C8-N9-C4	6.37	108.35	105.80
24	1H	25	U	C5-C4-O4	-6.37	122.08	125.90
24	1H	814	C	C6-N1-C2	6.37	122.85	120.30
24	14	1204	A	O4'-C1'-N9	6.37	113.29	108.20
24	1H	182	A	N1-C6-N6	6.36	122.42	118.60
24	1H	828	U	N3-C2-O2	-6.36	117.75	122.20
24	1H	2274	A	C2-N3-C4	-6.36	107.42	110.60
24	1H	2287	A	N3-C4-N9	-6.36	122.31	127.40
24	14	488	G	N3-C4-N9	6.36	129.82	126.00
24	14	949	C	C6-N1-C2	6.36	122.84	120.30
24	1H	839	U	N1-C2-N3	6.36	118.72	114.90
24	1H	1423	G	O5'-P-OP2	-6.36	99.98	105.70
24	1H	2271	G	C6-C5-N7	-6.36	126.58	130.40
24	14	733	G	N3-C4-N9	6.36	129.81	126.00
24	1H	185	U	OP2-P-O3'	6.36	119.19	105.20
25	1J	116	G	N3-C4-N9	-6.36	122.19	126.00
24	1H	117	G	C5-C6-O6	-6.36	124.79	128.60
24	1H	330	A	N3-C4-N9	-6.36	122.32	127.40
1	13	251	G	C4-C5-N7	6.35	113.34	110.80
24	14	1982	C	C5-C6-N1	6.35	124.18	121.00
24	14	2054	A	N1-C6-N6	6.35	122.41	118.60
24	1H	956	G	O5'-P-OP2	-6.35	99.99	105.70
54	1G	1528	U	C6-N1-C2	6.35	124.81	121.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
24	14	2755	C	C5-C6-N1	6.35	124.17	121.00
24	14	2726	U	N3-C4-O4	-6.35	114.96	119.40
24	1H	1559	G	C5-N7-C8	-6.35	101.13	104.30
24	14	208	C	N3-C2-O2	6.34	126.34	121.90
24	14	616	A	N1-C6-N6	6.34	122.41	118.60
24	14	1307	A	N1-C6-N6	-6.34	114.79	118.60
24	14	1332	G	N3-C2-N2	-6.34	115.46	119.90
24	1H	1426	G	N3-C4-C5	-6.34	125.43	128.60
24	1H	47	C	OP1-P-OP2	6.34	129.11	119.60
24	1H	837	C	N3-C4-N4	6.34	122.44	118.00
24	14	1496	A	C8-N9-C4	-6.34	103.26	105.80
24	14	1603	A	C8-N9-C4	-6.34	103.26	105.80
24	14	2595	G	N3-C4-C5	6.34	131.77	128.60
24	14	698	C	OP1-P-OP2	6.34	129.11	119.60
24	14	2389	G	N7-C8-N9	6.34	116.27	113.10
24	14	2822	G	C4-C5-C6	6.34	122.60	118.80
1	13	768	A	C6-N1-C2	-6.34	114.80	118.60
24	1H	784	A	N3-C4-N9	-6.34	122.33	127.40
24	1H	1249	U	OP1-P-OP2	6.34	129.10	119.60
24	1H	1960	A	C5-C6-N6	-6.34	118.63	123.70
24	1H	2452	C	C6-N1-C1'	-6.34	113.20	120.80
24	14	2232	U	N1-C2-O2	-6.34	118.36	122.80
24	1H	256	A	O5'-P-OP1	-6.33	100.00	105.70
24	1H	636	G	O5'-P-OP1	-6.33	100.00	105.70
24	1H	1598	C	O5'-P-OP2	6.33	118.30	110.70
24	1H	2452	C	N3-C4-N4	6.33	122.43	118.00
24	14	2730	C	N3-C4-C5	-6.33	119.37	121.90
24	1H	2059	A	C8-N9-C4	6.33	108.33	105.80
24	1H	2503	A	N3-C4-N9	6.33	132.47	127.40
24	14	2598	A	O5'-P-OP2	6.33	118.30	110.70
24	14	2278	A	N9-C4-C5	6.33	108.33	105.80
24	1H	448	U	C4-C5-C6	6.33	123.50	119.70
24	14	380	U	C6-N1-C2	-6.33	117.20	121.00
24	14	1564	C	N3-C4-C5	-6.33	119.37	121.90
24	14	1766	U	C2-N3-C4	-6.33	123.20	127.00
24	14	2264	C	O5'-P-OP2	6.33	118.29	110.70
1	13	121	C	N1-C2-O2	6.33	122.69	118.90
24	1H	36	G	N3-C2-N2	-6.33	115.47	119.90
24	1H	236	C	C6-N1-C2	6.33	122.83	120.30
54	1G	50	A	N1-C2-N3	6.33	132.46	129.30
54	1G	1499	A	C8-N9-C4	6.33	108.33	105.80
24	14	210	C	OP2-P-O3'	6.33	119.12	105.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
24	14	1350	C	N1-C2-O2	-6.32	115.11	118.90
23	4K	17	G	N1-C6-O6	6.32	123.69	119.90
24	14	671	C	O5'-P-OP2	-6.32	100.01	105.70
24	14	1364	G	N3-C4-N9	6.32	129.79	126.00
24	14	1404	C	N1-C2-O2	6.32	122.69	118.90
24	1H	2779	U	N3-C2-O2	-6.32	117.78	122.20
25	16	100	G	C8-N9-C4	6.32	108.93	106.40
54	1G	197	A	C4-C5-C6	6.32	120.16	117.00
24	14	856	C	C6-N1-C2	-6.32	117.77	120.30
24	14	2241	A	C2-N3-C4	-6.32	107.44	110.60
54	1G	1301	U	C2-N1-C1'	6.31	125.28	117.70
1	13	717	C	C5-C6-N1	6.31	124.16	121.00
24	1H	53	A	OP1-P-O3'	6.31	119.09	105.20
24	1H	2438	U	N3-C2-O2	-6.31	117.78	122.20
54	1G	1498	U	C2-N1-C1'	6.31	125.27	117.70
24	14	1816	G	N1-C6-O6	-6.31	116.11	119.90
24	1H	396	G	N1-C2-N2	6.31	121.88	116.20
24	1H	2527	C	C2-N3-C4	6.31	123.05	119.90
24	14	2413	G	C5-C6-O6	-6.31	124.81	128.60
24	1H	702	G	O5'-P-OP2	-6.31	100.02	105.70
24	1H	943	U	N1-C2-O2	-6.31	118.39	122.80
24	1H	1911	U	N3-C2-O2	-6.31	117.78	122.20
54	1G	913	A	P-O3'-C3'	6.31	127.27	119.70
24	14	2392	A	N7-C8-N9	6.31	116.95	113.80
24	14	2609	U	C2-N3-C4	-6.31	123.22	127.00
24	1H	2457	U	OP2-P-O3'	6.31	119.07	105.20
24	1H	676	A	OP1-P-OP2	6.30	129.06	119.60
24	1H	1021	A	N7-C8-N9	6.30	116.95	113.80
24	1H	333	G	C8-N9-C1'	-6.30	118.81	127.00
24	1H	1385	G	N3-C2-N2	-6.30	115.49	119.90
24	14	390	A	C2-N3-C4	-6.30	107.45	110.60
24	14	1277	G	C8-N9-C4	6.30	108.92	106.40
24	1H	703	U	C5-C6-N1	-6.30	119.55	122.70
24	14	2609	U	C5-C6-N1	-6.30	119.55	122.70
1	13	111	G	N1-C6-O6	6.30	123.68	119.90
24	1H	76	C	N3-C4-C5	-6.30	119.38	121.90
24	1H	1786	A	N9-C1'-C2'	6.30	122.19	114.00
24	1H	1975	G	C4-C5-N7	6.30	113.32	110.80
43	F8	67	GLY	N-CA-C	-6.29	97.37	113.10
24	14	2547	U	O5'-P-OP1	6.29	118.25	110.70
24	1H	1241	A	C5-N7-C8	-6.29	100.75	103.90
27	11	257	LEU	CA-CB-CG	6.29	129.77	115.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
24	14	1653	G	C5-N7-C8	6.29	107.45	104.30
24	1H	141	A	N1-C6-N6	6.29	122.37	118.60
24	1H	512	G	O4'-C1'-N9	6.29	113.23	108.20
1	13	681	C	C6-N1-C2	-6.29	117.78	120.30
24	1H	784	A	O5'-P-OP1	-6.29	100.04	105.70
24	1H	1004	C	O5'-P-OP2	6.29	118.25	110.70
24	1H	1967	C	O5'-P-OP2	-6.29	100.04	105.70
24	1H	2247	A	C8-N9-C4	-6.29	103.28	105.80
24	14	641	C	C6-N1-C2	6.29	122.81	120.30
25	16	18	G	N1-C6-O6	6.29	123.67	119.90
24	14	1806	C	C6-N1-C2	6.29	122.81	120.30
24	14	2489	G	N1-C6-O6	6.29	123.67	119.90
1	13	811	C	C6-N1-C1'	-6.28	113.26	120.80
24	1H	974(A)	C	N1-C2-O2	6.28	122.67	118.90
24	1H	1197	G	N1-C6-O6	-6.28	116.13	119.90
24	1H	2451	A	N9-C4-C5	6.28	108.31	105.80
1	13	587	G	N1-C6-O6	6.28	123.67	119.90
24	1H	1528	A	C8-N9-C4	-6.28	103.29	105.80
24	1H	2058	A	C5-N7-C8	-6.28	100.76	103.90
24	1H	2434	A	N7-C8-N9	-6.28	110.66	113.80
24	14	771	G	N3-C2-N2	-6.28	115.51	119.90
24	1H	2552	U	N3-C4-O4	6.28	123.79	119.40
54	1G	766	A	O5'-P-OP2	-6.27	100.06	105.70
24	14	1558	A	N1-C6-N6	6.27	122.36	118.60
24	14	2644	G	C5-N7-C8	-6.27	101.16	104.30
24	1H	1565	C	N3-C4-C5	6.27	124.41	121.90
54	1G	612	C	C6-N1-C2	6.27	122.81	120.30
24	14	1697	G	N1-C6-O6	6.27	123.66	119.90
24	14	801	G	C4-C5-N7	-6.27	108.29	110.80
24	14	2033	A	C6-N1-C2	-6.27	114.84	118.60
54	1G	1053	G	C8-N9-C1'	6.27	135.15	127.00
24	14	1355	G	C8-N9-C4	-6.27	103.89	106.40
24	14	211	A	C6-C5-N7	-6.26	127.91	132.30
24	1H	2042	A	C2-N3-C4	-6.26	107.47	110.60
24	14	1779	U	C6-N1-C1'	-6.26	112.43	121.20
24	1H	2689	U	P-O3'-C3'	6.26	127.21	119.70
24	1H	120	U	N3-C2-O2	-6.26	117.82	122.20
24	14	415	A	O5'-P-OP2	-6.26	100.07	105.70
24	14	2347	C	N3-C2-O2	-6.26	117.52	121.90
24	1H	236	C	C5-C6-N1	-6.26	117.87	121.00
24	1H	613	U	N3-C2-O2	-6.26	117.82	122.20
24	14	695	G	OP1-P-OP2	-6.26	110.21	119.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
24	14	2857	G	C4-C5-N7	6.26	113.30	110.80
24	14	2859	G	N7-C8-N9	6.26	116.23	113.10
24	1H	1294	U	N1-C2-O2	-6.26	118.42	122.80
24	1H	2496	C	OP1-P-O3'	6.26	118.96	105.20
24	14	738	G	O5'-P-OP1	6.26	118.21	110.70
24	14	570	G	N3-C2-N2	6.25	124.28	119.90
22	2K	20	C	N1-C2-O2	6.25	122.65	118.90
24	14	1252	G	O4'-C1'-N9	-6.25	103.20	108.20
23	4K	17	G	N9-C4-C5	-6.25	102.90	105.40
24	14	797	C	C6-N1-C2	6.25	122.80	120.30
24	14	2318	G	O4'-C1'-N9	6.25	113.20	108.20
24	1H	964	C	O5'-P-OP1	-6.25	100.08	105.70
24	1H	2714	G	C6-C5-N7	-6.25	126.65	130.40
24	1H	2888	C	C6-N1-C2	-6.25	117.80	120.30
24	14	2822	G	C6-C5-N7	-6.25	126.65	130.40
24	1H	1618	A	O5'-P-OP1	-6.25	100.08	105.70
24	1H	138	G	C5-N7-C8	-6.24	101.18	104.30
54	1G	372	C	N1-C2-O2	6.24	122.65	118.90
54	1G	23	C	N3-C4-N4	6.24	122.37	118.00
24	14	970	C	O5'-P-OP1	-6.24	100.08	105.70
24	14	2392	A	C4-C5-N7	6.24	113.82	110.70
24	14	2689	U	P-O3'-C3'	6.24	127.19	119.70
24	1H	1362	C	N1-C2-O2	-6.24	115.16	118.90
24	1H	2779	U	C5-C6-N1	-6.24	119.58	122.70
1	13	518	C	N3-C2-O2	-6.24	117.53	121.90
24	1H	1888	G	N3-C4-C5	-6.24	125.48	128.60
24	1H	1913	A	N1-C2-N3	-6.24	126.18	129.30
24	1H	705	A	C5-C6-N6	-6.23	118.71	123.70
24	14	1698	A	C5-C6-N1	-6.23	114.58	117.70
24	1H	946	G	C5-N7-C8	6.23	107.42	104.30
24	1H	2503	A	C6-C5-N7	-6.23	127.94	132.30
24	1H	2609	U	C6-N1-C2	6.23	124.74	121.00
24	14	632	A	C4-C5-N7	6.23	113.81	110.70
24	14	1270	C	OP2-P-O3'	6.23	118.91	105.20
24	14	1351	C	N1-C2-O2	-6.23	115.16	118.90
24	1H	1182	A	C8-N9-C4	-6.23	103.31	105.80
24	14	1780	A	N9-C4-C5	6.23	108.29	105.80
24	1H	2431	U	N3-C4-O4	-6.23	115.04	119.40
24	1H	2609	U	C5-C4-O4	-6.23	122.16	125.90
24	1H	933	A	N9-C4-C5	6.23	108.29	105.80
24	1H	2072	G	OP1-P-O3'	6.22	118.89	105.20
24	1H	802	A	OP2-P-O3'	6.22	118.89	105.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
24	1H	2355	C	C6-N1-C1'	-6.22	113.33	120.80
54	1G	886	G	N9-C4-C5	-6.22	102.91	105.40
24	14	2430	A	N9-C4-C5	-6.22	103.31	105.80
54	1G	1053	G	C4-N9-C1'	-6.22	118.42	126.50
24	1H	85	G	O5'-P-OP1	6.22	118.16	110.70
24	1H	740	U	OP2-P-O3'	6.22	118.88	105.20
24	1H	117	G	C4-C5-N7	6.22	113.29	110.80
24	1H	130	C	C5-C4-N4	-6.22	115.85	120.20
24	1H	2331	G	C2-N3-C4	-6.22	108.79	111.90
54	1G	449	C	C5-C4-N4	6.22	124.55	120.20
35	78	37	GLY	N-CA-C	-6.21	97.56	113.10
24	14	1644	C	N3-C4-N4	-6.21	113.65	118.00
24	1H	197	A	N1-C2-N3	6.21	132.41	129.30
24	1H	767	U	O5'-P-OP1	-6.21	100.11	105.70
24	1H	770	G	C8-N9-C4	-6.21	103.92	106.40
24	14	801	G	N9-C4-C5	6.21	107.88	105.40
24	14	2392	A	N1-C6-N6	6.21	122.33	118.60
1	13	735	C	C6-N1-C2	-6.21	117.82	120.30
24	1H	621	A	C8-N9-C4	-6.21	103.32	105.80
24	1H	802	A	N1-C2-N3	6.21	132.41	129.30
24	1H	1611	C	N1-C2-O2	-6.21	115.17	118.90
24	1H	1839	G	N1-C2-N2	-6.21	110.61	116.20
24	14	774	A	C6-C5-N7	-6.21	127.95	132.30
24	1H	398	G	O5'-P-OP2	-6.21	100.11	105.70
24	1H	676	A	N1-C6-N6	6.21	122.32	118.60
24	1H	1793	C	N1-C2-O2	-6.21	115.18	118.90
24	1H	2662	A	N1-C6-N6	6.21	122.32	118.60
1	13	972	C	C6-N1-C2	-6.20	117.82	120.30
24	1H	2019	A	N1-C6-N6	6.20	122.32	118.60
24	1H	2574	G	C5-C6-O6	-6.20	124.88	128.60
24	14	911	A	OP1-P-O3'	6.20	118.85	105.20
24	1H	1022	G	P-O3'-C3'	6.20	127.14	119.70
24	1H	1036	G	C8-N9-C4	6.20	108.88	106.40
24	1H	1763	G	O5'-P-OP1	6.20	118.14	110.70
24	14	1659	U	N1-C2-O2	-6.20	118.46	122.80
24	14	2320	A	P-O3'-C3'	6.20	127.14	119.70
24	1H	561	G	N7-C8-N9	-6.20	110.00	113.10
24	1H	1202	C	N1-C2-O2	-6.20	115.18	118.90
54	1G	322	C	N3-C2-O2	6.20	126.24	121.90
24	14	1274	A	O5'-P-OP2	-6.20	100.12	105.70
24	14	1653	G	N3-C4-C5	-6.20	125.50	128.60
24	14	2334	G	C8-N9-C4	6.20	108.88	106.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
24	1H	581	C	C6-N1-C2	-6.20	117.82	120.30
24	1H	1606	G	N7-C8-N9	-6.20	110.00	113.10
25	1J	54	G	N7-C8-N9	6.20	116.20	113.10
24	1H	99	U	N3-C2-O2	-6.20	117.86	122.20
24	1H	2713	A	N3-C4-N9	-6.20	122.44	127.40
24	14	1374	G	N7-C8-N9	6.20	116.20	113.10
24	14	1758	G	C6-C5-N7	6.20	134.12	130.40
25	1J	75	G	O5'-P-OP2	-6.20	100.12	105.70
24	1H	808	G	OP1-P-OP2	6.19	128.89	119.60
24	1H	2564	A	C5-C6-N6	-6.19	118.75	123.70
24	14	1787	A	N7-C8-N9	6.19	116.90	113.80
24	1H	508	G	N7-C8-N9	6.19	116.20	113.10
24	1H	2032	G	C2-N3-C4	-6.19	108.80	111.90
24	14	2713	A	N1-C6-N6	6.19	122.32	118.60
24	1H	774	A	C6-N1-C2	6.19	122.31	118.60
24	1H	828	U	C2-N3-C4	6.19	130.72	127.00
24	1H	1528	A	C6-C5-N7	-6.19	127.97	132.30
24	1H	2584	U	C2-N3-C4	-6.19	123.28	127.00
24	14	1994	C	N3-C4-N4	-6.19	113.67	118.00
24	1H	2240	C	C6-N1-C2	6.19	122.78	120.30
24	1H	2458	G	N1-C6-O6	-6.19	116.19	119.90
24	14	2246	G	C5-C6-O6	-6.19	124.89	128.60
24	14	2610	C	N1-C2-O2	6.19	122.61	118.90
24	14	836	G	C5-C6-N1	6.18	114.59	111.50
24	14	1813	G	O5'-P-OP1	-6.18	100.13	105.70
24	1H	165	U	N1-C2-O2	6.18	127.13	122.80
24	1H	2271	G	C8-N9-C1'	-6.18	118.96	127.00
54	1G	449	C	N3-C2-O2	-6.18	117.57	121.90
24	1H	1806	C	O5'-P-OP2	-6.18	100.14	105.70
24	1H	1960	A	N1-C6-N6	6.18	122.31	118.60
35	35	138	LEU	CA-CB-CG	6.18	129.51	115.30
1	13	15	G	C4-N9-C1'	6.18	134.53	126.50
24	1H	265	A	C6-C5-N7	-6.17	127.98	132.30
24	1H	529	A	C5-N7-C8	-6.17	100.81	103.90
24	1H	1616	A	C2-N3-C4	-6.17	107.51	110.60
24	1H	2699	C	C6-N1-C2	6.17	122.77	120.30
54	1G	572	A	N1-C6-N6	6.17	122.30	118.60
24	14	632	A	C5-N7-C8	-6.17	100.81	103.90
1	13	111	G	C8-N9-C4	6.17	108.87	106.40
24	1H	2361	A	C8-N9-C4	6.17	108.27	105.80
24	14	59	U	N3-C4-C5	-6.17	110.90	114.60
24	14	1022	G	P-O3'-C3'	6.17	127.11	119.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
24	14	2731	G	C8-N9-C4	-6.17	103.93	106.40
24	14	2339	G	O5'-P-OP2	-6.17	100.15	105.70
1	13	758	G	C2-N3-C4	-6.17	108.82	111.90
24	14	1903	G	OP1-P-OP2	6.17	128.85	119.60
24	1H	1315	C	C4-C5-C6	6.17	120.48	117.40
24	14	929	G	C6-C5-N7	-6.17	126.70	130.40
24	14	1224	G	C5-C6-O6	6.17	132.30	128.60
24	14	1350	C	N3-C2-O2	6.17	126.22	121.90
24	1H	1217	C	N3-C2-O2	6.16	126.22	121.90
24	1H	2433	A	C2-N3-C4	-6.16	107.52	110.60
24	14	1391	U	O5'-P-OP2	6.16	118.10	110.70
24	1H	701	G	OP2-P-O3'	6.16	118.75	105.20
24	1H	2066	C	OP1-P-O3'	6.16	118.76	105.20
24	14	512	G	N3-C4-C5	6.16	131.68	128.60
24	14	762	U	C5-C6-N1	6.16	125.78	122.70
24	14	1907	G	O5'-P-OP1	-6.16	100.15	105.70
24	1H	1940	U	O5'-P-OP2	-6.16	100.16	105.70
24	1H	2477	C	N1-C2-O2	6.16	122.60	118.90
24	14	635	C	N3-C2-O2	-6.16	117.59	121.90
24	14	1328	G	C5-N7-C8	-6.16	101.22	104.30
24	14	2712	U	C5-C4-O4	6.16	129.59	125.90
24	1H	2439	A	N7-C8-N9	6.16	116.88	113.80
24	1H	686	G	C8-N9-C4	6.16	108.86	106.40
24	1H	2374	C	OP1-P-OP2	6.16	128.83	119.60
24	14	25	U	C6-N1-C2	6.16	124.69	121.00
24	14	1377	G	N1-C6-O6	6.16	123.59	119.90
24	14	1758	G	C4-C5-N7	-6.16	108.34	110.80
24	14	562	U	C2-N3-C4	-6.15	123.31	127.00
24	1H	815	C	C6-N1-C2	6.15	122.76	120.30
24	1H	1899	G	N1-C2-N3	6.15	127.59	123.90
24	1H	1312	U	O5'-P-OP1	-6.15	100.17	105.70
24	14	817	C	N1-C2-O2	6.15	122.59	118.90
24	14	2351	G	N3-C4-C5	-6.15	125.52	128.60
24	14	2688	U	C4-C5-C6	6.15	123.39	119.70
24	1H	728	G	N9-C4-C5	-6.15	102.94	105.40
24	1H	949	C	C5-C6-N1	-6.15	117.93	121.00
24	14	988	A	C5-C6-N6	-6.15	118.78	123.70
24	14	1496	A	C6-C5-N7	-6.15	128.00	132.30
24	14	1696	G	N1-C6-O6	-6.15	116.21	119.90
24	14	2708	G	O5'-P-OP2	-6.15	100.17	105.70
24	1H	28	A	C4-C5-N7	6.15	113.77	110.70
24	1H	2375	G	C8-N9-C4	6.15	108.86	106.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
24	14	2387	U	C2-N3-C4	-6.15	123.31	127.00
24	14	2260	C	C6-N1-C2	6.14	122.76	120.30
24	1H	1318	C	O5'-P-OP1	-6.14	100.17	105.70
24	1H	2644	G	N3-C4-N9	-6.14	122.31	126.00
24	1H	2525	G	C8-N9-C4	6.14	108.86	106.40
24	1H	636	G	O5'-P-OP2	6.14	118.07	110.70
24	14	2587	A	N9-C4-C5	-6.14	103.34	105.80
25	1J	102	G	N1-C6-O6	-6.14	116.22	119.90
24	1H	2726	U	O5'-P-OP1	-6.14	100.18	105.70
24	1H	1975	G	N9-C4-C5	-6.14	102.94	105.40
54	1G	1475	G	N7-C8-N9	6.14	116.17	113.10
1	13	888	G	N1-C6-O6	6.13	123.58	119.90
24	1H	375	C	O5'-P-OP1	6.13	118.06	110.70
24	14	205	G	N3-C4-N9	6.13	129.68	126.00
24	14	2351	G	N3-C4-N9	6.13	129.68	126.00
24	1H	2585	U	C5-C4-O4	-6.13	122.22	125.90
24	1H	1669	A	C5-N7-C8	-6.13	100.84	103.90
24	14	210	C	C6-N1-C2	6.13	122.75	120.30
25	1J	114	G	N3-C4-C5	6.13	131.66	128.60
1	13	925	G	O5'-P-OP2	-6.13	100.19	105.70
24	1H	55	G	O5'-P-OP1	-6.12	100.19	105.70
24	1H	376	C	O5'-P-OP1	-6.12	100.19	105.70
24	1H	1306	C	N1-C2-O2	-6.12	115.22	118.90
24	14	774	A	C5-C6-N6	-6.12	118.80	123.70
24	14	1664	A	C8-N9-C4	-6.12	103.35	105.80
22	2K	1	G	N3-C4-C5	-6.12	125.54	128.60
24	1H	470	A	N1-C2-N3	6.12	132.36	129.30
24	14	2434	A	C8-N9-C4	6.12	108.25	105.80
24	1H	2574	G	C8-N9-C4	6.12	108.85	106.40
24	14	796	C	C5-C6-N1	-6.12	117.94	121.00
24	1H	2431	U	C5-C4-O4	6.12	129.57	125.90
24	14	1955	U	N1-C2-N3	6.12	118.57	114.90
24	1H	920	G	N7-C8-N9	-6.12	110.04	113.10
24	1H	2232	U	C5-C4-O4	6.12	129.57	125.90
24	14	671	C	C2-N3-C4	-6.12	116.84	119.90
24	1H	564	C	C6-N1-C2	-6.12	117.85	120.30
24	1H	566	U	C5-C6-N1	-6.12	119.64	122.70
24	1H	2265	U	N3-C4-O4	6.12	123.68	119.40
24	1H	2337	G	N7-C8-N9	6.12	116.16	113.10
24	1H	250	G	N7-C8-N9	6.11	116.16	113.10
24	1H	2274	A	OP1-P-OP2	-6.11	110.43	119.60
24	1H	2490	G	C2-N3-C4	-6.11	108.84	111.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
24	14	2346	A	C5-C6-N1	-6.11	114.64	117.70
25	1J	47	C	OP1-P-O3'	6.11	118.64	105.20
24	14	74	A	C5-N7-C8	-6.11	100.84	103.90
24	1H	1379	A	C4-C5-C6	6.11	120.05	117.00
24	1H	2445	G	C8-N9-C4	-6.11	103.96	106.40
24	14	1824	G	N1-C6-O6	6.11	123.56	119.90
1	13	1512	U	O5'-P-OP2	-6.11	100.20	105.70
24	1H	1141	U	O4'-C1'-N1	6.11	113.08	108.20
24	14	1566	A	N9-C4-C5	-6.11	103.36	105.80
24	1H	202	U	N1-C2-N3	-6.10	111.24	114.90
24	1H	582	G	C5-N7-C8	-6.10	101.25	104.30
24	1H	2391	G	O4'-C1'-N9	6.10	113.08	108.20
24	1H	2674	G	N3-C2-N2	-6.10	115.63	119.90
24	1H	539	G	O5'-P-OP1	6.10	118.02	110.70
24	1H	1600	C	OP1-P-O3'	6.10	118.62	105.20
24	1H	564	C	N3-C4-C5	-6.10	119.46	121.90
24	1H	1204	A	N9-C1'-C2'	6.10	121.93	114.00
24	1H	2741	A	C8-N9-C4	6.10	108.24	105.80
54	1G	1498	U	O4'-C1'-N1	-6.10	103.32	108.20
24	1H	621	A	O4'-C1'-N9	6.10	113.08	108.20
24	14	784	A	P-O3'-C3'	6.10	127.02	119.70
24	1H	1827	C	N1-C2-O2	6.09	122.56	118.90
24	14	330	A	C4-C5-N7	6.09	113.75	110.70
24	1H	124	G	C6-C5-N7	-6.09	126.74	130.40
24	1H	1019	U	C5-C4-O4	6.09	129.56	125.90
54	1G	535	A	N1-C6-N6	-6.09	114.94	118.60
24	14	2366	A	O5'-P-OP2	-6.09	100.22	105.70
24	14	2518	A	C5-C6-N6	-6.09	118.83	123.70
25	1J	27	C	C6-N1-C2	-6.09	117.86	120.30
24	1H	1790	C	N3-C4-C5	6.09	124.34	121.90
25	16	72	G	O5'-P-OP1	-6.09	100.22	105.70
24	14	203	C	N1-C2-O2	-6.09	115.25	118.90
1	13	576	G	C8-N9-C1'	-6.09	119.09	127.00
24	1H	1333	C	C5-C4-N4	-6.09	115.94	120.20
24	1H	1994	C	N1-C2-O2	6.09	122.55	118.90
24	1H	1807	G	O5'-P-OP1	-6.08	100.22	105.70
24	14	2590	A	C2-N3-C4	-6.08	107.56	110.60
24	1H	202	U	N3-C4-C5	6.08	118.25	114.60
24	1H	2429	G	OP1-P-OP2	-6.08	110.47	119.60
54	1G	58	C	C5-C6-N1	6.08	124.04	121.00
24	1H	999	U	O5'-P-OP2	6.08	118.00	110.70
24	1H	2741	A	N7-C8-N9	-6.08	110.76	113.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
24	1H	2618	G	C5-C6-O6	6.08	132.25	128.60
24	14	1241	A	C5-N7-C8	-6.08	100.86	103.90
24	1H	25	U	C6-N1-C2	6.08	124.65	121.00
24	14	733	G	N3-C4-C5	-6.08	125.56	128.60
24	1H	1815	A	C8-N9-C4	6.08	108.23	105.80
24	1H	1394	U	O5'-P-OP2	6.08	117.99	110.70
24	14	138	G	N7-C8-N9	6.08	116.14	113.10
24	14	930	U	N3-C2-O2	-6.08	117.95	122.20
24	14	2430	A	N1-C2-N3	6.08	132.34	129.30
1	13	684	A	C8-N9-C4	-6.07	103.37	105.80
1	13	738	C	C5-C6-N1	6.07	124.04	121.00
1	13	1084	G	N3-C4-N9	6.07	129.64	126.00
24	1H	791	C	P-O3'-C3'	6.07	126.99	119.70
54	1G	322	C	C6-N1-C2	6.07	122.73	120.30
24	1H	1353	A	C4-C5-N7	6.07	113.74	110.70
24	14	1130	U	O5'-P-OP1	-6.07	100.24	105.70
24	14	737	C	N3-C2-O2	6.07	126.15	121.90
25	1J	70	C	C6-N1-C2	-6.07	117.87	120.30
24	14	435	C	N1-C2-O2	6.07	122.54	118.90
24	14	2253	G	C5-C6-O6	-6.07	124.96	128.60
24	1H	1263	U	C2-N1-C1'	6.06	124.97	117.70
24	1H	1677	A	C2-N3-C4	-6.06	107.57	110.60
24	1H	1994	C	C6-N1-C2	-6.06	117.88	120.30
24	14	748	G	O4'-C1'-N9	6.06	113.05	108.20
24	1H	1754	C	N3-C4-C5	-6.06	119.48	121.90
24	1H	2264	C	OP1-P-O3'	6.06	118.53	105.20
24	14	389	G	N9-C4-C5	-6.06	102.98	105.40
24	14	811	U	N1-C2-N3	6.06	118.54	114.90
24	14	2593	U	N3-C4-O4	-6.06	115.16	119.40
24	1H	246	C	C2-N1-C1'	-6.06	112.14	118.80
24	1H	860	U	O5'-P-OP1	6.06	117.97	110.70
24	1H	924	C	C6-N1-C2	6.06	122.72	120.30
24	1H	1471	A	N7-C8-N9	6.06	116.83	113.80
24	1H	569	U	C5-C6-N1	-6.05	119.67	122.70
24	14	1666	G	C5-C6-O6	6.05	132.23	128.60
24	1H	1931	U	N3-C2-O2	-6.05	117.96	122.20
1	13	567	G	O5'-P-OP1	-6.05	100.25	105.70
24	14	583	G	C6-C5-N7	-6.05	126.77	130.40
24	14	621	A	N3-C4-C5	6.05	131.04	126.80
24	1H	2278	A	N9-C4-C5	6.05	108.22	105.80
24	1H	1574	C	N1-C2-O2	-6.05	115.27	118.90
24	1H	2385	C	C5-C6-N1	-6.05	117.98	121.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
24	1H	2514	U	C2-N1-C1'	-6.05	110.44	117.70
54	1G	514	C	C5-C6-N1	6.05	124.02	121.00
24	14	1930	G	N9-C4-C5	6.05	107.82	105.40
24	14	2008	C	N1-C2-O2	-6.04	115.27	118.90
24	14	2501	C	N3-C2-O2	6.04	126.13	121.90
24	1H	609	A	N9-C4-C5	-6.04	103.38	105.80
24	1H	1022	G	N3-C2-N2	-6.04	115.67	119.90
24	1H	1211	U	C6-N1-C2	6.04	124.63	121.00
22	2L	10	C	C5-C4-N4	6.04	124.43	120.20
24	14	471	A	C8-N9-C4	6.04	108.22	105.80
24	14	479	A	P-O3'-C3'	6.04	126.95	119.70
24	14	681	G	N1-C2-N2	-6.04	110.76	116.20
24	14	1616	A	C6-C5-N7	-6.04	128.07	132.30
24	14	2624	G	N1-C6-O6	6.04	123.53	119.90
1	13	186(A)	C	C2-N1-C1'	6.04	125.45	118.80
24	1H	609(A)	G	N1-C6-O6	6.04	123.53	119.90
24	1H	1178	C	C2-N1-C1'	6.04	125.45	118.80
24	1H	2584	U	C6-N1-C1'	-6.04	112.74	121.20
24	1H	2710	C	N3-C4-C5	6.04	124.32	121.90
24	14	1336	A	C6-N1-C2	-6.04	114.97	118.60
24	14	2873	A	C8-N9-C4	-6.04	103.38	105.80
24	14	621	A	C4-C5-N7	6.04	113.72	110.70
24	1H	453	C	C2-N3-C4	-6.04	116.88	119.90
24	1H	1312	U	P-O3'-C3'	6.04	126.95	119.70
24	1H	1786	A	N3-C4-C5	6.04	131.03	126.80
24	1H	1805	U	N3-C4-O4	6.04	123.63	119.40
24	14	1557	C	N3-C4-C5	6.04	124.32	121.90
24	14	2329	G	C5-C6-O6	-6.04	124.98	128.60
24	1H	273	G	C8-N9-C4	6.04	108.81	106.40
24	14	1615	C	N1-C2-O2	-6.04	115.28	118.90
24	14	1786	A	C4-N9-C1'	6.04	137.17	126.30
24	14	541	C	C6-N1-C2	-6.04	117.89	120.30
24	14	2859	G	P-O3'-C3'	6.04	126.94	119.70
24	1H	698	C	C4-C5-C6	6.03	120.42	117.40
24	1H	770	G	OP1-P-OP2	-6.03	110.55	119.60
24	1H	1798	U	C5-C4-O4	-6.03	122.28	125.90
25	16	53	A	C8-N9-C4	-6.03	103.39	105.80
54	1G	690	G	N3-C4-N9	-6.03	122.38	126.00
24	1H	2449	U	OP2-P-O3'	6.03	118.47	105.20
24	14	127	A	C8-N9-C4	6.03	108.21	105.80
24	1H	1373	A	N1-C6-N6	-6.03	114.98	118.60
24	14	1210	A	C5-N7-C8	-6.03	100.89	103.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	13	760	G	N1-C6-O6	6.03	123.52	119.90
24	1H	2572	A	C4-C5-C6	6.03	120.01	117.00
24	1H	1653	G	C4-N9-C1'	6.03	134.33	126.50
24	1H	2327	A	C6-C5-N7	6.03	136.52	132.30
24	14	2060	A	N7-C8-N9	6.03	116.81	113.80
24	1H	632	A	OP1-P-OP2	-6.02	110.56	119.60
24	1H	936	C	C6-N1-C2	6.02	122.71	120.30
24	14	1786	A	N3-C4-N9	-6.02	122.58	127.40
24	1H	375	C	O5'-P-OP2	-6.02	100.28	105.70
24	1H	1193	G	N3-C4-C5	6.02	131.61	128.60
24	1H	1379	A	C8-N9-C4	-6.02	103.39	105.80
24	1H	1397	U	C5-C4-O4	6.02	129.51	125.90
24	14	2455	G	N1-C6-O6	6.02	123.51	119.90
24	14	2586	C	C5-C6-N1	6.02	124.01	121.00
24	14	110	G	C8-N9-C4	6.02	108.81	106.40
24	14	698	C	C6-N1-C2	6.02	122.71	120.30
1	13	720	C	N3-C2-O2	-6.02	117.69	121.90
24	1H	928	G	N1-C6-O6	6.02	123.51	119.90
24	14	686	G	N3-C2-N2	6.02	124.11	119.90
2	12	196	LEU	CA-CB-CG	6.02	129.14	115.30
24	14	2375	G	C5-C6-O6	-6.02	124.99	128.60
24	14	2620	C	C6-N1-C1'	-6.02	113.58	120.80
24	14	784	A	OP1-P-O3'	6.01	118.43	105.20
24	14	2441	C	N3-C4-C5	6.01	124.31	121.90
1	13	1528	U	C6-N1-C2	6.01	124.61	121.00
24	1H	2564	A	N1-C6-N6	6.01	122.21	118.60
24	14	1928	A	C8-N9-C4	6.01	108.20	105.80
24	1H	528	A	C5-N7-C8	-6.01	100.90	103.90
24	1H	1236	G	O5'-P-OP2	6.01	117.91	110.70
24	1H	1413	G	N1-C6-O6	6.01	123.51	119.90
24	1H	784	A	C6-C5-N7	6.01	136.50	132.30
24	1H	1690	A	C8-N9-C4	-6.01	103.40	105.80
24	14	654(S)	G	P-O3'-C3'	6.01	126.91	119.70
24	14	1839	G	C8-N9-C1'	-6.01	119.19	127.00
24	14	2412	A	C6-N1-C2	-6.01	115.00	118.60
1	13	283	C	N1-C2-O2	6.00	122.50	118.90
54	1G	686	U	O4'-C1'-N1	6.00	113.00	108.20
24	14	621	A	C6-C5-N7	-6.00	128.10	132.30
24	1H	575	A	C5-C6-N6	-6.00	118.90	123.70
24	1H	1647	G	O5'-P-OP1	-6.00	100.30	105.70
24	1H	1762[A]	A	C8-N9-C4	-6.00	103.40	105.80
24	1H	1762[B]	A	C8-N9-C4	-6.00	103.40	105.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
24	1H	1277	G	C5-C6-O6	6.00	132.20	128.60
24	1H	1971	A	C6-N1-C2	-6.00	115.00	118.60
24	1H	2401	U	C5-C6-N1	6.00	125.70	122.70
24	14	155	C	C6-N1-C2	-6.00	117.90	120.30
24	14	672	C	O5'-P-OP2	-6.00	100.30	105.70
24	14	1316	U	C5-C6-N1	6.00	125.70	122.70
24	14	2573	C	C5-C4-N4	-6.00	116.00	120.20
24	1H	2605	U	N1-C2-N3	6.00	118.50	114.90
24	14	580	C	N1-C2-O2	-6.00	115.30	118.90
24	1H	677	A	C5-C6-N6	-6.00	118.90	123.70
24	1H	693	C	C4-C5-C6	6.00	120.40	117.40
24	1H	2518	A	C8-N9-C4	-6.00	103.40	105.80
24	14	1653	G	N3-C4-N9	6.00	129.60	126.00
24	14	1468	C	N3-C4-C5	-6.00	119.50	121.90
24	14	1352	U	O5'-P-OP2	-6.00	100.31	105.70
24	1H	261	G	N1-C6-O6	5.99	123.50	119.90
24	1H	2385	C	C6-N1-C2	5.99	122.70	120.30
24	1H	2443	C	C5-C4-N4	-5.99	116.00	120.20
24	14	2251	G	C8-N9-C1'	-5.99	119.21	127.00
24	1H	473	G	C8-N9-C4	5.99	108.80	106.40
24	14	2644	G	N7-C8-N9	5.99	116.10	113.10
24	1H	140	A	O4'-C1'-N9	5.99	112.99	108.20
24	1H	1800	C	OP1-P-OP2	-5.99	110.61	119.60
24	14	2880	C	N3-C4-C5	-5.99	119.50	121.90
1	13	418	C	C6-N1-C2	-5.99	117.91	120.30
24	1H	1200	C	C6-N1-C2	5.99	122.69	120.30
24	1H	1311	G	OP1-P-O3'	5.99	118.38	105.20
54	1G	768	A	C2-N3-C4	-5.99	107.61	110.60
24	14	2329	G	C8-N9-C4	5.99	108.80	106.40
24	1H	1543	A	C4-C5-N7	5.99	113.69	110.70
24	14	1702	G	N1-C6-O6	5.99	123.49	119.90
24	14	2823	A	C2-N3-C4	-5.99	107.61	110.60
22	2K	32	A	N1-C6-N6	5.98	122.19	118.60
24	1H	787	U	N1-C2-O2	-5.98	118.61	122.80
24	1H	1408	C	N1-C2-O2	-5.98	115.31	118.90
54	1G	754	C	N3-C2-O2	-5.98	117.71	121.90
24	14	726	G	N3-C2-N2	5.98	124.09	119.90
24	14	1965	C	C4-C5-C6	-5.98	114.41	117.40
24	14	2713	A	C6-C5-N7	-5.98	128.11	132.30
1	13	690	G	N1-C2-N3	5.98	127.49	123.90
24	14	428	A	C2-N3-C4	5.98	113.59	110.60
24	14	2620	C	C5-C4-N4	-5.98	116.01	120.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
24	1H	2502	G	C5-C6-O6	-5.98	125.01	128.60
24	14	585	G	N7-C8-N9	5.98	116.09	113.10
24	14	1742	C	C5-C6-N1	5.98	123.99	121.00
24	14	2386	C	C6-N1-C2	5.98	122.69	120.30
24	1H	472	A	N1-C6-N6	-5.98	115.02	118.60
24	14	2681	C	N3-C4-N4	-5.97	113.82	118.00
1	13	644	G	C8-N9-C4	5.97	108.79	106.40
24	1H	252	G	C5-C6-O6	-5.97	125.02	128.60
24	1H	1971	A	C2-N3-C4	5.97	113.59	110.60
24	14	1328	G	C6-C5-N7	-5.97	126.82	130.40
24	14	1332	G	N3-C4-C5	5.97	131.59	128.60
24	14	1390	U	N3-C2-O2	-5.97	118.02	122.20
24	14	2502	G	N3-C4-N9	5.97	129.58	126.00
24	1H	64	A	N7-C8-N9	-5.97	110.81	113.80
24	1H	1898	U	N3-C2-O2	-5.97	118.02	122.20
24	1H	2420	C	C4-C5-C6	-5.97	114.42	117.40
24	14	1978	A	OP2-P-O3'	5.97	118.34	105.20
24	1H	1128	A	C8-N9-C4	-5.97	103.41	105.80
24	1H	1912	A	N1-C6-N6	-5.97	115.02	118.60
24	1H	2688	U	N3-C4-O4	-5.97	115.22	119.40
24	14	2495	G	N1-C6-O6	5.97	123.48	119.90
24	1H	2392	A	C6-C5-N7	-5.97	128.12	132.30
24	14	1475	G	N7-C8-N9	5.97	116.08	113.10
1	13	690	G	N3-C2-N2	-5.97	115.72	119.90
1	13	888	G	C6-C5-N7	-5.97	126.82	130.40
24	1H	1310	G	N1-C6-O6	5.97	123.48	119.90
24	14	1616	A	N1-C2-N3	-5.97	126.32	129.30
24	14	2278	A	N1-C6-N6	-5.97	115.02	118.60
54	1G	135	C	N3-C2-O2	5.96	126.08	121.90
24	14	2573	C	C2-N1-C1'	5.96	125.36	118.80
24	1H	1142(A)	A	C5-C6-N1	-5.96	114.72	117.70
24	1H	1781	C	N3-C2-O2	-5.96	117.73	121.90
24	1H	1792	G	C8-N9-C4	5.96	108.78	106.40
25	16	102	G	N3-C4-N9	-5.96	122.42	126.00
24	1H	55	G	O5'-P-OP2	5.96	117.85	110.70
24	1H	207	A	C2-N3-C4	-5.96	107.62	110.60
24	14	1679	U	C2-N3-C4	-5.96	123.42	127.00
24	1H	1210	A	C6-C5-N7	-5.96	128.13	132.30
24	1H	1318	C	N1-C2-O2	5.96	122.47	118.90
24	1H	2346	A	N1-C2-N3	5.96	132.28	129.30
54	1G	719	C	N3-C4-C5	-5.96	119.52	121.90
24	1H	97	C	C6-N1-C2	5.96	122.68	120.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
24	1H	1671	U	N3-C4-O4	5.96	123.57	119.40
24	14	1378	A	C8-N9-C4	5.96	108.18	105.80
24	1H	72	U	C2-N3-C4	-5.95	123.43	127.00
24	1H	537	C	N1-C2-O2	5.95	122.47	118.90
24	14	1308	A	N1-C2-N3	5.95	132.28	129.30
24	1H	2238	G	OP1-P-OP2	5.95	128.53	119.60
24	1H	2446	G	C5-N7-C8	-5.95	101.32	104.30
24	14	1972	A	OP2-P-O3'	5.95	118.30	105.20
1	13	169	C	C6-N1-C2	-5.95	117.92	120.30
24	14	1816	G	C5-C6-N1	5.95	114.47	111.50
24	14	2700	C	C6-N1-C2	5.95	122.68	120.30
24	1H	848	G	C8-N9-C4	5.95	108.78	106.40
24	1H	1786	A	O4'-C1'-N9	5.95	112.96	108.20
54	1G	1374	A	C2-N3-C4	-5.95	107.63	110.60
24	14	389	G	N3-C4-N9	5.95	129.57	126.00
24	14	2351	G	C4-N9-C1'	5.95	134.23	126.50
24	14	2544	G	C5-C6-O6	-5.95	125.03	128.60
1	13	1336	C	C6-N1-C1'	-5.95	113.66	120.80
25	16	38	C	O5'-P-OP2	-5.95	100.35	105.70
24	14	593	G	N1-C2-N3	5.95	127.47	123.90
24	14	752	A	C2-N3-C4	-5.95	107.63	110.60
24	1H	38	A	C5-N7-C8	-5.95	100.93	103.90
24	1H	109	G	C5-C6-O6	5.95	132.17	128.60
24	1H	1780	A	N1-C2-N3	5.95	132.27	129.30
24	14	464	U	C6-N1-C2	-5.95	117.43	121.00
24	14	1241	A	C4-C5-N7	5.95	113.67	110.70
24	14	2263	C	C2-N1-C1'	5.95	125.34	118.80
1	13	738	C	C6-N1-C2	-5.94	117.92	120.30
24	1H	345	A	C8-N9-C4	-5.94	103.42	105.80
24	1H	1385	G	C4-N9-C1'	-5.94	118.77	126.50
24	1H	1448	G	O5'-P-OP1	-5.94	100.35	105.70
24	1H	2393	A	N1-C6-N6	-5.94	115.03	118.60
54	1G	603	U	C5-C6-N1	5.94	125.67	122.70
24	14	2813	A	C8-N9-C4	-5.94	103.42	105.80
24	1H	988	A	OP2-P-O3'	5.94	118.27	105.20
24	1H	1772	G	C5-C6-O6	5.94	132.16	128.60
24	1H	2776	A	C8-N9-C4	5.94	108.18	105.80
54	1G	402	G	C8-N9-C4	5.94	108.78	106.40
24	14	1444(A)	A	C8-N9-C4	5.94	108.18	105.80
1	13	523	A	C2-N3-C4	-5.94	107.63	110.60
24	1H	445	C	OP1-P-OP2	-5.94	110.69	119.60
54	1G	687	A	P-O3'-C3'	5.94	126.83	119.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
24	1H	1959	G	OP2-P-O3'	5.94	118.26	105.20
24	1H	2010	G	O5'-P-OP2	5.94	117.82	110.70
24	1H	638	G	O5'-P-OP1	-5.93	100.36	105.70
24	1H	729	G	N7-C8-N9	5.93	116.07	113.10
25	16	98	G	OP1-P-OP2	5.93	128.50	119.60
24	14	2620	C	N3-C4-C5	5.93	124.27	121.90
24	1H	30	G	OP1-P-OP2	-5.93	110.70	119.60
24	14	1021	A	N3-C4-C5	5.93	130.95	126.80
24	14	1991	U	N3-C2-O2	-5.93	118.05	122.20
1	13	811	C	C2-N1-C1'	5.93	125.32	118.80
24	1H	138	G	C8-N9-C4	-5.93	104.03	106.40
24	1H	2624	G	C8-N9-C4	5.93	108.77	106.40
24	14	2351	G	C8-N9-C1'	-5.93	119.29	127.00
24	14	2818	G	N1-C6-O6	5.93	123.46	119.90
24	1H	1564	C	N3-C2-O2	-5.92	117.75	121.90
54	1G	1375	A	C8-N9-C4	-5.92	103.43	105.80
24	14	1353	A	N1-C2-N3	5.92	132.26	129.30
36	45	62	GLY	N-CA-C	-5.92	98.29	113.10
24	1H	816	C	N3-C2-O2	5.92	126.05	121.90
24	14	1407	C	C5-C6-N1	5.92	123.96	121.00
24	14	1558	A	P-O3'-C3'	5.92	126.80	119.70
24	1H	2270	G	C8-N9-C1'	-5.92	119.31	127.00
24	1H	2509	G	N9-C4-C5	-5.92	103.03	105.40
54	1G	740	U	O5'-P-OP2	-5.92	100.37	105.70
24	14	2593	U	C6-N1-C2	5.92	124.55	121.00
24	14	2040	C	C4-C5-C6	5.92	120.36	117.40
24	1H	2433	A	C6-C5-N7	-5.91	128.16	132.30
24	14	265	A	C6-C5-N7	-5.91	128.16	132.30
24	14	811	U	C5-C4-O4	5.91	129.45	125.90
25	1J	79	C	C6-N1-C2	-5.91	117.94	120.30
24	14	1347	G	C4-C5-N7	5.91	113.17	110.80
24	1H	130	C	C6-N1-C2	5.91	122.66	120.30
24	1H	1931	U	N1-C2-N3	5.91	118.45	114.90
1	13	1446	A	O5'-P-OP1	5.91	117.79	110.70
24	1H	938	G	N1-C6-O6	-5.91	116.36	119.90
24	1H	1259	G	OP2-P-O3'	5.91	118.20	105.20
24	1H	2210	G	C4-N9-C1'	5.91	134.18	126.50
54	1G	525	C	N3-C4-N4	5.91	122.13	118.00
54	1G	932	C	N1-C2-O2	5.91	122.44	118.90
24	14	1567	A	N1-C2-N3	5.91	132.25	129.30
54	1G	769	G	N3-C4-N9	5.90	129.54	126.00
1	13	733	A	N9-C4-C5	-5.90	103.44	105.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
24	1H	465	G	N3-C2-N2	5.90	124.03	119.90
24	1H	828	U	C6-N1-C2	-5.90	117.46	121.00
24	14	747	U	C5-C4-O4	-5.90	122.36	125.90
24	14	193	U	N1-C2-O2	-5.90	118.67	122.80
24	1H	755	C	N3-C4-N4	5.90	122.13	118.00
24	1H	2712	U	C5-C6-N1	-5.90	119.75	122.70
24	14	419	C	C6-N1-C2	-5.90	117.94	120.30
24	14	524	U	C6-N1-C2	-5.90	117.46	121.00
24	14	1338	G	OP1-P-O3'	5.90	118.17	105.20
24	14	2042	A	C4-C5-C6	-5.90	114.05	117.00
24	1H	397	G	C5-C6-O6	-5.90	125.06	128.60
24	14	1616	A	C6-N1-C2	5.90	122.14	118.60
24	1H	70	G	C5-C6-O6	5.89	132.14	128.60
24	1H	74	A	N7-C8-N9	5.89	116.75	113.80
24	1H	839	U	C4-C5-C6	5.89	123.24	119.70
24	14	1780	A	N1-C2-N3	5.89	132.25	129.30
24	14	2021	C	N3-C2-O2	-5.89	117.78	121.90
24	14	2029	G	C6-C5-N7	5.89	133.94	130.40
24	14	2726	U	C5-C4-O4	5.89	129.44	125.90
24	14	2779	U	C2-N3-C4	-5.89	123.46	127.00
24	1H	1124	C	N1-C2-O2	-5.89	115.37	118.90
24	1H	1637	A	N7-C8-N9	5.89	116.75	113.80
24	1H	125	G	O4'-C1'-N9	-5.89	103.49	108.20
24	1H	529	A	C6-C5-N7	-5.89	128.18	132.30
24	14	955	C	OP1-P-O3'	5.89	118.15	105.20
24	1H	2726	U	N3-C2-O2	-5.89	118.08	122.20
24	14	1187	G	N9-C4-C5	5.89	107.75	105.40
24	14	1649	G	N7-C8-N9	5.89	116.04	113.10
24	1H	2442	C	N1-C2-O2	-5.88	115.37	118.90
24	14	442	G	C8-N9-C4	-5.88	104.05	106.40
24	1H	1409	C	C5-C6-N1	-5.88	118.06	121.00
1	13	921	U	C5-C4-O4	-5.88	122.37	125.90
1	13	913	A	P-O3'-C3'	5.88	126.75	119.70
24	1H	845	G	P-O3'-C3'	5.88	126.75	119.70
24	1H	2751	G	N3-C4-C5	5.88	131.54	128.60
24	14	2060	A	N1-C6-N6	-5.88	115.07	118.60
24	14	294	A	N1-C6-N6	-5.88	115.07	118.60
24	14	499	U	O5'-P-OP1	-5.88	100.41	105.70
24	14	1899	G	N3-C4-C5	5.88	131.54	128.60
24	1H	691	C	N1-C2-O2	-5.87	115.38	118.90
24	1H	2260	C	OP2-P-O3'	5.87	118.12	105.20
24	1H	2271	G	C6-N1-C2	-5.87	121.58	125.10

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
24	1H	2571	C	O5'-P-OP1	5.87	117.75	110.70
54	1G	758	G	C4-C5-N7	5.87	113.15	110.80
24	14	698	C	C5-C6-N1	-5.87	118.06	121.00
24	14	737	C	C6-N1-C2	5.87	122.65	120.30
54	1G	576	G	N1-C6-O6	5.87	123.42	119.90
24	14	2503	A	C2-N3-C4	5.87	113.53	110.60
24	1H	511	U	OP2-P-O3'	5.87	118.11	105.20
24	1H	1567	A	OP1-P-O3'	5.87	118.11	105.20
24	1H	2059	A	N1-C6-N6	5.87	122.12	118.60
24	1H	2489	G	C6-C5-N7	-5.87	126.88	130.40
24	1H	2566	A	P-O3'-C3'	5.87	126.74	119.70
24	1H	2591	C	N3-C4-N4	5.87	122.11	118.00
24	1H	2700	C	N1-C2-O2	-5.87	115.38	118.90
24	14	1786	A	OP1-P-O3'	5.87	118.11	105.20
24	14	2226	C	N3-C4-C5	5.87	124.25	121.90
24	14	2607	G	C4-C5-N7	5.87	113.15	110.80
24	1H	458	G	O4'-C1'-N9	5.87	112.89	108.20
24	1H	659	C	C6-N1-C2	5.87	122.65	120.30
24	14	133	C	C6-N1-C2	5.87	122.65	120.30
24	1H	860	U	C2-N1-C1'	5.86	124.74	117.70
24	1H	1806	C	OP1-P-OP2	5.86	128.40	119.60
24	1H	2360	A	C2-N3-C4	-5.86	107.67	110.60
54	1G	121	C	C6-N1-C1'	-5.86	113.76	120.80
24	14	582	G	N3-C4-C5	5.86	131.53	128.60
24	1H	1899	G	P-O3'-C3'	5.86	126.73	119.70
24	1H	2243	U	C4-C5-C6	5.86	123.22	119.70
24	14	1695	G	C4-N9-C1'	5.86	134.12	126.50
1	13	698	G	C8-N9-C4	-5.86	104.06	106.40
24	1H	828	U	N1-C2-O2	5.86	126.90	122.80
24	1H	1956	U	OP2-P-O3'	5.86	118.09	105.20
24	1H	190	A	C5-C6-N6	-5.86	119.02	123.70
25	16	11	C	N1-C2-O2	5.86	122.41	118.90
24	14	585	G	C2-N3-C4	-5.86	108.97	111.90
54	1G	352	C	N1-C2-O2	-5.85	115.39	118.90
24	14	1135	C	O5'-P-OP2	-5.85	100.43	105.70
1	13	733	A	N1-C6-N6	5.85	122.11	118.60
24	1H	305	U	C6-N1-C2	-5.85	117.49	121.00
24	1H	1365	A	N9-C4-C5	5.85	108.14	105.80
24	1H	1690	A	N1-C2-N3	5.85	132.23	129.30
54	1G	320	C	C2-N1-C1'	-5.85	112.36	118.80
24	14	1779	U	C5-C4-O4	-5.85	122.39	125.90
24	1H	62	C	C2-N1-C1'	-5.85	112.36	118.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
24	1H	2466	C	C6-N1-C2	5.85	122.64	120.30
24	14	1930	G	O5'-P-OP1	-5.85	100.43	105.70
24	14	2762	G	C5-C6-O6	-5.85	125.09	128.60
24	1H	2280	G	C5-C6-N1	-5.85	108.58	111.50
54	1G	903	G	O5'-P-OP2	-5.85	100.44	105.70
24	14	150	C	N3-C4-N4	-5.85	113.91	118.00
24	14	1602	U	O5'-P-OP2	5.85	117.72	110.70
24	14	1926	U	N3-C2-O2	-5.85	118.11	122.20
24	1H	1405	U	C5-C6-N1	-5.85	119.78	122.70
54	1G	898	G	C6-C5-N7	5.85	133.91	130.40
24	14	403	U	C5-C6-N1	-5.85	119.78	122.70
24	1H	816	C	C5-C4-N4	-5.84	116.11	120.20
24	1H	1528	A	N1-C6-N6	5.84	122.11	118.60
24	1H	2258	C	C5-C4-N4	-5.84	116.11	120.20
24	14	1902	C	C4-C5-C6	-5.84	114.48	117.40
24	1H	1158	C	C5-C6-N1	-5.84	118.08	121.00
24	1H	1400	G	C8-N9-C4	-5.84	104.06	106.40
54	1G	898	G	O5'-P-OP2	-5.84	100.44	105.70
25	1J	102	G	C5-N7-C8	5.84	107.22	104.30
1	13	514	C	C6-N1-C2	5.84	122.64	120.30
24	1H	621	A	N3-C4-C5	5.84	130.89	126.80
24	14	567	A	N1-C6-N6	5.84	122.11	118.60
24	14	792	G	C4-C5-C6	5.84	122.31	118.80
1	13	575	G	C5-C6-O6	5.84	132.10	128.60
54	1G	320	C	N1-C2-O2	-5.84	115.40	118.90
24	14	1382	G	C5-C6-N1	5.84	114.42	111.50
24	14	2335	A	N1-C6-N6	-5.84	115.10	118.60
24	1H	227	A	N1-C2-N3	5.84	132.22	129.30
24	1H	1558	A	C2-N3-C4	-5.84	107.68	110.60
22	2K	26	G	N1-C6-O6	5.84	123.40	119.90
24	1H	859	G	C8-N9-C1'	5.83	134.59	127.00
24	14	1462	C	C6-N1-C2	-5.83	117.97	120.30
24	14	2271	G	N9-C4-C5	-5.83	103.07	105.40
24	14	2477	C	C6-N1-C1'	-5.83	113.80	120.80
22	3L	74	C	C6-N1-C2	-5.83	117.97	120.30
24	14	133	C	N3-C4-C5	5.83	124.23	121.90
24	14	2441	C	N3-C2-O2	-5.83	117.82	121.90
1	13	1429	C	C6-N1-C2	5.83	122.63	120.30
24	1H	1226	G	N3-C4-N9	-5.83	122.50	126.00
24	1H	2407	G	OP2-P-O3'	5.83	118.03	105.20
24	14	664	C	C5-C6-N1	-5.83	118.08	121.00
24	14	1930	G	C6-C5-N7	5.83	133.90	130.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
24	14	2332	U	C5-C6-N1	-5.83	119.78	122.70
24	14	2859	G	N3-C4-C5	-5.83	125.69	128.60
24	1H	75	G	C2-N3-C4	5.83	114.81	111.90
24	14	729	G	N1-C6-O6	5.83	123.40	119.90
24	14	2779	U	C5-C4-O4	5.83	129.40	125.90
1	13	975	A	N7-C8-N9	5.83	116.71	113.80
24	1H	1670	C	N3-C4-C5	-5.83	119.57	121.90
24	1H	2828	C	C5-C6-N1	-5.83	118.09	121.00
24	14	66	C	C5-C6-N1	5.83	123.91	121.00
24	14	140	A	C6-C5-N7	-5.82	128.22	132.30
24	14	1491	G	C8-N9-C4	5.82	108.73	106.40
24	14	2356	C	OP2-P-O3'	5.82	118.01	105.20
24	1H	2387	U	OP2-P-O3'	5.82	118.00	105.20
54	1G	886	G	C8-N9-C4	5.82	108.73	106.40
24	14	1353	A	C8-N9-C4	-5.82	103.47	105.80
24	14	2051	A	C6-C5-N7	-5.82	128.22	132.30
24	14	2236	C	C6-N1-C2	5.82	122.63	120.30
24	1H	945	A	OP2-P-O3'	5.82	118.00	105.20
24	1H	2355	C	C5-C4-N4	-5.82	116.13	120.20
24	14	1265	A	O5'-P-OP2	-5.82	100.46	105.70
24	14	2827	C	C2-N1-C1'	-5.82	112.40	118.80
24	1H	617	G	N7-C8-N9	-5.82	110.19	113.10
54	1G	1086	U	C5-C6-N1	5.82	125.61	122.70
24	14	2355	C	C2-N1-C1'	5.82	125.20	118.80
23	4L	18	C	N3-C4-C5	-5.82	119.57	121.90
24	14	2050	C	C6-N1-C2	-5.82	117.97	120.30
24	14	2430	A	C5-N7-C8	-5.81	100.99	103.90
24	1H	683	C	C6-N1-C1'	-5.81	113.83	120.80
24	14	79	G	C5-C6-O6	-5.81	125.11	128.60
24	14	1814	G	O5'-P-OP2	-5.81	100.47	105.70
24	14	1997	G	N7-C8-N9	-5.81	110.19	113.10
24	1H	1164	G	C5-C6-O6	5.81	132.09	128.60
54	1G	309	G	C5-C6-O6	-5.81	125.11	128.60
54	1G	413	G	C8-N9-C4	5.81	108.72	106.40
24	14	635	C	N1-C2-O2	5.81	122.39	118.90
24	1H	848	G	N3-C4-N9	5.81	129.48	126.00
24	14	855	G	C8-N9-C4	-5.81	104.08	106.40
24	14	1612	C	C6-N1-C2	5.81	122.62	120.30
24	14	1780	A	N1-C6-N6	-5.81	115.12	118.60
24	14	2587	A	C5-C6-N6	-5.81	119.05	123.70
24	14	126	A	OP2-P-O3'	5.81	117.97	105.20
24	1H	1147	C	O5'-P-OP2	-5.80	100.48	105.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
24	1H	1614	A	O4'-C1'-N9	5.80	112.84	108.20
24	1H	243	U	N3-C2-O2	-5.80	118.14	122.20
24	14	582	G	C2-N3-C4	-5.80	109.00	111.90
24	14	2001	A	C6-C5-N7	-5.80	128.24	132.30
24	1H	265	A	N7-C8-N9	5.80	116.70	113.80
24	14	1930	G	C8-N9-C1'	5.80	134.54	127.00
24	1H	59	U	C6-N1-C2	-5.80	117.52	121.00
24	1H	2296	U	N3-C4-O4	5.80	123.46	119.40
24	1H	2337	G	C8-N9-C4	-5.80	104.08	106.40
24	1H	2779	U	C4-C5-C6	5.80	123.18	119.70
25	16	30	C	C6-N1-C2	-5.80	117.98	120.30
54	1G	678	U	O5'-P-OP2	-5.80	100.48	105.70
24	14	982	C	C5-C6-N1	5.80	123.90	121.00
24	14	1695	G	C6-C5-N7	-5.80	126.92	130.40
24	1H	1763	G	O5'-P-OP2	-5.80	100.48	105.70
24	1H	2489	G	N1-C6-O6	5.80	123.38	119.90
24	1H	2768	C	C6-N1-C2	-5.80	117.98	120.30
24	14	1155	A	N1-C6-N6	-5.80	115.12	118.60
24	14	1285	G	N3-C2-N2	-5.80	115.84	119.90
53	Q8	34	TRP	N-CA-C	5.80	126.65	111.00
54	1G	557	G	C8-N9-C1'	-5.80	119.47	127.00
24	14	1614	A	O5'-P-OP1	-5.80	100.48	105.70
22	2K	85	A	C5-N7-C8	-5.79	101.00	103.90
24	1H	730	C	C5-C4-N4	-5.79	116.14	120.20
24	1H	730	C	N3-C4-N4	5.79	122.06	118.00
24	1H	2051	A	C6-C5-N7	-5.79	128.24	132.30
24	1H	2329	G	N3-C4-N9	-5.79	122.52	126.00
24	14	750	A	OP1-P-O3'	5.79	117.95	105.20
24	14	1359	A	N7-C8-N9	-5.79	110.90	113.80
24	14	564	C	N3-C4-N4	5.79	122.05	118.00
24	14	2078	C	C6-N1-C2	-5.79	117.98	120.30
40	85	11	ARG	NE-CZ-NH1	-5.79	117.40	120.30
24	1H	1544	C	N1-C2-O2	5.79	122.37	118.90
24	14	2490	G	C5-N7-C8	-5.79	101.41	104.30
1	13	301	G	C5-C6-O6	-5.79	125.13	128.60
1	13	821	G	N1-C6-O6	-5.79	116.43	119.90
24	1H	786	C	C5-C6-N1	-5.79	118.11	121.00
24	1H	982	C	C6-N1-C2	-5.79	117.98	120.30
24	1H	1931	U	C4-C5-C6	5.79	123.17	119.70
24	1H	2239	G	OP2-P-O3'	5.79	117.94	105.20
24	1H	2781	A	O5'-P-OP1	-5.79	100.49	105.70
24	14	21	A	C2-N3-C4	-5.79	107.71	110.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
24	1H	2513	G	O5'-P-OP1	5.79	117.64	110.70
25	1J	60	C	C6-N1-C2	-5.79	117.98	120.30
1	13	690	G	C5-C6-N1	-5.79	108.61	111.50
24	1H	318	C	O5'-P-OP1	-5.79	100.49	105.70
24	1H	540	G	C5-C6-O6	-5.79	125.13	128.60
24	14	1798	U	C5-C6-N1	-5.79	119.81	122.70
24	14	2055	C	N1-C2-O2	5.79	122.37	118.90
1	13	740	U	O5'-P-OP2	-5.78	100.50	105.70
29	31	168	ARG	NE-CZ-NH1	5.78	123.19	120.30
24	14	960	A	C8-N9-C4	5.78	108.11	105.80
24	14	1691	C	O5'-P-OP1	-5.78	100.50	105.70
1	13	390	C	C6-N1-C2	-5.78	117.99	120.30
24	14	383	U	C2-N1-C1'	-5.78	110.76	117.70
24	1H	809	G	O5'-P-OP2	-5.78	100.50	105.70
24	14	1937	A	C8-N9-C4	5.78	108.11	105.80
24	14	2741	A	N9-C4-C5	-5.78	103.49	105.80
24	1H	1993	U	N1-C2-O2	-5.78	118.76	122.80
24	1H	1995	U	C6-N1-C2	5.78	124.47	121.00
24	14	2642	G	N1-C6-O6	5.78	123.37	119.90
24	1H	2580	U	OP2-P-O3'	5.78	117.91	105.20
24	14	479	A	N1-C6-N6	-5.78	115.14	118.60
24	14	868	U	C4-C5-C6	5.78	123.17	119.70
24	1H	1236	G	C2-N3-C4	-5.77	109.01	111.90
24	14	2029	G	C4-C5-N7	-5.77	108.49	110.80
24	1H	924	C	N1-C2-O2	5.77	122.36	118.90
24	1H	1781	C	N1-C2-O2	5.77	122.36	118.90
24	1H	2228	G	C6-C5-N7	-5.77	126.94	130.40
24	14	27	G	N3-C4-N9	-5.77	122.54	126.00
24	14	788	A	O5'-P-OP1	-5.77	100.50	105.70
24	14	2377	A	C8-N9-C4	5.77	108.11	105.80
24	1H	28	A	C2-N3-C4	5.77	113.48	110.60
24	1H	265	A	N1-C2-N3	5.77	132.18	129.30
24	1H	974	G	O4'-C1'-N9	-5.77	103.58	108.20
24	14	729	G	C5-C6-O6	-5.77	125.14	128.60
24	14	1391	U	O5'-P-OP1	-5.77	100.51	105.70
24	14	2287	A	N3-C4-C5	5.77	130.84	126.80
24	1H	634	C	C6-N1-C2	-5.77	117.99	120.30
24	1H	736	C	C5-C4-N4	-5.77	116.16	120.20
24	1H	2711	A	OP1-P-O3'	5.77	117.89	105.20
24	14	1994	C	C5-C4-N4	5.77	124.24	120.20
24	1H	698	C	C5-C6-N1	-5.77	118.12	121.00
24	1H	1821	A	N9-C4-C5	5.77	108.11	105.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	13	1520	G	C4-C5-N7	5.76	113.11	110.80
24	1H	793	A	C5-C6-N6	-5.76	119.09	123.70
24	1H	2820	A	OP1-P-O3'	5.76	117.88	105.20
54	1G	925	G	C8-N9-C4	5.76	108.71	106.40
24	14	954	G	O5'-P-OP1	-5.76	100.51	105.70
24	1H	1298	C	C2-N3-C4	5.76	122.78	119.90
24	14	1673	U	C5-C6-N1	-5.76	119.82	122.70
24	14	1994	C	O5'-P-OP2	-5.76	100.51	105.70
1	13	687	A	C8-N9-C4	-5.76	103.50	105.80
24	1H	1032	A	N1-C6-N6	5.76	122.06	118.60
24	14	1599	C	C6-N1-C2	-5.76	118.00	120.30
24	1H	716	A	O5'-P-OP2	5.76	117.61	110.70
24	1H	810	U	C5-C4-O4	-5.76	122.44	125.90
24	1H	1653	G	C8-N9-C1'	-5.76	119.51	127.00
24	1H	2452	C	N1-C2-N3	-5.76	115.17	119.20
24	1H	2569	G	C6-C5-N7	-5.76	126.94	130.40
54	1G	1082	G	N3-C4-C5	5.76	131.48	128.60
24	14	139	G	O5'-P-OP1	-5.76	100.52	105.70
24	14	388	G	N3-C2-N2	-5.76	115.87	119.90
24	14	774	A	O5'-P-OP1	5.76	117.61	110.70
1	13	31	G	C5-C6-O6	-5.76	125.14	128.60
24	14	2730	C	C4-C5-C6	5.76	120.28	117.40
24	1H	662	G	C5-C6-O6	5.76	132.05	128.60
24	14	396	G	N7-C8-N9	5.76	115.98	113.10
24	14	1241	A	C6-C5-N7	-5.76	128.27	132.30
24	14	2437	U	N1-C2-N3	5.76	118.35	114.90
24	1H	2436	G	N3-C2-N2	-5.75	115.87	119.90
24	1H	2490	G	C4-C5-C6	-5.75	115.35	118.80
54	1G	576	G	C6-C5-N7	-5.75	126.95	130.40
24	14	140	A	O4'-C1'-N9	5.75	112.80	108.20
24	1H	614	U	C6-N1-C2	-5.75	117.55	121.00
24	1H	2270	G	N1-C6-O6	5.75	123.35	119.90
24	1H	1819	A	C6-N1-C2	-5.75	115.15	118.60
24	14	1615	C	N3-C2-O2	5.75	125.92	121.90
24	14	1950	G	C4-N9-C1'	5.75	133.97	126.50
24	1H	713	G	N9-C4-C5	-5.75	103.10	105.40
24	1H	1283	G	N3-C4-N9	5.75	129.45	126.00
24	1H	1888	G	C2-N3-C4	5.75	114.77	111.90
24	1H	566	U	C2-N3-C4	-5.75	123.55	127.00
24	1H	1898	U	C6-N1-C2	-5.75	117.55	121.00
24	1H	2278	A	N1-C6-N6	-5.75	115.15	118.60
24	14	845	G	C2-N3-C4	-5.75	109.03	111.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
24	1H	2251	G	C8-N9-C4	-5.74	104.10	106.40
24	14	97	C	O5'-P-OP2	-5.74	100.53	105.70
24	14	438	G	C8-N9-C4	-5.74	104.10	106.40
24	14	2401	U	N1-C2-O2	-5.74	118.78	122.80
1	13	36	C	C6-N1-C2	-5.74	118.00	120.30
24	1H	1365	A	C8-N9-C4	-5.74	103.50	105.80
24	14	2610	C	P-O3'-C3'	5.74	126.59	119.70
24	1H	115	C	N3-C2-O2	5.74	125.92	121.90
24	1H	2700	C	C6-N1-C2	5.74	122.60	120.30
24	14	840	C	N1-C2-O2	-5.74	115.46	118.90
24	1H	568	U	C4-C5-C6	5.74	123.14	119.70
24	1H	575	A	N1-C6-N6	5.74	122.04	118.60
24	1H	747	U	OP1-P-O3'	5.74	117.82	105.20
24	1H	845	G	N3-C2-N2	5.74	123.91	119.90
24	1H	964	C	C2-N1-C1'	5.74	125.11	118.80
24	1H	1308	A	N1-C6-N6	-5.74	115.16	118.60
24	1H	1425	G	N1-C2-N2	-5.74	111.04	116.20
24	14	2386	C	N3-C4-N4	5.74	122.02	118.00
24	1H	214	G	C5-C6-O6	-5.73	125.16	128.60
24	1H	2329	G	N3-C4-C5	5.73	131.47	128.60
24	1H	1626	G	N7-C8-N9	5.73	115.97	113.10
24	14	1285	G	N1-C2-N2	5.73	121.36	116.20
24	14	789	A	N1-C2-N3	5.73	132.16	129.30
24	14	2024	G	C6-C5-N7	-5.73	126.96	130.40
1	13	1463	C	C6-N1-C2	-5.73	118.01	120.30
24	1H	860	U	N3-C2-O2	-5.73	118.19	122.20
24	1H	2329	G	OP1-P-OP2	5.73	128.19	119.60
54	1G	483	C	C6-N1-C2	5.73	122.59	120.30
24	14	127	A	C5-C6-N6	-5.73	119.12	123.70
1	13	652	U	C5-C6-N1	5.73	125.56	122.70
24	14	1787	A	C5-N7-C8	-5.73	101.04	103.90
22	3K	9	U	C2-N1-C1'	5.72	124.57	117.70
24	1H	591	C	C4-C5-C6	5.72	120.26	117.40
24	1H	2590	A	C8-N9-C4	5.72	108.09	105.80
24	14	934	G	O5'-P-OP2	-5.72	100.55	105.70
24	14	1902	C	C5-C4-N4	5.72	124.21	120.20
24	1H	673	C	C5-C4-N4	-5.72	116.19	120.20
24	1H	1364	G	N9-C4-C5	-5.72	103.11	105.40
24	1H	2828	C	C6-N1-C2	5.72	122.59	120.30
25	1J	116	G	N3-C4-C5	5.72	131.46	128.60
24	1H	2743	C	N1-C2-O2	-5.72	115.47	118.90
1	13	551	U	C5-C6-N1	-5.72	119.84	122.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
24	1H	2070	G	N1-C2-N3	5.72	127.33	123.90
24	1H	2430	A	C6-C5-N7	-5.72	128.30	132.30
54	1G	53	A	C5-N7-C8	-5.72	101.04	103.90
1	13	433	C	N3-C2-O2	-5.72	117.90	121.90
24	1H	1789	A	O5'-P-OP2	-5.72	100.55	105.70
54	1G	711	G	C8-N9-C4	5.72	108.69	106.40
24	1H	130	C	N3-C4-N4	5.72	122.00	118.00
24	1H	1326	U	N3-C2-O2	-5.72	118.20	122.20
54	1G	559	A	N7-C8-N9	5.72	116.66	113.80
24	14	1528	A	C4-C5-N7	5.72	113.56	110.70
24	1H	127	A	C2-N3-C4	-5.71	107.74	110.60
24	1H	501	A	N1-C2-N3	5.71	132.16	129.30
24	1H	1942	C	C6-N1-C2	-5.71	118.01	120.30
25	16	95	U	C5-C4-O4	5.71	129.33	125.90
24	1H	948	G	C5-N7-C8	-5.71	101.44	104.30
24	1H	1229(A)	G	N3-C2-N2	-5.71	115.90	119.90
24	14	310	A	O5'-P-OP1	-5.71	100.56	105.70
1	13	1158	C	C6-N1-C1'	-5.71	113.95	120.80
24	1H	136	G	C5-C6-N1	-5.71	108.65	111.50
24	1H	1911	U	N1-C2-O2	5.71	126.80	122.80
24	14	1835	G	O5'-P-OP1	5.71	117.55	110.70
24	14	2288	A	N1-C6-N6	5.71	122.03	118.60
24	14	2455	G	C4-C5-N7	5.71	113.08	110.80
24	1H	117	G	N1-C6-O6	5.71	123.32	119.90
24	1H	1013	C	C6-N1-C2	5.71	122.58	120.30
24	14	932	G	C6-C5-N7	5.71	133.82	130.40
24	14	1437	C	C6-N1-C2	-5.71	118.02	120.30
24	1H	1036	G	N9-C4-C5	-5.71	103.12	105.40
24	1H	1193	G	N9-C4-C5	-5.71	103.12	105.40
24	1H	1602	U	C4-C5-C6	5.70	123.12	119.70
24	14	528	A	O4'-C1'-N9	-5.70	103.64	108.20
24	1H	1200	C	C5-C6-N1	-5.70	118.15	121.00
24	1H	1260	G	N1-C6-O6	5.70	123.32	119.90
24	1H	459	U	N3-C4-C5	-5.70	111.18	114.60
24	1H	942	G	N3-C2-N2	-5.70	115.91	119.90
24	1H	2392	A	C4-C5-N7	5.70	113.55	110.70
54	1G	251	G	C5-C6-O6	-5.70	125.18	128.60
1	13	795	C	N1-C2-O2	-5.70	115.48	118.90
24	1H	58	G	C5-C6-N1	-5.70	108.65	111.50
24	14	2232	U	C6-N1-C1'	5.70	129.18	121.20
25	1J	89	G	C2-N3-C4	5.70	114.75	111.90
24	1H	624	C	N3-C2-O2	5.70	125.89	121.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
24	1H	2051	A	C4-C5-C6	5.70	119.85	117.00
24	1H	2246	G	OP1-P-O3'	5.70	117.73	105.20
24	1H	1751	C	N3-C2-O2	5.70	125.89	121.90
24	1H	2018	G	C8-N9-C4	-5.70	104.12	106.40
22	2K	1	G	N3-C4-N9	5.69	129.42	126.00
24	1H	2276	G	O5'-P-OP2	-5.69	100.58	105.70
24	1H	2499	C	C6-N1-C2	-5.69	118.02	120.30
24	1H	2645	G	O5'-P-OP2	-5.69	100.58	105.70
54	1G	817	C	C5-C6-N1	-5.69	118.15	121.00
24	14	1830	C	N3-C4-C5	5.69	124.18	121.90
47	F5	82	LEU	CA-CB-CG	5.69	128.40	115.30
24	1H	974	G	OP1-P-OP2	5.69	128.14	119.60
24	1H	1779	U	OP1-P-OP2	5.69	128.14	119.60
24	1H	2259	G	OP1-P-OP2	-5.69	111.06	119.60
24	1H	2589	A	C8-N9-C4	5.69	108.08	105.80
54	1G	485	G	N3-C4-N9	-5.69	122.58	126.00
24	14	863	A	C8-N9-C4	-5.69	103.52	105.80
1	13	1378	C	N1-C2-O2	-5.69	115.49	118.90
24	1H	522	G	OP1-P-OP2	-5.69	111.06	119.60
24	1H	2058	A	C8-N9-C4	-5.69	103.52	105.80
54	1G	559	A	C4-C5-C6	5.69	119.84	117.00
25	1J	95	U	N3-C2-O2	5.69	126.18	122.20
24	1H	2017	U	N3-C4-O4	5.69	123.38	119.40
24	1H	2422	A	N9-C4-C5	5.69	108.08	105.80
22	2L	15	G	C4-N9-C1'	5.69	133.90	126.50
24	14	767	U	N1-C2-N3	5.69	118.31	114.90
54	1G	815	A	C8-N9-C4	5.69	108.08	105.80
22	2L	85	A	N1-C6-N6	5.69	122.01	118.60
1	13	1357	A	O5'-P-OP2	5.69	117.52	110.70
24	1H	1226	G	N3-C4-C5	5.69	131.44	128.60
24	1H	2327	A	C5-C6-N6	5.69	128.25	123.70
24	14	177	G	C8-N9-C1'	-5.69	119.61	127.00
24	14	568	U	O5'-P-OP1	-5.69	100.58	105.70
24	1H	165	U	N3-C2-O2	-5.68	118.22	122.20
24	1H	974	G	O5'-P-OP2	-5.68	100.58	105.70
24	1H	1201	C	C5-C4-N4	-5.68	116.22	120.20
24	14	681	G	N1-C2-N3	5.68	127.31	123.90
24	14	786	C	C5-C6-N1	-5.68	118.16	121.00
24	14	1319	G	N7-C8-N9	5.68	115.94	113.10
24	14	2594	C	C5-C4-N4	-5.68	116.22	120.20
1	13	651	C	C6-N1-C2	-5.68	118.03	120.30
24	1H	140	A	C5-C6-N6	-5.68	119.16	123.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
24	1H	1912	A	P-O3'-C3'	5.68	126.52	119.70
24	1H	1943	U	O5'-P-OP2	-5.68	100.59	105.70
24	1H	2674	G	N1-C2-N2	5.68	121.31	116.20
24	14	461	C	N3-C4-C5	-5.68	119.63	121.90
24	1H	391	G	N1-C6-O6	5.68	123.31	119.90
25	16	60	C	C5-C6-N1	5.68	123.84	121.00
24	1H	1672	C	N3-C2-O2	5.68	125.88	121.90
24	14	1988	C	N3-C2-O2	5.68	125.88	121.90
24	14	2369	A	C8-N9-C4	-5.68	103.53	105.80
24	14	2518	A	N7-C8-N9	5.68	116.64	113.80
24	14	73	A	C8-N9-C4	-5.68	103.53	105.80
1	13	266	G	O4'-C1'-N9	-5.68	103.66	108.20
24	1H	955	C	OP1-P-O3'	5.68	117.69	105.20
54	1G	1519	A	N1-C6-N6	-5.68	115.19	118.60
24	14	531	C	C6-N1-C2	5.68	122.57	120.30
24	14	593	G	C6-N1-C2	-5.68	121.69	125.10
24	14	1022	G	C4-C5-N7	-5.68	108.53	110.80
24	14	1313	U	C6-N1-C2	-5.68	117.59	121.00
1	13	320	C	C6-N1-C2	5.67	122.57	120.30
24	1H	557	U	C5-C6-N1	-5.67	119.86	122.70
24	1H	1320	C	C6-N1-C2	-5.67	118.03	120.30
24	1H	1950	G	N3-C4-N9	-5.67	122.59	126.00
24	1H	2618	G	N1-C6-O6	-5.67	116.50	119.90
24	14	207	A	N1-C6-N6	5.67	122.00	118.60
1	13	452	A	N7-C8-N9	-5.67	110.96	113.80
24	1H	944	G	O5'-P-OP2	-5.67	100.59	105.70
24	14	864	G	C8-N9-C4	-5.67	104.13	106.40
24	1H	2686	G	C8-N9-C4	-5.67	104.13	106.40
24	14	673	C	O5'-P-OP2	-5.67	100.59	105.70
1	13	15	G	C8-N9-C1'	-5.67	119.63	127.00
1	13	789	U	N1-C2-N3	5.67	118.30	114.90
24	1H	1366	A	C6-C5-N7	-5.67	128.33	132.30
24	1H	2018	G	O5'-P-OP2	-5.67	100.60	105.70
24	14	569	U	C6-N1-C2	5.67	124.40	121.00
24	14	652	C	N1-C2-O2	-5.67	115.50	118.90
1	13	689	C	N3-C4-C5	-5.67	119.63	121.90
24	1H	791	C	OP2-P-O3'	5.67	117.67	105.20
24	1H	1517	G	OP1-P-O3'	5.67	117.67	105.20
24	1H	1663	C	C5-C6-N1	-5.67	118.17	121.00
54	1G	1406	U	N3-C2-O2	-5.67	118.23	122.20
24	14	204	A	N1-C2-N3	5.67	132.13	129.30
24	14	2573	C	N3-C4-N4	5.67	121.97	118.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	13	221	C	C6-N1-C2	-5.67	118.03	120.30
24	1H	923	C	N3-C4-C5	-5.67	119.63	121.90
24	14	1500	G	N3-C4-N9	5.67	129.40	126.00
24	14	1698	A	N1-C6-N6	5.67	122.00	118.60
24	14	1770	G	N1-C6-O6	5.67	123.30	119.90
1	13	575	G	N3-C2-N2	5.67	123.86	119.90
24	1H	1373	A	C5-N7-C8	5.67	106.73	103.90
24	1H	473	G	N1-C2-N2	-5.66	111.10	116.20
24	1H	1415	U	N3-C2-O2	-5.66	118.24	122.20
24	1H	2232	U	C6-N1-C1'	5.66	129.13	121.20
54	1G	747	C	C6-N1-C2	5.66	122.56	120.30
24	14	177	G	N3-C4-N9	5.66	129.40	126.00
24	14	457	A	C8-N9-C4	-5.66	103.53	105.80
24	1H	662	G	OP1-P-OP2	5.66	128.09	119.60
24	14	803	U	C2-N3-C4	-5.66	123.60	127.00
24	14	1979	C	O5'-P-OP2	-5.66	100.60	105.70
1	13	888	G	C8-N9-C1'	-5.66	119.64	127.00
54	1G	197	A	C6-C5-N7	-5.66	128.34	132.30
24	14	530	G	C6-C5-N7	-5.66	127.00	130.40
1	13	1097	C	C6-N1-C2	-5.66	118.04	120.30
1	13	1470	G	N3-C2-N2	-5.66	115.94	119.90
24	1H	822	U	N3-C2-O2	-5.66	118.24	122.20
24	1H	620	G	N1-C6-O6	5.66	123.29	119.90
24	1H	1799	G	C2-N3-C4	5.66	114.73	111.90
24	1H	2597	G	N3-C4-N9	5.66	129.39	126.00
24	1H	1963	U	C5-C6-N1	5.66	125.53	122.70
24	14	265	A	N1-C6-N6	5.66	121.99	118.60
24	1H	132	G	C5-C6-N1	-5.65	108.67	111.50
24	1H	677	A	N1-C2-N3	5.65	132.13	129.30
24	14	1559	G	C8-N9-C4	5.65	108.66	106.40
24	1H	678	C	C6-N1-C2	5.65	122.56	120.30
54	1G	969	A	N1-C6-N6	-5.65	115.21	118.60
54	1G	1126	U	P-O3'-C3'	5.65	126.48	119.70
24	14	2426	A	C5-N7-C8	-5.65	101.08	103.90
1	13	541	G	C5-C6-O6	-5.65	125.21	128.60
45	H8	61	LEU	CA-CB-CG	5.65	128.29	115.30
24	1H	322	A	O5'-P-OP2	5.65	117.48	110.70
24	1H	2597	G	N3-C2-N2	5.65	123.85	119.90
24	14	669	G	N9-C4-C5	5.65	107.66	105.40
24	14	1142(A)	A	C5-N7-C8	-5.65	101.08	103.90
24	1H	28	A	N7-C8-N9	5.65	116.62	113.80
24	1H	2866	U	O4'-C1'-N1	5.65	112.72	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
24	14	797	C	N3-C4-N4	5.65	121.95	118.00
24	14	2232	U	OP2-P-O3'	5.65	117.62	105.20
1	13	1403	C	C2-N1-C1'	-5.64	112.59	118.80
24	1H	1382	G	C8-N9-C4	5.64	108.66	106.40
24	1H	1994	C	C5-C4-N4	5.64	124.15	120.20
24	14	789	A	C2-N3-C4	-5.64	107.78	110.60
24	14	1742	C	C6-N1-C2	-5.64	118.04	120.30
24	14	2375	G	N1-C6-O6	5.64	123.29	119.90
24	1H	382	G	N9-C4-C5	-5.64	103.14	105.40
24	1H	2588	G	N1-C6-O6	-5.64	116.51	119.90
24	1H	2644	G	N3-C2-N2	-5.64	115.95	119.90
18	9A	31	LEU	CA-CB-CG	5.64	128.28	115.30
24	14	1314	C	N3-C4-C5	5.64	124.16	121.90
24	14	2318	G	N7-C8-N9	5.64	115.92	113.10
24	1H	568	U	N1-C2-O2	-5.64	118.85	122.80
24	14	2386	C	C5-C6-N1	-5.64	118.18	121.00
24	1H	693	C	N1-C2-O2	-5.64	115.52	118.90
24	14	926	A	C5-C6-N6	-5.64	119.19	123.70
24	14	1241	A	C6-N1-C2	5.64	121.98	118.60
24	1H	209	C	N3-C4-C5	5.64	124.16	121.90
28	29	63	LEU	CA-CB-CG	-5.64	102.33	115.30
1	13	496	A	N1-C6-N6	-5.64	115.22	118.60
24	1H	1364	G	C6-C5-N7	-5.64	127.02	130.40
24	14	1297	C	O5'-P-OP2	-5.64	100.63	105.70
24	14	2198	A	O4'-C1'-N9	5.64	112.71	108.20
25	1J	102	G	N7-C8-N9	-5.64	110.28	113.10
24	1H	31	C	C5-C4-N4	-5.63	116.26	120.20
24	1H	1850	G	N3-C2-N2	-5.63	115.96	119.90
24	1H	1927	A	N1-C6-N6	-5.63	115.22	118.60
24	1H	2451	A	C8-N9-C4	-5.63	103.55	105.80
24	14	599	G	N9-C4-C5	-5.63	103.15	105.40
24	14	741	G	OP1-P-OP2	-5.63	111.15	119.60
24	14	1387	C	C6-N1-C2	-5.63	118.05	120.30
1	13	111	G	N9-C4-C5	-5.63	103.15	105.40
24	1H	387	U	O5'-P-OP2	-5.63	100.63	105.70
24	1H	1559	G	C4-C5-N7	5.63	113.05	110.80
25	16	13	A	O5'-P-OP2	-5.63	100.63	105.70
24	14	1924	C	N3-C2-O2	5.63	125.84	121.90
24	14	2278	A	C6-N1-C2	-5.63	115.22	118.60
24	1H	1657	C	OP1-P-O3'	5.63	117.59	105.20
24	1H	2273	A	N1-C2-N3	-5.63	126.48	129.30
24	14	1779	U	N3-C4-O4	5.63	123.34	119.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
24	14	2050	C	N3-C4-C5	-5.63	119.65	121.90
24	14	921	G	C8-N9-C4	-5.63	104.15	106.40
24	14	956	G	N1-C6-O6	5.63	123.28	119.90
24	14	2074	U	OP2-P-O3'	5.63	117.58	105.20
24	14	740	U	OP2-P-O3'	5.63	117.58	105.20
24	1H	575	A	C5-N7-C8	5.62	106.71	103.90
24	14	1652	A	O5'-P-OP1	-5.62	100.64	105.70
24	1H	678	C	C5-C6-N1	-5.62	118.19	121.00
24	1H	727	A	N1-C6-N6	5.62	121.97	118.60
24	1H	1601	G	OP1-P-O3'	5.62	117.57	105.20
24	14	971	C	OP2-P-O3'	5.62	117.57	105.20
1	13	1519	A	N9-C4-C5	5.62	108.05	105.80
24	1H	845	G	N3-C4-C5	5.62	131.41	128.60
54	1G	671	G	O5'-P-OP2	-5.62	100.64	105.70
24	1H	584	C	N3-C2-O2	5.62	125.83	121.90
24	14	1474	C	C5-C6-N1	5.62	123.81	121.00
54	1G	108	G	C8-N9-C4	-5.62	104.15	106.40
24	14	138	G	C4-N9-C1'	5.62	133.80	126.50
24	14	855	G	N7-C8-N9	5.62	115.91	113.10
24	14	2261	C	O5'-P-OP1	5.62	117.44	110.70
1	13	23	C	C5-C6-N1	5.62	123.81	121.00
24	1H	262	A	C5-C6-N6	-5.62	119.21	123.70
24	1H	529	A	C5-C6-N6	-5.62	119.21	123.70
54	1G	353	A	C5-N7-C8	-5.62	101.09	103.90
24	14	447	A	O5'-P-OP1	-5.62	100.65	105.70
24	14	511	U	C6-N1-C2	-5.62	117.63	121.00
24	14	1796	U	O5'-P-OP1	-5.62	100.65	105.70
24	14	2263	C	N1-C2-O2	5.62	122.27	118.90
24	1H	1204	A	O4'-C1'-N9	5.61	112.69	108.20
24	1H	2199	A	OP2-P-O3'	5.61	117.55	105.20
24	1H	2429	G	OP2-P-O3'	5.61	117.55	105.20
24	14	191	A	OP1-P-O3'	-5.61	92.85	105.20
24	14	458	G	O4'-C1'-N9	5.61	112.69	108.20
24	14	472	A	C6-N1-C2	-5.61	115.23	118.60
24	14	2542	A	C6-C5-N7	5.61	136.23	132.30
24	1H	1356	G	C4-C5-N7	5.61	113.04	110.80
24	1H	1752	C	N3-C2-O2	5.61	125.83	121.90
24	1H	1931	U	O5'-P-OP1	5.61	117.43	110.70
24	1H	2280	G	OP1-P-O3'	5.61	117.54	105.20
24	14	1823	G	N3-C4-C5	5.61	131.41	128.60
24	14	2776	A	C8-N9-C4	-5.61	103.56	105.80
24	1H	2362	G	N9-C4-C5	-5.61	103.16	105.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
24	14	1603	A	N7-C8-N9	5.61	116.60	113.80
25	1J	72	G	C8-N9-C4	5.61	108.64	106.40
24	1H	846	C	O5'-P-OP2	-5.61	100.65	105.70
24	1H	1963	U	C6-N1-C2	-5.61	117.64	121.00
24	1H	2705	A	N9-C4-C5	-5.61	103.56	105.80
53	M5	32	LEU	CA-CB-CG	5.61	128.20	115.30
1	13	435	C	C5-C6-N1	5.61	123.80	121.00
24	1H	181	A	N1-C6-N6	-5.61	115.24	118.60
24	14	2685	G	N7-C8-N9	-5.61	110.30	113.10
1	13	326	G	C4-C5-N7	-5.60	108.56	110.80
1	13	913	A	C8-N9-C4	-5.60	103.56	105.80
24	1H	669	G	O5'-P-OP2	-5.60	100.66	105.70
24	1H	2714	G	C5-C6-O6	-5.60	125.24	128.60
1	13	965	A	N1-C6-N6	5.60	121.96	118.60
24	1H	382	G	C5-C6-O6	-5.60	125.24	128.60
24	1H	1426	G	N3-C4-N9	5.60	129.36	126.00
24	1H	2875	C	N1-C2-O2	5.60	122.26	118.90
24	14	747	U	N1-C2-N3	-5.60	111.54	114.90
1	13	656	C	C5-C6-N1	5.60	123.80	121.00
24	1H	188	G	N9-C4-C5	-5.60	103.16	105.40
24	1H	1125	G	N7-C8-N9	-5.60	110.30	113.10
54	1G	61	G	N1-C6-O6	5.60	123.26	119.90
54	1G	687	A	C8-N9-C4	-5.60	103.56	105.80
24	1H	2277	G	N3-C4-N9	5.60	129.36	126.00
24	1H	848	G	N3-C2-N2	5.60	123.82	119.90
24	14	623	G	N1-C6-O6	5.60	123.26	119.90
24	1H	273(F)	C	N3-C2-O2	-5.59	117.98	121.90
24	1H	1182	A	N7-C8-N9	5.59	116.60	113.80
27	11	235	GLY	N-CA-C	5.59	127.08	113.10
24	1H	719	C	N1-C2-O2	5.59	122.26	118.90
24	1H	1648	C	C5-C6-N1	-5.59	118.20	121.00
42	E8	64	MET	N-CA-C	5.59	126.10	111.00
24	1H	138	G	C4-C5-N7	5.59	113.04	110.80
24	1H	596	G	N9-C4-C5	5.59	107.64	105.40
24	1H	2243	U	N3-C2-O2	-5.59	118.29	122.20
24	1H	2489	G	C5-C6-O6	-5.59	125.25	128.60
24	14	409	C	C6-N1-C2	5.59	122.54	120.30
24	14	656	G	N1-C6-O6	5.59	123.25	119.90
24	14	1516	U	C5-C4-O4	5.59	129.25	125.90
24	1H	230	U	O5'-P-OP2	-5.59	100.67	105.70
24	1H	2554	U	C5-C4-O4	-5.59	122.55	125.90
24	1H	2582	G	N3-C4-C5	-5.59	125.81	128.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
24	14	2598	A	C8-N9-C4	5.59	108.04	105.80
24	1H	2004	G	C4-C5-N7	5.59	113.03	110.80
24	1H	2457	U	O5'-P-OP2	-5.59	100.67	105.70
24	14	1769	G	C6-C5-N7	-5.59	127.05	130.40
24	14	1775	U	N3-C4-O4	-5.59	115.49	119.40
24	1H	124	G	N9-C4-C5	-5.59	103.17	105.40
24	1H	2499	C	O5'-P-OP1	5.59	117.40	110.70
24	14	178	G	O5'-P-OP1	-5.59	100.67	105.70
24	14	751	A	C6-N1-C2	-5.59	115.25	118.60
24	1H	2272	U	O5'-P-OP1	5.58	117.40	110.70
24	14	724	U	O5'-P-OP1	-5.58	100.67	105.70
24	14	784	A	C5-C6-N6	5.58	128.17	123.70
24	14	1758	G	N3-C4-N9	-5.58	122.65	126.00
24	14	2361	A	C2-N3-C4	-5.58	107.81	110.60
24	1H	758	C	N3-C4-C5	5.58	124.13	121.90
24	1H	2457	U	C4-C5-C6	-5.58	116.35	119.70
24	14	270(K)	C	N1-C2-O2	5.58	122.25	118.90
24	14	780	G	C2-N3-C4	-5.58	109.11	111.90
24	14	1646	C	OP1-P-O3'	5.58	117.48	105.20
24	14	2250	G	C8-N9-C4	-5.58	104.17	106.40
24	14	2390	U	O5'-P-OP1	-5.58	100.67	105.70
24	1H	247	G	N3-C2-N2	5.58	123.81	119.90
24	1H	1313	U	N3-C4-C5	-5.58	111.25	114.60
24	1H	2024	G	OP2-P-O3'	5.58	117.48	105.20
24	1H	2072	G	N1-C6-O6	-5.58	116.55	119.90
24	1H	2589	A	C5-C6-N6	-5.58	119.23	123.70
24	14	747	U	N3-C2-O2	5.58	126.11	122.20
24	14	1208	C	C5-C6-N1	5.58	123.79	121.00
24	1H	199	A	C2-N3-C4	5.58	113.39	110.60
24	1H	728	G	C5-C6-O6	-5.58	125.25	128.60
32	61	110	ASP	C-N-CA	5.58	145.43	122.00
1	13	795	C	C6-N1-C1'	5.58	127.49	120.80
24	1H	1254	A	C8-N9-C4	5.58	108.03	105.80
24	1H	2700	C	C5-C6-N1	-5.58	118.21	121.00
24	14	2561	A	OP1-P-OP2	5.58	127.97	119.60
24	1H	15	G	N1-C6-O6	5.58	123.25	119.90
24	1H	141	A	C6-C5-N7	-5.58	128.40	132.30
54	1G	568	G	C8-N9-C4	-5.58	104.17	106.40
54	1G	1500	A	C5-N7-C8	-5.58	101.11	103.90
20	BA	10	LEU	CA-CB-CG	5.58	128.12	115.30
24	14	1021	A	C5-C6-N1	-5.58	114.91	117.70
24	14	2069	G	N1-C6-O6	-5.58	116.56	119.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
24	14	2441	C	N1-C2-O2	5.58	122.25	118.90
24	1H	805	G	OP1-P-O3'	5.57	117.46	105.20
24	1H	1694	C	OP2-P-O3'	5.57	117.46	105.20
24	1H	2318	G	C8-N9-C4	-5.57	104.17	106.40
24	14	2445	G	C6-C5-N7	-5.57	127.06	130.40
24	1H	1962	C	C5-C6-N1	5.57	123.79	121.00
24	14	603	A	N7-C8-N9	5.57	116.59	113.80
24	14	2228	G	N1-C6-O6	-5.57	116.56	119.90
24	1H	26	G	C2-N3-C4	5.57	114.69	111.90
24	1H	1425	G	N3-C2-N2	5.57	123.80	119.90
24	1H	1989	G	C5-C6-N1	-5.57	108.71	111.50
24	14	202	U	OP1-P-OP2	5.57	127.96	119.60
24	14	453	C	C5-C6-N1	-5.57	118.22	121.00
24	14	676	A	C6-C5-N7	-5.57	128.40	132.30
24	14	1143	A	O5'-P-OP2	-5.57	100.69	105.70
1	13	11	G	O5'-P-OP1	-5.57	100.69	105.70
24	1H	575	A	O5'-P-OP1	-5.57	100.69	105.70
45	H8	24	LEU	CA-CB-CG	5.57	128.11	115.30
54	1G	774	G	N3-C4-C5	5.57	131.38	128.60
24	14	1914	C	C6-N1-C2	-5.57	118.07	120.30
1	13	509	A	P-O3'-C3'	5.57	126.38	119.70
24	1H	1308	A	C2-N3-C4	-5.57	107.82	110.60
25	16	89	G	C8-N9-C4	-5.57	104.17	106.40
44	G8	81	LYS	C-N-CD	-5.57	108.35	120.60
24	14	1564	C	N1-C2-N3	5.57	123.10	119.20
24	1H	942	G	OP1-P-O3'	5.57	117.44	105.20
24	1H	1950	G	N1-C6-O6	5.57	123.24	119.90
24	1H	2578	G	OP2-P-O3'	5.57	117.44	105.20
54	1G	742	G	N1-C6-O6	5.57	123.24	119.90
24	14	194	G	C8-N9-C4	5.56	108.63	106.40
24	14	494	G	C5-C6-O6	-5.56	125.26	128.60
1	13	1519	A	C5-C6-N1	-5.56	114.92	117.70
24	1H	119	A	OP1-P-O3'	5.56	117.44	105.20
24	1H	2360	A	C5-C6-N1	-5.56	114.92	117.70
24	14	1449(A)	G	N1-C2-N3	5.56	127.24	123.90
24	14	2365	G	N3-C4-N9	5.56	129.34	126.00
24	14	2502	G	C6-C5-N7	-5.56	127.06	130.40
24	1H	2271	G	N3-C4-C5	-5.56	125.82	128.60
24	14	74	A	C4-C5-C6	5.56	119.78	117.00
24	14	774	A	N9-C4-C5	-5.56	103.58	105.80
24	14	2762	G	C6-C5-N7	-5.56	127.06	130.40
24	1H	853	G	N7-C8-N9	-5.56	110.32	113.10

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
24	1H	2446	G	N3-C4-C5	5.56	131.38	128.60
54	1G	1346	A	OP2-P-O3'	5.56	117.43	105.20
54	1G	1455	G	N1-C6-O6	5.56	123.23	119.90
24	14	177	G	C4-N9-C1'	5.56	133.73	126.50
24	14	472	A	N9-C4-C5	5.56	108.02	105.80
1	13	749	C	C2-N1-C1'	5.56	124.91	118.80
24	1H	1307	A	C5-C6-N6	-5.56	119.25	123.70
24	1H	1766	U	C5-C6-N1	-5.56	119.92	122.70
24	1H	2247	A	N1-C2-N3	5.56	132.08	129.30
25	16	102	G	N3-C4-C5	5.56	131.38	128.60
24	14	1289	C	N1-C2-O2	-5.56	115.57	118.90
24	14	1950	G	N3-C2-N2	5.56	123.79	119.90
24	14	2251	G	C4-N9-C1'	5.56	133.73	126.50
24	1H	265	A	C5-N7-C8	-5.56	101.12	103.90
24	1H	780	G	C4-N9-C1'	5.56	133.72	126.50
24	1H	2532	G	N1-C6-O6	5.56	123.23	119.90
24	14	1976	U	N3-C4-C5	-5.56	111.27	114.60
24	14	787	U	O5'-P-OP1	-5.55	100.70	105.70
1	13	1065	U	P-O3'-C3'	5.55	126.36	119.70
24	14	453	C	N3-C2-O2	5.55	125.78	121.90
24	14	1254	A	C6-N1-C2	-5.55	115.27	118.60
24	14	1383	C	N1-C2-O2	-5.55	115.57	118.90
24	1H	474	G	N9-C4-C5	5.55	107.62	105.40
24	1H	2540	C	C2-N3-C4	-5.55	117.13	119.90
24	1H	2766	G	N9-C4-C5	-5.55	103.18	105.40
22	2L	26	G	N3-C4-C5	5.55	131.38	128.60
24	14	1378	A	N1-C2-N3	-5.55	126.53	129.30
1	13	575	G	N1-C6-O6	-5.55	116.57	119.90
1	13	435	C	C6-N1-C2	-5.55	118.08	120.30
1	13	1502	A	C6-N1-C2	-5.55	115.27	118.60
24	1H	2588	G	C5-C6-N1	5.55	114.27	111.50
24	14	786	C	C2-N3-C4	-5.55	117.13	119.90
24	14	2598	A	OP2-P-O3'	5.55	117.40	105.20
1	13	353	A	OP2-P-O3'	5.54	117.40	105.20
24	1H	1390	U	OP1-P-O3'	5.54	117.40	105.20
24	1H	2347	C	OP2-P-O3'	5.54	117.40	105.20
24	1H	1314	C	C6-N1-C1'	-5.54	114.15	120.80
24	1H	1393	A	OP1-P-O3'	5.54	117.40	105.20
54	1G	1112	C	C6-N1-C2	-5.54	118.08	120.30
54	1G	1502	A	N7-C8-N9	5.54	116.57	113.80
24	14	1968	G	C5-N7-C8	-5.54	101.53	104.30
24	1H	260	G	N1-C2-N2	5.54	121.19	116.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
24	1H	436	C	C6-N1-C2	5.54	122.52	120.30
24	1H	1742	C	C6-N1-C2	-5.54	118.08	120.30
24	1H	2509	G	N3-C4-N9	5.54	129.32	126.00
24	1H	2571	C	C6-N1-C1'	-5.54	114.15	120.80
24	14	1801	G	O5'-P-OP1	-5.54	100.71	105.70
24	14	2598	A	N1-C6-N6	5.54	121.92	118.60
24	1H	1528	A	C4-C5-N7	5.54	113.47	110.70
24	1H	1790	C	N3-C2-O2	5.54	125.78	121.90
54	1G	115	G	P-O3'-C3'	5.54	126.35	119.70
24	1H	65	C	C6-N1-C2	-5.54	118.08	120.30
24	1H	788	A	OP2-P-O3'	5.54	117.38	105.20
24	1H	1826	G	N1-C6-O6	5.54	123.22	119.90
24	1H	2585	U	N3-C4-O4	5.54	123.28	119.40
54	1G	122	G	O5'-P-OP1	-5.54	100.72	105.70
54	1G	703	G	N3-C4-C5	-5.54	125.83	128.60
22	2L	6	G	C8-N9-C4	5.54	108.61	106.40
24	14	632	A	N1-C6-N6	5.54	121.92	118.60
24	14	1254	A	N1-C6-N6	5.54	121.92	118.60
54	1G	34	C	C6-N1-C2	5.54	122.52	120.30
24	14	1203	G	N1-C6-O6	-5.54	116.58	119.90
24	14	1842	G	C8-N9-C4	5.54	108.61	106.40
24	1H	2504	U	N1-C2-O2	5.54	126.67	122.80
53	Q8	34	TRP	CA-CB-CG	-5.54	103.18	113.70
24	14	1368	G	N1-C6-O6	-5.54	116.58	119.90
24	14	2595	G	C5-C6-N1	5.54	114.27	111.50
24	1H	70	G	OP1-P-OP2	-5.53	111.30	119.60
24	1H	458	G	C5-C6-O6	5.53	131.92	128.60
24	1H	2016	U	C2-N1-C1'	-5.53	111.06	117.70
24	14	1287	A	C8-N9-C4	-5.53	103.59	105.80
24	14	2388	A	O5'-P-OP2	-5.53	100.72	105.70
24	14	2709	G	N9-C4-C5	-5.53	103.19	105.40
24	1H	458	G	C8-N9-C4	-5.53	104.19	106.40
24	14	623	G	C5-C6-O6	-5.53	125.28	128.60
1	13	990	C	C5-C6-N1	5.53	123.77	121.00
24	1H	512	G	C5-C6-O6	-5.53	125.28	128.60
24	1H	578	A	O5'-P-OP1	5.53	117.34	110.70
24	1H	788	A	C5-C6-N1	-5.53	114.93	117.70
24	1H	943	U	N3-C2-O2	5.53	126.07	122.20
24	14	1156	A	O4'-C1'-N9	-5.53	103.78	108.20
24	14	1679	U	O5'-P-OP1	-5.53	100.72	105.70
25	1J	114	G	C4-N9-C1'	-5.53	119.31	126.50
24	1H	465	G	C8-N9-C4	5.53	108.61	106.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
24	1H	126	A	C8-N9-C4	-5.53	103.59	105.80
24	1H	202	U	C4-C5-C6	-5.53	116.38	119.70
24	1H	792	G	O4'-C1'-N9	-5.53	103.78	108.20
24	1H	828	U	N3-C4-C5	-5.53	111.28	114.60
24	1H	1310	G	C5-C6-O6	-5.53	125.28	128.60
24	1H	1321	A	N1-C2-N3	5.53	132.06	129.30
24	1H	1629	U	C5-C6-N1	5.53	125.46	122.70
54	1G	699	C	O5'-P-OP1	-5.53	100.73	105.70
24	14	442	G	C4-N9-C1'	5.53	133.69	126.50
24	14	2324	C	C6-N1-C2	5.53	122.51	120.30
24	1H	582	G	C4-C5-N7	5.53	113.01	110.80
24	14	191	A	N3-C4-N9	-5.53	122.98	127.40
24	14	961	C	O5'-P-OP1	-5.53	100.73	105.70
24	14	1961	C	O5'-P-OP1	5.53	117.33	110.70
24	1H	92	G	N1-C6-O6	5.52	123.21	119.90
24	1H	773	U	N1-C2-O2	-5.52	118.93	122.80
24	1H	1379	A	C5-N7-C8	-5.52	101.14	103.90
24	14	2501	C	C6-N1-C2	5.52	122.51	120.30
24	1H	788	A	N9-C4-C5	-5.52	103.59	105.80
42	E8	19	LEU	CB-CG-CD2	-5.52	101.61	111.00
24	14	454	A	C8-N9-C4	5.52	108.01	105.80
24	14	1712	C	C6-N1-C2	-5.52	118.09	120.30
24	14	2365	G	OP2-P-O3'	5.52	117.35	105.20
24	14	2480	C	C6-N1-C2	-5.52	118.09	120.30
24	1H	664	C	O5'-P-OP2	-5.52	100.73	105.70
24	1H	1365	A	C5-C6-N1	-5.52	114.94	117.70
24	1H	1728	G	C4-C5-N7	5.52	113.01	110.80
54	1G	337	C	C5-C4-N4	-5.52	116.34	120.20
24	14	1513	C	C6-N1-C2	-5.52	118.09	120.30
24	1H	829	A	C8-N9-C4	5.52	108.01	105.80
24	1H	2609	U	O5'-P-OP1	-5.52	100.73	105.70
24	14	952	G	OP1-P-O3'	5.52	117.34	105.20
24	14	2060	A	N9-C4-C5	5.52	108.01	105.80
24	14	2253	G	O5'-P-OP1	5.52	117.32	110.70
24	1H	1253	A	N1-C2-N3	-5.51	126.54	129.30
24	1H	1287	A	C8-N9-C4	-5.51	103.59	105.80
24	1H	2420	C	N3-C4-C5	5.51	124.11	121.90
24	14	929	G	C4-C5-N7	5.51	113.01	110.80
24	14	945	A	C8-N9-C4	5.51	108.01	105.80
24	14	2288	A	N9-C4-C5	-5.51	103.59	105.80
24	14	2530	A	N1-C6-N6	5.51	121.91	118.60
24	1H	1349	A	N3-C4-C5	5.51	130.66	126.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
24	1H	2449	U	N3-C4-O4	5.51	123.26	119.40
24	1H	2509	G	C6-C5-N7	-5.51	127.09	130.40
24	14	270(G)	C	C5-C6-N1	5.51	123.76	121.00
24	14	1474	C	O5'-P-OP1	-5.51	100.74	105.70
24	14	2250	G	C5-C6-O6	5.51	131.91	128.60
24	1H	70	G	N3-C4-C5	-5.51	125.84	128.60
24	1H	1251	C	C5-C6-N1	-5.51	118.24	121.00
24	1H	2274	A	N9-C4-C5	-5.51	103.59	105.80
24	14	679	C	C5-C6-N1	-5.51	118.24	121.00
24	1H	777	A	C5-N7-C8	-5.51	101.14	103.90
24	1H	1603	A	C8-N9-C4	-5.51	103.60	105.80
24	1H	2241	A	N1-C2-N3	5.51	132.05	129.30
24	1H	2540	C	C5-C6-N1	-5.51	118.25	121.00
24	1H	2550	G	N1-C2-N2	5.51	121.16	116.20
24	1H	2574	G	N1-C6-O6	5.51	123.21	119.90
24	14	197	A	N3-C4-C5	5.51	130.66	126.80
24	14	452	G	C8-N9-C4	5.51	108.60	106.40
24	14	1899	G	C8-N9-C4	-5.51	104.20	106.40
27	19	43	ARG	CG-CD-NE	5.51	123.37	111.80
1	13	1084	G	N3-C4-C5	-5.51	125.85	128.60
24	1H	2012	G	N9-C4-C5	-5.51	103.20	105.40
24	1H	2257	U	OP2-P-O3'	5.51	117.32	105.20
24	14	1135	C	N3-C2-O2	-5.51	118.04	121.90
24	1H	1829	A	OP1-P-OP2	5.51	127.86	119.60
24	1H	2430	A	C4-C5-N7	5.51	113.45	110.70
54	1G	1528	U	C5-C6-N1	-5.51	119.95	122.70
24	14	1187	G	N3-C2-N2	-5.51	116.05	119.90
24	1H	931	G	N3-C4-C5	-5.50	125.85	128.60
24	1H	978	G	C5-C6-N1	-5.50	108.75	111.50
24	1H	1364	G	C4-C5-N7	5.50	113.00	110.80
24	1H	1996	C	N3-C4-N4	-5.50	114.15	118.00
24	1H	2288	A	N1-C6-N6	5.50	121.90	118.60
54	1G	943	U	O5'-P-OP1	-5.50	100.75	105.70
24	14	494	G	C6-C5-N7	-5.50	127.10	130.40
24	14	798	G	N1-C6-O6	5.50	123.20	119.90
1	13	806	C	N3-C2-O2	-5.50	118.05	121.90
1	13	1521	G	N1-C6-O6	5.50	123.20	119.90
24	1H	2288	A	C5-C6-N6	-5.50	119.30	123.70
25	1J	81	G	C5-N7-C8	-5.50	101.55	104.30
24	1H	1379	A	N7-C8-N9	5.50	116.55	113.80
23	4K	19	A	O4'-C1'-N9	5.50	112.60	108.20
24	1H	541	C	N3-C4-C5	-5.50	119.70	121.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
24	1H	1123	C	N3-C4-C5	-5.50	119.70	121.90
24	1H	2713	A	N3-C4-C5	5.50	130.65	126.80
24	1H	2737	G	C4-C5-N7	5.50	113.00	110.80
54	1G	758	G	C5-C6-O6	-5.50	125.30	128.60
24	14	2056	G	N1-C6-O6	5.50	123.20	119.90
24	14	2284	C	C6-N1-C2	5.50	122.50	120.30
1	13	13	U	C5-C6-N1	-5.50	119.95	122.70
24	1H	204	A	N9-C4-C5	5.50	108.00	105.80
1	13	1528	U	C5-C6-N1	-5.49	119.95	122.70
24	1H	1674	G	N7-C8-N9	5.49	115.85	113.10
54	1G	1394	A	N1-C6-N6	-5.49	115.30	118.60
24	1H	735	A	C8-N9-C4	5.49	108.00	105.80
24	1H	2686	G	N3-C4-C5	-5.49	125.85	128.60
24	14	2258	C	C5-C4-N4	-5.49	116.36	120.20
24	14	2592	G	C2-N3-C4	5.49	114.65	111.90
24	1H	132	G	C8-N9-C1'	-5.49	119.86	127.00
24	1H	1637	A	N9-C4-C5	5.49	108.00	105.80
54	1G	53	A	C5-C6-N6	-5.49	119.31	123.70
54	1G	665	A	OP1-P-OP2	5.49	127.83	119.60
24	14	452	G	O5'-P-OP2	-5.49	100.76	105.70
1	13	812	C	C2-N3-C4	5.49	122.64	119.90
24	1H	377	C	C6-N1-C2	5.49	122.50	120.30
54	1G	950	U	C5-C6-N1	5.49	125.44	122.70
24	14	528	A	N7-C8-N9	5.49	116.54	113.80
42	A5	19	LEU	CA-CB-CG	-5.49	102.68	115.30
24	1H	1187	G	OP2-P-O3'	5.49	117.27	105.20
24	1H	2734	A	C8-N9-C4	5.49	107.99	105.80
54	1G	50	A	C2-N3-C4	-5.49	107.86	110.60
24	14	603	A	N1-C6-N6	5.49	121.89	118.60
1	13	789	U	C4-C5-C6	5.48	122.99	119.70
24	1H	1620	G	C5-C6-O6	-5.48	125.31	128.60
24	14	2860	A	N1-C6-N6	5.48	121.89	118.60
24	1H	1804	C	C5-C4-N4	-5.48	116.36	120.20
24	14	1586	A	N7-C8-N9	5.48	116.54	113.80
24	14	1925	C	C6-N1-C2	-5.48	118.11	120.30
24	14	2271	G	OP2-P-O3'	5.48	117.26	105.20
1	13	890	G	O4'-C1'-N9	5.48	112.58	108.20
24	1H	772	C	C4-C5-C6	5.48	120.14	117.40
24	1H	2674	G	C4-C5-N7	-5.48	108.61	110.80
54	1G	1415	G	N1-C6-O6	5.48	123.19	119.90
24	1H	129	C	C6-N1-C2	5.48	122.49	120.30
24	1H	1300	U	N1-C2-N3	5.48	118.19	114.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
24	1H	1882	C	C6-N1-C2	-5.48	118.11	120.30
24	1H	2037	G	O5'-P-OP1	5.48	117.28	110.70
24	14	1543	A	N1-C2-N3	5.48	132.04	129.30
24	1H	330	A	N7-C8-N9	5.48	116.54	113.80
24	1H	1520	U	N3-C2-O2	-5.48	118.37	122.20
24	14	270(T)	G	N1-C6-O6	5.48	123.19	119.90
24	14	1158	C	C6-N1-C2	-5.48	118.11	120.30
24	1H	61	G	C8-N9-C4	5.48	108.59	106.40
24	1H	566	U	N3-C2-O2	5.48	126.03	122.20
24	1H	1227	A	N7-C8-N9	-5.48	111.06	113.80
24	14	1410	G	O5'-P-OP2	-5.48	100.77	105.70
24	14	1766	U	C5-C6-N1	-5.48	119.96	122.70
24	1H	728	G	C6-C5-N7	-5.47	127.11	130.40
24	1H	2620	C	C6-N1-C1'	-5.47	114.23	120.80
1	13	346	G	C4-N9-C1'	5.47	133.61	126.50
24	1H	1470	G	OP2-P-O3'	5.47	117.24	105.20
24	1H	1656	C	N3-C4-C5	-5.47	119.71	121.90
24	1H	2662	A	C5-C6-N6	-5.47	119.32	123.70
24	14	1462	C	N3-C4-C5	-5.47	119.71	121.90
24	14	2252	G	N1-C6-O6	5.47	123.18	119.90
24	14	843	G	O5'-P-OP2	-5.47	100.78	105.70
54	1G	61	G	C6-C5-N7	-5.47	127.12	130.40
24	14	356	G	N1-C6-O6	5.47	123.18	119.90
24	1H	2598	A	O5'-P-OP1	-5.47	100.78	105.70
24	14	2263	C	N3-C2-O2	-5.47	118.07	121.90
1	13	121	C	C2-N1-C1'	5.46	124.81	118.80
1	13	560	U	C5-C6-N1	5.46	125.43	122.70
24	1H	2584	U	C4-C5-C6	5.46	122.98	119.70
24	14	1662	C	N3-C2-O2	-5.46	118.08	121.90
24	14	1952	A	O5'-P-OP1	-5.46	100.78	105.70
24	1H	237	C	N1-C2-O2	-5.46	115.62	118.90
24	1H	2314	C	O5'-P-OP2	-5.46	100.78	105.70
24	14	389	G	C5-C6-O6	-5.46	125.32	128.60
24	14	2419	U	OP1-P-O3'	5.46	117.22	105.20
24	1H	1800	C	C5-C4-N4	5.46	124.02	120.20
24	1H	2065	C	OP1-P-OP2	-5.46	111.41	119.60
24	1H	2569	G	C8-N9-C4	-5.46	104.22	106.40
24	1H	2599	G	N1-C2-N3	5.46	127.18	123.90
24	14	1528	A	C6-C5-N7	-5.46	128.48	132.30
24	14	1550	C	N1-C2-O2	-5.46	115.62	118.90
24	14	1599	C	N3-C2-O2	-5.46	118.08	121.90
1	13	14	U	O5'-P-OP1	-5.46	100.79	105.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	13	1264	C	C6-N1-C2	-5.46	118.12	120.30
9	8E	47	LEU	CA-CB-CG	5.46	127.85	115.30
24	1H	1621	U	N3-C4-C5	-5.46	111.33	114.60
24	1H	1902	C	N1-C2-O2	5.46	122.17	118.90
24	1H	2822	G	C6-C5-N7	-5.46	127.12	130.40
24	1H	2855	C	C5-C6-N1	5.46	123.73	121.00
24	14	1598	C	N3-C4-C5	5.46	124.08	121.90
24	14	1773	A	O5'-P-OP2	-5.46	100.79	105.70
1	13	720	C	N1-C2-O2	5.46	122.17	118.90
1	13	1481	U	N3-C4-C5	-5.46	111.33	114.60
24	1H	150	C	N1-C2-O2	5.46	122.17	118.90
24	1H	514	A	OP1-P-O3'	5.46	117.20	105.20
24	1H	728	G	O5'-P-OP2	-5.46	100.79	105.70
24	1H	838	C	O5'-P-OP1	-5.46	100.79	105.70
24	1H	1805	U	C5-C4-O4	-5.46	122.63	125.90
1	13	53	A	N1-C6-N6	5.46	121.87	118.60
24	1H	949	C	C6-N1-C2	5.46	122.48	120.30
24	1H	954	G	OP1-P-O3'	5.46	117.20	105.20
24	1H	1018	C	C5-C6-N1	5.46	123.73	121.00
24	1H	964	C	N3-C4-N4	5.45	121.82	118.00
24	1H	1825	A	O5'-P-OP2	-5.45	100.79	105.70
24	14	1930	G	C4-N9-C1'	-5.45	119.41	126.50
24	14	2827	C	C5-C6-N1	-5.45	118.27	121.00
1	13	765	G	C6-C5-N7	-5.45	127.13	130.40
24	1H	816	C	C6-N1-C2	5.45	122.48	120.30
24	14	801	G	C4-C5-C6	-5.45	115.53	118.80
25	1J	114	G	N7-C8-N9	-5.45	110.37	113.10
1	13	915	A	N1-C6-N6	-5.45	115.33	118.60
22	2K	11	C	C5-C6-N1	5.45	123.72	121.00
24	1H	127	A	N9-C4-C5	-5.45	103.62	105.80
24	1H	1780	A	N1-C6-N6	-5.45	115.33	118.60
24	1H	2039	C	C5-C6-N1	5.45	123.72	121.00
24	14	180	G	N1-C6-O6	5.45	123.17	119.90
24	14	452	G	N9-C4-C5	-5.45	103.22	105.40
24	14	1349	A	O4'-C1'-N9	5.45	112.56	108.20
23	4K	17	G	N3-C4-N9	5.45	129.27	126.00
54	1G	1498	U	P-O3'-C3'	5.45	126.24	119.70
24	14	205	G	N3-C2-N2	5.45	123.71	119.90
24	14	1559	G	N3-C4-C5	5.45	131.32	128.60
24	14	2228	G	C2-N3-C4	5.45	114.62	111.90
1	13	866	C	N3-C4-C5	-5.45	119.72	121.90
24	1H	1501	C	C5-C6-N1	5.45	123.72	121.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
24	1H	2503	A	C5-C6-N1	5.45	120.42	117.70
24	1H	578	A	O5'-P-OP2	-5.45	100.80	105.70
24	1H	1621	U	N3-C4-O4	5.45	123.21	119.40
24	14	25	U	N3-C2-O2	5.45	126.01	122.20
24	14	1496	A	C5-C6-N6	-5.45	119.34	123.70
24	14	1664	A	C4-C5-C6	5.45	119.72	117.00
24	14	1939	U	C2-N1-C1'	-5.45	111.17	117.70
24	14	2724	C	C2-N1-C1'	-5.45	112.81	118.80
24	1H	1594	G	O5'-P-OP1	-5.44	100.80	105.70
24	1H	188	G	C5-C6-N1	5.44	114.22	111.50
24	1H	1695	G	N7-C8-N9	5.44	115.82	113.10
25	1J	11	C	N3-C2-O2	-5.44	118.09	121.90
1	13	758	G	C4-C5-N7	5.44	112.98	110.80
24	1H	680	G	N3-C4-N9	-5.44	122.74	126.00
24	1H	1377	G	O5'-P-OP2	-5.44	100.80	105.70
24	14	817	C	C5-C6-N1	5.44	123.72	121.00
24	14	2073	C	C2-N3-C4	-5.44	117.18	119.90
24	1H	2726	U	N3-C4-O4	-5.44	115.59	119.40
24	14	2491	U	C6-N1-C2	5.44	124.26	121.00
1	13	1524	C	N3-C2-O2	5.44	125.71	121.90
24	1H	381	G	C8-N9-C4	5.44	108.58	106.40
54	1G	18	C	O5'-P-OP2	5.44	117.22	110.70
54	1G	768	A	N1-C2-N3	5.44	132.02	129.30
24	14	689	A	C5-C6-N6	-5.44	119.35	123.70
1	13	36	C	N3-C4-C5	-5.43	119.73	121.90
24	1H	698	C	OP1-P-OP2	5.43	127.75	119.60
24	1H	1565	C	N3-C2-O2	5.43	125.70	121.90
24	1H	2683	C	C6-N1-C2	5.43	122.47	120.30
54	1G	303	A	N1-C6-N6	5.43	121.86	118.60
24	14	1285	G	C5-C6-N1	5.43	114.22	111.50
24	14	1636	C	C6-N1-C2	-5.43	118.13	120.30
24	1H	2264	C	O5'-P-OP2	5.43	117.22	110.70
54	1G	23	C	C5-C6-N1	5.43	123.72	121.00
24	1H	1366	A	C5-C6-N6	-5.43	119.36	123.70
24	1H	1952	A	C5-C6-N6	-5.43	119.36	123.70
54	1G	769	G	C4-N9-C1'	5.43	133.56	126.50
24	14	1811	G	C5-N7-C8	-5.43	101.58	104.30
24	14	1899	G	N9-C4-C5	5.43	107.57	105.40
24	14	2078	C	N3-C4-C5	-5.43	119.73	121.90
24	14	2866	U	C5-C4-O4	5.43	129.16	125.90
1	13	452	A	C4-N9-C1'	-5.43	116.53	126.30
1	13	1158	C	C5-C6-N1	5.43	123.72	121.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
24	1H	657	U	C5-C6-N1	-5.43	119.99	122.70
24	14	667	U	O5'-P-OP1	5.43	117.21	110.70
24	14	1761	C	C6-N1-C2	5.43	122.47	120.30
24	1H	1556	C	C2-N3-C4	5.43	122.61	119.90
24	1H	2445	G	N7-C8-N9	5.43	115.81	113.10
24	1H	2512	C	C6-N1-C2	5.43	122.47	120.30
24	14	1394	U	O5'-P-OP2	5.43	117.21	110.70
24	14	2359	C	N1-C2-O2	-5.43	115.64	118.90
1	13	690	G	N1-C6-O6	5.43	123.16	119.90
24	1H	2028	U	C6-N1-C2	-5.43	117.74	121.00
27	11	28	GLU	C-N-CD	5.43	139.80	128.40
54	1G	900	A	O5'-P-OP1	-5.43	100.81	105.70
24	14	613	U	N3-C2-O2	-5.43	118.40	122.20
24	14	1243	G	N1-C6-O6	5.43	123.16	119.90
24	14	1308	A	C8-N9-C4	-5.43	103.63	105.80
24	14	2581	G	N3-C4-N9	5.43	129.26	126.00
1	13	1487	G	O5'-P-OP2	-5.42	100.82	105.70
24	1H	955	C	N1-C2-O2	-5.42	115.64	118.90
24	1H	1956	U	O5'-P-OP2	-5.42	100.82	105.70
54	1G	733	A	O4'-C1'-N9	5.42	112.54	108.20
24	14	468	G	C8-N9-C4	5.42	108.57	106.40
24	1H	679	C	N1-C2-O2	-5.42	115.65	118.90
24	1H	2241	A	C2-N3-C4	-5.42	107.89	110.60
24	1H	2508	G	C5-C6-O6	5.42	131.85	128.60
54	1G	823	G	C5-C6-O6	-5.42	125.35	128.60
54	1G	897	C	N3-C4-C5	-5.42	119.73	121.90
24	14	659	C	C5-C6-N1	-5.42	118.29	121.00
1	13	1499	A	N7-C8-N9	-5.42	111.09	113.80
24	1H	1249	U	O5'-P-OP1	-5.42	100.82	105.70
54	1G	1432	G	O5'-P-OP1	-5.42	100.82	105.70
24	14	2001	A	N7-C8-N9	5.42	116.51	113.80
24	1H	1160	G	C8-N9-C4	-5.42	104.23	106.40
24	1H	1405	U	O5'-P-OP2	-5.42	100.82	105.70
24	14	270(Z)	U	C5-C4-O4	5.42	129.15	125.90
24	14	2262	U	OP1-P-O3'	5.42	117.12	105.20
24	14	2418	A	N1-C6-N6	5.42	121.85	118.60
1	13	970	C	N1-C2-O2	5.42	122.15	118.90
24	1H	77	C	C5-C4-N4	-5.42	116.41	120.20
24	1H	836	G	OP1-P-OP2	-5.42	111.48	119.60
24	1H	1836	C	OP1-P-O3'	5.42	117.12	105.20
25	16	81	G	C4-N9-C1'	5.42	133.54	126.50
54	1G	345	C	P-O3'-C3'	5.42	126.20	119.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
24	14	2457	U	OP2-P-O3'	5.42	117.12	105.20
24	14	2821	A	C2-N3-C4	-5.42	107.89	110.60
24	1H	1275	A	N9-C4-C5	-5.42	103.63	105.80
24	1H	2701	C	P-O3'-C3'	5.42	126.20	119.70
24	1H	444	C	N1-C2-N3	5.41	122.99	119.20
24	1H	1377	G	C6-C5-N7	-5.41	127.15	130.40
24	14	12	U	N3-C2-O2	-5.41	118.41	122.20
24	14	557	U	C5-C6-N1	-5.41	119.99	122.70
24	14	1695	G	C5-C6-N1	-5.41	108.79	111.50
24	14	1848	A	C8-N9-C4	5.41	107.97	105.80
24	1H	1516	U	N1-C2-O2	5.41	126.59	122.80
24	1H	862	G	C5-C6-O6	5.41	131.85	128.60
24	1H	1241	A	C6-N1-C2	5.41	121.85	118.60
24	1H	2280	G	C8-N9-C4	-5.41	104.24	106.40
24	14	686	G	N1-C6-O6	-5.41	116.65	119.90
24	14	717	G	N1-C6-O6	5.41	123.15	119.90
24	14	1902	C	C6-N1-C2	5.41	122.46	120.30
24	14	2882	A	O5'-P-OP2	-5.41	100.83	105.70
24	1H	2302	G	N1-C6-O6	-5.41	116.66	119.90
24	1H	189	G	N3-C4-C5	5.41	131.30	128.60
24	1H	305	U	C2-N3-C4	5.41	130.24	127.00
24	1H	2762	G	N1-C2-N2	-5.41	111.33	116.20
54	1G	297	G	C8-N9-C4	5.41	108.56	106.40
24	14	213	A	C8-N9-C4	5.41	107.96	105.80
24	1H	203	C	N3-C4-N4	5.41	121.78	118.00
24	14	601	C	N1-C2-O2	-5.41	115.66	118.90
24	14	2250	G	N1-C6-O6	-5.41	116.66	119.90
24	1H	856	C	C6-N1-C2	-5.40	118.14	120.30
24	14	144	C	N3-C2-O2	-5.40	118.12	121.90
24	1H	513	A	N1-C6-N6	-5.40	115.36	118.60
24	1H	570	G	C5-C6-N1	-5.40	108.80	111.50
24	1H	806	C	N3-C4-C5	5.40	124.06	121.90
24	1H	1691	C	C6-N1-C2	-5.40	118.14	120.30
24	1H	2238	G	N7-C8-N9	-5.40	110.40	113.10
54	1G	242	C	C6-N1-C2	-5.40	118.14	120.30
24	14	1443	G	N1-C6-O6	5.40	123.14	119.90
1	13	245	C	C2-N1-C1'	-5.40	112.86	118.80
24	1H	1917	U	OP1-P-O3'	5.40	117.08	105.20
24	1H	2023	G	N9-C4-C5	5.40	107.56	105.40
24	1H	2293	C	N3-C2-O2	-5.40	118.12	121.90
24	14	514	A	C8-N9-C4	5.40	107.96	105.80
24	14	1645	G	N1-C6-O6	-5.40	116.66	119.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
6	5E	87	ARG	NE-CZ-NH1	5.40	123.00	120.30
24	1H	1598	C	C5-C6-N1	5.40	123.70	121.00
1	13	268	C	O5'-P-OP1	-5.40	100.84	105.70
1	13	422	C	C6-N1-C2	-5.40	118.14	120.30
24	1H	2572	A	C5-N7-C8	5.40	106.60	103.90
25	16	105	G	C8-N9-C4	-5.40	104.24	106.40
54	1G	898	G	N1-C6-O6	-5.40	116.66	119.90
24	14	2595	G	C8-N9-C1'	5.40	134.02	127.00
24	1H	265	A	C8-N9-C4	-5.39	103.64	105.80
24	1H	1620	G	OP1-P-OP2	-5.39	111.51	119.60
24	1H	2364	C	OP2-P-O3'	5.39	117.07	105.20
24	14	2561	A	N1-C6-N6	-5.39	115.36	118.60
1	13	5	U	N3-C2-O2	-5.39	118.42	122.20
1	13	558	G	N1-C6-O6	5.39	123.14	119.90
1	13	795	C	C2-N1-C1'	-5.39	112.87	118.80
54	1G	725	G	O5'-P-OP1	-5.39	100.85	105.70
24	14	1201	C	C5-C6-N1	-5.39	118.30	121.00
24	14	1659	U	C4-C5-C6	5.39	122.94	119.70
47	F5	80	LEU	CA-CB-CG	5.39	127.70	115.30
24	14	2395	C	C5-C4-N4	-5.39	116.43	120.20
1	13	960	U	C2-N3-C4	5.39	130.23	127.00
24	1H	952	G	C2-N3-C4	5.39	114.59	111.90
24	1H	1489	U	C6-N1-C1'	5.39	128.75	121.20
54	1G	719	C	C4-C5-C6	5.39	120.09	117.40
24	14	1276	A	C5-N7-C8	-5.39	101.20	103.90
24	1H	1768	U	C2-N1-C1'	-5.39	111.23	117.70
24	1H	1829	A	N9-C4-C5	5.39	107.95	105.80
54	1G	656	C	C5-C6-N1	5.39	123.69	121.00
22	2L	85	A	C4-C5-N7	5.39	113.39	110.70
24	1H	1132	A	OP2-P-O3'	5.39	117.05	105.20
24	1H	1159	U	O5'-P-OP1	5.39	117.17	110.70
24	1H	1353	A	N9-C4-C5	-5.39	103.64	105.80
31	51	171	LEU	CA-CB-CG	5.39	127.69	115.30
1	13	793	U	C6-N1-C2	-5.38	117.77	121.00
24	1H	305	U	N3-C4-C5	-5.38	111.37	114.60
24	1H	816	C	N1-C2-N3	-5.38	115.43	119.20
24	1H	1431	U	C5-C6-N1	5.38	125.39	122.70
24	1H	2509	G	C8-N9-C4	5.38	108.55	106.40
30	41	42	GLY	N-CA-C	-5.38	99.64	113.10
54	1G	31	G	N3-C4-C5	5.38	131.29	128.60
24	14	379	G	C2-N3-C4	-5.38	109.21	111.90
24	14	2275	C	C5-C6-N1	5.38	123.69	121.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
24	14	2328	A	C5-C6-N6	-5.38	119.39	123.70
24	14	2545	G	N3-C2-N2	-5.38	116.13	119.90
24	1H	1387	C	C6-N1-C2	-5.38	118.15	120.30
24	1H	1476	C	C6-N1-C2	-5.38	118.15	120.30
54	1G	26	A	C6-N1-C2	-5.38	115.37	118.60
54	1G	1059	C	C6-N1-C2	-5.38	118.15	120.30
24	1H	750	A	OP2-P-O3'	5.38	117.04	105.20
1	13	397	A	N1-C2-N3	5.38	131.99	129.30
1	13	830	G	O5'-P-OP1	-5.38	100.86	105.70
24	1H	1674	G	C4-N9-C1'	5.38	133.49	126.50
53	Q8	31	HIS	CB-CA-C	5.38	121.16	110.40
54	1G	815	A	N7-C8-N9	-5.38	111.11	113.80
24	1H	1235	G	C8-N9-C1'	-5.38	120.01	127.00
24	1H	1562	A	N1-C2-N3	5.38	131.99	129.30
24	1H	2062	A	N1-C2-N3	-5.38	126.61	129.30
24	1H	2374	C	N3-C4-N4	-5.38	114.23	118.00
54	1G	553	A	O5'-P-OP2	-5.38	100.86	105.70
54	1G	1453	G	O4'-C1'-N9	5.38	112.50	108.20
24	14	1368	G	C5-N7-C8	5.38	106.99	104.30
24	14	2392	A	N3-C4-C5	5.38	130.56	126.80
24	1H	330	A	C4-C5-N7	5.38	113.39	110.70
24	1H	732	C	OP1-P-O3'	5.38	117.03	105.20
24	1H	1346	G	C2-N3-C4	5.38	114.59	111.90
24	1H	1385	G	C8-N9-C1'	5.38	133.99	127.00
24	1H	2496	C	N1-C2-O2	5.38	122.13	118.90
54	1G	772	U	O5'-P-OP2	-5.38	100.86	105.70
24	14	1276	A	C4-C5-N7	5.38	113.39	110.70
24	1H	2361	A	C2-N3-C4	-5.38	107.91	110.60
54	1G	413	G	N7-C8-N9	-5.38	110.41	113.10
54	1G	732	C	OP2-P-O3'	5.38	117.03	105.20
24	14	531	C	C5-C6-N1	-5.38	118.31	121.00
24	1H	598	G	OP1-P-OP2	5.37	127.66	119.60
24	1H	1471	A	C8-N9-C4	-5.37	103.65	105.80
24	1H	2067	G	N9-C4-C5	5.37	107.55	105.40
31	51	7	LEU	C-N-CD	5.37	139.69	128.40
1	13	623	C	C5-C6-N1	5.37	123.69	121.00
1	13	710	G	C6-C5-N7	-5.37	127.18	130.40
1	13	786	G	C8-N9-C4	5.37	108.55	106.40
24	1H	1463	C	C5-C6-N1	5.37	123.69	121.00
24	1H	2105	C	C6-N1-C2	-5.37	118.15	120.30
24	1H	2330	G	N9-C4-C5	-5.37	103.25	105.40
24	1H	2582	G	N3-C4-N9	5.37	129.22	126.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
54	1G	916	G	C2-N3-C4	5.37	114.59	111.90
24	14	791	C	N3-C4-C5	5.37	124.05	121.90
24	1H	463	G	N1-C2-N2	-5.37	111.37	116.20
24	1H	485	C	N1-C2-O2	-5.37	115.68	118.90
24	1H	2346	A	N3-C4-N9	-5.37	123.10	127.40
24	14	676	A	N1-C2-N3	5.37	131.99	129.30
24	14	757	U	N1-C2-N3	5.37	118.12	114.90
24	1H	1927	A	O5'-P-OP2	-5.37	100.87	105.70
24	1H	2329	G	N3-C2-N2	-5.37	116.14	119.90
54	1G	942	G	N3-C4-N9	5.37	129.22	126.00
24	14	946	G	C2-N3-C4	-5.37	109.22	111.90
24	14	1401	G	N3-C4-N9	-5.37	122.78	126.00
24	14	1666	G	C5-N7-C8	5.37	106.98	104.30
24	14	2552	U	C2-N3-C4	-5.37	123.78	127.00
24	1H	427	U	C2-N1-C1'	5.37	124.14	117.70
24	1H	2438	U	C4-C5-C6	5.37	122.92	119.70
54	1G	783	C	O5'-P-OP1	-5.37	100.87	105.70
24	14	661	C	C6-N1-C2	-5.37	118.15	120.30
1	13	765	G	C5-C6-O6	-5.37	125.38	128.60
24	1H	569	U	C2-N3-C4	-5.37	123.78	127.00
24	1H	577	G	OP1-P-OP2	-5.37	111.55	119.60
24	14	871	U	N3-C2-O2	5.37	125.95	122.20
24	14	1386	C	N3-C4-N4	5.37	121.76	118.00
24	1H	2465	C	C6-N1-C2	5.36	122.45	120.30
54	1G	748	C	P-O3'-C3'	5.36	126.14	119.70
22	2L	12	C	C2-N1-C1'	5.36	124.70	118.80
24	14	74	A	N3-C4-C5	5.36	130.56	126.80
24	14	214	G	O4'-C1'-N9	5.36	112.49	108.20
24	1H	1296	G	O5'-P-OP2	-5.36	100.87	105.70
24	1H	1474	C	C6-N1-C2	-5.36	118.16	120.30
24	1H	1808	U	N3-C2-O2	5.36	125.95	122.20
24	14	205	G	N9-C4-C5	-5.36	103.25	105.40
24	1H	2595	G	C4-N9-C1'	-5.36	119.53	126.50
24	14	2439	A	C8-N9-C4	-5.36	103.66	105.80
24	1H	2021	C	OP2-P-O3'	5.36	116.99	105.20
24	1H	2210	G	C6-C5-N7	-5.36	127.19	130.40
24	1H	2582	G	C2-N3-C4	5.36	114.58	111.90
24	14	2594	C	N3-C4-N4	5.36	121.75	118.00
24	1H	1262	A	C8-N9-C4	5.36	107.94	105.80
24	1H	2521	C	O5'-P-OP2	5.36	117.13	110.70
24	1H	2542	A	O5'-P-OP1	-5.36	100.88	105.70
54	1G	758	G	N1-C6-O6	5.36	123.11	119.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
24	14	288	C	N1-C2-O2	5.36	122.11	118.90
24	14	474	G	O4'-C1'-N9	5.36	112.48	108.20
24	14	2207	C	C2-N1-C1'	5.36	124.69	118.80
24	1H	213	A	N1-C6-N6	5.36	121.81	118.60
1	13	720	C	C2-N1-C1'	5.35	124.69	118.80
1	13	976	G	N3-C4-N9	-5.35	122.79	126.00
24	1H	662	G	C6-C5-N7	5.35	133.61	130.40
54	1G	481	G	N3-C4-N9	5.35	129.21	126.00
54	1G	801	U	N1-C2-O2	5.35	126.55	122.80
24	1H	917	A	C6-C5-N7	-5.35	128.55	132.30
24	1H	2278	A	C8-N9-C4	-5.35	103.66	105.80
24	1H	2605	U	N3-C2-O2	-5.35	118.45	122.20
24	1H	2610	C	OP1-P-O3'	5.35	116.97	105.20
24	1H	2647	U	C6-N1-C2	5.35	124.21	121.00
24	14	177	G	N3-C4-C5	-5.35	125.92	128.60
1	13	106	C	C6-N1-C2	-5.35	118.16	120.30
24	1H	1629	U	C6-N1-C2	-5.35	117.79	121.00
24	1H	1691	C	O5'-P-OP1	-5.35	100.89	105.70
24	1H	2270	G	C4-N9-C1'	5.35	133.46	126.50
24	1H	2403	C	N1-C2-O2	-5.35	115.69	118.90
24	1H	2410	G	O5'-P-OP2	5.35	117.12	110.70
24	1H	2766	G	N3-C4-N9	5.35	129.21	126.00
24	14	1673	U	N1-C2-O2	-5.35	119.06	122.80
24	14	2873	A	C4-C5-N7	5.35	113.38	110.70
24	1H	193	U	C5-C6-N1	-5.35	120.03	122.70
24	1H	1660	C	C5-C4-N4	5.35	123.94	120.20
24	1H	2545	G	C5-C6-N1	5.35	114.17	111.50
54	1G	1502	A	C4-C5-C6	5.35	119.67	117.00
24	14	631	A	OP1-P-O3'	5.35	116.96	105.20
24	14	777	A	C6-N1-C2	-5.35	115.39	118.60
24	14	912	C	C5-C6-N1	5.35	123.67	121.00
24	14	2422	A	O5'-P-OP2	-5.35	100.89	105.70
1	13	758	G	C6-C5-N7	-5.35	127.19	130.40
24	14	2581	G	C4-N9-C1'	5.35	133.45	126.50
41	95	21	ARG	CG-CD-NE	5.35	123.03	111.80
47	F5	79	GLY	N-CA-C	5.35	126.46	113.10
24	1H	749	C	C6-N1-C2	5.34	122.44	120.30
24	1H	1307	A	C4-C5-N7	5.34	113.37	110.70
54	1G	397	A	C8-N9-C4	-5.34	103.66	105.80
24	14	988	A	N9-C4-C5	-5.34	103.66	105.80
24	1H	1202	C	N3-C4-N4	5.34	121.74	118.00
24	1H	1261	C	C5-C6-N1	-5.34	118.33	121.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
24	1H	1899	G	C5-N7-C8	-5.34	101.63	104.30
22	3L	55	U	C2-N1-C1'	5.34	124.11	117.70
24	14	1247	A	N1-C2-N3	5.34	131.97	129.30
24	14	1277	G	N3-C4-C5	5.34	131.27	128.60
24	14	2544	G	C5-C6-N1	5.34	114.17	111.50
24	14	2731	G	N7-C8-N9	5.34	115.77	113.10
1	13	186(A)	C	C5-C6-N1	5.34	123.67	121.00
54	1G	108	G	N7-C8-N9	5.34	115.77	113.10
24	14	693	C	N1-C2-O2	-5.34	115.70	118.90
24	14	1639	U	O5'-P-OP2	-5.34	100.89	105.70
24	14	2839	G	N3-C4-C5	-5.34	125.93	128.60
24	1H	1661	G	N3-C2-N2	-5.34	116.16	119.90
24	1H	2431	U	C5-C6-N1	-5.34	120.03	122.70
24	14	1407	C	N3-C4-N4	5.34	121.74	118.00
24	14	1512	G	N7-C8-N9	5.34	115.77	113.10
24	14	1956	U	C2-N3-C4	-5.34	123.80	127.00
24	1H	226	G	C5-C6-O6	-5.33	125.40	128.60
24	1H	2550	G	N9-C4-C5	5.33	107.53	105.40
24	14	1933	G	N1-C6-O6	5.33	123.10	119.90
1	13	1407	C	N3-C4-C5	5.33	124.03	121.90
24	1H	458	G	N9-C4-C5	5.33	107.53	105.40
24	1H	803	U	C6-N1-C2	5.33	124.20	121.00
24	1H	1774	C	C6-N1-C2	-5.33	118.17	120.30
24	1H	1786	A	O5'-P-OP2	-5.33	100.90	105.70
4	3E	167	GLY	N-CA-C	-5.33	99.77	113.10
22	3K	85	A	C5-C6-N6	-5.33	119.44	123.70
24	1H	58	G	C4-N9-C1'	5.33	133.43	126.50
24	1H	1931	U	O5'-P-OP2	-5.33	100.90	105.70
24	1H	2262	U	N3-C2-O2	-5.33	118.47	122.20
24	14	494	G	O5'-P-OP2	5.33	117.10	110.70
24	1H	2444	G	O5'-P-OP1	-5.33	100.90	105.70
24	1H	2598	A	OP2-P-O3'	5.33	116.93	105.20
24	1H	746	A	N7-C8-N9	5.33	116.46	113.80
24	1H	1263	U	N3-C2-O2	-5.33	118.47	122.20
24	1H	1625	C	OP2-P-O3'	5.33	116.92	105.20
24	1H	1931	U	C5-C6-N1	-5.33	120.04	122.70
24	14	817	C	C2-N3-C4	5.33	122.56	119.90
24	14	1988	C	N1-C2-N3	-5.33	115.47	119.20
24	14	2437	U	C6-N1-C2	-5.33	117.80	121.00
24	14	2550	G	C4-N9-C1'	5.33	133.43	126.50
1	13	1407	C	C4-C5-C6	-5.33	114.74	117.40
24	1H	71	A	N3-C4-N9	-5.33	123.14	127.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
23	4L	18	C	C2-N1-C1'	5.33	124.66	118.80
24	14	2860	A	N9-C4-C5	-5.33	103.67	105.80
24	14	2872	G	C8-N9-C4	-5.33	104.27	106.40
1	13	121	C	N3-C2-O2	-5.33	118.17	121.90
24	1H	182	A	C4-C5-N7	5.33	113.36	110.70
24	1H	189	G	C4-C5-N7	5.33	112.93	110.80
24	1H	628	G	N3-C4-N9	5.33	129.19	126.00
24	1H	1543	A	C6-C5-N7	-5.33	128.57	132.30
33	58	112	LEU	CB-CG-CD1	-5.33	101.95	111.00
24	14	794	G	OP2-P-O3'	5.33	116.92	105.20
24	14	1597	A	N1-C2-N3	5.33	131.96	129.30
24	1H	594	U	C2-N1-C1'	-5.32	111.31	117.70
24	1H	1007	C	C4-C5-C6	5.32	120.06	117.40
24	1H	2484	G	C4-C5-N7	5.32	112.93	110.80
54	1G	403	C	O5'-P-OP2	-5.32	100.91	105.70
54	1G	706	A	C8-N9-C4	-5.32	103.67	105.80
24	14	110	G	N9-C4-C5	-5.32	103.27	105.40
24	1H	593	G	C4-C5-N7	5.32	112.93	110.80
24	14	997	G	OP1-P-O3'	5.32	116.91	105.20
24	14	1308	A	N1-C6-N6	-5.32	115.41	118.60
34	25	8	LEU	CA-CB-CG	5.32	127.54	115.30
24	1H	202	U	N1-C2-O2	5.32	126.52	122.80
24	1H	1275	A	N3-C4-N9	5.32	131.66	127.40
54	1G	38	G	N3-C4-N9	-5.32	122.81	126.00
24	14	1159	U	OP1-P-O3'	5.32	116.91	105.20
24	14	2361	A	O5'-P-OP2	-5.32	100.91	105.70
24	1H	835	A	OP2-P-O3'	5.32	116.90	105.20
24	1H	1660	C	N3-C2-O2	-5.32	118.18	121.90
54	1G	231	G	C4-N9-C1'	-5.32	119.58	126.50
54	1G	783	C	C6-N1-C2	-5.32	118.17	120.30
23	4K	17	G	C5-C6-O6	-5.32	125.41	128.60
24	1H	785	G	N9-C4-C5	5.32	107.53	105.40
24	1H	1826	G	C4-C5-C6	5.32	121.99	118.80
24	1H	1901	A	C5-C6-N1	5.32	120.36	117.70
24	1H	2440	C	C5-C4-N4	5.32	123.92	120.20
24	1H	2499	C	N3-C4-C5	-5.32	119.77	121.90
24	14	71	A	C5-C6-N1	-5.32	115.04	117.70
24	14	955	C	N3-C4-N4	-5.32	114.28	118.00
24	14	1021	A	C5-C6-N6	5.32	127.95	123.70
24	14	2326	C	C6-N1-C2	-5.32	118.17	120.30
24	1H	49	A	O5'-P-OP2	-5.32	100.92	105.70
24	1H	70	G	N1-C6-O6	-5.32	116.71	119.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
24	1H	471	A	N9-C4-C5	-5.32	103.67	105.80
24	1H	530	G	C4-C5-N7	5.32	112.93	110.80
54	1G	1514	C	N1-C2-O2	-5.32	115.71	118.90
24	14	1496	A	O4'-C1'-N9	5.32	112.45	108.20
24	1H	464	U	OP1-P-OP2	-5.31	111.63	119.60
24	1H	1413	G	N3-C2-N2	-5.31	116.18	119.90
24	14	752	A	C5-N7-C8	-5.31	101.24	103.90
24	14	1142(A)	A	C5-C6-N1	-5.31	115.04	117.70
24	14	2287	A	O4'-C1'-N9	-5.31	103.95	108.20
24	1H	24	G	N3-C4-N9	-5.31	122.81	126.00
24	1H	818	G	OP2-P-O3'	5.31	116.89	105.20
24	1H	1660	C	C5-C6-N1	-5.31	118.34	121.00
24	1H	2297	C	N3-C4-C5	-5.31	119.78	121.90
24	1H	2674	G	C5-N7-C8	5.31	106.96	104.30
6	52	21	LEU	CA-CB-CG	5.31	127.52	115.30
24	14	973	A	C8-N9-C4	5.31	107.92	105.80
24	1H	1827	C	N3-C2-O2	-5.31	118.18	121.90
24	1H	1982	C	O5'-P-OP2	-5.31	100.92	105.70
24	14	1616	A	C2-N3-C4	-5.31	107.94	110.60
24	1H	36	G	OP2-P-O3'	5.31	116.88	105.20
24	1H	397	G	C8-N9-C4	5.31	108.52	106.40
24	1H	557	U	N1-C2-N3	5.31	118.09	114.90
24	1H	1912	A	O5'-P-OP1	-5.31	100.92	105.70
54	1G	1370	G	C5-C6-N1	-5.31	108.84	111.50
24	14	845	G	N3-C4-C5	5.31	131.25	128.60
24	14	2364	C	OP2-P-O3'	5.31	116.88	105.20
24	1H	75	G	N3-C4-C5	-5.31	125.95	128.60
54	1G	1414	U	O5'-P-OP1	-5.31	100.92	105.70
24	14	104	U	N3-C2-O2	5.31	125.92	122.20
24	14	211	A	C4-C5-N7	5.31	113.35	110.70
24	1H	137(A)	G	O5'-P-OP1	-5.31	100.92	105.70
24	14	616	A	C5-C6-N6	-5.31	119.46	123.70
24	14	2346	A	O4'-C1'-N9	5.31	112.44	108.20
1	13	413	G	C5-C6-O6	5.30	131.78	128.60
24	1H	528	A	C5-C6-N1	-5.30	115.05	117.70
24	1H	1229(A)	G	N3-C4-C5	5.30	131.25	128.60
24	1H	1603	A	OP1-P-O3'	5.30	116.87	105.20
24	14	1902	C	N1-C2-O2	5.30	122.08	118.90
24	1H	2270	G	C4-C5-C6	5.30	121.98	118.80
24	14	855	G	OP1-P-O3'	5.30	116.87	105.20
24	14	1780	A	C5-C6-N6	5.30	127.94	123.70
24	14	1831	G	C8-N9-C4	-5.30	104.28	106.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
24	1H	138	G	O4'-C1'-N9	5.30	112.44	108.20
54	1G	1374	A	O4'-C1'-N9	5.30	112.44	108.20
24	14	805	G	N7-C8-N9	5.30	115.75	113.10
24	14	2633	G	C8-N9-C4	5.30	108.52	106.40
23	4K	17	G	C4-C5-N7	5.30	112.92	110.80
24	1H	471	A	C4-C5-N7	5.30	113.35	110.70
24	1H	673	C	O5'-P-OP1	5.30	117.06	110.70
24	1H	1427	A	N9-C4-C5	5.30	107.92	105.80
24	1H	2507	C	C5-C4-N4	5.30	123.91	120.20
24	1H	2717	G	N3-C4-C5	-5.30	125.95	128.60
24	14	2253	G	N1-C6-O6	5.30	123.08	119.90
24	14	2405	G	OP1-P-O3'	5.30	116.86	105.20
1	13	769	G	O5'-P-OP2	-5.30	100.93	105.70
24	1H	261	G	C5-C6-O6	-5.30	125.42	128.60
24	1H	840	C	N3-C2-O2	5.30	125.61	121.90
24	1H	2010	G	OP1-P-O3'	5.30	116.86	105.20
24	14	2762	G	N1-C6-O6	5.30	123.08	119.90
1	13	250	A	C8-N9-C4	5.30	107.92	105.80
24	1H	1035	U	O5'-P-OP2	-5.30	100.93	105.70
24	1H	2448	A	C5-C6-N6	-5.30	119.46	123.70
24	1H	2767	C	C2-N1-C1'	5.30	124.63	118.80
54	1G	146	G	N1-C6-O6	5.30	123.08	119.90
24	14	13	A	C8-N9-C4	-5.30	103.68	105.80
24	14	401	A	N1-C6-N6	-5.30	115.42	118.60
24	14	694	U	OP2-P-O3'	5.30	116.85	105.20
24	14	840	C	N3-C2-O2	5.30	125.61	121.90
24	14	1251	C	N1-C2-O2	5.30	122.08	118.90
1	13	891	U	OP2-P-O3'	5.29	116.85	105.20
24	1H	450	G	N1-C6-O6	5.29	123.08	119.90
24	1H	862	G	N1-C6-O6	-5.29	116.72	119.90
24	1H	1212	G	N1-C2-N2	5.29	120.97	116.20
24	14	2857	G	C5-C6-O6	-5.29	125.42	128.60
24	1H	20	C	C2-N3-C4	-5.29	117.25	119.90
24	1H	56	A	C2-N3-C4	-5.29	107.95	110.60
24	1H	1343	G	O5'-P-OP1	-5.29	100.94	105.70
24	1H	1454	U	N3-C2-O2	-5.29	118.50	122.20
24	1H	2056	G	O4'-C1'-N9	-5.29	103.97	108.20
24	1H	2715	C	N3-C4-C5	5.29	124.02	121.90
54	1G	963	G	N3-C4-N9	5.29	129.18	126.00
24	14	675	A	C5-N7-C8	-5.29	101.25	103.90
24	14	1768	U	C2-N1-C1'	-5.29	111.35	117.70
24	14	2461	C	O5'-P-OP2	-5.29	100.94	105.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
24	1H	2377	A	O5'-P-OP1	5.29	117.05	110.70
24	14	121	G	C5-C6-O6	-5.29	125.42	128.60
24	14	780	G	C5-C6-N1	-5.29	108.86	111.50
24	14	934	G	OP1-P-OP2	5.29	127.54	119.60
24	1H	338	G	OP2-P-O3'	5.29	116.84	105.20
24	14	1769	G	C4-N9-C1'	5.29	133.38	126.50
24	14	1779	U	OP1-P-OP2	5.29	127.53	119.60
24	14	1940	U	O5'-P-OP1	5.29	117.05	110.70
24	1H	670	A	N1-C2-N3	-5.29	126.66	129.30
24	1H	843	G	OP1-P-OP2	-5.29	111.67	119.60
24	1H	1299	G	C8-N9-C4	-5.29	104.28	106.40
36	88	106	VAL	CB-CA-C	-5.29	101.35	111.40
24	14	1239	G	C5-C6-N1	5.29	114.14	111.50
1	13	805	C	C6-N1-C2	-5.29	118.19	120.30
24	1H	967	C	N1-C2-N3	5.29	122.90	119.20
24	1H	2046	G	N1-C6-O6	-5.29	116.73	119.90
54	1G	336	C	N3-C2-O2	5.29	125.60	121.90
24	1H	328	U	N3-C4-C5	-5.29	111.43	114.60
24	1H	1558	A	O5'-P-OP1	-5.29	100.94	105.70
54	1G	337	C	N3-C4-N4	5.29	121.70	118.00
24	14	178	G	OP1-P-OP2	5.29	127.53	119.60
24	14	462	C	O5'-P-OP2	-5.29	100.94	105.70
24	14	1656	C	C6-N1-C2	-5.29	118.19	120.30
1	13	866	C	C4-C5-C6	5.28	120.04	117.40
24	1H	1800	C	C2-N3-C4	5.28	122.54	119.90
24	1H	2618	G	N9-C4-C5	5.28	107.51	105.40
54	1G	777	A	O5'-P-OP1	5.28	117.04	110.70
54	1G	906	G	N1-C6-O6	5.28	123.07	119.90
24	14	974(A)	C	N1-C2-N3	5.28	122.90	119.20
24	14	1981	A	N1-C6-N6	5.28	121.77	118.60
24	14	2056	G	N3-C2-N2	-5.28	116.20	119.90
24	14	2290	G	N1-C6-O6	5.28	123.07	119.90
24	1H	837	C	C5-C4-N4	-5.28	116.50	120.20
24	1H	1341	U	C5-C4-O4	-5.28	122.73	125.90
24	1H	1599	C	OP2-P-O3'	5.28	116.82	105.20
24	1H	2228	G	N9-C4-C5	-5.28	103.29	105.40
24	1H	2375	G	N7-C8-N9	-5.28	110.46	113.10
24	1H	2591	C	N3-C2-O2	5.28	125.60	121.90
54	1G	23	C	C5-C4-N4	-5.28	116.50	120.20
24	1H	821	A	N1-C2-N3	5.28	131.94	129.30
24	1H	2050	C	C4-C5-C6	5.28	120.04	117.40
24	1H	2508	G	N1-C6-O6	-5.28	116.73	119.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
24	14	2689	U	OP2-P-O3'	5.28	116.81	105.20
1	13	32	A	OP1-P-O3'	5.28	116.81	105.20
1	13	1058	G	N3-C4-N9	5.28	129.17	126.00
24	1H	575	A	N3-C4-N9	5.28	131.62	127.40
1	13	320	C	C2-N1-C1'	-5.28	113.00	118.80
1	13	335	C	N1-C2-O2	-5.28	115.73	118.90
1	13	645	C	C6-N1-C2	-5.28	118.19	120.30
1	13	860	A	C5-N7-C8	-5.28	101.26	103.90
24	1H	2403	C	O5'-P-OP2	-5.28	100.95	105.70
24	1H	2497	A	C5-C6-N6	-5.28	119.48	123.70
25	16	93	C	C6-N1-C2	-5.28	118.19	120.30
24	14	639	U	O5'-P-OP2	-5.28	100.95	105.70
24	14	1673	U	C2-N1-C1'	-5.28	111.37	117.70
54	1G	108	G	O5'-P-OP1	5.27	117.03	110.70
24	1H	728	G	C8-N9-C4	5.27	108.51	106.40
24	1H	1513	C	C2-N3-C4	5.27	122.54	119.90
24	1H	2302	G	N3-C4-C5	-5.27	125.96	128.60
54	1G	1395	C	O5'-P-OP1	-5.27	100.95	105.70
24	14	1239	G	C5-C6-O6	-5.27	125.44	128.60
24	14	1297	C	OP2-P-O3'	-5.27	93.60	105.20
24	14	1855	G	N3-C4-N9	5.27	129.16	126.00
24	1H	2316	C	O5'-P-OP1	-5.27	100.96	105.70
24	14	491	G	N1-C6-O6	-5.27	116.74	119.90
24	14	757	U	N1-C2-O2	-5.27	119.11	122.80
24	14	2232	U	C5-C4-O4	5.27	129.06	125.90
24	14	2342	C	N3-C2-O2	-5.27	118.21	121.90
22	2K	1	G	C4-N9-C1'	5.27	133.35	126.50
24	1H	775	G	N3-C4-N9	5.27	129.16	126.00
24	1H	1197	G	C6-C5-N7	5.27	133.56	130.40
24	1H	1595	G	O5'-P-OP1	-5.27	100.96	105.70
24	14	488	G	C8-N9-C1'	-5.27	120.15	127.00
24	14	2430	A	C5-C6-N6	-5.27	119.48	123.70
24	14	2502	G	P-O3'-C3'	5.27	126.02	119.70
24	1H	2246	G	N3-C4-N9	5.27	129.16	126.00
24	1H	2360	A	C4-C5-C6	5.27	119.63	117.00
24	1H	2438	U	C2-N3-C4	-5.27	123.84	127.00
25	16	78	A	C8-N9-C4	5.27	107.91	105.80
24	14	888	C	P-O3'-C3'	5.27	126.02	119.70
24	14	1606	G	C5-C6-O6	-5.27	125.44	128.60
24	14	2384	G	N3-C4-C5	5.27	131.23	128.60
54	1G	1202	G	C5-C6-O6	5.27	131.76	128.60
24	14	696	G	C5-C6-N1	5.27	114.13	111.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
24	14	2602	A	P-O3'-C3'	5.27	126.02	119.70
1	13	769	G	O4'-C1'-N9	5.26	112.41	108.20
1	13	1276	G	C8-N9-C4	-5.26	104.29	106.40
24	1H	15	G	C6-C5-N7	-5.26	127.24	130.40
24	1H	1060	U	P-O3'-C3'	5.26	126.02	119.70
24	1H	2293	C	C6-N1-C2	-5.26	118.19	120.30
24	1H	2461	C	O5'-P-OP2	-5.26	100.96	105.70
24	14	199	A	N1-C2-N3	-5.26	126.67	129.30
24	14	725	G	O5'-P-OP1	-5.26	100.96	105.70
24	14	2595	G	N3-C4-N9	-5.26	122.84	126.00
1	13	669	U	C6-N1-C2	-5.26	117.84	121.00
24	14	1210	A	C2-N3-C4	-5.26	107.97	110.60
24	14	1673	U	C2-N3-C4	-5.26	123.84	127.00
24	14	2389	G	C6-C5-N7	-5.26	127.24	130.40
1	13	13	U	OP1-P-O3'	5.26	116.78	105.20
1	13	1285	A	P-O3'-C3'	5.26	126.01	119.70
24	1H	1898	U	C5-C4-O4	5.26	129.06	125.90
24	14	1204	A	C5-C6-N1	-5.26	115.07	117.70
37	55	107	ASP	CB-CG-OD1	-5.26	113.56	118.30
24	1H	77	C	N3-C4-N4	5.26	121.68	118.00
24	1H	1280	G	N3-C4-C5	5.26	131.23	128.60
24	1H	1970	A	C8-N9-C4	-5.26	103.70	105.80
24	1H	2281	C	C5-C4-N4	-5.26	116.52	120.20
54	1G	1469	G	C4-C5-C6	5.26	121.95	118.80
24	14	1207	C	N3-C4-C5	-5.26	119.80	121.90
24	14	1239	G	C4-C5-N7	5.26	112.90	110.80
24	14	1639	U	O5'-P-OP1	5.26	117.01	110.70
24	14	1673	U	N3-C2-O2	5.26	125.88	122.20
22	2K	11	C	C6-N1-C2	-5.26	118.20	120.30
24	1H	680	G	N9-C4-C5	5.26	107.50	105.40
24	1H	2031	A	N3-C4-N9	5.26	131.61	127.40
24	1H	2395	C	C5-C4-N4	-5.26	116.52	120.20
24	1H	2527	C	C6-N1-C2	-5.26	118.20	120.30
24	1H	838	C	C4-C5-C6	5.26	120.03	117.40
24	1H	1556	C	C5-C6-N1	5.26	123.63	121.00
24	1H	1633	G	C8-N9-C4	5.26	108.50	106.40
24	14	113	G	N7-C8-N9	-5.26	110.47	113.10
24	14	1286	A	OP2-P-O3'	5.26	116.77	105.20
22	2L	10	C	N3-C4-N4	-5.25	114.32	118.00
24	14	585	G	C4-C5-N7	5.25	112.90	110.80
1	13	387	U	OP1-P-O3'	5.25	116.76	105.20
24	1H	258	G	C8-N9-C4	5.25	108.50	106.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
24	1H	826	U	OP1-P-OP2	5.25	127.48	119.60
24	1H	945	A	C5-C6-N1	5.25	120.33	117.70
24	1H	1981	A	C5-C6-N1	5.25	120.33	117.70
24	14	739	G	N1-C6-O6	5.25	123.05	119.90
24	14	1294	U	N1-C2-O2	-5.25	119.12	122.80
24	14	1407	C	C5-C4-N4	-5.25	116.52	120.20
24	14	2228	G	C5-C6-N1	5.25	114.13	111.50
24	1H	956	G	C5-N7-C8	5.25	106.93	104.30
24	1H	1461	G	C6-C5-N7	-5.25	127.25	130.40
24	1H	2286	A	C8-N9-C4	-5.25	103.70	105.80
25	16	99	A	OP1-P-OP2	5.25	127.48	119.60
54	1G	742	G	C5-C6-O6	-5.25	125.45	128.60
54	1G	932	C	N3-C2-O2	-5.25	118.22	121.90
24	14	1269	A	C5-N7-C8	-5.25	101.28	103.90
24	14	1566	A	N1-C6-N6	5.25	121.75	118.60
24	1H	271	G	N3-C4-C5	5.25	131.22	128.60
25	16	22	U	C6-N1-C2	-5.25	117.85	121.00
54	1G	1483	A	O5'-P-OP1	-5.25	100.97	105.70
24	14	1483	G	O5'-P-OP2	-5.25	100.97	105.70
24	14	1666	G	O4'-C1'-N9	5.25	112.40	108.20
24	14	2690	C	C5-C6-N1	-5.25	118.38	121.00
24	1H	845	G	C4-C5-N7	5.25	112.90	110.80
24	1H	1226	G	C2-N3-C4	-5.25	109.28	111.90
24	1H	2261	C	O5'-P-OP1	5.25	117.00	110.70
24	14	1318	C	N3-C2-O2	5.25	125.57	121.90
24	14	1839	G	C4-N9-C1'	5.25	133.32	126.50
24	14	2081	C	O5'-P-OP2	-5.25	100.98	105.70
24	14	2271	G	N1-C6-O6	5.25	123.05	119.90
24	1H	2075	U	OP2-P-O3'	5.25	116.74	105.20
24	1H	2596	U	OP1-P-OP2	5.25	127.47	119.60
54	1G	1415	G	C5-C6-N1	-5.25	108.88	111.50
24	14	664	C	N1-C2-O2	-5.25	115.75	118.90
24	14	726	G	N3-C4-N9	5.25	129.15	126.00
24	14	2024	G	N1-C6-O6	5.25	123.05	119.90
24	1H	2828	C	N3-C4-C5	5.25	124.00	121.90
24	14	990	A	C5-N7-C8	-5.25	101.28	103.90
24	1H	1159	U	O5'-P-OP2	-5.24	100.98	105.70
24	1H	1607	C	OP1-P-OP2	5.24	127.46	119.60
24	1H	1620	G	N1-C6-O6	5.24	123.05	119.90
24	1H	2454	G	N7-C8-N9	-5.24	110.48	113.10
24	1H	2827	C	C6-N1-C2	5.24	122.40	120.30
24	1H	195	A	P-O3'-C3'	5.24	125.99	119.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
32	61	131	LYS	C-N-CD	-5.24	109.07	120.60
24	14	1666	G	C4-C5-N7	-5.24	108.70	110.80
24	14	1694	C	C2-N1-C1'	-5.24	113.03	118.80
24	14	2639	A	C5-C6-N6	-5.24	119.51	123.70
24	14	2688	U	C2-N3-C4	-5.24	123.86	127.00
24	14	2722	G	OP1-P-O3'	5.24	116.73	105.20
24	1H	291	C	N3-C2-O2	5.24	125.57	121.90
24	1H	731	C	N1-C2-O2	-5.24	115.75	118.90
24	1H	1283	G	N3-C4-C5	-5.24	125.98	128.60
24	1H	1333	C	N3-C2-O2	5.24	125.57	121.90
24	1H	2299	G	N7-C8-N9	5.24	115.72	113.10
24	1H	2520	C	N1-C2-O2	-5.24	115.76	118.90
24	14	2542	A	N1-C6-N6	-5.24	115.46	118.60
1	13	365	U	C2-N1-C1'	5.24	123.99	117.70
24	1H	833	U	OP2-P-O3'	5.24	116.72	105.20
24	14	409	C	C5-C4-N4	-5.24	116.53	120.20
24	14	1021	A	N1-C2-N3	5.24	131.92	129.30
24	14	1682	G	OP1-P-OP2	5.24	127.46	119.60
24	14	1842	G	N9-C4-C5	-5.24	103.31	105.40
24	14	2709	G	C8-N9-C4	5.24	108.50	106.40
1	13	805	C	OP1-P-OP2	-5.24	111.74	119.60
24	1H	2236	C	N1-C2-O2	-5.24	115.76	118.90
1	13	889	A	OP1-P-OP2	5.24	127.45	119.60
24	1H	2429	G	C8-N9-C4	-5.24	104.31	106.40
52	L5	12	ARG	NE-CZ-NH1	-5.24	117.68	120.30
1	13	186(A)	C	C6-N1-C2	-5.23	118.21	120.30
24	1H	1624	G	C5-N7-C8	5.23	106.92	104.30
24	1H	1973	G	N3-C2-N2	5.23	123.56	119.90
54	1G	1486	G	C8-N9-C4	5.23	108.49	106.40
24	14	2024	G	C2-N3-C4	-5.23	109.28	111.90
1	13	733	A	C8-N9-C4	5.23	107.89	105.80
1	13	810	C	C4-C5-C6	5.23	120.02	117.40
24	1H	1642	G	N1-C6-O6	-5.23	116.76	119.90
24	1H	2420	C	N3-C2-O2	5.23	125.56	121.90
24	1H	2594	C	C2-N3-C4	-5.23	117.28	119.90
24	14	792	G	N3-C4-N9	5.23	129.14	126.00
24	14	1361	G	O5'-P-OP1	-5.23	100.99	105.70
24	14	1839	G	N3-C4-N9	5.23	129.14	126.00
24	14	2460	U	O5'-P-OP1	-5.23	100.99	105.70
1	13	1052	U	N3-C2-O2	-5.23	118.54	122.20
24	1H	589	C	O5'-P-OP2	-5.23	100.99	105.70
24	1H	676	A	N1-C2-N3	5.23	131.91	129.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
24	1H	727	A	N1-C2-N3	5.23	131.91	129.30
24	1H	1185	C	O5'-P-OP2	-5.23	100.99	105.70
54	1G	1195	C	C6-N1-C2	-5.23	118.21	120.30
24	14	2550	G	C6-C5-N7	-5.23	127.26	130.40
24	1H	1690	A	C6-N1-C2	-5.23	115.46	118.60
24	14	28	A	C2-N3-C4	5.23	113.21	110.60
23	4K	17	G	C8-N9-C1'	-5.23	120.20	127.00
24	1H	1819	A	N1-C2-N3	5.23	131.91	129.30
35	78	66	GLY	N-CA-C	-5.23	100.03	113.10
24	1H	141(A)	C	OP1-P-O3'	-5.23	93.70	105.20
24	1H	2032	G	C8-N9-C4	5.23	108.49	106.40
24	1H	2415	G	C8-N9-C4	-5.23	104.31	106.40
24	14	671	C	O5'-P-OP1	5.23	116.97	110.70
24	14	2542	A	O5'-P-OP1	5.23	116.97	110.70
24	1H	719	C	C2-N1-C1'	5.22	124.55	118.80
24	1H	1769	G	N3-C4-C5	-5.22	125.99	128.60
24	14	124	G	N9-C4-C5	-5.22	103.31	105.40
24	1H	46	C	OP1-P-O3'	-5.22	93.71	105.20
24	1H	2413	G	C2-N3-C4	-5.22	109.29	111.90
54	1G	898	G	C8-N9-C4	5.22	108.49	106.40
24	14	935	C	N3-C4-N4	-5.22	114.34	118.00
24	14	1261	C	N1-C2-O2	-5.22	115.77	118.90
24	14	2860	A	C5-C6-N6	-5.22	119.52	123.70
1	13	576	G	C4-N9-C1'	5.22	133.29	126.50
54	1G	690	G	C2-N3-C4	-5.22	109.29	111.90
24	1H	2061	G	N3-C2-N2	5.22	123.55	119.90
24	1H	2615	U	C5-C6-N1	5.22	125.31	122.70
54	1G	251	G	N3-C4-C5	5.22	131.21	128.60
24	14	1939	U	N3-C2-O2	5.22	125.85	122.20
24	14	2260	C	C5-C6-N1	-5.22	118.39	121.00
1	13	926	G	N9-C4-C5	5.22	107.49	105.40
24	1H	508	G	C6-C5-N7	-5.22	127.27	130.40
24	1H	2325	G	C8-N9-C4	-5.22	104.31	106.40
24	1H	2688	U	N3-C4-C5	-5.22	111.47	114.60
24	14	2385	C	C6-N1-C2	5.22	122.39	120.30
24	14	2451	A	C2-N3-C4	-5.22	107.99	110.60
24	1H	1401	G	C8-N9-C4	-5.22	104.31	106.40
24	1H	2183	C	C6-N1-C2	-5.22	118.21	120.30
24	1H	2472	G	N1-C6-O6	5.22	123.03	119.90
24	1H	2583	G	N3-C2-N2	-5.22	116.25	119.90
25	16	48	A	O5'-P-OP2	5.22	116.96	110.70
54	1G	180	U	C5-C6-N1	5.22	125.31	122.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
54	1G	1354	C	C5-C6-N1	5.22	123.61	121.00
24	14	26	G	N3-C4-C5	-5.22	125.99	128.60
24	14	1254	A	C8-N9-C4	5.22	107.89	105.80
24	14	1629	U	N3-C4-C5	-5.22	111.47	114.60
1	13	191(F)	U	C6-N1-C2	-5.21	117.87	121.00
1	13	665	A	C2-N3-C4	5.21	113.21	110.60
1	13	888	G	N3-C4-N9	5.21	129.13	126.00
24	1H	593	G	N9-C4-C5	-5.21	103.31	105.40
24	1H	945	A	C6-N1-C2	-5.21	115.47	118.60
24	1H	1235	G	C6-C5-N7	-5.21	127.27	130.40
24	1H	1671	U	N3-C4-C5	-5.21	111.47	114.60
24	1H	2542	A	C8-N9-C4	5.21	107.89	105.80
54	1G	1115	C	C6-N1-C2	-5.21	118.21	120.30
35	35	85	LEU	CA-CB-CG	5.21	127.29	115.30
24	1H	781	A	C6-N1-C2	-5.21	115.47	118.60
54	1G	525	C	N3-C2-O2	5.21	125.55	121.90
24	14	1567	A	C8-N9-C4	-5.21	103.72	105.80
24	1H	263	C	N1-C2-O2	5.21	122.03	118.90
24	1H	446	G	C5-C6-N1	-5.21	108.89	111.50
24	1H	1790	C	C5-C6-N1	-5.21	118.39	121.00
24	1H	2635	C	C5-C6-N1	-5.21	118.39	121.00
24	1H	2879	C	N3-C4-C5	-5.21	119.81	121.90
54	1G	186	C	C6-N1-C2	-5.21	118.22	120.30
24	14	730	C	C5-C4-N4	-5.21	116.55	120.20
24	1H	1804	C	N3-C4-N4	5.21	121.65	118.00
24	14	1829	A	OP1-P-OP2	5.21	127.41	119.60
24	14	2328	A	C6-N1-C2	-5.21	115.47	118.60
24	1H	1656	C	OP2-P-O3'	5.21	116.66	105.20
54	1G	250	A	C2-N3-C4	-5.21	108.00	110.60
54	1G	333	G	OP2-P-O3'	5.21	116.66	105.20
24	14	678	C	C5-C6-N1	-5.21	118.39	121.00
24	1H	579	G	N1-C6-O6	5.21	123.02	119.90
24	1H	2063	C	C6-N1-C2	5.21	122.38	120.30
24	14	685	A	C8-N9-C4	-5.21	103.72	105.80
24	14	1930	G	N1-C6-O6	-5.21	116.78	119.90
24	1H	246	C	C6-N1-C2	5.21	122.38	120.30
24	1H	581	C	N1-C2-O2	-5.21	115.78	118.90
24	1H	2300	G	O5'-P-OP2	5.21	116.95	110.70
24	1H	226	G	C6-C5-N7	-5.20	127.28	130.40
24	1H	2253	G	N3-C4-N9	-5.20	122.88	126.00
24	14	50	U	C5-C4-O4	5.20	129.02	125.90
24	14	624	C	O5'-P-OP1	5.20	116.94	110.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
24	14	1389	G	OP1-P-O3'	5.20	116.65	105.20
24	14	1801	G	C8-N9-C4	-5.20	104.32	106.40
24	14	2613	U	OP1-P-OP2	5.20	127.40	119.60
25	1J	111	U	C5-C4-O4	5.20	129.02	125.90
24	1H	931	G	N1-C6-O6	-5.20	116.78	119.90
24	1H	2662	A	C4-C5-N7	5.20	113.30	110.70
24	14	1421	G	C8-N9-C4	-5.20	104.32	106.40
24	14	2239	G	P-O3'-C3'	5.20	125.94	119.70
1	13	995	C	C6-N1-C2	-5.20	118.22	120.30
24	1H	918	A	C5-N7-C8	-5.20	101.30	103.90
24	1H	1647	G	C5-C6-O6	5.20	131.72	128.60
24	1H	1812	A	OP1-P-OP2	5.20	127.40	119.60
24	1H	2071	A	N1-C6-N6	5.20	121.72	118.60
54	1G	606	G	C8-N9-C4	-5.20	104.32	106.40
24	14	706	A	C2-N3-C4	-5.20	108.00	110.60
24	14	1246	A	N1-C6-N6	-5.20	115.48	118.60
24	14	1566	A	C5-C6-N6	-5.20	119.54	123.70
24	14	1785	A	C8-N9-C4	-5.20	103.72	105.80
24	14	1940	U	C5-C6-N1	-5.20	120.10	122.70
24	1H	1198	U	N1-C2-N3	5.20	118.02	114.90
24	1H	2620	C	C2-N1-C1'	5.20	124.52	118.80
54	1G	803	G	N1-C6-O6	5.20	123.02	119.90
24	14	2518	A	O5'-P-OP1	-5.20	101.02	105.70
24	14	2586	C	N3-C2-O2	5.20	125.54	121.90
1	13	541	G	N1-C6-O6	5.20	123.02	119.90
54	1G	362	G	N3-C2-N2	-5.20	116.26	119.90
24	14	2726	U	N3-C2-O2	-5.20	118.56	122.20
1	13	733	A	O4'-C1'-N9	5.20	112.36	108.20
24	1H	2391	G	N1-C6-O6	-5.20	116.78	119.90
54	1G	290	C	N3-C2-O2	5.20	125.54	121.90
24	14	1594	G	O5'-P-OP1	-5.20	101.02	105.70
24	14	1620	G	OP1-P-OP2	-5.20	111.81	119.60
24	14	1640	C	O4'-C1'-N1	5.20	112.36	108.20
24	14	2712	U	C6-N1-C2	5.20	124.12	121.00
24	1H	372	G	N9-C4-C5	5.19	107.48	105.40
24	1H	1244	G	C4-C5-N7	5.19	112.88	110.80
24	1H	1476	C	C6-N1-C1'	5.19	127.03	120.80
54	1G	1502	A	C5-C6-N1	-5.19	115.10	117.70
24	14	978	G	OP1-P-O3'	5.19	116.63	105.20
24	14	1011	G	N7-C8-N9	-5.19	110.50	113.10
24	14	1855	G	C4-N9-C1'	5.19	133.25	126.50
24	1H	31	C	N3-C4-N4	5.19	121.63	118.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
24	1H	62	C	N1-C2-O2	-5.19	115.78	118.90
24	1H	1812	A	OP2-P-O3'	5.19	116.62	105.20
24	1H	2078	C	C6-N1-C2	-5.19	118.22	120.30
24	1H	2478	A	O4'-C1'-N9	5.19	112.35	108.20
24	1H	2637	U	C5-C4-O4	-5.19	122.78	125.90
24	14	567	A	C5-C6-N6	-5.19	119.55	123.70
24	14	1993	U	OP2-P-O3'	5.19	116.62	105.20
1	13	975	A	C5-N7-C8	-5.19	101.31	103.90
24	1H	780	G	C8-N9-C1'	-5.19	120.25	127.00
24	1H	848	G	C8-N9-C1'	-5.19	120.25	127.00
24	1H	853	G	N1-C6-O6	5.19	123.01	119.90
24	1H	942	G	N1-C2-N2	5.19	120.87	116.20
24	1H	1215	G	C8-N9-C4	-5.19	104.32	106.40
24	1H	1253	A	C4-C5-C6	-5.19	114.40	117.00
24	1H	1778	U	C5-C4-O4	-5.19	122.79	125.90
24	1H	2263	C	N1-C2-O2	-5.19	115.78	118.90
24	1H	2774	C	N1-C2-O2	-5.19	115.78	118.90
24	14	1667	G	O5'-P-OP1	-5.19	101.03	105.70
24	14	2207	C	C6-N1-C1'	-5.19	114.57	120.80
1	13	560	U	N1-C1'-C2'	-5.19	106.29	112.00
24	1H	609	A	C5-C6-N6	-5.19	119.55	123.70
54	1G	13	U	C4-C5-C6	5.19	122.81	119.70
24	14	211	A	C8-N9-C4	5.19	107.88	105.80
24	1H	136	G	N1-C6-O6	5.19	123.01	119.90
24	1H	1382	G	N7-C8-N9	-5.19	110.51	113.10
24	1H	2422	A	N1-C6-N6	-5.19	115.49	118.60
24	1H	2845	G	O5'-P-OP2	-5.19	101.03	105.70
24	14	793	A	C5-C6-N6	-5.19	119.55	123.70
24	14	1386	C	C5-C6-N1	5.19	123.59	121.00
24	14	1448	G	OP2-P-O3'	5.19	116.61	105.20
24	14	2069	G	C4-N9-C1'	-5.19	119.76	126.50
24	14	2502	G	C2-N3-C4	5.19	114.49	111.90
24	1H	979	G	C8-N9-C4	-5.19	104.33	106.40
24	1H	2573	C	C6-N1-C1'	-5.19	114.58	120.80
27	11	54	ARG	NE-CZ-NH1	-5.19	117.71	120.30
24	14	575	A	O4'-C1'-N9	5.19	112.35	108.20
24	14	654(S)	G	OP1-P-O3'	5.19	116.61	105.20
24	14	1441	G	N1-C6-O6	5.19	123.01	119.90
1	13	900	A	N9-C4-C5	-5.18	103.73	105.80
24	1H	2620	C	C5-C4-N4	-5.18	116.57	120.20
53	Q8	57	ARG	NE-CZ-NH1	5.18	122.89	120.30
24	14	1765	C	C6-N1-C2	5.18	122.37	120.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
24	14	2640	G	N7-C8-N9	5.18	115.69	113.10
24	1H	2023	G	N1-C2-N2	5.18	120.86	116.20
54	1G	979	C	C6-N1-C2	-5.18	118.23	120.30
24	14	926	A	N9-C4-C5	-5.18	103.73	105.80
24	14	1394	U	OP1-P-OP2	-5.18	111.83	119.60
24	14	1613	G	N3-C4-C5	-5.18	126.01	128.60
24	14	1855	G	C8-N9-C1'	-5.18	120.26	127.00
25	16	17	C	N3-C2-O2	-5.18	118.27	121.90
24	14	747	U	C6-N1-C2	5.18	124.11	121.00
24	14	768	G	N3-C4-N9	5.18	129.11	126.00
24	14	1588	C	C5-C6-N1	5.18	123.59	121.00
24	14	1920	C	O5'-P-OP2	-5.18	101.04	105.70
24	14	2413	G	N9-C4-C5	-5.18	103.33	105.40
24	14	2622	C	C6-N1-C2	5.18	122.37	120.30
24	1H	71	A	C5-C6-N6	-5.18	119.56	123.70
24	1H	1528	A	C5-C6-N1	-5.18	115.11	117.70
24	1H	2324	C	N3-C4-C5	5.18	123.97	121.90
24	14	942	G	OP1-P-O3'	5.18	116.59	105.20
24	14	1187	G	N7-C8-N9	5.18	115.69	113.10
24	14	1257	C	C6-N1-C2	-5.18	118.23	120.30
24	14	2681	C	C5-C6-N1	-5.18	118.41	121.00
1	13	576	G	C5-C6-N1	-5.18	108.91	111.50
24	1H	1518	C	O5'-P-OP2	5.18	116.91	110.70
24	1H	1558	A	N1-C2-N3	5.18	131.89	129.30
24	1H	1957	C	O5'-P-OP1	5.18	116.91	110.70
54	1G	1515	C	C6-N1-C2	5.18	122.37	120.30
24	14	329	G	N3-C4-N9	5.18	129.11	126.00
24	14	2281	C	N1-C2-O2	-5.18	115.79	118.90
24	14	2401	U	C6-N1-C1'	5.18	128.45	121.20
24	14	2586	C	N3-C4-N4	5.18	121.62	118.00
1	13	1199	U	C5-C4-O4	5.17	129.00	125.90
24	1H	729	G	OP2-P-O3'	5.17	116.58	105.20
24	1H	837	C	C5-C6-N1	5.17	123.59	121.00
24	1H	2357	U	C2-N3-C4	5.17	130.10	127.00
24	1H	2428	G	C5-C6-O6	5.17	131.71	128.60
22	2L	75	C	N3-C2-O2	-5.17	118.28	121.90
24	14	255	A	OP2-P-O3'	5.17	116.58	105.20
24	14	2251	G	N1-C2-N3	5.17	127.00	123.90
24	1H	1271	G	N3-C4-N9	5.17	129.10	126.00
54	1G	50	A	C8-N9-C4	-5.17	103.73	105.80
24	14	727	A	O5'-P-OP1	-5.17	101.04	105.70
1	13	610	G	O5'-P-OP2	-5.17	101.05	105.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
24	1H	2084	C	O5'-P-OP1	-5.17	101.05	105.70
24	1H	2511	U	C4-C5-C6	5.17	122.80	119.70
24	1H	2874	C	N3-C4-N4	5.17	121.62	118.00
54	1G	535	A	C5-C6-N6	5.17	127.84	123.70
24	14	1766	U	C4-C5-C6	5.17	122.80	119.70
24	14	2297	C	N3-C2-O2	-5.17	118.28	121.90
24	1H	562	U	OP1-P-OP2	5.17	127.36	119.60
24	1H	2284	C	N3-C2-O2	5.17	125.52	121.90
24	14	389	G	C4-C5-N7	5.17	112.87	110.80
1	13	186(A)	C	N1-C2-O2	5.17	122.00	118.90
24	1H	654(S)	G	P-O3'-C3'	5.17	125.90	119.70
24	1H	705	A	N9-C4-C5	-5.17	103.73	105.80
24	1H	812	C	N1-C2-O2	-5.17	115.80	118.90
54	1G	594	G	C8-N9-C4	-5.17	104.33	106.40
54	1G	1275	A	C8-N9-C4	-5.17	103.73	105.80
24	14	1255	U	N3-C4-O4	5.17	123.02	119.40
24	14	2570	G	C2-N3-C4	-5.17	109.31	111.90
24	1H	307	G	N7-C8-N9	5.17	115.68	113.10
24	1H	2264	C	O5'-P-OP1	-5.17	101.05	105.70
54	1G	1202	G	C4-C5-N7	-5.17	108.73	110.80
24	14	447	A	O5'-P-OP2	5.17	116.90	110.70
24	14	1564	C	C4-C5-C6	5.17	119.98	117.40
25	1J	75	G	N9-C4-C5	-5.17	103.33	105.40
24	1H	1197	G	C4-C5-N7	-5.17	108.73	110.80
24	1H	1824	G	OP2-P-O3'	5.17	116.56	105.20
24	1H	2717	G	N3-C4-N9	5.17	129.10	126.00
24	1H	2783	G	C6-C5-N7	-5.17	127.30	130.40
24	1H	1444(A)	A	O4'-C1'-N9	5.16	112.33	108.20
24	1H	2316	C	O5'-P-OP2	5.16	116.90	110.70
24	1H	1021	A	C6-N1-C2	5.16	121.70	118.60
24	1H	1603	A	N7-C8-N9	5.16	116.38	113.80
25	16	56	G	C8-N9-C4	-5.16	104.33	106.40
24	14	2450	A	N1-C2-N3	5.16	131.88	129.30
1	13	720	C	C5-C6-N1	5.16	123.58	121.00
24	1H	1562	A	N1-C6-N6	5.16	121.70	118.60
53	Q8	60	LEU	CA-CB-CG	5.16	127.17	115.30
24	14	2270	G	OP2-P-O3'	5.16	116.55	105.20
51	J5	19	ARG	NE-CZ-NH1	-5.16	117.72	120.30
24	1H	593	G	OP2-P-O3'	5.16	116.55	105.20
54	1G	671	G	C8-N9-C4	5.16	108.46	106.40
24	14	669	G	N1-C6-O6	-5.16	116.81	119.90
24	14	2577	A	C4-C5-C6	5.16	119.58	117.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
27	19	41	GLY	N-CA-C	-5.16	100.20	113.10
24	1H	213	A	C5-C6-N6	-5.16	119.57	123.70
24	1H	340	A	C8-N9-C4	-5.16	103.74	105.80
24	1H	1936	A	N3-C4-N9	5.16	131.53	127.40
24	14	2458	G	N3-C2-N2	-5.16	116.29	119.90
24	14	2603	G	N1-C6-O6	5.16	122.99	119.90
1	13	1502	A	C5-N7-C8	-5.16	101.32	103.90
24	1H	1409	C	C6-N1-C2	5.16	122.36	120.30
24	1H	2590	A	N3-C4-C5	5.16	130.41	126.80
24	14	565	C	C6-N1-C2	5.16	122.36	120.30
24	14	796	C	C4-C5-C6	5.16	119.98	117.40
24	14	2681	C	C5-C4-N4	5.16	123.81	120.20
54	1G	402	G	O5'-P-OP2	-5.15	101.06	105.70
23	4L	18	C	N3-C2-O2	-5.15	118.29	121.90
1	13	1407	C	N1-C2-O2	5.15	121.99	118.90
24	1H	113	G	N3-C4-C5	5.15	131.18	128.60
24	1H	2403	C	N3-C4-C5	-5.15	119.84	121.90
24	1H	2705	A	N1-C6-N6	5.15	121.69	118.60
24	14	603	A	C6-C5-N7	-5.15	128.69	132.30
24	14	2297	C	N1-C2-O2	5.15	121.99	118.90
2	1E	196	LEU	CA-CB-CG	5.15	127.15	115.30
22	3K	18	G	C4-N9-C1'	-5.15	119.81	126.50
24	1H	208	C	OP2-P-O3'	5.15	116.53	105.20
24	1H	1461	G	C4-N9-C1'	5.15	133.19	126.50
24	1H	1692	U	C5-C4-O4	-5.15	122.81	125.90
24	1H	2582	G	N3-C2-N2	5.15	123.51	119.90
54	1G	438	G	O5'-P-OP2	-5.15	101.06	105.70
24	14	679	C	C6-N1-C2	5.15	122.36	120.30
24	14	2081	C	O5'-P-OP1	5.15	116.88	110.70
24	14	2581	G	C5-C6-N1	-5.15	108.92	111.50
1	13	433	C	N1-C2-O2	5.15	121.99	118.90
24	1H	1645	G	C8-N9-C4	-5.15	104.34	106.40
24	1H	1681	G	N3-C4-N9	-5.15	122.91	126.00
24	14	1143	A	C2-N3-C4	-5.15	108.03	110.60
24	14	2679	A	O5'-P-OP2	-5.15	101.07	105.70
24	1H	127	A	OP1-P-O3'	5.15	116.53	105.20
24	1H	258	G	O5'-P-OP2	-5.15	101.07	105.70
24	1H	1017	G	C8-N9-C4	-5.15	104.34	106.40
27	11	147	LEU	CA-CB-CG	5.15	127.14	115.30
24	14	270(Y)	G	C4-C5-N7	-5.15	108.74	110.80
24	14	786	C	N3-C4-C5	5.15	123.96	121.90
24	14	2362	G	C8-N9-C4	5.15	108.46	106.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
24	14	2433	A	C8-N9-C4	-5.15	103.74	105.80
24	14	2447	G	P-O3'-C3'	5.15	125.88	119.70
24	1H	2239	G	P-O3'-C3'	5.15	125.88	119.70
24	1H	2389	G	N1-C6-O6	-5.15	116.81	119.90
54	1G	7	G	C8-N9-C1'	5.14	133.69	127.00
54	1G	421	U	C5-C6-N1	5.14	125.27	122.70
54	1G	900	A	O5'-P-OP2	5.14	116.87	110.70
24	14	463	G	N7-C8-N9	5.14	115.67	113.10
54	1G	503	C	C5-C6-N1	5.14	123.57	121.00
54	1G	1529	G	C5-C6-N1	5.14	114.07	111.50
24	14	1255	U	N3-C4-C5	-5.14	111.51	114.60
24	1H	131	G	O5'-P-OP1	5.14	116.87	110.70
24	1H	1565	C	N1-C2-O2	-5.14	115.82	118.90
24	1H	2692	C	N3-C2-O2	-5.14	118.30	121.90
24	14	17	G	C5-C6-O6	-5.14	125.52	128.60
24	14	2323	G	C8-N9-C4	5.14	108.46	106.40
24	14	2455	G	C5-N7-C8	-5.14	101.73	104.30
24	14	2516	G	N9-C4-C5	5.14	107.46	105.40
1	13	394	G	N3-C2-N2	-5.14	116.30	119.90
24	1H	175	G	C8-N9-C4	5.14	108.46	106.40
24	1H	841	A	C2-N3-C4	-5.14	108.03	110.60
24	1H	1453	A	C8-N9-C4	5.14	107.86	105.80
38	A8	60	GLY	N-CA-C	5.14	125.95	113.10
54	1G	1502	A	C4-N9-C1'	5.14	135.55	126.30
24	14	672	C	O5'-P-OP1	5.14	116.87	110.70
24	14	2019	A	C8-N9-C4	5.14	107.86	105.80
24	1H	2692	C	N1-C2-O2	5.14	121.98	118.90
54	1G	511	C	C2-N1-C1'	-5.14	113.15	118.80
24	14	1157	G	C8-N9-C1'	-5.14	120.32	127.00
24	14	2685	G	N9-C4-C5	-5.14	103.34	105.40
1	13	690	G	C6-C5-N7	-5.14	127.32	130.40
24	1H	238	C	N1-C2-O2	-5.14	115.82	118.90
24	1H	578	A	C4-C5-C6	5.14	119.57	117.00
24	1H	2819	G	C8-N9-C4	5.14	108.45	106.40
54	1G	505	G	C4-N9-C1'	5.14	133.18	126.50
24	14	438	G	N7-C8-N9	5.14	115.67	113.10
24	1H	1398	C	C6-N1-C2	5.13	122.35	120.30
24	1H	2288	A	N9-C4-C5	-5.13	103.75	105.80
24	14	27	G	N3-C4-C5	5.13	131.17	128.60
24	1H	975	G	N1-C6-O6	5.13	122.98	119.90
24	1H	2490	G	C5-C6-O6	-5.13	125.52	128.60
54	1G	412	A	P-O3'-C3'	5.13	125.86	119.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
54	1G	1469	G	C4-N9-C1'	5.13	133.17	126.50
24	14	2624	G	C4-C5-N7	5.13	112.85	110.80
1	13	571	U	N3-C4-O4	5.13	122.99	119.40
24	1H	512	G	C4-C5-N7	5.13	112.85	110.80
4	32	135	LEU	CA-CB-CG	5.13	127.10	115.30
24	14	16	G	N1-C6-O6	5.13	122.98	119.90
24	14	2318	G	C4-N9-C1'	5.13	133.17	126.50
24	14	2649	U	N3-C4-O4	5.13	122.99	119.40
24	14	1316	U	C2-N1-C1'	5.13	123.86	117.70
24	14	1569	A	OP1-P-O3'	5.13	116.49	105.20
24	14	1602	U	O5'-P-OP1	-5.13	101.08	105.70
24	1H	585	G	C5-C6-O6	-5.13	125.52	128.60
24	1H	674	G	C8-N9-C4	5.13	108.45	106.40
24	1H	1138	G	C8-N9-C1'	-5.13	120.33	127.00
54	1G	919	A	N1-C6-N6	-5.13	115.52	118.60
24	14	396	G	C5-N7-C8	-5.13	101.74	104.30
24	14	453	C	N1-C2-O2	-5.13	115.82	118.90
24	14	2700	C	N3-C4-C5	5.13	123.95	121.90
24	1H	501	A	C2-N3-C4	-5.13	108.04	110.60
24	1H	1426	G	C4-N9-C1'	5.13	133.16	126.50
24	1H	2575	C	C6-N1-C2	-5.13	118.25	120.30
54	1G	183	G	N3-C4-N9	5.13	129.07	126.00
24	14	733	G	C4-N9-C1'	5.13	133.16	126.50
24	14	1783	A	C2-N3-C4	-5.13	108.04	110.60
24	14	1783	A	N1-C2-N3	5.13	131.86	129.30
24	14	2689	U	C2-N1-C1'	-5.13	111.55	117.70
28	29	80	GLU	N-CA-C	5.13	124.84	111.00
24	1H	1226	G	C5-C6-O6	5.12	131.68	128.60
24	14	1142(A)	A	N3-C4-C5	5.12	130.39	126.80
24	14	1295	C	N1-C2-O2	-5.12	115.83	118.90
1	13	780	A	N1-C6-N6	5.12	121.67	118.60
24	1H	1252	G	C4-C5-N7	-5.12	108.75	110.80
24	1H	1986	A	N1-C2-N3	5.12	131.86	129.30
24	1H	2593	U	C5-C4-O4	-5.12	122.83	125.90
25	16	94	C	N3-C4-C5	-5.12	119.85	121.90
54	1G	769	G	N3-C4-C5	-5.12	126.04	128.60
24	14	146	G	C2-N3-C4	-5.12	109.34	111.90
24	14	556	G	N3-C4-N9	5.12	129.07	126.00
24	1H	733	G	N3-C4-N9	5.12	129.07	126.00
24	1H	1257	C	C4-C5-C6	5.12	119.96	117.40
24	1H	2225	A	C5-C6-N1	5.12	120.26	117.70
24	1H	2318	G	C4-C5-N7	5.12	112.85	110.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
24	1H	2578	G	C8-N9-C4	5.12	108.45	106.40
54	1G	783	C	C5-C6-N1	5.12	123.56	121.00
22	3L	33	C	N3-C4-C5	-5.12	119.85	121.90
24	14	180	G	C6-C5-N7	-5.12	127.33	130.40
24	14	1342	A	N7-C8-N9	5.12	116.36	113.80
24	14	1440	G	N1-C6-O6	5.12	122.97	119.90
1	13	780	A	OP1-P-OP2	-5.12	111.92	119.60
1	13	1498	U	O4'-C1'-N1	-5.12	104.10	108.20
24	1H	911	A	OP1-P-O3'	5.12	116.46	105.20
24	14	1642	G	N7-C8-N9	5.12	115.66	113.10
1	13	742	G	C8-N9-C4	5.12	108.45	106.40
24	1H	606	U	O5'-P-OP2	-5.12	101.09	105.70
24	1H	1025	G	C8-N9-C4	-5.12	104.35	106.40
24	1H	2258	C	O5'-P-OP1	-5.12	101.09	105.70
24	1H	2402	C	C6-N1-C2	-5.12	118.25	120.30
41	D8	35	LEU	CA-CB-CG	5.12	127.07	115.30
24	14	1317	A	O5'-P-OP2	-5.12	101.09	105.70
24	1H	558	G	C5-C6-N1	-5.12	108.94	111.50
24	1H	669	G	OP1-P-OP2	5.12	127.28	119.60
24	1H	691	C	C6-N1-C2	5.12	122.35	120.30
24	1H	2586	C	C5-C4-N4	-5.12	116.62	120.20
24	14	616	A	C5-N7-C8	-5.12	101.34	103.90
24	14	1028	A	OP2-P-O3'	5.12	116.46	105.20
1	13	272	C	C6-N1-C2	-5.12	118.25	120.30
24	1H	527	C	C6-N1-C2	5.12	122.35	120.30
24	1H	692	C	C6-N1-C2	5.12	122.35	120.30
24	1H	2375	G	C5-C6-O6	-5.12	125.53	128.60
24	14	477	A	OP1-P-O3'	5.12	116.45	105.20
24	14	2638	G	C5-C6-O6	-5.12	125.53	128.60
24	1H	307	G	C8-N9-C4	-5.11	104.36	106.40
24	1H	1620	G	C6-C5-N7	-5.11	127.33	130.40
54	1G	1415	G	C8-N9-C1'	-5.11	120.35	127.00
24	1H	652	C	C6-N1-C2	-5.11	118.25	120.30
54	1G	944	G	N3-C4-C5	-5.11	126.04	128.60
24	14	1500	G	C4-C5-C6	5.11	121.87	118.80
1	13	17	U	O5'-P-OP1	-5.11	101.10	105.70
24	1H	2058	A	N1-C2-N3	-5.11	126.75	129.30
24	1H	2341	G	N3-C4-N9	5.11	129.07	126.00
25	16	24	G	N3-C4-C5	-5.11	126.04	128.60
24	14	1366	A	C5-C6-N6	-5.11	119.61	123.70
24	14	1528	A	N1-C6-N6	5.11	121.67	118.60
24	14	1649	G	N3-C4-C5	-5.11	126.05	128.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
25	1J	101	A	N1-C6-N6	5.11	121.67	118.60
24	1H	2417	C	N3-C4-C5	-5.11	119.86	121.90
24	14	2287	A	N1-C6-N6	5.11	121.67	118.60
24	14	2773	C	N1-C2-O2	5.11	121.97	118.90
32	69	131	LYS	C-N-CD	-5.11	109.36	120.60
1	13	758	G	C5-C6-O6	-5.11	125.54	128.60
1	13	760	G	C5-C6-O6	-5.11	125.54	128.60
24	1H	769	G	OP1-P-OP2	-5.11	111.94	119.60
24	1H	2427	C	C2-N1-C1'	-5.11	113.18	118.80
24	14	349	G	N1-C6-O6	5.11	122.97	119.90
24	1H	504	U	C2-N1-C1'	5.11	123.83	117.70
24	1H	2272	U	O5'-P-OP2	-5.11	101.10	105.70
24	1H	2450	A	N1-C2-N3	5.11	131.85	129.30
54	1G	1502	A	C6-C5-N7	-5.11	128.73	132.30
24	14	134	C	C5-C6-N1	-5.11	118.45	121.00
24	14	1216	G	N1-C6-O6	5.11	122.96	119.90
24	1H	1911	U	C6-N1-C2	-5.10	117.94	121.00
24	1H	2497	A	OP1-P-OP2	-5.10	111.94	119.60
24	14	933	A	C5-N7-C8	-5.10	101.35	103.90
1	13	1502	A	C6-C5-N7	-5.10	128.73	132.30
24	1H	1219	G	C5-C6-O6	-5.10	125.54	128.60
24	14	397	G	C5-C6-O6	-5.10	125.54	128.60
24	1H	445	C	N3-C4-C5	-5.10	119.86	121.90
24	14	1579	A	N9-C4-C5	-5.10	103.76	105.80
24	14	1790	C	N3-C4-C5	5.10	123.94	121.90
24	1H	373	U	N1-C2-O2	5.10	126.37	122.80
24	1H	1637	A	N1-C6-N6	-5.10	115.54	118.60
24	1H	2462	U	OP1-P-OP2	5.10	127.25	119.60
54	1G	1519	A	C5-C6-N1	-5.10	115.15	117.70
24	14	1604	C	N1-C2-O2	-5.10	115.84	118.90
24	14	2252	G	C4-C5-C6	5.10	121.86	118.80
1	13	346	G	C8-N9-C1'	-5.10	120.37	127.00
24	1H	772	C	N3-C4-N4	5.10	121.57	118.00
24	1H	1400	G	O4'-C1'-N9	5.10	112.28	108.20
24	1H	1812	A	C4-C5-C6	5.10	119.55	117.00
24	1H	2569	G	C8-N9-C1'	-5.10	120.37	127.00
24	14	481	G	O5'-P-OP1	5.10	116.82	110.70
24	14	1764	G	C8-N9-C4	5.10	108.44	106.40
24	14	2237	G	OP1-P-OP2	5.10	127.25	119.60
1	13	1057	G	N3-C4-C5	-5.10	126.05	128.60
24	1H	208	C	N3-C2-O2	5.10	125.47	121.90
24	1H	770	G	N7-C8-N9	5.10	115.65	113.10

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
24	1H	2454	G	C5-N7-C8	5.10	106.85	104.30
24	14	389	G	C6-C5-N7	-5.10	127.34	130.40
24	14	1566	A	C8-N9-C4	5.10	107.84	105.80
1	13	560	U	C3'-C2'-C1'	5.09	105.58	101.50
24	1H	1936	A	N9-C4-C5	-5.09	103.76	105.80
28	21	117	MET	CA-CB-CG	5.09	121.96	113.30
54	1G	1096	C	C6-N1-C2	-5.09	118.26	120.30
24	14	79	G	N1-C6-O6	5.09	122.96	119.90
24	14	784	A	O4'-C1'-N9	5.09	112.28	108.20
24	14	1204	A	N3-C4-C5	5.09	130.37	126.80
24	14	1349	A	C2-N3-C4	-5.09	108.05	110.60
24	14	1656	C	OP1-P-OP2	-5.09	111.96	119.60
24	14	1725	G	C8-N9-C4	-5.09	104.36	106.40
1	13	1520	G	C5-C6-O6	-5.09	125.54	128.60
24	1H	614	U	C2-N1-C1'	5.09	123.81	117.70
24	14	419	C	N3-C4-C5	-5.09	119.86	121.90
24	14	1559	G	C5-N7-C8	-5.09	101.75	104.30
1	13	827	U	C2-N1-C1'	5.09	123.81	117.70
24	1H	793	A	N1-C6-N6	5.09	121.66	118.60
24	1H	930	U	N1-C2-O2	5.09	126.36	122.80
24	1H	1279	G	O5'-P-OP1	5.09	116.81	110.70
54	1G	578	C	N3-C2-O2	-5.09	118.34	121.90
24	14	1594	G	O5'-P-OP2	5.09	116.81	110.70
1	13	540	G	N1-C6-O6	5.09	122.95	119.90
24	1H	929	G	N1-C6-O6	5.09	122.95	119.90
24	1H	949	C	N3-C2-O2	5.09	125.46	121.90
24	1H	2033	A	O4'-C1'-N9	5.09	112.27	108.20
54	1G	514	C	C6-N1-C2	-5.09	118.26	120.30
24	14	271(A)	C	C6-N1-C2	-5.09	118.26	120.30
24	14	683	C	N1-C2-O2	-5.09	115.85	118.90
24	14	2762	G	C4-C5-N7	5.09	112.84	110.80
1	13	1027	C	P-O3'-C3'	5.09	125.81	119.70
1	13	1525	G	N3-C4-C5	5.09	131.14	128.60
24	1H	535	C	OP2-P-O3'	5.09	116.39	105.20
24	1H	863	A	OP2-P-O3'	5.09	116.39	105.20
24	1H	1606	G	C8-N9-C1'	-5.09	120.39	127.00
24	1H	2019	A	C5-C6-N6	-5.09	119.63	123.70
24	1H	2270	G	N3-C4-N9	5.09	129.05	126.00
54	1G	1060	C	C6-N1-C2	-5.09	118.27	120.30
24	14	1643	G	O5'-P-OP1	-5.09	101.12	105.70
24	1H	611	C	C6-N1-C2	5.09	122.33	120.30
24	1H	1314	C	C2-N1-C1'	5.09	124.40	118.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
24	1H	1616	A	C8-N9-C4	-5.09	103.77	105.80
24	1H	1768	U	OP2-P-O3'	5.09	116.39	105.20
54	1G	1529	G	C2-N3-C4	5.09	114.44	111.90
24	14	679	C	N1-C2-O2	-5.09	115.85	118.90
24	14	1834	U	C2-N1-C1'	5.09	123.81	117.70
24	1H	2030	A	C5-C6-N6	-5.08	119.63	123.70
24	14	442	G	C5-N7-C8	-5.08	101.76	104.30
24	14	666	G	O5'-P-OP1	5.08	116.80	110.70
24	14	778	G	C2-N3-C4	-5.08	109.36	111.90
25	1J	31	C	N1-C2-O2	-5.08	115.85	118.90
24	1H	52	A	C2-N3-C4	5.08	113.14	110.60
24	1H	452	G	C5-C6-O6	5.08	131.65	128.60
24	1H	596	G	C4-C5-N7	-5.08	108.77	110.80
24	1H	1192	G	C6-C5-N7	-5.08	127.35	130.40
24	1H	1428	C	OP1-P-OP2	-5.08	111.98	119.60
24	1H	2697	G	OP1-P-OP2	5.08	127.23	119.60
24	14	388	G	N1-C2-N2	5.08	120.77	116.20
24	14	671	C	N1-C2-N3	5.08	122.76	119.20
24	14	1334	G	C4-N9-C1'	5.08	133.11	126.50
1	13	518	C	N1-C2-O2	5.08	121.95	118.90
24	1H	70	G	C8-N9-C4	-5.08	104.37	106.40
24	1H	788	A	C6-C5-N7	-5.08	128.74	132.30
24	1H	794	G	N1-C2-N3	5.08	126.95	123.90
24	1H	1244	G	C5-N7-C8	-5.08	101.76	104.30
24	1H	1543	A	C2-N3-C4	-5.08	108.06	110.60
54	1G	421	U	C2-N1-C1'	5.08	123.80	117.70
54	1G	1469	G	C5-C6-N1	-5.08	108.96	111.50
24	14	234	C	N3-C2-O2	-5.08	118.34	121.90
24	14	2568	C	OP2-P-O3'	5.08	116.38	105.20
24	14	2621	A	N1-C6-N6	-5.08	115.55	118.60
24	1H	2069	G	C5-C6-N1	5.08	114.04	111.50
24	14	1553	A	C2-N3-C4	-5.08	108.06	110.60
24	1H	210	C	N3-C4-C5	5.08	123.93	121.90
24	1H	964	C	C6-N1-C2	-5.08	118.27	120.30
24	1H	1250	G	C6-C5-N7	5.08	133.45	130.40
24	1H	1402	C	C5-C4-N4	-5.08	116.64	120.20
24	1H	2869	G	C8-N9-C4	-5.08	104.37	106.40
24	14	2360	A	N1-C6-N6	5.08	121.65	118.60
24	14	2701	C	OP2-P-O3'	5.08	116.37	105.20
24	1H	2516	G	C5-C6-N1	5.08	114.04	111.50
24	1H	2766	G	C8-N9-C1'	-5.08	120.40	127.00
24	14	2584	U	C6-N1-C1'	-5.08	114.09	121.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	13	942	G	C8-N9-C4	-5.08	104.37	106.40
1	13	1260	C	C6-N1-C2	-5.08	118.27	120.30
54	1G	322	C	C5-C4-N4	-5.08	116.65	120.20
24	14	925	C	C6-N1-C2	-5.08	118.27	120.30
24	14	1790	C	OP1-P-O3'	5.08	116.37	105.20
24	14	2688	U	N1-C2-O2	5.08	126.35	122.80
24	1H	122	G	C5-C6-O6	-5.07	125.56	128.60
24	1H	347	A	N1-C6-N6	5.07	121.64	118.60
24	1H	2501	C	C2-N1-C1'	-5.07	113.22	118.80
24	1H	2583	G	N3-C4-N9	-5.07	122.96	126.00
24	14	2087	G	N9-C4-C5	-5.07	103.37	105.40
54	1G	1081	G	O5'-P-OP2	-5.07	101.14	105.70
24	14	1242	A	N1-C2-N3	5.07	131.84	129.30
24	14	2595	G	C6-C5-N7	5.07	133.44	130.40
24	14	2755	C	C6-N1-C2	-5.07	118.27	120.30
1	13	285	G	N3-C4-C5	-5.07	126.06	128.60
24	1H	1313	U	C2-N3-C4	5.07	130.04	127.00
24	1H	1815	A	N7-C8-N9	-5.07	111.27	113.80
24	1H	1938	A	O4'-C1'-N9	5.07	112.26	108.20
24	1H	2589	A	C5-C6-N1	5.07	120.23	117.70
24	14	1318	C	C5-C6-N1	5.07	123.53	121.00
24	14	2051	A	C4-C5-N7	5.07	113.23	110.70
24	1H	1261	C	N3-C2-O2	5.07	125.45	121.90
24	1H	2077	A	C8-N9-C4	-5.07	103.77	105.80
24	1H	2623	G	N3-C4-C5	-5.07	126.06	128.60
24	14	2021	C	C6-N1-C2	-5.07	118.27	120.30
22	2K	20	C	N3-C2-O2	-5.07	118.35	121.90
24	1H	1241	A	C4-C5-N7	5.07	113.23	110.70
24	1H	1953	A	C5-C6-N1	5.07	120.23	117.70
24	1H	2277	G	C5-C6-O6	-5.07	125.56	128.60
24	14	2386	C	N1-C2-O2	-5.07	115.86	118.90
24	1H	724	U	C5-C6-N1	-5.07	120.17	122.70
24	1H	2512	C	C5-C4-N4	-5.07	116.66	120.20
24	14	977	G	N1-C6-O6	-5.07	116.86	119.90
24	14	2275	C	O4'-C1'-N1	-5.07	104.15	108.20
1	13	449	C	C2-N1-C1'	5.06	124.37	118.80
24	1H	530	G	N3-C4-C5	5.06	131.13	128.60
24	1H	1630(A)	C	O5'-P-OP1	-5.06	101.14	105.70
24	1H	2082	A	O5'-P-OP2	-5.06	101.14	105.70
24	1H	2272	U	N3-C4-O4	-5.06	115.86	119.40
54	1G	1420	C	C5-C6-N1	5.06	123.53	121.00
24	14	1594	G	N7-C8-N9	5.06	115.63	113.10

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
24	14	2430	A	C4-C5-C6	5.06	119.53	117.00
24	1H	61	G	O5'-P-OP1	-5.06	101.14	105.70
24	1H	1365	A	C4-C5-C6	5.06	119.53	117.00
24	1H	1820	U	C5-C6-N1	-5.06	120.17	122.70
24	1H	2752	C	C6-N1-C2	-5.06	118.28	120.30
24	1H	2779	U	N3-C4-O4	-5.06	115.86	119.40
52	P8	23	ARG	NE-CZ-NH1	5.06	122.83	120.30
54	1G	1366	C	O5'-P-OP1	-5.06	101.14	105.70
24	14	868	U	N3-C4-C5	-5.06	111.56	114.60
24	14	1814	G	OP1-P-OP2	5.06	127.19	119.60
24	1H	918	A	N7-C8-N9	5.06	116.33	113.80
24	1H	1331	A	C5-C6-N6	5.06	127.75	123.70
24	1H	2342	C	C5-C6-N1	5.06	123.53	121.00
24	1H	2441	C	C6-N1-C2	5.06	122.32	120.30
24	14	627	A	N1-C6-N6	5.06	121.64	118.60
1	13	137	C	C6-N1-C2	5.06	122.32	120.30
24	1H	1285	G	O5'-P-OP1	-5.06	101.15	105.70
54	1G	866	C	C6-N1-C2	-5.06	118.28	120.30
24	14	669	G	C5-C6-O6	5.06	131.63	128.60
24	14	1477	A	O5'-P-OP2	-5.06	101.15	105.70
1	13	968	A	N1-C6-N6	5.06	121.64	118.60
24	1H	1786	A	C4-N9-C1'	5.06	135.40	126.30
54	1G	33	A	OP1-P-O3'	5.06	116.33	105.20
54	1G	1516	G	N3-C2-N2	-5.06	116.36	119.90
24	14	955	C	C5-C4-N4	5.06	123.74	120.20
1	13	694	A	O5'-P-OP2	5.06	116.77	110.70
24	1H	1366	A	C4-C5-C6	5.06	119.53	117.00
54	1G	545	C	O5'-P-OP2	-5.06	101.15	105.70
24	14	809	G	N1-C2-N3	5.06	126.93	123.90
1	13	765	G	N9-C4-C5	-5.05	103.38	105.40
1	13	858	G	C5-C6-O6	5.05	131.63	128.60
24	1H	339	U	N1-C2-N3	5.05	117.93	114.90
24	1H	848	G	N7-C8-N9	-5.05	110.57	113.10
24	1H	863	A	C8-N9-C4	5.05	107.82	105.80
24	1H	1025	G	N9-C4-C5	5.05	107.42	105.40
24	1H	2496	C	N3-C4-C5	5.05	123.92	121.90
24	1H	582	G	N7-C8-N9	5.05	115.63	113.10
24	1H	1663	C	O5'-P-OP1	5.05	116.76	110.70
24	1H	2574	G	C4-C5-N7	5.05	112.82	110.80
54	1G	150	C	C6-N1-C2	-5.05	118.28	120.30
54	1G	481	G	N3-C4-C5	-5.05	126.07	128.60
24	14	1256	G	C5-C6-N1	5.05	114.03	111.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
24	14	1474	C	C2-N3-C4	5.05	122.43	119.90
24	14	2511	U	O5'-P-OP2	-5.05	101.15	105.70
41	95	91	TYR	CB-CG-CD2	-5.05	117.97	121.00
22	2K	29	C	C6-N1-C2	5.05	122.32	120.30
24	1H	2569	G	N3-C4-C5	-5.05	126.08	128.60
24	1H	2773	C	C5-C6-N1	-5.05	118.47	121.00
54	1G	758	G	C6-C5-N7	-5.05	127.37	130.40
24	14	914	C	N1-C2-O2	5.05	121.93	118.90
24	14	1915	U	N3-C2-O2	-5.05	118.67	122.20
24	14	2036	C	OP2-P-O3'	5.05	116.31	105.20
24	14	2819	G	C5-C6-O6	-5.05	125.57	128.60
24	1H	188	G	C4-C5-N7	5.05	112.82	110.80
54	1G	898	G	N7-C8-N9	-5.05	110.58	113.10
24	1H	222	A	O4'-C1'-N9	-5.05	104.16	108.20
24	1H	299	A	OP2-P-O3'	5.05	116.30	105.20
24	1H	1252	G	C4-N9-C1'	-5.05	119.94	126.50
24	1H	1559	G	C5-C6-O6	-5.05	125.57	128.60
24	1H	2346	A	O5'-P-OP1	-5.05	101.16	105.70
24	1H	2510	C	N1-C2-O2	-5.05	115.87	118.90
44	G8	81	LYS	C-N-CA	5.05	143.20	122.00
24	14	2592	G	N3-C4-C5	-5.05	126.08	128.60
24	14	2894	G	N3-C4-N9	-5.05	122.97	126.00
24	1H	748	G	O4'-C1'-N9	5.04	112.24	108.20
24	1H	990	A	OP2-P-O3'	5.04	116.30	105.20
24	1H	1307	A	C8-N9-C4	5.04	107.82	105.80
24	1H	2318	G	C4-N9-C1'	5.04	133.06	126.50
25	16	60	C	N3-C4-N4	5.04	121.53	118.00
24	14	1984	G	C8-N9-C4	5.04	108.42	106.40
24	1H	688	U	N3-C2-O2	5.04	125.73	122.20
24	1H	1125	G	C4-C5-N7	-5.04	108.78	110.80
24	1H	1989	G	C4-C5-C6	5.04	121.83	118.80
24	1H	2012	G	C8-N9-C4	5.04	108.42	106.40
24	1H	2335	A	O4'-C1'-N9	5.04	112.23	108.20
54	1G	1348	U	C5-C4-O4	5.04	128.93	125.90
54	1G	1414	U	C5-C4-O4	5.04	128.93	125.90
24	14	623	G	C4-C5-N7	5.04	112.82	110.80
24	14	1209	G	O5'-P-OP2	-5.04	101.16	105.70
24	14	2857	G	C6-C5-N7	-5.04	127.37	130.40
37	55	79	LEU	CA-CB-CG	5.04	126.90	115.30
24	1H	593	G	C4-C5-C6	5.04	121.83	118.80
24	1H	1229(A)	G	C2-N3-C4	-5.04	109.38	111.90
41	D8	40	LEU	CA-CB-CG	5.04	126.89	115.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
54	1G	783	C	N3-C4-C5	-5.04	119.88	121.90
24	14	737	C	C2-N1-C1'	-5.04	113.25	118.80
24	14	1311	G	C8-N9-C4	5.04	108.42	106.40
24	14	1463	C	C6-N1-C2	-5.04	118.28	120.30
24	14	1985	G	C4-C5-N7	-5.04	108.78	110.80
24	1H	889	C	C2-N1-C1'	5.04	124.34	118.80
24	1H	1400	G	N9-C4-C5	5.04	107.42	105.40
24	1H	1689	A	O5'-P-OP2	-5.04	101.16	105.70
24	1H	2016	U	C5-C6-N1	-5.04	120.18	122.70
24	14	110	G	N1-C6-O6	5.04	122.92	119.90
24	1H	774	A	C6-C5-N7	-5.04	128.77	132.30
24	14	383	U	C5-C4-O4	5.04	128.92	125.90
24	14	558	G	C8-N9-C4	5.04	108.42	106.40
24	14	1141	U	O4'-C1'-N1	5.04	112.23	108.20
24	14	1234	U	O5'-P-OP2	-5.04	101.17	105.70
24	14	2011	U	N1-C2-O2	-5.04	119.27	122.80
24	14	2615	U	C5-C6-N1	5.04	125.22	122.70
24	1H	2455	G	N3-C4-C5	5.04	131.12	128.60
24	14	632	A	N7-C8-N9	5.04	116.32	113.80
24	14	1940	U	C4-C5-C6	5.04	122.72	119.70
24	14	2874	C	C6-N1-C1'	-5.04	114.76	120.80
24	1H	528	A	C8-N9-C1'	5.04	136.76	127.70
24	1H	683	C	C2-N1-C1'	5.04	124.34	118.80
24	1H	1888	G	N1-C6-O6	-5.04	116.88	119.90
24	1H	1953	A	C6-N1-C2	-5.04	115.58	118.60
24	14	270(X)	G	N1-C6-O6	5.04	122.92	119.90
1	13	901	A	N3-C4-C5	5.03	130.32	126.80
24	1H	731	C	OP1-P-O3'	5.03	116.27	105.20
24	1H	1437	C	C6-N1-C2	-5.03	118.29	120.30
24	1H	1446	C	C6-N1-C2	-5.03	118.29	120.30
24	1H	1850	G	O5'-P-OP2	5.03	116.74	110.70
24	1H	2251	G	N9-C4-C5	5.03	107.41	105.40
24	1H	2569	G	OP1-P-OP2	5.03	127.15	119.60
22	2L	32	A	N1-C6-N6	5.03	121.62	118.60
24	1H	2598	A	C5-N7-C8	-5.03	101.38	103.90
24	1H	273(F)	C	C6-N1-C2	-5.03	118.29	120.30
24	1H	292	C	C6-N1-C2	-5.03	118.29	120.30
24	1H	1431	U	C5-C4-O4	-5.03	122.88	125.90
24	1H	1907	G	N7-C8-N9	5.03	115.61	113.10
24	1H	2346	A	N3-C4-C5	5.03	130.32	126.80
54	1G	1149	C	C6-N1-C2	-5.03	118.29	120.30
24	14	2390	U	C6-N1-C2	-5.03	117.98	121.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
24	14	2731	G	OP2-P-O3'	5.03	116.27	105.20
24	1H	1225	C	N3-C4-C5	-5.03	119.89	121.90
24	1H	1308	A	OP1-P-OP2	5.03	127.14	119.60
24	1H	1970	A	O4'-C1'-N9	-5.03	104.18	108.20
24	14	1251	C	C2-N1-C1'	5.03	124.33	118.80
24	14	1383	C	C5-C4-N4	-5.03	116.68	120.20
24	14	1975	G	N1-C6-O6	5.03	122.92	119.90
24	14	2598	A	C5-C6-N6	-5.03	119.68	123.70
24	14	2699	C	C2-N1-C1'	-5.03	113.27	118.80
24	1H	67	U	C6-N1-C2	-5.03	117.98	121.00
24	1H	2877	G	C5-C6-N1	-5.03	108.99	111.50
54	1G	1498	U	N3-C2-O2	-5.03	118.68	122.20
24	14	177	G	C4-C5-C6	5.03	121.82	118.80
24	14	965	C	C6-N1-C2	-5.03	118.29	120.30
27	19	48	ARG	NE-CZ-NH1	-5.03	117.79	120.30
24	1H	210	C	C5-C6-N1	-5.03	118.49	121.00
24	1H	468	G	N9-C4-C5	-5.03	103.39	105.40
24	1H	775	G	C4-C5-C6	5.03	121.82	118.80
24	1H	2604	U	N1-C2-N3	-5.03	111.88	114.90
24	14	2250	G	OP1-P-OP2	5.03	127.14	119.60
1	13	1216	G	C8-N9-C4	-5.02	104.39	106.40
24	1H	179	G	C5-C6-N1	-5.02	108.99	111.50
54	1G	485	G	N3-C2-N2	-5.02	116.38	119.90
24	14	566	U	C2-N3-C4	-5.02	123.98	127.00
24	14	1566	A	O4'-C1'-N9	-5.02	104.18	108.20
24	14	1802	A	C6-N1-C2	-5.02	115.58	118.60
1	13	47	C	N1-C2-O2	-5.02	115.89	118.90
1	13	266	G	P-O3'-C3'	5.02	125.73	119.70
1	13	926	G	N3-C4-N9	-5.02	122.99	126.00
24	1H	113	G	N3-C4-N9	-5.02	122.99	126.00
24	1H	1266	G	N3-C4-N9	5.02	129.01	126.00
24	1H	1287	A	N7-C8-N9	5.02	116.31	113.80
25	16	24	G	C4-N9-C1'	5.02	133.03	126.50
24	14	738	G	N1-C6-O6	5.02	122.91	119.90
24	14	2597	G	OP2-P-O3'	5.02	116.25	105.20
24	1H	1611	C	C2-N3-C4	-5.02	117.39	119.90
24	1H	2062	A	C2-N3-C4	5.02	113.11	110.60
54	1G	7	G	C4-N9-C1'	-5.02	119.97	126.50
24	14	2413	G	N1-C6-O6	5.02	122.91	119.90
1	13	583	A	O5'-P-OP1	-5.02	101.18	105.70
24	1H	513	A	N9-C4-C5	5.02	107.81	105.80
24	1H	1786	A	N3-C4-N9	-5.02	123.39	127.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
24	1H	1917	U	C6-N1-C2	-5.02	117.99	121.00
24	14	150	C	C5-C4-N4	5.02	123.71	120.20
24	14	1559	G	C6-C5-N7	-5.02	127.39	130.40
24	14	2392	A	C6-C5-N7	-5.02	128.79	132.30
1	13	1052	U	N1-C2-O2	5.02	126.31	122.80
1	13	1058	G	OP1-P-O3'	5.02	116.24	105.20
1	13	1348	U	N1-C2-N3	5.02	117.91	114.90
24	1H	1332	G	O4'-C1'-N9	-5.02	104.19	108.20
24	1H	1826	G	C6-C5-N7	-5.02	127.39	130.40
24	1H	2595	G	N1-C6-O6	-5.02	116.89	119.90
24	14	141	A	N1-C6-N6	5.02	121.61	118.60
24	14	726	G	N3-C4-C5	-5.02	126.09	128.60
24	14	749	C	N1-C2-O2	5.02	121.91	118.90
24	1H	2595	G	C4-C5-C6	-5.02	115.79	118.80
24	14	1837	C	C6-N1-C2	-5.02	118.29	120.30
24	14	2481	G	N3-C4-C5	5.02	131.11	128.60
1	13	1338	G	N3-C4-C5	-5.01	126.09	128.60
24	1H	1250	G	C5-N7-C8	5.01	106.81	104.30
42	E8	15	ARG	NE-CZ-NH2	-5.01	117.79	120.30
54	1G	735	C	C6-N1-C2	-5.01	118.29	120.30
24	14	310	A	N1-C6-N6	-5.01	115.59	118.60
24	14	2035	G	O4'-C1'-N9	5.01	112.21	108.20
24	14	2073	C	N3-C4-C5	5.01	123.91	121.90
24	14	2211	G	C4-N9-C1'	5.01	133.02	126.50
24	1H	59	U	N3-C4-C5	-5.01	111.59	114.60
24	1H	620	G	N3-C2-N2	-5.01	116.39	119.90
24	1H	757	U	C5-C6-N1	-5.01	120.19	122.70
24	1H	2248	C	OP1-P-O3'	5.01	116.23	105.20
54	1G	1067	A	C8-N9-C4	-5.01	103.80	105.80
22	3L	79	A	C8-N9-C4	5.01	107.81	105.80
24	14	599	G	C8-N9-C4	5.01	108.41	106.40
24	14	1276	A	N1-C6-N6	5.01	121.61	118.60
24	1H	1333	C	N3-C4-N4	5.01	121.51	118.00
24	1H	1428	C	C4-C5-C6	5.01	119.91	117.40
24	1H	1594	G	N1-C6-O6	5.01	122.91	119.90
54	1G	1313	U	C5-C6-N1	5.01	125.20	122.70
54	1G	1498	U	C5-C6-N1	5.01	125.21	122.70
24	14	1348	G	O5'-P-OP1	-5.01	101.19	105.70
1	13	254	G	O5'-P-OP2	5.01	116.71	110.70
1	13	532	A	O5'-P-OP1	-5.01	101.19	105.70
24	1H	1202	C	O5'-P-OP2	-5.01	101.19	105.70
24	1H	1299	G	O5'-P-OP2	5.01	116.71	110.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
24	1H	1344	G	C4-C5-N7	5.01	112.80	110.80
24	1H	1781	C	C5-C4-N4	5.01	123.71	120.20
24	1H	1792	G	OP2-P-O3'	5.01	116.22	105.20
24	14	2818	G	C4-C5-N7	5.01	112.80	110.80
1	13	887	G	C8-N9-C4	5.01	108.40	106.40
24	1H	2597	G	C8-N9-C1'	-5.01	120.49	127.00
24	1H	2615	U	C4-C5-C6	-5.01	116.69	119.70
1	13	749	C	N1-C2-O2	5.01	121.90	118.90
24	1H	387	U	OP1-P-O3'	5.01	116.22	105.20
24	1H	1244	G	N3-C4-C5	5.01	131.10	128.60
24	1H	1253	A	N9-C4-C5	-5.01	103.80	105.80
24	1H	1280	G	N3-C4-N9	-5.01	123.00	126.00
24	1H	1760	A	C6-N1-C2	-5.01	115.60	118.60
24	1H	2265	U	O5'-P-OP2	5.01	116.71	110.70
24	14	703	U	C2-N3-C4	5.01	130.00	127.00
24	14	1781	C	O4'-C1'-N1	5.01	112.21	108.20
24	14	2078	C	O5'-P-OP1	-5.01	101.19	105.70
24	1H	713	G	N1-C6-O6	5.00	122.90	119.90
24	1H	1327	C	OP2-P-O3'	5.00	116.21	105.20
24	14	1035	U	N3-C2-O2	-5.00	118.70	122.20
1	13	829	G	O5'-P-OP2	-5.00	101.20	105.70
1	13	1487	G	N3-C2-N2	-5.00	116.40	119.90
24	1H	2502	G	C5-C6-N1	5.00	114.00	111.50
54	1G	584	G	N1-C6-O6	5.00	122.90	119.90
54	1G	898	G	C4-N9-C1'	-5.00	120.00	126.50
24	14	61	G	N3-C4-N9	5.00	129.00	126.00
24	14	530	G	N3-C2-N2	5.00	123.40	119.90
24	14	2639	A	C6-C5-N7	-5.00	128.80	132.30
1	13	5	U	O4'-C1'-N1	5.00	112.20	108.20
24	1H	19	C	C4-C5-C6	5.00	119.90	117.40
24	1H	575	A	C6-N1-C2	-5.00	115.60	118.60
24	1H	829	A	OP1-P-OP2	5.00	127.10	119.60
24	1H	2261	C	C5-C6-N1	5.00	123.50	121.00
54	1G	363	A	N1-C6-N6	-5.00	115.60	118.60
54	1G	542	G	O5'-P-OP1	-5.00	101.20	105.70
24	14	1949	G	C5-C6-O6	5.00	131.60	128.60
24	14	2427	C	OP2-P-O3'	5.00	116.20	105.20

There are no chirality outliers.

All (68) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
27	11	197	GLY	Peptide
27	11	27	THR	Peptide
27	11	32	SER	Peptide
27	11	47	GLY	Peptide
2	12	71	VAL	Peptide
27	19	197	GLY	Peptide
27	19	270	ILE	Peptide
27	19	272	ALA	Peptide
27	19	37	LEU	Peptide
10	1A	55	LYS	Peptide
2	1E	71	VAL	Peptide
28	29	130	GLY	Peptide
28	29	202	LYS	Peptide
28	29	53	PRO	Peptide
28	29	61	ARG	Peptide
28	29	65	GLY	Peptide
28	29	67	PHE	Peptide
28	29	70	ALA	Peptide
28	29	76	ARG	Peptide
28	29	81	ILE	Peptide
35	35	110	TYR	Peptide
35	35	22	GLY	Peptide
35	35	24	GLY	Peptide
35	35	36	LYS	Peptide
35	35	48	PRO	Peptide
35	35	70	GLN	Peptide
12	3A	26	ALA	Peptide
12	3A	46	LYS	Peptide
4	3E	166	LYS	Peptide
36	45	24	GLY	Peptide
36	45	59	ARG	Peptide
31	59	123	PHE	Peptide
14	5I	13	THR	Peptide
32	61	134	PRO	Peptide
38	65	56	LEU	Peptide
39	75	105	LEU	Peptide
39	75	6	LEU	Peptide
39	75	8	LYS	Peptide
35	78	21	ARG	Peptide
35	78	24	GLY	Peptide
35	78	36	LYS	Peptide
40	85	98	LEU	Peptide
36	88	20	ALA	Peptide

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Mol	Chain	Res	Type	Group
36	88	21	THR	Peptide
41	95	48	GLY	Peptide
41	95	49	THR	Peptide
19	AI	6	LYS	Peptide
19	AI	64	GLU	Peptide
39	B8	4	GLY	Peptide
39	B8	5	ALA	Peptide
39	B8	58	ASN	Peptide
39	B8	6	LEU	Peptide
20	BA	101	GLY	Peptide
44	C5	81	LYS	Peptide
45	D5	107	THR	Peptide
47	F5	91	LYS	Peptide
48	G5	16	LEU	Peptide
48	G5	17	SER	Peptide
49	H5	12	PRO	Peptide
51	J5	51	TYR	Peptide
48	K8	4	SER	Peptide
53	M5	30	ARG	Peptide
53	M5	33	ASN	Peptide
53	M5	34	TRP	Peptide
53	M5	40	GLU	Peptide
53	M5	54	GLU	Peptide
52	P8	46	VAL	Peptide
53	Q8	54	GLU	Peptide

5.2 Too-close contacts (i)

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

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	13	32334	0	16320	769	0
2	12	1924	0	1975	86	0
2	1E	1924	0	1975	110	0
3	22	1612	0	1677	65	0
3	2E	1605	0	1668	66	0
4	32	1702	0	1763	97	1
4	3E	1702	0	1762	58	0
5	42	1155	0	1213	59	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
5	4E	1155	0	1213	42	0
6	52	842	0	857	26	0
6	5E	842	0	857	46	1
7	62	1256	0	1296	41	0
7	6E	1256	0	1296	44	0
8	72	1115	0	1177	32	0
8	7E	1115	0	1177	43	0
9	82	998	0	1024	59	0
9	8E	1009	0	1037	50	0
10	1A	801	0	849	36	0
10	1I	801	0	849	31	0
11	2A	884	0	904	28	0
11	2I	864	0	881	35	0
12	3A	975	0	1062	37	0
12	3I	975	0	1062	40	0
13	4A	933	0	992	56	0
13	4I	928	0	987	44	0
14	5A	491	0	529	30	0
14	5I	491	0	529	31	0
15	6A	733	0	771	26	0
15	6I	733	0	771	29	0
16	7A	705	0	725	27	0
16	7I	705	0	725	48	0
17	8A	834	0	904	32	0
17	8I	834	0	904	36	0
18	9A	590	0	662	24	0
18	9I	590	0	662	27	0
19	AA	644	0	644	48	0
19	AI	665	0	686	34	0
20	BA	762	0	861	35	0
20	BI	762	0	861	48	0
21	1B	217	0	234	13	0
21	1F	217	0	234	10	0
22	2K	1765	0	916	56	0
22	2L	1678	0	872	69	0
22	3K	1825	0	946	61	0
22	3L	1825	0	946	51	0
23	4K	239	0	121	12	0
23	4L	129	0	66	3	0
24	14	62669	0	31591	1357	0
24	1H	62729	0	31622	1439	1
25	16	2617	0	1328	59	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
25	1J	2617	0	1328	90	0
26	71	1049	0	1071	32	0
26	79	1049	0	1071	32	0
27	11	2115	0	2195	103	0
27	19	2120	0	2197	103	0
28	21	1568	0	1634	90	0
28	29	1568	0	1634	87	0
29	31	1585	0	1632	70	0
29	39	1627	0	1680	89	0
30	41	1473	0	1535	76	0
30	49	1473	0	1535	72	0
31	51	1336	0	1418	72	0
31	59	1312	0	1384	57	0
32	61	1136	0	1223	41	0
32	69	1136	0	1223	67	0
33	15	1104	0	1180	35	0
33	58	1104	0	1180	54	0
34	25	932	0	996	46	0
34	68	932	0	996	29	0
35	35	1144	0	1228	76	0
35	78	1144	0	1228	83	0
36	45	1121	0	1179	59	0
36	88	1121	0	1179	59	0
37	55	959	0	1021	44	0
37	98	967	0	1033	58	0
38	65	881	0	943	62	0
38	A8	881	0	943	34	0
39	75	1131	0	1180	69	0
39	B8	1141	0	1202	75	0
40	85	963	0	1022	48	0
40	C8	963	0	1022	36	0
41	95	778	0	852	85	0
41	D8	778	0	852	29	0
42	A5	899	0	964	34	0
42	E8	899	0	964	30	0
43	B5	730	0	780	23	0
43	F8	738	0	791	41	0
44	C5	794	0	884	70	0
44	G8	791	0	881	44	0
45	D5	1428	0	1454	96	0
45	H8	1397	0	1430	58	0
46	E5	612	0	633	38	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
46	I8	639	0	644	41	0
47	F5	762	0	848	26	0
47	J8	762	0	848	43	0
48	G5	580	0	629	28	1
48	K8	558	0	610	29	0
49	H5	468	0	518	27	0
49	L8	468	0	518	20	0
50	I5	515	0	514	46	0
50	M8	533	0	526	29	0
51	J5	458	0	480	25	0
51	N8	458	0	480	32	0
52	L5	429	0	480	30	0
52	P8	409	0	454	20	0
53	M5	507	0	576	35	0
53	Q8	495	0	567	47	0
54	1G	32329	0	16319	734	0
55	11	2	0	0	0	0
55	13	129	0	0	0	0
55	14	489	0	0	0	0
55	15	1	0	0	0	0
55	16	12	0	0	0	0
55	19	1	0	0	0	0
55	1G	147	0	0	0	0
55	1H	548	0	0	0	0
55	1J	11	0	0	0	0
55	21	1	0	0	0	0
55	25	1	0	0	0	0
55	29	5	0	0	0	0
55	2K	4	0	0	0	0
55	2L	3	0	0	0	0
55	32	1	0	0	0	0
55	39	1	0	0	0	0
55	3I	1	0	0	0	0
55	3L	2	0	0	0	0
55	42	1	0	0	0	0
55	45	1	0	0	0	0
55	49	1	0	0	0	0
55	55	3	0	0	0	0
55	5E	2	0	0	0	0
55	78	2	0	0	0	0
55	88	2	0	0	0	0
55	C5	1	0	0	0	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
55	E5	2	0	0	0	0
55	F5	1	0	0	0	0
55	I8	3	0	0	0	0
55	J8	1	0	0	0	0
55	M5	1	0	0	0	0
55	Q8	1	0	0	0	0
56	32	1	0	0	0	0
56	3E	1	0	0	0	0
56	5A	1	0	0	0	0
56	5I	1	0	0	0	0
56	C5	1	0	0	0	0
56	G8	1	0	0	0	0
57	13	188	0	0	32	0
57	14	821	0	0	195	0
57	16	12	0	0	2	0
57	1G	156	0	0	26	0
57	1H	1038	0	0	252	0
57	1J	24	0	0	3	0
57	25	6	0	0	0	0
57	2K	6	0	0	0	0
57	2L	6	0	0	0	0
57	E5	6	0	0	0	0
57	J8	6	0	0	0	0
All	All	299678	0	200771	8223	2

The all-atom clashscore is defined as the number of clashes found per 1000 atoms (including hydrogen atoms). The all-atom clashscore for this structure is 17.

All (8223) close contacts within the same asymmetric unit are listed below, sorted by their clash magnitude.

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:95:91:TYR:CD2	41:95:91:TYR:CG	1.79	1.66
41:95:91:TYR:CG	41:95:91:TYR:CD1	1.80	1.63
41:95:91:TYR:CE1	41:95:91:TYR:CZ	1.90	1.59
41:95:91:TYR:CZ	41:95:91:TYR:CE2	1.88	1.58
22:3K:35:QUO:C4	22:3K:35:QUO:N3	1.71	1.53
22:2K:35:QUO:C4	22:2K:35:QUO:N3	1.70	1.51
22:3L:35:QUO:N3	22:3L:35:QUO:C4	1.71	1.51
22:2L:35:QUO:C4	22:2L:35:QUO:N3	1.72	1.49
41:95:21:ARG:NE	41:95:91:TYR:CD1	1.85	1.38
41:95:21:ARG:NE	41:95:21:ARG:CD	1.86	1.38

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:95:21:ARG:NE	41:95:91:TYR:CE1	1.89	1.38
41:95:21:ARG:NE	41:95:91:TYR:CG	2.03	1.25
41:95:21:ARG:NE	41:95:91:TYR:CZ	2.05	1.22
41:95:91:TYR:CD2	41:95:91:TYR:CE2	2.28	1.22
41:95:21:ARG:NE	41:95:91:TYR:CD2	2.07	1.21
41:95:91:TYR:CD1	41:95:91:TYR:CE1	2.30	1.19
41:95:21:ARG:NE	41:95:91:TYR:CE2	2.14	1.15
57:14:3529:HOH:O	37:55:3:HIS:NE2	1.82	1.11
24:1H:1632:A:N7	57:1H:3691:HOH:O	1.85	1.09
24:1H:2701:C:H3'	24:1H:2702:U:H5"	1.27	1.08
41:95:21:ARG:CD	41:95:91:TYR:CE2	2.38	1.07
24:1H:2392:A:H8	35:78:61:ARG:HG2	1.18	1.06
24:14:192:C:N3	57:14:3799:HOH:O	1.87	1.06
24:1H:741:G:OP1	57:1H:3931:HOH:O	1.73	1.05
41:95:21:ARG:HD2	41:95:91:TYR:CE2	1.92	1.04
24:1H:2714:G:OP2	57:1H:3625:HOH:O	1.73	1.04
24:14:2821:A:OP2	57:14:3529:HOH:O	1.75	1.04
33:58:47:ALA:HB2	33:58:112:LEU:HD11	1.38	1.02
24:1H:1496:A:H8	24:1H:1577:C:HO2'	1.05	1.01
24:1H:1273:U:OP2	57:1H:4454:HOH:O	1.78	1.01
54:1G:448:A:OP2	54:1G:485:G:N2	1.93	1.00
9:82:89:ASN:HB3	9:82:92:TYR:HB2	1.41	1.00
54:1G:827:U:H3	54:1G:872:A:H62	1.09	1.00
24:14:2714:G:OP2	57:14:3566:HOH:O	1.78	0.99
28:29:66:HIS:HB3	28:29:70:ALA:HB3	1.41	0.99
24:14:2711:A:OP2	57:14:3566:HOH:O	1.80	0.98
1:13:1182:G:H4'	1:13:1183:A:H5'	1.45	0.98
24:14:2593:U:O4	57:14:3627:HOH:O	1.82	0.98
24:14:2705:A:OP2	57:14:3676:HOH:O	1.82	0.98
4:32:18:LYS:NZ	4:32:31:CYS:SG	2.37	0.98
41:95:21:ARG:CZ	41:95:91:TYR:CE2	2.47	0.98
24:1H:567:A:OP1	57:1H:3552:HOH:O	1.79	0.98
24:14:2448:A:OP2	57:14:3519:HOH:O	1.82	0.98
5:42:101:ILE:HD11	5:42:119:LEU:HD23	1.43	0.97
24:1H:730:C:OP2	57:1H:3638:HOH:O	1.80	0.97
24:14:1647:G:OP2	57:14:3710:HOH:O	1.80	0.97
4:32:9:CYS:SG	4:32:22:LYS:NZ	2.38	0.97
54:1G:243:A:H4'	54:1G:244:U:H5'	1.44	0.97
24:14:676:A:H8	24:14:2069:G:H21	1.00	0.96
28:29:1:MET:N	28:29:200:GLU:OE2	1.97	0.96
41:95:21:ARG:CD	41:95:91:TYR:CD2	2.48	0.96

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:1H:2711:A:OP2	57:1H:3625:HOH:O	1.83	0.96
24:14:1899:G:N2	24:14:1902:C:H41	1.61	0.95
24:14:2068:U:H3	24:14:2430:A:H2	1.08	0.95
45:H8:24:LEU:HD11	45:H8:86:VAL:HG23	1.49	0.95
38:A8:11:LYS:HD3	38:A8:91:PRO:HD3	1.47	0.94
24:1H:192:C:OP2	57:1H:4043:HOH:O	1.82	0.94
33:15:47:ALA:HB2	33:15:112:LEU:HD11	1.46	0.94
24:1H:676:A:H8	24:1H:2069:G:H21	1.09	0.94
41:95:21:ARG:CZ	41:95:91:TYR:CD2	2.49	0.94
54:1G:1348:U:H3	54:1G:1374:A:H2	1.15	0.94
39:B8:2:ASN:HB2	39:B8:5:ALA:H	1.33	0.93
40:85:90:VAL:HG22	41:95:39:LEU:HB3	1.50	0.93
24:1H:2582:G:OP2	57:1H:3767:HOH:O	1.85	0.93
24:14:1496:A:H8	24:14:1577:C:HO2'	1.16	0.93
24:1H:409:C:OP1	57:1H:3697:HOH:O	1.84	0.93
25:1J:5:C:H42	25:1J:115:G:H1	1.04	0.93
24:14:751:A:OP1	57:14:3499:HOH:O	1.84	0.93
24:1H:450:G:OP2	57:1H:3853:HOH:O	1.86	0.93
24:1H:2248:C:OP2	57:1H:3675:HOH:O	1.87	0.92
24:1H:2068:U:H3	24:1H:2430:A:H2	1.18	0.92
24:14:2062:A:OP2	57:14:3857:HOH:O	1.87	0.92
54:1G:1492:A:N3	24:14:1913:A:N6	2.18	0.92
24:14:741:G:OP1	57:14:3585:HOH:O	1.86	0.92
24:1H:1899:G:H22	24:1H:1902:C:H41	1.08	0.92
24:1H:2615:U:OP1	57:1H:3565:HOH:O	1.85	0.92
53:Q8:29:LYS:HB2	53:Q8:44:LYS:HB3	1.51	0.92
24:1H:1601:G:N7	57:1H:4010:HOH:O	2.03	0.92
24:1H:2006:C:OP1	57:1H:3597:HOH:O	1.86	0.92
24:1H:620:G:H4'	24:1H:621:A:H5"	1.51	0.92
24:1H:1771:C:HO2'	24:1H:1786:A:H8	1.02	0.92
54:1G:1127:G:N3	54:1G:1147:C:N4	2.17	0.92
24:1H:298:G:N7	57:1H:4142:HOH:O	2.03	0.91
27:11:182:LEU:H	27:11:272:ALA:HB3	1.34	0.91
39:B8:7:ILE:HB	39:B8:10:VAL:H	1.35	0.91
54:1G:286:G:N7	57:1G:1814:HOH:O	2.03	0.91
41:95:21:ARG:CD	41:95:91:TYR:CZ	2.53	0.91
54:1G:1502:A:H2	54:1G:1505:G:H1	1.19	0.91
45:H8:103:ARG:HB2	45:H8:138:GLU:HA	1.52	0.91
47:J8:91:LYS:HZ3	47:J8:91:LYS:HA	1.35	0.91
20:BI:22:ARG:O	20:BI:26:ASN:ND2	2.04	0.91
24:1H:2392:A:H2	24:1H:2424:C:H42	1.18	0.90

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:95:21:ARG:CZ	41:95:91:TYR:CZ	2.55	0.90
1:13:837:G:H1	1:13:849:C:H42	1.16	0.90
39:B8:64:ARG:HB2	39:B8:73:GLU:HG2	1.53	0.90
54:1G:1340:A:O2'	22:2L:32:A:O2'	1.89	0.90
24:1H:1385:G:O2'	24:1H:1396:U:O2	1.88	0.90
24:1H:1479:G:N7	24:1H:1510:A:N6	2.20	0.90
24:1H:2593:U:O4	57:1H:3629:HOH:O	1.89	0.90
24:1H:71:A:H2	43:F8:31:HIS:HE2	1.20	0.90
54:1G:1305:G:H22	54:1G:1331:G:H2'	1.36	0.90
24:1H:1828:G:OP2	57:1H:3666:HOH:O	1.88	0.90
24:14:1970:A:OP1	57:14:3600:HOH:O	1.90	0.90
24:1H:790:C:OP2	57:1H:3879:HOH:O	1.88	0.89
24:14:67:U:H3	24:14:74:A:H2	1.19	0.89
24:1H:574:C:OP2	57:1H:4003:HOH:O	1.90	0.89
39:B8:5:ALA:O	39:B8:7:ILE:HA	1.72	0.89
24:1H:49:A:N7	24:1H:120:U:H5	1.71	0.89
24:14:2597:G:O3'	57:14:4308:HOH:O	1.89	0.89
7:6E:42:ILE:HG23	7:6E:117:ALA:HB2	1.53	0.89
24:1H:805:G:OP1	57:1H:3775:HOH:O	1.90	0.88
24:1H:1614:A:OP1	57:1H:3887:HOH:O	1.89	0.88
40:85:92:ARG:HD3	40:85:95:LEU:HD12	1.52	0.88
24:1H:1138:G:H21	33:58:106:MET:HE3	1.38	0.88
54:1G:330:C:O2	57:1G:1774:HOH:O	1.91	0.88
24:1H:2701:C:H3'	24:1H:2702:U:C5'	2.03	0.88
51:J5:16:ARG:NH1	51:J5:17:ASP:OD1	2.06	0.88
24:14:1771:C:HO2'	24:14:1786:A:H8	1.21	0.88
25:1J:15:A:H5'	25:1J:16:G:C8	2.09	0.88
24:1H:2061:G:OP2	57:1H:3576:HOH:O	1.89	0.88
24:1H:1187:G:OP2	57:1H:3842:HOH:O	1.91	0.88
24:1H:2392:A:C8	35:78:61:ARG:HG2	2.07	0.88
1:13:766:A:OP2	57:13:1735:HOH:O	1.90	0.87
22:2K:19:C:H3'	22:2K:20:C:H2'	1.55	0.87
10:1A:48:THR:HA	10:1A:62:HIS:HB3	1.57	0.87
24:14:2499:C:OP2	57:14:3519:HOH:O	1.91	0.87
13:4I:107:ALA:HB3	13:4I:111:LYS:HE2	1.56	0.87
22:2K:15:G:H22	22:2K:57:C:H5	1.22	0.87
54:1G:504:C:OP1	57:1G:1754:HOH:O	1.92	0.87
24:14:1959:G:N7	57:14:4274:HOH:O	2.07	0.87
40:C8:8:VAL:HG23	40:C8:11:ARG:HH21	1.39	0.87
41:95:21:ARG:NH1	41:95:91:TYR:CE2	2.43	0.87
1:13:1503:A:H61	23:4K:12:A:H2'	1.40	0.87

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:J8:87:PRO:HG2	47:J8:90:ILE:HD11	1.57	0.87
24:14:2576:G:OP1	57:14:3536:HOH:O	1.93	0.87
42:A5:41:LYS:HE3	51:J5:25:LEU:HD11	1.57	0.87
24:1H:2032:G:N7	57:1H:4558:HOH:O	2.07	0.86
22:2K:1:G:H2'	22:2K:2:G:H8	1.38	0.86
24:1H:1357:U:OP2	57:1H:4034:HOH:O	1.93	0.86
24:1H:787:U:OP1	57:1H:3881:HOH:O	1.91	0.86
24:14:780:G:H21	24:14:783:A:H62	1.21	0.86
43:B5:27:THR:HG22	43:B5:80:ILE:HB	1.56	0.86
24:14:1263:U:OP2	57:14:4132:HOH:O	1.92	0.86
57:14:4309:HOH:O	27:19:242:ARG:O	1.91	0.86
45:D5:157:LEU:HB3	45:D5:161:VAL:HA	1.56	0.86
1:13:673:G:H2'	1:13:674:G:C8	2.11	0.86
27:19:95:LEU:HD11	27:19:105:ILE:HD12	1.56	0.85
24:14:574:C:OP2	57:14:3736:HOH:O	1.92	0.85
39:75:6:LEU:H	39:75:9:LEU:HB3	1.37	0.85
24:1H:2588:G:OP2	57:1H:3618:HOH:O	1.94	0.85
27:19:37:LEU:HA	27:19:38:LYS:HG2	1.59	0.85
1:13:310:G:OP2	16:7I:27:LYS:NZ	2.09	0.85
1:13:1159:U:O4'	1:13:1182:G:N2	2.10	0.85
4:32:53:ASP:O	4:32:57:ARG:NH1	2.09	0.85
24:14:2822:G:OP2	57:14:3525:HOH:O	1.93	0.85
24:1H:2580:U:H4'	28:21:130:GLY:HA3	1.59	0.85
24:14:2255:G:OP2	57:14:3864:HOH:O	1.94	0.85
54:1G:664:G:H22	54:1G:741:G:H1	1.23	0.85
24:14:1359:A:H62	24:14:1372:U:H3	1.18	0.85
24:14:2712(A):A:OP2	57:14:3569:HOH:O	1.93	0.85
35:35:146:VAL:HG13	35:35:147:LEU:HG	1.58	0.85
24:1H:2307:G:H1	30:41:44:GLY:HA2	1.42	0.85
24:14:1899:G:H22	24:14:1902:C:H41	1.20	0.85
24:14:2157:G:H2'	24:14:2158:A:H8	1.42	0.85
24:14:1970:A:OP2	57:14:3607:HOH:O	1.95	0.85
24:14:2287:A:N6	24:14:2344:U:H3	1.75	0.85
24:1H:1899:G:H22	24:1H:1902:C:N4	1.74	0.84
37:98:24:GLN:HE22	37:98:36:THR:HG21	1.43	0.84
54:1G:976:G:N2	54:1G:1362(A):C:OP2	2.11	0.84
6:52:87:ARG:HH11	6:52:87:ARG:HG3	1.42	0.84
41:95:21:ARG:HD3	41:95:91:TYR:CD2	2.12	0.84
44:C5:39:VAL:O	44:C5:41:GLY:N	2.10	0.84
22:2K:36:U:H3	23:4K:17:G:H1	1.26	0.84
24:1H:2314:C:H2'	24:1H:2315:G:H8	1.41	0.84

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:1H:993:G:OP1	40:C8:50:ARG:NH2	2.10	0.84
1:13:509:A:OP2	57:13:1750:HOH:O	1.96	0.84
24:1H:2485:G:H5"	36:88:46:GLN:HE21	1.42	0.84
57:1H:4581:HOH:O	27:11:242:ARG:O	1.93	0.84
27:11:223:GLY:HA3	27:11:231:HIS:ND1	1.91	0.84
24:1H:67:U:H3	24:1H:74:A:H2	1.24	0.84
24:1H:945:A:OP1	57:1H:4116:HOH:O	1.96	0.84
24:1H:1678:G:N2	24:1H:1989:G:H22	1.76	0.84
39:B8:2:ASN:CB	39:B8:5:ALA:H	1.91	0.84
54:1G:963:G:H21	10:1A:55:LYS:HE2	1.42	0.84
24:14:2343:C:O2'	24:14:2373:G:O2'	1.94	0.84
54:1G:766:A:OP2	57:1G:1752:HOH:O	1.96	0.84
24:14:2269:A:OP1	57:14:4116:HOH:O	1.94	0.84
24:1H:1764:G:OP2	57:1H:3986:HOH:O	1.95	0.84
1:13:768:A:OP2	57:13:1773:HOH:O	1.94	0.83
1:13:686:U:H1'	11:2I:42:TRP:HE1	1.44	0.83
1:13:1348:U:H2'	1:13:1349:A:H8	1.42	0.83
24:1H:1346:G:OP2	57:1H:4501:HOH:O	1.97	0.83
24:14:450:G:O6	57:14:3809:HOH:O	1.95	0.83
24:14:2588:G:OP1	57:14:3619:HOH:O	1.95	0.83
24:1H:607:U:H3	24:1H:621:A:H2	1.24	0.83
24:1H:2420:C:H41	53:Q8:31:HIS:HB3	1.43	0.83
22:3L:15:G:N1	22:3L:57:C:O2	2.12	0.83
54:1G:957:U:OP1	19:AA:81:ARG:NH2	2.11	0.83
28:29:33:VAL:HG12	28:29:89:ASP:HA	1.60	0.83
44:G8:100:ALA:HB1	44:G8:101:LYS:HB2	1.58	0.83
24:14:833:U:O2	35:35:55:ARG:NH1	2.11	0.83
24:14:987:G:OP2	57:14:4149:HOH:O	1.95	0.83
24:1H:598:G:H5'	35:78:11:GLY:HA3	1.60	0.83
24:1H:987:G:OP2	57:1H:3978:HOH:O	1.97	0.83
5:42:100:VAL:O	5:42:107:ARG:NH2	2.12	0.83
24:1H:2499:C:N3	57:1H:4557:HOH:O	2.10	0.82
1:13:1352:C:OP1	21:1F:3:LYS:NZ	2.12	0.82
24:1H:218:A:N7	57:1H:3712:HOH:O	2.11	0.82
27:11:26:LYS:O	27:11:27:THR:OG1	1.97	0.82
25:1J:66:A:H61	25:1J:108:C:H5"	1.44	0.82
5:42:102:ALA:HB1	5:42:106:PRO:HG2	1.61	0.82
39:75:107:ASP:O	39:75:111:ARG:NH1	2.11	0.82
12:3I:39:VAL:HG22	12:3I:57:LYS:HB2	1.60	0.82
14:5I:26:ARG:HH11	14:5I:43:CYS:HB2	1.45	0.82
24:1H:1057:A:N6	24:1H:1087:G:N7	2.27	0.82

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:J8:56:GLN:HG3	47:J8:84:GLY:H	1.44	0.82
24:14:1012:U:H3	24:14:1143:A:H2	1.28	0.82
24:1H:330:A:HO2'	24:1H:331:A:H8	1.23	0.82
36:88:104:PHE:HE2	36:88:125:LEU:HD11	1.45	0.82
24:14:660:G:H21	35:35:12:ALA:HA	1.45	0.82
24:14:1614:A:OP1	57:14:3497:HOH:O	1.97	0.82
24:14:2582:G:OP1	57:14:4242:HOH:O	1.98	0.82
24:1H:453:C:OP1	57:1H:3855:HOH:O	1.97	0.81
24:1H:1370:C:OP2	57:1H:4029:HOH:O	1.97	0.81
19:AA:50:ALA:HB1	19:AA:57:HIS:HB3	1.60	0.81
24:14:511:U:H3'	24:14:512:G:H5"	1.60	0.81
24:14:1633:G:O6	57:14:3549:HOH:O	1.95	0.81
24:1H:1664:A:OP2	57:1H:4084:HOH:O	1.97	0.81
24:14:761:A:N7	57:14:4299:HOH:O	2.13	0.81
24:14:1266:G:O5'	42:A5:15:ARG:NH2	2.13	0.81
1:13:411:A:H62	1:13:413:G:H21	1.28	0.81
39:B8:2:ASN:HB3	39:B8:4:GLY:H	1.45	0.81
24:14:452:G:OP2	57:14:3805:HOH:O	1.97	0.81
24:14:654(E):C:H42	24:14:654(P):G:H1	1.27	0.81
24:14:1332:G:N2	24:14:1609:A:O2'	2.13	0.81
24:14:1357:U:O4	57:14:4024:HOH:O	1.97	0.81
24:1H:881:G:O6	24:1H:882:G:N2	2.10	0.81
24:1H:1970:A:OP2	57:1H:3952:HOH:O	1.98	0.81
24:14:1019:U:H3	24:14:1142(A):A:H62	1.26	0.81
24:14:1632:A:N7	57:14:3550:HOH:O	2.12	0.81
38:65:3:ARG:HE	38:65:4:LEU:N	1.79	0.81
29:39:53:THR:HG23	29:39:55:GLY:H	1.44	0.81
1:13:504:C:OP1	57:13:1798:HOH:O	1.98	0.81
54:1G:1324:A:H4'	54:1G:1362:C:H4'	1.61	0.81
24:14:2685:G:O6	57:14:3655:HOH:O	1.99	0.81
24:14:2807:G:N1	24:14:2893:G:O6	2.11	0.81
24:1H:400:G:N7	57:1H:4037:HOH:O	2.14	0.81
24:1H:2789:C:O2	24:1H:2894:G:N2	2.14	0.81
12:3A:62:SER:HB2	12:3A:64:TYR:HB2	1.63	0.81
24:1H:2327:A:H2'	24:1H:2328:A:C8	2.15	0.81
33:58:132:ALA:O	33:58:134:ARG:NH2	2.14	0.81
47:J8:85:LEU:HB2	47:J8:86:SER:HB2	1.61	0.81
54:1G:57:G:H2'	54:1G:58:C:C6	2.15	0.81
1:13:1003:G:N1	1:13:1036:G:O6	2.14	0.81
24:1H:1006:C:OP2	57:1H:4154:HOH:O	1.98	0.81
42:E8:6:ILE:HG12	42:E8:104:THR:HG23	1.63	0.81

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:12:74:LYS:NZ	2:12:205:ASP:OD2	2.14	0.81
2:12:127:ILE:O	2:12:135:GLN:NE2	2.14	0.81
5:4E:143:ARG:NE	8:7E:77:GLU:OE1	2.13	0.81
24:1H:751:A:OP1	57:1H:3889:HOH:O	1.98	0.81
24:1H:1264:G:OP1	51:N8:19:ARG:NH2	2.11	0.81
24:1H:2249:U:O4	57:1H:3675:HOH:O	1.98	0.81
24:1H:2597:G:O3'	57:1H:4585:HOH:O	1.98	0.81
1:13:1368:G:H5"	9:8E:112:LYS:HB3	1.63	0.80
24:1H:2781:A:H5"	24:1H:2782:G:H5'	1.63	0.80
45:H8:147:GLY:H	45:H8:174:VAL:HB	1.43	0.80
27:11:8:PRO:HB3	27:11:14:ARG:HB3	1.64	0.80
9:82:126:SER:OG	9:82:127:LYS:N	2.11	0.80
18:9A:33:ASP:OD2	18:9A:36:ASN:ND2	2.14	0.80
43:B5:63:LYS:H	43:B5:63:LYS:HE3	1.46	0.80
24:14:397:G:N7	57:14:4145:HOH:O	2.13	0.80
24:14:1488:G:O6	57:14:4083:HOH:O	1.98	0.80
24:14:2782:G:OP2	57:14:3999:HOH:O	1.97	0.80
24:14:2793:G:N2	24:14:2804:C:O2	2.14	0.80
54:1G:446:G:N7	57:1G:1899:HOH:O	2.15	0.80
1:13:456:C:N3	1:13:476:G:N2	2.30	0.80
7:6E:143:ARG:NH2	22:3K:43:G:OP1	2.15	0.80
24:14:1428:C:N4	24:14:1570:A:OP2	2.14	0.80
1:13:954:G:O6	1:13:1225:A:N6	2.14	0.80
54:1G:56:U:H2'	54:1G:57:G:H8	1.47	0.80
51:J5:16:ARG:HH11	51:J5:16:ARG:HG2	1.46	0.80
42:E8:73:ALA:HB3	42:E8:106:ILE:HG23	1.64	0.80
54:1G:1316:G:H5"	14:5A:17:LYS:HD3	1.64	0.80
24:14:123:G:O6	57:14:3543:HOH:O	2.00	0.80
25:1J:80:U:H2'	25:1J:81:G:H21	1.44	0.80
39:75:93:ARG:HB2	39:75:117:ASP:HB3	1.63	0.80
1:13:1110:A:OP2	57:13:1866:HOH:O	1.99	0.80
24:1H:1268:A:OP1	57:1H:3598:HOH:O	2.00	0.80
39:B8:26:ASP:HB3	39:B8:91:ARG:HA	1.63	0.80
24:14:888:C:H4'	24:14:889:C:H5'	1.63	0.80
53:M5:30:ARG:O	53:M5:32:LEU:N	2.14	0.80
24:1H:259:G:O2'	24:1H:621:A:O2'	1.96	0.80
41:95:21:ARG:CZ	41:95:91:TYR:CE1	2.65	0.80
24:1H:259:G:HO2'	24:1H:621:A:HO2'	1.24	0.80
32:61:78:THR:OG1	32:61:141:LYS:NZ	2.14	0.80
22:2L:34:U:O2'	22:2L:35:QUO:O5'	1.99	0.80
24:14:592:G:H21	53:M5:4:MET:HE1	1.45	0.80

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:1H:2057:A:OP2	57:1H:3571:HOH:O	1.99	0.79
24:14:636:G:HO2'	24:14:638:G:HO2'	1.30	0.79
24:14:2713:A:OP2	57:14:3571:HOH:O	1.99	0.79
31:59:64:LEU:HA	31:59:67:LEU:HD12	1.64	0.79
41:95:35:LEU:O	41:95:37:VAL:HG22	1.82	0.79
24:14:1022:G:H22	24:14:1142(A):A:H2	1.29	0.79
24:14:2268:A:OP1	57:14:4116:HOH:O	1.98	0.79
24:1H:2406:U:OP1	57:1H:3680:HOH:O	2.00	0.79
40:C8:34:LYS:NZ	40:C8:37:GLU:OE1	2.14	0.79
11:2A:29:ILE:HG22	11:2A:44:SER:HB2	1.64	0.79
12:3A:41:ARG:HD2	12:3A:42:THR:H	1.46	0.79
24:1H:1533:C:O2	24:1H:1539:G:N2	2.15	0.79
24:14:577:G:O6	57:14:3737:HOH:O	2.01	0.79
24:1H:252:G:OP2	35:78:50:ARG:NH1	2.16	0.79
24:1H:330:A:O2'	24:1H:331:A:H8	1.64	0.79
24:1H:2017:U:OP1	57:1H:4548:HOH:O	2.00	0.79
24:1H:2502:G:OP2	57:1H:3573:HOH:O	1.99	0.79
33:15:38:HIS:NE2	33:15:50:ASP:OD2	2.15	0.79
24:1H:763:G:OP1	57:1H:3643:HOH:O	1.99	0.79
54:1G:731:G:OP2	57:1G:1873:HOH:O	2.00	0.79
47:F5:87:PRO:HA	47:F5:90:ILE:HG22	1.65	0.79
2:1E:69:LEU:HB3	2:1E:162:ILE:HG22	1.63	0.79
24:1H:761:A:OP1	57:1H:3638:HOH:O	2.01	0.79
39:B8:2:ASN:H	39:B8:5:ALA:HB3	1.46	0.79
36:88:90:VAL:HG23	36:88:91:GLU:H	1.48	0.79
24:14:1139:G:O2'	24:14:1143:A:N6	2.15	0.79
24:14:1992:G:N7	57:14:3652:HOH:O	2.14	0.79
38:65:3:ARG:HH21	38:65:4:LEU:HB2	1.48	0.79
1:13:974:A:OP2	14:5I:41:ARG:NH1	2.16	0.78
6:5E:87:ARG:HH11	6:5E:87:ARG:HG3	1.47	0.78
25:1J:48:A:H4'	38:65:95:HIS:HD2	1.48	0.78
1:13:812:C:N3	57:13:1734:HOH:O	2.14	0.78
1:13:1157:A:H62	1:13:1178:G:N2	1.81	0.78
12:3A:28:LYS:HD3	12:3A:30:ALA:HB2	1.65	0.78
22:3L:35:QUO:O6	22:3L:35:QUO:N11	2.15	0.78
28:29:77:ILE:HG22	28:29:79:ARG:HE	1.48	0.78
36:45:43:THR:HB	36:45:45:GLN:HE21	1.46	0.78
5:42:6:PHE:HZ	5:42:40:ARG:HH21	1.31	0.78
24:14:39:C:O2	29:39:46:ARG:NH2	2.16	0.78
24:14:574:C:OP2	57:14:3738:HOH:O	1.99	0.78
50:I5:16:CYS:SG	50:I5:17:GLY:N	2.55	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:1H:2052:G:H4'	28:21:143:ASN:O	1.82	0.78
24:14:1249:U:OP1	57:14:3515:HOH:O	2.01	0.78
24:14:2592:G:N7	57:14:3629:HOH:O	2.16	0.78
1:13:272:C:H2'	1:13:273:A:H8	1.48	0.78
24:1H:187:G:OP2	57:1H:4325:HOH:O	2.00	0.78
54:1G:620:C:OP1	57:1G:1798:HOH:O	2.01	0.78
24:14:2392:A:H8	35:35:61:ARG:HB3	1.46	0.78
2:1E:82:ARG:NH1	2:1E:92:TYR:OH	2.16	0.78
24:1H:1221:C:H2'	24:1H:1222:C:H6	1.47	0.78
39:B8:57:PHE:O	39:B8:58:ASN:ND2	2.14	0.78
54:1G:992:U:H3	54:1G:1044:A:H62	1.30	0.78
24:1H:1265:A:OP2	57:1H:3561:HOH:O	2.02	0.78
27:11:30:GLU:HA	27:11:30:GLU:OE2	1.83	0.78
1:13:1189:C:O2	57:13:1864:HOH:O	1.98	0.78
13:4I:15:VAL:HA	13:4I:45:VAL:HG12	1.66	0.78
24:14:273(D):C:N4	24:14:363(B):G:O6	2.15	0.78
24:1H:1313:U:OP1	57:1H:3916:HOH:O	2.01	0.78
24:1H:2210:G:H3'	24:1H:2211:G:C8	2.19	0.78
24:1H:2598:A:OP1	57:1H:4582:HOH:O	2.00	0.78
30:41:112:PRO:HB3	50:M8:37:SER:H	1.48	0.78
24:14:84:A:N6	24:14:102:G:O2'	2.16	0.78
24:1H:399:G:OP2	57:1H:4039:HOH:O	2.03	0.77
24:1H:884:C:N3	24:1H:892:G:N2	2.31	0.77
24:14:2327:A:H2'	24:14:2328:A:C8	2.19	0.77
1:13:1500:A:OP1	57:13:1730:HOH:O	2.02	0.77
24:1H:802:A:OP1	57:1H:4298:HOH:O	2.02	0.77
54:1G:1105:A:H2'	54:1G:1106:G:H8	1.49	0.77
24:14:862:G:OP2	57:14:3927:HOH:O	2.00	0.77
1:13:538:G:H5"	12:3I:114:LYS:HB2	1.67	0.77
31:51:15:VAL:HG12	31:51:29:PRO:HD2	1.67	0.77
24:1H:142:G:H1'	43:F8:37:THR:HG21	1.67	0.77
24:1H:801:G:OP2	57:1H:4170:HOH:O	2.03	0.77
33:58:70:LYS:HE3	33:58:72:TYR:CE1	2.19	0.77
37:98:67:LEU:HD13	37:98:76:VAL:HG21	1.67	0.77
24:14:2102:U:H3	24:14:2187:G:H1	1.30	0.77
24:14:2227:A:OP2	57:14:4101:HOH:O	2.03	0.77
24:14:2748:A:H2'	24:14:2749:A:H8	1.50	0.77
39:75:8:LYS:N	39:75:11:GLU:OE1	2.15	0.77
1:13:177:C:OP1	20:BI:65:LYS:NZ	2.12	0.77
24:1H:2582:G:OP2	57:1H:3763:HOH:O	2.02	0.77
54:1G:1151:A:H5"	10:1A:42:THR:HG23	1.66	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:14:3529:HOH:O	28:29:110:GLY:O	2.03	0.77
22:2K:17:OMG:HN21	22:2K:64:PSU:H6	1.29	0.77
50:I5:37:SER:OG	50:I5:38:LYS:N	2.17	0.77
5:4E:101:ILE:O	5:4E:120:THR:OG1	2.02	0.77
22:2K:10:C:H42	22:2K:26:G:H1	1.30	0.77
54:1G:505:G:N7	57:1G:1759:HOH:O	2.17	0.77
54:1G:1291:G:OP1	7:62:37:ASN:ND2	2.17	0.77
54:1G:1342:C:H4'	9:82:125:TYR:HB3	1.67	0.77
24:14:567:A:OP1	57:14:3749:HOH:O	2.02	0.77
24:14:2228:G:O6	57:14:4102:HOH:O	2.02	0.77
41:95:21:ARG:CZ	41:95:91:TYR:CG	2.67	0.77
1:13:1124:G:H21	1:13:1125:U:H3	1.33	0.77
53:Q8:34:TRP:CE3	53:Q8:34:TRP:HA	2.19	0.77
54:1G:741:G:N7	57:1G:1843:HOH:O	2.18	0.76
38:65:107:GLU:H	38:65:110:LEU:HD21	1.49	0.76
14:5I:3:ARG:HA	14:5I:3:ARG:HH11	1.50	0.76
28:29:58:ARG:O	28:29:60:ASN:ND2	2.18	0.76
29:39:117:ARG:NH1	29:39:120:GLU:OE1	2.18	0.76
48:G5:68:ARG:HA	48:G5:72:ALA:HB2	1.66	0.76
4:32:30:LYS:HG3	4:32:35:ARG:HB2	1.66	0.76
4:32:98:GLU:OE2	4:32:103:ASN:ND2	2.16	0.76
24:1H:654(G):C:N4	24:1H:654(L):G:OP2	2.18	0.76
24:1H:2608:G:N7	57:1H:3764:HOH:O	2.19	0.76
28:21:128:SER:OG	28:21:129:HIS:N	2.15	0.76
24:14:1105:U:H2'	24:14:1106:G:H8	1.50	0.76
24:14:2681:C:H5	24:14:2725:A:H62	1.32	0.76
25:1J:18:G:H1	25:1J:65:C:H42	1.32	0.76
24:1H:733:G:OP2	57:1H:4066:HOH:O	2.02	0.76
24:14:2533:A:OP2	57:14:4238:HOH:O	2.02	0.76
30:49:121:ASN:HD21	30:49:123:ASN:HB2	1.49	0.76
37:55:78:LYS:HE2	37:55:83:ILE:HD11	1.67	0.76
1:13:617:G:N7	57:13:1906:HOH:O	2.18	0.76
24:1H:2032:G:N7	57:1H:4560:HOH:O	2.19	0.76
54:1G:1162:C:H42	54:1G:1174:G:H1	1.31	0.76
8:72:102:ARG:HD3	8:72:105:ARG:HD3	1.67	0.76
22:3L:52:G:H2'	22:3L:53:A:C8	2.20	0.76
45:D5:30:ASN:HD22	45:D5:90:VAL:HB	1.51	0.76
24:1H:2298:A:H62	24:1H:2318:G:H8	1.33	0.76
24:1H:2447:G:OP2	57:1H:3809:HOH:O	2.02	0.76
24:14:2178:C:H4'	26:79:46:LYS:HD3	1.68	0.76
29:39:79:GLY:HA2	29:39:86:GLY:HA2	1.68	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:13:201:C:H42	1:13:216:G:H1	1.32	0.76
9:8E:26:VAL:HG13	9:8E:61:ALA:HB3	1.67	0.76
24:1H:2607:G:O3'	57:1H:3927:HOH:O	2.03	0.76
24:14:2588:G:OP1	57:14:3615:HOH:O	2.03	0.76
46:E5:12:ASN:HA	46:E5:14:ARG:HH21	1.48	0.76
15:6I:56:LEU:HA	15:6I:59:MET:HE2	1.66	0.76
24:1H:563:G:OP2	57:1H:3583:HOH:O	2.04	0.76
24:1H:2115:G:N3	24:1H:2171:A:N6	2.33	0.76
24:1H:2056:G:OP2	57:1H:3570:HOH:O	2.04	0.76
12:3A:41:ARG:HB3	12:3A:41:ARG:HH11	1.50	0.76
22:3K:24:G:H2'	22:3K:25:G:H8	1.51	0.75
24:1H:1828:G:OP1	57:1H:3947:HOH:O	2.03	0.75
24:1H:2032:G:H21	28:21:146:THR:HG23	1.50	0.75
36:88:14:ARG:HG2	36:88:41:TRP:HH2	1.50	0.75
22:3K:8:4SU:S4	22:3K:14:A:N6	2.58	0.75
54:1G:56:U:H2'	54:1G:57:G:C8	2.21	0.75
1:13:920:U:H2'	1:13:921:U:C6	2.20	0.75
17:8I:18:THR:OG1	17:8I:69:LYS:NZ	2.19	0.75
24:1H:2404:C:OP2	57:1H:4220:HOH:O	2.03	0.75
54:1G:1069:C:O2'	54:1G:1192:C:O2	2.05	0.75
3:22:81:GLY:HA2	3:22:85:ARG:HH21	1.51	0.75
24:14:1616:A:O2'	57:14:3711:HOH:O	2.04	0.75
24:14:910:A:H62	36:45:12:GLN:HA	1.50	0.75
24:14:2212:A:H4'	24:14:2213:U:H5	1.51	0.75
1:13:1508:G:OP1	57:13:1730:HOH:O	2.04	0.75
28:21:9:VAL:HG13	39:B8:3:ARG:HG2	1.68	0.75
54:1G:1076:C:OP1	2:12:175:ARG:NH1	2.19	0.75
24:14:1828:G:OP1	57:14:3594:HOH:O	2.05	0.75
4:32:22:LYS:NZ	4:32:26:CYS:SG	2.59	0.75
24:14:2582:G:OP1	57:14:4239:HOH:O	2.04	0.75
6:5E:23:LYS:HZ3	6:5E:23:LYS:HB2	1.52	0.75
36:88:43:THR:HG22	36:88:94:VAL:HG12	1.67	0.75
54:1G:1386:G:H2'	54:1G:1387:G:H8	1.52	0.75
37:55:97:VAL:HG22	37:55:114:VAL:HG22	1.69	0.75
4:32:61:LYS:HB2	4:32:203:VAL:HG13	1.68	0.75
45:D5:10:ARG:NH2	45:D5:26:GLY:O	2.20	0.75
1:13:674:G:H2'	1:13:675:A:H8	1.51	0.75
4:32:31:CYS:C	4:32:33:MET:H	1.90	0.75
9:82:9:ARG:HH22	9:82:104:ARG:HD3	1.52	0.75
1:13:736:C:H2'	1:13:737:A:C8	2.21	0.74
24:1H:2701:C:C3'	24:1H:2702:U:H5"	2.15	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:1G:1527:C:OP1	57:1G:1872:HOH:O	2.04	0.74
9:82:53:VAL:HG23	9:82:55:ALA:H	1.51	0.74
31:59:9:ILE:HG23	31:59:51:ARG:HB3	1.69	0.74
2:1E:185:ILE:HB	2:1E:199:TYR:HB2	1.69	0.74
24:1H:102:G:OP1	48:K8:7:ARG:NH2	2.20	0.74
24:1H:981:A:OP1	57:1H:3757:HOH:O	2.05	0.74
24:1H:2788:C:O2'	24:1H:2809:A:N3	2.20	0.74
22:2L:40:PSU:HO2'	22:3L:36:U:HO2'	1.25	0.74
24:14:363:G:H2'	24:14:363(A):A:H8	1.52	0.74
36:45:24:GLY:HA3	36:45:25:ASP:HB2	1.67	0.74
40:85:28:ARG:NH1	40:85:38:THR:OG1	2.20	0.74
41:95:21:ARG:CD	41:95:91:TYR:CE1	2.70	0.74
24:1H:363(B):G:H2'	24:1H:363(C):G:C8	2.21	0.74
24:1H:963:U:OP1	57:1H:3816:HOH:O	2.05	0.74
24:14:739:G:OP1	57:14:3819:HOH:O	2.05	0.74
24:14:1416:G:O2'	24:14:1417:C:O5'	2.04	0.74
34:25:63:VAL:HG12	34:25:106:LEU:HD11	1.67	0.74
47:F5:7:ILE:HG12	47:F5:62:VAL:HG11	1.69	0.74
1:13:468:A:H5"	16:7I:80:PHE:HB3	1.68	0.74
24:1H:1534:G:O2'	24:1H:1535:U:O4'	2.06	0.74
35:78:63:PRO:HB2	53:Q8:30:ARG:HH21	1.53	0.74
44:G8:82:PRO:HG3	44:G8:97:ARG:HD2	1.70	0.74
24:14:602:G:O2'	24:14:604:G:O2'	2.05	0.74
24:14:1855:G:N7	57:14:4090:HOH:O	2.20	0.74
24:14:2822:G:OP2	57:14:3526:HOH:O	2.05	0.74
1:13:450:G:OP1	16:7I:43:LYS:NZ	2.20	0.74
1:13:1062:U:H2'	1:13:1063:C:C6	2.22	0.74
24:1H:2213:U:O2	47:J8:52:ARG:NH2	2.20	0.74
54:1G:536:C:OP2	57:1G:1791:HOH:O	2.06	0.74
29:39:181:LEU:HD11	29:39:186:ILE:HD11	1.67	0.74
24:1H:534:U:H5'	40:C8:42:ALA:HB1	1.69	0.74
27:11:68:LYS:HB3	27:11:70:TRP:CH2	2.23	0.74
28:21:73:GLU:HG3	28:21:74:PRO:HD2	1.69	0.74
33:58:134:ARG:HB3	33:58:134:ARG:HH11	1.51	0.74
24:14:733:G:OP2	57:14:4303:HOH:O	2.04	0.74
24:1H:1271:G:OP2	57:1H:4449:HOH:O	2.05	0.74
24:1H:1975:G:OP2	57:1H:3964:HOH:O	2.06	0.74
39:B8:10:VAL:HA	39:B8:11:GLU:C	2.08	0.74
24:14:773:U:OP1	57:14:4098:HOH:O	2.05	0.74
24:1H:862:G:OP2	57:1H:3973:HOH:O	2.04	0.74
33:58:95:PRO:O	33:58:97:ARG:N	2.21	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:Q8:32:LEU:O	53:Q8:33:ASN:ND2	2.20	0.74
54:1G:750:G:N3	15:6A:23:GLY:HA3	2.02	0.74
40:85:98:LEU:HB2	40:85:102:GLU:HB2	1.68	0.74
22:3K:48:C:H42	22:3K:52:G:H1	1.34	0.74
24:1H:815:C:O2	24:1H:1192:G:N2	2.18	0.74
24:14:1073:A:OP2	24:14:1094:U:N3	2.17	0.74
4:32:26:CYS:HA	4:32:31:CYS:HB2	1.69	0.74
24:14:1771:C:H1'	24:14:1786:A:C8	2.22	0.74
35:35:79:ARG:HG3	35:35:110:TYR:HB2	1.70	0.74
43:B5:46:ALA:O	48:G5:30:ARG:NH1	2.21	0.74
2:12:167:PRO:O	2:12:171:ALA:N	2.21	0.73
24:1H:1417:C:OP2	57:1H:4019:HOH:O	2.05	0.73
36:88:111:GLU:OE1	36:88:133:ARG:NH2	2.21	0.73
50:M8:37:SER:HB3	50:M8:42:PHE:HB3	1.70	0.73
24:14:1604:C:OP1	57:14:3915:HOH:O	2.06	0.73
24:14:2123:G:O6	24:14:2174:C:N4	2.20	0.73
27:19:31:LYS:HD2	27:19:32:SER:H	1.52	0.73
48:G5:13:ALA:HA	48:G5:16:LEU:HD21	1.69	0.73
3:2E:150:LYS:HE3	3:2E:152:ILE:HD11	1.70	0.73
24:1H:1365:A:OP1	47:J8:41:ARG:NH2	2.22	0.73
25:16:101:A:OP2	57:16:215:HOH:O	2.06	0.73
32:61:110:ASP:N	32:61:130:TYR:OH	2.20	0.73
24:14:732:C:OP2	57:14:4300:HOH:O	2.07	0.73
24:14:2611:U:H2'	51:J5:2:ALA:O	1.87	0.73
25:1J:45:A:O4'	30:49:95:ARG:NH1	2.20	0.73
29:39:37:VAL:HG21	35:35:6:LEU:HD21	1.69	0.73
16:7A:43:LYS:HA	16:7A:48:TRP:HB3	1.71	0.73
24:14:141:A:H8	24:14:1595:G:H21	1.36	0.73
24:14:483:A:H4'	44:C5:49:VAL:HA	1.70	0.73
24:14:1689:A:H62	24:14:1698:A:H2	1.36	0.73
31:59:3:ARG:HG2	31:59:4:ILE:HG13	1.68	0.73
5:4E:110:LEU:HD13	5:4E:118:ILE:HG21	1.70	0.73
24:1H:2125:G:O2'	24:1H:2173:A:N6	2.20	0.73
31:51:4:ILE:HG21	31:51:6:ARG:NH1	2.04	0.73
22:3L:24:G:H2'	22:3L:25:G:H8	1.52	0.73
35:35:48:PRO:O	35:35:50:ARG:N	2.14	0.73
1:13:877:C:OP1	8:7E:88:LYS:NZ	2.21	0.73
1:13:1376:U:H2'	1:13:1377:A:H8	1.53	0.73
2:1E:16:HIS:HD2	2:1E:210:SER:HA	1.54	0.73
28:21:119:ARG:HG2	28:21:160:TYR:HB2	1.70	0.73
8:72:10:LEU:HD22	8:72:83:ILE:HD11	1.70	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:14:994:C:OP2	40:85:54:LYS:NZ	2.18	0.73
24:1H:1771:C:H1'	24:1H:1786:A:C8	2.24	0.73
24:1H:1774:C:OP1	57:1H:3745:HOH:O	2.06	0.73
41:95:21:ARG:CZ	41:95:91:TYR:CD1	2.71	0.73
24:1H:340:A:OP2	57:1H:3735:HOH:O	2.05	0.73
24:1H:2305:A:H5"	30:41:134:GLY:HA3	1.69	0.73
24:14:1639:U:OP1	57:14:3572:HOH:O	2.05	0.73
41:95:10:LYS:NZ	41:95:23:GLU:OE1	2.22	0.73
42:A5:18:ARG:NH2	42:A5:76:VAL:O	2.19	0.73
1:13:736:C:H2'	1:13:737:A:H8	1.53	0.73
12:3I:52:LEU:O	12:3I:54:LYS:NZ	2.22	0.73
24:1H:249:C:OP1	57:1H:3613:HOH:O	2.06	0.73
24:1H:1495:A:OP2	57:1H:4333:HOH:O	2.05	0.73
9:82:28:VAL:HG22	9:82:63:ILE:HB	1.69	0.73
1:13:649:G:H2'	1:13:650:G:H8	1.54	0.73
17:8A:66:SER:O	17:8A:70:ARG:NH1	2.20	0.73
24:14:585:G:OP2	57:14:4163:HOH:O	2.06	0.73
1:13:601:C:H2'	1:13:602:A:C8	2.24	0.72
2:1E:7:VAL:HG21	2:1E:11:LEU:HD22	1.70	0.72
24:1H:1268:A:OP1	57:1H:3600:HOH:O	2.06	0.72
8:72:49:GLU:OE2	8:72:62:TYR:OH	2.07	0.72
24:14:960:A:H61	36:45:83:MET:HE2	1.54	0.72
24:1H:1333:C:OP2	57:1H:3909:HOH:O	2.06	0.72
24:1H:1774:C:OP1	57:1H:3746:HOH:O	2.07	0.72
14:5A:40:CYS:H	14:5A:43:CYS:HB2	1.54	0.72
24:1H:450:G:O6	57:1H:3857:HOH:O	2.06	0.72
24:1H:1156:A:OP2	57:1H:3753:HOH:O	2.06	0.72
24:1H:1290:C:H2'	24:1H:1291:C:C6	2.25	0.72
24:1H:2270:G:OP2	57:1H:4235:HOH:O	2.07	0.72
39:B8:11:GLU:HB3	39:B8:13:ARG:HG2	1.71	0.72
22:2K:60:A:O2'	22:2K:61:G:O5'	2.07	0.72
24:1H:800:A:OP1	57:1H:3591:HOH:O	2.06	0.72
24:1H:860:U:H5	24:1H:917:A:C2	2.06	0.72
24:1H:1434:A:H61	24:1H:1558:A:N6	1.86	0.72
24:1H:1633:G:O6	57:1H:3696:HOH:O	2.06	0.72
24:1H:1704:G:O6	57:1H:4468:HOH:O	2.04	0.72
25:16:21:G:H1	25:16:62:C:H42	1.36	0.72
54:1G:57:G:H2'	54:1G:58:C:H6	1.53	0.72
2:12:71:VAL:HB	2:12:164:VAL:HG12	1.71	0.72
24:14:1239:G:O6	57:14:4278:HOH:O	2.04	0.72
24:1H:732:C:OP2	57:1H:4070:HOH:O	2.06	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:68:2:ILE:HD12	34:68:6:THR:HG21	1.72	0.72
47:J8:78:LYS:HE2	47:J8:79:GLY:H	1.53	0.72
24:14:1828:G:OP2	57:14:3532:HOH:O	2.06	0.72
24:14:1891:G:O6	57:14:4128:HOH:O	2.06	0.72
45:D5:163:LEU:HD11	45:D5:167:PRO:HG3	1.71	0.72
9:8E:13:ALA:HB2	9:8E:68:GLY:HA3	1.70	0.72
11:2I:86:GLY:N	11:2I:112:THR:OG1	2.20	0.72
24:1H:1403:C:H5"	24:1H:1471:A:H1'	1.70	0.72
8:72:51:VAL:HG22	8:72:52:ASP:H	1.55	0.72
24:1H:516:C:OP1	51:N8:13:LYS:NZ	2.23	0.72
35:78:39:LYS:HD2	35:78:45:LEU:HD21	1.70	0.72
54:1G:1133:G:H1	54:1G:1141:C:H42	1.36	0.72
1:13:737:A:H2'	1:13:738:C:C6	2.25	0.72
24:1H:761:A:OP1	57:1H:3642:HOH:O	2.08	0.72
19:AA:60:VAL:HG21	19:AA:74:PHE:HB3	1.72	0.72
1:13:1146:A:OP2	57:13:1897:HOH:O	2.08	0.72
24:1H:1642:G:N7	57:1H:3903:HOH:O	2.23	0.72
54:1G:1289:A:OP1	21:1B:10:ARG:NH1	2.21	0.72
2:12:178:ARG:NH1	2:12:196:LEU:O	2.20	0.72
7:62:20:ASP:HB3	7:62:23:VAL:HG23	1.71	0.72
24:14:739:G:OP1	57:14:3822:HOH:O	2.07	0.72
25:1J:5:C:O2'	25:1J:27:C:O2	2.06	0.72
28:29:49:LEU:O	28:29:78:LEU:HB3	1.89	0.72
50:I5:13:ARG:HE	50:I5:22:ILE:HG23	1.55	0.72
2:1E:84:GLU:HB3	2:1E:219:VAL:HG21	1.71	0.71
24:1H:1981:A:OP1	57:1H:3606:HOH:O	2.07	0.71
39:B8:25:GLY:H	39:B8:49:VAL:HG23	1.55	0.71
30:49:40:ASN:HB2	30:49:91:ARG:HG3	1.72	0.71
41:95:21:ARG:CD	41:95:91:TYR:CG	2.73	0.71
1:13:745:C:H2'	1:13:746:A:C8	2.25	0.71
24:1H:456:C:H2'	43:F8:68:ARG:HH22	1.54	0.71
24:1H:969:U:O4	57:1H:4347:HOH:O	2.08	0.71
54:1G:1182:G:H5'	54:1G:1183:A:H5'	1.71	0.71
24:14:810:U:O4	57:14:3746:HOH:O	2.06	0.71
5:4E:126:ARG:HG3	5:4E:126:ARG:HH11	1.54	0.71
22:3K:35:QUO:H5'	22:3K:35:QUO:H8	1.72	0.71
24:1H:446:G:OP2	57:1H:3649:HOH:O	2.08	0.71
24:1H:731:C:H5"	57:1H:3781:HOH:O	1.89	0.71
27:11:31:LYS:HD2	27:11:94:LEU:HD11	1.71	0.71
43:F8:60:ARG:NH2	52:P8:47:ARG:HH12	1.87	0.71
24:14:800:A:OP1	57:14:3800:HOH:O	2.07	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:14:2652:C:H42	24:14:2668:G:H1	1.38	0.71
2:1E:115:LEU:HD13	2:1E:145:LEU:HB3	1.72	0.71
24:1H:70:G:H21	24:1H:71:A:H62	1.38	0.71
24:1H:2418:A:OP2	53:Q8:29:LYS:NZ	2.23	0.71
27:11:25:THR:HG21	27:11:81:ALA:HA	1.71	0.71
47:J8:51:VAL:HG11	47:J8:74:VAL:HG11	1.71	0.71
54:1G:1435:G:H2'	54:1G:1436:U:C6	2.24	0.71
24:14:1525:G:H2'	24:14:1526:G:H8	1.56	0.71
45:D5:132:ASN:N	45:D5:132:ASN:OD1	2.23	0.71
24:1H:574:C:OP2	57:1H:4002:HOH:O	2.08	0.71
24:1H:918:A:N3	25:16:80:U:O2'	2.24	0.71
24:1H:1521:G:N7	57:1H:4415:HOH:O	2.23	0.71
2:12:130:ARG:HB2	2:12:135:GLN:HE21	1.55	0.71
24:14:1667:G:O2'	24:14:1991:U:O4	2.06	0.71
34:25:75:SER:OG	39:75:74:ARG:NH1	2.23	0.71
41:95:21:ARG:HD2	41:95:91:TYR:CZ	2.25	0.71
29:31:6:VAL:HG21	29:31:119:ARG:HB2	1.71	0.71
54:1G:957:U:H1'	54:1G:960:U:H5	1.55	0.71
2:1E:189:ASP:HB3	2:1E:191:ASP:HB2	1.72	0.71
10:1I:38:ILE:HG23	10:1I:71:LEU:HB3	1.71	0.71
24:1H:1728:G:H8	24:1H:1732:A:H62	1.39	0.71
39:B8:10:VAL:HA	39:B8:12:SER:N	2.06	0.71
54:1G:741:G:O6	57:1G:1841:HOH:O	2.07	0.71
22:2L:1:G:H2'	22:2L:2:G:H8	1.53	0.71
24:14:571:A:OP2	57:14:3772:HOH:O	2.08	0.71
24:14:2343:C:HO2'	24:14:2373:G:HO2'	1.34	0.71
15:6I:26:GLU:OE2	15:6I:77:ARG:NH1	2.20	0.71
24:1H:259:G:H21	24:1H:621:A:H8	1.35	0.71
24:1H:956:G:OP2	36:88:14:ARG:NH2	2.24	0.71
52:P8:10:ARG:O	52:P8:14:LYS:HB2	1.91	0.71
3:22:20:SER:HB3	3:22:22:TRP:HE1	1.54	0.71
45:D5:33:LEU:HD23	45:D5:90:VAL:HG21	1.72	0.71
1:13:677:U:H3	1:13:713:G:H22	1.37	0.71
26:71:45:ALA:HB2	26:71:212:VAL:HG22	1.72	0.71
53:Q8:36:LYS:HG2	53:Q8:37:SER:H	1.54	0.71
19:AA:22:LEU:HB3	19:AA:27:GLU:HG3	1.71	0.71
24:14:493:G:N7	57:14:3923:HOH:O	2.22	0.71
24:14:2353:G:N7	57:14:4207:HOH:O	2.24	0.71
24:1H:136:G:N7	57:1H:4132:HOH:O	2.24	0.71
24:1H:2315:G:N3	30:41:128:ARG:NH2	2.37	0.71
30:41:112:PRO:HG3	50:M8:38:LYS:HB2	1.73	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:E8:45:TYR:OH	42:E8:49:LYS:NZ	2.16	0.71
4:32:18:LYS:NZ	4:32:26:CYS:HB3	2.06	0.71
4:32:30:LYS:HA	4:32:31:CYS:HB3	1.73	0.71
24:14:1093:G:H22	24:14:1097:U:H5"	1.55	0.71
24:1H:2518:A:OP2	57:1H:4063:HOH:O	2.09	0.70
36:88:20:ALA:HB1	36:88:99:PRO:HD2	1.73	0.70
24:14:120:U:OP2	57:14:3547:HOH:O	2.08	0.70
24:14:273(C):C:H42	24:14:363(C):G:H1	1.37	0.70
41:95:38:LEU:HD13	41:95:55:ALA:HB1	1.73	0.70
45:D5:103:ARG:HG2	45:D5:136:PHE:HB2	1.71	0.70
1:13:108:G:H5"	1:13:109:A:H5"	1.70	0.70
24:1H:2017:U:OP2	57:1H:4546:HOH:O	2.08	0.70
24:1H:2878:U:O4	57:1H:4242:HOH:O	2.07	0.70
44:G8:76:CYS:SG	44:G8:97:ARG:HG3	2.31	0.70
47:J8:73:LEU:HB3	47:J8:90:ILE:HG22	1.73	0.70
10:1A:32:ALA:HB2	10:1A:81:THR:HG21	1.73	0.70
24:14:2598:A:OP1	57:14:4310:HOH:O	2.09	0.70
24:1H:1381:G:N7	57:1H:4011:HOH:O	2.24	0.70
25:16:40:U:H3	25:16:43:C:H5"	1.56	0.70
45:H8:16:SER:O	45:H8:20:ARG:NH1	2.22	0.70
24:14:270(L):U:H3'	24:14:270(M):U:H5"	1.71	0.70
24:14:1007:C:OP1	33:15:35:ARG:NH1	2.23	0.70
35:35:57:THR:HG22	35:35:59:LEU:H	1.55	0.70
2:1E:178:ARG:NH1	2:1E:196:LEU:O	2.22	0.70
24:1H:787:U:OP1	57:1H:3880:HOH:O	2.09	0.70
24:1H:2572:A:N7	28:21:144:ARG:HD2	2.06	0.70
57:1H:3653:HOH:O	28:21:135:HIS:NE2	2.24	0.70
31:51:54:ARG:HD3	31:51:65:HIS:ND1	2.06	0.70
24:14:2306:C:H3'	24:14:2307:G:H5"	1.73	0.70
24:14:2419:U:OP1	53:M5:34:TRP:HE3	1.74	0.70
38:65:35:ILE:HD11	38:65:97:ARG:HE	1.56	0.70
43:B5:51:VAL:H	43:B5:83:VAL:HG23	1.57	0.70
1:13:1281:U:OP2	1:13:1282:C:N4	2.19	0.70
24:1H:1383:C:O2	57:1H:4502:HOH:O	2.09	0.70
40:C8:5:LYS:HB2	40:C8:5:LYS:NZ	2.07	0.70
41:D8:1:MET:HE3	41:D8:43:GLU:H	1.57	0.70
43:F8:60:ARG:HH22	52:P8:47:ARG:HH12	1.36	0.70
47:J8:3:LYS:O	47:J8:12:PRO:HD3	1.90	0.70
6:52:7:ASN:HD21	18:9A:34:TYR:HE1	1.39	0.70
13:4A:66:LEU:HA	13:4A:70:LEU:HB2	1.72	0.70
24:14:31:C:OP1	57:14:3947:HOH:O	2.08	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:14:2255:G:H21	46:E5:9:SER:HB2	1.55	0.70
28:29:55:ASN:O	28:29:57:LYS:NZ	2.25	0.70
44:C5:47:LYS:H	44:C5:60:PHE:HB3	1.57	0.70
12:3I:71:PRO:O	12:3I:102:ARG:NH1	2.25	0.70
24:1H:583:G:N7	57:1H:3705:HOH:O	2.24	0.70
24:1H:784:A:OP1	57:1H:3874:HOH:O	2.09	0.70
24:1H:1593:G:H2'	24:1H:1594:G:C8	2.26	0.70
24:1H:1689:A:H62	24:1H:1698:A:H2	1.39	0.70
24:1H:2056:G:N7	57:1H:4207:HOH:O	2.22	0.70
24:1H:2469:A:O2'	36:88:56:ARG:NE	2.24	0.70
13:4A:108:ARG:HD3	13:4A:114:ARG:HE	1.55	0.70
24:14:674:G:O2'	29:39:74:ARG:HG3	1.91	0.70
24:14:1386:C:H2'	24:14:1387:C:H6	1.56	0.70
24:14:1417:C:OP2	57:14:3893:HOH:O	2.08	0.70
24:14:1623:G:N7	57:14:3695:HOH:O	2.24	0.70
29:39:20:LEU:HD13	29:39:199:TRP:HH2	1.57	0.70
30:49:47:LYS:HG3	30:49:81:LYS:HG2	1.71	0.70
35:35:122:PRO:HB3	35:35:141:ALA:HB1	1.72	0.70
53:M5:40:GLU:HA	53:M5:43:GLN:HB2	1.73	0.70
24:1H:790:C:H5'	57:1H:3879:HOH:O	1.91	0.70
24:1H:1510:A:O2'	24:1H:1512:G:N7	2.21	0.70
24:14:2534:A:N7	57:14:4237:HOH:O	2.25	0.70
25:1J:28:C:H42	25:1J:56:G:H1	1.38	0.70
24:1H:363(B):G:H2'	24:1H:363(C):G:H8	1.57	0.70
24:1H:862:G:OP2	57:1H:3972:HOH:O	2.09	0.70
33:58:73:THR:HG22	33:58:84:LYS:HG2	1.74	0.70
35:78:19:VAL:HG23	35:78:27:HIS:HB2	1.73	0.70
22:3L:21:A:H61	22:3L:55:U:H3	1.37	0.70
24:14:2318:G:H1	38:65:2:ALA:HB1	1.57	0.70
24:1H:804:A:OP1	57:1H:3776:HOH:O	2.08	0.70
54:1G:766:A:OP2	57:1G:1750:HOH:O	2.09	0.70
3:22:47:LEU:O	3:22:50:ALA:N	2.25	0.70
24:14:1063:G:O6	24:14:1075:C:N4	2.24	0.70
33:15:18:ALA:HA	33:15:21:LYS:HG3	1.74	0.70
45:D5:105:VAL:HG22	45:D5:107:THR:H	1.56	0.70
1:13:737:A:H2'	1:13:738:C:H6	1.54	0.70
10:1I:61:GLU:OE2	14:5I:45:ARG:NH1	2.25	0.70
43:F8:36:LYS:HG2	43:F8:54:VAL:HB	1.73	0.70
54:1G:315:A:OP1	57:1G:1894:HOH:O	2.09	0.70
54:1G:617:G:N7	57:1G:1796:HOH:O	2.25	0.70
54:1G:971:G:N2	54:1G:1363:A:OP2	2.24	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:14:83:G:N2	24:14:102:G:O2'	2.24	0.70
30:49:107:LEU:HA	30:49:111:LEU:HD12	1.74	0.70
1:13:768:A:OP2	57:13:1771:HOH:O	2.10	0.69
8:7E:19:VAL:HG23	8:7E:21:LYS:HG3	1.74	0.69
57:1H:4144:HOH:O	44:G8:84:ARG:NH2	2.24	0.69
25:16:7:G:H4'	38:A8:29:PHE:CD2	2.26	0.69
37:98:33:ARG:HH22	51:N8:55:ARG:HG2	1.57	0.69
38:A8:26:LEU:HD23	38:A8:87:PHE:HD1	1.56	0.69
54:1G:353:A:H5'	54:1G:353:A:H8	1.57	0.69
1:13:452:A:H62	1:13:480:U:H3	1.37	0.69
1:13:576:G:OP1	57:13:1827:HOH:O	2.09	0.69
24:1H:563:G:OP2	57:1H:3580:HOH:O	2.08	0.69
24:1H:946:G:OP2	57:1H:4112:HOH:O	2.09	0.69
24:1H:981:A:OP1	57:1H:3761:HOH:O	2.10	0.69
24:1H:1997:G:OP2	57:1H:3991:HOH:O	2.10	0.69
24:14:2577:A:OP1	57:14:3541:HOH:O	2.10	0.69
36:45:19:GLY:H	36:45:98:LYS:NZ	1.90	0.69
1:13:1291:G:OP1	7:6E:37:ASN:ND2	2.21	0.69
54:1G:552:U:H2'	54:1G:553:A:H8	1.55	0.69
54:1G:920:U:H2'	54:1G:921:U:C6	2.27	0.69
10:1A:33:GLN:HB3	10:1A:75:ILE:HG12	1.74	0.69
24:14:446:G:OP2	57:14:3899:HOH:O	2.09	0.69
39:75:56:GLY:O	39:75:59:THR:HG22	1.93	0.69
24:1H:1021:A:H62	24:1H:1141:U:H3	1.40	0.69
24:1H:1636:C:OP2	57:1H:3555:HOH:O	2.09	0.69
24:1H:2588:G:OP1	57:1H:3876:HOH:O	2.10	0.69
32:61:110:ASP:OD2	32:61:113:ARG:NH1	2.25	0.69
54:1G:1305:G:N2	54:1G:1331:G:H2'	2.05	0.69
25:1J:102:G:N2	45:D5:73:GLN:OE1	2.22	0.69
26:79:13:LYS:NZ	26:79:31:GLU:O	2.24	0.69
41:95:81:TYR:HD1	41:95:83:ARG:HH12	1.40	0.69
1:13:1305:G:N2	1:13:1331:G:H2'	2.07	0.69
44:G8:97:ARG:NH2	44:G8:104:GLY:O	2.25	0.69
54:1G:324:G:OP2	57:1G:1823:HOH:O	2.11	0.69
54:1G:1322:C:O2'	54:1G:1323:G:O5'	2.10	0.69
24:14:300:A:N6	57:14:3846:HOH:O	2.16	0.69
24:14:603:A:H8	24:14:604:G:H1'	1.57	0.69
24:14:1394:U:OP1	57:14:3917:HOH:O	2.10	0.69
25:1J:73:A:OP2	57:1J:227:HOH:O	2.11	0.69
24:1H:593:G:H4'	53:Q8:62:LEU:HD22	1.73	0.69
24:1H:675:A:OP2	57:1H:4294:HOH:O	2.09	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:1H:1633:G:O6	57:1H:3694:HOH:O	2.07	0.69
27:11:79:VAL:HG21	27:11:111:LEU:HD21	1.74	0.69
54:1G:261:U:OP2	20:BA:79:ARG:NH2	2.25	0.69
54:1G:1161:C:H42	54:1G:1175:G:H1	1.40	0.69
2:12:76:GLN:NE2	2:12:206:ASP:OD1	2.26	0.69
24:14:361:G:OP1	57:14:4212:HOH:O	2.09	0.69
24:14:2878:U:O4	57:14:4080:HOH:O	2.10	0.69
1:13:1213:A:O2'	1:13:1215:G:N7	2.21	0.69
19:AI:40:ILE:HG23	19:AI:41:VAL:HG13	1.74	0.69
24:1H:138:G:N2	43:F8:44:GLU:OE2	2.21	0.69
37:98:103:ARG:HH21	37:98:110:PRO:HD3	1.57	0.69
24:14:1633:G:OP2	57:14:4245:HOH:O	2.10	0.69
24:14:2611:U:C4	51:J5:3:LYS:HG3	2.28	0.69
57:14:3620:HOH:O	27:19:237:GLU:OE2	2.09	0.69
29:39:2:LYS:HD3	29:39:2:LYS:H	1.57	0.69
24:1H:768:G:O2'	24:1H:1379:A:N6	2.25	0.69
24:1H:910:A:H62	36:88:12:GLN:HA	1.57	0.69
24:1H:2035:G:OP1	57:1H:3740:HOH:O	2.10	0.69
24:1H:2712(A):A:OP2	57:1H:3625:HOH:O	2.11	0.69
30:41:122:PRO:HB3	30:41:180:PHE:HD1	1.55	0.69
45:H8:19:ARG:NH1	45:H8:84:GLU:O	2.25	0.69
54:1G:1302:U:OP1	13:4A:13:LYS:NZ	2.26	0.69
3:22:72:LYS:HD2	3:22:75:VAL:HG23	1.73	0.69
22:2L:24:G:H2'	22:2L:25:G:H8	1.56	0.69
22:3L:36:U:H3'	22:3L:37:A:H8	1.56	0.69
24:14:1353:A:OP2	57:14:3578:HOH:O	2.11	0.69
24:14:2002:G:N7	57:14:4013:HOH:O	2.26	0.69
1:13:748:C:H4'	1:13:749:C:O5'	1.91	0.69
1:13:1182:G:C4'	1:13:1183:A:H5'	2.22	0.69
24:1H:676:A:H8	24:1H:2069:G:N2	1.88	0.69
24:1H:821:A:N1	57:1H:3830:HOH:O	2.26	0.69
24:1H:1053:C:H42	24:1H:1106:G:H1	1.40	0.69
24:1H:1771:C:OP1	57:1H:3967:HOH:O	2.10	0.69
32:61:132:PRO:O	32:61:133:HIS:ND1	2.25	0.69
44:G8:85:VAL:HG23	44:G8:96:ILE:HB	1.74	0.69
54:1G:352:C:OP2	57:1G:1775:HOH:O	2.10	0.69
54:1G:963:G:N3	10:1A:55:LYS:NZ	2.34	0.69
1:13:352:C:O2'	1:13:354:G:OP1	2.08	0.69
24:1H:978:G:OP2	57:1H:3760:HOH:O	2.10	0.69
24:14:1828:G:OP2	57:14:3530:HOH:O	2.12	0.69
20:BI:10:LEU:HG	20:BI:12:ALA:H	1.58	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:1H:1349:A:OP1	57:1H:4125:HOH:O	2.11	0.68
24:1H:2849:U:H4'	24:1H:2868:A:C2	2.28	0.68
35:78:49:ARG:HG3	53:Q8:60:LEU:HD12	1.75	0.68
35:78:88:LEU:HD12	35:78:95:VAL:HG11	1.74	0.68
54:1G:382:A:H2'	54:1G:383:A:C8	2.29	0.68
54:1G:953:G:H5'	54:1G:965:A:H61	1.57	0.68
17:8A:87:LYS:HE2	17:8A:91:ARG:HH21	1.58	0.68
20:BA:75:ASN:N	20:BA:75:ASN:OD1	2.25	0.68
24:14:770:G:OP2	57:14:4043:HOH:O	2.11	0.68
1:13:690:G:H2'	1:13:691:G:O4'	1.93	0.68
1:13:1135:U:H4'	1:13:1136:U:H5	1.57	0.68
22:3K:18:G:H4'	22:3K:19:C:O5'	1.93	0.68
24:1H:1658:C:OP1	57:1H:3653:HOH:O	2.11	0.68
24:14:102:G:OP1	48:G5:7:ARG:NH2	2.17	0.68
24:14:270(W):G:N7	57:14:4225:HOH:O	2.26	0.68
24:14:1633:G:O6	57:14:3552:HOH:O	2.07	0.68
29:39:101:LEU:O	29:39:106:ARG:NH1	2.27	0.68
1:13:148:G:H2'	1:13:149:A:H8	1.58	0.68
24:1H:1899:G:N2	24:1H:1902:C:H41	1.87	0.68
24:1H:2023:G:H5'	24:1H:2617:C:H4'	1.75	0.68
24:1H:2154:G:H2'	24:1H:2155:G:H8	1.59	0.68
24:14:2576:G:OP1	57:14:3541:HOH:O	2.09	0.68
9:8E:9:ARG:HB3	9:8E:14:VAL:HG13	1.74	0.68
35:35:39:LYS:HG3	35:35:45:LEU:HD22	1.76	0.68
1:13:975:A:H5"	1:13:975:A:H8	1.59	0.68
1:13:1179:A:H4'	9:8E:103:THR:HA	1.75	0.68
2:1E:100:GLY:O	2:1E:104:ASN:N	2.24	0.68
24:1H:1828:G:OP1	57:1H:3950:HOH:O	2.11	0.68
54:1G:683:G:N2	54:1G:707:C:O2	2.22	0.68
54:1G:1228:C:OP1	13:4A:115:LYS:N	2.23	0.68
24:14:2821:A:H3'	57:14:3526:HOH:O	1.94	0.68
1:13:1412:C:H2'	1:13:1413:A:C8	2.28	0.68
5:4E:91:LEU:HD12	5:4E:120:THR:HG22	1.74	0.68
22:3K:17:OMG:N2	22:3K:64:PSU:O4	2.26	0.68
24:1H:1013:C:H42	24:1H:1149:G:H1	1.42	0.68
24:1H:2314:C:H2'	24:1H:2315:G:C8	2.27	0.68
44:G8:81:LYS:HB3	44:G8:82:PRO:HA	1.74	0.68
24:14:578:A:OP2	57:14:3739:HOH:O	2.11	0.68
24:14:1676:A:OP2	57:14:3561:HOH:O	2.12	0.68
24:14:2287:A:H62	24:14:2344:U:H3	1.38	0.68
27:19:146:GLU:HB2	27:19:189:CYS:HB3	1.75	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:13:978:A:OP2	1:13:1362(A):C:N4	2.25	0.68
24:1H:423:A:OP1	57:1H:3720:HOH:O	2.12	0.68
24:1H:733:G:N7	57:1H:4067:HOH:O	2.26	0.68
37:98:2:ARG:HA	37:98:5:LYS:HD2	1.76	0.68
39:B8:107:ASP:N	39:B8:107:ASP:OD1	2.25	0.68
43:B5:50:LYS:N	43:B5:87:GLN:OE1	2.26	0.68
45:D5:111:VAL:HG13	45:D5:113:ALA:H	1.59	0.68
1:13:276:G:O2'	17:8I:68:ARG:NH1	2.27	0.68
1:13:1023:G:H3'	1:13:1024:G:H5"	1.75	0.68
1:13:1320:C:N3	19:AI:36:ARG:NH1	2.42	0.68
8:7E:116:LYS:HG3	8:7E:127:LEU:HD22	1.76	0.68
9:8E:42:ARG:NH2	9:8E:75:ASP:OD2	2.27	0.68
16:7I:53:VAL:HG13	16:7I:79:VAL:HG22	1.76	0.68
20:BI:82:SER:O	20:BI:86:ARG:HB2	1.93	0.68
24:1H:1665:A:N7	57:1H:4086:HOH:O	2.25	0.68
12:3A:70:ILE:HD13	12:3A:77:LEU:HD12	1.75	0.68
27:19:65:ILE:HD11	27:19:67:PHE:CE1	2.28	0.68
35:35:63:PRO:HB3	53:M5:30:ARG:HH21	1.59	0.68
38:65:109:GLY:O	38:65:111:GLU:N	2.23	0.68
24:1H:1386:C:H2'	24:1H:1387:C:H6	1.59	0.68
27:11:142:VAL:HG23	27:11:193:VAL:HA	1.75	0.68
54:1G:581:G:OP1	15:6A:61:GLY:HA3	1.93	0.68
7:62:92:SER:HB2	7:62:94:ARG:HE	1.59	0.68
20:BA:97:ALA:O	20:BA:99:LEU:HG	1.94	0.68
24:14:399:G:OP2	57:14:3903:HOH:O	2.11	0.68
40:85:92:ARG:HG3	40:85:94:ASN:HB3	1.76	0.68
1:13:191(F):U:O2	20:BI:105:SER:OG	2.10	0.68
1:13:1320:C:OP2	19:AI:3:ARG:NH2	2.26	0.68
14:5I:29:ARG:HD3	14:5I:40:CYS:SG	2.33	0.68
24:1H:1430:C:H2'	24:1H:1431:U:C6	2.28	0.68
24:1H:1676:A:OP2	57:1H:3658:HOH:O	2.11	0.68
16:7A:3:LYS:HG3	16:7A:24:ALA:HB2	1.76	0.68
41:95:21:ARG:CD	41:95:91:TYR:CD1	2.76	0.68
1:13:601:C:H2'	1:13:602:A:H8	1.57	0.67
16:7I:23:ASP:OD2	16:7I:25:ARG:NH1	2.27	0.67
24:1H:428:A:OP1	57:1H:3709:HOH:O	2.11	0.67
24:1H:2406:U:OP1	57:1H:3683:HOH:O	2.13	0.67
47:J8:93:GLU:OE2	47:J8:94:LEU:N	2.27	0.67
4:32:24:GLU:OE1	4:32:24:GLU:N	2.26	0.67
10:1A:92:THR:HG23	10:1A:93:GLY:H	1.59	0.67
24:14:586:A:OP2	57:14:3517:HOH:O	2.11	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:59:103:LEU:HD22	31:59:121:ILE:HG21	1.76	0.67
1:13:1348:U:H3	1:13:1374:A:H2	1.40	0.67
24:1H:273(F):C:H3'	24:1H:274:G:H5"	1.77	0.67
40:C8:105:VAL:HG22	41:D8:44:LYS:HG2	1.76	0.67
54:1G:1095:U:P	54:1G:1108:G:H1	2.16	0.67
3:22:27:LYS:NZ	3:22:28:GLN:OE1	2.27	0.67
24:14:2143:C:H2'	24:14:2144:U:O4'	1.94	0.67
1:13:468:A:H1'	16:7I:82:GLN:HE22	1.59	0.67
3:2E:127:ARG:NH2	3:2E:192:THR:OG1	2.27	0.67
6:5E:97:PHE:HB2	18:9I:32:ARG:HE	1.59	0.67
38:A8:34:HIS:HB2	38:A8:36:TYR:HE1	1.59	0.67
54:1G:866:C:O2'	54:1G:919:A:OP1	2.12	0.67
1:13:511:C:OP2	4:3E:49:ARG:NH2	2.27	0.67
30:41:130:ASN:HB3	30:41:160:VAL:HA	1.77	0.67
33:58:35:ARG:HG3	33:58:37:LYS:HG3	1.77	0.67
54:1G:690:G:H2'	54:1G:691:G:O4'	1.95	0.67
4:32:163:GLU:OE2	4:32:166:LYS:NZ	2.28	0.67
34:25:47:ILE:HG13	34:25:48:PRO:HD2	1.75	0.67
1:13:1504:G:OP1	57:13:1732:HOH:O	2.13	0.67
24:1H:270(V):G:H2'	24:1H:270(W):G:H8	1.59	0.67
24:1H:1690:A:N1	57:1H:4484:HOH:O	2.27	0.67
24:1H:2445:G:OP1	29:31:74:ARG:NH2	2.28	0.67
54:1G:593:G:H1	54:1G:646:U:H3	1.42	0.67
54:1G:1014:A:H2'	54:1G:1015:A:C8	2.29	0.67
24:14:2251:G:OP1	36:45:82:ARG:NH1	2.28	0.67
53:M5:54:GLU:HG2	53:M5:57:ARG:HH22	1.59	0.67
1:13:262:A:H2'	1:13:263:A:C8	2.30	0.67
24:1H:517:C:OP1	51:N8:16:ARG:NH2	2.27	0.67
43:F8:67:GLY:O	43:F8:69:TYR:N	2.28	0.67
54:1G:582:U:OP1	15:6A:64:ARG:NH1	2.26	0.67
54:1G:1076:C:P	2:12:175:ARG:HH12	2.18	0.67
24:14:1828:G:OP1	57:14:3592:HOH:O	2.12	0.67
35:35:47:ASP:OD2	35:35:50:ARG:NH2	2.26	0.67
50:I5:37:SER:O	50:I5:40:HIS:N	2.27	0.67
1:13:560:U:H5'	1:13:566:G:N2	2.10	0.67
24:1H:761:A:N7	57:1H:4069:HOH:O	2.28	0.67
24:1H:2791:C:N3	24:1H:2807:G:N2	2.41	0.67
39:B8:7:ILE:HG22	39:B8:9:LEU:HD23	1.76	0.67
3:22:32:LEU:HD22	3:22:59:ARG:HH12	1.59	0.67
20:BA:57:ARG:NE	20:BA:102:GLY:HA3	2.10	0.67
22:2L:62:G:H3'	22:2L:63:5MU:H71	1.77	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:69:103:ARG:HE	32:69:103:ARG:H	1.41	0.67
1:13:1129:C:N4	1:13:1133:G:N7	2.42	0.67
19:AI:19:VAL:HG11	19:AI:44:MET:HG2	1.77	0.67
24:1H:2314:C:H5'	30:41:38:VAL:HG11	1.76	0.67
24:1H:2345:G:H1'	24:1H:2382:G:H5'	1.76	0.67
54:1G:1281:U:OP2	54:1G:1282:C:N4	2.26	0.67
2:12:236:TYR:HB3	2:12:239:VAL:HG22	1.77	0.67
24:14:751:A:OP1	57:14:3496:HOH:O	2.13	0.67
24:14:1257:C:H4'	29:39:83:PHE:CE1	2.30	0.67
38:65:14:VAL:HG11	38:65:89:ARG:HH11	1.60	0.67
1:13:887:G:N7	57:13:1834:HOH:O	2.27	0.67
12:3I:62:SER:HB2	12:3I:64:TYR:HD1	1.59	0.67
54:1G:1391:U:H2'	54:1G:1392:G:C8	2.29	0.67
28:29:181:LEU:HD21	39:75:5:ALA:HB1	1.75	0.67
22:2K:10:C:N3	22:2K:26:G:N2	2.36	0.67
24:1H:450:G:O6	57:1H:3859:HOH:O	2.12	0.67
24:14:243:U:OP1	53:M5:6:THR:OG1	2.09	0.67
45:D5:148:ASP:OD2	45:D5:170:THR:OG1	2.09	0.67
2:1E:21:ARG:HB3	2:1E:39:ILE:HA	1.75	0.66
4:3E:30:LYS:C	4:3E:32:ALA:H	1.95	0.66
24:1H:1251:C:H5	57:1H:3801:HOH:O	1.77	0.66
24:1H:2588:G:OP1	57:1H:3874:HOH:O	2.13	0.66
54:1G:736:C:H2'	54:1G:737:A:C8	2.30	0.66
22:3L:51:C:OP2	22:3L:52:G:N2	2.29	0.66
24:14:399:G:OP2	57:14:3906:HOH:O	2.12	0.66
24:14:1250:G:OP1	57:14:4166:HOH:O	2.12	0.66
24:14:2404:C:O3'	35:35:77:ARG:NH2	2.27	0.66
38:65:29:PHE:HD1	38:65:30:ARG:N	1.94	0.66
1:13:693:G:H2'	1:13:694:A:C8	2.30	0.66
1:13:771:G:N7	57:13:1776:HOH:O	2.27	0.66
54:1G:1178:G:H22	54:1G:1181:G:H5"	1.60	0.66
8:72:85:ARG:NH1	8:72:87:SER:O	2.27	0.66
24:14:1800:C:OP2	27:19:183:ARG:NH2	2.28	0.66
24:14:2531:A:H5'	31:59:157:TYR:CZ	2.30	0.66
24:14:2748:A:H2'	24:14:2749:A:C8	2.30	0.66
35:35:47:ASP:HB3	35:35:48:PRO:O	1.95	0.66
49:H5:8:LEU:HB2	49:H5:28:LEU:HD22	1.75	0.66
1:13:343:U:O2	1:13:346:G:N2	2.25	0.66
3:2E:175:LEU:HD21	3:2E:201:TYR:HE2	1.60	0.66
54:1G:1105:A:H2'	54:1G:1106:G:C8	2.29	0.66
54:1G:1502:A:H2	54:1G:1505:G:N1	1.90	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:32:149:ALA:O	4:32:153:ARG:NE	2.28	0.66
12:3A:34:ARG:HB3	12:3A:34:ARG:HH11	1.61	0.66
24:14:1352:U:OP1	57:14:3884:HOH:O	2.12	0.66
3:2E:113:ALA:HB2	3:2E:202:ILE:HG13	1.77	0.66
24:1H:392:C:OP1	57:1H:3697:HOH:O	2.12	0.66
24:1H:1010:A:HO2'	24:1H:1152:C:HO2'	1.43	0.66
7:62:113:GLU:HB2	7:62:119:ARG:HG2	1.76	0.66
9:82:9:ARG:NH1	9:82:9:ARG:O	2.26	0.66
24:14:1614:A:H62	42:A5:93:ALA:HB2	1.61	0.66
29:39:41:LEU:HB3	29:39:44:ARG:HD3	1.77	0.66
1:13:129(A):G:H4'	1:13:130:A:H5"	1.76	0.66
1:13:1058:G:OP1	3:2E:199:LYS:NZ	2.28	0.66
2:1E:24:TRP:CZ3	2:1E:26:PRO:HA	2.30	0.66
4:3E:98:GLU:OE2	4:3E:103:ASN:ND2	2.27	0.66
13:4I:58:GLU:O	13:4I:62:ASN:ND2	2.26	0.66
24:1H:1:G:H1	24:1H:2902:C:H42	1.43	0.66
24:1H:442:G:H4'	29:31:46:ARG:HG3	1.76	0.66
57:1H:3651:HOH:O	28:21:135:HIS:NE2	2.28	0.66
31:51:8:PRO:HD2	31:51:69:ARG:HE	1.60	0.66
35:78:38:GLN:HG2	35:78:45:LEU:HD13	1.78	0.66
42:E8:13:SER:HB3	42:E8:16:LYS:HG3	1.76	0.66
54:1G:827:U:H3	54:1G:872:A:N6	1.88	0.66
24:14:1464:C:HO2'	24:14:1528:A:H8	1.41	0.66
24:14:2320:A:H1'	24:14:2321:G:C6	2.31	0.66
41:95:67:GLY:O	41:95:88:ARG:HD2	1.96	0.66
45:D5:128:VAL:HG23	45:D5:160:GLY:HA3	1.77	0.66
22:3K:24:G:H2'	22:3K:25:G:C8	2.28	0.66
24:1H:2428:G:N7	57:1H:3770:HOH:O	2.29	0.66
13:4A:8:GLU:HG3	13:4A:22:ILE:HG23	1.76	0.66
22:3L:36:U:H3'	22:3L:37:A:C8	2.29	0.66
24:14:1352:U:OP1	57:14:3882:HOH:O	2.13	0.66
24:14:2577:A:O4'	51:J5:3:LYS:HB2	1.96	0.66
39:75:6:LEU:N	39:75:9:LEU:HB3	2.09	0.66
1:13:223:U:H2'	1:13:224:C:H6	1.58	0.66
2:1E:87:ARG:NH1	2:1E:220:ASP:OD1	2.29	0.66
4:3E:18:LYS:HE3	4:3E:31:CYS:HB2	1.76	0.66
24:1H:1221:C:H2'	24:1H:1222:C:C6	2.29	0.66
45:H8:69:THR:HG22	45:H8:90:VAL:HG22	1.78	0.66
54:1G:975:A:H4'	54:1G:976:G:H5"	1.78	0.66
54:1G:1192:C:OP2	3:22:4:LYS:NZ	2.29	0.66
54:1G:1298:C:H41	7:62:114:ARG:HB3	1.60	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:14:1997:G:OP2	57:14:3645:HOH:O	2.14	0.66
26:79:56:GLN:NE2	26:79:203:GLY:O	2.28	0.66
39:75:88:ILE:HD11	39:75:91:ARG:CZ	2.26	0.66
2:1E:219:VAL:HA	2:1E:222:ILE:HD12	1.78	0.66
8:7E:10:LEU:HD22	8:7E:83:ILE:HD11	1.78	0.66
11:2I:124:LYS:HB3	11:2I:125:PHE:CD1	2.30	0.66
24:1H:397:G:N7	57:1H:4464:HOH:O	2.29	0.66
29:31:29:ASN:H	29:31:112:MET:CE	2.09	0.66
54:1G:1399:C:H4'	54:1G:1400:C:H5"	1.78	0.66
24:14:854:G:H2'	24:14:855:G:C8	2.30	0.66
25:1J:83:G:H4'	49:H5:52:HIS:CG	2.31	0.66
27:19:93:ALA:HB3	27:19:105:ILE:HG22	1.77	0.66
50:I5:31:ILE:HG23	50:I5:32:TYR:HB2	1.78	0.66
1:13:1145:C:H4'	1:13:1146:A:C8	2.31	0.66
8:7E:64:LYS:HB3	8:7E:79:VAL:HG21	1.77	0.66
15:6I:17:ARG:HD3	15:6I:26:GLU:HG3	1.77	0.66
24:1H:585:G:OP2	57:1H:3803:HOH:O	2.12	0.66
24:1H:760:G:OP2	57:1H:4068:HOH:O	2.12	0.66
24:1H:2867:G:OP2	39:B8:119:LYS:NZ	2.25	0.66
28:21:101:ARG:HD2	28:21:171:GLU:HA	1.78	0.66
2:12:144:ARG:HE	2:12:148:TYR:HE2	1.44	0.66
4:32:73:ARG:O	4:32:77:ASN:ND2	2.26	0.66
24:14:249:C:OP1	57:14:3506:HOH:O	2.12	0.66
24:14:259:G:H21	24:14:621:A:H8	1.43	0.66
24:14:1977:A:OP2	57:14:4195:HOH:O	2.13	0.66
44:C5:47:LYS:N	44:C5:60:PHE:HB3	2.09	0.66
22:3K:13:G:H2'	22:3K:14:A:H8	1.61	0.66
22:3K:84:C:H5'	47:J8:30:VAL:HG21	1.78	0.66
24:1H:219:G:O6	57:1H:3709:HOH:O	2.10	0.66
24:1H:730:C:H3'	57:1H:3641:HOH:O	1.94	0.66
24:1H:1800:C:OP2	27:11:183:ARG:NH2	2.28	0.66
24:1H:2150:U:H2'	24:1H:2151:G:C8	2.31	0.66
24:1H:2402:C:H2'	24:1H:2403:C:C5	2.31	0.66
40:C8:5:LYS:HB2	40:C8:5:LYS:HZ2	1.61	0.66
54:1G:1028:C:H42	54:1G:1033:G:H1	1.43	0.66
54:1G:1454:G:OP1	20:BA:39:LYS:NZ	2.26	0.66
2:12:166:ASP:HB3	2:12:169:LYS:HB2	1.78	0.66
8:72:45:ILE:HG22	8:72:47:GLY:H	1.59	0.66
17:8A:58:GLU:OE1	17:8A:75:ARG:NH2	2.29	0.66
24:14:1050:A:N6	24:14:2751:G:N7	2.43	0.66
24:14:1332:G:C8	24:14:1332:G:H5'	2.31	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:D5:144:LEU:HB2	45:D5:174:VAL:HG11	1.77	0.66
1:13:747:C:OP2	1:13:748:C:N4	2.25	0.65
39:B8:7:ILE:H	39:B8:10:VAL:HG22	1.61	0.65
24:14:943:U:O4	57:14:4058:HOH:O	2.12	0.65
24:14:1786:A:H2	24:14:2606:C:H1'	1.59	0.65
24:14:2531:A:H5'	31:59:157:TYR:CE2	2.31	0.65
34:25:4:PRO:O	34:25:5:GLN:HB2	1.95	0.65
39:75:134:GLU:CD	39:75:134:GLU:H	1.99	0.65
24:1H:341:G:N7	57:1H:3736:HOH:O	2.29	0.65
24:1H:1664:A:OP2	57:1H:4088:HOH:O	2.13	0.65
45:H8:139:VAL:HG22	45:H8:155:LEU:HD21	1.78	0.65
54:1G:1274:G:H2'	54:1G:1275:A:C8	2.31	0.65
24:14:2074:U:O5'	57:14:3494:HOH:O	2.15	0.65
24:14:2324:C:H5"	24:14:2325:G:H5'	1.78	0.65
28:29:8:LYS:HB3	28:29:192:ASN:HA	1.76	0.65
31:59:91:GLY:HA3	31:59:94:TYR:CE2	2.31	0.65
1:13:1346:A:OP1	9:8E:120:ARG:NH1	2.28	0.65
24:1H:1425:G:O6	57:1H:4197:HOH:O	2.08	0.65
24:1H:2035:G:OP1	57:1H:3743:HOH:O	2.13	0.65
36:88:66:ILE:O	36:88:104:PHE:N	2.29	0.65
39:B8:7:ILE:C	39:B8:9:LEU:H	2.00	0.65
54:1G:324:G:N7	57:1G:1825:HOH:O	2.29	0.65
54:1G:659:U:OP1	15:6A:9:GLN:NE2	2.30	0.65
54:1G:1226:C:O2'	13:4A:111:LYS:NZ	2.23	0.65
24:14:861:A:N6	24:14:916:G:O2'	2.29	0.65
24:14:1771:C:OP1	57:14:3634:HOH:O	2.13	0.65
28:29:111:ARG:HA	37:55:2:ARG:HH12	1.60	0.65
44:C5:40:GLU:N	44:C5:40:GLU:OE2	2.28	0.65
1:13:576:G:OP1	57:13:1823:HOH:O	2.15	0.65
24:1H:1517:G:H2'	24:1H:1518:C:C6	2.32	0.65
24:1H:2375:G:N7	57:1H:4387:HOH:O	2.29	0.65
35:78:47:ASP:OD2	35:78:50:ARG:NH2	2.29	0.65
54:1G:1259:C:N4	54:1G:1260:C:O2	2.30	0.65
24:14:686:G:OP2	57:14:4044:HOH:O	2.13	0.65
44:C5:19:LYS:HG3	44:C5:20:TYR:H	1.61	0.65
45:D5:59:LEU:O	45:D5:61:LEU:N	2.26	0.65
1:13:323:U:H2'	1:13:324:G:O4'	1.97	0.65
1:13:1073:U:OP2	5:4E:57:LYS:NZ	2.30	0.65
2:1E:71:VAL:HG12	2:1E:93:VAL:HB	1.77	0.65
24:1H:1190:G:N7	57:1H:3836:HOH:O	2.29	0.65
5:42:126:ARG:HG2	5:42:126:ARG:HH11	1.62	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:14:1190:G:N7	57:14:3751:HOH:O	2.28	0.65
38:65:64:GLU:OE2	38:65:67:ARG:NH1	2.30	0.65
1:13:272:C:H2'	1:13:273:A:C8	2.31	0.65
1:13:339:C:OP2	34:68:97:ARG:NH1	2.30	0.65
1:13:1329:A:H5'	13:4I:29:ARG:HD2	1.79	0.65
22:2K:48:C:N3	22:2K:52:G:N1	2.44	0.65
24:1H:2593:U:O4	57:1H:3631:HOH:O	2.11	0.65
44:G8:53:PRO:HA	44:G8:56:PRO:HG3	1.79	0.65
24:14:1636:C:OP2	57:14:3683:HOH:O	2.13	0.65
24:14:2124:G:H1	26:79:217:THR:HA	1.61	0.65
24:14:2562:U:H1'	34:25:23:ARG:HH11	1.62	0.65
34:25:68:GLU:HB3	34:25:78:ARG:NH1	2.10	0.65
1:13:247:G:N2	1:13:277:C:O2	2.27	0.65
1:13:1307:U:OP1	13:4I:101:GLN:NE2	2.29	0.65
1:13:1321:C:H3'	1:13:1322:C:H5"	1.79	0.65
24:1H:71:A:H5'	24:1H:73:A:C8	2.32	0.65
24:1H:831:G:OP1	57:1H:3826:HOH:O	2.14	0.65
24:1H:1243:G:O2'	35:78:7:ARG:NH2	2.29	0.65
24:1H:2295:C:OP1	38:A8:10:ARG:NH1	2.29	0.65
28:21:111:ARG:HD3	28:21:160:TYR:CD2	2.32	0.65
51:N8:40:LYS:NZ	51:N8:48:GLU:OE1	2.28	0.65
24:14:78:A:H2'	24:14:79:G:C8	2.32	0.65
24:14:1105:U:H2'	24:14:1106:G:C8	2.31	0.65
24:14:1112:G:H5'	31:59:3:ARG:HD3	1.79	0.65
25:1J:80:U:H2'	25:1J:81:G:N2	2.10	0.65
27:19:253:GLN:HB3	27:19:255:LYS:HZ3	1.62	0.65
39:75:33:LYS:HE3	39:75:40:THR:HG21	1.77	0.65
40:85:97:ASP:OD1	40:85:98:LEU:N	2.29	0.65
1:13:21:G:OP1	57:13:1763:HOH:O	2.15	0.65
3:2E:131:ARG:HH11	5:4E:50:GLU:HG2	1.61	0.65
9:8E:18:PHE:HD2	9:8E:62:TYR:HD2	1.42	0.65
24:1H:1345:C:OP2	57:1H:4501:HOH:O	2.14	0.65
24:1H:2635:C:H5"	28:21:78:LEU:HA	1.78	0.65
54:1G:1392:G:H21	54:1G:1502:A:H8	1.43	0.65
17:8A:53:LEU:HD21	17:8A:85:VAL:HG11	1.79	0.65
24:14:1975:G:OP2	57:14:3631:HOH:O	2.15	0.65
30:49:108:ASN:HA	50:I5:37:SER:HB3	1.78	0.65
1:13:266:G:H5"	1:13:268:C:H41	1.59	0.65
1:13:1325:C:OP1	21:1F:15:ARG:NH2	2.27	0.65
24:1H:1537:C:H2'	24:1H:1538:G:C8	2.31	0.65
24:1H:2061:G:P	57:1H:3576:HOH:O	2.53	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:1H:2331:G:O3'	46:I8:43:THR:HG22	1.95	0.65
54:1G:422:C:O2'	54:1G:423:G:N2	2.30	0.65
12:3A:117:ARG:HB3	12:3A:122:THR:HB	1.79	0.65
22:2L:62:G:C5	22:2L:63:5MU:H72	2.32	0.65
22:3L:42:U:H2'	22:3L:43:G:C8	2.31	0.65
24:14:248:G:OP1	57:14:4142:HOH:O	2.15	0.65
24:14:2711:A:OP2	57:14:3569:HOH:O	2.14	0.65
24:14:2776:A:OP1	24:14:2776:A:H3'	1.97	0.65
35:35:52:GLU:OE2	35:35:55:ARG:NH2	2.30	0.65
24:1H:988:A:P	49:L8:11:SER:HB2	2.37	0.65
51:N8:41:PRO:O	51:N8:44:THR:OG1	2.15	0.65
54:1G:411:A:C5	54:1G:413:G:H1'	2.32	0.65
15:6A:36:ILE:HD12	15:6A:63:ARG:HD3	1.79	0.65
22:2L:21:A:N6	22:2L:46:G:O2'	2.30	0.65
24:14:987:G:OP2	57:14:4152:HOH:O	2.14	0.65
24:1H:2784:C:O2	28:21:37:ARG:NH2	2.30	0.64
28:21:167:VAL:HG12	28:21:189:PRO:HD3	1.78	0.64
49:L8:26:LEU:HD21	49:L8:46:ASN:HB3	1.80	0.64
54:1G:588:G:H1	54:1G:651:C:H42	1.45	0.64
22:2L:7:G:N2	22:2L:76:C:O2	2.31	0.64
24:14:1021:A:H62	24:14:1141:U:H3	1.44	0.64
30:49:49:ASP:OD1	30:49:52:ILE:N	2.30	0.64
2:1E:67:THR:HG21	2:1E:155:LEU:HB3	1.80	0.64
9:8E:3:GLN:OE1	9:8E:20:ARG:NH1	2.30	0.64
24:1H:2362:G:OP1	53:Q8:44:LYS:NZ	2.28	0.64
54:1G:501:C:H2'	54:1G:502:G:C8	2.32	0.64
24:14:958:U:O2	25:1J:89(A):A:O2'	2.14	0.64
24:14:2656:U:H3	24:14:2665:A:H2	1.43	0.64
24:14:2822:G:N7	57:14:3528:HOH:O	2.29	0.64
12:3I:117:ARG:HB3	12:3I:122:THR:HB	1.78	0.64
13:4I:90:LEU:HA	13:4I:93:ARG:HG2	1.79	0.64
27:11:17:THR:HG22	27:11:205:VAL:H	1.62	0.64
30:41:105:LYS:HD3	50:M8:26:SER:HB2	1.78	0.64
39:B8:2:ASN:HB2	39:B8:5:ALA:N	2.11	0.64
44:G8:94:LYS:HA	44:G8:94:LYS:HZ3	1.62	0.64
52:P8:12:ARG:HH21	52:P8:44:PRO:HB3	1.62	0.64
54:1G:1086:U:O5'	54:1G:1086:U:H6	1.81	0.64
54:1G:1171:G:H2'	54:1G:1172:C:C6	2.33	0.64
7:62:15:ASP:OD1	7:62:44:TYR:OH	2.16	0.64
24:14:995:C:O2	33:15:3:THR:OG1	2.15	0.64
27:19:31:LYS:CD	27:19:32:SER:H	2.09	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:A5:65:LEU:HB3	42:A5:68:ARG:HD2	1.80	0.64
22:2K:35:QUO:C4	22:2K:35:QUO:C2	2.70	0.64
28:21:61:ARG:HB3	28:21:61:ARG:HH11	1.62	0.64
45:H8:125:LEU:HG	45:H8:164:ALA:HB3	1.80	0.64
54:1G:1122:U:O4	54:1G:1123:A:N6	2.27	0.64
22:3L:8:4SU:HN3	22:3L:14:A:H62	1.45	0.64
24:1H:880:G:H1	24:1H:897:C:H42	1.46	0.64
47:J8:85:LEU:CB	47:J8:86:SER:HB2	2.27	0.64
54:1G:1191:A:OP2	3:22:3:ASN:ND2	2.31	0.64
54:1G:1286:A:C8	54:1G:1287:A:H4'	2.32	0.64
2:12:82:ARG:NH1	2:12:92:TYR:OH	2.31	0.64
24:14:1196:C:HO2'	24:14:1228:G:HO2'	1.42	0.64
46:E5:49:LYS:HB3	46:E5:80:HIS:HB3	1.79	0.64
1:13:1145:C:H4'	1:13:1146:A:H8	1.62	0.64
1:13:1167:A:H8	1:13:1167:A:OP1	1.80	0.64
24:1H:192:C:N3	57:1H:3593:HOH:O	2.29	0.64
24:1H:270(K):C:O2	24:1H:270(N):G:N1	2.29	0.64
24:1H:1024:G:H3'	24:1H:1025:G:H5"	1.78	0.64
35:78:19:VAL:HG12	35:78:21:ARG:HB2	1.79	0.64
48:K8:33:MET:O	48:K8:37:PHE:HD1	1.80	0.64
54:1G:974:A:OP2	14:5A:41:ARG:NH1	2.30	0.64
27:19:2:ALA:N	27:19:200:ASP:OD2	2.31	0.64
38:65:41:ASP:OD2	38:65:44:LYS:HG2	1.98	0.64
24:1H:1533:C:H2'	24:1H:1534:G:C8	2.32	0.64
36:88:14:ARG:HG2	36:88:41:TRP:CH2	2.32	0.64
54:1G:1086:U:H3	54:1G:1099:G:H22	1.46	0.64
24:14:1427:A:H4'	24:14:1428:C:O5'	1.98	0.64
27:19:242:ARG:HG2	27:19:246:PRO:HG3	1.80	0.64
1:13:474:G:H2'	1:13:475:G:C8	2.32	0.64
1:13:1318:A:H1'	19:AI:37:ARG:HH21	1.61	0.64
15:6I:47:LYS:H	15:6I:47:LYS:HD2	1.62	0.64
22:2K:27:A:H3'	22:2K:28:G:H8	1.60	0.64
24:1H:1533:C:N4	24:1H:1538:G:H1	1.96	0.64
24:1H:1614:A:OP1	57:1H:3890:HOH:O	2.14	0.64
28:21:92:THR:O	28:21:95:ILE:HG12	1.98	0.64
48:K8:48:HIS:O	48:K8:52:ASP:HB2	1.98	0.64
54:1G:41:G:H2'	54:1G:42:G:C8	2.33	0.64
54:1G:1015:A:H2'	54:1G:1016:A:C8	2.33	0.64
6:52:100:ASN:ND2	18:9A:23:LYS:O	2.31	0.64
24:14:617:G:OP1	29:39:40:GLN:NE2	2.31	0.64
24:14:654(J):A:OP2	24:14:654(M):C:N4	2.30	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:14:2122:U:H2'	24:14:2123:G:O4'	1.98	0.64
25:1J:42:C:O2	30:49:93:THR:N	2.21	0.64
30:49:75:LYS:HE3	30:49:77:ILE:HD11	1.80	0.64
37:55:2:ARG:N	37:55:5:LYS:HE3	2.13	0.64
41:95:35:LEU:HB2	41:95:37:VAL:HG13	1.78	0.64
48:G5:17:SER:HB2	48:G5:20:GLU:H	1.62	0.64
24:1H:1786:A:H2	24:1H:2606:C:H1'	1.63	0.64
24:1H:2706:G:N7	57:1H:4090:HOH:O	2.29	0.64
54:1G:1205:U:H4'	3:22:195:VAL:HG11	1.78	0.64
8:72:86:ILE:HG21	8:72:133:LEU:HD22	1.79	0.64
24:14:1386:C:H2'	24:14:1387:C:C6	2.33	0.64
24:14:2074:U:OP1	57:14:3493:HOH:O	2.15	0.64
27:19:182:LEU:H	27:19:272:ALA:HB3	1.63	0.64
30:49:161:THR:HG22	30:49:163:ALA:H	1.61	0.64
39:75:27:THR:HG23	39:75:90:GLN:HB3	1.80	0.64
1:13:411:A:H62	1:13:413:G:N2	1.96	0.64
1:13:1503:A:O2'	23:4K:13:A:N1	2.25	0.64
22:3K:46:G:N2	22:3K:54:C:O2	2.31	0.64
24:1H:323:G:HO2'	24:1H:1205:U:H3	1.46	0.64
24:1H:331:A:N3	57:1H:4486:HOH:O	2.30	0.64
24:1H:587:C:OP2	35:78:21:ARG:NH2	2.31	0.64
24:1H:809:G:N7	57:1H:3551:HOH:O	2.30	0.64
54:1G:345:C:H1'	54:1G:346:G:C2	2.33	0.64
18:9A:22:VAL:HG22	18:9A:23:LYS:H	1.63	0.64
22:3L:35:QUO:C4	22:3L:35:QUO:C2	2.73	0.64
26:79:69:GLY:HA3	26:79:180:PHE:HZ	1.63	0.64
35:35:105:LEU:O	35:35:106:LEU:HB3	1.97	0.64
2:1E:14:GLY:H	2:1E:16:HIS:HE1	1.46	0.63
24:1H:1010:A:O2'	24:1H:1152:C:O2'	2.14	0.63
24:1H:1086:A:O2'	24:1H:1103:A:N1	2.27	0.63
43:F8:41:ASN:O	43:F8:45:THR:HG23	1.97	0.63
54:1G:962:C:H42	54:1G:973:G:H1	1.46	0.63
54:1G:1250:A:OP1	9:82:67:GLY:N	2.28	0.63
2:12:10:LEU:HA	2:12:13:ALA:HB2	1.80	0.63
24:14:1489:U:O4	57:14:4087:HOH:O	2.14	0.63
35:35:84:ASN:HD22	35:35:117:GLU:HB3	1.63	0.63
50:I5:12:ALA:HB1	50:I5:29:PRO:HA	1.80	0.63
1:13:5:U:O2'	1:13:6:G:O5'	2.14	0.63
24:1H:1430:C:H2'	24:1H:1431:U:H6	1.63	0.63
24:1H:1588:C:H2'	24:1H:1589:C:H6	1.61	0.63
45:H8:30:ASN:OD1	45:H8:33:LEU:N	2.29	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:3L:14:A:H3'	22:3L:15:G:H5"	1.80	0.63
27:19:228:PRO:HD3	27:19:235:GLY:HA3	1.80	0.63
29:39:42:ALA:O	29:39:45:ARG:HB3	1.98	0.63
30:49:67:LYS:H	50:I5:6:HIS:CE1	2.15	0.63
37:55:29:LEU:HB3	37:55:75:LEU:HD11	1.81	0.63
44:C5:17:SER:O	44:C5:21:LYS:HB2	1.99	0.63
2:1E:33:TYR:HB2	2:1E:43:ASP:HB2	1.78	0.63
8:7E:103:VAL:HG21	8:7E:110:ALA:HB2	1.80	0.63
20:BI:75:ASN:N	20:BI:75:ASN:OD1	2.32	0.63
24:1H:2016:U:OP1	57:1H:4229:HOH:O	2.15	0.63
33:58:70:LYS:HE3	33:58:72:TYR:HE1	1.62	0.63
54:1G:1228:C:H2'	54:1G:1229:A:H8	1.62	0.63
2:12:101:MET:HA	2:12:108:ILE:HG13	1.79	0.63
24:14:2352:A:OP2	57:14:4207:HOH:O	2.15	0.63
57:14:4153:HOH:O	49:H5:13:ILE:O	2.16	0.63
32:69:41:GLU:HA	32:69:44:LEU:HB2	1.79	0.63
50:I5:16:CYS:HA	50:I5:33:VAL:HG13	1.80	0.63
24:1H:674:G:H1'	29:31:74:ARG:HD2	1.81	0.63
24:1H:748:G:OP2	57:1H:4356:HOH:O	2.15	0.63
24:1H:1534:G:N1	24:1H:1539:G:H1'	2.12	0.63
24:1H:2131:G:O2'	24:1H:2133:G:N3	2.31	0.63
24:1H:2287:A:N6	24:1H:2344:U:H3	1.97	0.63
46:I8:24:LYS:O	46:I8:25:ARG:NH1	2.31	0.63
54:1G:324:G:N7	57:1G:1820:HOH:O	2.31	0.63
54:1G:1128:C:H1'	54:1G:1146:A:H61	1.64	0.63
22:3L:17:OMG:N2	22:3L:67:A:OP2	2.32	0.63
24:14:479:A:H4'	24:14:480:A:OP1	1.97	0.63
24:14:620:G:H4'	24:14:621:A:H5"	1.79	0.63
24:14:1084:A:N7	24:14:1085:A:N6	2.46	0.63
24:14:1467:C:H42	24:14:1525:G:H1	1.45	0.63
24:14:2392:A:C8	35:35:61:ARG:HB3	2.32	0.63
1:13:890:G:O2'	1:13:906:G:O6	2.11	0.63
24:1H:631:A:OP1	35:78:65:ARG:NH1	2.31	0.63
24:1H:833:U:O2	35:78:55:ARG:NH2	2.32	0.63
24:1H:1853:A:H2'	24:1H:1854:A:C8	2.34	0.63
54:1G:920:U:H2'	54:1G:921:U:H6	1.63	0.63
54:1G:1002:G:H22	54:1G:1038:C:H42	1.46	0.63
19:AA:7:LYS:H	19:AA:7:LYS:HD3	1.62	0.63
22:2L:36:U:H3	23:4L:17:G:H1	1.46	0.63
24:14:1047:G:H21	24:14:1111:A:H62	1.45	0.63
6:5E:6:VAL:HG22	6:5E:90:VAL:HG22	1.81	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:1H:739:G:OP1	57:1H:3934:HOH:O	2.14	0.63
34:68:86:ILE:HG22	34:68:94:ARG:HG3	1.79	0.63
54:1G:512:U:H2'	54:1G:513:C:H6	1.63	0.63
54:1G:1256:A:H62	54:1G:1277:C:H3'	1.64	0.63
2:12:130:ARG:O	2:12:135:GLN:NE2	2.32	0.63
4:32:12:CYS:SG	4:32:18:LYS:NZ	2.72	0.63
24:14:1224:G:OP2	41:95:66:ARG:NH2	2.30	0.63
25:1J:6:C:H2'	25:1J:7:G:H5"	1.81	0.63
1:13:929:G:H1	1:13:1388:C:H42	1.46	0.63
24:1H:2887:U:H2'	24:1H:2888:C:H6	1.63	0.63
54:1G:1116:C:H42	54:1G:1184:G:H1	1.45	0.63
13:4A:54:VAL:HA	13:4A:57:ARG:HB3	1.80	0.63
21:1B:6:ARG:HH21	21:1B:15:ARG:HH22	1.47	0.63
24:14:1771:C:C1'	24:14:1786:A:H8	2.12	0.63
24:14:2052:G:C8	28:29:141:ILE:HD11	2.33	0.63
39:75:108:ARG:HA	39:75:111:ARG:HD2	1.79	0.63
2:1E:21:ARG:HH21	2:1E:23:ARG:HG3	1.62	0.63
24:1H:836:G:H5"	24:1H:837:C:OP2	1.99	0.63
24:1H:1520:U:OP2	57:1H:4413:HOH:O	2.15	0.63
24:1H:1593:G:H2'	24:1H:1594:G:H8	1.62	0.63
24:1H:2408:U:OP2	57:1H:3681:HOH:O	2.16	0.63
24:1H:2495:G:H5"	36:88:82:ARG:HB3	1.81	0.63
25:16:31:C:H4'	30:41:29:TRP:CH2	2.34	0.63
27:11:17:THR:HG22	27:11:205:VAL:N	2.14	0.63
54:1G:1095:U:OP1	54:1G:1108:G:N2	2.31	0.63
24:14:634:C:H2'	24:14:635:C:C6	2.33	0.63
24:14:1291:C:H2'	24:14:1292:U:H6	1.64	0.63
39:75:2:ASN:O	39:75:4:GLY:HA3	1.99	0.63
39:75:91:ARG:NH1	39:75:124:ASP:OD2	2.26	0.63
45:D5:97:GLU:HB3	45:D5:125:LEU:HD11	1.80	0.63
1:13:77:C:N4	1:13:89:U:O4	2.30	0.63
1:13:1127:G:N2	1:13:1145:C:H1'	2.14	0.63
1:13:1157:A:O2'	1:13:1181:G:N2	2.32	0.63
2:1E:27:LYS:NZ	2:1E:193:ASP:OD2	2.23	0.63
4:3E:14:ARG:HB2	4:3E:40:PRO:HD2	1.80	0.63
22:3K:20:C:H5"	22:3K:68:A:H62	1.63	0.63
31:51:8:PRO:HG2	31:51:69:ARG:HH21	1.63	0.63
33:58:43:THR:HB	33:58:46:VAL:HG23	1.81	0.63
39:B8:7:ILE:HG13	39:B8:10:VAL:HG22	1.81	0.63
24:14:93:C:H5'	24:14:94:G:OP2	1.99	0.63
24:14:289:A:H5'	24:14:290:G:OP2	1.99	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:39:68:LYS:HB3	29:39:69:HIS:CD2	2.33	0.63
1:13:1435:G:H2'	1:13:1436:U:C6	2.34	0.62
3:2E:76:VAL:HG21	3:2E:103:VAL:HG21	1.79	0.62
3:2E:89:GLU:HG2	3:2E:93:LYS:HE3	1.81	0.62
15:6I:32:LEU:O	15:6I:35:ARG:N	2.32	0.62
19:AI:6:LYS:HG3	19:AI:9:VAL:HG22	1.81	0.62
19:AI:69:HIS:HB3	19:AI:73:GLU:HG3	1.81	0.62
31:51:20:ALA:HB1	31:51:21:PRO:HD2	1.80	0.62
52:P8:46:VAL:HG13	52:P8:47:ARG:HB3	1.80	0.62
22:3L:15:G:H4'	22:3L:15:G:OP1	1.99	0.62
24:14:1171:G:OP2	24:14:1173:G:N2	2.32	0.62
24:14:1997:G:H5"	57:14:3644:HOH:O	1.99	0.62
1:13:1443:G:O2'	39:B8:122:ASP:OD2	2.16	0.62
24:1H:579:G:H2'	24:1H:580:C:C6	2.35	0.62
24:1H:1211:U:OP2	57:1H:4526:HOH:O	2.15	0.62
46:I8:38:VAL:HG12	46:I8:40:GLN:HG2	1.81	0.62
54:1G:15:G:O6	54:1G:920:U:N3	2.18	0.62
54:1G:278:G:N7	17:8A:92:ARG:NH1	2.47	0.62
3:22:79:ARG:H	3:22:79:ARG:NE	1.97	0.62
9:82:9:ARG:HB3	9:82:14:VAL:HG13	1.81	0.62
20:BA:22:ARG:O	20:BA:26:ASN:ND2	2.31	0.62
24:14:78:A:H2'	24:14:79:G:H8	1.64	0.62
24:14:1364:G:OP2	47:F5:2:SER:N	2.31	0.62
31:59:30:LYS:NZ	31:59:79:VAL:O	2.32	0.62
1:13:243:A:H4'	1:13:244:U:H5"	1.81	0.62
18:9I:66:LEU:O	18:9I:70:ILE:HG13	2.00	0.62
24:1H:2420:C:N4	53:Q8:31:HIS:HB3	2.13	0.62
24:1H:2420:C:P	53:Q8:34:TRP:H	2.22	0.62
27:11:25:THR:HG23	27:11:26:LYS:N	2.13	0.62
54:1G:539:A:H2'	54:1G:540:G:C8	2.34	0.62
54:1G:1126:U:N3	54:1G:1281:U:O4'	2.31	0.62
54:1G:1224:G:C6	54:1G:1322:C:H1'	2.35	0.62
54:1G:1326:C:H2'	54:1G:1327:C:C6	2.33	0.62
24:14:1164:G:H1	24:14:1185:C:H42	1.46	0.62
24:14:2062:A:OP2	57:14:3860:HOH:O	2.15	0.62
28:29:24:THR:HG21	28:29:188:VAL:HB	1.80	0.62
5:4E:10:MET:HB3	5:4E:32:VAL:HG22	1.80	0.62
13:4I:91:ARG:HB2	13:4I:98:VAL:HG12	1.82	0.62
24:1H:111:A:H4'	48:K8:69:ARG:NH2	2.15	0.62
27:11:70:TRP:CH2	27:11:150:LYS:HA	2.34	0.62
30:41:27:ASN:HB3	30:41:30:GLU:HG3	1.82	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:51:98:LEU:HD22	31:51:125:VAL:HG23	1.81	0.62
19:AA:48:THR:HA	19:AA:61:TYR:HA	1.82	0.62
24:14:832:G:H5'	35:35:45:LEU:HD11	1.81	0.62
24:14:2068:U:N3	24:14:2430:A:H2	1.90	0.62
42:A5:17:VAL:HG23	42:A5:76:VAL:HG11	1.81	0.62
45:D5:70:LEU:O	45:D5:89:PHE:N	2.31	0.62
27:11:59:LYS:HD2	27:11:60:ARG:H	1.64	0.62
3:22:134:ILE:HG21	3:22:168:ALA:HB3	1.81	0.62
4:32:111:ALA:HB2	4:32:120:LEU:HD12	1.81	0.62
7:62:111:ARG:NH2	7:62:122:HIS:HB3	2.14	0.62
24:14:517:C:OP1	51:J5:16:ARG:NH2	2.32	0.62
48:G5:24:LEU:HD13	48:G5:60:LEU:HD21	1.82	0.62
7:6E:26:PHE:CE2	7:6E:30:ILE:HD11	2.34	0.62
20:BA:29:LYS:O	20:BA:33:ILE:HG12	2.00	0.62
1:13:1132:C:H2'	1:13:1133:G:H8	1.64	0.62
2:1E:18:GLY:HA3	2:1E:41:ILE:HD12	1.81	0.62
54:1G:542:G:P	4:32:10:ARG:HH22	2.22	0.62
54:1G:542:G:OP1	4:32:10:ARG:NH2	2.33	0.62
54:1G:992:U:H3	54:1G:1044:A:N6	1.97	0.62
54:1G:1004:A:H1'	54:1G:1025:U:C2	2.35	0.62
54:1G:1052:U:H5"	54:1G:1053:G:OP2	1.99	0.62
3:22:94:LEU:HD13	3:22:95:THR:HG23	1.82	0.62
4:32:3:ARG:HG3	4:32:5:ILE:HD11	1.82	0.62
18:9A:53:ARG:HD2	18:9A:59:SER:O	2.00	0.62
24:14:1778:U:H2'	24:14:1784:A:N6	2.15	0.62
24:14:2720:U:H3	24:14:2873:A:H2	1.48	0.62
40:85:34:LYS:NZ	40:85:37:GLU:OE1	2.27	0.62
45:D5:72:ARG:N	45:D5:87:ASP:O	2.25	0.62
1:13:171:A:H2'	1:13:172:A:C8	2.35	0.62
1:13:1212:U:H4'	1:13:1213:A:C8	2.35	0.62
1:13:1319:A:O2'	1:13:1323:G:N7	2.29	0.62
46:I8:70:GLN:NE2	46:I8:72:ARG:HD3	2.15	0.62
3:22:3:ASN:OD1	3:22:3:ASN:N	2.33	0.62
24:14:581:C:H2'	24:14:582:G:H8	1.65	0.62
24:14:610:C:O2	24:14:618:G:N2	2.20	0.62
24:14:1054:A:H3'	24:14:1055:G:H8	1.64	0.62
24:14:1599:C:H2'	24:14:1600:C:H6	1.64	0.62
25:1J:7:G:H4'	38:65:29:PHE:CD2	2.33	0.62
26:79:201:PRO:HG2	26:79:204:ALA:HB2	1.82	0.62
27:19:69:ARG:NH2	27:19:128:GLY:O	2.33	0.62
46:E5:11:ARG:O	46:E5:14:ARG:NH2	2.32	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:1H:1942:C:OP2	24:1H:1943:U:O2'	2.12	0.62
45:H8:95:PRO:HA	45:H8:130:PRO:HD3	1.80	0.62
20:BA:69:GLY:O	20:BA:73:HIS:NE2	2.31	0.62
24:14:861:A:N3	25:1J:79:C:O2'	2.33	0.62
29:39:111:ALA:HB2	29:39:206:ILE:HG21	1.81	0.62
31:59:52:VAL:HG11	31:59:69:ARG:HB2	1.82	0.62
1:13:738:C:H2'	1:13:739:C:H6	1.65	0.62
1:13:1347:G:H22	1:13:1374:A:P	2.23	0.62
1:13:1502:A:H2	1:13:1505:G:H1	1.47	0.62
2:1E:72:GLY:HA3	2:1E:165:VAL:HG22	1.81	0.62
3:2E:49:SER:O	3:2E:72:LYS:NZ	2.33	0.62
24:1H:2019:A:N7	51:N8:9:LYS:HE3	2.15	0.62
27:11:24:ILE:HG22	27:11:25:THR:O	1.98	0.62
54:1G:1104:G:OP1	2:12:144:ARG:NH1	2.32	0.62
2:12:50:GLU:O	2:12:54:THR:OG1	2.12	0.62
24:14:918:A:O2'	25:1J:96:G:N2	2.31	0.62
24:14:1441:G:H2'	24:14:1442:G:H8	1.63	0.62
24:14:1511:A:H2'	24:14:1512:G:C8	2.35	0.62
24:14:2099:U:H3	24:14:2190:G:H1	1.47	0.62
24:14:2757:A:H61	31:59:67:LEU:HD21	1.65	0.62
34:25:64:ARG:NH1	34:25:81:ASP:OD1	2.33	0.62
45:D5:30:ASN:OD1	45:D5:31:ARG:N	2.30	0.62
13:4I:92:HIS:CE1	13:4I:98:VAL:HG11	2.35	0.61
24:1H:107:C:H2'	24:1H:108:U:H6	1.64	0.61
24:1H:424:G:N7	57:1H:3717:HOH:O	2.31	0.61
24:1H:442:G:H1'	29:31:48:THR:HG21	1.82	0.61
24:1H:631:A:OP2	53:Q8:47:LYS:NZ	2.24	0.61
24:1H:2212:A:H1'	24:1H:2215:G:C5	2.34	0.61
24:1H:2667:C:H1'	31:51:109:PHE:CD1	2.34	0.61
31:51:4:ILE:HG13	31:51:6:ARG:NE	2.14	0.61
54:1G:678:U:H2'	54:1G:679:C:C6	2.35	0.61
54:1G:1279:A:O2'	54:1G:1281:U:OP2	2.14	0.61
4:32:60:GLU:OE2	4:32:199:ASN:N	2.33	0.61
7:62:97:GLN:NE2	7:62:101:LEU:HD11	2.15	0.61
29:39:185:ASP:CG	29:39:188:ARG:HH21	2.02	0.61
30:49:64:THR:HB	30:49:94:LEU:HD21	1.82	0.61
32:69:86:THR:HG23	32:69:87:LYS:HE3	1.82	0.61
38:65:106:ARG:NH1	38:65:107:GLU:OE1	2.32	0.61
46:E5:49:LYS:O	46:E5:50:ASN:ND2	2.33	0.61
7:6E:109:ASN:O	7:6E:109:ASN:ND2	2.32	0.61
15:6I:16:ALA:HB1	15:6I:21:ASP:HB3	1.81	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:3K:18:G:O4'	22:3K:66:G:N2	2.33	0.61
24:1H:71:A:H2	43:F8:31:HIS:NE2	1.94	0.61
24:1H:1022:G:N2	24:1H:1142(A):A:N1	2.47	0.61
24:1H:1645:G:H5"	24:1H:1646:C:H5'	1.82	0.61
25:16:15:A:H1'	25:16:109:G:C4	2.36	0.61
31:51:4:ILE:HB	31:51:6:ARG:HG3	1.82	0.61
54:1G:327:A:HO2'	54:1G:329:A:H8	1.47	0.61
54:1G:956:U:H1'	54:1G:1225:A:H2	1.65	0.61
16:7A:6:LEU:HG	16:7A:17:TYR:HB3	1.82	0.61
24:14:1839:G:OP2	57:14:3936:HOH:O	2.16	0.61
32:69:135:GLU:N	32:69:135:GLU:OE2	2.33	0.61
1:13:980:C:O2	57:13:1760:HOH:O	2.15	0.61
37:98:24:GLN:NE2	37:98:36:THR:HG21	2.13	0.61
44:G8:29:GLU:HB3	44:G8:38:ILE:CG2	2.30	0.61
5:42:122:GLU:O	5:42:126:ARG:NH1	2.25	0.61
6:52:77:ARG:HH12	6:52:78:GLU:HG2	1.65	0.61
24:14:1165:U:H2'	24:14:1166:C:C6	2.35	0.61
24:14:1567:A:H5'	27:19:58:HIS:ND1	2.14	0.61
24:14:2335:A:C8	24:14:2337:G:C5	2.88	0.61
24:1H:948:G:O6	57:1H:4351:HOH:O	2.14	0.61
24:1H:2178:C:H4'	26:71:46:LYS:HD3	1.80	0.61
29:31:185:ASP:OD1	29:31:188:ARG:NH1	2.27	0.61
30:41:65:GLY:HA2	50:M8:7:PRO:HG2	1.80	0.61
30:41:114:ILE:HD13	30:41:140:ILE:HG21	1.82	0.61
54:1G:501:C:H2'	54:1G:502:G:H8	1.65	0.61
54:1G:957:U:H1'	54:1G:960:U:C5	2.35	0.61
54:1G:1321:C:H3'	54:1G:1322:C:H5"	1.82	0.61
24:14:1141:U:OP2	33:15:63:THR:OG1	2.16	0.61
5:4E:102:ALA:HB1	5:4E:106:PRO:HG2	1.82	0.61
22:3K:52:G:H2'	22:3K:53:A:C8	2.35	0.61
24:1H:1520:U:H2'	24:1H:1521:G:O4'	2.01	0.61
37:98:55:ALA:HA	37:98:80:PHE:CE2	2.34	0.61
42:E8:68:ARG:NH1	42:E8:109:GLU:OE1	2.32	0.61
54:1G:236:G:OP1	17:8A:40:LYS:NZ	2.26	0.61
54:1G:258:G:N7	57:1G:1887:HOH:O	2.31	0.61
54:1G:1052:U:O2'	54:1G:1055:A:OP2	2.11	0.61
12:3A:28:LYS:HD2	12:3A:33:ARG:CZ	2.31	0.61
24:14:2053:G:H5'	28:29:144:ARG:O	2.00	0.61
44:C5:87:LYS:H	44:C5:94:LYS:HB3	1.65	0.61
48:G5:41:ILE:HD11	48:G5:44:LEU:HD22	1.82	0.61
16:7I:49:LEU:HD12	16:7I:50:LYS:N	2.15	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:1H:878:A:N6	24:1H:899:A:O2'	2.34	0.61
24:1H:2132:U:N3	26:71:5:LYS:HB3	2.15	0.61
24:1H:2210:G:H2'	24:1H:2211:G:N7	2.16	0.61
30:41:138:GLN:NE2	30:41:151:ALA:O	2.33	0.61
39:B8:100:TYR:HB3	39:B8:103:ARG:NH1	2.16	0.61
43:F8:57:LEU:N	43:F8:57:LEU:HD23	2.16	0.61
2:12:164:VAL:HG23	2:12:186:ALA:HB2	1.83	0.61
24:14:2889:C:H2'	24:14:2891:G:O4'	2.01	0.61
25:1J:7:G:H4'	38:65:29:PHE:HD2	1.64	0.61
1:13:1049:U:OP1	14:5I:3:ARG:HB2	2.00	0.61
1:13:1295:G:O2'	13:4I:14:ARG:NH1	2.26	0.61
10:1I:48:THR:HG23	10:1I:62:HIS:HB3	1.81	0.61
19:AI:68:GLY:H	50:M8:55:ARG:HH21	1.48	0.61
24:1H:1175:U:H1'	24:1H:1176:G:N3	2.16	0.61
24:1H:1329:U:H5"	24:1H:1330:C:H5	1.64	0.61
34:68:76:ALA:HB3	39:B8:75:ILE:HB	1.82	0.61
13:4A:91:ARG:HB2	13:4A:98:VAL:HG22	1.81	0.61
24:14:162:U:H4'	24:14:171:G:C8	2.35	0.61
24:14:784:A:OP1	57:14:3616:HOH:O	2.16	0.61
1:13:411:A:C5	1:13:413:G:H1'	2.35	0.61
1:13:688:G:H2'	1:13:689:C:H6	1.64	0.61
1:13:1122:U:O4	1:13:1123:A:N6	2.34	0.61
1:13:1132:C:H2'	1:13:1133:G:C8	2.36	0.61
1:13:1378:C:O2	7:6E:76:ARG:NH1	2.33	0.61
1:13:1429:C:H2'	1:13:1430:C:H6	1.65	0.61
24:1H:1021:A:H3'	24:1H:1022:G:H5"	1.82	0.61
21:1B:6:ARG:HE	21:1B:15:ARG:HH12	1.46	0.61
24:14:61:G:H1	24:14:93:C:H42	1.49	0.61
24:14:138:G:N2	43:B5:44:GLU:OE2	2.30	0.61
24:14:1210:A:H5"	24:14:1211:U:H3'	1.83	0.61
27:19:255:LYS:H	27:19:255:LYS:NZ	1.97	0.61
32:69:101:LEU:HD12	32:69:109:ILE:HD12	1.83	0.61
49:H5:27:GLY:HA3	49:H5:35:ARG:NH2	2.16	0.61
52:L5:8:ASN:OD1	52:L5:11:LYS:HB2	2.01	0.61
1:13:192:U:O2	20:BI:57:ARG:NH1	2.32	0.61
1:13:1128:C:H5'	9:8E:16:ARG:HH22	1.64	0.61
24:1H:2255:G:OP2	57:1H:4124:HOH:O	2.16	0.61
41:D8:35:LEU:HB3	41:D8:37:VAL:HG23	1.82	0.61
54:1G:17:U:H2'	54:1G:18:C:C6	2.36	0.61
54:1G:587:G:N2	54:1G:754:C:OP2	2.33	0.61
54:1G:1095:U:OP2	54:1G:1108:G:N1	2.30	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:82:83:ARG:HA	9:82:86:VAL:HG12	1.83	0.61
24:14:1174:A:N6	24:14:1177:A:O2'	2.34	0.61
24:14:2575:C:H2'	24:14:2578:G:O6	2.01	0.61
31:59:16:SER:HB2	31:59:27:LYS:HB3	1.83	0.61
46:E5:51:VAL:HG23	46:E5:81:VAL:HG23	1.82	0.61
47:F5:82:LEU:HD23	47:F5:82:LEU:H	1.65	0.61
1:13:1304:G:N2	1:13:1332:A:OP2	2.33	0.61
1:13:1376:U:H2'	1:13:1377:A:C8	2.34	0.61
2:1E:145:LEU:HD12	2:1E:149:LEU:HD12	1.82	0.61
6:5E:50:TYR:OH	18:9I:74:ARG:O	2.12	0.61
6:5E:89:MET:HE3	18:9I:76:LEU:HD13	1.83	0.61
27:11:70:TRP:CE2	27:11:150:LYS:HD2	2.36	0.61
39:B8:7:ILE:HB	39:B8:10:VAL:N	2.13	0.61
50:M8:37:SER:HA	50:M8:41:PRO:HG2	1.82	0.61
54:1G:102:G:O2'	54:1G:151:A:N3	2.34	0.61
4:32:18:LYS:NZ	4:32:19:LEU:O	2.34	0.61
24:14:1771:C:H1'	24:14:1786:A:H8	1.63	0.61
34:25:2:ILE:HG13	34:25:8:LEU:HD11	1.82	0.61
38:65:11:LYS:HD3	38:65:91:PRO:HG3	1.82	0.61
45:D5:39:VAL:HG21	45:D5:44:PHE:CD2	2.36	0.61
22:2K:1:G:H2'	22:2K:2:G:C8	2.28	0.60
24:1H:607:U:OP1	29:31:102:PRO:HA	2.01	0.60
24:1H:1681:G:N2	57:1H:3983:HOH:O	2.33	0.60
28:21:38:THR:O	28:21:43:GLY:N	2.28	0.60
30:41:161:THR:HG22	30:41:163:ALA:H	1.66	0.60
31:51:125:VAL:HG12	31:51:127:GLU:O	2.01	0.60
35:78:50:ARG:HH21	35:78:50:ARG:HG3	1.66	0.60
44:G8:15:VAL:HG21	44:G8:42:VAL:HG21	1.81	0.60
54:1G:147:G:H1	54:1G:175:C:H42	1.49	0.60
54:1G:545:C:OP1	4:32:61:LYS:NZ	2.34	0.60
7:62:129:GLU:OE2	7:62:131:LYS:NZ	2.33	0.60
24:14:686:G:H5"	52:L5:11:LYS:HZ1	1.65	0.60
24:14:848:G:H2'	24:14:849:A:C8	2.36	0.60
24:14:1676:A:OP2	57:14:3565:HOH:O	2.16	0.60
24:14:2733:A:N1	28:29:203:LYS:HA	2.16	0.60
25:1J:101:A:N7	57:1J:223:HOH:O	2.31	0.60
27:19:255:LYS:H	27:19:255:LYS:CE	2.14	0.60
44:C5:88:LYS:O	44:C5:89:PHE:HB3	2.01	0.60
1:13:277:C:OP2	17:8I:41:LYS:NZ	2.33	0.60
1:13:322:C:O2'	20:BI:23:ARG:HD2	2.01	0.60
17:8I:48:GLU:OE1	17:8I:50:LYS:HE2	2.01	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:BI:53:LEU:HB2	20:BI:100:ILE:HG22	1.84	0.60
24:1H:1359:A:H2'	24:1H:1360:A:H5'	1.83	0.60
54:1G:885:G:O2'	54:1G:914:A:N1	2.31	0.60
17:8A:45:HIS:CD2	17:8A:47:PRO:HG3	2.36	0.60
24:14:567:A:P	57:14:3749:HOH:O	2.58	0.60
24:14:2537:U:H2'	24:14:2538:C:C6	2.36	0.60
24:14:2602:A:H4'	24:14:2603:G:O5'	2.01	0.60
1:13:157:G:H1	1:13:164:U:H3	1.49	0.60
1:13:321:A:H62	1:13:328:C:H1'	1.66	0.60
4:3E:104:VAL:HG21	4:3E:140:VAL:HG21	1.83	0.60
28:21:111:ARG:HD3	28:21:160:TYR:CE2	2.35	0.60
42:E8:41:LYS:HE3	51:N8:25:LEU:HD21	1.82	0.60
50:M8:17:GLY:H	50:M8:36:CYS:HB3	1.66	0.60
22:2L:24:G:H2'	22:2L:25:G:C8	2.34	0.60
24:14:2293:C:O3'	38:65:89:ARG:NH2	2.33	0.60
24:14:2294:C:P	38:65:89:ARG:HH22	2.23	0.60
25:1J:11:C:H3'	25:1J:12:C:H6	1.65	0.60
39:75:105:LEU:O	39:75:107:ASP:N	2.34	0.60
1:13:992:U:H4'	1:13:993:G:O5'	2.00	0.60
1:13:1502:A:H5'	1:13:1504:G:N7	2.15	0.60
3:2E:102:ASN:OD1	3:2E:102:ASN:N	2.34	0.60
24:1H:1005:C:O2'	33:58:28:THR:HG21	2.01	0.60
24:1H:2324:C:H5"	24:1H:2325:G:H5'	1.84	0.60
28:21:53:PRO:HA	28:21:74:PRO:HA	1.83	0.60
33:58:13:TRP:O	33:58:135:PRO:HD2	2.01	0.60
24:14:831:G:OP1	57:14:3871:HOH:O	2.15	0.60
28:29:120:TRP:CD1	28:29:155:LYS:HB3	2.36	0.60
32:69:144:VAL:HG22	32:69:145:VAL:HG22	1.83	0.60
24:1H:271(B):G:H1	24:1H:404:C:H42	1.48	0.60
24:1H:443:A:H1'	24:1H:1201:C:O4'	2.01	0.60
24:1H:598:G:C5'	35:78:11:GLY:HA3	2.30	0.60
24:1H:2584:U:H2'	24:1H:2585:U:H2'	1.82	0.60
35:78:39:LYS:HB2	35:78:45:LEU:HD11	1.83	0.60
54:1G:316:G:OP2	54:1G:351:G:O2'	2.18	0.60
54:1G:1399:C:H4'	54:1G:1400:C:C5'	2.32	0.60
7:62:67:GLU:OE2	7:62:70:LYS:NZ	2.31	0.60
8:72:39:LEU:HB3	8:72:45:ILE:HG12	1.83	0.60
15:6A:82:ILE:HB	15:6A:87:ILE:HB	1.82	0.60
19:AA:11:VAL:HG12	19:AA:12:ASP:H	1.66	0.60
24:14:854:G:H2'	24:14:855:G:H8	1.67	0.60
26:79:212:VAL:HG11	26:79:226:PRO:HD3	1.83	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:45:19:GLY:H	36:45:98:LYS:HZ1	1.50	0.60
41:95:37:VAL:CG2	41:95:56:SER:HA	2.31	0.60
1:13:881:G:OP2	12:3I:12:ARG:NH2	2.34	0.60
24:1H:1588:C:H2'	24:1H:1589:C:C6	2.37	0.60
24:1H:1935:G:H1'	24:1H:1964:G:N2	2.17	0.60
24:1H:2096:U:H2'	24:1H:2097:C:C6	2.36	0.60
28:21:10:GLY:HA3	39:B8:8:LYS:HD2	1.82	0.60
35:78:49:ARG:HG3	53:Q8:60:LEU:CD1	2.31	0.60
42:E8:29:LEU:HD21	42:E8:33:ARG:NH2	2.16	0.60
45:H8:97:GLU:HA	45:H8:127:LYS:HA	1.82	0.60
54:1G:1316:G:OP1	14:5A:17:LYS:NZ	2.34	0.60
4:32:9:CYS:HA	4:32:12:CYS:HB2	1.83	0.60
13:4A:70:LEU:O	13:4A:74:VAL:HG23	2.01	0.60
24:14:1270:C:H5"	24:14:1271:G:H5'	1.83	0.60
24:14:1430:C:H2'	24:14:1431:U:C6	2.37	0.60
24:14:2695:C:H2'	24:14:2696:U:H6	1.66	0.60
1:13:1129:C:N4	1:13:1134:G:N7	2.49	0.60
15:6I:3:ILE:HD13	15:6I:34:LEU:HD23	1.84	0.60
22:3K:33:C:H2'	22:3K:34:U:H5"	1.84	0.60
24:1H:70:G:H21	24:1H:71:A:N6	1.99	0.60
24:1H:529:A:H4'	24:1H:530:G:H5'	1.83	0.60
24:1H:2392:A:H2	24:1H:2424:C:N4	1.96	0.60
27:11:71:ASP:OD1	27:11:103:ARG:NH2	2.35	0.60
9:82:24:GLY:HA2	9:82:59:PHE:O	2.01	0.60
9:82:26:VAL:HG13	9:82:61:ALA:HB3	1.83	0.60
13:4A:65:LYS:HB2	13:4A:69:GLU:HG3	1.83	0.60
24:14:960:A:H61	36:45:83:MET:CE	2.14	0.60
24:14:993:G:OP1	40:85:50:ARG:NH2	2.34	0.60
24:14:1969:A:H3'	57:14:3607:HOH:O	2.02	0.60
24:14:2887:U:H2'	24:14:2888:C:H6	1.65	0.60
28:29:169:ASN:HA	28:29:201:THR:HG21	1.82	0.60
32:69:76:THR:HG21	32:69:140:LEU:HD22	1.84	0.60
35:35:30:THR:HG21	35:35:35:HIS:H	1.67	0.60
16:7I:49:LEU:HD12	16:7I:50:LYS:H	1.66	0.60
24:1H:2540:C:OP2	57:1H:4062:HOH:O	2.16	0.60
28:21:2:LYS:HA	28:21:84:PHE:CD1	2.36	0.60
31:51:6:ARG:HD2	31:51:65:HIS:HB3	1.84	0.60
33:58:89:LYS:O	33:58:93:THR:OG1	2.18	0.60
42:E8:88:ARG:HB3	42:E8:92:ARG:HB2	1.84	0.60
44:G8:28:LYS:NZ	44:G8:64:GLU:OE2	2.23	0.60
54:1G:603:U:H2'	54:1G:604:G:H8	1.65	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:12:132:LYS:HA	2:12:135:GLN:HB2	1.84	0.60
13:4A:80:ARG:NH1	19:AA:66:MET:SD	2.75	0.60
26:79:15:ASP:HB3	26:79:18:LYS:HB3	1.83	0.60
31:59:103:LEU:HG	31:59:115:VAL:HB	1.82	0.60
37:55:57:ARG:NH2	37:55:62:ALA:HB2	2.17	0.60
42:A5:60:ASN:OD1	42:A5:60:ASN:N	2.34	0.60
1:13:74:C:H42	1:13:96:G:H1	1.48	0.60
2:1E:174:VAL:HG13	2:1E:184:VAL:HG11	1.84	0.60
22:3K:33:C:N4	22:3K:34:U:O4	2.35	0.60
24:1H:249:C:O5'	57:1H:3613:HOH:O	2.16	0.60
24:1H:1209:G:O6	57:1H:4486:HOH:O	2.17	0.60
24:1H:2795:G:N2	24:1H:2801:A:OP2	2.35	0.60
46:I8:40:GLN:NE2	46:I8:42:GLY:O	2.35	0.60
2:12:223:ILE:HA	2:12:226:ARG:HB2	1.84	0.60
12:3A:24:VAL:HB	12:3A:27:LEU:HD12	1.82	0.60
12:3A:110:VAL:HG23	12:3A:120:TYR:HB3	1.82	0.60
24:14:997:G:O2'	24:14:998:C:H5'	2.02	0.60
24:14:2520:C:H41	24:14:2542:A:H62	1.50	0.60
1:13:664:G:H22	1:13:741:G:H1	1.47	0.60
1:13:719:C:O2'	18:9I:49:LYS:HB3	2.02	0.60
9:8E:50:LEU:HD23	9:8E:85:LEU:HD22	1.83	0.60
25:16:111:U:H2'	25:16:112:G:H8	1.67	0.60
48:K8:47:ASN:C	48:K8:49:LYS:H	2.06	0.60
53:Q8:34:TRP:HA	53:Q8:34:TRP:HE3	1.67	0.60
24:14:328:U:H4'	44:C5:68:HIS:CD2	2.37	0.60
24:14:483:A:H5'	44:C5:49:VAL:HG22	1.82	0.60
24:14:2224:G:H4'	24:14:2226:C:C2	2.35	0.60
25:1J:89:G:O6	25:1J:89(A):A:N6	2.35	0.60
27:19:17:THR:O	27:19:211:ARG:NH2	2.35	0.60
31:59:56:SER:HG	31:59:61:HIS:HD1	1.49	0.60
44:C5:19:LYS:HG3	44:C5:20:TYR:HD1	1.65	0.60
50:I5:56:VAL:HG22	50:I5:57:GLU:H	1.67	0.60
1:13:368:U:OP1	32:69:91:SER:OG	2.20	0.59
1:13:517:G:N1	1:13:533:A:OP2	2.32	0.59
1:13:636:U:H2'	1:13:637:G:C8	2.37	0.59
3:2E:88:ARG:HB3	3:2E:99:VAL:HG21	1.83	0.59
3:2E:90:GLU:HA	3:2E:93:LYS:HD2	1.84	0.59
5:4E:53:LEU:H	5:4E:53:LEU:HD12	1.67	0.59
24:1H:581:C:H2'	24:1H:582:G:C8	2.36	0.59
24:1H:2415:G:H4'	35:78:67:MET:N	2.17	0.59
25:16:73:A:C2'	25:16:74:U:H5'	2.32	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:A8:37:ALA:HB2	38:A8:101:LEU:HD21	1.83	0.59
47:J8:4:VAL:HG12	47:J8:11:ARG:HB2	1.84	0.59
54:1G:1011:G:H22	54:1G:1018:C:N4	2.00	0.59
13:4A:16:ASP:OD1	13:4A:17:VAL:N	2.33	0.59
13:4A:108:ARG:HH11	13:4A:108:ARG:HG3	1.67	0.59
22:2L:10:C:N4	22:2L:26:G:H1	2.00	0.59
22:2L:72:U:OP1	22:2L:72:U:H2'	2.02	0.59
24:14:142:G:H1'	43:B5:37:THR:HG21	1.83	0.59
24:14:910:A:C5	36:45:13:GLN:HG3	2.36	0.59
24:14:1786:A:C2	24:14:2606:C:H1'	2.37	0.59
24:14:1840:G:OP2	57:14:3934:HOH:O	2.16	0.59
24:14:2176:A:H2'	24:14:2177:C:C6	2.37	0.59
29:39:67:GLN:HG3	29:39:67:GLN:O	2.02	0.59
1:13:1070:U:OP1	5:4E:18:ARG:NH1	2.27	0.59
13:4I:17:VAL:O	13:4I:20:THR:OG1	2.15	0.59
24:1H:602:G:HO2'	24:1H:604:G:HO2'	1.50	0.59
3:22:47:LEU:HB3	3:22:52:LEU:HD22	1.82	0.59
14:5A:39:LEU:HD13	14:5A:47:LEU:HD12	1.85	0.59
24:14:524:U:H2'	24:14:525:U:C6	2.37	0.59
24:14:2319:G:N7	38:65:3:ARG:HG3	2.17	0.59
24:14:2557:G:H2'	24:14:2558:C:C6	2.37	0.59
45:D5:19:ARG:HH21	45:D5:84:GLU:HB3	1.66	0.59
22:2K:36:U:O2	23:4K:17:G:N2	2.28	0.59
24:1H:598:G:H1'	35:78:12:ALA:HB2	1.84	0.59
24:1H:1065:U:O2	24:1H:1074:G:N2	2.35	0.59
43:F8:89:ILE:HG22	43:F8:92:LEU:H	1.67	0.59
24:14:273(C):C:N4	24:14:363(C):G:H1	2.00	0.59
24:14:1372:U:OP2	57:14:4027:HOH:O	2.16	0.59
24:14:2836:U:H2'	24:14:2837:G:C8	2.36	0.59
31:59:122:THR:O	31:59:131:VAL:HG13	2.01	0.59
46:E5:70:GLN:NE2	46:E5:72:ARG:HD2	2.17	0.59
50:I5:18:CYS:H	50:I5:19:GLY:HA2	1.66	0.59
1:13:105:G:H2'	1:13:106:C:C6	2.37	0.59
1:13:603:U:H2'	1:13:604:G:H8	1.68	0.59
1:13:659:U:H2'	1:13:660:G:C8	2.37	0.59
2:1E:51:LEU:HD22	2:1E:55:PHE:HE1	1.67	0.59
2:1E:88:ALA:HB2	2:1E:219:VAL:HG13	1.83	0.59
20:BI:73:HIS:HB3	20:BI:74:LYS:HG2	1.85	0.59
24:1H:1334:G:N7	57:1H:3913:HOH:O	2.31	0.59
24:1H:1650:G:O6	57:1H:4192:HOH:O	2.15	0.59
24:1H:1778:U:H2'	24:1H:1784:A:N6	2.17	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:1H:2068:U:N3	24:1H:2430:A:H2	1.94	0.59
24:1H:2853:C:H2'	24:1H:2854:G:H8	1.67	0.59
30:41:66:GLN:HA	50:M8:6:HIS:CE1	2.37	0.59
54:1G:959:A:HO2'	54:1G:984:C:HO2'	1.50	0.59
22:2L:71:C:O2'	22:2L:72:U:OP1	2.20	0.59
24:14:527:C:OP2	24:14:2779:U:H5	1.86	0.59
24:14:1810:A:H2'	24:14:1811:G:O4'	2.03	0.59
24:14:2761:G:O2'	31:59:143:GLN:NE2	2.34	0.59
33:15:20:GLY:HA2	33:15:61:ARG:HG2	1.83	0.59
35:35:2:LYS:NZ	35:35:4:SER:OG	2.35	0.59
44:C5:6:HIS:ND1	44:C5:7:VAL:HG13	2.17	0.59
5:4E:80:ILE:HD13	8:7E:104:ARG:HH21	1.65	0.59
6:5E:10:LEU:HD13	6:5E:61:LEU:HD13	1.85	0.59
14:5I:26:ARG:NH1	14:5I:43:CYS:HB2	2.15	0.59
20:BI:45:GLN:HB2	20:BI:91:LEU:HD13	1.83	0.59
24:1H:2126:A:O2'	24:1H:2162:G:N2	2.35	0.59
32:61:131:LYS:HB3	32:61:132:PRO:HA	1.84	0.59
50:M8:24:THR:OG1	50:M8:25:TYR:N	2.36	0.59
54:1G:1300:G:O2'	54:1G:1301:U:O5'	2.20	0.59
2:12:8:LYS:HG2	2:12:217:ARG:HE	1.67	0.59
2:12:185:ILE:HG22	2:12:199:TYR:HB2	1.83	0.59
4:32:2:GLY:N	4:32:71:SER:HB3	2.18	0.59
5:42:110:LEU:O	5:42:115:VAL:HG12	2.02	0.59
15:6A:21:ASP:OD2	15:6A:24:SER:OG	2.12	0.59
24:14:607:U:H3	24:14:621:A:H2	1.47	0.59
24:14:819:A:OP2	24:14:1187:G:N2	2.28	0.59
24:14:1776:G:OP2	57:14:3558:HOH:O	2.16	0.59
27:19:69:ARG:HD3	27:19:105:ILE:HD11	1.85	0.59
38:65:106:ARG:HA	38:65:110:LEU:HD11	1.83	0.59
50:I5:58:ARG:HH12	50:I5:62:ARG:HB2	1.66	0.59
2:1E:14:GLY:H	2:1E:16:HIS:CE1	2.20	0.59
35:78:126:VAL:HG12	35:78:147:LEU:HD22	1.85	0.59
45:H8:142:SER:HB2	45:H8:143:GLY:HA2	1.85	0.59
46:I8:72:ARG:HB3	46:I8:75:LEU:HB2	1.84	0.59
51:N8:31:VAL:HG13	51:N8:42:PRO:HG3	1.85	0.59
54:1G:114:U:H2'	54:1G:115:G:C8	2.38	0.59
54:1G:177:C:OP1	20:BA:65:LYS:NZ	2.35	0.59
4:32:139:ARG:HH11	4:32:139:ARG:HG3	1.68	0.59
21:1B:6:ARG:NE	21:1B:15:ARG:HH12	2.01	0.59
22:2L:32:A:H2'	22:2L:33:C:H6	1.67	0.59
24:14:468:G:N7	52:L5:39:ARG:NH2	2.47	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:19:76:PRO:HA	27:19:118:VAL:HG23	1.85	0.59
32:69:130:TYR:HB3	32:69:136:VAL:HG13	1.85	0.59
40:85:110:VAL:O	40:85:114:LYS:HG3	2.03	0.59
1:13:603:U:H2'	1:13:604:G:C8	2.38	0.59
5:4E:147:ASP:OD1	5:4E:147:ASP:N	2.36	0.59
9:8E:16:ARG:HB2	9:8E:64:THR:HG23	1.84	0.59
40:C8:110:VAL:HG12	40:C8:114:LYS:HE3	1.85	0.59
44:G8:104:GLY:H	44:G8:105:ALA:HB3	1.67	0.59
46:I8:23:VAL:HG13	46:I8:38:VAL:HG22	1.84	0.59
54:1G:235:C:H5'	17:8A:70:ARG:HG2	1.84	0.59
13:4A:14:ARG:H	13:4A:44:ARG:HH11	1.50	0.59
22:2L:41:C:H2'	22:2L:42:U:H6	1.68	0.59
24:14:548:A:C5	24:14:549:G:H1'	2.37	0.59
32:69:3:VAL:HG12	32:69:38:LEU:HA	1.84	0.59
22:3K:17:OMG:O2'	22:3K:66:G:N2	2.36	0.59
24:1H:50:U:H3'	24:1H:51:G:H5'	1.85	0.59
24:1H:796:C:H2'	24:1H:797:C:C6	2.37	0.59
24:1H:2002:G:O6	57:1H:4226:HOH:O	2.17	0.59
24:1H:2292:C:P	38:A8:17:ARG:HH22	2.25	0.59
24:1H:2688:U:OP1	24:1H:2713:A:N6	2.36	0.59
34:68:65:THR:OG1	34:68:69:ILE:HD11	2.03	0.59
41:D8:44:LYS:O	41:D8:46:VAL:N	2.34	0.59
54:1G:983:A:N1	54:1G:1222:G:N2	2.51	0.59
2:12:118:LEU:HB3	2:12:142:LEU:HD12	1.83	0.59
4:32:75:PHE:CE1	4:32:93:PHE:HZ	2.21	0.59
24:14:729:G:C6	27:19:208:LYS:HB2	2.37	0.59
24:14:958:U:OP2	36:45:14:ARG:NH1	2.36	0.59
30:49:56:ALA:HA	30:49:153:ARG:HH21	1.67	0.59
1:13:201:C:N4	1:13:216:G:H1	2.00	0.59
1:13:735:C:H2'	1:13:736:C:H6	1.67	0.59
24:1H:321:G:O3'	29:31:168:ARG:NH2	2.35	0.59
24:1H:761:A:OP2	57:1H:4065:HOH:O	2.17	0.59
24:1H:1399:C:N4	57:1H:4494:HOH:O	2.34	0.59
24:1H:1434:A:H61	24:1H:1558:A:H61	1.48	0.59
26:71:20:TYR:HB2	26:71:224:ILE:HG22	1.85	0.59
37:98:79:LEU:HA	37:98:83:ILE:HD12	1.85	0.59
41:D8:91:TYR:HD1	41:D8:91:TYR:H	1.50	0.59
54:1G:1347:G:O6	9:82:10:ARG:NH2	2.36	0.59
22:2L:19:C:O2'	22:2L:21:A:OP1	2.14	0.59
24:14:75:G:H4'	48:G5:55:ARG:HH21	1.67	0.59
29:39:18:ARG:HG2	29:39:19:GLU:H	1.68	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:69:72:LEU:HD11	32:69:107:VAL:HG11	1.84	0.59
35:35:63:PRO:HD3	53:M5:27:THR:HG22	1.83	0.59
1:13:667:G:H4'	15:6I:51:HIS:CE1	2.38	0.59
20:BI:49:ALA:HA	20:BI:52:ALA:HB3	1.85	0.59
24:1H:805:G:O4'	35:78:38:GLN:NE2	2.36	0.59
24:1H:1013:C:N4	24:1H:1149:G:H1	2.01	0.59
24:1H:1406:U:H2'	24:1H:1407:C:C6	2.38	0.59
35:78:19:VAL:CG2	35:78:27:HIS:HB2	2.33	0.59
41:D8:19:LYS:HG3	41:D8:95:LEU:HD23	1.85	0.59
42:E8:1:MET:HB3	42:E8:64:MET:HE2	1.85	0.59
54:1G:547:A:OP2	4:32:2:GLY:HA2	2.02	0.59
54:1G:1298:C:H4'	54:1G:1299:A:C8	2.38	0.59
24:14:1454:U:OP1	37:55:77:ARG:NH1	2.29	0.59
1:13:1226:C:H5"	13:4I:96:LEU:HD11	1.85	0.58
3:2E:72:LYS:HZ3	3:2E:75:VAL:HG21	1.68	0.58
4:3E:13:ARG:HB3	4:3E:33:MET:HE3	1.85	0.58
26:71:7:TYR:HA	26:71:10:LEU:HD22	1.85	0.58
28:21:31:CYS:HB3	28:21:49:LEU:HB3	1.84	0.58
54:1G:501:C:OP1	12:3A:117:ARG:NH2	2.33	0.58
54:1G:603:U:H2'	54:1G:604:G:C8	2.37	0.58
54:1G:1076:C:H42	54:1G:1081:G:H1	1.50	0.58
54:1G:1142:G:H3'	54:1G:1143:G:H8	1.68	0.58
54:1G:1306:A:N6	54:1G:1331:G:O2'	2.36	0.58
12:3A:53:ARG:HH12	12:3A:92:ASP:HB3	1.68	0.58
15:6A:16:ALA:HB1	15:6A:21:ASP:HB3	1.85	0.58
19:AA:10:PHE:HB2	19:AA:39:THR:OG1	2.03	0.58
27:19:201:HIS:O	27:19:204:ILE:HG13	2.02	0.58
29:39:123:LEU:O	29:39:124:LEU:HB3	2.03	0.58
30:49:143:GLU:HA	50:I5:28:LYS:HD2	1.85	0.58
35:35:39:LYS:HA	35:35:45:LEU:HD13	1.85	0.58
48:G5:4:SER:HB3	48:G5:5:GLU:OE2	2.03	0.58
13:4I:59:TYR:O	13:4I:63:THR:OG1	2.17	0.58
24:1H:459:U:H5"	52:P8:40:TRP:CD2	2.37	0.58
24:1H:1141:U:H6	33:58:63:THR:HG1	1.50	0.58
38:A8:11:LYS:HD2	38:A8:15:ARG:NH2	2.17	0.58
45:H8:107:THR:OG1	45:H8:144:LEU:N	2.33	0.58
49:L8:43:ILE:O	49:L8:47:VAL:HG23	2.03	0.58
54:1G:108:G:H5"	54:1G:109:A:H5"	1.84	0.58
54:1G:1057:G:OP1	3:22:154:SER:OG	2.20	0.58
5:42:43:LEU:HD13	5:42:109:ILE:HD11	1.84	0.58
24:14:654(D):G:H1	24:14:654(Q):C:H42	1.50	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:14:1110:G:H2'	24:14:1111:A:H8	1.68	0.58
34:25:4:PRO:HA	34:25:21:CYS:O	2.03	0.58
39:75:64:ARG:HD2	39:75:73:GLU:HG3	1.85	0.58
1:13:431:A:H2'	1:13:432:A:O4'	2.04	0.58
1:13:1075:C:H5'	2:1E:103:THR:HG21	1.85	0.58
2:1E:17:PHE:HA	2:1E:44:LEU:HD11	1.84	0.58
7:6E:46:ALA:HB2	7:6E:117:ALA:HB1	1.84	0.58
24:1H:2137:C:H42	24:1H:2154:G:H1	1.50	0.58
24:1H:2303:G:O2'	30:41:132:ASN:HB2	2.02	0.58
25:16:15:A:H1'	25:16:109:G:C5	2.37	0.58
33:58:40:PRO:HB3	40:C8:68:ALA:HB2	1.85	0.58
44:G8:49:VAL:HG21	44:G8:55:TYR:HE1	1.68	0.58
24:14:957:A:N6	24:14:2459:A:C8	2.71	0.58
30:49:135:LEU:HB2	30:49:155:MET:HG2	1.86	0.58
1:13:127:G:O2'	17:8I:2:PRO:O	2.19	0.58
1:13:673:G:H5"	6:5E:87:ARG:NH1	2.18	0.58
21:1F:9:ARG:HH22	21:1F:23:PRO:HD2	1.69	0.58
24:1H:185:U:H4'	24:1H:218:A:H4'	1.85	0.58
32:61:57:ARG:HA	32:61:60:GLU:HB2	1.84	0.58
45:H8:4:ARG:HA	45:H8:58:VAL:HB	1.85	0.58
48:K8:42:GLY:O	48:K8:44:LEU:N	2.37	0.58
49:L8:35:ARG:HG2	49:L8:37:LEU:HD23	1.85	0.58
54:1G:1226:C:H4'	19:AA:80:TYR:OH	2.02	0.58
54:1G:1412:C:H2'	54:1G:1413:A:C8	2.39	0.58
3:22:130:VAL:O	3:22:134:ILE:HG12	2.04	0.58
9:82:5:TYR:HE1	9:82:16:ARG:HG2	1.68	0.58
24:14:298:G:H5"	24:14:299:A:OP1	2.03	0.58
36:45:47:ILE:O	36:45:50:ALA:N	2.36	0.58
40:85:91:ASP:O	40:85:92:ARG:HG2	2.03	0.58
52:L5:10:ARG:O	52:L5:14:LYS:HG2	2.03	0.58
22:2K:15:G:H21	22:2K:20:C:N4	2.01	0.58
24:1H:827:U:H5'	24:1H:828:U:O5'	2.02	0.58
24:1H:1639:U:H4'	24:1H:2699:C:H4'	1.86	0.58
26:71:212:VAL:HG21	26:71:226:PRO:HB3	1.86	0.58
35:78:50:ARG:HD3	53:Q8:60:LEU:HD21	1.86	0.58
54:1G:382:A:H2'	54:1G:383:A:H8	1.67	0.58
54:1G:707:C:H2'	54:1G:708:C:C6	2.38	0.58
54:1G:859:A:H2'	54:1G:860:A:O4'	2.03	0.58
3:22:181:ASN:HB3	3:22:205:GLY:O	2.04	0.58
16:7A:14:ASN:OD1	16:7A:42:ARG:NH2	2.36	0.58
20:BA:33:ILE:O	20:BA:37:SER:OG	2.20	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:14:273(F):C:H3'	24:14:274:G:H5"	1.85	0.58
24:14:1019:U:HO2'	24:14:1021:A:H2	1.52	0.58
25:1J:93:C:H2'	25:1J:94:C:H6	1.67	0.58
30:49:108:ASN:OD1	50:I5:37:SER:OG	2.20	0.58
31:59:46:GLU:HB2	31:59:49:VAL:HG23	1.85	0.58
34:25:113:LYS:HE3	34:25:117:LEU:HD11	1.86	0.58
46:E5:27:GLU:OE1	46:E5:69:PHE:N	2.30	0.58
4:3E:156:GLU:O	4:3E:160:GLN:HG3	2.03	0.58
24:1H:2228:G:OP1	27:11:261:LYS:NZ	2.37	0.58
35:78:18:ARG:O	35:78:19:VAL:HG13	2.03	0.58
54:1G:411:A:C6	54:1G:413:G:H1'	2.38	0.58
54:1G:1273:G:H3'	54:1G:1274:G:H8	1.68	0.58
16:7A:75:ARG:O	16:7A:78:GLY:N	2.32	0.58
22:3L:57:C:H5"	22:3L:59:A:OP2	2.04	0.58
24:14:2114:A:H2'	24:14:2168:G:O2'	2.03	0.58
24:14:2142:C:H2'	24:14:2143:C:C6	2.39	0.58
24:14:2212:A:H1'	24:14:2215:G:C4	2.39	0.58
35:35:23:PRO:HB3	41:95:80:GLN:HG3	1.85	0.58
36:45:109:VAL:HG23	36:45:114:ALA:HB2	1.85	0.58
1:13:1221:G:H4'	19:AI:77:THR:HG21	1.84	0.58
2:1E:6:THR:OG1	2:1E:7:VAL:N	2.37	0.58
8:7E:129:VAL:HG23	8:7E:130:GLY:H	1.69	0.58
9:8E:4:TYR:CZ	9:8E:88:TYR:HB2	2.39	0.58
9:8E:93:ARG:HA	9:8E:96:LEU:HB2	1.86	0.58
24:1H:751:A:OP1	57:1H:3886:HOH:O	2.16	0.58
24:1H:1019:U:OP1	24:1H:1035:U:O2'	2.14	0.58
24:1H:2291:U:H5"	24:1H:2380:C:O2'	2.03	0.58
24:1H:2712:U:H1'	24:1H:2712(A):A:C8	2.38	0.58
26:71:44:HIS:CE1	26:71:172:HIS:HB3	2.38	0.58
27:11:206:LEU:O	27:11:211:ARG:HD3	2.04	0.58
39:B8:74:ARG:HB3	39:B8:74:ARG:HH11	1.69	0.58
54:1G:352:C:O2'	54:1G:354:G:OP1	2.21	0.58
54:1G:1289:A:OP1	21:1B:9:ARG:NH2	2.37	0.58
2:12:70:PHE:O	2:12:93:VAL:N	2.33	0.58
22:2L:17:OMG:N2	22:2L:64:PSU:O4	2.36	0.58
24:14:242:G:O5'	53:M5:3:LYS:HE3	2.03	0.58
24:14:576:U:H5	57:14:3733:HOH:O	1.86	0.58
24:14:1678:G:N2	24:14:1989:G:H22	2.02	0.58
25:1J:15:A:H5'	25:1J:16:G:N7	2.18	0.58
26:79:25:ALA:HA	26:79:28:LEU:HB3	1.86	0.58
49:H5:26:LEU:HD21	49:H5:46:ASN:HB2	1.86	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:8E:110:GLU:OE2	9:8E:113:LYS:NZ	2.36	0.58
22:3K:13:G:H2'	22:3K:14:A:C8	2.39	0.58
24:1H:532:A:N7	24:1H:2021:C:O2'	2.25	0.58
25:16:104:A:OP1	45:H8:72:ARG:NH1	2.37	0.58
39:B8:7:ILE:CG2	39:B8:9:LEU:HB2	2.33	0.58
44:G8:29:GLU:HB3	44:G8:38:ILE:HG23	1.86	0.58
54:1G:1004:A:O4'	54:1G:1024:G:O2'	2.22	0.58
9:82:9:ARG:NH2	9:82:104:ARG:HD3	2.19	0.58
24:14:1202:C:H42	24:14:1243:G:H1	1.51	0.58
27:19:148:GLU:HB2	27:19:151:LYS:HD2	1.85	0.58
50:I5:56:VAL:HG13	50:I5:57:GLU:HG3	1.86	0.58
1:13:375:U:O2'	16:7I:6:LEU:O	2.22	0.58
1:13:502:G:OP1	12:3I:118:SER:HB3	2.04	0.58
6:5E:41:GLU:HG2	6:5E:43:LEU:HD11	1.85	0.58
10:1I:51:ARG:HG3	14:5I:45:ARG:NH1	2.19	0.58
24:1H:1021:A:H3'	24:1H:1021:A:C8	2.38	0.58
24:1H:2175:C:OP1	26:71:3:HIS:ND1	2.31	0.58
38:A8:106:ARG:O	38:A8:107:GLU:HG3	2.03	0.58
39:B8:98:LYS:HB3	39:B8:100:TYR:CE2	2.38	0.58
44:G8:94:LYS:HZ2	44:G8:95:LYS:H	1.52	0.58
50:M8:10:VAL:HG22	50:M8:11:PRO:HD2	1.85	0.58
54:1G:868:C:H2'	54:1G:869:G:O4'	2.04	0.58
54:1G:1003:G:O6	54:1G:1035:A:N6	2.37	0.58
54:1G:1469:G:N7	57:1G:1813:HOH:O	2.32	0.58
3:22:32:LEU:HD22	3:22:59:ARG:HH22	1.68	0.58
15:6A:39:LEU:HD12	15:6A:56:LEU:HB2	1.86	0.58
22:3L:14:A:H3'	22:3L:15:G:C5'	2.34	0.58
24:14:31:C:OP1	57:14:3946:HOH:O	2.17	0.58
24:14:817:C:OP2	57:14:3761:HOH:O	2.17	0.58
24:14:1871:A:H2'	24:14:1872:A:C8	2.39	0.58
24:14:1871:A:H2'	24:14:1872:A:H8	1.68	0.58
24:14:2183:C:H2'	24:14:2184:G:H8	1.69	0.58
24:14:2445:G:OP1	29:39:74:ARG:NH2	2.36	0.58
24:14:2839:G:H5'	37:55:46:GLY:HA2	1.84	0.58
31:59:144:VAL:O	31:59:148:ILE:HG12	2.04	0.58
8:7E:86:ILE:HG21	8:7E:133:LEU:HD22	1.85	0.58
12:3I:93:LEU:HB2	12:3I:96:VAL:CG1	2.34	0.58
17:8I:15:MET:HB3	17:8I:18:THR:HB	1.86	0.58
24:1H:581:C:H2'	24:1H:582:G:H8	1.69	0.58
24:1H:607:U:N3	24:1H:621:A:H2	1.99	0.58
24:1H:780:G:H21	24:1H:783:A:H62	1.50	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:1H:2199:A:H5'	24:1H:2205:C:OP2	2.04	0.58
24:1H:2312:U:H5'	30:41:88:ILE:HG21	1.86	0.58
24:1H:2695:C:H2'	24:1H:2696:U:H6	1.68	0.58
24:1H:2840:C:H5"	37:98:53:HIS:CD2	2.38	0.58
24:1H:2884:U:H2'	24:1H:2885:C:O4'	2.04	0.58
54:1G:660:G:H2'	54:1G:661:G:O4'	2.04	0.58
54:1G:1095:U:H5"	54:1G:1109:C:O2	2.04	0.58
22:3L:57:C:H4'	22:3L:58:G:O5'	2.03	0.58
24:14:309:G:H4'	44:C5:18:GLY:HA3	1.86	0.58
24:14:363(B):G:H2'	24:14:363(C):G:H8	1.69	0.58
24:14:1688:U:O2	24:14:1700:A:H5'	2.04	0.58
26:79:41:VAL:HG22	26:79:216:THR:HG22	1.86	0.58
28:29:101:ARG:HD2	28:29:169:ASN:ND2	2.19	0.58
33:15:62:VAL:HG22	33:15:66:LYS:HD2	1.85	0.58
43:B5:63:LYS:HE3	43:B5:63:LYS:N	2.16	0.58
49:H5:59:VAL:HG22	49:H5:60:GLU:H	1.69	0.58
18:9I:53:ARG:HH21	18:9I:59:SER:HA	1.68	0.57
24:1H:1678:G:H8	24:1H:1678:G:O5'	1.86	0.57
24:1H:2031:A:C6	24:1H:2498:C:H1'	2.38	0.57
24:1H:2443:C:OP1	29:31:68:LYS:HD3	2.04	0.57
27:11:182:LEU:H	27:11:272:ALA:CB	2.12	0.57
32:61:10:GLU:O	32:61:11:ASN:ND2	2.37	0.57
36:88:39:PRO:HA	36:88:97:VAL:O	2.04	0.57
54:1G:20:U:H2'	54:1G:21:G:O4'	2.04	0.57
54:1G:636:U:H2'	54:1G:637:G:C8	2.39	0.57
3:22:14:ILE:HD13	3:22:15:THR:HB	1.86	0.57
5:42:6:PHE:HB3	5:42:34:VAL:HG13	1.86	0.57
7:62:23:VAL:O	7:62:27:ILE:HG13	2.04	0.57
24:14:1175:U:O2'	24:14:1176:G:N3	2.33	0.57
24:14:2031:A:C6	24:14:2498:C:H1'	2.39	0.57
24:14:2134:A:C2	24:14:2159:G:H1'	2.38	0.57
24:14:2261:C:O2'	24:14:2262:U:H5'	2.04	0.57
24:14:2887:U:H2'	24:14:2888:C:C6	2.39	0.57
27:19:76:PRO:HB2	27:19:116:GLN:HE21	1.69	0.57
45:D5:52:SER:O	45:D5:52:SER:OG	2.15	0.57
1:13:939:G:H2'	1:13:940:C:C6	2.39	0.57
7:6E:120:ILE:HG22	7:6E:124:LEU:HD12	1.86	0.57
24:1H:181:A:H1'	24:1H:435:C:H5'	1.86	0.57
24:1H:654(D):G:H1	24:1H:654(Q):C:H42	1.52	0.57
24:1H:1170:G:O6	24:1H:1179:C:N4	2.28	0.57
24:1H:2685:G:OP1	34:68:78:ARG:NH2	2.37	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:1G:250:A:H1'	54:1G:251:G:OP2	2.04	0.57
14:5A:26:ARG:HD3	14:5A:43:CYS:SG	2.44	0.57
18:9A:61:LYS:O	18:9A:65:ILE:HG13	2.04	0.57
24:14:191:A:H2'	24:14:192:C:C6	2.39	0.57
24:14:271:G:H2'	24:14:272:G:H8	1.69	0.57
53:M5:9:GLY:O	53:M5:13:ARG:HD2	2.04	0.57
1:13:735:C:H2'	1:13:736:C:C6	2.39	0.57
1:13:1007:C:H42	1:13:1022:G:H1	1.51	0.57
1:13:1226:C:OP2	13:4I:103:THR:OG1	2.13	0.57
2:1E:15:VAL:HG23	2:1E:210:SER:HB2	1.85	0.57
4:3E:92:VAL:O	4:3E:96:LEU:HD22	2.04	0.57
8:7E:121:ASP:HB2	8:7E:125:ARG:NH2	2.20	0.57
13:4I:50:GLU:N	13:4I:50:GLU:OE2	2.37	0.57
24:1H:871:U:OP2	36:88:5:ARG:NE	2.36	0.57
24:1H:1250:G:N7	35:78:18:ARG:NH2	2.50	0.57
25:16:15:A:O2'	25:16:109:G:N7	2.29	0.57
31:51:113:VAL:HG21	31:51:151:ILE:HG21	1.86	0.57
39:B8:4:GLY:O	39:B8:7:ILE:HG23	2.04	0.57
46:I8:53:MET:HG3	46:I8:59:LEU:HD23	1.85	0.57
54:1G:660:G:H1	54:1G:745:C:H42	1.52	0.57
20:BA:10:LEU:HG	20:BA:12:ALA:H	1.68	0.57
22:2L:73:U:H2'	22:2L:74:C:C6	2.40	0.57
1:13:280:C:H3'	1:13:281:G:H5'	1.86	0.57
1:13:1128:C:HO2'	1:13:1130:A:H8	1.51	0.57
4:3E:61:LYS:HD2	4:3E:207:TYR:OH	2.04	0.57
4:3E:155:LEU:HB3	4:3E:158:ILE:HB	1.86	0.57
12:3I:93:LEU:HB2	12:3I:96:VAL:HG12	1.87	0.57
24:1H:249:C:P	57:1H:3613:HOH:O	2.62	0.57
24:1H:950:G:H2'	24:1H:951:C:C6	2.40	0.57
24:1H:1587:A:H2'	24:1H:1588:C:C6	2.40	0.57
27:11:260:ARG:HG2	27:11:261:LYS:O	2.04	0.57
44:G8:55:TYR:HB2	44:G8:58:GLY:HA3	1.85	0.57
54:1G:28:G:H21	54:1G:296:U:H4'	1.69	0.57
54:1G:110:C:O2'	16:7A:25:ARG:O	2.22	0.57
54:1G:963:G:H21	10:1A:55:LYS:CE	2.16	0.57
54:1G:1129:C:N4	54:1G:1141:C:H41	2.02	0.57
12:3A:83:VAL:HG21	12:3A:100:ILE:HD13	1.86	0.57
16:7A:14:ASN:OD1	16:7A:16:HIS:NE2	2.35	0.57
24:14:125:G:H5"	52:L5:19:ARG:HD3	1.86	0.57
24:14:654(O):G:N2	24:14:654(P):G:O6	2.37	0.57
31:59:109:PHE:CZ	31:59:152:ARG:HB2	2.38	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:45:75:THR:HA	36:45:90:VAL:H	1.69	0.57
45:D5:54:HIS:HB3	45:D5:101:PRO:HD3	1.86	0.57
45:D5:126:VAL:HG12	45:D5:163:LEU:HA	1.86	0.57
1:13:1348:U:H4'	9:8E:120:ARG:HD2	1.85	0.57
3:2E:172:ARG:HH21	3:2E:174:PRO:HG3	1.69	0.57
16:7I:43:LYS:HG3	16:7I:48:TRP:CZ3	2.39	0.57
24:1H:1174:A:H62	24:1H:1175:U:H5	1.51	0.57
24:1H:1533:C:H42	24:1H:1538:G:H1	1.53	0.57
29:31:122:LYS:NZ	29:31:152:GLU:OE2	2.35	0.57
36:88:106:VAL:HG21	36:88:114:ALA:HB1	1.86	0.57
39:B8:92:GLY:HA2	39:B8:117:ASP:H	1.70	0.57
46:I8:36:ILE:CD1	46:I8:39:ARG:HG2	2.35	0.57
54:1G:166:G:H2'	54:1G:167:G:H8	1.69	0.57
24:14:1187:G:OP2	57:14:3762:HOH:O	2.17	0.57
24:14:1291:C:H2'	24:14:1292:U:C6	2.39	0.57
24:14:1337:G:H2'	24:14:1338:G:H8	1.70	0.57
24:14:2788:C:O2'	24:14:2809:A:N3	2.36	0.57
27:19:253:GLN:HB3	27:19:255:LYS:NZ	2.19	0.57
33:15:68:GLU:HG2	33:15:88:GLU:OE1	2.05	0.57
35:35:82:GLY:HA2	35:35:113:LYS:O	2.05	0.57
41:95:44:LYS:O	41:95:46:VAL:HG12	2.05	0.57
48:G5:22:GLU:HG2	48:G5:64:LEU:HD11	1.87	0.57
1:13:926:G:N2	23:4K:15:A:OP2	2.37	0.57
24:1H:1657:C:H2'	24:1H:1658:C:C6	2.40	0.57
33:58:58:ASP:OD1	33:58:58:ASP:N	2.24	0.57
37:98:74:LYS:C	37:98:76:VAL:H	2.08	0.57
54:1G:674:G:H2'	54:1G:675:A:C8	2.39	0.57
5:42:87:SER:HB3	5:42:125:SER:O	2.05	0.57
13:4A:12:ASN:O	13:4A:12:ASN:ND2	2.36	0.57
13:4A:77:ASN:HD22	13:4A:80:ARG:HH21	1.52	0.57
24:14:2855:C:H2'	24:14:2856:C:H6	1.68	0.57
33:15:15:LEU:HB2	33:15:134:ARG:HG2	1.87	0.57
1:13:17:U:H2'	1:13:18:C:C6	2.38	0.57
16:7I:39:TYR:OH	16:7I:41:PRO:HB3	2.05	0.57
18:9I:85:LEU:HD23	18:9I:88:LYS:HB2	1.86	0.57
24:1H:860:U:C5	24:1H:917:A:C2	2.91	0.57
24:1H:1021:A:H61	24:1H:1142(A):A:H61	1.51	0.57
32:61:80:PRO:HB2	32:61:146:ALA:HB2	1.86	0.57
36:88:86:GLY:HA3	36:88:87:LYS:HG3	1.85	0.57
42:E8:70:TYR:HD1	42:E8:70:TYR:H	1.51	0.57
43:F8:60:ARG:HH12	52:P8:47:ARG:HH22	1.52	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:L8:50:VAL:O	49:L8:54:VAL:HG12	2.05	0.57
51:N8:40:LYS:HG2	51:N8:46:CYS:HA	1.85	0.57
53:Q8:37:SER:OG	53:Q8:38:GLY:N	2.35	0.57
54:1G:533:A:O2'	54:1G:535:A:OP2	2.14	0.57
4:32:18:LYS:HZ1	4:32:26:CYS:HB3	1.68	0.57
9:82:4:TYR:OH	9:82:88:TYR:O	2.22	0.57
13:4A:84:ILE:HG12	19:AA:63:THR:HB	1.85	0.57
24:14:71:A:H2	43:B5:31:HIS:HE2	1.47	0.57
24:14:1535:U:C5	24:14:1536:A:H1'	2.40	0.57
24:14:2849:U:OP1	39:75:95:ARG:NH1	2.37	0.57
39:75:5:ALA:O	39:75:6:LEU:HB3	2.05	0.57
47:F5:21:ARG:HD3	47:F5:35:THR:HG21	1.86	0.57
1:13:537:G:H5"	12:3I:113:ARG:HH12	1.70	0.57
2:1E:82:ARG:NH1	2:1E:92:TYR:HH	2.01	0.57
29:31:32:LEU:HD21	29:31:105:VAL:HG13	1.85	0.57
33:58:15:LEU:HB2	33:58:134:ARG:HB2	1.87	0.57
34:68:52:VAL:HG12	34:68:94:ARG:HH21	1.70	0.57
46:I8:50:ASN:HB2	46:I8:81:VAL:HG13	1.87	0.57
8:72:86:ILE:HD11	8:72:136:GLU:HG2	1.87	0.57
17:8A:48:GLU:HG3	17:8A:50:LYS:HB2	1.86	0.57
24:14:646:A:H2'	24:14:647:G:O4'	2.05	0.57
24:14:912:C:OP1	36:45:8:LYS:NZ	2.35	0.57
24:14:1434:A:H61	24:14:1558:A:N6	2.03	0.57
24:14:1777:U:O2'	24:14:1778:U:H5'	2.05	0.57
28:29:37:ARG:HB2	28:29:46:ALA:H	1.70	0.57
29:39:132:VAL:O	29:39:134:GLY:N	2.37	0.57
41:95:16:PRO:HA	41:95:96:ILE:HG22	1.86	0.57
42:A5:86:LEU:HD12	42:A5:87:PRO:HD2	1.85	0.57
48:G5:53:LEU:O	48:G5:57:ILE:HG13	2.04	0.57
1:13:1256:A:H4'	1:13:1258:G:C4	2.40	0.57
24:1H:1036:G:N2	24:1H:1119:C:O2	2.36	0.57
24:1H:2147:G:H2'	24:1H:2148:G:O4'	2.05	0.57
24:1H:2855:C:H2'	24:1H:2856:C:H6	1.68	0.57
31:51:4:ILE:HD11	31:51:7:LEU:HD11	1.87	0.57
35:78:59:LEU:HD23	53:Q8:13:ARG:HD2	1.86	0.57
38:A8:28:VAL:HG11	38:A8:98:VAL:HG13	1.86	0.57
54:1G:1123:A:H4'	10:1A:36:GLY:HA3	1.85	0.57
54:1G:1246:C:O2	54:1G:1291:G:N2	2.31	0.57
2:12:162:ILE:HD11	2:12:184:VAL:HG22	1.85	0.57
9:82:88:TYR:O	9:82:89:ASN:ND2	2.36	0.57
11:2A:31:THR:HG22	11:2A:42:TRP:HB2	1.86	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:14:69:C:H2'	24:14:70:G:C8	2.40	0.57
24:14:494:G:OP1	42:A5:8:ARG:NH1	2.38	0.57
24:14:864:G:C6	24:14:865:C:N4	2.73	0.57
24:14:1525:G:H2'	24:14:1526:G:C8	2.40	0.57
24:14:2622:C:H5'	28:29:159:HIS:ND1	2.19	0.57
44:C5:26:LYS:O	44:C5:39:VAL:HG12	2.04	0.57
1:13:1429:C:H2'	1:13:1430:C:C6	2.40	0.57
8:7E:77:GLU:HG2	8:7E:78:GLN:H	1.69	0.57
14:5I:27:CYS:HB2	14:5I:29:ARG:HG2	1.87	0.57
14:5I:37:PHE:CE1	14:5I:53:LEU:HD13	2.40	0.57
17:8I:68:ARG:H	17:8I:70:ARG:NH1	2.03	0.57
22:2K:64:PSU:O2'	22:2K:66:G:N7	2.34	0.57
24:1H:300:A:H2'	24:1H:334:C:H1'	1.87	0.57
24:1H:1365:A:P	47:J8:41:ARG:HH22	2.28	0.57
29:31:29:ASN:H	29:31:112:MET:HE3	1.68	0.57
54:1G:142:G:H1	54:1G:221:C:H42	1.52	0.57
20:BA:67:ALA:HA	20:BA:73:HIS:H	1.70	0.57
22:3L:62:G:N2	22:3L:70:C:O2	2.33	0.57
24:14:363(B):G:H2'	24:14:363(C):G:C8	2.40	0.57
24:14:989:G:OP2	49:H5:11:SER:OG	2.23	0.57
24:14:1048:A:H61	24:14:1112:G:HO2'	1.53	0.57
24:14:1359:A:N7	24:14:1372:U:O4	2.38	0.57
24:14:1742:C:H5'	24:14:1743:G:OP2	2.04	0.57
24:14:2131:G:H5'	24:14:2132:U:H5"	1.85	0.57
31:59:8:PRO:HG2	31:59:69:ARG:HH21	1.68	0.57
31:59:10:PRO:HG2	31:59:50:VAL:HG13	1.87	0.57
32:69:87:LYS:O	32:69:87:LYS:HD2	2.04	0.57
39:75:10:VAL:HG12	39:75:11:GLU:H	1.69	0.57
3:2E:47:LEU:HD11	3:2E:76:VAL:HG12	1.86	0.56
16:7I:39:TYR:CZ	16:7I:41:PRO:HB3	2.40	0.56
24:1H:320:A:OP1	29:31:135:LYS:NZ	2.38	0.56
24:1H:651:G:OP1	53:Q8:19:SER:HB3	2.04	0.56
24:1H:1435:G:H1	24:1H:1557:C:H42	1.50	0.56
4:32:173:TRP:CD1	4:32:174:LEU:HG	2.40	0.56
19:AA:9:VAL:HB	19:AA:11:VAL:HG23	1.87	0.56
24:14:1416:G:HO2'	24:14:1417:C:P	2.27	0.56
29:39:122:LYS:HD2	29:39:191:ARG:HB3	1.87	0.56
41:95:37:VAL:HG21	41:95:56:SER:HA	1.86	0.56
45:D5:141:VAL:HG13	45:D5:150:LEU:HD12	1.87	0.56
1:13:22:G:O2'	1:13:913:A:N1	2.36	0.56
1:13:738:C:H2'	1:13:739:C:C6	2.40	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:13:788:U:H3	1:13:792:A:HO2'	1.54	0.56
11:2I:32:ILE:HD11	11:2I:68:ALA:HB1	1.87	0.56
24:1H:314:A:C2'	24:1H:315:G:H5'	2.35	0.56
24:1H:320:A:H2'	29:31:136:THR:HG21	1.86	0.56
24:1H:773:U:C4'	27:11:47:GLY:HA3	2.34	0.56
24:1H:1102:C:H2'	24:1H:1103:A:C8	2.40	0.56
35:78:19:VAL:HG12	35:78:21:ARG:N	2.20	0.56
39:B8:42:ILE:HG12	39:B8:84:GLN:NE2	2.21	0.56
43:F8:64:LYS:HD2	43:F8:73:ARG:NH2	2.20	0.56
49:L8:21:ALA:O	49:L8:24:LYS:HB2	2.05	0.56
53:Q8:29:LYS:HD3	53:Q8:44:LYS:O	2.05	0.56
54:1G:1190:G:OP2	3:22:5:ILE:HD13	2.04	0.56
54:1G:1365:G:H2'	54:1G:1366:C:H6	1.69	0.56
11:2A:51:LYS:HA	11:2A:55:LYS:HD3	1.85	0.56
24:14:336:C:H5"	44:C5:6:HIS:HD2	1.70	0.56
24:14:780:G:N2	24:14:783:A:H62	1.98	0.56
24:14:1048:A:H2	24:14:1112:G:H21	1.51	0.56
24:14:1593:G:H2'	24:14:1594:G:C8	2.40	0.56
24:14:1945:G:H2'	24:14:1946:U:C6	2.40	0.56
24:14:2239:G:OP2	57:14:3492:HOH:O	2.17	0.56
26:79:175:VAL:O	26:79:188:ASN:ND2	2.37	0.56
35:35:39:LYS:CG	35:35:45:LEU:HD22	2.35	0.56
1:13:902:G:H2'	1:13:903:G:H8	1.71	0.56
2:1E:77:ALA:HB2	2:1E:211:ILE:HD13	1.86	0.56
4:3E:154:ASN:O	4:3E:159:ARG:HG3	2.04	0.56
8:7E:6:ILE:HD11	8:7E:31:PHE:HD2	1.70	0.56
10:1I:48:THR:HA	10:1I:62:HIS:HB3	1.87	0.56
11:2I:58:PRO:HD3	11:2I:89:ALA:HB1	1.87	0.56
20:BI:14:LYS:HA	20:BI:17:ARG:HE	1.71	0.56
24:1H:871:U:P	36:88:5:ARG:HE	2.29	0.56
24:1H:2502:G:H5"	24:1H:2503:A:H5"	1.87	0.56
24:1H:2656:U:H3	24:1H:2665:A:H2	1.52	0.56
25:16:21:G:H1	25:16:62:C:N4	2.03	0.56
27:11:8:PRO:HB3	27:11:14:ARG:CB	2.34	0.56
34:68:4:PRO:O	34:68:5:GLN:HB2	2.04	0.56
36:88:89:ASN:HB2	36:88:90:VAL:HG13	1.87	0.56
37:98:74:LYS:H	37:98:74:LYS:HD2	1.70	0.56
38:A8:34:HIS:HB2	38:A8:36:TYR:CE1	2.39	0.56
54:1G:1072:G:H2'	54:1G:1073:U:C6	2.40	0.56
2:12:12:GLU:OE1	2:12:15:VAL:N	2.37	0.56
4:32:29:PRO:HG2	4:32:30:LYS:HD3	1.86	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:72:12:ARG:HD3	8:72:26:VAL:HG12	1.87	0.56
10:1A:4:ILE:HB	10:1A:74:ILE:HB	1.87	0.56
13:4A:15:VAL:HG12	13:4A:45:VAL:HG22	1.87	0.56
22:2L:71:C:H1'	22:2L:72:U:OP2	2.04	0.56
24:14:330:A:H2	24:14:1210:A:HO2'	1.51	0.56
24:14:479:A:N3	24:14:481:G:H5"	2.19	0.56
24:14:579:G:H2'	24:14:580:C:C6	2.41	0.56
24:14:751:A:H4'	42:A5:90:ARG:NH1	2.20	0.56
24:14:1115:G:H2'	24:14:1116:C:C6	2.41	0.56
24:14:1268:A:H2'	24:14:1269:A:O4'	2.05	0.56
24:14:1358:G:O2'	24:14:1359:A:H5"	2.05	0.56
24:14:1537:C:H2'	24:14:1538:G:O4'	2.05	0.56
24:14:1568:G:P	27:19:63:ARG:HH12	2.27	0.56
24:14:1771:C:C1'	24:14:1786:A:C8	2.87	0.56
26:79:213:TYR:CD2	26:79:221:SER:HB2	2.40	0.56
38:65:59:LYS:HG2	38:65:60:GLY:H	1.68	0.56
44:C5:38:ILE:HD13	44:C5:66:PRO:HA	1.86	0.56
45:D5:125:LEU:HG	45:D5:164:ALA:HB3	1.87	0.56
50:I5:9:LEU:HD12	50:I5:26:SER:HA	1.87	0.56
52:L5:34:ARG:NH1	52:L5:39:ARG:HD2	2.20	0.56
1:13:939:G:H2'	1:13:940:C:H6	1.70	0.56
2:1E:141:GLU:O	2:1E:145:LEU:HB2	2.05	0.56
24:1H:2:G:H22	24:1H:2901:C:H42	1.53	0.56
24:1H:573:G:O2'	24:1H:574:C:H3'	2.05	0.56
24:1H:589:C:H2'	24:1H:590:A:C8	2.40	0.56
24:1H:1446:C:H2'	24:1H:1447:G:H8	1.69	0.56
24:1H:2355:C:H1'	46:I8:39:ARG:HH21	1.70	0.56
31:51:92:ILE:H	31:51:92:ILE:HD12	1.70	0.56
53:Q8:54:GLU:OE2	53:Q8:57:ARG:NH2	2.38	0.56
54:1G:1118:C:O5'	54:1G:1118:C:H6	1.89	0.56
4:32:5:ILE:O	4:32:5:ILE:HG22	2.05	0.56
10:1A:99:LYS:HD3	10:1A:100:THR:H	1.71	0.56
14:5A:40:CYS:HB2	14:5A:43:CYS:H	1.70	0.56
19:AA:40:ILE:HD11	19:AA:69:HIS:HB2	1.88	0.56
24:14:2688:U:H1'	24:14:2721:A:N6	2.21	0.56
28:29:92:THR:O	28:29:95:ILE:HG13	2.04	0.56
31:59:129:THR:OG1	31:59:130:ARG:N	2.32	0.56
37:55:37:THR:OG1	37:55:40:LYS:HE3	2.05	0.56
24:1H:172:C:H2'	24:1H:173:G:H8	1.70	0.56
24:1H:2005:A:H5"	24:1H:2006:C:OP2	2.06	0.56
24:1H:2688:U:H5	24:1H:2720:U:OP2	1.88	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:16:65:C:N4	25:16:108:C:H2'	2.21	0.56
32:61:88:ILE:HG22	32:61:90:GLY:H	1.69	0.56
32:61:126:TYR:HB2	32:61:140:LEU:O	2.05	0.56
54:1G:176:C:H2'	54:1G:177:C:H6	1.70	0.56
54:1G:1272:G:H2'	54:1G:1273:G:O4'	2.06	0.56
24:14:2419:U:H5"	53:M5:34:TRP:HB3	1.87	0.56
24:14:2563:U:O2	24:14:2565:A:H8	1.88	0.56
40:85:92:ARG:HD2	41:95:11:GLN:CD	2.26	0.56
1:13:448:A:OP2	1:13:485:G:N2	2.28	0.56
1:13:639:G:H2'	1:13:640:A:H8	1.70	0.56
6:5E:82:ARG:HB2	6:5E:85:VAL:HG23	1.87	0.56
8:7E:54:ASP:O	8:7E:56:LYS:NZ	2.37	0.56
24:1H:248:G:H5'	24:1H:250:G:N7	2.20	0.56
30:41:66:GLN:OE1	30:41:98:ARG:NH1	2.39	0.56
24:14:581:C:H2'	24:14:582:G:C8	2.41	0.56
24:14:2572:A:H62	28:29:145:LYS:HD2	1.71	0.56
35:35:94:GLU:HG3	35:35:124:LYS:HD3	1.88	0.56
36:45:43:THR:HB	36:45:45:GLN:NE2	2.20	0.56
40:85:52:ARG:HB3	40:85:52:ARG:HH11	1.71	0.56
40:85:92:ARG:C	40:85:94:ASN:H	2.08	0.56
52:L5:5:TRP:CD1	52:L5:7:PRO:HG3	2.41	0.56
1:13:191(F):U:H2'	1:13:191:G:C8	2.41	0.56
1:13:491:G:H2'	1:13:492:G:H8	1.70	0.56
1:13:626:U:H2'	1:13:627:G:H8	1.70	0.56
1:13:1103:C:H2'	1:13:1104:G:O4'	2.05	0.56
24:1H:459:U:H2'	24:1H:460:A:C8	2.40	0.56
24:1H:575:A:OP2	24:1H:2055:C:N4	2.33	0.56
24:1H:2591:C:H2'	24:1H:2592:G:C8	2.41	0.56
2:12:7:VAL:HG13	2:12:8:LYS:H	1.69	0.56
4:32:31:CYS:C	4:32:33:MET:N	2.59	0.56
24:14:755:C:H2'	24:14:756:C:C6	2.41	0.56
24:14:1007:C:OP1	33:15:37:LYS:NZ	2.38	0.56
24:14:2563:U:O2	24:14:2565:A:C8	2.58	0.56
30:49:56:ALA:HA	30:49:59:GLU:HG2	1.87	0.56
36:45:108:GLY:HA3	45:D5:116:VAL:HG22	1.86	0.56
39:75:29:ARG:NH1	39:75:46:GLU:OE1	2.39	0.56
44:C5:39:VAL:C	44:C5:41:GLY:H	2.06	0.56
49:H5:27:GLY:HA3	49:H5:35:ARG:HH21	1.70	0.56
1:13:439:A:H2'	1:13:440:A:O4'	2.06	0.56
1:13:666:G:H8	1:13:666:G:OP1	1.89	0.56
3:2E:15:THR:HG21	3:2E:181:ASN:HA	1.87	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:1H:578:A:OP2	57:1H:4547:HOH:O	2.18	0.56
24:1H:731:C:OP2	57:1H:3638:HOH:O	2.18	0.56
24:1H:956:G:N2	24:1H:959:A:H3'	2.21	0.56
31:51:83:TYR:HD2	31:51:84:SER:H	1.54	0.56
6:52:35:ALA:HB2	6:52:67:MET:HE3	1.88	0.56
13:4A:49:THR:N	13:4A:52:GLU:OE1	2.30	0.56
13:4A:77:ASN:ND2	13:4A:80:ARG:HH21	2.03	0.56
24:14:49:A:H5"	24:14:51:G:O4'	2.05	0.56
24:14:271:G:H2'	24:14:272:G:C8	2.39	0.56
24:14:488:G:N2	24:14:492:A:OP2	2.39	0.56
24:14:755:C:H2'	24:14:756:C:H6	1.70	0.56
24:14:1359:A:H2'	24:14:1360:A:H5'	1.87	0.56
24:14:1751:C:H2'	24:14:1752:C:C6	2.41	0.56
24:14:2130:U:O2'	24:14:2134:A:O4'	2.23	0.56
45:D5:23:LYS:NZ	45:D5:40:ASP:HB2	2.21	0.56
45:D5:76:LEU:H	45:D5:76:LEU:HD23	1.71	0.56
45:D5:161:VAL:HG23	45:D5:162:GLU:HG2	1.87	0.56
1:13:313:A:H2'	1:13:314:C:C6	2.40	0.56
1:13:1352:C:H2'	1:13:1353:G:C8	2.40	0.56
13:4I:107:ALA:CB	13:4I:111:LYS:HE2	2.33	0.56
22:2K:35:QUO:H5"	22:2K:36:U:OP2	2.05	0.56
24:1H:947:G:N7	57:1H:4348:HOH:O	2.33	0.56
24:1H:2058:A:N6	57:1H:3568:HOH:O	2.19	0.56
24:1H:2564:A:C2	24:1H:2647:U:H4'	2.40	0.56
37:98:97:VAL:HA	37:98:113:LEU:O	2.06	0.56
47:J8:80:LEU:H	47:J8:80:LEU:HD22	1.71	0.56
54:1G:585:G:N3	54:1G:879:C:H4'	2.21	0.56
54:1G:1239:A:H4'	54:1G:1240:U:H5"	1.88	0.56
7:62:26:PHE:CE2	7:62:30:ILE:HD11	2.41	0.56
18:9A:58:LEU:HD22	18:9A:62:GLU:HB3	1.88	0.56
22:2L:41:C:H2'	22:2L:42:U:C6	2.41	0.56
24:14:30:G:H2'	24:14:31:C:C6	2.41	0.56
24:14:132:G:H1	24:14:147:U:H3	1.53	0.56
24:14:1287:A:N7	37:55:107:ASP:HB2	2.21	0.56
24:14:1899:G:H22	24:14:1902:C:N4	1.97	0.56
32:69:117:GLU:CD	32:69:118:LYS:H	2.08	0.56
1:13:390:C:O2'	16:7I:28:ARG:NH2	2.39	0.56
1:13:1260:C:O5'	1:13:1284:C:H4'	2.06	0.56
1:13:1347:G:C8	9:8E:107:ARG:HB3	2.41	0.56
7:6E:57:GLU:O	7:6E:60:LYS:HG2	2.06	0.56
16:7I:26:ARG:NH1	16:7I:31:LYS:HB3	2.21	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:8I:67:LYS:O	17:8I:68:ARG:HB3	2.05	0.56
22:3K:38:MIA:H2'	22:3K:39:A:C8	2.41	0.56
24:1H:732:C:H3'	57:1H:4066:HOH:O	2.05	0.56
24:1H:1011:G:H4'	40:C8:75:ASN:ND2	2.21	0.56
24:1H:2788:C:OP1	28:21:61:ARG:NH2	2.39	0.56
27:11:223:GLY:HA3	27:11:231:HIS:CE1	2.41	0.56
9:82:26:VAL:HG22	9:82:61:ALA:HB3	1.87	0.56
24:14:2720:U:N3	24:14:2873:A:H2	2.04	0.56
25:1J:11:C:H3'	25:1J:12:C:C6	2.41	0.56
25:1J:18:G:H2'	25:1J:19:G:C8	2.41	0.56
29:39:132:VAL:HG13	29:39:133:ASN:HB2	1.87	0.56
45:D5:53:ILE:HA	45:D5:71:VAL:HG13	1.88	0.56
1:13:491:G:H2'	1:13:492:G:C8	2.41	0.55
1:13:1149:C:H2'	1:13:1150:U:H6	1.70	0.55
1:13:1202:G:O2'	14:5I:27:CYS:HB3	2.06	0.55
1:13:1427:U:H2'	1:13:1428:A:C8	2.41	0.55
24:1H:699:A:H2'	24:1H:700:G:O4'	2.06	0.55
24:1H:723:G:H2'	24:1H:724:U:O4'	2.06	0.55
29:31:6:VAL:HG12	29:31:7:TYR:H	1.70	0.55
29:31:12:LEU:HD13	29:31:124:LEU:HD11	1.88	0.55
31:51:106:THR:HG22	31:51:112:PRO:HB3	1.87	0.55
35:78:15:ARG:HA	35:78:16:ARG:HB2	1.88	0.55
35:78:126:VAL:HG13	35:78:145:PRO:HG2	1.88	0.55
54:1G:165:C:H2'	54:1G:166:G:C8	2.41	0.55
54:1G:474:G:H2'	54:1G:475:G:H8	1.71	0.55
54:1G:934:C:O2'	54:1G:1344:C:OP2	2.23	0.55
2:12:63:MET:HG3	2:12:225:ALA:HB1	1.87	0.55
7:62:71:PRO:HD3	7:62:103:TRP:HZ3	1.70	0.55
21:1B:6:ARG:HH21	21:1B:15:ARG:NH2	2.03	0.55
24:14:2230:G:H1'	47:F5:45:ASN:HB2	1.87	0.55
29:39:158:THR:HG23	29:39:164:ARG:HG3	1.88	0.55
45:D5:30:ASN:ND2	45:D5:90:VAL:O	2.39	0.55
52:L5:19:ARG:HG2	52:L5:19:ARG:HH11	1.71	0.55
1:13:576:G:N2	1:13:759:A:OP1	2.38	0.55
19:AI:5:LEU:HD22	19:AI:70:LYS:NZ	2.21	0.55
24:1H:483:A:N7	24:1H:497:A:H2	2.04	0.55
24:1H:1010:A:OP2	57:1H:4153:HOH:O	2.18	0.55
24:1H:2144:U:H1'	24:1H:2148:G:N2	2.21	0.55
24:1H:2392:A:OP2	53:Q8:32:LEU:HD12	2.07	0.55
24:1H:2737:G:H2'	24:1H:2738:A:H8	1.69	0.55
27:11:124:PRO:HG2	27:11:129:ASN:HD21	1.70	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:H8:171:ILE:HG23	45:H8:172:ALA:H	1.71	0.55
54:1G:438:G:H4'	4:32:123:HIS:ND1	2.21	0.55
54:1G:923:A:O2'	54:1G:1399:C:OP2	2.21	0.55
17:8A:63:ARG:HG2	17:8A:64:PRO:HD2	1.88	0.55
22:3L:18:G:H4'	22:3L:19:C:O5'	2.05	0.55
24:14:1328:G:H2'	24:14:1330:C:C5	2.41	0.55
24:14:2157:G:H2'	24:14:2158:A:C8	2.33	0.55
28:29:76:ARG:HG2	28:29:195:LEU:HD22	1.88	0.55
29:39:130:ALA:H	29:39:142:TRP:HD1	1.55	0.55
46:E5:26:TYR:O	46:E5:29:GLN:HB2	2.05	0.55
50:I5:57:GLU:O	50:I5:60:GLN:NE2	2.40	0.55
1:13:411:A:N7	1:13:413:G:N3	2.53	0.55
1:13:631:G:O2'	1:13:632:A:O4'	2.14	0.55
1:13:807:A:H2'	1:13:808:C:C6	2.41	0.55
1:13:1055:A:H2'	3:2E:156:ARG:HD2	1.88	0.55
1:13:1369:C:H2'	1:13:1370:G:C8	2.41	0.55
24:1H:1021:A:H3'	24:1H:1021:A:H8	1.72	0.55
24:1H:1857:G:N7	57:1H:4346:HOH:O	2.33	0.55
24:1H:2334:G:O6	46:I8:74:ARG:NH2	2.38	0.55
25:16:112:G:H2'	25:16:113:C:C6	2.41	0.55
37:98:87:TYR:HE1	37:98:117:VAL:HG12	1.71	0.55
46:I8:27:GLU:HG3	46:I8:69:PHE:H	1.70	0.55
54:1G:464:G:C6	54:1G:466:C:H5'	2.42	0.55
54:1G:757:U:H2'	54:1G:758:G:O4'	2.07	0.55
22:2L:12:C:H5	22:2L:24:G:H22	1.53	0.55
24:14:296:C:H2'	24:14:297:C:H6	1.72	0.55
24:14:2276:G:C2	24:14:2277:G:C8	2.94	0.55
24:14:2695:C:H2'	24:14:2696:U:C6	2.41	0.55
30:49:64:THR:OG1	30:49:65:GLY:N	2.37	0.55
31:59:116:GLU:O	31:59:118:PRO:HD3	2.06	0.55
1:13:67:C:H2'	1:13:68:G:C8	2.42	0.55
4:3E:108:LEU:HB3	4:3E:110:PHE:CD1	2.41	0.55
11:2I:73:MET:SD	11:2I:102:GLY:HA3	2.46	0.55
24:1H:1113:U:H2'	24:1H:1114:G:C8	2.41	0.55
24:1H:1188:U:H4'	41:D8:79:VAL:HG22	1.88	0.55
24:1H:1472:A:H2'	24:1H:1473:G:O4'	2.06	0.55
24:1H:1878:G:H2'	24:1H:1879:C:C6	2.41	0.55
24:1H:1950:G:N2	57:1H:3995:HOH:O	2.39	0.55
32:61:120:ILE:HD12	32:61:126:TYR:CE2	2.42	0.55
37:98:75:LEU:HA	37:98:78:LYS:HB3	1.88	0.55
54:1G:1386:G:H2'	54:1G:1387:G:C8	2.39	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:7A:18:ARG:HD3	16:7A:35:LYS:HD2	1.87	0.55
17:8A:87:LYS:HE2	17:8A:91:ARG:NH2	2.21	0.55
24:14:908:C:OP1	36:45:22:LYS:HD2	2.07	0.55
24:14:1054:A:H3'	24:14:1055:G:C8	2.41	0.55
24:14:1505:C:H2'	24:14:1506:C:C6	2.42	0.55
24:14:2273:A:O2'	24:14:2274:A:H5'	2.07	0.55
24:14:2376:A:H8	24:14:2376:A:OP1	1.90	0.55
25:1J:29:A:H2'	25:1J:30:C:O4'	2.07	0.55
27:19:255:LYS:H	27:19:255:LYS:HZ1	1.53	0.55
1:13:93:U:H2'	1:13:95:G:O4'	2.06	0.55
1:13:304:U:H2'	1:13:305:G:C8	2.42	0.55
1:13:536:C:H2'	1:13:537:G:C8	2.41	0.55
1:13:814:A:N7	1:13:816:A:C4	2.74	0.55
12:3I:93:LEU:O	12:3I:96:VAL:HG12	2.06	0.55
24:1H:1332:G:H21	24:1H:1610:A:H8	1.54	0.55
24:1H:1607:C:H4'	24:1H:1608:A:O5'	2.07	0.55
24:1H:2175:C:O2'	26:71:219:GLY:O	2.25	0.55
24:1H:2230:G:H1'	47:J8:45:ASN:HB2	1.86	0.55
24:1H:2402:C:H2'	24:1H:2403:C:H5	1.70	0.55
28:21:108:SER:OG	28:21:163:GLU:HG2	2.06	0.55
54:1G:996:A:H2'	54:1G:997:U:O4'	2.07	0.55
54:1G:1250:A:H2'	54:1G:1251:A:C8	2.42	0.55
54:1G:1273:G:H3'	54:1G:1274:G:C8	2.42	0.55
4:32:153:ARG:HH12	4:32:181:MET:HB2	1.72	0.55
8:72:16:ALA:HB2	8:72:24:THR:HG21	1.87	0.55
24:14:882:G:O6	24:14:894:C:N4	2.39	0.55
24:14:924:C:H2'	24:14:925:C:C6	2.41	0.55
24:14:1021:A:H61	24:14:1142(A):A:H61	1.55	0.55
24:14:2037:G:H2'	24:14:2038:G:C8	2.41	0.55
24:14:2130:U:H2'	24:14:2158:A:N1	2.21	0.55
25:1J:119:A:O5'	25:1J:119:A:H8	1.89	0.55
29:39:8:GLN:HG2	29:39:124:LEU:HD11	1.88	0.55
45:D5:120:ILE:HG23	45:D5:173:ALA:HB2	1.89	0.55
1:13:1070:U:H2'	1:13:1071:C:H6	1.71	0.55
1:13:1335:C:H5"	1:13:1336:C:OP1	2.06	0.55
1:13:1448:C:H42	1:13:1455:G:H1	1.53	0.55
2:1E:71:VAL:HG23	2:1E:164:VAL:HG22	1.89	0.55
6:5E:30:LEU:HB3	6:5E:35:ALA:HB3	1.88	0.55
24:1H:1435:G:O5'	24:1H:1435:G:H8	1.90	0.55
24:1H:1762[B]:A:N1	57:1H:3693:HOH:O	2.33	0.55
24:1H:1786:A:C2	24:1H:2606:C:H1'	2.40	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:1H:1929:G:H4'	24:1H:1930:G:OP1	2.06	0.55
32:61:123:LEU:HD23	32:61:142:VAL:HB	1.89	0.55
37:98:117:VAL:HG22	37:98:118:GLU:H	1.71	0.55
45:H8:48:PHE:HA	45:H8:51:ALA:HB3	1.88	0.55
46:I8:23:VAL:HB	46:I8:26:TYR:HE1	1.72	0.55
54:1G:129(A):G:C6	54:1G:188:U:H4'	2.42	0.55
54:1G:728:A:H2'	54:1G:729:A:C8	2.42	0.55
54:1G:1033:G:H2'	54:1G:1034:G:H8	1.72	0.55
10:1A:17:ASP:OD2	10:1A:70:ARG:NH1	2.40	0.55
22:2L:74:C:H2'	22:2L:75:C:H6	1.72	0.55
24:14:75:G:H4'	48:G5:55:ARG:NH2	2.22	0.55
24:14:1327:C:OP2	57:14:3721:HOH:O	2.18	0.55
24:14:2808:U:H5"	24:14:2891:G:O6	2.06	0.55
1:13:353:A:H8	1:13:353:A:H5'	1.70	0.55
2:1E:237:ALA:O	2:1E:239:VAL:N	2.39	0.55
22:3K:75:C:H2'	22:3K:76:C:C6	2.41	0.55
24:1H:176:G:O2'	24:1H:177:G:H5'	2.07	0.55
35:78:59:LEU:HD11	53:Q8:10:ALA:HB2	1.88	0.55
36:88:17:LEU:HB3	36:88:39:PRO:HB2	1.88	0.55
37:98:70:LEU:O	37:98:72:ASP:N	2.39	0.55
39:B8:21:GLU:OE1	39:B8:91:ARG:NH2	2.40	0.55
40:C8:106:PHE:HA	40:C8:109:LEU:HD12	1.89	0.55
53:Q8:54:GLU:HB3	53:Q8:57:ARG:HH21	1.71	0.55
54:1G:986:A:H1'	19:AA:54:GLY:O	2.06	0.55
24:14:330:A:H2	24:14:1210:A:O2'	1.89	0.55
24:14:988:A:P	49:H5:11:SER:HB2	2.47	0.55
24:14:2542:A:H4'	24:14:2542:A:OP1	2.06	0.55
26:79:163:PHE:HB2	26:79:171:ILE:HD11	1.89	0.55
42:A5:29:LEU:HD21	42:A5:33:ARG:NH2	2.20	0.55
44:C5:97:ARG:CZ	44:C5:104:GLY:H	2.19	0.55
1:13:377:G:OP1	16:7I:3:LYS:HD2	2.06	0.55
1:13:383:A:OP1	1:13:454:C:O2'	2.21	0.55
1:13:1292:U:OP1	7:6E:41:ARG:NH2	2.34	0.55
15:6I:55:GLY:HA2	15:6I:58:MET:HE3	1.89	0.55
20:BI:20:LEU:O	20:BI:23:ARG:HB3	2.07	0.55
24:1H:1025:G:C4	24:1H:1135:C:H1'	2.42	0.55
24:1H:1064:C:N4	24:1H:1075:C:N3	2.54	0.55
24:1H:2361:A:OP1	53:Q8:27:THR:OG1	2.16	0.55
31:51:4:ILE:HD13	31:51:4:ILE:H	1.71	0.55
35:78:27:HIS:CD2	35:78:27:HIS:N	2.73	0.55
35:78:121:LYS:O	35:78:123:LEU:N	2.38	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:98:12:ARG:HG2	37:98:16:HIS:ND1	2.22	0.55
41:D8:35:LEU:C	41:D8:37:VAL:H	2.10	0.55
54:1G:538:G:O6	57:1G:1790:HOH:O	2.17	0.55
54:1G:937:A:H1'	54:1G:1379:G:N2	2.22	0.55
54:1G:1002:G:H1	54:1G:1037:C:H42	1.53	0.55
3:22:150:LYS:HG3	3:22:169:ALA:HB2	1.88	0.55
11:2A:12:ARG:HB2	11:2A:75:TYR:CD2	2.42	0.55
21:1B:9:ARG:O	21:1B:13:ILE:HG13	2.06	0.55
24:14:1379:A:H4'	24:14:1380:G:OP2	2.06	0.55
24:14:1678:G:H22	24:14:1989:G:H1	1.55	0.55
25:1J:15:A:H1'	25:1J:109:G:C4	2.42	0.55
44:C5:3:VAL:HG11	44:C5:32:PRO:HB2	1.88	0.55
52:L5:29:LYS:O	52:L5:33:ARG:HG3	2.07	0.55
1:13:674:G:H2'	1:13:675:A:C8	2.38	0.55
1:13:806:C:H2'	1:13:807:A:H8	1.72	0.55
4:3E:134:ASP:O	4:3E:136:PRO:HD3	2.07	0.55
6:5E:87:ARG:HG2	6:5E:88:VAL:H	1.70	0.55
24:1H:1371:G:H2'	24:1H:1372:U:H5	1.70	0.55
26:71:48:GLY:HA3	26:71:207:THR:O	2.06	0.55
27:11:146:GLU:HB2	27:11:189:CYS:HB3	1.89	0.55
20:BA:54:LYS:HA	20:BA:57:ARG:NH2	2.22	0.55
20:BA:79:ARG:HH21	20:BA:80:ARG:NH1	2.05	0.55
24:14:1012:U:OP1	40:85:70:ARG:NH1	2.32	0.55
24:14:2020:A:O2'	24:14:2021:C:H5'	2.06	0.55
24:14:2378:A:H4'	38:65:23:ARG:NH1	2.21	0.55
25:1J:55:U:HO2'	30:49:29:TRP:HD1	1.55	0.55
29:39:4:VAL:HA	29:39:19:GLU:HB3	1.89	0.55
30:49:121:ASN:O	30:49:131:TYR:OH	2.22	0.55
41:95:21:ARG:NH2	41:95:91:TYR:CD1	2.75	0.55
1:13:419:C:H5'	1:13:420:U:OP2	2.07	0.55
1:13:1240:U:H5"	1:13:1241:G:C8	2.42	0.55
22:2K:40:PSU:HO2'	22:3K:36:U:HO2'	1.44	0.55
22:3K:49:A:H1'	22:3K:52:G:H22	1.72	0.55
24:1H:620:G:H4'	24:1H:621:A:C5'	2.29	0.55
24:1H:982:C:O5'	24:1H:982:C:H6	1.90	0.55
24:1H:1177:A:H5'	24:1H:1178:C:C2	2.42	0.55
24:1H:1290:C:H2'	24:1H:1291:C:H6	1.70	0.55
30:41:49:ASP:OD2	30:41:51:ARG:NE	2.36	0.55
54:1G:828:A:N6	54:1G:858:G:O2'	2.33	0.55
54:1G:963:G:N2	54:1G:972:C:N3	2.54	0.55
9:82:7:THR:O	9:82:83:ARG:NH1	2.39	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:4A:17:VAL:O	13:4A:20:THR:OG1	2.14	0.55
22:2L:35:QUO:N11	22:2L:36:U:O4	2.40	0.55
24:14:1048:A:N6	24:14:1112:G:HO2'	2.05	0.55
24:14:2270:G:OP2	57:14:4060:HOH:O	2.18	0.55
25:1J:60:C:H2'	25:1J:61:G:H8	1.72	0.55
29:39:124:LEU:HG	29:39:124:LEU:O	2.06	0.55
35:35:48:PRO:C	35:35:50:ARG:H	2.08	0.55
35:35:86:LYS:HB2	35:35:117:GLU:O	2.06	0.55
35:35:138:LEU:HD21	35:35:144:GLU:HG3	1.89	0.55
37:55:10:LEU:O	37:55:12:ARG:HG3	2.07	0.55
39:75:64:ARG:HD2	39:75:73:GLU:OE1	2.06	0.55
49:H5:6:VAL:O	49:H5:34:GLU:HA	2.07	0.55
1:13:686:U:O4	1:13:703:G:H1'	2.07	0.54
1:13:994:A:N7	1:13:1216:G:H4'	2.22	0.54
4:3E:7:PRO:HB2	4:3E:10:ARG:HG2	1.88	0.54
20:BI:26:ASN:HD22	20:BI:26:ASN:H	1.55	0.54
24:1H:1265:A:H8	24:1H:1265:A:OP1	1.90	0.54
24:1H:2557:G:H2'	24:1H:2558:C:C6	2.41	0.54
37:98:33:ARG:HD3	37:98:113:LEU:HD11	1.88	0.54
39:B8:74:ARG:HD3	39:B8:76:PHE:CZ	2.43	0.54
54:1G:1238:A:H62	54:1G:1301:U:H3	1.54	0.54
3:22:67:THR:HG23	3:22:102:ASN:HB3	1.89	0.54
24:14:661:C:O2'	35:35:13:ASN:O	2.24	0.54
24:14:1050:A:H2'	24:14:1051:G:O4'	2.07	0.54
24:14:1678:G:H22	24:14:1989:G:H22	1.55	0.54
24:14:2124:G:N2	26:79:217:THR:OG1	2.40	0.54
24:14:2271:G:H5"	46:E5:20:ARG:NE	2.22	0.54
38:65:62:LYS:HB3	38:65:97:ARG:CD	2.37	0.54
1:13:321:A:N6	1:13:328:C:H1'	2.22	0.54
1:13:1264:C:O2	1:13:1272:G:N1	2.40	0.54
2:1E:12:GLU:HB3	2:1E:213:LEU:HD23	1.89	0.54
5:4E:78:HIS:CE1	5:4E:142:LEU:HD23	2.41	0.54
14:5I:16:PHE:HB2	14:5I:19:ARG:HD3	1.89	0.54
24:1H:1771:C:P	57:1H:3967:HOH:O	2.65	0.54
25:16:71:C:C2	25:16:72:G:C8	2.96	0.54
29:31:114:VAL:HG21	29:31:202:PHE:CZ	2.43	0.54
45:H8:45:ASP:O	45:H8:49:ARG:HG2	2.07	0.54
54:1G:266:G:H3'	17:8A:67:LYS:HB2	1.89	0.54
54:1G:748:C:H4'	54:1G:749:C:O5'	2.06	0.54
54:1G:955:U:O2'	19:AA:83:HIS:ND1	2.33	0.54
54:1G:1228:C:H2'	54:1G:1229:A:C8	2.42	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:1G:1326:C:H2'	54:1G:1327:C:H6	1.73	0.54
4:32:101:LEU:HD23	4:32:121:VAL:HG11	1.88	0.54
5:42:78:HIS:HD2	8:72:107:LEU:HD22	1.71	0.54
9:82:23:ASN:ND2	9:82:25:LYS:HG2	2.23	0.54
9:82:70:LYS:O	9:82:74:ILE:HG13	2.07	0.54
24:14:931:G:O2'	49:H5:24:LYS:HE3	2.07	0.54
24:14:1061:U:O2'	24:14:1064:C:N4	2.41	0.54
24:14:1341:U:OP1	24:14:1397:U:N3	2.35	0.54
28:29:87:GLU:CD	28:29:87:GLU:H	2.10	0.54
31:59:26:VAL:HG21	31:59:76:VAL:HA	1.88	0.54
44:C5:75:ILE:O	44:C5:80:GLY:N	2.40	0.54
1:13:344:A:H2'	1:13:346:G:N7	2.22	0.54
24:1H:588:U:H2'	24:1H:589:C:C6	2.42	0.54
24:1H:1026:U:H1'	24:1H:1027:A:O5'	2.07	0.54
24:1H:2074:U:OP1	57:1H:3636:HOH:O	2.18	0.54
27:11:71:ASP:CG	27:11:103:ARG:HH22	2.10	0.54
29:31:160:ASN:OD1	29:31:163:VAL:HG23	2.08	0.54
54:1G:1512:U:H2'	54:1G:1513:A:C8	2.43	0.54
5:42:74:GLY:HA3	5:42:116:THR:OG1	2.07	0.54
6:52:7:ASN:HD22	18:9A:76:LEU:HD11	1.72	0.54
13:4A:92:HIS:CE1	13:4A:98:VAL:HG21	2.42	0.54
19:AA:42:PRO:HD3	50:I5:60:GLN:HG3	1.89	0.54
24:14:1889:A:H2'	24:14:1890:A:C8	2.42	0.54
24:14:2293:C:H5"	38:65:89:ARG:NH2	2.23	0.54
33:15:103:VAL:HG11	33:15:120:LEU:HD22	1.90	0.54
40:85:49:HIS:O	40:85:53:ARG:N	2.39	0.54
45:D5:39:VAL:HG21	45:D5:44:PHE:HD2	1.71	0.54
1:13:518:C:H2'	1:13:530[B]:G:C8	2.43	0.54
1:13:881:G:P	12:3I:12:ARG:HH22	2.29	0.54
24:1H:612:G:O2'	24:1H:616:A:N1	2.29	0.54
24:1H:661:C:O2'	35:78:14:LYS:N	2.33	0.54
24:1H:2287:A:H62	24:1H:2344:U:H3	1.54	0.54
24:1H:2393:A:H2'	24:1H:2394:C:H6	1.71	0.54
41:D8:1:MET:SD	41:D8:43:GLU:HG2	2.48	0.54
42:E8:51:LEU:HD23	42:E8:105:VAL:HG11	1.88	0.54
54:1G:15:G:H4'	5:42:24:ARG:NH1	2.22	0.54
54:1G:254:G:N2	17:8A:16:GLN:OE1	2.35	0.54
54:1G:1292:U:H2'	54:1G:1293:G:C8	2.41	0.54
54:1G:1512:U:H2'	54:1G:1513:A:H8	1.72	0.54
15:6A:39:LEU:CD1	15:6A:56:LEU:HB2	2.38	0.54
25:1J:13:A:H2'	25:1J:70:C:O2'	2.08	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:75:77:PRO:HB2	39:75:80:SER:HB2	1.89	0.54
1:13:79:G:H22	1:13:88:C:H2'	1.71	0.54
1:13:108:G:P	1:13:326:G:H22	2.29	0.54
15:6I:87:ILE:HG22	15:6I:88:ARG:H	1.72	0.54
18:9I:26:LEU:HB3	18:9I:42:ARG:NH2	2.22	0.54
22:3K:43:G:H2'	22:3K:44:C:H6	1.71	0.54
24:1H:1680:U:O2	24:1H:1763:G:H3'	2.08	0.54
24:1H:1919:A:H5"	24:1H:1920:C:OP2	2.08	0.54
24:1H:2271:G:H5"	46:I8:20:ARG:HD2	1.89	0.54
24:1H:2484:G:H1'	36:88:124:LYS:HG3	1.90	0.54
54:1G:78:G:O6	54:1G:91:C:N4	2.39	0.54
54:1G:1008:C:O2	54:1G:1022:G:N2	2.41	0.54
54:1G:1162:C:N4	54:1G:1174:G:H1	2.04	0.54
4:32:59:ARG:O	4:32:63:LYS:N	2.34	0.54
24:14:31:C:N4	57:14:4108:HOH:O	2.40	0.54
24:14:1230:C:H2'	24:14:1231:G:C8	2.43	0.54
24:14:2161:C:H2'	24:14:2162:G:H8	1.73	0.54
24:14:2723:C:OP1	37:55:3:HIS:ND1	2.40	0.54
25:1J:91:C:OP1	45:D5:79:ARG:NH2	2.40	0.54
33:15:42:TRP:O	40:85:64:ARG:NH2	2.40	0.54
45:D5:138:GLU:O	45:D5:156:LYS:NZ	2.24	0.54
46:E5:27:GLU:HB2	46:E5:69:PHE:HD1	1.71	0.54
1:13:115:G:H4'	1:13:116:A:O5'	2.07	0.54
1:13:975:A:H4'	1:13:976:G:H5"	1.88	0.54
1:13:1346:A:N1	1:13:1374:A:H5"	2.23	0.54
5:4E:83:GLU:HG2	5:4E:88:LYS:HG3	1.88	0.54
7:6E:24:THR:HA	7:6E:27:ILE:HB	1.89	0.54
7:6E:70:LYS:HD3	7:6E:96:GLN:OE1	2.08	0.54
22:2K:21:A:H2'	22:2K:46:G:N7	2.23	0.54
22:3K:38:MIA:H2'	22:3K:39:A:H8	1.71	0.54
24:1H:1412:A:H2'	24:1H:1413:G:C8	2.42	0.54
24:1H:2557:G:H2'	24:1H:2558:C:H6	1.73	0.54
51:N8:40:LYS:HD3	51:N8:46:CYS:SG	2.47	0.54
51:N8:40:LYS:HE2	51:N8:47:PRO:HG2	1.90	0.54
4:32:32:ALA:O	4:32:36:ARG:N	2.37	0.54
18:9A:22:VAL:HG12	18:9A:56:THR:HA	1.90	0.54
24:14:973:A:H5'	24:14:1188:U:H1'	1.89	0.54
24:14:1388:G:O2'	24:14:1389:G:H5'	2.08	0.54
24:14:1931:U:H6	24:14:1931:U:H5'	1.73	0.54
24:14:2027:G:H2'	24:14:2028:U:O4'	2.06	0.54
25:1J:84:C:OP1	49:H5:15:TYR:OH	2.21	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:49:104:GLU:OE1	50:I5:23:GLU:HG2	2.08	0.54
39:75:26:ASP:OD1	39:75:120:ARG:NH2	2.37	0.54
46:E5:51:VAL:N	46:E5:62:LEU:HD12	2.22	0.54
51:J5:16:ARG:HH11	51:J5:16:ARG:CG	2.15	0.54
1:13:1286:A:H5'	21:1F:26:LYS:HD3	1.89	0.54
24:1H:848:G:H2'	24:1H:849:A:C8	2.42	0.54
24:1H:1175:U:O2	24:1H:1176:G:N2	2.40	0.54
24:1H:1844:C:H2'	24:1H:1845:G:H8	1.72	0.54
34:68:71:ARG:HH11	39:B8:74:ARG:HH21	1.55	0.54
39:B8:16:ARG:NH2	39:B8:83:ILE:O	2.41	0.54
39:B8:102:ILE:HA	39:B8:105:LEU:HD22	1.89	0.54
44:G8:85:VAL:HG22	44:G8:98:VAL:HB	1.88	0.54
49:L8:31:LEU:O	49:L8:32:GLN:HB2	2.08	0.54
54:1G:791:G:C6	54:1G:792:A:N7	2.75	0.54
54:1G:1460:A:OP2	20:BA:27:LYS:NZ	2.40	0.54
22:3L:21:A:N6	22:3L:55:U:H3	2.06	0.54
24:14:1198:U:H2'	24:14:1199:U:C6	2.42	0.54
29:39:7:TYR:HE2	29:39:10:PRO:HG3	1.71	0.54
38:65:3:ARG:NH2	38:65:4:LEU:HB2	2.19	0.54
42:A5:11:ARG:CZ	42:A5:98:LYS:HB3	2.37	0.54
44:C5:61:ILE:HD12	44:C5:63:LYS:HE2	1.90	0.54
44:C5:87:LYS:N	44:C5:94:LYS:HB3	2.22	0.54
45:D5:9:TYR:CE1	45:D5:35:ARG:HD3	2.43	0.54
1:13:475:G:H2'	1:13:476:G:O4'	2.07	0.54
9:8E:18:PHE:CD2	9:8E:62:TYR:HD2	2.24	0.54
16:7I:3:LYS:O	16:7I:21:VAL:HA	2.07	0.54
17:8I:75:ARG:HH12	17:8I:77:VAL:HG13	1.72	0.54
24:1H:1510:A:OP1	24:1H:1511:A:H5'	2.08	0.54
24:1H:1859:A:N6	24:1H:1883:G:O2'	2.40	0.54
24:1H:2689:U:OP2	24:1H:2719:G:N2	2.36	0.54
28:21:34:VAL:HG22	28:21:48:GLN:HG2	1.90	0.54
30:41:124:SER:HB2	30:41:131:TYR:CE1	2.42	0.54
32:61:11:ASN:OD1	32:61:12:LEU:N	2.40	0.54
54:1G:67:C:H2'	54:1G:68:G:C8	2.43	0.54
54:1G:1411:C:H2'	54:1G:1412:C:C6	2.43	0.54
13:4A:22:ILE:HB	13:4A:25:ILE:HG13	1.90	0.54
24:14:1184:G:OP2	49:H5:30:ARG:NH2	2.40	0.54
27:19:10:THR:OG1	27:19:13:ARG:HB2	2.07	0.54
29:39:129:PHE:HA	29:39:142:TRP:CD1	2.42	0.54
38:65:7:TYR:HE2	38:65:11:LYS:NZ	2.06	0.54
45:D5:30:ASN:N	45:D5:33:LEU:O	2.38	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:13:581:G:OP1	15:6I:65:ARG:NH1	2.41	0.54
1:13:618:C:H5"	1:13:619:U:H5"	1.88	0.54
1:13:1512:U:H3	1:13:1523:G:H1	1.54	0.54
24:1H:1901:A:OP2	27:11:255:LYS:HE2	2.08	0.54
24:1H:1970:A:H8	24:1H:1970:A:H5"	1.73	0.54
28:21:167:VAL:CG1	28:21:189:PRO:HD3	2.37	0.54
38:A8:15:ARG:HD2	38:A8:88:ASP:OD2	2.08	0.54
54:1G:999:U:H2'	54:1G:1000:A:C8	2.43	0.54
24:14:320:A:H4'	24:14:322:A:C8	2.43	0.54
24:14:1858:G:H8	24:14:1858:G:OP2	1.90	0.54
38:65:26:LEU:HD22	38:65:87:PHE:CD1	2.43	0.54
40:85:92:ARG:NH2	41:95:11:GLN:H	2.05	0.54
1:13:978:A:O2'	1:13:1322:C:N3	2.35	0.54
1:13:986:A:H1'	19:AI:55:LYS:HA	1.88	0.54
4:3E:191:ARG:HD3	4:3E:200:GLU:OE1	2.08	0.54
8:7E:112:LEU:HB3	8:7E:133:LEU:HA	1.89	0.54
24:1H:459:U:H2'	24:1H:460:A:H8	1.73	0.54
24:1H:671:C:OP1	35:78:42:SER:O	2.26	0.54
25:16:44:G:C2	25:16:48:A:C2	2.96	0.54
30:41:143:GLU:OE1	50:M8:26:SER:OG	2.25	0.54
31:51:23:ARG:HH12	31:51:25:LYS:HG3	1.73	0.54
36:88:110:THR:HG23	36:88:113:GLN:OE1	2.07	0.54
4:32:36:ARG:HG3	4:32:38:TYR:CE2	2.43	0.54
24:14:956:G:OP2	36:45:14:ARG:NH2	2.38	0.54
24:14:1858:G:O2'	24:14:1884:A:N6	2.40	0.54
24:14:2393:A:H5'	35:35:63:PRO:HG3	1.90	0.54
27:19:37:LEU:HA	27:19:38:LYS:CG	2.36	0.54
29:39:53:THR:HG23	29:39:55:GLY:N	2.19	0.54
39:75:106:SER:HA	39:75:110:ILE:HD11	1.90	0.54
1:13:37:U:O2'	1:13:500:G:H4'	2.07	0.53
1:13:841:U:H5'	1:13:842:C:H5"	1.90	0.53
1:13:1126:U:OP2	1:13:1281:U:H1'	2.07	0.53
22:2K:38:MIA:H162	22:2K:38:MIA:HN6	1.73	0.53
24:1H:71:A:H5"	24:1H:72:U:H3'	1.88	0.53
24:1H:2339:G:H2'	24:1H:2340:G:H8	1.73	0.53
24:1H:2488:A:H2'	24:1H:2489:G:O4'	2.08	0.53
54:1G:1129:C:H42	54:1G:1141:C:H41	1.54	0.53
54:1G:1443:G:N2	39:75:119:LYS:HB2	2.23	0.53
5:42:127:ASN:OD1	5:42:130:ASN:ND2	2.32	0.53
20:BA:92:LEU:HA	20:BA:95:ALA:HB3	1.90	0.53
24:14:213:A:H2'	24:14:214:G:O4'	2.08	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:14:882:G:OP2	24:14:882:G:H8	1.91	0.53
24:14:1062:G:OP1	24:14:1070:A:O2'	2.15	0.53
24:14:1324:G:N7	57:14:3723:HOH:O	2.41	0.53
24:14:2392:A:H2	24:14:2424:C:H42	1.55	0.53
24:14:2408:U:H2'	24:14:2409:G:C8	2.43	0.53
25:1J:14:U:H5'	25:1J:71:C:H1'	1.88	0.53
27:19:228:PRO:HD3	27:19:235:GLY:CA	2.37	0.53
28:29:112:GLY:O	28:29:159:HIS:HA	2.08	0.53
29:39:20:LEU:HD13	29:39:199:TRP:CH2	2.39	0.53
33:15:67:LEU:O	33:15:88:GLU:HG3	2.08	0.53
36:45:74:TYR:O	36:45:90:VAL:HA	2.08	0.53
41:95:2:PHE:HB3	41:95:15:GLU:HG2	1.89	0.53
45:D5:111:VAL:HG11	45:D5:177:PRO:HD2	1.89	0.53
1:13:223:U:H2'	1:13:224:C:C6	2.41	0.53
1:13:519:C:H2'	1:13:520:A:C8	2.43	0.53
1:13:1118:C:OP1	9:8E:104:ARG:NH1	2.40	0.53
1:13:1307:U:H5"	13:4I:101:GLN:HE22	1.74	0.53
2:1E:100:GLY:HA2	2:1E:103:THR:HB	1.90	0.53
2:1E:111:ARG:HG2	2:1E:111:ARG:HH11	1.73	0.53
24:1H:724:U:H2'	24:1H:725:G:O4'	2.08	0.53
25:16:7:G:H4'	38:A8:29:PHE:HD2	1.73	0.53
30:41:29:TRP:O	30:41:33:ARG:NH1	2.38	0.53
32:61:109:ILE:HB	32:61:130:TYR:CZ	2.43	0.53
45:H8:5:LEU:HD21	45:H8:39:VAL:HB	1.90	0.53
54:1G:552:U:H2'	54:1G:553:A:C8	2.41	0.53
9:82:49:PRO:HD2	9:82:81:ILE:HD11	1.89	0.53
24:14:336:C:H5"	44:C5:6:HIS:CD2	2.44	0.53
24:14:1062:G:N2	24:14:1089:G:OP2	2.42	0.53
24:14:1257:C:H4'	29:39:83:PHE:CD1	2.43	0.53
24:14:1665:A:H1'	34:25:1:MET:HG3	1.90	0.53
41:95:87:HIS:NE2	41:95:89:GLN:HB2	2.22	0.53
50:I5:2:LYS:HG3	50:I5:6:HIS:CG	2.43	0.53
1:13:359:U:OP1	32:69:87:LYS:HE2	2.08	0.53
1:13:540:G:H2'	1:13:541:G:O4'	2.08	0.53
1:13:859:A:H2'	1:13:860:A:H8	1.73	0.53
1:13:1077:G:N2	1:13:1080:A:OP2	2.41	0.53
1:13:1179:A:H2'	1:13:1180:A:O4'	2.08	0.53
2:1E:51:LEU:HD21	2:1E:201:ILE:HG23	1.89	0.53
3:2E:45:LYS:HB2	3:2E:45:LYS:NZ	2.23	0.53
17:8I:3:LYS:HD2	17:8I:60:ILE:HD11	1.89	0.53
20:BI:26:ASN:HB2	20:BI:71:THR:OG1	2.08	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:1H:213:A:H2'	24:1H:214:G:O4'	2.08	0.53
24:1H:1032:A:H2	24:1H:1122:G:H22	1.57	0.53
24:1H:1111:A:O2'	24:1H:1112:G:H4'	2.09	0.53
54:1G:555:C:H2'	54:1G:556:C:C6	2.44	0.53
2:12:19:HIS:NE2	2:12:206:ASP:HB2	2.23	0.53
6:52:7:ASN:ND2	18:9A:76:LEU:HD11	2.24	0.53
17:8A:43:LEU:HD12	17:8A:68:ARG:HG2	1.90	0.53
24:14:861:A:C2	24:14:917:A:C4	2.96	0.53
24:14:975:G:H1'	24:14:990:A:C2	2.43	0.53
24:14:1164:G:H2'	24:14:1165:U:C6	2.44	0.53
24:14:1409:C:O2	24:14:1594:G:N2	2.41	0.53
24:14:2512:C:H5"	24:14:2513:G:OP2	2.08	0.53
57:14:4306:HOH:O	27:19:232:PRO:O	2.19	0.53
27:19:34:VAL:HG13	27:19:61:LEU:HG	1.91	0.53
36:45:36:ALA:HB2	36:45:103:MET:SD	2.48	0.53
44:C5:23:ARG:HH11	44:C5:23:ARG:HG3	1.74	0.53
6:5E:97:PHE:HD1	18:9I:31:LEU:HD12	1.73	0.53
13:4I:87:TYR:O	13:4I:91:ARG:HG2	2.09	0.53
24:1H:1533:C:H2'	24:1H:1534:G:H8	1.73	0.53
24:1H:2695:C:H2'	24:1H:2696:U:C6	2.43	0.53
32:61:67:ARG:NH2	32:61:68:LEU:HB2	2.24	0.53
34:68:75:SER:HB2	39:B8:74:ARG:HH12	1.72	0.53
50:M8:12:ALA:HA	50:M8:29:PRO:HB3	1.91	0.53
52:P8:11:LYS:HE3	52:P8:15:THR:OG1	2.08	0.53
54:1G:298:A:H5"	54:1G:299:G:OP2	2.07	0.53
54:1G:664:G:P	18:9A:64:ARG:HH21	2.32	0.53
4:32:49:ARG:HA	4:32:49:ARG:NE	2.24	0.53
4:32:187:ARG:NH2	4:32:193:ASP:OD2	2.40	0.53
12:3A:28:LYS:HD2	12:3A:33:ARG:NH2	2.23	0.53
22:2L:1:G:H2'	22:2L:2:G:C8	2.41	0.53
24:14:494:G:O6	57:14:3921:HOH:O	2.19	0.53
24:14:1187:G:P	57:14:3762:HOH:O	2.65	0.53
24:14:1448:G:O2'	24:14:1529:A:N1	2.36	0.53
24:14:1970:A:H4'	24:14:1971:A:OP1	2.09	0.53
24:14:2542:A:N3	24:14:2542:A:H5"	2.23	0.53
24:14:2697:G:H2'	24:14:2698:U:O4'	2.08	0.53
28:29:47:VAL:HG22	28:29:48:GLN:H	1.74	0.53
30:49:98:ARG:NH2	50:I5:2:LYS:HE2	2.23	0.53
34:25:68:GLU:HB3	34:25:78:ARG:HH11	1.71	0.53
42:A5:27:LYS:NZ	42:A5:31:GLU:OE2	2.42	0.53
1:13:451:A:N6	1:13:480:U:H2'	2.24	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:13:666:G:H5'	1:13:726:C:H1'	1.90	0.53
1:13:1022:G:H2'	1:13:1023:G:H8	1.74	0.53
1:13:1323:G:H2'	1:13:1324:A:C8	2.44	0.53
24:1H:795:C:H2'	24:1H:796:C:C6	2.44	0.53
24:1H:919:G:N2	24:1H:2269:A:OP2	2.41	0.53
24:1H:1693:U:OP2	24:1H:1694:C:N4	2.27	0.53
24:1H:2737:G:H2'	24:1H:2738:A:C8	2.44	0.53
27:11:83:GLU:OE2	27:11:104:TYR:OH	2.23	0.53
42:E8:2:GLU:HB2	42:E8:106:ILE:HD11	1.90	0.53
45:H8:126:VAL:HG12	45:H8:163:LEU:HA	1.90	0.53
54:1G:622:A:C8	54:1G:623:C:C6	2.96	0.53
12:3A:76:ASN:HD21	12:3A:108:ALA:N	2.06	0.53
18:9A:22:VAL:C	18:9A:24:ALA:H	2.12	0.53
20:BA:100:ILE:H	20:BA:100:ILE:HD12	1.74	0.53
22:2L:37:A:N6	22:2L:38:MIA:H122	2.24	0.53
24:14:307:G:O5'	24:14:307:G:H8	1.91	0.53
24:14:805:G:O5'	35:35:41:ARG:HG2	2.08	0.53
24:14:863:A:H2'	24:14:864:G:C8	2.43	0.53
24:14:1250:G:OP2	35:35:21:ARG:NH1	2.42	0.53
24:14:1519:G:H2'	24:14:1520:U:O4'	2.08	0.53
24:14:2370:G:N7	57:14:4202:HOH:O	2.33	0.53
24:14:2873:A:C8	37:55:5:LYS:O	2.62	0.53
25:1J:12:C:H2'	46:E5:73:GLY:HA3	1.90	0.53
32:69:103:ARG:HE	32:69:104:GLN:H	1.56	0.53
37:55:103:ARG:HD3	37:55:108:GLY:O	2.08	0.53
53:M5:14:VAL:HG13	53:M5:22:VAL:HG23	1.90	0.53
1:13:49:U:C2	1:13:361:G:N2	2.77	0.53
1:13:247:G:OP2	17:8I:101:ARG:HG2	2.09	0.53
1:13:452:A:O2'	1:13:453:A:O5'	2.26	0.53
1:13:1397:C:H42	23:4K:22:A:H3'	1.72	0.53
22:2K:15:G:N2	22:2K:57:C:H5	2.00	0.53
24:1H:638:G:C5	24:1H:651:G:C2	2.97	0.53
24:1H:1198:U:H2'	24:1H:1199:U:C6	2.43	0.53
24:1H:2054:A:H5"	24:1H:2055:C:O5'	2.08	0.53
24:1H:2110:G:C6	24:1H:2120:G:C8	2.97	0.53
25:16:24:G:N7	25:16:56:G:H2'	2.22	0.53
27:11:138:VAL:HG23	27:11:168:ARG:NH2	2.24	0.53
27:11:226:MET:HB3	27:11:230:ASP:HB2	1.89	0.53
33:58:73:THR:HB	33:58:82:LEU:HD11	1.90	0.53
37:98:14:SER:HA	37:98:17:ARG:HH12	1.73	0.53
37:98:104:ARG:HB2	37:98:111:LEU:HD11	1.90	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:B8:50:ILE:HD11	39:B8:102:ILE:HD11	1.90	0.53
52:P8:12:ARG:NH2	52:P8:44:PRO:HB3	2.22	0.53
54:1G:278:G:OP2	17:8A:41:LYS:NZ	2.29	0.53
54:1G:631:G:H2'	54:1G:632:A:C8	2.44	0.53
54:1G:686:U:H1'	11:2A:42:TRP:HE1	1.74	0.53
54:1G:1142:G:H3'	54:1G:1143:G:C8	2.43	0.53
2:12:145:LEU:O	2:12:149:LEU:HB2	2.08	0.53
9:82:73:GLN:O	9:82:77:ILE:HG23	2.09	0.53
9:82:121:ARG:NH1	9:82:122:ALA:O	2.41	0.53
19:AA:7:LYS:HD3	19:AA:7:LYS:N	2.23	0.53
30:49:150:ASP:OD1	30:49:150:ASP:N	2.41	0.53
7:6E:84:ASN:ND2	22:3K:33:C:O3'	2.41	0.53
24:1H:376:C:OP2	57:1H:3698:HOH:O	2.19	0.53
24:1H:748:G:C8	42:E8:89:ALA:HB1	2.44	0.53
24:1H:1007:C:OP1	33:58:35:ARG:NH1	2.41	0.53
24:1H:1328:G:H2'	24:1H:1330:C:C5	2.44	0.53
24:1H:2807:G:H3'	24:1H:2808:U:H5"	1.89	0.53
54:1G:340:U:H2'	54:1G:341:C:C6	2.44	0.53
54:1G:476:G:O2'	54:1G:477:G:H5'	2.08	0.53
2:12:12:GLU:OE1	2:12:16:HIS:N	2.36	0.53
21:1B:8:THR:HG22	21:1B:10:ARG:H	1.73	0.53
22:2L:14:A:H2'	22:2L:15:G:C8	2.43	0.53
24:14:2556:C:H2'	24:14:2557:G:O4'	2.09	0.53
24:14:2608:G:OP1	57:14:4241:HOH:O	2.19	0.53
27:19:246:PRO:HD2	27:19:255:LYS:HD3	1.90	0.53
28:29:32:PRO:HD2	28:29:50:GLY:HA3	1.89	0.53
33:15:15:LEU:HG	33:15:134:ARG:HD3	1.91	0.53
35:35:84:ASN:ND2	35:35:117:GLU:HB3	2.23	0.53
39:75:4:GLY:O	39:75:5:ALA:HB3	2.08	0.53
1:13:78:G:O6	1:13:91:C:N4	2.40	0.53
1:13:1086:U:H3	1:13:1099:G:H22	1.56	0.53
1:13:1127:G:H22	1:13:1145:C:H1'	1.73	0.53
1:13:1348:U:H2'	1:13:1349:A:C8	2.32	0.53
15:6I:11:VAL:HG21	15:6I:34:LEU:HD13	1.90	0.53
20:BI:73:HIS:HB3	20:BI:74:LYS:HE2	1.90	0.53
22:2K:19:C:C3'	22:2K:20:C:H2'	2.34	0.53
24:1H:107:C:H2'	24:1H:108:U:C6	2.43	0.53
24:1H:795:C:H2'	24:1H:796:C:H6	1.74	0.53
24:1H:1441:G:H2'	24:1H:1442:G:C8	2.44	0.53
24:1H:1534:G:H2'	24:1H:1538:G:N2	2.24	0.53
24:1H:2256:G:N7	57:1H:4122:HOH:O	2.34	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:1H:2432:A:C5	47:J8:33:LYS:HG2	2.42	0.53
24:1H:2722:G:H2'	24:1H:2723:C:C6	2.43	0.53
26:71:30:LYS:NZ	26:71:178:ALA:O	2.40	0.53
31:51:67:LEU:O	31:51:71:LEU:HB2	2.09	0.53
31:51:95:ARG:HB3	31:51:95:ARG:HH11	1.74	0.53
38:A8:36:TYR:N	38:A8:36:TYR:CD1	2.77	0.53
48:K8:21:LEU:HD13	48:K8:64:LEU:HA	1.90	0.53
54:1G:973:G:O4'	10:1A:55:LYS:HG2	2.08	0.53
54:1G:1442:G:N7	54:1G:1446:A:N6	2.56	0.53
15:6A:15:PHE:HD2	15:6A:30:ALA:HB2	1.73	0.53
16:7A:34:GLU:OE1	16:7A:55:ARG:NH1	2.41	0.53
24:14:1974:C:OP2	57:14:3635:HOH:O	2.18	0.53
24:14:2298:A:H1'	24:14:2321:G:N2	2.24	0.53
31:59:109:PHE:HE1	31:59:152:ARG:HE	1.55	0.53
32:69:25:TYR:CE1	32:69:29:TYR:CD2	2.97	0.53
32:69:79:ILE:HD11	32:69:140:LEU:HD21	1.90	0.53
35:35:23:PRO:HB3	41:95:80:GLN:CG	2.39	0.53
35:35:100:LEU:HD12	35:35:112:LEU:HD11	1.91	0.53
47:F5:93:GLU:HA	47:F5:97:LEU:HD22	1.90	0.53
1:13:243:A:H4'	1:13:244:U:H3'	1.91	0.53
1:13:431:A:OP2	57:13:1799:HOH:O	2.19	0.53
1:13:786:G:N7	57:13:1888:HOH:O	2.34	0.53
1:13:1304:G:H22	1:13:1332:A:P	2.31	0.53
24:1H:524:U:H4'	24:1H:554:U:H4'	1.91	0.53
24:1H:2098:U:H2'	24:1H:2099:U:O4'	2.09	0.53
24:1H:2255:G:OP2	57:1H:4120:HOH:O	2.18	0.53
34:68:113:LYS:O	34:68:117:LEU:HD13	2.09	0.53
37:98:65:LEU:O	37:98:68:ARG:HB2	2.09	0.53
39:B8:91:ARG:O	39:B8:116:ALA:HA	2.09	0.53
53:Q8:39:LYS:HG2	53:Q8:40:GLU:N	2.23	0.53
54:1G:1058:G:H1	54:1G:1199:U:H3	1.57	0.53
13:4A:3:ARG:HB3	13:4A:9:ILE:HG12	1.91	0.53
24:14:588:U:H2'	24:14:589:C:C6	2.44	0.53
24:14:796:C:H2'	24:14:797:C:C6	2.44	0.53
24:14:867:C:C5	24:14:868:U:C5	2.97	0.53
24:14:2176:A:H2'	24:14:2177:C:H6	1.73	0.53
24:14:2557:G:H2'	24:14:2558:C:H6	1.74	0.53
29:39:84:VAL:O	29:39:86:GLY:N	2.41	0.53
32:69:98:ALA:HA	32:69:109:ILE:HD11	1.90	0.53
39:75:13:ARG:NH1	39:75:15:VAL:O	2.41	0.53
46:E5:72:ARG:HH21	46:E5:75:LEU:HD12	1.74	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:13:781:A:OP2	1:13:800:G:N1	2.27	0.53
1:13:1195:C:H5"	1:13:1196:U:O5'	2.09	0.53
1:13:1218:C:H2'	1:13:1219:U:C5	2.44	0.53
3:2E:131:ARG:NH1	5:4E:50:GLU:HG2	2.24	0.53
7:6E:80:VAL:HB	7:6E:85:TYR:HE1	1.74	0.53
24:1H:330:A:O2'	24:1H:331:A:C8	2.52	0.53
24:1H:751:A:OP1	57:1H:3888:HOH:O	2.18	0.53
24:1H:1359:A:N1	24:1H:1372:U:C4	2.76	0.53
24:1H:1826:G:H4'	27:11:242:ARG:HH21	1.74	0.53
24:1H:2017:U:P	57:1H:4546:HOH:O	2.65	0.53
24:1H:2533:A:OP1	24:1H:2665:A:H1'	2.08	0.53
27:11:6:PHE:HE1	27:11:18:VAL:HG23	1.74	0.53
29:31:9:ILE:HG12	29:31:20:LEU:O	2.09	0.53
24:14:304:G:H2'	24:14:305:U:C6	2.44	0.53
24:14:729:G:O5'	27:19:208:LYS:NZ	2.42	0.53
24:14:1505:C:H2'	24:14:1506:C:H6	1.74	0.53
24:14:2646:C:H2'	24:14:2647:U:O4'	2.09	0.53
25:1J:45:A:H1'	30:49:95:ARG:HH22	1.74	0.53
28:29:61:ARG:HA	28:29:63:LEU:HD23	1.89	0.53
47:F5:7:ILE:HG12	47:F5:62:VAL:CG1	2.35	0.53
49:H5:3:ARG:HD2	49:H5:60:GLU:O	2.09	0.53
1:13:359:U:H2'	1:13:360:A:C8	2.44	0.52
1:13:376:G:O3'	16:7I:5:ARG:NH1	2.41	0.52
1:13:453:A:H4'	16:7I:72:ARG:HB2	1.91	0.52
1:13:828:A:H2'	1:13:829:G:O4'	2.09	0.52
1:13:1218:C:H2'	1:13:1219:U:C6	2.44	0.52
1:13:1371:G:O3'	9:8E:69:GLY:HA3	2.09	0.52
5:4E:53:LEU:O	5:4E:57:LYS:HG2	2.08	0.52
8:7E:113:SER:HB2	8:7E:134:ILE:HD11	1.91	0.52
10:1I:5:ARG:HH21	10:1I:99:LYS:HD2	1.75	0.52
12:3I:86:ARG:HG3	12:3I:101:VAL:HG22	1.91	0.52
16:7I:57:ARG:HA	16:7I:60:LEU:HD12	1.92	0.52
20:BI:90:GLN:HA	20:BI:93:GLU:HG2	1.91	0.52
22:2K:20:C:O2'	22:2K:21:A:OP2	2.22	0.52
22:2K:72:U:H2'	22:2K:73:U:C6	2.45	0.52
24:1H:1257:C:H4'	29:31:83:PHE:CD1	2.44	0.52
24:1H:1800:C:OP1	27:11:266:SER:OG	2.14	0.52
24:1H:2822:G:OP1	28:21:159:HIS:NE2	2.39	0.52
27:11:85:ASP:OD2	27:11:88:ARG:HD2	2.09	0.52
29:31:7:TYR:HA	29:31:22:ALA:O	2.09	0.52
29:31:64:ILE:HG23	29:31:65:TRP:CD1	2.44	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:78:114:ILE:HD13	35:78:125:VAL:HG11	1.90	0.52
40:C8:59:ARG:O	40:C8:63:VAL:HG23	2.10	0.52
47:J8:64:ALA:HA	47:J8:67:ILE:HG13	1.89	0.52
54:1G:583:A:H2'	54:1G:584:G:O4'	2.09	0.52
8:72:86:ILE:HG12	8:72:135:CYS:HA	1.90	0.52
22:2L:12:C:H1'	24:14:1923:U:O2'	2.10	0.52
22:2L:40:PSU:O2'	22:3L:36:U:O2'	2.03	0.52
24:14:568:U:H6	24:14:568:U:H5"	1.74	0.52
24:14:1028:A:H2'	24:14:1029:A:C8	2.44	0.52
24:14:1466:G:H5'	24:14:1467:C:OP1	2.09	0.52
24:14:1729:A:O2'	24:14:1731:G:N2	2.42	0.52
24:14:2129:C:H2'	24:14:2130:U:O4'	2.09	0.52
24:14:2291:U:O2'	24:14:2374:C:O2	2.27	0.52
24:14:2689:U:H5"	24:14:2713:A:C2	2.45	0.52
28:29:105:THR:OG1	28:29:199:ARG:NH2	2.42	0.52
41:95:35:LEU:CB	41:95:37:VAL:HG13	2.39	0.52
44:C5:43:ASN:HB3	44:C5:64:GLU:HA	1.91	0.52
1:13:474:G:H5"	16:7I:81:ARG:CZ	2.40	0.52
1:13:609:A:H2'	1:13:610:G:H5'	1.90	0.52
1:13:626:U:C2	1:13:627:G:C8	2.97	0.52
1:13:712:A:O2'	1:13:713:G:H5'	2.09	0.52
1:13:767:A:H3'	57:13:1773:HOH:O	2.09	0.52
6:5E:35:ALA:HA	6:5E:67:MET:HB3	1.91	0.52
18:9I:59:SER:HB3	18:9I:62:GLU:HG3	1.90	0.52
19:AI:8:GLY:HA2	50:M8:66:SER:HB3	1.91	0.52
24:1H:2572:A:C8	28:21:144:ARG:HD2	2.45	0.52
25:16:89:G:H8	25:16:89:G:OP2	1.92	0.52
38:A8:26:LEU:HD23	38:A8:87:PHE:CD1	2.41	0.52
39:B8:7:ILE:C	39:B8:9:LEU:N	2.63	0.52
54:1G:741:G:H2'	54:1G:742:G:O4'	2.09	0.52
54:1G:993:G:H1	54:1G:1045:C:H42	1.56	0.52
4:32:204:ILE:HD13	5:42:97:GLY:O	2.08	0.52
5:42:80:ILE:HD12	5:42:91:LEU:HB2	1.90	0.52
9:82:22:GLY:N	9:82:58:HIS:O	2.25	0.52
22:2L:84:C:H2'	22:2L:85:A:C2	2.45	0.52
24:14:304:G:H2'	24:14:305:U:H6	1.74	0.52
24:14:886:C:O2'	24:14:887:A:O5'	2.26	0.52
24:14:1050:A:C2	24:14:1051:G:H1'	2.43	0.52
24:14:1351:C:H5"	57:14:3880:HOH:O	2.09	0.52
24:14:2745:C:H4'	31:59:142:GLY:O	2.08	0.52
30:49:180:PHE:O	50:I5:43:TYR:OH	2.27	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:59:80:SER:OG	31:59:81:GLU:N	2.43	0.52
31:59:82:GLY:HA3	31:59:135:GLY:O	2.09	0.52
31:59:125:VAL:HG12	31:59:127:GLU:H	1.73	0.52
34:25:85:VAL:HG11	34:25:114:ILE:HD13	1.90	0.52
44:C5:47:LYS:HA	44:C5:60:PHE:HD2	1.74	0.52
1:13:727:G:N2	1:13:730:G:OP2	2.39	0.52
1:13:1454:G:OP1	20:BI:39:LYS:NZ	2.43	0.52
3:2E:7:PRO:O	3:2E:11:ARG:HG2	2.09	0.52
19:AI:52:TYR:HA	19:AI:56:GLN:O	2.09	0.52
24:1H:784:A:O4'	27:11:227:ASN:ND2	2.42	0.52
24:1H:821:A:H5"	24:1H:822:U:H6	1.74	0.52
24:1H:1167:U:H2'	24:1H:1168:G:C8	2.44	0.52
24:1H:1257:C:O2'	29:31:83:PHE:HA	2.09	0.52
47:J8:86:SER:HB3	47:J8:87:PRO:HA	1.90	0.52
54:1G:1170:A:N6	54:1G:1171:G:N3	2.56	0.52
8:72:121:ASP:HB2	8:72:125:ARG:HH21	1.75	0.52
9:82:37:PHE:CD2	9:82:43:ALA:HB2	2.45	0.52
13:4A:10:PRO:HB2	13:4A:18:ALA:HB1	1.90	0.52
17:8A:75:ARG:HH12	17:8A:77:VAL:HG22	1.74	0.52
24:14:10:G:N2	24:14:2802:G:OP1	2.42	0.52
24:14:1899:G:O2'	24:14:1900:A:H5"	2.10	0.52
24:14:2064:C:H2'	24:14:2065:C:C6	2.44	0.52
24:14:2357:U:OP1	46:E5:20:ARG:HD2	2.09	0.52
28:29:38:THR:HG23	28:29:41:LYS:HB3	1.91	0.52
33:15:98:VAL:HG23	33:15:99:LEU:N	2.24	0.52
40:85:65:ILE:HD11	40:85:93:LYS:HA	1.91	0.52
41:95:44:LYS:C	41:95:46:VAL:H	2.13	0.52
1:13:10:A:OP2	5:4E:126:ARG:HD3	2.10	0.52
8:7E:106:GLY:HA2	8:7E:122:ARG:HH12	1.74	0.52
13:4I:64:TRP:HD1	13:4I:66:LEU:HD11	1.74	0.52
24:1H:1371:G:H2'	24:1H:1372:U:C5	2.45	0.52
24:1H:2439:A:H5'	24:1H:2439:A:C8	2.44	0.52
24:1H:2507:C:H5'	24:1H:2573:C:N4	2.24	0.52
24:1H:2689:U:P	24:1H:2719:G:H22	2.32	0.52
30:41:85:GLY:O	30:41:86:MET:HB2	2.10	0.52
36:88:90:VAL:HG23	36:88:91:GLU:N	2.20	0.52
41:D8:65:GLY:O	41:D8:91:TYR:HD1	1.92	0.52
54:1G:568:G:N3	54:1G:574:A:H2	2.08	0.52
54:1G:1001:G:H1	54:1G:1039:C:H42	1.58	0.52
54:1G:1231:G:H5"	9:82:127:LYS:HA	1.91	0.52
2:12:212:GLN:OE1	2:12:235:SER:OG	2.25	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:12:237:ALA:C	2:12:239:VAL:H	2.12	0.52
16:7A:56:ALA:O	16:7A:60:LEU:HG	2.09	0.52
22:3L:24:G:H2'	22:3L:25:G:C8	2.41	0.52
24:14:1163:G:O2'	24:14:1164:G:H5'	2.10	0.52
24:14:1450:C:H2'	24:14:1451:C:C6	2.45	0.52
24:14:1751:C:H2'	24:14:1752:C:H6	1.73	0.52
24:14:2830:G:O2'	24:14:2883:A:N1	2.30	0.52
32:69:93:THR:HG22	32:69:119:PRO:HG3	1.91	0.52
38:65:7:TYR:O	38:65:11:LYS:HB2	2.09	0.52
46:E5:12:ASN:HA	46:E5:14:ARG:NH2	2.20	0.52
1:13:975:A:H5"	1:13:975:A:C8	2.41	0.52
3:2E:73:PRO:HG3	3:2E:105:GLU:HB2	1.91	0.52
6:5E:19:LEU:HD23	6:5E:23:LYS:NZ	2.25	0.52
24:1H:247:G:H4'	24:1H:386:G:C5	2.45	0.52
24:1H:1688:U:H2'	24:1H:1698:A:N6	2.25	0.52
24:1H:1993:U:H4'	28:21:128:SER:HB3	1.91	0.52
24:1H:2262:U:H4'	24:1H:2328:A:C2	2.45	0.52
24:1H:2832:U:H4'	24:1H:2833:G:H5"	1.92	0.52
32:61:67:ARG:O	32:61:71:ILE:HG23	2.09	0.52
43:F8:31:HIS:CE1	43:F8:33:LYS:HB2	2.45	0.52
54:1G:1002:G:H22	54:1G:1038:C:N4	2.08	0.52
54:1G:1117:G:N2	54:1G:1180:A:H1'	2.24	0.52
10:1A:4:ILE:HD13	10:1A:100:THR:HG22	1.92	0.52
24:14:659:C:H4'	29:39:100:THR:O	2.09	0.52
24:14:1098:A:H3'	24:14:1099:G:H5'	1.92	0.52
24:14:1536:A:H5"	24:14:1537:C:C6	2.44	0.52
32:69:103:ARG:H	32:69:103:ARG:NE	2.08	0.52
43:B5:56:THR:HB	43:B5:77:LYS:HE2	1.91	0.52
1:13:1349:A:H2'	1:13:1350:A:C8	2.43	0.52
9:8E:28:VAL:HG22	9:8E:63:ILE:HB	1.91	0.52
24:1H:587:C:O2	35:78:33:ARG:NH1	2.43	0.52
24:1H:1266:G:O2'	24:1H:2012:G:O6	2.21	0.52
24:1H:2287:A:N3	24:1H:2289:G:C8	2.77	0.52
28:21:60:ASN:OD1	28:21:62:PRO:HD2	2.09	0.52
29:31:8:GLN:OE1	29:31:8:GLN:N	2.38	0.52
54:1G:540:G:H2'	54:1G:541:G:O4'	2.10	0.52
54:1G:559:A:H4'	54:1G:560:U:H5"	1.92	0.52
54:1G:1015:A:H2'	54:1G:1016:A:H8	1.75	0.52
11:2A:62:GLN:HB2	11:2A:93:GLN:OE1	2.09	0.52
19:AA:63:THR:OG1	19:AA:65:ASN:OD1	2.19	0.52
24:14:1287:A:C8	37:55:107:ASP:HB2	2.45	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:1J:88:C:N3	25:1J:89:G:N3	2.58	0.52
39:75:16:ARG:HH12	39:75:83:ILE:HB	1.73	0.52
39:75:91:ARG:HD2	39:75:124:ASP:OD2	2.10	0.52
44:C5:62:GLU:CD	44:C5:63:LYS:H	2.12	0.52
1:13:170:U:H2'	1:13:171:A:H8	1.75	0.52
24:1H:32:C:O2'	24:1H:33:U:H5'	2.10	0.52
24:1H:761:A:H5"	57:1H:3640:HOH:O	2.10	0.52
24:1H:1771:C:H1'	24:1H:1786:A:H8	1.73	0.52
24:1H:2339:G:H2'	24:1H:2340:G:C8	2.44	0.52
25:16:29:A:P	38:A8:32:LEU:HD13	2.50	0.52
37:98:41:ALA:O	37:98:44:LEU:N	2.39	0.52
38:A8:39:ILE:HD13	38:A8:85:VAL:HG11	1.90	0.52
38:A8:67:ARG:O	38:A8:71:ARG:HG3	2.10	0.52
43:F8:26:TYR:CD1	43:F8:89:ILE:HD13	2.44	0.52
54:1G:1357:A:N7	54:1G:1358:U:C5	2.78	0.52
11:2A:12:ARG:HB2	11:2A:75:TYR:HD2	1.75	0.52
24:14:481:G:OP2	44:C5:47:LYS:HB2	2.10	0.52
24:14:821:A:H2'	24:14:946:G:H5"	1.92	0.52
24:14:988:A:N6	57:14:4150:HOH:O	2.33	0.52
24:14:1292:U:H2'	24:14:1293:C:C6	2.43	0.52
24:14:1496:A:H8	24:14:1577:C:O2'	1.85	0.52
24:14:1857:G:O2'	24:14:1885:A:N6	2.42	0.52
24:14:1899:G:N2	24:14:1902:C:N4	2.44	0.52
24:14:2113:U:C5	24:14:2114:A:H1'	2.45	0.52
24:14:2178:C:O2'	26:79:168:THR:O	2.26	0.52
26:79:26:ALA:O	26:79:29:VAL:HG12	2.10	0.52
30:49:11:TYR:OH	30:49:16:ARG:NH2	2.43	0.52
35:35:47:ASP:HB3	35:35:48:PRO:C	2.30	0.52
1:13:553:A:H5"	12:3I:24:VAL:HG21	1.90	0.52
7:6E:9:VAL:HG13	7:6E:94:ARG:HE	1.74	0.52
7:6E:111:ARG:NH1	7:6E:113:GLU:OE2	2.42	0.52
9:8E:86:VAL:O	9:8E:90:PRO:HA	2.09	0.52
22:2K:4:G:N2	22:2K:78:C:O2	2.43	0.52
24:1H:774:A:H2	24:1H:787:U:HO2'	1.56	0.52
24:1H:1515:C:H2'	24:1H:1516:U:H6	1.75	0.52
25:16:30:C:OP2	38:A8:32:LEU:HD11	2.10	0.52
35:78:59:LEU:CD2	53:Q8:13:ARG:HD2	2.40	0.52
36:88:135:ASP:HB3	36:88:137:TYR:H	1.74	0.52
51:N8:40:LYS:CG	51:N8:47:PRO:HD2	2.40	0.52
54:1G:79:G:H1	54:1G:90:C:H42	1.57	0.52
54:1G:192:U:H2'	54:1G:193:C:H6	1.75	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:7A:43:LYS:HA	16:7A:48:TRP:CB	2.37	0.52
22:2L:34:U:HO2'	22:2L:35:QUO:P	2.31	0.52
24:14:270(D):C:H2'	24:14:270(E):G:C8	2.45	0.52
24:14:826:U:H4'	35:35:55:ARG:HA	1.92	0.52
24:14:999:U:C5	24:14:1154:G:C5	2.97	0.52
24:14:1336:A:H2'	24:14:1337:G:C8	2.44	0.52
24:14:1671:U:HO2'	24:14:1673:U:H5	1.57	0.52
24:14:2660:A:H2'	24:14:2661:G:O4'	2.10	0.52
27:19:58:HIS:HD2	27:19:59:LYS:H	1.57	0.52
29:39:25:PRO:CG	29:39:119:ARG:HB2	2.39	0.52
45:D5:10:ARG:HD2	45:D5:36:LYS:HE2	1.91	0.52
1:13:760:G:O2'	17:8I:98:LEU:HD22	2.10	0.52
1:13:859:A:H2'	1:13:860:A:C8	2.44	0.52
1:13:1216:G:H2'	1:13:1217:C:C6	2.45	0.52
8:7E:87:SER:HA	8:7E:93:VAL:HG23	1.91	0.52
24:1H:182:A:O2'	24:1H:183:C:H5'	2.10	0.52
24:1H:284:U:H2'	24:1H:285:C:C6	2.45	0.52
24:1H:1252:G:N3	40:C8:33:ARG:HD2	2.25	0.52
31:51:168:PRO:HB2	31:51:170:ARG:HE	1.75	0.52
36:88:2:LEU:H	36:88:2:LEU:HD12	1.75	0.52
37:98:75:LEU:O	37:98:79:LEU:HB2	2.09	0.52
43:F8:15:GLU:H	43:F8:15:GLU:CD	2.14	0.52
54:1G:1321:C:C4	54:1G:1322:C:C4	2.98	0.52
9:82:17:VAL:HA	9:82:63:ILE:HG12	1.92	0.52
10:1A:11:PHE:CE1	10:1A:67:THR:HG22	2.45	0.52
24:14:932:G:OP1	49:H5:29:ARG:NH2	2.43	0.52
24:14:1187:G:H8	24:14:1187:G:O5'	1.92	0.52
24:14:2018:G:O2'	40:85:34:LYS:HE3	2.09	0.52
24:14:2123:G:N2	26:79:42:GLU:OE1	2.42	0.52
24:14:2823:A:OP1	28:29:159:HIS:NE2	2.32	0.52
25:1J:44:G:H1'	25:1J:47:C:N4	2.25	0.52
35:35:30:THR:CG2	35:35:35:HIS:H	2.23	0.52
37:55:24:GLN:HB3	37:55:44:LEU:HD11	1.92	0.52
1:13:146:G:N2	1:13:176:C:O2	2.42	0.52
1:13:692:U:O2'	1:13:694:A:N7	2.32	0.52
1:13:1284:C:OP1	21:1F:26:LYS:NZ	2.43	0.52
4:3E:57:ARG:HB3	4:3E:206:PHE:HB2	1.92	0.52
24:1H:94:G:H21	48:K8:47:ASN:ND2	2.08	0.52
24:1H:270(V):G:H2'	24:1H:270(W):G:C8	2.42	0.52
24:1H:275:G:N2	24:1H:278:A:N1	2.57	0.52
24:1H:1153:C:H2'	24:1H:1154:G:C8	2.45	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:1H:1274:A:N1	24:1H:1644:C:O2'	2.37	0.52
24:1H:1339:G:H21	24:1H:1603:A:H1'	1.75	0.52
24:1H:1899:G:N2	24:1H:1902:C:C5	2.77	0.52
24:1H:2248:C:OP2	57:1H:3674:HOH:O	2.19	0.52
31:51:6:ARG:O	31:51:69:ARG:HB2	2.10	0.52
31:51:104:GLU:HG3	31:51:114:VAL:HG22	1.92	0.52
44:G8:104:GLY:N	44:G8:105:ALA:HB3	2.24	0.52
47:J8:78:LYS:HE2	47:J8:79:GLY:N	2.21	0.52
54:1G:1014:A:H4'	19:AA:14:HIS:CD2	2.45	0.52
4:32:30:LYS:CG	4:32:35:ARG:HB2	2.39	0.52
4:32:112:VAL:HG12	4:32:116:GLN:OE1	2.10	0.52
22:2L:21:A:H1'	22:2L:22:A:H2'	1.92	0.52
24:14:298:G:N7	57:14:3842:HOH:O	2.34	0.52
24:14:1568:G:OP2	27:19:63:ARG:NH2	2.43	0.52
24:14:2469:A:H2'	24:14:2470:G:O4'	2.09	0.52
35:35:57:THR:O	35:35:61:ARG:HG2	2.10	0.52
40:85:110:VAL:HG12	40:85:114:LYS:HE2	1.90	0.52
44:C5:27:VAL:HA	44:C5:39:VAL:HG13	1.92	0.52
1:13:757:U:H2'	1:13:758:G:O4'	2.09	0.51
1:13:1107:C:C4	1:13:1108:G:C8	2.98	0.51
3:2E:130:VAL:O	3:2E:134:ILE:HG12	2.10	0.51
3:2E:135:LYS:NZ	5:4E:53:LEU:HD11	2.26	0.51
22:3K:35:QUO:C4	22:3K:35:QUO:C2	2.73	0.51
24:1H:1668:A:OP1	34:68:5:GLN:HG3	2.10	0.51
24:1H:1914:C:H2'	24:1H:1915:U:C6	2.46	0.51
24:1H:1974:C:H3'	57:1H:3968:HOH:O	2.09	0.51
24:1H:2048:G:N7	57:1H:4047:HOH:O	2.34	0.51
24:1H:2115:G:H1'	24:1H:2171:A:N6	2.25	0.51
24:1H:2316:C:H1'	30:41:128:ARG:HH21	1.75	0.51
28:21:50:GLY:HA2	28:21:77:ILE:HA	1.92	0.51
35:78:59:LEU:HD21	53:Q8:10:ALA:HA	1.91	0.51
35:78:91:PHE:O	35:78:121:LYS:NZ	2.40	0.51
54:1G:148:G:N2	54:1G:149:A:C2	2.78	0.51
54:1G:328:C:H4'	54:1G:329:A:H5'	1.92	0.51
54:1G:536:C:OP1	57:1G:1755:HOH:O	2.19	0.51
54:1G:673:G:H2'	54:1G:674:G:C8	2.45	0.51
11:2A:127:LYS:H	11:2A:127:LYS:HD2	1.74	0.51
22:3L:62:G:C5	22:3L:63:5MU:H72	2.45	0.51
24:14:573:G:O2'	24:14:574:C:H3'	2.10	0.51
24:14:1607:C:H4'	24:14:1608:A:O5'	2.09	0.51
24:14:1952:A:C2	34:25:22:ILE:HG23	2.45	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:14:2355:C:H5”	24:14:2356:C:OP2	2.10	0.51
24:14:2562:U:H1’	34:25:23:ARG:NH1	2.24	0.51
27:19:80:ALA:HB3	27:19:94:LEU:HB3	1.92	0.51
29:39:25:PRO:HG3	29:39:119:ARG:HB2	1.92	0.51
32:69:109:ILE:HB	32:69:130:TYR:CZ	2.44	0.51
45:D5:99:TYR:HD2	45:D5:123:ASP:HB2	1.75	0.51
1:13:235:C:H5’	17:8I:70:ARG:HG2	1.92	0.51
17:8I:54:GLY:HA3	17:8I:82:MET:HG2	1.92	0.51
22:2K:15:G:H21	22:2K:20:C:H41	1.56	0.51
24:1H:191:A:H2’	24:1H:192:C:C6	2.45	0.51
24:1H:855:G:H5”	24:1H:856:C:OP2	2.11	0.51
24:1H:1525:G:H2’	24:1H:1526:G:H8	1.74	0.51
24:1H:1653:G:H8	24:1H:1653:G:O5’	1.94	0.51
24:1H:2261:C:O2’	24:1H:2262:U:H5’	2.10	0.51
24:1H:2473:U:O2’	24:1H:2474:C:O4’	2.22	0.51
25:16:73:A:C4	25:16:104:A:C2	2.99	0.51
33:58:14:VAL:HG12	33:58:15:LEU:H	1.75	0.51
40:C8:52:ARG:HA	40:C8:55:ARG:HG3	1.91	0.51
45:H8:137:ILE:HG21	45:H8:155:LEU:HD13	1.91	0.51
54:1G:636:U:H2’	54:1G:637:G:H8	1.74	0.51
3:22:90:GLU:HA	3:22:93:LYS:HB2	1.90	0.51
24:14:192:C:O2’	24:14:802:A:N3	2.38	0.51
24:14:1337:G:H2’	24:14:1338:G:C8	2.45	0.51
27:19:4:LYS:HB3	27:19:18:VAL:HG23	1.91	0.51
33:15:95:PRO:O	33:15:98:VAL:HG22	2.09	0.51
45:D5:73:GLN:H	45:D5:87:ASP:HB2	1.75	0.51
1:13:89:U:O2’	1:13:90:C:H5”	2.11	0.51
1:13:598:U:H4’	8:7E:94:TYR:CD2	2.46	0.51
1:13:1133:G:H2’	1:13:1134:G:O4’	2.10	0.51
1:13:1347:G:N2	1:13:1374:A:OP2	2.40	0.51
14:5I:4:LYS:O	14:5I:7:ILE:HG12	2.10	0.51
16:7I:15:PRO:C	16:7I:16:HIS:HD1	2.11	0.51
22:3K:20:C:H5”	22:3K:68:A:N6	2.24	0.51
24:1H:455:C:N3	24:1H:473:G:H5’	2.25	0.51
24:1H:654(V):A:H2	24:1H:655:A:C2	2.28	0.51
24:1H:1279:G:H4’	37:98:31:HIS:ND1	2.24	0.51
24:1H:2218:G:N7	57:1H:4554:HOH:O	2.34	0.51
24:1H:2679:A:H4’	28:21:165:VAL:HG11	1.93	0.51
24:1H:2758:A:C4	31:51:67:LEU:HD21	2.46	0.51
27:11:75:ILE:H	27:11:75:ILE:HD12	1.76	0.51
32:61:88:ILE:HG22	32:61:90:GLY:N	2.26	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:68:101:PRO:HB3	34:68:122:LEU:CD1	2.39	0.51
39:B8:7:ILE:HG21	39:B8:9:LEU:HB2	1.92	0.51
45:H8:53:ILE:HG22	45:H8:71:VAL:HG22	1.92	0.51
52:P8:8:ASN:OD1	52:P8:8:ASN:C	2.48	0.51
54:1G:575:G:O2'	54:1G:821:G:H5'	2.11	0.51
54:1G:1244:C:H42	54:1G:1293:G:H1	1.58	0.51
54:1G:1319:A:OP1	19:AA:10:PHE:HB3	2.11	0.51
2:12:45:GLN:O	2:12:48:MET:HB3	2.10	0.51
24:14:405:U:O2'	24:14:406:G:OP1	2.23	0.51
24:14:676:A:H8	24:14:2069:G:N2	1.85	0.51
24:14:769:G:H2'	24:14:770:G:H8	1.76	0.51
24:14:1022:G:C6	24:14:1140:C:C4	2.99	0.51
24:14:1538:G:H2'	24:14:1539:G:H8	1.75	0.51
24:14:2733:A:C2	28:29:203:LYS:HA	2.45	0.51
27:19:40:THR:OG1	27:19:41:GLY:N	2.42	0.51
32:69:69:LYS:O	32:69:72:LEU:N	2.43	0.51
40:85:83:LEU:HG	40:85:88:ILE:HD12	1.91	0.51
50:I5:14:ILE:HG22	50:I5:20:ASN:HB3	1.93	0.51
1:13:958:A:OP1	19:AI:79:THR:HG21	2.10	0.51
1:13:1409:C:H2'	1:13:1410:G:H8	1.76	0.51
7:6E:15:ASP:HB3	7:6E:19:GLY:N	2.25	0.51
16:7I:74:LEU:HD22	16:7I:79:VAL:HG21	1.93	0.51
24:1H:1266:G:O5'	42:E8:15:ARG:NH2	2.43	0.51
24:1H:2327:A:H2'	24:1H:2328:A:H8	1.73	0.51
24:1H:2470:G:H5'	36:88:56:ARG:NH2	2.24	0.51
27:11:231:HIS:CD2	27:11:249:PRO:HA	2.46	0.51
29:31:39:TRP:CH2	29:31:106:ARG:HD2	2.45	0.51
54:1G:512:U:H2'	54:1G:513:C:C6	2.45	0.51
54:1G:1070:U:H2'	54:1G:1071:C:H6	1.74	0.51
3:22:50:ALA:HB2	3:22:75:VAL:HB	1.92	0.51
7:62:60:LYS:HD2	7:62:63:LYS:HZ1	1.76	0.51
12:3A:110:VAL:CG2	12:3A:120:TYR:HB3	2.41	0.51
17:8A:57:VAL:HG12	17:8A:76:LEU:HA	1.93	0.51
24:14:363:G:H2'	24:14:363(A):A:C8	2.40	0.51
24:14:874:G:N2	24:14:904:C:C2	2.79	0.51
24:14:1771:C:O2'	24:14:1786:A:H8	1.88	0.51
27:19:24:ILE:HG23	27:19:83:GLU:HA	1.92	0.51
27:19:65:ILE:HD13	27:19:106:ILE:HG13	1.91	0.51
30:49:95:ARG:O	30:49:99:MET:HG2	2.10	0.51
34:25:2:ILE:HD12	34:25:6:THR:HG21	1.93	0.51
38:65:3:ARG:HE	38:65:4:LEU:H	1.57	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:H5:28:LEU:HA	49:H5:33:GLN:OE1	2.10	0.51
1:13:321:A:C2	1:13:333:G:C2	2.98	0.51
1:13:1219:U:H2'	1:13:1220:G:H8	1.74	0.51
1:13:1346:A:H5"	9:8E:120:ARG:NH1	2.25	0.51
3:2E:53:ALA:HB2	3:2E:115:LEU:HD13	1.93	0.51
10:1I:6:ILE:HG22	10:1I:98:ILE:HG23	1.92	0.51
24:1H:484:C:OP1	44:G8:51:VAL:HG22	2.10	0.51
24:1H:760:G:OP1	57:1H:3784:HOH:O	2.18	0.51
24:1H:945:A:OP2	57:1H:4109:HOH:O	2.19	0.51
24:1H:2208:U:O2'	24:1H:2209:C:H5'	2.10	0.51
25:16:40:U:N3	25:16:43:C:H5"	2.25	0.51
28:21:119:ARG:HD2	28:21:120:TRP:CE2	2.45	0.51
31:51:4:ILE:O	31:51:4:ILE:HG12	2.09	0.51
35:78:1:MET:HE3	35:78:1:MET:O	2.09	0.51
44:G8:55:TYR:CZ	44:G8:61:ILE:HD11	2.45	0.51
45:H8:163:LEU:HD23	45:H8:163:LEU:H	1.76	0.51
46:I8:53:MET:HG3	46:I8:59:LEU:CD2	2.41	0.51
54:1G:1402:C:H2'	54:1G:1403:C:O4'	2.11	0.51
10:1A:25:GLU:O	10:1A:29:ARG:HB3	2.10	0.51
22:2L:32:A:H2'	22:2L:33:C:C6	2.45	0.51
24:14:353:G:H2'	24:14:354:G:H8	1.76	0.51
24:14:528:A:O2'	24:14:529:A:H5'	2.10	0.51
24:14:2774:C:H2'	24:14:2775:A:O4'	2.11	0.51
24:14:2880:C:H1'	37:55:92:GLY:HA3	1.91	0.51
57:14:3527:HOH:O	37:55:3:HIS:CD2	2.64	0.51
34:25:11:ALA:HB1	34:25:99:PHE:HB2	1.93	0.51
39:75:3:ARG:HA	39:75:4:GLY:O	2.10	0.51
46:E5:21:LEU:HD21	46:E5:41:ARG:NH2	2.25	0.51
1:13:648:A:H2'	1:13:649:G:C8	2.46	0.51
2:1E:187:LEU:HD23	2:1E:201:ILE:O	2.10	0.51
11:2I:33:THR:OG1	11:2I:34:ASP:O	2.26	0.51
12:3I:11:VAL:HG13	17:8I:29:HIS:CD2	2.46	0.51
15:6I:70:LEU:HD11	15:6I:77:ARG:HG3	1.93	0.51
24:1H:7:G:H1	24:1H:2896:C:H42	1.58	0.51
24:1H:80:G:N7	57:1H:3724:HOH:O	2.34	0.51
24:1H:1113:U:H5'	31:51:2:SER:HB2	1.92	0.51
54:1G:32:A:C2	54:1G:33:A:C4	2.98	0.51
54:1G:1028:C:N3	54:1G:1033:G:N2	2.47	0.51
54:1G:1097:C:O2'	54:1G:1169:A:N3	2.36	0.51
54:1G:1508:G:H2'	54:1G:1509:C:O4'	2.10	0.51
2:12:116:GLU:HG2	2:12:153:ARG:NH2	2.26	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:1A:44:VAL:HG22	10:1A:66:ARG:HB3	1.93	0.51
22:2L:10:C:H41	22:2L:26:G:H1	1.57	0.51
24:14:565:C:H4'	24:14:1253:A:N6	2.26	0.51
24:14:748:G:C8	42:A5:89:ALA:HB1	2.45	0.51
24:14:1146:C:H2'	24:14:1147:C:H6	1.76	0.51
24:14:1630(A):C:H2'	57:14:3553:HOH:O	2.11	0.51
24:14:1956:U:H1'	24:14:2552:U:OP1	2.11	0.51
45:D5:7:ALA:O	45:D5:8:TYR:CG	2.63	0.51
1:13:263:A:OP2	20:BI:79:ARG:NH1	2.44	0.51
1:13:745:C:H2'	1:13:746:A:H8	1.72	0.51
3:2E:13:GLY:CA	14:5I:57:ARG:HE	2.24	0.51
12:3I:6:THR:OG1	12:3I:9:GLN:HG3	2.11	0.51
18:9I:36:ASN:ND2	18:9I:39:VAL:HG21	2.25	0.51
24:1H:1508:A:H4'	24:1H:1509:C:C1'	2.41	0.51
24:1H:1771:C:C1'	24:1H:1786:A:H8	2.24	0.51
24:1H:2388:A:H2'	24:1H:2389:G:H5'	1.92	0.51
24:1H:2442:C:H2'	24:1H:2443:C:C6	2.46	0.51
24:1H:2583:G:OP2	57:1H:3765:HOH:O	2.19	0.51
24:1H:2776:A:H4'	24:1H:2777:G:H5"	1.93	0.51
24:1H:2791:C:H2'	24:1H:2792:G:C8	2.46	0.51
31:51:154:PRO:HB3	31:51:163:TYR:CE2	2.45	0.51
37:98:30:THR:HG22	37:98:31:HIS:CD2	2.46	0.51
43:F8:5:TYR:O	48:K8:36:ARG:NH2	2.44	0.51
54:1G:1109:C:H2'	54:1G:1110:A:O4'	2.10	0.51
3:22:111:LEU:HD22	3:22:146:ALA:HB2	1.93	0.51
15:6A:70:LEU:HD11	15:6A:77:ARG:HG3	1.92	0.51
24:14:26:G:C6	24:14:27:G:N1	2.78	0.51
24:14:620:G:N3	24:14:620:G:H5'	2.26	0.51
24:14:780:G:H21	24:14:783:A:N6	2.00	0.51
24:14:1389:G:H2'	24:14:1390:U:C6	2.46	0.51
24:14:2537:U:H2'	24:14:2538:C:H6	1.75	0.51
24:14:2638:G:O2'	24:14:2639:A:H8	1.94	0.51
27:19:70:TRP:CD1	27:19:70:TRP:C	2.84	0.51
29:39:168:ARG:HG2	29:39:175:THR:HG21	1.93	0.51
32:69:76:THR:HG23	32:69:140:LEU:HD13	1.93	0.51
34:25:73:ASP:OD1	34:25:75:SER:HB3	2.10	0.51
40:85:49:HIS:HA	40:85:52:ARG:HB2	1.93	0.51
1:13:95:G:H3'	1:13:96:G:C8	2.46	0.51
1:13:376:G:H1	1:13:387:U:H3	1.59	0.51
2:1E:208:ILE:HD12	2:1E:209:ARG:H	1.76	0.51
2:1E:214:ILE:HG23	2:1E:215:LEU:HD22	1.91	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:2I:46:GLY:HA2	11:2I:50:TYR:O	2.11	0.51
22:2K:48:C:O2	22:2K:52:G:N2	2.42	0.51
24:1H:1316:U:H2'	24:1H:1317:A:C8	2.45	0.51
24:1H:2271:G:H5"	46:I8:20:ARG:NH1	2.26	0.51
24:1H:2839:G:H5'	37:98:46:GLY:HA2	1.93	0.51
29:31:53:THR:HG23	29:31:56:GLU:OE1	2.11	0.51
30:41:41:GLN:HG2	30:41:155:MET:HB3	1.93	0.51
32:61:84:GLY:N	32:61:89:TYR:HE1	2.09	0.51
33:58:96:GLU:OE1	33:58:96:GLU:N	2.44	0.51
37:98:101:ALA:HA	51:N8:44:THR:HG21	1.93	0.51
54:1G:1086:U:H2'	54:1G:1087:G:O4'	2.11	0.51
10:1A:40:LEU:HD13	10:1A:71:LEU:HB2	1.92	0.51
24:14:71:A:H5'	24:14:71:A:C8	2.46	0.51
24:14:1389:G:H2'	24:14:1390:U:H6	1.75	0.51
24:14:2808:U:H3	24:14:2892:A:H62	1.59	0.51
28:29:128:SER:O	28:29:129:HIS:HB2	2.09	0.51
38:65:62:LYS:O	38:65:65:VAL:HG22	2.11	0.51
1:13:255:G:H2'	1:13:256:U:H6	1.76	0.51
1:13:1239:A:O2'	7:6E:114:ARG:O	2.16	0.51
1:13:1313:U:O4	19:AI:4:SER:HB3	2.10	0.51
24:1H:273(D):C:H2'	24:1H:273(E):U:H6	1.76	0.51
24:1H:739:G:P	57:1H:3934:HOH:O	2.68	0.51
24:1H:924:C:H2'	24:1H:925:C:C6	2.46	0.51
24:1H:1111:A:OP1	31:51:3:ARG:NH1	2.43	0.51
24:1H:1324:G:O6	57:1H:4566:HOH:O	2.17	0.51
24:1H:1512:G:H2'	24:1H:1513:C:C6	2.46	0.51
35:78:30:THR:HG21	35:78:35:HIS:H	1.75	0.51
54:1G:79:G:N2	54:1G:91:C:N3	2.59	0.51
4:32:71:SER:OG	4:32:74:GLN:HG3	2.11	0.51
10:1A:6:ILE:HG23	10:1A:72:VAL:HB	1.91	0.51
12:3A:24:VAL:HG12	12:3A:98:TYR:CE1	2.46	0.51
16:7A:25:ARG:HH11	16:7A:25:ARG:HG3	1.76	0.51
22:2L:8:4SU:O2'	22:2L:22:A:N1	2.40	0.51
22:2L:57:C:H2'	22:2L:68:A:H4'	1.92	0.51
24:14:554:U:O2'	24:14:556:G:N7	2.38	0.51
24:14:1510:A:H3'	24:14:1511:A:H8	1.76	0.51
24:14:1627:G:OP1	57:14:4252:HOH:O	2.20	0.51
24:14:1827:C:OP2	27:19:222:ARG:NH1	2.43	0.51
32:69:77:LEU:HD21	32:69:141:LYS:HD3	1.93	0.51
45:D5:155:LEU:HD12	45:D5:163:LEU:HD13	1.93	0.51
50:I5:25:TYR:O	50:I5:26:SER:OG	2.26	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:13:118:U:H3'	1:13:288:A:H61	1.75	0.51
1:13:649:G:H2'	1:13:650:G:C8	2.41	0.51
1:13:1503:A:O2'	1:13:1504:G:O5'	2.29	0.51
19:AI:5:LEU:HD22	19:AI:70:LYS:HZ1	1.76	0.51
22:3K:37:A:H2'	22:3K:38:MIA:O4'	2.11	0.51
24:1H:7:G:H2'	24:1H:8:A:O4'	2.10	0.51
24:1H:654(D):G:N2	24:1H:654(Q):C:N3	2.44	0.51
24:1H:2329:G:H21	46:I8:41:ARG:HG3	1.76	0.51
24:1H:2388:A:C2'	24:1H:2389:G:H5'	2.41	0.51
25:16:14:U:OP2	25:16:70:C:O2'	2.24	0.51
33:58:103:VAL:HG21	33:58:120:LEU:HD11	1.93	0.51
41:D8:7:THR:HG23	41:D8:12:TYR:HE1	1.74	0.51
41:D8:76:LYS:HG3	41:D8:81:TYR:CD2	2.46	0.51
45:H8:76:LEU:HA	45:H8:83:PRO:HA	1.91	0.51
54:1G:46:G:O2'	54:1G:365:U:H1'	2.11	0.51
54:1G:186(D):C:H2'	54:1G:186(E):C:C6	2.46	0.51
54:1G:422:C:HO2'	54:1G:423:G:N2	2.09	0.51
54:1G:612:C:O2	54:1G:629:G:N2	2.43	0.51
24:14:69:C:H2'	24:14:70:G:H8	1.75	0.51
24:14:270(M):U:H1'	24:14:270(N):G:C6	2.46	0.51
24:14:443:A:H1'	24:14:1201:C:O4'	2.11	0.51
24:14:1570:A:H2'	24:14:1571:A:C8	2.46	0.51
24:14:2017:U:OP1	57:14:3742:HOH:O	2.19	0.51
24:14:2469:A:OP2	24:14:2476:A:N6	2.27	0.51
28:29:55:ASN:O	28:29:57:LYS:N	2.41	0.51
38:65:71:ARG:HD2	38:65:106:ARG:NH2	2.26	0.51
38:65:99:LYS:HE2	38:65:103:GLU:OE1	2.12	0.51
46:E5:29:GLN:O	46:E5:67:VAL:HG23	2.10	0.51
1:13:67:C:H2'	1:13:68:G:H8	1.74	0.50
1:13:178:C:H2'	1:13:179:A:O4'	2.11	0.50
1:13:957:U:H1'	1:13:960:U:C5	2.46	0.50
5:4E:6:PHE:HB3	5:4E:34:VAL:HG13	1.93	0.50
22:3K:51:C:H3'	22:3K:52:G:O4'	2.11	0.50
24:1H:38:A:H2'	24:1H:39:C:C6	2.46	0.50
31:51:137:ASP:OD1	31:51:138:LYS:N	2.38	0.50
37:98:42:LYS:O	37:98:45:ARG:HD2	2.11	0.50
39:B8:55:ASN:H	39:B8:59:THR:HB	1.76	0.50
52:P8:45:ALA:O	52:P8:46:VAL:HB	2.10	0.50
54:1G:553:A:O4'	12:3A:31:PRO:HA	2.11	0.50
54:1G:1145:C:H4'	54:1G:1146:A:H8	1.75	0.50
54:1G:1453:G:H2'	20:BA:39:LYS:NZ	2.26	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:4A:108:ARG:NH1	13:4A:112:GLY:O	2.44	0.50
22:3L:62:G:H3'	22:3L:63:5MU:H71	1.92	0.50
24:14:38:A:H2'	24:14:39:C:C6	2.46	0.50
24:14:2102:U:O2	24:14:2187:G:N2	2.42	0.50
24:14:2124:G:H2'	24:14:2124:G:N3	2.26	0.50
57:14:3493:HOH:O	27:19:228:PRO:O	2.19	0.50
32:69:25:TYR:HE1	32:69:29:TYR:CD2	2.28	0.50
32:69:140:LEU:HD12	32:69:141:LYS:N	2.26	0.50
33:15:21:LYS:O	33:15:60:ILE:HG13	2.11	0.50
46:E5:70:GLN:HE22	46:E5:72:ARG:HD2	1.76	0.50
47:F5:87:PRO:O	47:F5:91:LYS:HB2	2.11	0.50
49:H5:40:THR:HG23	49:H5:43:ILE:HG12	1.92	0.50
1:13:626:U:H2'	1:13:627:G:C8	2.46	0.50
22:2K:71:C:C2	22:2K:72:U:C5	2.99	0.50
24:1H:934:G:H2'	24:1H:935:C:H6	1.76	0.50
24:1H:1065:U:N3	24:1H:1070:A:OP1	2.40	0.50
24:1H:1448:G:O2'	24:1H:1529:A:N1	2.39	0.50
24:1H:1528:A:C2	24:1H:1542:G:C2	2.99	0.50
24:1H:1590:U:H2'	24:1H:1591:G:C8	2.46	0.50
24:1H:1997:G:H5"	57:1H:3991:HOH:O	2.10	0.50
32:61:91:SER:HB3	32:61:121:LYS:HD2	1.93	0.50
36:88:133:ARG:O	36:88:134:ARG:HB2	2.11	0.50
49:L8:7:LYS:HB2	49:L8:34:GLU:HG2	1.93	0.50
54:1G:64:G:H4'	54:1G:65:U:H3'	1.92	0.50
54:1G:573:A:N3	54:1G:883:C:O2'	2.40	0.50
54:1G:861:G:O2'	54:1G:874:G:O2'	2.23	0.50
5:42:92:LYS:HB3	5:42:119:LEU:HB2	1.94	0.50
21:1B:2:GLY:O	21:1B:4:GLY:N	2.44	0.50
24:14:760:G:H2'	24:14:761:A:O4'	2.12	0.50
24:14:1639:U:H4'	24:14:2699:C:H4'	1.93	0.50
24:14:2750:A:H8	24:14:2752:C:H42	1.57	0.50
30:49:82:LEU:HA	30:49:86:MET:SD	2.51	0.50
49:H5:8:LEU:HD11	49:H5:23:LEU:HD13	1.92	0.50
1:13:142:G:H2'	1:13:143:A:C8	2.45	0.50
1:13:642:A:N3	8:7E:113:SER:OG	2.35	0.50
1:13:836:G:OP1	18:9I:61:LYS:NZ	2.45	0.50
2:1E:12:GLU:HB2	2:1E:16:HIS:CG	2.46	0.50
13:4I:10:PRO:HB2	13:4I:18:ALA:HB1	1.92	0.50
24:1H:839:U:O2'	24:1H:1191:G:N3	2.41	0.50
24:1H:1213:A:H1'	24:1H:1238:G:N3	2.26	0.50
24:1H:1525:G:H2'	24:1H:1526:G:C8	2.46	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:1H:2128:C:H2'	24:1H:2129:C:H6	1.77	0.50
24:1H:2721:A:H2'	24:1H:2722:G:O4'	2.11	0.50
25:16:7:G:O5'	38:A8:29:PHE:CE2	2.65	0.50
25:16:100:G:H5"	57:16:220:HOH:O	2.11	0.50
31:51:27:LYS:HA	31:51:32:GLU:HA	1.94	0.50
33:58:90:MET:HG3	33:58:94:HIS:O	2.11	0.50
34:68:47:ILE:HG13	34:68:48:PRO:HD2	1.93	0.50
38:A8:101:LEU:HD12	38:A8:101:LEU:O	2.11	0.50
45:H8:128:VAL:HG11	45:H8:134:PRO:HD2	1.93	0.50
54:1G:977:A:H2'	54:1G:978:A:H5"	1.94	0.50
14:5A:45:ARG:HG3	14:5A:49:HIS:HE1	1.76	0.50
24:14:337:C:H2'	24:14:338:G:O4'	2.11	0.50
24:14:635:C:H2'	24:14:636:G:O4'	2.12	0.50
24:14:1278:A:O3'	37:55:34:ILE:HG13	2.11	0.50
24:14:1341:U:C5	24:14:1395:A:H2	2.30	0.50
24:14:1423:G:H2'	24:14:1424:G:H8	1.76	0.50
25:1J:70:C:H2'	25:1J:71:C:H6	1.76	0.50
29:39:110:LEU:HD12	29:39:202:PHE:CE1	2.46	0.50
38:65:24:LEU:HB2	38:65:85:VAL:HG12	1.94	0.50
45:D5:59:LEU:C	45:D5:61:LEU:H	2.13	0.50
45:D5:105:VAL:HG13	45:D5:106:GLY:H	1.76	0.50
50:I5:21:VAL:HG22	50:I5:22:ILE:H	1.75	0.50
52:L5:12:ARG:NH2	52:L5:44:PRO:HB3	2.26	0.50
1:13:152:A:N6	1:13:170:U:C2	2.80	0.50
1:13:322:C:H5	1:13:328:C:H5	1.58	0.50
1:13:338:A:OP2	34:68:97:ARG:NH2	2.45	0.50
1:13:957:U:O2'	1:13:959:A:N7	2.36	0.50
1:13:1459:C:OP1	20:BI:31:SER:OG	2.16	0.50
1:13:1503:A:O2'	23:4K:13:A:N6	2.44	0.50
7:6E:150:ALA:HB2	11:2I:50:TYR:OH	2.10	0.50
20:BI:10:LEU:HG	20:BI:12:ALA:N	2.27	0.50
24:1H:577:G:O2'	24:1H:1254:A:OP1	2.26	0.50
24:1H:1655:A:H1'	28:21:113:PHE:CD1	2.46	0.50
24:1H:2345:G:N3	24:1H:2381:C:H2'	2.27	0.50
24:1H:2572:A:H5"	24:1H:2574:G:H4'	1.93	0.50
24:1H:2853:C:H2'	24:1H:2854:G:C8	2.45	0.50
27:11:70:TRP:CD1	27:11:70:TRP:C	2.85	0.50
29:31:64:ILE:HG23	29:31:65:TRP:NE1	2.27	0.50
31:51:129:THR:O	31:51:129:THR:OG1	2.29	0.50
47:J8:73:LEU:HD21	47:J8:95:LEU:HD23	1.94	0.50
54:1G:125:U:H2'	54:1G:126:G:C8	2.47	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:1G:1122:U:N3	54:1G:1123:A:N7	2.59	0.50
54:1G:1366:C:H2'	54:1G:1367:C:C6	2.46	0.50
54:1G:1442:G:O2'	54:1G:1443:G:OP1	2.25	0.50
4:32:175:SER:HB3	4:32:186:LEU:HD11	1.92	0.50
17:8A:59:ILE:CG2	17:8A:71:PHE:HB3	2.41	0.50
20:BA:16:HIS:O	20:BA:19:SER:OG	2.28	0.50
24:14:389:G:H22	35:35:72:PRO:HD3	1.76	0.50
24:14:529:A:H4'	24:14:530:G:H5'	1.92	0.50
24:14:801:G:OP2	57:14:3954:HOH:O	2.19	0.50
24:14:1113:U:OP1	31:59:3:ARG:HG3	2.10	0.50
24:14:2147:G:C2	24:14:2148:G:H1'	2.47	0.50
24:14:2749:A:O4'	31:59:63:SER:HA	2.11	0.50
27:19:43:ARG:HD2	27:19:49:ILE:HB	1.93	0.50
35:35:14:LYS:HG2	35:35:15:ARG:H	1.75	0.50
39:75:92:GLY:HA2	39:75:117:ASP:H	1.75	0.50
39:75:107:ASP:C	39:75:111:ARG:NH1	2.64	0.50
41:95:21:ARG:HD3	41:95:91:TYR:CG	2.45	0.50
1:13:413:G:H2'	1:13:428:G:N2	2.26	0.50
1:13:1418:A:C2	1:13:1483:A:C2	3.00	0.50
3:2E:123:GLN:O	3:2E:128:PHE:HB2	2.11	0.50
4:3E:150:GLU:HA	4:3E:153:ARG:HG2	1.94	0.50
16:7I:43:LYS:HG3	16:7I:48:TRP:CE3	2.47	0.50
22:3K:62:G:C5	22:3K:63:5MU:H72	2.46	0.50
24:1H:155:C:H42	24:1H:171:G:H1	1.60	0.50
24:1H:931:G:C4	24:1H:933:A:C8	2.99	0.50
24:1H:945:A:N7	57:1H:3822:HOH:O	2.35	0.50
24:1H:1053:C:N4	24:1H:1106:G:H1	2.08	0.50
24:1H:1267:U:O3'	57:1H:3600:HOH:O	2.19	0.50
24:1H:1313:U:H4'	24:1H:1332:G:H4'	1.93	0.50
24:1H:2111:C:H5	24:1H:2147:G:H22	1.60	0.50
57:1H:3633:HOH:O	27:11:228:PRO:O	2.20	0.50
39:B8:2:ASN:HB3	39:B8:5:ALA:H	1.76	0.50
47:J8:8:SER:HB3	47:J8:66:HIS:CD2	2.47	0.50
48:K8:31:GLU:HB2	48:K8:53:LEU:HD11	1.93	0.50
54:1G:1442:G:N7	54:1G:1446:A:N1	2.59	0.50
14:5A:23:ARG:HB2	14:5A:28:GLY:O	2.11	0.50
17:8A:45:HIS:O	17:8A:73:VAL:HG12	2.12	0.50
18:9A:84:LYS:H	18:9A:84:LYS:HD3	1.76	0.50
24:14:1142:U:H5"	24:14:1142(A):A:H5'	1.93	0.50
24:14:1299:G:H5'	24:14:1301:A:O4'	2.11	0.50
28:29:120:TRP:CG	28:29:155:LYS:HB3	2.47	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:39:102:PRO:HB2	29:39:105:VAL:HG23	1.94	0.50
31:59:107:VAL:HG11	31:59:152:ARG:HB3	1.94	0.50
39:75:74:ARG:HD3	39:75:76:PHE:CZ	2.47	0.50
1:13:186(F):C:H2'	1:13:187:C:O4'	2.11	0.50
9:8E:4:TYR:HB2	9:8E:19:LEU:HB2	1.93	0.50
9:8E:33:PHE:CE2	9:8E:47:LEU:HD12	2.47	0.50
22:2K:22:A:H2'	22:2K:22:A:N3	2.25	0.50
22:2K:48:C:N4	22:2K:52:G:O6	2.40	0.50
24:1H:1771:C:C1'	24:1H:1786:A:C8	2.94	0.50
24:1H:2313:C:H4'	30:41:91:ARG:HG3	1.93	0.50
24:1H:2387:U:OP1	46:I8:55:ARG:NH1	2.28	0.50
25:16:31:C:H4'	30:41:29:TRP:HH2	1.76	0.50
28:21:84:PHE:CE2	28:21:86:PRO:HG3	2.47	0.50
31:51:144:VAL:O	31:51:148:ILE:HG12	2.11	0.50
34:68:107:ARG:NH1	39:B8:36:GLU:HG2	2.27	0.50
45:H8:35:ARG:HB3	45:H8:35:ARG:HH11	1.76	0.50
49:L8:23:LEU:H	49:L8:23:LEU:HD12	1.76	0.50
54:1G:352:C:P	57:1G:1777:HOH:O	2.68	0.50
54:1G:1513:A:H2'	54:1G:1514:C:C6	2.47	0.50
3:22:78:GLY:HA3	3:22:79:ARG:NH2	2.27	0.50
4:32:18:LYS:CE	4:32:26:CYS:HB3	2.41	0.50
24:14:249:C:P	57:14:3506:HOH:O	2.70	0.50
24:14:1540:G:H2'	24:14:1541:U:O4'	2.12	0.50
24:14:2688:U:H1'	24:14:2721:A:H61	1.76	0.50
42:A5:14:PRO:O	42:A5:18:ARG:HG3	2.11	0.50
1:13:77:C:H2'	1:13:78:G:C8	2.47	0.50
1:13:960:U:N3	1:13:1225:A:H1'	2.27	0.50
1:13:1260:C:H4'	1:13:1284:C:H5'	1.94	0.50
1:13:1292:U:H2'	1:13:1293:G:C8	2.46	0.50
10:1I:13:HIS:HB3	10:1I:68:HIS:CD2	2.47	0.50
16:7I:36:ILE:O	16:7I:36:ILE:HG13	2.11	0.50
24:1H:395:U:H1'	24:1H:396:G:N7	2.26	0.50
24:1H:606:U:H4'	24:1H:658:C:H4'	1.93	0.50
24:1H:998:C:P	40:C8:92:ARG:HH22	2.35	0.50
24:1H:1176:G:H3'	24:1H:1177:A:C8	2.47	0.50
24:1H:1409:C:H42	24:1H:1593:G:H1	1.60	0.50
24:1H:2171:A:H2'	24:1H:2172:U:O4'	2.12	0.50
24:1H:2212:A:H1'	24:1H:2215:G:C4	2.47	0.50
24:1H:2341:G:H2'	24:1H:2342:C:C6	2.47	0.50
24:1H:2533:A:H2'	24:1H:2534:A:O4'	2.10	0.50
25:16:110:G:C6	25:16:111:U:C4	3.00	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:21:165:VAL:O	28:21:189:PRO:HG2	2.12	0.50
29:31:108:LYS:O	29:31:112:MET:HG3	2.11	0.50
30:41:12:TYR:HD1	30:41:16:ARG:HD2	1.77	0.50
30:41:138:GLN:HE22	30:41:152:LEU:HA	1.77	0.50
37:98:57:ARG:HB3	37:98:59:ASP:OD1	2.11	0.50
41:D8:7:THR:HG23	41:D8:12:TYR:CE1	2.46	0.50
54:1G:618:C:H5'	54:1G:619:U:H5"	1.93	0.50
54:1G:811:C:H5"	54:1G:898:G:H4'	1.94	0.50
54:1G:986:A:O2'	19:AA:55:LYS:HA	2.11	0.50
54:1G:998:G:N2	54:1G:1043:C:O2	2.44	0.50
54:1G:1369:C:H2'	54:1G:1370:G:O4'	2.12	0.50
2:12:5:ILE:HA	2:12:221:LEU:HD13	1.91	0.50
24:14:458:G:O2'	24:14:469:G:O6	2.23	0.50
24:14:565:C:H4'	24:14:1253:A:C6	2.47	0.50
24:14:586:A:H5'	29:39:89:VAL:HG21	1.94	0.50
24:14:774:A:H2	24:14:787:U:HO2'	1.58	0.50
24:14:849:A:H5"	24:14:850:C:OP2	2.11	0.50
24:14:2355:C:H1'	46:E5:39:ARG:HH21	1.76	0.50
32:69:87:LYS:HE3	32:69:87:LYS:H	1.76	0.50
45:D5:163:LEU:HD23	45:D5:163:LEU:H	1.77	0.50
1:13:434:U:H2'	1:13:435:C:C6	2.47	0.50
1:13:600:C:H2'	1:13:601:C:C6	2.47	0.50
1:13:1432:G:OP1	39:B8:107:ASP:HB2	2.11	0.50
2:1E:164:VAL:HB	2:1E:186:ALA:HB1	1.94	0.50
11:2I:125:PHE:CD1	11:2I:125:PHE:N	2.79	0.50
13:4I:89:GLY:HA2	13:4I:92:HIS:HD2	1.77	0.50
22:2K:76:C:H2'	22:2K:77:C:C6	2.47	0.50
24:1H:234:C:H2'	24:1H:235:U:H6	1.77	0.50
24:1H:314:A:H2'	24:1H:315:G:H5'	1.93	0.50
24:1H:483:A:O4'	44:G8:48:ALA:HB1	2.12	0.50
24:1H:1021:A:H61	24:1H:1142(A):A:N6	2.10	0.50
24:1H:1298:C:H5"	24:1H:1299:G:OP2	2.11	0.50
24:1H:1405:U:H2'	24:1H:1406:U:C6	2.45	0.50
24:1H:1778:U:P	57:1H:3938:HOH:O	2.69	0.50
24:1H:2275:C:H5'	24:1H:2275:C:H6	1.77	0.50
24:1H:2287:A:N6	24:1H:2344:U:N3	2.59	0.50
24:1H:2655:G:N2	24:1H:2665:A:OP2	2.44	0.50
54:1G:280:C:H3'	54:1G:281:G:H5'	1.93	0.50
54:1G:281:G:H8	54:1G:281:G:OP2	1.94	0.50
54:1G:440:A:H8	54:1G:440:A:OP2	1.95	0.50
54:1G:716:A:N3	11:2A:118:GLY:HA2	2.27	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:1G:938:A:N6	54:1G:939:G:C6	2.80	0.50
3:22:5:ILE:HD11	10:1A:51:ARG:NH1	2.27	0.50
3:22:54:ARG:HB2	3:22:69:HIS:ND1	2.27	0.50
7:62:24:THR:HA	7:62:27:ILE:HD12	1.93	0.50
24:14:686:G:H1	52:L5:16:HIS:CD2	2.30	0.50
24:14:829:A:N7	24:14:2248:C:H5'	2.27	0.50
24:14:2790:A:H3'	24:14:2791:C:H5'	1.94	0.50
35:35:59:LEU:HD23	53:M5:57:ARG:HE	1.76	0.50
1:13:186:C:O2'	20:BI:85:MET:SD	2.56	0.50
1:13:940:C:H2'	1:13:941:G:C8	2.46	0.50
1:13:1005:A:H1'	1:13:1036:G:H22	1.77	0.50
2:1E:233:SER:HB2	2:1E:234:PRO:HD2	1.93	0.50
12:3I:77:LEU:HD21	12:3I:107:ALA:HB2	1.93	0.50
16:7I:9:PHE:CZ	16:7I:18:ARG:HD2	2.47	0.50
24:1H:500:G:N2	24:1H:502:A:H3'	2.27	0.50
24:1H:1899:G:N2	24:1H:1902:C:H5	2.10	0.50
24:1H:2287:A:C2	24:1H:2289:G:C8	3.00	0.50
24:1H:2774:C:H2'	24:1H:2775:A:O4'	2.12	0.50
31:51:6:ARG:HA	31:51:66:GLY:HA2	1.93	0.50
33:58:103:VAL:O	33:58:106:MET:N	2.35	0.50
46:I8:18:ALA:HB3	46:I8:20:ARG:HH11	1.76	0.50
54:1G:674:G:H2'	54:1G:675:A:H8	1.77	0.50
54:1G:1048:G:O4'	54:1G:1215:G:H4'	2.12	0.50
16:7A:58:TYR:O	16:7A:62:VAL:HG22	2.11	0.50
24:14:297:C:H4'	44:C5:86:ARG:HD2	1.94	0.50
24:14:654(F):C:O2	24:14:654(P):G:N2	2.45	0.50
24:14:765:G:H2'	24:14:766:C:C6	2.47	0.50
24:14:1016:G:H2'	24:14:1017:G:H8	1.77	0.50
27:19:31:LYS:HD2	27:19:32:SER:N	2.23	0.50
28:29:201:THR:HB	28:29:203:LYS:HZ1	1.76	0.50
36:45:136:ALA:HB1	45:D5:48:PHE:CE1	2.47	0.50
39:75:11:GLU:HA	39:75:15:VAL:HG13	1.93	0.50
46:E5:27:GLU:HG3	46:E5:68:GLU:HA	1.94	0.50
1:13:811:C:H4'	1:13:900:A:N6	2.27	0.49
1:13:1134:G:H1	1:13:1140:C:H42	1.60	0.49
12:3I:24:VAL:HB	12:3I:27:LEU:HD12	1.94	0.49
17:8I:76:LEU:HD21	17:8I:79:SER:OG	2.12	0.49
19:AI:50:ALA:HA	19:AI:58:VAL:O	2.12	0.49
24:1H:412:A:H5"	24:1H:413:C:OP2	2.12	0.49
24:1H:1359:A:C2	24:1H:1372:U:O4	2.65	0.49
24:1H:1570:A:H2'	24:1H:1571:A:C8	2.47	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:1H:1638:C:H5”	24:1H:2710:C:O2’	2.11	0.49
27:11:69:ARG:HD3	27:11:105:ILE:HD11	1.93	0.49
30:41:114:ILE:HG22	30:41:117:PHE:HB2	1.94	0.49
39:B8:51:ARG:HG3	39:B8:98:LYS:HE3	1.94	0.49
42:E8:92:ARG:NH1	42:E8:94:ASP:OD1	2.45	0.49
44:G8:82:PRO:CG	44:G8:97:ARG:HD2	2.40	0.49
45:H8:17:ALA:HA	45:H8:20:ARG:HD2	1.94	0.49
54:1G:11:G:C5	54:1G:12:U:C5	3.00	0.49
54:1G:552:U:H4’	12:3A:86:ARG:HG2	1.92	0.49
54:1G:1073:U:H2’	54:1G:1074:G:C8	2.47	0.49
54:1G:1326:C:OP1	21:1B:17:THR:OG1	2.17	0.49
54:1G:1347:G:C8	9:82:107:ARG:HB3	2.46	0.49
54:1G:1365:G:H2’	54:1G:1366:C:C6	2.46	0.49
14:5A:12:ARG:HH22	14:5A:14:PRO:HG3	1.77	0.49
19:AA:48:THR:HG22	19:AA:61:TYR:HB2	1.93	0.49
19:AA:66:MET:HB3	19:AA:69:HIS:CD2	2.47	0.49
24:14:9:U:H2’	24:14:10:G:C8	2.47	0.49
24:14:248:G:OP1	57:14:4140:HOH:O	2.19	0.49
24:14:303:U:H2’	24:14:304:G:C8	2.47	0.49
24:14:602:G:OP2	24:14:602:G:H8	1.95	0.49
24:14:673:C:H5”	29:39:81:PRO:HD2	1.94	0.49
24:14:1568:G:H21	27:19:58:HIS:HE1	1.60	0.49
24:14:1885:A:H2’	24:14:1886:C:O4’	2.11	0.49
24:14:1926:U:H2’	24:14:1928:A:OP2	2.12	0.49
24:14:2750:A:H8	24:14:2752:C:N4	2.10	0.49
31:59:35:VAL:HB	31:59:71:LEU:HD21	1.94	0.49
34:25:115:VAL:HG12	34:25:121:VAL:HG21	1.93	0.49
36:45:75:THR:HG21	36:45:87:LYS:HE3	1.93	0.49
1:13:624:C:H4’	16:7I:11:SER:N	2.27	0.49
2:1E:155:LEU:HD22	2:1E:159:PRO:HD3	1.93	0.49
3:2E:135:LYS:HZ2	5:4E:53:LEU:HD11	1.77	0.49
4:3E:15:GLU:OE1	4:3E:66:ARG:NH1	2.45	0.49
9:8E:33:PHE:HE2	9:8E:47:LEU:HD12	1.77	0.49
13:4I:107:ALA:O	13:4I:110:ARG:N	2.45	0.49
24:1H:277:C:H3’	24:1H:278:A:O4’	2.12	0.49
24:1H:370:G:H4’	24:1H:371:A:OP2	2.12	0.49
24:1H:414:C:H2’	24:1H:415:A:C8	2.47	0.49
24:1H:433:C:H2’	24:1H:434:U:C6	2.47	0.49
24:1H:844:C:H2’	24:1H:845:G:O4’	2.12	0.49
24:1H:1062:G:N1	24:1H:1076:C:O2	2.44	0.49
24:1H:1171:G:N7	24:1H:1174:A:N6	2.60	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:1H:2271:G:H5"	46:I8:20:ARG:HH11	1.76	0.49
24:1H:2690:C:H5"	24:1H:2872:G:N2	2.28	0.49
24:1H:2789:C:H1'	24:1H:2892:A:H2	1.77	0.49
24:1H:2854:G:H2'	24:1H:2855:C:C6	2.47	0.49
44:G8:87:LYS:H	44:G8:94:LYS:HB3	1.77	0.49
54:1G:295:C:H2'	54:1G:296:U:O4'	2.11	0.49
54:1G:1011:G:H22	54:1G:1018:C:H42	1.58	0.49
2:12:103:THR:HG23	2:12:176:GLU:OE1	2.11	0.49
14:5A:40:CYS:N	14:5A:43:CYS:HB2	2.26	0.49
17:8A:6:LEU:HD13	17:8A:23:VAL:HG21	1.93	0.49
24:14:1146:C:C2'	24:14:1147:C:H5'	2.42	0.49
24:14:1404:C:C2'	24:14:1405:U:H5'	2.42	0.49
24:14:2298:A:H2'	24:14:2299:G:O4'	2.12	0.49
27:19:64:ILE:O	27:19:64:ILE:HG12	2.12	0.49
29:39:80:ALA:O	29:39:83:PHE:HB2	2.12	0.49
36:45:26:TYR:OH	36:45:141:GLN:HB2	2.11	0.49
48:G5:10:LEU:O	48:G5:14:ARG:HB2	2.12	0.49
1:13:1404:C:H6	1:13:1404:C:O5'	1.95	0.49
2:1E:230:VAL:HG12	2:1E:231:GLU:H	1.77	0.49
3:2E:119:ARG:HD3	3:2E:140:ARG:NH2	2.28	0.49
17:8I:86:GLU:O	17:8I:90:ILE:HG13	2.12	0.49
24:1H:988:A:H8	24:1H:988:A:O5'	1.95	0.49
24:1H:1403:C:H5"	24:1H:1471:A:C1'	2.41	0.49
28:21:1:MET:N	28:21:83:ASP:O	2.41	0.49
29:31:101:LEU:O	29:31:106:ARG:NH1	2.43	0.49
30:41:138:GLN:O	30:41:144:ILE:HG13	2.11	0.49
32:61:86:THR:HA	32:61:123:LEU:HD12	1.93	0.49
44:G8:20:TYR:CE2	44:G8:43:ASN:HA	2.47	0.49
54:1G:625:G:C6	54:1G:626:U:C4	3.00	0.49
54:1G:922:G:N3	54:1G:1398:A:H2	2.10	0.49
54:1G:1288:A:H4'	21:1B:13:ILE:HD13	1.95	0.49
13:4A:48:LEU:HD11	13:4A:53:VAL:HG22	1.93	0.49
18:9A:73:ALA:HB3	18:9A:79:LEU:HD12	1.93	0.49
19:AA:80:TYR:CZ	19:AA:82:GLY:HA2	2.48	0.49
24:14:314:A:H2'	24:14:315:G:C8	2.46	0.49
24:14:764:A:O4'	27:19:213:ARG:HG3	2.12	0.49
24:14:994:C:H3'	40:85:54:LYS:HE3	1.94	0.49
24:14:1167:U:C2	24:14:1183:G:N2	2.80	0.49
30:49:66:GLN:NE2	30:49:93:THR:O	2.46	0.49
31:59:158:HIS:O	31:59:158:HIS:ND1	2.42	0.49
32:69:123:LEU:HD22	32:69:143:SER:HA	1.94	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:F5:86:SER:N	47:F5:87:PRO:HD2	2.27	0.49
1:13:393:A:OP2	16:7I:12:LYS:NZ	2.31	0.49
1:13:960:U:H3	1:13:1225:A:H1'	1.76	0.49
1:13:1120:G:H2'	1:13:1121:U:C6	2.47	0.49
4:3E:59:ARG:HH21	4:3E:66:ARG:HH12	1.60	0.49
7:6E:15:ASP:OD1	7:6E:44:TYR:OH	2.29	0.49
10:1I:47:PHE:CE2	14:5I:37:PHE:HE2	2.29	0.49
11:2I:27:ASN:ND2	11:2I:55:LYS:HD2	2.27	0.49
24:1H:527:C:OP2	24:1H:2779:U:H5	1.96	0.49
24:1H:861:A:N3	25:16:79:C:O2'	2.43	0.49
24:1H:1408:C:C2	24:1H:1595:G:N2	2.80	0.49
24:1H:1517:G:H2'	24:1H:1518:C:H6	1.76	0.49
24:1H:2211:G:H4'	24:1H:2212:A:OP2	2.11	0.49
46:I8:36:ILE:HD11	46:I8:39:ARG:HG2	1.94	0.49
51:N8:56:LYS:HE3	51:N8:58:LEU:HG	1.93	0.49
54:1G:346:G:N2	54:1G:347:G:C8	2.81	0.49
54:1G:438:G:OP1	4:32:125:HIS:HE1	1.95	0.49
54:1G:960:U:N3	54:1G:1225:A:C4	2.80	0.49
54:1G:1127:G:H21	54:1G:1147:C:H5	1.60	0.49
9:82:16:ARG:O	9:82:63:ILE:HG23	2.12	0.49
24:14:1486:A:H2'	24:14:1487:G:H8	1.78	0.49
24:14:2165:G:O2'	24:14:2166:G:H5'	2.12	0.49
25:1J:24:G:H21	25:1J:27:C:H42	1.58	0.49
27:19:92:ILE:HD12	27:19:104:TYR:CD1	2.47	0.49
29:39:167:ALA:HB1	29:39:173:VAL:HG11	1.95	0.49
44:C5:17:SER:HB2	44:C5:71:LYS:HD2	1.93	0.49
1:13:630:G:H2'	1:13:631:G:O4'	2.12	0.49
1:13:716:A:N3	11:2I:118:GLY:HA2	2.27	0.49
1:13:953:G:H2'	1:13:954:G:O4'	2.12	0.49
2:1E:30:ARG:HG3	2:1E:31:TYR:CD1	2.47	0.49
22:2K:18:G:N2	22:2K:66:G:H1'	2.26	0.49
24:1H:1375:C:H2'	24:1H:1376:C:H6	1.78	0.49
24:1H:1388:G:H2'	24:1H:1389:G:C8	2.47	0.49
24:1H:1705:G:C2'	24:1H:1706:U:H5'	2.42	0.49
38:A8:11:LYS:HD2	38:A8:15:ARG:CZ	2.42	0.49
53:Q8:33:ASN:ND2	53:Q8:33:ASN:O	2.45	0.49
54:1G:247:G:OP2	17:8A:100:LYS:N	2.44	0.49
54:1G:503:C:OP2	12:3A:116:SER:OG	2.15	0.49
54:1G:1349:A:P	9:82:118:LYS:HZ3	2.35	0.49
3:22:134:ILE:O	3:22:137:ALA:N	2.40	0.49
24:14:71:A:H2	43:B5:31:HIS:NE2	2.11	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:14:747:U:O2	24:14:2014:A:H1'	2.11	0.49
24:14:811:U:H2'	35:35:21:ARG:HA	1.94	0.49
24:14:1588:C:H5'	24:14:1589:C:OP2	2.12	0.49
24:14:2062:A:P	57:14:3857:HOH:O	2.64	0.49
24:14:2608:G:H5"	24:14:2609:U:OP1	2.12	0.49
29:39:143:ALA:HB1	29:39:148:LEU:HB2	1.94	0.49
34:25:7:TYR:HE1	34:25:20:MET:HE3	1.78	0.49
36:45:66:ILE:O	36:45:67:ARG:HB2	2.12	0.49
37:55:78:LYS:O	37:55:82:GLU:HB3	2.12	0.49
45:D5:30:ASN:HB3	45:D5:33:LEU:H	1.77	0.49
53:M5:34:TRP:CD1	53:M5:34:TRP:C	2.86	0.49
1:13:838:G:OP2	1:13:842:C:N4	2.46	0.49
2:1E:223:ILE:HA	2:1E:226:ARG:HG2	1.93	0.49
6:5E:70:ASP:OD1	6:5E:70:ASP:N	2.44	0.49
8:7E:51:VAL:HG21	8:7E:60:ARG:HD2	1.94	0.49
13:4I:65:LYS:HE3	13:4I:69:GLU:HG2	1.95	0.49
16:7I:20:VAL:HG21	16:7I:32:TYR:CD2	2.47	0.49
24:1H:298:G:C5	57:1H:4137:HOH:O	2.66	0.49
24:1H:725:G:C6	24:1H:726:G:N1	2.81	0.49
24:1H:787:U:OP2	57:1H:3884:HOH:O	2.20	0.49
24:1H:1047:G:HO2'	24:1H:1048:A:H8	1.57	0.49
28:21:119:ARG:HB3	28:21:120:TRP:CD1	2.47	0.49
54:1G:111:G:H8	54:1G:111:G:O5'	1.95	0.49
54:1G:542:G:H5'	4:32:41:GLY:HA3	1.94	0.49
54:1G:785:G:N2	54:1G:798:G:C4	2.81	0.49
13:4A:73:GLU:O	13:4A:77:ASN:HB2	2.12	0.49
24:14:972:G:OP2	24:14:973:A:O2'	2.16	0.49
24:14:1433:U:O2	24:14:1561:G:C2	2.66	0.49
24:14:2607:G:H2'	24:14:2608:G:O4'	2.12	0.49
28:29:9:VAL:HG13	39:75:3:ARG:HD3	1.95	0.49
30:49:18:GLU:O	30:49:22:ARG:HG2	2.12	0.49
30:49:43:LEU:H	30:49:89:GLY:HA2	1.77	0.49
33:15:120:LEU:HG	33:15:122:VAL:HG23	1.94	0.49
34:25:101:PRO:HG3	39:75:67:SER:OG	2.12	0.49
36:45:38:GLU:HB2	36:45:127:ILE:HG22	1.95	0.49
46:E5:26:TYR:HB2	46:E5:29:GLN:OE1	2.13	0.49
47:F5:12:PRO:HB3	47:F5:43:TYR:HD1	1.77	0.49
1:13:109:A:C6	1:13:326:G:C6	3.01	0.49
1:13:148:G:H2'	1:13:149:A:C8	2.44	0.49
1:13:671:G:C2	1:13:672:U:C2	3.00	0.49
1:13:1023:G:H3'	1:13:1024:G:C5'	2.42	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:3K:47:U:H2'	22:3K:48:C:C6	2.48	0.49
24:1H:974(A):C:OP1	57:1H:4175:HOH:O	2.20	0.49
24:1H:1278:A:OP1	37:98:36:THR:HG22	2.13	0.49
24:1H:1292:U:H2'	24:1H:1293:C:C6	2.48	0.49
24:1H:2227:A:OP1	27:11:263:ARG:HD2	2.13	0.49
27:11:25:THR:CG2	27:11:82:ILE:H	2.25	0.49
29:31:40:GLN:NE2	29:31:184:TYR:HB3	2.27	0.49
38:A8:36:TYR:N	38:A8:36:TYR:HD1	2.09	0.49
54:1G:89:U:O2'	54:1G:90:C:O5'	2.25	0.49
3:22:20:SER:HB3	3:22:22:TRP:NE1	2.25	0.49
4:32:94:LEU:O	4:32:97:LEU:N	2.44	0.49
4:32:188:LEU:HD23	4:32:189:PRO:HD2	1.94	0.49
24:14:616:A:C8	29:39:176:LEU:HD11	2.47	0.49
24:14:1252:G:O4'	40:85:33:ARG:HD2	2.12	0.49
24:14:1915:U:H2'	24:14:1916:A:O4'	2.11	0.49
24:14:2335:A:C8	24:14:2337:G:N7	2.81	0.49
24:14:2479:G:H2'	24:14:2480:C:O4'	2.12	0.49
24:14:2521:C:O2'	24:14:2564:A:N3	2.39	0.49
25:1J:15:A:H1'	25:1J:109:G:N9	2.28	0.49
33:15:111:PRO:HA	33:15:114:ARG:NH1	2.28	0.49
35:35:111:ARG:HG2	35:35:128:HIS:CD2	2.47	0.49
36:45:37:LEU:HD21	36:45:130:LYS:HB2	1.94	0.49
45:D5:138:GLU:HG2	45:D5:156:LYS:HE2	1.94	0.49
50:I5:16:CYS:SG	50:I5:36:CYS:HB2	2.53	0.49
1:13:510:A:H8	57:13:1748:HOH:O	1.95	0.49
1:13:956:U:C2	1:13:1225:A:C2	3.01	0.49
4:3E:14:ARG:HB2	4:3E:40:PRO:CD	2.42	0.49
5:4E:72:GLN:O	5:4E:75:THR:HG22	2.11	0.49
5:4E:87:SER:HB3	5:4E:125:SER:O	2.12	0.49
6:5E:19:LEU:HD23	6:5E:23:LYS:HZ2	1.78	0.49
7:6E:113:GLU:CG	7:6E:119:ARG:HG2	2.43	0.49
9:8E:118:LYS:O	9:8E:119:ALA:HB3	2.13	0.49
22:3K:26:G:H2'	22:3K:27:A:C8	2.48	0.49
24:1H:2629:A:OP1	24:1H:2629:A:H4'	2.11	0.49
24:1H:2636:U:OP1	28:21:79:ARG:HA	2.12	0.49
24:1H:2791:C:H2'	24:1H:2792:G:H8	1.77	0.49
24:1H:2794:C:OP2	24:1H:2797:U:H4'	2.13	0.49
30:41:16:ARG:O	30:41:20:ILE:HG13	2.13	0.49
30:41:68:PRO:HA	30:41:92:VAL:HB	1.95	0.49
30:41:119:GLY:HA2	50:M8:43:TYR:HE2	1.78	0.49
41:D8:27:ALA:HB1	41:D8:61:VAL:HG21	1.95	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:D8:44:LYS:C	41:D8:46:VAL:H	2.15	0.49
44:G8:93:GLY:O	44:G8:94:LYS:HB2	2.12	0.49
45:H8:141:VAL:HB	45:H8:144:LEU:HG	1.95	0.49
46:I8:42:GLY:C	46:I8:57:PHE:HD2	2.16	0.49
54:1G:142:G:H2'	54:1G:143:A:H8	1.77	0.49
54:1G:983:A:H2	54:1G:984:C:C6	2.30	0.49
8:72:6:ILE:O	8:72:10:LEU:HG	2.13	0.49
19:AA:63:THR:HG23	19:AA:65:ASN:O	2.12	0.49
24:14:67:U:H2'	24:14:68:G:H8	1.78	0.49
25:1J:3:C:H2'	25:1J:4:C:C6	2.47	0.49
29:39:116:ASP:OD2	35:35:1:MET:HB2	2.12	0.49
29:39:148:LEU:HD11	29:39:193:VAL:HG21	1.94	0.49
31:59:35:VAL:HG11	31:59:71:LEU:HD11	1.95	0.49
34:25:68:GLU:OE2	34:25:78:ARG:NH1	2.45	0.49
50:I5:21:VAL:HG22	50:I5:22:ILE:HG13	1.94	0.49
1:13:580:U:H2'	1:13:581:G:O4'	2.13	0.49
1:13:871:U:OP1	57:13:1831:HOH:O	2.20	0.49
1:13:1165:C:H2'	1:13:1166:G:O4'	2.12	0.49
24:1H:1317:A:H2'	24:1H:1318:C:H6	1.77	0.49
24:1H:1516:U:C2	24:1H:1517:G:C8	3.00	0.49
24:1H:2094:G:P	32:61:22:LYS:HD2	2.53	0.49
24:1H:2517:C:C2	24:1H:2542:A:N6	2.81	0.49
24:1H:2518:A:H5'	24:1H:2518:A:C8	2.47	0.49
25:16:80:U:H2'	25:16:81:G:H21	1.77	0.49
26:71:181:PRO:HD2	26:71:184:LYS:HB2	1.94	0.49
28:21:66:HIS:CG	28:21:67:PHE:N	2.81	0.49
33:58:134:ARG:O	33:58:136:GLU:N	2.45	0.49
35:78:39:LYS:CD	35:78:45:LEU:HD21	2.41	0.49
35:78:60:MET:HA	53:Q8:13:ARG:NH1	2.28	0.49
45:H8:48:PHE:CE1	45:H8:71:VAL:HG21	2.48	0.49
48:K8:55:ARG:O	48:K8:58:ALA:HB3	2.12	0.49
54:1G:197:A:H1'	54:1G:198:G:O4'	2.13	0.49
54:1G:1096:C:H2'	54:1G:1097:C:H6	1.77	0.49
7:62:95:ARG:NH2	7:62:99:LEU:HD21	2.28	0.49
24:14:180:G:OP2	52:L5:32:LYS:HE2	2.13	0.49
24:14:273(C):C:N3	24:14:363(C):G:N2	2.53	0.49
24:14:324:A:H2'	24:14:325:G:O4'	2.12	0.49
24:14:586:A:P	57:14:3512:HOH:O	2.70	0.49
24:14:1198:U:H2'	24:14:1199:U:H6	1.77	0.49
24:14:1845:G:OP1	27:19:258:LYS:NZ	2.35	0.49
24:14:2017:U:O2	51:J5:10:LYS:HB2	2.13	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:14:2233:U:H2'	24:14:2234:G:C8	2.47	0.49
24:14:2659:G:O2'	24:14:2661:G:N7	2.25	0.49
25:1J:48:A:H4'	38:65:95:HIS:CD2	2.38	0.49
27:19:108:PRO:HG2	27:19:111:LEU:HB2	1.94	0.49
32:69:85:GLU:OE1	32:69:86:THR:HG22	2.13	0.49
45:D5:127:LYS:HB3	45:D5:162:GLU:HB3	1.94	0.49
1:13:853:G:O6	57:13:1830:HOH:O	2.20	0.49
1:13:1037:C:H2'	1:13:1038:C:C6	2.48	0.49
22:2K:17:OMG:O2'	22:2K:66:G:N2	2.45	0.49
24:1H:382:G:H1	24:1H:392:C:H42	1.59	0.49
24:1H:451:C:N4	24:1H:454:A:OP2	2.31	0.49
24:1H:642:G:H21	24:1H:646:A:H2	1.60	0.49
24:1H:1039:G:H1	24:1H:1116:C:H42	1.61	0.49
24:1H:1094:U:O2'	24:1H:1096:A:OP1	2.27	0.49
24:1H:2154:G:H2'	24:1H:2155:G:C8	2.43	0.49
24:1H:2438:U:O3'	24:1H:2439:A:H3'	2.13	0.49
24:1H:2531:A:H5'	31:51:157:TYR:CZ	2.48	0.49
24:1H:2555:U:C5	24:1H:2556:C:C2	3.01	0.49
25:16:90:C:H5'	36:88:18:LYS:HA	1.94	0.49
27:11:85:ASP:OD1	27:11:86:PRO:HD2	2.13	0.49
31:51:102:ALA:HA	31:51:117:PRO:HD3	1.95	0.49
32:61:41:GLU:OE2	32:61:42:SER:N	2.45	0.49
35:78:90:ARG:HH21	35:78:103:ALA:HB1	1.78	0.49
39:B8:90:GLN:HG3	39:B8:91:ARG:N	2.28	0.49
3:22:159:GLY:HA2	3:22:193:TYR:CE1	2.48	0.49
5:42:75:THR:HG23	5:42:76:ILE:N	2.28	0.49
18:9A:19:LYS:HG2	18:9A:20:ALA:H	1.78	0.49
22:2L:22:A:N6	22:2L:57:C:C2	2.81	0.49
22:3L:85:A:O2'	24:14:2394:C:O2	2.30	0.49
24:14:2757:A:N1	31:59:67:LEU:HD11	2.28	0.49
27:19:12:SER:HB2	27:19:208:LYS:HB3	1.94	0.49
28:29:30:PRO:HD3	28:29:180:ASN:ND2	2.28	0.49
32:69:128:LEU:O	32:69:137:PRO:HA	2.13	0.49
38:65:31:SER:O	38:65:97:ARG:NH2	2.41	0.49
44:C5:17:SER:CB	44:C5:71:LYS:HD2	2.43	0.49
1:13:127:G:N2	17:8I:61:GLU:OE1	2.41	0.48
2:1E:187:LEU:HA	2:1E:201:ILE:HB	1.94	0.48
5:4E:148:VAL:HG21	8:7E:107:LEU:HD22	1.93	0.48
14:5I:2:ALA:HB1	14:5I:6:LEU:HD12	1.95	0.48
22:3K:21:A:N6	22:3K:56:U:O2	2.45	0.48
24:1H:67:U:H2'	24:1H:68:G:H8	1.76	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:1H:274:G:H2'	24:1H:275:G:C1'	2.43	0.48
24:1H:503:A:H4'	24:1H:504:U:H5"	1.95	0.48
24:1H:529:A:H8	24:1H:530:G:C6	2.30	0.48
24:1H:934:G:H2'	24:1H:935:C:C6	2.47	0.48
24:1H:2186:G:H2'	24:1H:2187:G:H8	1.78	0.48
24:1H:2427:C:H5"	24:1H:2428:G:OP1	2.12	0.48
24:1H:2711:A:P	57:1H:3622:HOH:O	2.69	0.48
34:68:37:ASP:O	34:68:61:VAL:HG23	2.13	0.48
35:78:63:PRO:HD3	53:Q8:27:THR:HG22	1.95	0.48
36:88:20:ALA:HB1	36:88:99:PRO:CD	2.42	0.48
39:B8:30:VAL:HG11	39:B8:76:PHE:CE2	2.48	0.48
47:J8:88:LYS:HA	47:J8:90:ILE:HD12	1.95	0.48
54:1G:730:G:C5	54:1G:731:G:H1'	2.48	0.48
54:1G:1189:C:H4'	3:22:10:PHE:HE1	1.78	0.48
6:52:7:ASN:N	6:52:7:ASN:OD1	2.45	0.48
14:5A:45:ARG:O	14:5A:49:HIS:ND1	2.46	0.48
22:3L:42:U:H2'	22:3L:43:G:H8	1.75	0.48
22:3L:85:A:O2'	24:14:2394:C:N3	2.40	0.48
24:14:94:G:N2	48:G5:47:ASN:OD1	2.31	0.48
24:14:879:G:C2	24:14:880:G:H1'	2.48	0.48
24:14:1639:U:P	57:14:3572:HOH:O	2.71	0.48
24:14:2801:A:C8	24:14:2895:U:H4'	2.47	0.48
24:14:2869:G:H2'	24:14:2870:C:O4'	2.12	0.48
29:39:4:VAL:HB	29:39:17:ARG:HH11	1.78	0.48
30:49:80:PHE:HD1	30:49:81:LYS:H	1.61	0.48
36:45:43:THR:OG1	36:45:45:GLN:HG2	2.13	0.48
38:65:7:TYR:HE2	38:65:11:LYS:HZ3	1.60	0.48
41:95:98:GLU:OE1	41:95:100:ARG:NH1	2.45	0.48
42:A5:40:ASN:O	42:A5:41:LYS:HG2	2.13	0.48
46:E5:27:GLU:HB2	46:E5:69:PHE:CD1	2.47	0.48
52:L5:26:GLY:O	52:L5:30:VAL:HG23	2.13	0.48
1:13:108:G:OP2	1:13:326:G:N2	2.44	0.48
1:13:758:G:H8	1:13:758:G:O5'	1.96	0.48
1:13:1014:A:H4'	19:AI:14:HIS:NE2	2.28	0.48
2:1E:167:PRO:HG2	2:1E:192:SER:HB3	1.95	0.48
11:2I:78:GLN:O	11:2I:103:LEU:HA	2.12	0.48
24:1H:248:G:H5"	24:1H:386:G:N2	2.28	0.48
24:1H:1044:G:H4'	24:1H:1048:A:H1'	1.95	0.48
30:41:122:PRO:HB3	30:41:180:PHE:CD1	2.42	0.48
54:1G:997:U:H2'	54:1G:998:G:C8	2.48	0.48
54:1G:1033:G:H2'	54:1G:1034:G:C8	2.48	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:32:162:LEU:HD13	4:32:181:MET:HG2	1.96	0.48
8:72:25:ASP:OD1	8:72:25:ASP:N	2.46	0.48
8:72:33:GLU:HG3	8:72:48:TYR:CE2	2.48	0.48
10:1A:53:PRO:HA	14:5A:42:ILE:HG13	1.95	0.48
24:14:249:C:OP1	57:14:3502:HOH:O	2.20	0.48
24:14:724:U:H2'	24:14:725:G:O4'	2.12	0.48
24:14:1491:G:O2'	27:19:101:GLU:HB2	2.13	0.48
24:14:2789:C:C2	24:14:2894:G:N2	2.81	0.48
24:14:2849:U:O4	39:75:23:ARG:NH2	2.47	0.48
33:15:6:PRO:HB3	33:15:41:ASP:OD1	2.13	0.48
45:D5:11:GLU:O	45:D5:36:LYS:NZ	2.42	0.48
1:13:1023:G:OP2	1:13:1024:G:N2	2.30	0.48
1:13:1085:U:H3'	1:13:1086:U:H5	1.78	0.48
1:13:1270:C:H2'	1:13:1271:G:O4'	2.13	0.48
2:1E:162:ILE:HD11	2:1E:184:VAL:HG22	1.94	0.48
24:1H:273(D):C:H2'	24:1H:273(E):U:C6	2.48	0.48
24:1H:1464:C:HO2'	24:1H:1528:A:H8	1.60	0.48
24:1H:1657:C:H2'	24:1H:1658:C:H6	1.76	0.48
24:1H:2082:A:H2'	24:1H:2083:G:O4'	2.13	0.48
24:1H:2615:U:H2'	24:1H:2616:C:H6	1.77	0.48
28:21:6:GLY:HA2	28:21:51:PHE:CZ	2.48	0.48
32:61:82:ARG:O	32:61:89:TYR:HD1	1.96	0.48
45:H8:75:ASN:O	45:H8:84:GLU:N	2.45	0.48
54:1G:619:U:C4	4:32:135:LEU:HD11	2.48	0.48
54:1G:711:G:OP1	6:52:54:LYS:NZ	2.46	0.48
54:1G:1002:G:H1	54:1G:1037:C:N4	2.10	0.48
54:1G:1129:C:H41	54:1G:1140:C:N4	2.12	0.48
5:42:81:GLU:HA	5:42:89:ILE:O	2.13	0.48
9:82:114:TYR:HE2	10:1A:59:SER:HA	1.78	0.48
9:82:125:TYR:CD1	9:82:126:SER:N	2.80	0.48
20:BA:67:ALA:O	20:BA:73:HIS:ND1	2.46	0.48
24:14:582:G:H2'	24:14:583:G:C8	2.49	0.48
24:14:914:C:N3	24:14:915:C:H1'	2.28	0.48
38:65:23:ARG:NH1	38:65:85:VAL:O	2.46	0.48
40:85:52:ARG:HB3	40:85:52:ARG:NH1	2.28	0.48
1:13:227:G:H2'	1:13:228:A:O4'	2.14	0.48
1:13:652:U:O4	1:13:752:G:O2'	2.16	0.48
1:13:669:U:O2	1:13:670:G:C8	2.66	0.48
2:1E:80:ILE:O	2:1E:84:GLU:HG2	2.13	0.48
2:1E:167:PRO:O	2:1E:171:ALA:N	2.46	0.48
3:2E:32:LEU:HD13	3:2E:59:ARG:HD3	1.95	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:2E:133:ALA:O	3:2E:136:GLN:HG3	2.13	0.48
8:7E:98:LYS:H	8:7E:98:LYS:HG2	1.47	0.48
10:1I:40:LEU:HB2	10:1I:69:ASN:HB2	1.95	0.48
18:9I:70:ILE:HG23	18:9I:79:LEU:HD12	1.95	0.48
20:BI:10:LEU:HD21	20:BI:12:ALA:HB3	1.94	0.48
24:1H:164:U:H5"	24:1H:165:U:C6	2.48	0.48
24:1H:1762[B]:A:N6	57:1H:3693:HOH:O	2.40	0.48
24:1H:1805:U:O2	27:11:50:THR:HB	2.13	0.48
24:1H:2111:C:H5	24:1H:2147:G:N2	2.11	0.48
24:1H:2611:U:C4	51:N8:3:LYS:HG2	2.47	0.48
24:1H:2864:G:OP1	39:B8:119:LYS:HD2	2.12	0.48
26:71:48:GLY:N	26:71:208:PHE:O	2.46	0.48
35:78:19:VAL:HG12	35:78:21:ARG:H	1.77	0.48
54:1G:764:C:H2'	54:1G:765:G:O4'	2.12	0.48
54:1G:1277:C:O2'	54:1G:1279:A:C8	2.67	0.48
5:42:80:ILE:HD13	5:42:138:ALA:HB1	1.95	0.48
13:4A:108:ARG:HG3	13:4A:108:ARG:NH1	2.28	0.48
17:8A:67:LYS:O	17:8A:69:LYS:N	2.46	0.48
24:14:1983:C:H4'	24:14:2606:C:H4'	1.95	0.48
24:14:2150:U:H2'	24:14:2151:G:C8	2.48	0.48
24:14:2340:G:O2'	24:14:2341:G:H5'	2.12	0.48
25:1J:66:A:H61	25:1J:107:U:H2'	1.78	0.48
36:45:67:ARG:NH1	36:45:105:GLU:OE2	2.39	0.48
41:95:59:ALA:HB2	41:95:96:ILE:HD13	1.95	0.48
42:A5:18:ARG:HG2	42:A5:76:VAL:HG13	1.94	0.48
1:13:1167:A:H2'	1:13:1169:A:C8	2.48	0.48
1:13:1493[B]:A:H5"	1:13:1494:G:OP2	2.14	0.48
2:1E:84:GLU:HB3	2:1E:219:VAL:CG2	2.41	0.48
2:1E:180:LEU:C	2:1E:182:ILE:H	2.16	0.48
15:6I:74:ASP:HB3	15:6I:77:ARG:HG2	1.95	0.48
22:2K:27:A:H3'	22:2K:28:G:C8	2.46	0.48
22:3K:35:QUO:H8	22:3K:35:QUO:C5'	2.42	0.48
24:1H:880:G:H1	24:1H:897:C:N4	2.08	0.48
24:1H:1164:G:H2'	24:1H:1165:U:C6	2.47	0.48
24:1H:2281:C:O2'	24:1H:2282:G:H5'	2.14	0.48
25:16:27:C:O3'	38:A8:36:TYR:OH	2.31	0.48
27:11:108:PRO:HG3	27:11:143:HIS:CE1	2.49	0.48
28:21:46:ALA:HB2	28:21:82:ARG:HA	1.95	0.48
31:51:4:ILE:C	31:51:6:ARG:H	2.16	0.48
35:78:46:LYS:O	35:78:47:ASP:HB3	2.14	0.48
39:B8:19:LEU:HD22	39:B8:86:ILE:HG23	1.95	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:D8:25:LEU:HD11	41:D8:94:LEU:HD11	1.95	0.48
42:E8:83:LYS:O	42:E8:84:ARG:HD3	2.12	0.48
43:F8:27:THR:HG23	43:F8:80:ILE:HB	1.96	0.48
48:K8:64:LEU:O	48:K8:68:ARG:HG3	2.13	0.48
54:1G:197:A:C8	54:1G:198:G:H1'	2.49	0.48
54:1G:1176:A:H2'	54:1G:1177:G:O4'	2.14	0.48
54:1G:1510:U:H2'	54:1G:1511:G:C8	2.48	0.48
4:32:8:VAL:HG13	4:32:21:LEU:HD12	1.96	0.48
22:3L:13:G:H1'	22:3L:23:A:H61	1.78	0.48
24:14:486:C:O2'	42:A5:60:ASN:ND2	2.47	0.48
24:14:732:C:H3'	57:14:4303:HOH:O	2.13	0.48
24:14:851:U:OP1	49:H5:49:LYS:HE2	2.14	0.48
24:14:1138:G:H5"	24:14:1139:G:OP2	2.13	0.48
24:14:1798:U:H5'	27:19:259:THR:OG1	2.13	0.48
37:55:79:LEU:HA	37:55:83:ILE:HB	1.96	0.48
40:85:58:ARG:HA	40:85:61:TRP:CE3	2.49	0.48
45:D5:19:ARG:NE	45:D5:84:GLU:OE2	2.47	0.48
46:E5:23:VAL:HG22	46:E5:38:VAL:HG22	1.95	0.48
47:F5:53:VAL:HG22	47:F5:74:VAL:HG13	1.96	0.48
50:I5:18:CYS:N	50:I5:19:GLY:HA2	2.27	0.48
51:J5:56:LYS:HZ1	51:J5:58:LEU:HD12	1.78	0.48
1:13:346:G:N2	1:13:347:G:C4	2.80	0.48
1:13:1151:A:H2'	1:13:1152:A:C8	2.49	0.48
6:5E:41:GLU:HG2	6:5E:43:LEU:CD1	2.43	0.48
13:4I:84:ILE:HG21	19:AI:65:ASN:HB2	1.96	0.48
15:6I:17:ARG:HH11	15:6I:17:ARG:HG3	1.78	0.48
24:1H:307:G:N2	24:1H:310:A:O5'	2.44	0.48
24:1H:325:G:O2'	24:1H:326:G:H5'	2.14	0.48
24:1H:654(C):G:N2	24:1H:654(R):C:O2	2.44	0.48
24:1H:2330:G:H2'	24:1H:2331:G:O4'	2.13	0.48
24:1H:2575:C:H2'	24:1H:2578:G:O6	2.14	0.48
24:1H:2591:C:OP1	27:11:239:ARG:HG3	2.13	0.48
44:G8:78:ALA:HB3	44:G8:79:CYS:SG	2.54	0.48
54:1G:69:G:C2	54:1G:73:G:C8	3.02	0.48
54:1G:187:C:H2'	54:1G:188:U:O4'	2.13	0.48
54:1G:1025:U:H2'	54:1G:1026:G:C8	2.48	0.48
54:1G:1497:G:H2'	54:1G:1498:U:H5'	1.96	0.48
7:62:74:GLU:HG2	7:62:91:VAL:HG22	1.94	0.48
18:9A:41:LYS:O	18:9A:41:LYS:HD3	2.13	0.48
22:3L:18:G:N1	24:14:2169:A:N1	2.57	0.48
24:14:55:G:H2'	24:14:56:A:H8	1.78	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:14:139:G:N3	24:14:141:A:N1	2.62	0.48
24:14:761:A:C5	57:14:4299:HOH:O	2.63	0.48
24:14:1011:G:C2	24:14:1151:G:C2	3.01	0.48
24:14:1542:G:O5'	24:14:1543:A:H5"	2.13	0.48
24:14:2016:U:H1'	51:J5:6:VAL:HG13	1.95	0.48
24:14:2096:U:H2'	24:14:2097:C:C6	2.48	0.48
24:14:2762:G:H5'	24:14:2763:G:OP2	2.14	0.48
25:1J:3:C:H2'	25:1J:4:C:H6	1.79	0.48
28:29:106:GLY:HA3	28:29:189:PRO:HB2	1.95	0.48
35:35:65:ARG:HH22	53:M5:15:LYS:HB2	1.78	0.48
40:85:92:ARG:CZ	41:95:11:GLN:H	2.26	0.48
41:95:16:PRO:HA	41:95:96:ILE:CG2	2.44	0.48
50:I5:14:ILE:HG23	50:I5:33:VAL:HG11	1.96	0.48
1:13:1298:C:H2'	7:6E:114:ARG:NH2	2.28	0.48
1:13:1309:G:C6	1:13:1329:A:C2	3.02	0.48
16:7I:28:ARG:HG3	16:7I:29:ASP:N	2.28	0.48
19:AI:40:ILE:HG12	19:AI:41:VAL:N	2.29	0.48
24:1H:1388:G:H2'	24:1H:1389:G:H8	1.79	0.48
24:1H:1424:G:H2'	24:1H:1425:G:O4'	2.14	0.48
24:1H:2724:C:OP1	28:21:118:LYS:HE3	2.13	0.48
30:41:12:TYR:HA	30:41:16:ARG:HG3	1.95	0.48
30:41:37:VAL:HG22	30:41:159:VAL:HG12	1.96	0.48
39:B8:56:GLY:O	39:B8:59:THR:HG22	2.14	0.48
41:D8:3:ALA:HB1	41:D8:38:LEU:HD11	1.95	0.48
54:1G:619:U:C2	4:32:135:LEU:HD21	2.48	0.48
54:1G:1046:A:H3'	54:1G:1047:G:H8	1.78	0.48
54:1G:1279:A:O2'	54:1G:1282:C:N4	2.47	0.48
4:32:61:LYS:CB	4:32:203:VAL:HG13	2.42	0.48
10:1A:48:THR:CA	10:1A:62:HIS:HB3	2.36	0.48
10:1A:65:LEU:HD12	14:5A:55:GLY:O	2.13	0.48
16:7A:34:GLU:OE2	16:7A:55:ARG:HD3	2.13	0.48
24:14:96:G:H4'	48:G5:48:HIS:CD2	2.48	0.48
24:14:336:C:OP1	44:C5:83:THR:HG23	2.13	0.48
24:14:1171:G:O2'	24:14:1173:G:O4'	2.27	0.48
24:14:1470:G:N2	24:14:1522:G:OP2	2.46	0.48
24:14:2115:G:O2'	24:14:2165:G:N2	2.47	0.48
24:14:2427:C:H5"	24:14:2428:G:OP1	2.13	0.48
24:14:2751:G:N2	31:59:2:SER:O	2.46	0.48
28:29:31:CYS:HB2	28:29:91:VAL:HG23	1.96	0.48
29:39:74:ARG:O	29:39:74:ARG:HG2	2.11	0.48
35:35:59:LEU:HD21	53:M5:10:ALA:HA	1.95	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:65:19:LYS:O	38:65:20:ARG:HB2	2.13	0.48
38:65:66:ALA:HA	38:65:69:VAL:HG12	1.94	0.48
40:85:87:GLY:O	41:95:50:PRO:HD3	2.14	0.48
42:A5:84:ARG:HG3	42:A5:98:LYS:HZ2	1.78	0.48
46:E5:72:ARG:HE	46:E5:75:LEU:HD12	1.79	0.48
1:13:350:G:H2'	1:13:351:G:C8	2.48	0.48
1:13:640:A:N3	8:7E:115:SER:OG	2.36	0.48
12:3I:55:VAL:HG12	12:3I:69:TYR:HA	1.95	0.48
19:AI:51:VAL:HG13	19:AI:58:VAL:HG13	1.95	0.48
24:1H:77:C:H5"	48:K8:10:LEU:HD11	1.95	0.48
24:1H:176:G:C2'	24:1H:177:G:H5'	2.43	0.48
24:1H:722:A:C2	24:1H:723:G:C4	3.01	0.48
24:1H:960:A:C8	24:1H:962:G:C8	3.02	0.48
24:1H:969:U:O3'	49:L8:14:GLY:HA2	2.14	0.48
24:1H:1336:A:OP2	43:F8:64:LYS:NZ	2.42	0.48
24:1H:1341:U:OP1	24:1H:1397:U:N3	2.39	0.48
24:1H:1355:G:OP1	27:11:38:LYS:NZ	2.42	0.48
24:1H:1526:G:H2'	24:1H:1527:G:O4'	2.14	0.48
24:1H:1665:A:H4'	34:68:67:LYS:HB2	1.96	0.48
24:1H:1997:G:P	57:1H:3991:HOH:O	2.72	0.48
24:1H:2035:G:H5"	57:1H:3740:HOH:O	2.13	0.48
25:16:50:G:OP1	38:A8:63:THR:HG23	2.14	0.48
27:11:134:ARG:HG3	27:11:135:PHE:CE1	2.48	0.48
28:21:79:ARG:HH21	28:21:195:LEU:HD22	1.79	0.48
30:41:53:LEU:HD22	30:41:87:PRO:HG3	1.95	0.48
39:B8:26:ASP:OD2	39:B8:120:ARG:NH1	2.41	0.48
43:F8:11:PRO:HD3	48:K8:37:PHE:CD2	2.48	0.48
44:G8:6:HIS:HE1	44:G8:69:ALA:O	1.97	0.48
46:I8:57:PHE:N	46:I8:57:PHE:HD1	2.12	0.48
54:1G:913:A:H1'	54:1G:914:A:O4'	2.13	0.48
54:1G:974:A:P	14:5A:41:ARG:HH12	2.36	0.48
54:1G:978:A:H61	54:1G:1316:G:H1'	1.79	0.48
54:1G:986:A:O2'	19:AA:55:LYS:HD2	2.13	0.48
54:1G:1124:G:H2'	54:1G:1145:C:C4	2.48	0.48
54:1G:1189:C:H4'	3:22:10:PHE:CE1	2.48	0.48
3:22:22:TRP:HA	10:1A:93:GLY:HA3	1.95	0.48
3:22:29:TYR:OH	14:5A:54:PRO:HD2	2.14	0.48
4:32:119:GLN:O	4:32:123:HIS:HD2	1.96	0.48
9:82:40:LEU:HD12	9:82:40:LEU:O	2.14	0.48
11:2A:17:GLY:O	11:2A:80:VAL:HA	2.13	0.48
14:5A:12:ARG:NH2	14:5A:14:PRO:HG3	2.29	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:14:1154:G:P	40:85:58:ARG:HE	2.37	0.48
24:14:2074:U:P	57:14:3494:HOH:O	2.72	0.48
25:1J:103:U:O2'	45:D5:72:ARG:HG3	2.14	0.48
28:29:63:LEU:HD22	28:29:63:LEU:HA	1.52	0.48
31:59:94:TYR:N	31:59:94:TYR:CD1	2.79	0.48
32:69:114:LEU:O	32:69:114:LEU:HD23	2.13	0.48
32:69:118:LYS:HD2	32:69:119:PRO:HD2	1.94	0.48
43:B5:50:LYS:HG2	43:B5:84:ALA:HB2	1.96	0.48
1:13:108:G:OP2	1:13:326:G:N1	2.39	0.48
1:13:130:A:C8	17:8I:63:ARG:HB2	2.49	0.48
1:13:468:A:H4'	16:7I:80:PHE:O	2.13	0.48
1:13:659:U:H2'	1:13:660:G:H8	1.78	0.48
1:13:784:C:H2'	1:13:785:G:C8	2.49	0.48
1:13:865:A:H2	1:13:918:A:H4'	1.79	0.48
1:13:1333:A:C8	1:13:1334:G:C8	3.01	0.48
2:1E:195:ASP:OD1	2:1E:195:ASP:N	2.46	0.48
9:8E:71:SER:HA	9:8E:74:ILE:HG13	1.96	0.48
13:4I:39:ILE:HD12	13:4I:56:LEU:HD22	1.94	0.48
24:1H:30:G:H2'	24:1H:31:C:C6	2.49	0.48
24:1H:33:U:H4'	24:1H:34:C:OP1	2.13	0.48
24:1H:882:G:H1'	24:1H:883:G:N7	2.28	0.48
24:1H:979:G:N7	57:1H:3761:HOH:O	2.35	0.48
24:1H:1188:U:C4'	41:D8:79:VAL:HG22	2.43	0.48
24:1H:1810:A:H2'	24:1H:1811:G:O4'	2.14	0.48
24:1H:2119:A:N1	24:1H:2170:A:N6	2.62	0.48
24:1H:2698:U:H2'	24:1H:2699:C:C6	2.49	0.48
32:61:75:LEU:HD11	32:61:105:HIS:CD2	2.49	0.48
35:78:45:LEU:HD22	35:78:45:LEU:N	2.29	0.48
54:1G:1393:U:HO2'	54:1G:1501:C:HO2'	1.60	0.48
15:6A:5:LYS:O	15:6A:9:GLN:HG2	2.14	0.48
22:3L:31:G:H2'	22:3L:32:A:C8	2.48	0.48
24:14:118:A:N3	24:14:178:G:H1'	2.28	0.48
24:14:673:C:H4'	29:39:82:ILE:HG12	1.96	0.48
24:14:881:G:C2	24:14:882:G:H1'	2.49	0.48
24:14:1161:C:H1'	41:95:8:GLY:O	2.13	0.48
24:14:2273:A:H2'	24:14:2274:A:C8	2.48	0.48
24:14:2885:C:N3	24:14:2886:G:H1'	2.29	0.48
26:79:52:ARG:HE	26:79:167:LYS:HB2	1.78	0.48
30:49:37:VAL:HG22	30:49:159:VAL:HG12	1.95	0.48
30:49:47:LYS:HG2	30:49:48:GLU:H	1.78	0.48
31:59:102:ALA:HB1	31:59:115:VAL:O	2.14	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:15:48:MET:HE2	33:15:48:MET:HB3	1.78	0.48
40:85:92:ARG:NH1	41:95:11:GLN:O	2.47	0.48
46:E5:25:ARG:HG3	46:E5:29:GLN:NE2	2.29	0.48
1:13:606:G:O2'	1:13:632:A:N6	2.45	0.48
1:13:1489:G:H2'	1:13:1490:C:O4'	2.14	0.48
5:4E:139:LEU:HA	5:4E:142:LEU:HD12	1.94	0.48
22:3K:14:A:H2'	22:3K:14:A:N3	2.29	0.48
24:1H:906:G:OP1	36:88:26:TYR:OH	2.23	0.48
24:1H:2186:G:H2'	24:1H:2187:G:C8	2.49	0.48
25:16:83:G:C6	25:16:84:C:C5	3.02	0.48
35:78:90:ARG:HH22	35:78:105:LEU:HD21	1.78	0.48
37:98:33:ARG:NH1	51:N8:57:VAL:HG22	2.29	0.48
46:I8:57:PHE:N	46:I8:57:PHE:CD1	2.81	0.48
54:1G:222:U:H2'	54:1G:223:U:C6	2.49	0.48
54:1G:308:C:H2'	54:1G:309:G:C8	2.49	0.48
54:1G:449:C:H6	16:7A:42:ARG:HD2	1.79	0.48
12:3A:55:VAL:HG23	12:3A:69:TYR:HA	1.94	0.48
15:6A:15:PHE:CZ	15:6A:84:LYS:HG2	2.48	0.48
24:14:464:U:H2'	24:14:465:G:O4'	2.13	0.48
24:14:522:G:H2'	24:14:523:C:C6	2.49	0.48
24:14:616:A:C5	29:39:180:GLY:HA3	2.49	0.48
24:14:817:C:H2'	24:14:818:G:H8	1.79	0.48
24:14:863:A:H2'	24:14:864:G:H8	1.79	0.48
24:14:1441:G:H2'	24:14:1442:G:C8	2.47	0.48
24:14:2341:G:H2'	24:14:2342:C:C6	2.49	0.48
38:65:83:LYS:HB3	38:65:109:GLY:H	1.79	0.48
40:85:66:ASN:HD21	40:85:70:ARG:HE	1.62	0.48
53:M5:59:LYS:HE3	53:M5:59:LYS:HB2	1.49	0.48
1:13:503:C:OP2	12:3I:116:SER:OG	2.22	0.47
1:13:523:A:H61	12:3I:92:ASP:HB2	1.79	0.47
1:13:1505:G:OP1	57:13:1730:HOH:O	2.20	0.47
11:2I:85:ARG:HA	11:2I:112:THR:OG1	2.13	0.47
24:1H:527:C:H4'	24:1H:528:A:O5'	2.14	0.47
24:1H:1726:G:C6	24:1H:1727:U:C4	3.02	0.47
24:1H:2224:G:H4'	24:1H:2226:C:C2	2.49	0.47
24:1H:2419:U:O4	53:Q8:31:HIS:CD2	2.66	0.47
27:11:8:PRO:CB	27:11:14:ARG:HB3	2.40	0.47
34:68:76:ALA:HB3	39:B8:75:ILE:HD13	1.96	0.47
45:H8:53:ILE:HA	45:H8:71:VAL:HG13	1.96	0.47
54:1G:448:A:H2'	54:1G:449:C:O2	2.14	0.47
54:1G:857:C:H2'	54:1G:858:G:O4'	2.14	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:1G:980:C:H5'	54:1G:981:U:OP2	2.13	0.47
54:1G:1327:C:H2'	54:1G:1328:C:C6	2.49	0.47
4:32:30:LYS:HA	4:32:31:CYS:CB	2.41	0.47
6:52:96:PRO:HB3	18:9A:30:ASP:CG	2.34	0.47
24:14:303:U:H2'	24:14:304:G:H8	1.79	0.47
24:14:705:A:H2'	24:14:706:A:O4'	2.13	0.47
24:14:2377:A:O3'	38:65:111:GLU:HG2	2.14	0.47
25:1J:89:G:C6	25:1J:89(A):A:C6	3.02	0.47
27:19:124:PRO:HG2	27:19:129:ASN:ND2	2.28	0.47
52:L5:47:ARG:HH11	52:L5:47:ARG:HG3	1.78	0.47
53:M5:29:LYS:HB2	53:M5:44:LYS:HB3	1.95	0.47
1:13:1124:G:N2	1:13:1125:U:H3	2.08	0.47
1:13:1228:C:H2'	1:13:1229:A:H8	1.79	0.47
1:13:1239:A:O2'	1:13:1298:C:N4	2.44	0.47
1:13:1399:C:C2	1:13:1502:A:N6	2.83	0.47
2:1E:55:PHE:CD2	2:1E:58:ILE:HD12	2.49	0.47
9:8E:47:LEU:HD13	9:8E:47:LEU:H	1.79	0.47
22:2K:59:A:C2'	22:2K:60:A:H5'	2.44	0.47
24:1H:49:A:N7	24:1H:120:U:C5	2.63	0.47
24:1H:1448:G:N2	24:1H:1449:A:N6	2.62	0.47
24:1H:1510:A:H2'	24:1H:1510:A:N3	2.29	0.47
24:1H:2298:A:H2'	24:1H:2299:G:O4'	2.13	0.47
24:1H:2887:U:H2'	24:1H:2888:C:C6	2.45	0.47
27:11:3:VAL:HG12	27:11:17:THR:HG23	1.96	0.47
29:31:122:LYS:HD2	29:31:191:ARG:HG2	1.96	0.47
31:51:115:VAL:HG11	31:51:148:ILE:HD11	1.96	0.47
31:51:154:PRO:HB3	31:51:163:TYR:CZ	2.49	0.47
33:58:26:LEU:O	33:58:30:ILE:HG13	2.13	0.47
39:B8:2:ASN:HB3	39:B8:4:GLY:N	2.24	0.47
46:I8:50:ASN:HB3	46:I8:63:VAL:HG22	1.97	0.47
54:1G:443:C:H42	54:1G:491:G:H1	1.61	0.47
54:1G:1305:G:O2'	54:1G:1306:A:H8	1.97	0.47
5:42:51:VAL:O	5:42:55:VAL:HG23	2.14	0.47
13:4A:3:ARG:HE	13:4A:9:ILE:HD11	1.79	0.47
17:8A:62:SER:OG	17:8A:63:ARG:N	2.47	0.47
24:14:195:A:H2'	24:14:198:C:N4	2.28	0.47
24:14:271(B):G:N7	24:14:421:U:H2'	2.29	0.47
24:14:1114:G:H2'	24:14:1115:G:C8	2.48	0.47
24:14:1247:A:OP1	29:39:95:ARG:NH2	2.45	0.47
24:14:1311:G:O2'	52:L5:47:ARG:NH2	2.46	0.47
24:14:1408:C:C2	24:14:1595:G:N2	2.82	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:14:2335:A:N7	24:14:2337:G:C5	2.82	0.47
27:19:245:PRO:HA	27:19:246:PRO:HD3	1.74	0.47
38:65:103:GLU:O	38:65:106:ARG:HG2	2.14	0.47
44:C5:81:LYS:HB2	44:C5:99:CYS:SG	2.54	0.47
1:13:265:G:H5"	17:8I:65:ILE:O	2.15	0.47
1:13:323:U:O3'	20:BI:22:ARG:HD3	2.14	0.47
1:13:784:C:H2'	1:13:785:G:H8	1.79	0.47
1:13:1202:G:H1'	14:5I:29:ARG:HD2	1.96	0.47
1:13:1372:U:H5"	9:8E:71:SER:HB3	1.97	0.47
2:1E:14:GLY:N	2:1E:16:HIS:CE1	2.82	0.47
4:3E:22:LYS:HB2	4:3E:26:CYS:SG	2.55	0.47
4:3E:23:GLY:HA2	4:3E:112:VAL:HG22	1.96	0.47
7:6E:113:GLU:HG3	7:6E:119:ARG:HG2	1.96	0.47
22:3K:25:G:H2'	22:3K:26:G:C8	2.49	0.47
22:3K:63:5MU:H2'	22:3K:64:PSU:H5"	1.97	0.47
24:1H:763:G:O2'	24:1H:764:A:H3'	2.14	0.47
24:1H:787:U:P	57:1H:3880:HOH:O	2.70	0.47
24:1H:2094:G:OP1	32:61:22:LYS:HD2	2.14	0.47
24:1H:2199:A:H3'	24:1H:2205:C:H6	1.79	0.47
24:1H:2636:U:H2'	24:1H:2637:U:C6	2.49	0.47
25:16:78:A:H2'	25:16:79:C:O4'	2.15	0.47
27:11:106:ILE:HD11	27:11:196:VAL:HG22	1.95	0.47
30:41:135:LEU:HD23	30:41:140:ILE:HD11	1.94	0.47
30:41:150:ASP:OD1	30:41:153:ARG:NH2	2.48	0.47
38:A8:18:ILE:O	38:A8:21:THR:HG22	2.14	0.47
38:A8:35:ILE:HG22	38:A8:97:ARG:HH21	1.79	0.47
54:1G:149:A:H2'	54:1G:150:C:C6	2.48	0.47
54:1G:542:G:N2	54:1G:543:C:C2	2.82	0.47
54:1G:1129:C:C2	54:1G:1139:G:C6	3.02	0.47
16:7A:58:TYR:O	16:7A:61:SER:HB3	2.14	0.47
24:14:185:U:H4'	24:14:218:A:H4'	1.96	0.47
24:14:1110:G:H2'	24:14:1111:A:C8	2.47	0.47
24:14:1794:U:H2'	24:14:1795:C:H6	1.79	0.47
27:19:76:PRO:HB2	27:19:116:GLN:NE2	2.28	0.47
28:29:67:PHE:H	28:29:70:ALA:HB3	1.78	0.47
28:29:183:LEU:HD21	39:75:9:LEU:HD21	1.95	0.47
31:59:27:LYS:HA	31:59:27:LYS:HD2	1.70	0.47
36:45:43:THR:HA	36:45:94:VAL:HG12	1.96	0.47
37:55:57:ARG:HH21	37:55:62:ALA:HB2	1.79	0.47
39:75:74:ARG:HG2	39:75:74:ARG:HH11	1.79	0.47
41:95:81:TYR:HD1	41:95:83:ARG:NH1	2.12	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:C5:42:VAL:O	44:C5:65:ALA:N	2.36	0.47
1:13:881:G:H2'	1:13:882:C:O4'	2.15	0.47
1:13:1128:C:C5'	9:8E:16:ARG:HH22	2.28	0.47
2:1E:15:VAL:HG22	2:1E:209:ARG:HB2	1.96	0.47
3:2E:50:ALA:HB1	3:2E:70:VAL:HG11	1.96	0.47
6:5E:50:TYR:CZ	18:9I:77:GLY:HA2	2.50	0.47
11:2I:124:LYS:HB3	11:2I:125:PHE:CE1	2.48	0.47
24:1H:1662:C:O2'	24:1H:2687:U:H5"	2.14	0.47
24:1H:1731:G:OP2	24:1H:1731:G:H8	1.97	0.47
24:1H:1916:A:H2'	24:1H:1917:U:O4'	2.14	0.47
24:1H:2238:G:H2'	24:1H:2238:G:N3	2.28	0.47
24:1H:2408:U:O2'	24:1H:2409:G:H5'	2.13	0.47
24:1H:2863:C:H2'	24:1H:2864:G:C8	2.49	0.47
28:21:50:GLY:HA3	28:21:74:PRO:HG3	1.97	0.47
28:21:52:LEU:O	28:21:75:VAL:HG22	2.14	0.47
30:41:145:THR:O	30:41:146:TYR:HB3	2.14	0.47
32:61:110:ASP:HB3	32:61:112:LYS:N	2.29	0.47
39:B8:1:MET:N	39:B8:2:ASN:HA	2.27	0.47
45:H8:165:VAL:HB	45:H8:166:SER:H	1.49	0.47
54:1G:620:C:H2'	54:1G:621:A:O4'	2.15	0.47
54:1G:804:U:H5"	54:1G:805:C:OP2	2.14	0.47
54:1G:1136:U:H5"	54:1G:1137:C:C5	2.49	0.47
54:1G:1360:A:C4	14:5A:18:VAL:HG11	2.50	0.47
4:32:154:ASN:OD1	4:32:154:ASN:N	2.48	0.47
19:AA:41:VAL:HB	19:AA:42:PRO:HD2	1.97	0.47
20:BA:53:LEU:HD12	20:BA:101:GLY:HA3	1.96	0.47
22:3L:38:MIA:H2'	22:3L:39:A:O4'	2.14	0.47
24:14:446:G:OP2	57:14:3901:HOH:O	2.20	0.47
24:14:485:C:H42	24:14:495:G:H1	1.62	0.47
24:14:610:C:H2'	24:14:611:C:C6	2.50	0.47
24:14:1028:A:N6	24:14:1125:G:H2'	2.29	0.47
26:79:32:LEU:HD13	26:79:220:PRO:HD2	1.97	0.47
30:49:95:ARG:O	30:49:99:MET:N	2.42	0.47
31:59:83:TYR:OH	31:59:132:ARG:NH2	2.47	0.47
32:69:8:PRO:HD3	32:69:15:VAL:HG22	1.95	0.47
39:75:106:SER:HA	39:75:110:ILE:CD1	2.45	0.47
42:A5:59:VAL:HG12	42:A5:60:ASN:OD1	2.14	0.47
1:13:838:G:H1	1:13:848:C:H42	1.62	0.47
2:1E:21:ARG:C	2:1E:23:ARG:H	2.18	0.47
2:1E:30:ARG:HG3	2:1E:31:TYR:CE1	2.50	0.47
4:3E:108:LEU:HB3	4:3E:110:PHE:HD1	1.80	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:8I:67:LYS:HA	17:8I:70:ARG:HH12	1.80	0.47
17:8I:74:LEU:HD23	17:8I:74:LEU:HA	1.68	0.47
24:1H:558:G:P	33:58:111:PRO:HD2	2.54	0.47
24:1H:747:U:O2	24:1H:2014:A:H1'	2.14	0.47
24:1H:2478:A:C8	24:1H:2529:G:H2'	2.50	0.47
35:78:37:GLY:HA2	35:78:41:ARG:NH2	2.30	0.47
36:88:36:ALA:O	36:88:99:PRO:HA	2.14	0.47
38:A8:35:ILE:HD11	38:A8:101:LEU:HD22	1.97	0.47
41:D8:79:VAL:HG13	41:D8:81:TYR:HB3	1.95	0.47
54:1G:7:G:H21	5:42:121:LYS:HG2	1.79	0.47
54:1G:135:C:O2	16:7A:1:MET:HB3	2.15	0.47
54:1G:448:A:H62	54:1G:486:U:H3	1.61	0.47
54:1G:1440:C:O2'	54:1G:1442:G:N2	2.48	0.47
2:12:8:LYS:HG2	2:12:217:ARG:NE	2.30	0.47
4:32:108:LEU:HD13	4:32:174:LEU:HD13	1.97	0.47
6:52:3:ARG:HB2	6:52:93:SER:HB2	1.97	0.47
13:4A:7:VAL:HG11	30:49:115:ARG:HH21	1.79	0.47
20:BA:54:LYS:HB2	20:BA:54:LYS:HE3	1.65	0.47
21:1B:9:ARG:HH11	21:1B:13:ILE:HD11	1.79	0.47
22:2L:35:QUO:H162	22:2L:35:QUO:H101	1.53	0.47
22:2L:72:U:O2'	22:2L:73:U:OP2	2.26	0.47
24:14:1045:A:N3	24:14:1045:A:H2'	2.30	0.47
24:14:1224:G:N2	24:14:1227:A:OP2	2.41	0.47
24:14:1453:A:O2'	24:14:1454:U:H2'	2.14	0.47
24:14:1839:G:C8	24:14:1927:A:H1'	2.49	0.47
24:14:2536:G:C6	24:14:2537:U:C4	3.03	0.47
24:14:2646:C:OP2	24:14:2732:G:O2'	2.22	0.47
24:14:2648:C:H2'	24:14:2649:U:C6	2.50	0.47
24:14:2649:U:H2'	24:14:2650:U:C6	2.50	0.47
24:14:2833:G:H8	24:14:2833:G:OP1	1.97	0.47
30:49:36:LYS:HG2	30:49:38:VAL:HG23	1.97	0.47
35:35:27:HIS:O	35:35:31:ALA:HA	2.15	0.47
48:G5:17:SER:HB3	48:G5:20:GLU:HB2	1.96	0.47
1:13:15:G:H4'	5:4E:24:ARG:NH1	2.30	0.47
1:13:498:A:H4'	1:13:500:G:OP1	2.15	0.47
1:13:537:G:OP1	12:3I:113:ARG:NH2	2.34	0.47
1:13:765:G:H5"	1:13:766:A:OP1	2.14	0.47
1:13:767:A:H2'	1:13:768:A:O4'	2.15	0.47
1:13:1186:G:H21	14:5I:61:TRP:C	2.17	0.47
1:13:1340:A:O2'	22:2K:32:A:O2'	2.14	0.47
1:13:1503:A:H61	23:4K:12:A:C2'	2.18	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:13:1525:G:OP1	11:2I:120:ARG:NH2	2.48	0.47
2:1E:178:ARG:HH12	2:1E:196:LEU:C	2.16	0.47
24:1H:354:G:H2'	24:1H:355:G:H8	1.79	0.47
24:1H:528:A:O2'	24:1H:529:A:H5"	2.14	0.47
24:1H:540:G:C8	24:1H:540:G:H5"	2.49	0.47
24:1H:910:A:C5	36:88:13:GLN:HG3	2.49	0.47
24:1H:1014:U:H3	24:1H:1148:A:H61	1.61	0.47
24:1H:1332:G:H5'	24:1H:1332:G:C8	2.50	0.47
24:1H:1427:A:H4'	24:1H:1428:C:O5'	2.14	0.47
24:1H:1609:A:H5'	24:1H:1617:C:OP1	2.14	0.47
24:1H:2052:G:O4'	28:21:142:GLY:HA3	2.13	0.47
24:1H:2845:G:OP2	57:1H:4380:HOH:O	2.20	0.47
29:31:32:LEU:O	29:31:36:VAL:HG23	2.15	0.47
29:31:78:ILE:HA	29:31:83:PHE:CD2	2.49	0.47
51:N8:16:ARG:HG3	51:N8:17:ASP:N	2.29	0.47
53:Q8:26:LYS:HD3	53:Q8:48:PHE:CD1	2.50	0.47
54:1G:109:A:C6	54:1G:326:G:C6	3.03	0.47
54:1G:456:C:H42	54:1G:476:G:H1	1.63	0.47
54:1G:523:A:H61	12:3A:53:ARG:NH1	2.13	0.47
54:1G:933:G:O6	7:62:3:ARG:NH2	2.44	0.47
2:12:178:ARG:NH2	8:72:74:PRO:HG3	2.30	0.47
4:32:31:CYS:O	4:32:33:MET:N	2.48	0.47
4:32:178:VAL:C	4:32:180:GLY:H	2.17	0.47
6:52:4:TYR:CE1	6:52:92:LYS:HG3	2.49	0.47
6:52:87:ARG:HG3	6:52:87:ARG:NH1	2.14	0.47
11:2A:85:ARG:HA	11:2A:112:THR:OG1	2.14	0.47
20:BA:95:ALA:C	20:BA:97:ALA:H	2.16	0.47
24:14:329:G:O6	44:C5:19:LYS:HG2	2.14	0.47
24:14:1149:G:H2'	24:14:1150:C:C6	2.50	0.47
24:14:1448:G:H1'	24:14:1528:A:H62	1.78	0.47
24:14:1688:U:H1'	24:14:1701:A:C6	2.49	0.47
24:14:1785:A:H4'	24:14:1982:C:O2'	2.14	0.47
24:14:1820:U:O2	27:19:201:HIS:HB3	2.14	0.47
24:14:2287:A:N1	24:14:2346:A:H2	2.12	0.47
24:14:2666:C:H5"	24:14:2667:C:OP2	2.14	0.47
29:39:18:ARG:HG2	29:39:19:GLU:N	2.29	0.47
32:69:38:LEU:HD12	32:69:38:LEU:H	1.80	0.47
32:69:77:LEU:HD22	32:69:141:LYS:HB3	1.96	0.47
1:13:79:G:H2'	1:13:79:G:N3	2.30	0.47
1:13:376:G:H4'	16:7I:5:ARG:HH11	1.80	0.47
1:13:391:G:O3'	16:7I:8:ARG:NH2	2.47	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:13:572:A:N3	1:13:917:G:H1'	2.30	0.47
1:13:774:G:OP1	27:11:202:LYS:NZ	2.46	0.47
1:13:947:G:H2'	1:13:948:C:C6	2.49	0.47
1:13:1123:A:H4'	10:1I:37:PRO:HD2	1.97	0.47
1:13:1232:U:H5"	9:8E:124:GLN:HB3	1.97	0.47
1:13:1286:A:C8	1:13:1287:A:H4'	2.49	0.47
2:1E:145:LEU:O	2:1E:149:LEU:HB2	2.15	0.47
4:3E:13:ARG:O	4:3E:14:ARG:HB3	2.15	0.47
6:5E:67:MET:HB2	6:5E:68:PRO:HD2	1.96	0.47
6:5E:69:GLU:O	6:5E:72:VAL:HG12	2.15	0.47
7:6E:88:PRO:HD2	7:6E:152:ALA:HA	1.96	0.47
9:8E:53:VAL:HB	9:8E:95:LYS:HE2	1.96	0.47
10:1I:3:LYS:HB3	10:1I:101:VAL:O	2.15	0.47
22:3K:14:A:H3'	22:3K:15:G:H5"	1.96	0.47
24:1H:26:G:C6	24:1H:27:G:N1	2.82	0.47
24:1H:251:A:C5	24:1H:252:G:H1'	2.49	0.47
24:1H:270(Y):G:C2	24:1H:270(Z):U:O4	2.67	0.47
24:1H:372:G:H22	24:1H:400:G:H2'	1.80	0.47
24:1H:528:A:N1	24:1H:2042:A:H2'	2.29	0.47
24:1H:639:U:H2'	24:1H:640:C:C6	2.49	0.47
24:1H:792:G:H5"	24:1H:793:A:H5'	1.96	0.47
24:1H:963:U:H2'	24:1H:964:C:C6	2.49	0.47
24:1H:1497:U:H5"	24:1H:1498:C:H5	1.80	0.47
24:1H:1575:C:H2'	24:1H:1576:U:O4'	2.15	0.47
24:1H:2023:G:H4'	24:1H:2617:C:O3'	2.15	0.47
24:1H:2151:G:H2'	24:1H:2152:G:H8	1.78	0.47
24:1H:2252:G:H2'	24:1H:2253:G:O4'	2.14	0.47
24:1H:2340:G:O2'	24:1H:2341:G:H5'	2.14	0.47
24:1H:2502:G:H5"	24:1H:2503:A:C5'	2.45	0.47
24:1H:2680:C:OP2	28:21:111:ARG:NH2	2.48	0.47
24:1H:2854:G:H2'	24:1H:2855:C:H6	1.80	0.47
27:11:182:LEU:HA	27:11:182:LEU:HD23	1.64	0.47
28:21:15:PHE:HB3	39:B8:81:PRO:HG2	1.95	0.47
30:41:97:ASP:O	30:41:101:ILE:HG12	2.15	0.47
34:68:20:MET:O	34:68:22:ILE:HD13	2.14	0.47
34:68:63:VAL:HG12	34:68:106:LEU:HD11	1.95	0.47
35:78:106:LEU:O	35:78:106:LEU:HD22	2.14	0.47
35:78:125:VAL:O	35:78:144:GLU:HB2	2.15	0.47
43:F8:60:ARG:NH1	52:P8:47:ARG:HH22	2.11	0.47
46:I8:23:VAL:HG13	46:I8:38:VAL:CG2	2.44	0.47
54:1G:412:A:O2'	54:1G:413:G:OP2	2.21	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:1G:571:U:O2	54:1G:918:A:H5'	2.14	0.47
54:1G:677:U:H2'	54:1G:678:U:C6	2.50	0.47
54:1G:952:U:H2'	54:1G:953:G:C8	2.50	0.47
2:12:10:LEU:HD12	2:12:13:ALA:HB2	1.97	0.47
2:12:58:ILE:HA	2:12:61:LEU:HB3	1.96	0.47
4:32:18:LYS:HE2	4:32:20:TYR:CD2	2.49	0.47
4:32:30:LYS:HB2	4:32:32:ALA:N	2.29	0.47
14:5A:45:ARG:HG3	14:5A:49:HIS:CE1	2.50	0.47
19:AA:7:LYS:HE2	19:AA:7:LYS:O	2.15	0.47
22:2L:36:U:H2'	22:2L:37:A:C8	2.49	0.47
22:2L:59:A:H61	22:2L:60:A:N6	2.12	0.47
22:3L:64:PSU:O2'	22:3L:66:G:N7	2.39	0.47
24:14:315:G:H2'	24:14:316:C:C6	2.49	0.47
24:14:740:U:O4'	24:14:1981:A:C4	2.68	0.47
24:14:1323:U:H2'	24:14:1324:G:H5'	1.96	0.47
24:14:1342:A:C2	24:14:1397:U:C2	3.02	0.47
24:14:1464:C:O2'	24:14:1528:A:H8	1.97	0.47
24:14:1716:U:H1'	24:14:1746:G:N2	2.29	0.47
24:14:2050:C:H2'	24:14:2051:A:C8	2.49	0.47
24:14:2629:A:O2'	24:14:2630:G:H4'	2.15	0.47
27:19:102:LYS:C	27:19:103:ARG:HG2	2.34	0.47
28:29:32:PRO:HA	28:29:90:THR:H	1.78	0.47
29:39:28:ILE:HD12	29:39:119:ARG:HE	1.79	0.47
31:59:27:LYS:HA	31:59:32:GLU:HB3	1.95	0.47
32:69:6:LEU:O	32:69:15:VAL:HG13	2.15	0.47
32:69:75:LEU:HG	32:69:76:THR:N	2.30	0.47
33:15:6:PRO:HG3	33:15:41:ASP:O	2.15	0.47
34:25:71:ARG:NH2	34:25:105:GLU:OE1	2.43	0.47
39:75:6:LEU:H	39:75:9:LEU:CB	2.18	0.47
39:75:9:LEU:O	39:75:9:LEU:HD22	2.15	0.47
39:75:16:ARG:NH2	39:75:19:LEU:HD21	2.30	0.47
39:75:60:THR:HG22	39:75:77:PRO:HA	1.95	0.47
41:95:21:ARG:HG2	41:95:91:TYR:CE1	2.49	0.47
41:95:22:VAL:HG22	41:95:23:GLU:H	1.80	0.47
41:95:84:LYS:HE3	41:95:85:LYS:H	1.79	0.47
45:D5:5:LEU:HD13	45:D5:47:VAL:HG21	1.97	0.47
1:13:1141:C:H2'	1:13:1142:G:H8	1.79	0.47
8:7E:43:GLY:O	8:7E:64:LYS:HD2	2.15	0.47
24:1H:141:A:H8	24:1H:1595:G:H21	1.59	0.47
24:1H:600:G:N2	24:1H:605:C:O3'	2.48	0.47
24:1H:956:G:H2'	24:1H:957:A:H2'	1.96	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:1H:1471:A:C2	24:1H:1472:A:C4	3.02	0.47
24:1H:2136:C:H2'	24:1H:2137:C:C6	2.50	0.47
24:1H:2235:G:H2'	24:1H:2236:C:C6	2.50	0.47
24:1H:2442:C:H2'	24:1H:2443:C:H6	1.77	0.47
24:1H:2863:C:H2'	24:1H:2864:G:H8	1.80	0.47
24:1H:2864:G:H2'	24:1H:2865:U:C6	2.50	0.47
27:11:147:LEU:HD22	27:11:155:LEU:HD11	1.97	0.47
28:21:55:ASN:HA	28:21:58:ARG:HD2	1.95	0.47
33:58:56:ASN:N	33:58:125:GLY:O	2.39	0.47
37:98:87:TYR:HD1	37:98:90:ARG:HD2	1.80	0.47
39:B8:2:ASN:HB2	39:B8:5:ALA:CB	2.45	0.47
53:Q8:41:ILE:HD13	53:Q8:41:ILE:HA	1.82	0.47
54:1G:166:G:H2'	54:1G:167:G:C8	2.49	0.47
54:1G:359:U:H2'	54:1G:360:A:C8	2.49	0.47
54:1G:878:G:H5'	8:72:89:PRO:HG2	1.96	0.47
54:1G:979:C:OP1	54:1G:1223:C:N4	2.48	0.47
54:1G:1106:G:H4'	3:22:171:GLY:O	2.15	0.47
54:1G:1216:G:H2'	54:1G:1217:C:C6	2.50	0.47
2:12:58:ILE:O	2:12:62:ALA:N	2.33	0.47
4:32:94:LEU:HA	4:32:97:LEU:HD12	1.96	0.47
5:42:30:ALA:O	5:42:45:PHE:HD1	1.98	0.47
7:62:26:PHE:O	7:62:30:ILE:HG13	2.14	0.47
7:62:114:ARG:H	7:62:114:ARG:HG2	1.47	0.47
9:82:24:GLY:HA3	9:82:57:GLY:HA2	1.96	0.47
15:6A:56:LEU:O	15:6A:60:VAL:HG23	2.15	0.47
19:AA:15:LEU:O	19:AA:19:VAL:HG23	2.15	0.47
20:BA:63:ILE:HD13	20:BA:80:ARG:HB3	1.95	0.47
22:3L:26:G:H2'	22:3L:27:A:O4'	2.14	0.47
24:14:903:C:H2'	24:14:904:C:C6	2.50	0.47
24:14:996:A:N6	24:14:1160:G:C6	2.82	0.47
24:14:1313:U:H2'	24:14:1610:A:C2	2.50	0.47
24:14:1404:C:O2'	24:14:1405:U:H5'	2.15	0.47
24:14:2635:C:OP1	28:29:77:ILE:HG21	2.15	0.47
24:14:2704:C:H2'	24:14:2705:A:O4'	2.14	0.47
32:69:140:LEU:HD12	32:69:141:LYS:H	1.80	0.47
45:D5:100:VAL:HG11	45:D5:134:PRO:HG2	1.97	0.47
50:I5:10:VAL:HG22	50:I5:11:PRO:HD2	1.96	0.47
1:13:265:G:H5'	17:8I:64:PRO:O	2.15	0.47
1:13:342:C:H2'	1:13:343:U:O4'	2.15	0.47
1:13:445:G:H1	1:13:489:C:H42	1.62	0.47
1:13:713:G:H2'	1:13:714:G:C8	2.50	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:1E:55:PHE:CD2	2:1E:221:LEU:HG	2.50	0.47
2:1E:87:ARG:HH11	2:1E:219:VAL:HB	1.79	0.47
3:2E:52:LEU:HA	3:2E:70:VAL:HG22	1.97	0.47
4:3E:112:VAL:HG12	4:3E:116:GLN:OE1	2.14	0.47
18:9I:38:GLU:HA	18:9I:41:LYS:HG2	1.96	0.47
22:3K:22:A:N3	22:3K:22:A:H2'	2.30	0.47
24:1H:1006:C:C2	24:1H:1138:G:N2	2.83	0.47
24:1H:2123:G:H2'	24:1H:2124:G:O4'	2.15	0.47
24:1H:2331:G:H4'	46:I8:42:GLY:HA3	1.97	0.47
26:71:45:ALA:CB	26:71:212:VAL:HG22	2.41	0.47
35:78:138:LEU:HD12	35:78:144:GLU:OE2	2.14	0.47
54:1G:57:G:C2	54:1G:58:C:C2	3.03	0.47
54:1G:1084:G:H5'	54:1G:1102:A:OP2	2.15	0.47
54:1G:1399:C:H4'	54:1G:1400:C:O5'	2.14	0.47
15:6A:67:LEU:HD23	15:6A:67:LEU:HA	1.77	0.47
22:2L:3:U:H2'	22:2L:4:G:C8	2.50	0.47
24:14:1488:G:H5'	24:14:1489:U:OP2	2.15	0.47
24:14:1753:G:N1	24:14:1756:G:C2	2.83	0.47
26:79:14:VAL:HG11	26:79:222:VAL:HA	1.95	0.47
36:45:87:LYS:HG3	36:45:88:GLY:N	2.30	0.47
37:55:33:ARG:HB3	37:55:115:GLU:HG3	1.97	0.47
40:85:61:TRP:CZ3	40:85:94:ASN:HB2	2.50	0.47
1:13:651:C:H5"	1:13:652:U:OP2	2.15	0.47
1:13:745:C:H5'	1:13:851:G:H21	1.80	0.47
1:13:789:U:H2'	1:13:791:G:OP2	2.15	0.47
4:3E:141:ARG:HH11	4:3E:142:PRO:HD2	1.80	0.47
12:3I:110:VAL:HG23	12:3I:120:TYR:HB3	1.96	0.47
24:1H:59:U:O2'	24:1H:73:A:H2'	2.15	0.47
24:1H:198:C:H2'	24:1H:199:A:H5"	1.96	0.47
24:1H:270(T):G:C6	24:1H:270(U):C:C4	3.03	0.47
24:1H:667:U:O2	53:Q8:2:PRO:HD2	2.15	0.47
24:1H:935:C:H2'	24:1H:936:C:H6	1.80	0.47
24:1H:1169:G:H1	24:1H:1180:C:H42	1.63	0.47
24:1H:2130:U:O2'	24:1H:2158:A:N6	2.47	0.47
24:1H:2577:A:HO2'	51:N8:2:ALA:N	2.13	0.47
26:71:46:LYS:NZ	26:71:210:ARG:HH21	2.12	0.47
28:21:21:VAL:HG13	28:21:185:LYS:HG3	1.96	0.47
28:21:101:ARG:NH1	28:21:171:GLU:HB2	2.29	0.47
31:51:90:LYS:NZ	31:51:169:VAL:HG21	2.30	0.47
33:58:47:ALA:CB	33:58:112:LEU:HD11	2.27	0.47
36:88:30:GLY:HA2	36:88:107:ALA:HB2	1.96	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:98:13:HIS:CE1	37:98:16:HIS:HB2	2.50	0.47
45:H8:143:GLY:HA2	45:H8:144:LEU:HA	1.50	0.47
50:M8:55:ARG:HD2	50:M8:55:ARG:HA	1.52	0.47
54:1G:1178:G:OP2	9:82:93:ARG:NH2	2.47	0.47
4:32:33:MET:O	4:32:34:GLU:HB2	2.15	0.47
5:42:57:LYS:HG2	5:42:61:TYR:HE1	1.80	0.47
22:2L:70:C:HO2'	22:2L:71:C:H2'	1.80	0.47
24:14:270(V):G:H2'	24:14:270(W):G:H8	1.80	0.47
24:14:1634:A:N1	57:14:3687:HOH:O	2.36	0.47
24:14:2537:U:C2	24:14:2538:C:C5	3.03	0.47
24:14:2870:C:H2'	24:14:2871:C:O4'	2.15	0.47
28:29:18:ASP:HB3	39:75:82:LEU:HD11	1.96	0.47
28:29:67:PHE:H	28:29:70:ALA:CB	2.28	0.47
43:B5:9:LEU:HB2	43:B5:29:TRP:O	2.15	0.47
1:13:164:U:H2'	1:13:165:C:C6	2.50	0.46
1:13:865:A:C2	1:13:918:A:H4'	2.50	0.46
1:13:874:G:C5	1:13:875:C:C5	3.03	0.46
2:1E:164:VAL:HB	2:1E:186:ALA:CB	2.44	0.46
10:1I:26:ALA:HB1	10:1I:84:GLN:HG3	1.96	0.46
13:4I:84:ILE:HG13	13:4I:86:CYS:H	1.80	0.46
24:1H:274:G:H2'	24:1H:275:G:H1'	1.97	0.46
24:1H:654(A):A:H2	24:1H:654(T):A:N1	2.13	0.46
24:1H:911:A:H5"	24:1H:912:C:C5'	2.45	0.46
24:1H:2231:C:H2'	24:1H:2232:U:O4'	2.15	0.46
24:1H:2378:A:O2'	38:A8:21:THR:HG21	2.15	0.46
24:1H:2432:A:C4	47:J8:33:LYS:HG2	2.50	0.46
29:31:6:VAL:HG11	29:31:119:ARG:HA	1.96	0.46
31:51:101:ARG:NH2	31:51:122:THR:HA	2.30	0.46
54:1G:391:G:C6	54:1G:392:G:C5	3.03	0.46
15:6A:15:PHE:HZ	15:6A:84:LYS:HG2	1.80	0.46
24:14:182:A:N3	24:14:433:C:O2'	2.44	0.46
24:14:540:G:H2'	24:14:541:C:C6	2.50	0.46
24:14:863:A:C2	24:14:864:G:C4	3.03	0.46
24:14:2175:C:H1'	26:79:217:THR:O	2.16	0.46
24:14:2337:G:H5"	24:14:2338:G:OP2	2.15	0.46
24:14:2698:U:H2'	24:14:2699:C:C6	2.51	0.46
26:79:25:ALA:O	26:79:29:VAL:N	2.47	0.46
27:19:43:ARG:HH11	27:19:43:ARG:CG	2.28	0.46
29:39:150:GLY:HA2	29:39:172:TRP:CD2	2.50	0.46
31:59:79:VAL:HA	31:59:136:ILE:HG22	1.97	0.46
32:69:120:ILE:HG21	32:69:126:TYR:HE2	1.81	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:25:68:GLU:HB3	34:25:78:ARG:HB3	1.97	0.46
34:25:90:GLN:O	34:25:91:LEU:HB2	2.14	0.46
41:95:91:TYR:CD2	41:95:91:TYR:CB	2.85	0.46
42:A5:95:ILE:HG13	42:A5:95:ILE:O	2.14	0.46
44:C5:84:ARG:HG3	44:C5:95:LYS:HG3	1.97	0.46
1:13:200:G:N2	1:13:218:C:O2	2.48	0.46
1:13:1277:C:O2'	1:13:1279:A:H1'	2.14	0.46
1:13:1363:A:H1'	1:13:1365:G:N7	2.29	0.46
4:3E:179:GLU:CD	4:3E:179:GLU:H	2.18	0.46
6:5E:4:TYR:HD1	6:5E:92:LYS:HA	1.79	0.46
6:5E:14:LEU:HB3	6:5E:19:LEU:HD12	1.97	0.46
12:3I:35:GLY:HA2	12:3I:60:LEU:HA	1.96	0.46
13:4I:67:GLU:CD	13:4I:68:GLY:H	2.19	0.46
24:1H:174:C:H2'	24:1H:175:G:O4'	2.16	0.46
24:1H:1029:A:H62	24:1H:1125:G:H21	1.64	0.46
24:1H:1635:G:H2'	24:1H:1636:C:C6	2.51	0.46
24:1H:1853:A:H2'	24:1H:1854:A:H8	1.77	0.46
24:1H:2228:G:P	27:11:263:ARG:HH12	2.38	0.46
24:1H:2593:U:H2'	24:1H:2594:C:C6	2.50	0.46
24:1H:2607:G:H2'	24:1H:2608:G:O4'	2.14	0.46
24:1H:2626:C:H2'	24:1H:2627:G:O4'	2.16	0.46
29:31:102:PRO:HB2	29:31:105:VAL:HG23	1.97	0.46
30:41:109:VAL:HG21	50:M8:14:ILE:HD13	1.96	0.46
35:78:64:LYS:O	53:Q8:30:ARG:NH2	2.48	0.46
42:E8:11:ARG:CZ	42:E8:98:LYS:HB3	2.46	0.46
47:J8:15:ALA:O	47:J8:40:ARG:HG3	2.15	0.46
52:P8:35:ARG:HG3	52:P8:42:LEU:HD11	1.97	0.46
54:1G:364:A:O2'	54:1G:365:U:H5'	2.15	0.46
54:1G:630:G:H5'	54:1G:631:G:OP2	2.15	0.46
54:1G:737:A:H2'	54:1G:738:C:C6	2.50	0.46
54:1G:980:C:H3'	54:1G:981:U:C6	2.50	0.46
5:42:72:GLN:O	5:42:75:THR:N	2.43	0.46
5:42:140:ARG:O	5:42:143:ARG:NH2	2.49	0.46
7:62:13:GLN:HA	7:62:14:PRO:HD3	1.78	0.46
7:62:116:ALA:HA	7:62:119:ARG:HG3	1.97	0.46
22:2L:15:G:H8	22:2L:15:G:O5'	1.98	0.46
24:14:55:G:H2'	24:14:56:A:C8	2.50	0.46
24:14:286:C:H2'	24:14:287:C:C6	2.49	0.46
24:14:782:A:H5'	24:14:783:A:C2	2.50	0.46
24:14:1806:C:O2'	27:19:46:GLN:OE1	2.24	0.46
24:14:2516:G:C6	24:14:2517:C:C4	3.03	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:14:2626:C:H2'	24:14:2627:G:O4'	2.15	0.46
24:14:2635:C:OP1	28:29:77:ILE:HG12	2.15	0.46
24:14:2638:G:HO2'	24:14:2639:A:H8	1.57	0.46
24:14:2805:G:O2'	24:14:2807:G:O4'	2.33	0.46
25:1J:89:G:C6	25:1J:89(A):A:N1	2.83	0.46
25:1J:93:C:H2'	25:1J:94:C:C6	2.48	0.46
28:29:119:ARG:HG2	28:29:160:TYR:HB2	1.98	0.46
35:35:128:HIS:HA	35:35:147:LEU:HA	1.97	0.46
44:C5:42:VAL:HG13	44:C5:65:ALA:HB3	1.97	0.46
45:D5:77:ASP:HB2	45:D5:84:GLU:HG2	1.98	0.46
48:G5:22:GLU:HA	48:G5:25:VAL:HG22	1.97	0.46
1:13:359:U:H2'	1:13:360:A:H8	1.80	0.46
1:13:828:A:N3	2:1E:26:PRO:HG3	2.30	0.46
1:13:1003:G:H2'	1:13:1004:A:H4'	1.96	0.46
1:13:1391:U:H2'	1:13:1392:G:C8	2.51	0.46
2:1E:9:GLU:HA	2:1E:12:GLU:OE2	2.15	0.46
4:3E:84:LYS:HD2	4:3E:84:LYS:HA	1.61	0.46
22:2K:38:MIA:H161	23:4K:15:A:C2	2.50	0.46
24:1H:322:A:P	29:31:168:ARG:HH21	2.39	0.46
24:1H:456:C:C2'	43:F8:68:ARG:HH22	2.25	0.46
24:1H:1213:A:N3	24:1H:1238:G:O2'	2.42	0.46
24:1H:1339:G:H5"	43:F8:16:LYS:HD2	1.98	0.46
24:1H:1742:C:H5'	24:1H:1743:G:OP2	2.15	0.46
54:1G:165:C:H2'	54:1G:166:G:H8	1.80	0.46
54:1G:355:C:C4	54:1G:356:A:N7	2.84	0.46
54:1G:419:C:H5'	54:1G:513:C:H4'	1.97	0.46
54:1G:523:A:H61	12:3A:92:ASP:HB2	1.79	0.46
3:22:34:LEU:O	3:22:38:ARG:HG3	2.15	0.46
22:2L:20:C:O2'	22:2L:22:A:H5'	2.15	0.46
22:2L:72:U:O2'	22:2L:73:U:P	2.74	0.46
24:14:11:G:N2	24:14:2627:G:O3'	2.48	0.46
24:14:1012:U:N3	24:14:1143:A:H2	2.06	0.46
24:14:1226:G:C4'	41:95:84:LYS:HA	2.45	0.46
24:14:2210:G:H3'	24:14:2211:G:C5	2.50	0.46
24:14:2439:A:H5'	24:14:2439:A:C8	2.50	0.46
27:19:69:ARG:CD	27:19:105:ILE:HD11	2.45	0.46
28:29:76:ARG:CG	28:29:195:LEU:HD22	2.46	0.46
29:39:178:PRO:HG2	29:39:179:GLU:OE1	2.15	0.46
33:15:99:LEU:HD22	33:15:103:VAL:HG23	1.97	0.46
37:55:77:ARG:O	37:55:80:PHE:N	2.49	0.46
38:65:62:LYS:HB3	38:65:97:ARG:HD3	1.97	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:C5:20:TYR:CZ	44:C5:42:VAL:HA	2.50	0.46
44:C5:87:LYS:O	44:C5:94:LYS:HG2	2.15	0.46
45:D5:132:ASN:HD22	45:D5:159:PRO:HB2	1.79	0.46
48:G5:17:SER:HB2	48:G5:20:GLU:N	2.29	0.46
1:13:793:U:H5'	1:13:794:A:H5"	1.98	0.46
1:13:929:G:H1	1:13:1388:C:N4	2.13	0.46
1:13:1238:A:N7	1:13:1303:C:H1'	2.30	0.46
2:1E:80:ILE:HD12	2:1E:211:ILE:HB	1.98	0.46
3:2E:150:LYS:HB3	3:2E:201:TYR:HB2	1.97	0.46
6:5E:97:PHE:O	18:9I:31:LEU:N	2.27	0.46
11:2I:92:GLU:O	11:2I:96:ARG:HG3	2.16	0.46
15:6I:39:LEU:HD13	15:6I:56:LEU:HB2	1.97	0.46
22:2K:9:U:O2'	22:2K:10:C:H5	1.98	0.46
24:1H:873:G:H1	24:1H:904:C:H42	1.62	0.46
24:1H:885:C:H2'	24:1H:886:C:H5"	1.97	0.46
24:1H:2022:U:O2'	24:1H:2617:C:H5'	2.16	0.46
24:1H:2574:G:N3	28:21:143:ASN:ND2	2.62	0.46
30:41:18:GLU:O	30:41:22:ARG:HB2	2.15	0.46
40:C8:47:TYR:CD1	40:C8:47:TYR:C	2.89	0.46
40:C8:80:ILE:O	40:C8:84:LYS:HB2	2.15	0.46
46:I8:72:ARG:CB	46:I8:75:LEU:HB2	2.44	0.46
54:1G:300:A:H2'	54:1G:301:G:O4'	2.15	0.46
54:1G:457:C:H2'	54:1G:458:C:C6	2.51	0.46
54:1G:683:G:C6	54:1G:684:A:C6	3.03	0.46
54:1G:1069:C:N4	54:1G:1094:G:O6	2.48	0.46
54:1G:1073:U:H2'	54:1G:1074:G:H8	1.79	0.46
54:1G:1147:C:O2	9:82:16:ARG:NE	2.48	0.46
54:1G:1158:C:O3'	2:12:133:LYS:NZ	2.49	0.46
54:1G:1239:A:O2'	7:62:114:ARG:O	2.31	0.46
54:1G:1272:G:C6	54:1G:1273:G:C5	3.03	0.46
3:22:206:GLU:HG3	3:22:207:VAL:H	1.78	0.46
5:42:90:VAL:O	5:42:91:LEU:HD13	2.16	0.46
13:4A:14:ARG:N	13:4A:44:ARG:HH11	2.11	0.46
24:14:470:A:H2'	24:14:471:A:O4'	2.14	0.46
24:14:999:U:H5	24:14:1154:G:N7	2.14	0.46
24:14:1591:G:H2'	24:14:1592:C:C6	2.50	0.46
24:14:1728:G:C2	24:14:1730:U:OP2	2.69	0.46
24:14:2317:C:H2'	24:14:2318:G:O4'	2.14	0.46
24:14:2394:C:H5"	35:35:64:LYS:CD	2.45	0.46
24:14:2893:G:H4'	24:14:2894:G:O5'	2.15	0.46
25:1J:43:C:OP1	50:I5:2:LYS:HB3	2.15	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:1J:53:A:H2'	25:1J:54:G:O4'	2.15	0.46
25:1J:66:A:N6	25:1J:107:U:H2'	2.31	0.46
28:29:131:ALA:HB1	28:29:135:HIS:CE1	2.50	0.46
30:49:66:GLN:HG2	50:I5:6:HIS:CE1	2.51	0.46
43:B5:63:LYS:HA	43:B5:72:LYS:HA	1.96	0.46
47:F5:40:ARG:NH2	47:F5:42:GLN:HG2	2.31	0.46
50:I5:32:TYR:HB3	50:I5:33:VAL:H	1.35	0.46
52:L5:12:ARG:HH21	52:L5:44:PRO:HB3	1.81	0.46
53:M5:62:LEU:HA	53:M5:62:LEU:HD23	1.39	0.46
1:13:148:G:H1	1:13:174:C:H42	1.62	0.46
1:13:295:C:H2'	1:13:296:U:O4'	2.15	0.46
1:13:465:A:H2'	1:13:467:G:N7	2.30	0.46
4:3E:63:LYS:O	4:3E:67:ILE:HG13	2.16	0.46
24:1H:1516:U:N3	24:1H:1517:G:N7	2.63	0.46
24:1H:1697:G:O2'	24:1H:1978:A:OP1	2.27	0.46
24:1H:1763:G:OP1	24:1H:1763:G:H4'	2.15	0.46
24:1H:2491:U:O2'	24:1H:2570:G:OP1	2.29	0.46
31:51:7:LEU:HD23	31:51:65:HIS:HE1	1.81	0.46
34:68:22:ILE:HA	34:68:22:ILE:HD12	1.75	0.46
44:G8:5:MET:HE1	44:G8:32:PRO:HB3	1.98	0.46
54:1G:32:A:C2	54:1G:33:A:C5	3.02	0.46
54:1G:38:G:C2	54:1G:397:A:C2	3.04	0.46
54:1G:445:G:C4	54:1G:446:G:C8	3.03	0.46
54:1G:553:A:H2'	54:1G:554:C:H6	1.80	0.46
54:1G:1446:A:H3'	54:1G:1446:A:N3	2.30	0.46
4:32:96:LEU:HD13	4:32:139:ARG:NH2	2.31	0.46
20:BA:42:GLN:O	20:BA:46:GLU:HG3	2.15	0.46
24:14:75:G:H1	24:14:111:A:H61	1.64	0.46
24:14:142:G:H1'	43:B5:37:THR:CG2	2.46	0.46
24:14:685:A:C8	24:14:774:A:C6	3.03	0.46
24:14:1036:G:H2'	24:14:1037:G:O4'	2.14	0.46
24:14:1500:G:O2'	27:19:100:GLY:O	2.21	0.46
24:14:1516:U:H2'	24:14:1517:G:H8	1.81	0.46
24:14:1545:A:H2'	24:14:1545(A):A:O4'	2.16	0.46
24:14:2230:G:H1'	47:F5:45:ASN:CB	2.46	0.46
25:1J:12:C:H6	25:1J:12:C:OP2	1.97	0.46
34:25:19:ILE:HG22	34:25:43:VAL:HA	1.97	0.46
36:45:48:GLU:O	36:45:48:GLU:HG3	2.16	0.46
43:B5:88:LYS:HD2	43:B5:93:GLU:HG3	1.98	0.46
53:M5:16:ILE:HD13	53:M5:58:ILE:HG12	1.97	0.46
53:M5:57:ARG:HH11	53:M5:57:ARG:CA	2.28	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:13:38:G:C2	1:13:397:A:C2	3.03	0.46
1:13:111:G:H5"	16:7I:27:LYS:HG3	1.97	0.46
1:13:314:C:O2'	1:13:315:A:H5'	2.15	0.46
1:13:976:G:H5'	1:13:1358:U:O2'	2.16	0.46
1:13:1118:C:H1'	1:13:1179:A:C4	2.51	0.46
2:1E:108:ILE:O	2:1E:108:ILE:HG13	2.16	0.46
6:5E:99:ALA:O	18:9I:28:GLU:HA	2.15	0.46
12:3I:44:THR:HG22	12:3I:52:LEU:HD22	1.96	0.46
22:3K:41:C:H2'	22:3K:42:U:H6	1.80	0.46
24:1H:54:G:O6	57:1H:4186:HOH:O	2.18	0.46
24:1H:323:G:C8	29:31:171:PRO:HG3	2.50	0.46
24:1H:598:G:H2'	24:1H:599:G:O4'	2.15	0.46
24:1H:900:A:H3'	24:1H:901:A:H8	1.81	0.46
24:1H:1629:U:O2'	24:1H:1630:G:H5'	2.15	0.46
24:1H:1888:G:N3	24:1H:1888:G:H5"	2.30	0.46
25:16:12:C:O2'	25:16:13:A:OP2	2.23	0.46
27:11:239:ARG:O	27:11:240:ALA:HB3	2.15	0.46
31:51:4:ILE:HG21	31:51:6:ARG:CZ	2.46	0.46
35:78:134:ALA:O	35:78:138:LEU:HB2	2.16	0.46
37:98:38:VAL:HG22	37:98:112:ALA:HB2	1.98	0.46
42:E8:33:ARG:HE	42:E8:52:GLU:CD	2.19	0.46
45:H8:100:VAL:HG21	45:H8:134:PRO:HG2	1.98	0.46
54:1G:192:U:H2'	54:1G:193:C:C6	2.50	0.46
54:1G:243:A:C4'	54:1G:244:U:H5'	2.30	0.46
54:1G:256:U:H2'	54:1G:257:G:C8	2.51	0.46
54:1G:865:A:H5'	54:1G:1078:U:C5	2.51	0.46
54:1G:1104:G:C2	54:1G:1105:A:C4	3.04	0.46
54:1G:1228:C:OP2	13:4A:108:ARG:NH2	2.48	0.46
54:1G:1306:A:H62	54:1G:1331:G:H1'	1.80	0.46
54:1G:1352:C:H2'	54:1G:1353:G:C8	2.51	0.46
54:1G:1387:G:H2'	54:1G:1388:C:C6	2.51	0.46
3:22:35:GLU:O	3:22:39:ILE:HD13	2.15	0.46
5:42:103:GLY:O	5:42:106:PRO:HD2	2.15	0.46
22:2L:15:G:H1	22:2L:57:C:H5	1.63	0.46
24:14:57:C:H2'	24:14:58:G:O4'	2.16	0.46
24:14:932:G:P	49:H5:29:ARG:HH22	2.38	0.46
24:14:1093:G:N1	24:14:1097:U:OP2	2.49	0.46
24:14:1204:A:C2	24:14:1241:A:N1	2.84	0.46
24:14:1329:U:H5"	24:14:1330:C:H5	1.81	0.46
24:14:1788:C:H2'	24:14:1789:A:O4'	2.16	0.46
26:79:45:ALA:HA	26:79:211:SER:O	2.16	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:39:66:PRO:O	29:39:67:GLN:HB3	2.16	0.46
36:45:34:LEU:HD12	36:45:130:LYS:O	2.16	0.46
47:F5:94:LEU:HD23	47:F5:94:LEU:HA	1.67	0.46
1:13:10:A:H2'	1:13:11:G:H8	1.81	0.46
1:13:129(A):G:C2	1:13:188:U:O2'	2.68	0.46
1:13:405:U:O4	4:3E:2:GLY:N	2.49	0.46
1:13:575:G:C5	1:13:881:G:C2	3.04	0.46
1:13:591:U:C2	1:13:592:G:C8	3.04	0.46
1:13:973:G:H3'	1:13:974:A:H5"	1.97	0.46
1:13:1007:C:N3	1:13:1022:G:N2	2.60	0.46
1:13:1060:C:C5'	10:1I:51:ARG:HG2	2.46	0.46
3:2E:70:VAL:N	3:2E:106:VAL:HG23	2.31	0.46
6:5E:23:LYS:HB2	6:5E:23:LYS:NZ	2.21	0.46
16:7I:51:VAL:HG12	16:7I:52:ASP:C	2.36	0.46
20:BI:36:LEU:HA	20:BI:36:LEU:HD13	1.72	0.46
20:BI:72:LEU:HD12	20:BI:72:LEU:HA	1.69	0.46
22:2K:19:C:OP1	22:2K:19:C:H4'	2.09	0.46
24:1H:118:A:C8	24:1H:119:A:C8	3.03	0.46
24:1H:557:U:C2	24:1H:558:G:C8	3.04	0.46
24:1H:805:G:O5'	35:78:41:ARG:HG2	2.16	0.46
24:1H:1019:U:N3	24:1H:1020:A:N7	2.64	0.46
24:1H:1486:A:H2'	24:1H:1487:G:H8	1.81	0.46
24:1H:2233:U:H2'	24:1H:2234:G:C8	2.51	0.46
24:1H:2262:U:H4'	24:1H:2328:A:H2	1.81	0.46
24:1H:2481:G:HO2'	24:1H:2482:G:P	2.39	0.46
24:1H:2615:U:H2'	24:1H:2616:C:C6	2.51	0.46
27:11:25:THR:HG22	27:11:82:ILE:H	1.80	0.46
28:21:117:MET:HG3	28:21:117:MET:O	2.16	0.46
31:51:9:ILE:O	31:51:11:VAL:HG22	2.16	0.46
35:78:135:LEU:HD23	35:78:135:LEU:HA	1.82	0.46
52:P8:24:THR:HG23	52:P8:27:GLY:H	1.81	0.46
53:Q8:36:LYS:NZ	53:Q8:40:GLU:HG2	2.31	0.46
54:1G:304:U:H2'	54:1G:305:G:C8	2.51	0.46
54:1G:1148:U:OP1	9:82:7:THR:HG21	2.15	0.46
5:42:27:ARG:HH11	5:42:47:LYS:HZ1	1.63	0.46
9:82:125:TYR:HD1	9:82:126:SER:H	1.63	0.46
22:2L:85:A:N3	22:2L:85:A:H5'	2.31	0.46
22:3L:85:A:N6	24:14:2422:A:H5"	2.30	0.46
24:14:885:C:H1'	24:14:892:G:H1	1.80	0.46
24:14:1416:G:O2'	24:14:1417:C:H6	1.99	0.46
30:49:7:LEU:HD22	30:49:100:TRP:CE3	2.51	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:49:47:LYS:HG2	30:49:48:GLU:N	2.31	0.46
43:B5:18:TYR:C	43:B5:20:GLY:N	2.68	0.46
1:13:240:C:H2'	1:13:241:C:C6	2.49	0.46
1:13:671:G:H2'	1:13:672:U:C6	2.50	0.46
1:13:1171:G:H2'	1:13:1172:C:C6	2.51	0.46
1:13:1502:A:H2	1:13:1505:G:N1	2.13	0.46
2:1E:91:PRO:HB3	2:1E:154:LEU:HB2	1.98	0.46
2:1E:168:THR:OG1	2:1E:191:ASP:HB3	2.16	0.46
18:9I:26:LEU:HD11	18:9I:29:PHE:CG	2.50	0.46
22:2K:1:G:N3	22:2K:2:G:C8	2.83	0.46
24:1H:557:U:H2'	24:1H:558:G:H8	1.81	0.46
24:1H:1055:G:O6	24:1H:1056:G:N1	2.49	0.46
24:1H:1332:G:N2	24:1H:1609:A:O2'	2.49	0.46
24:1H:1641:A:H2'	24:1H:1642:G:O4'	2.16	0.46
24:1H:2104:G:C2	24:1H:2186:G:C2	3.04	0.46
24:1H:2785:C:H2'	24:1H:2786:U:O4'	2.15	0.46
25:16:22:U:H3	25:16:61:G:H1	1.64	0.46
28:21:179:GLU:O	28:21:180:ASN:HB2	2.16	0.46
29:31:68:LYS:HB3	29:31:68:LYS:HE3	1.69	0.46
42:E8:23:LEU:HD13	51:N8:25:LEU:HB2	1.96	0.46
54:1G:356:A:N3	54:1G:368:U:O2'	2.40	0.46
54:1G:370:C:H2'	54:1G:371:G:C8	2.51	0.46
54:1G:976:G:H5'	54:1G:1358:U:O2'	2.15	0.46
3:22:32:LEU:HD22	3:22:59:ARG:NH1	2.30	0.46
3:22:79:ARG:NH2	3:22:83:ARG:H	2.13	0.46
9:82:18:PHE:HB2	9:82:62:TYR:O	2.15	0.46
9:82:96:LEU:HD12	9:82:96:LEU:HA	1.71	0.46
10:1A:22:LYS:HE3	10:1A:22:LYS:HB3	1.75	0.46
24:14:459:U:H2'	24:14:460:A:C8	2.51	0.46
24:14:611:C:H2'	24:14:612:G:O4'	2.16	0.46
24:14:857:C:H2'	24:14:858:U:C6	2.50	0.46
24:14:1050:A:O2'	24:14:2752:C:H1'	2.15	0.46
24:14:1542:G:O6	24:14:1543:A:N6	2.49	0.46
24:14:1729:A:O2'	24:14:1730:U:H5"	2.16	0.46
24:14:1967:C:H2'	24:14:1968:G:O4'	2.16	0.46
24:14:2320:A:C6	24:14:2333:A:C8	3.04	0.46
24:14:2438:U:O3'	24:14:2439:A:H3'	2.15	0.46
24:14:2625:G:H2'	24:14:2626:C:O4'	2.16	0.46
28:29:27:LEU:HG	28:29:27:LEU:O	2.15	0.46
34:25:9:GLU:O	34:25:83:ALA:HA	2.16	0.46
36:45:24:GLY:HA3	36:45:25:ASP:CB	2.36	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:C5:73:ARG:NH2	44:C5:81:LYS:O	2.48	0.46
1:13:57:G:H2'	1:13:58:C:C6	2.51	0.46
1:13:816:A:OP1	1:13:1526:G:O2'	2.31	0.46
1:13:976:G:C8	1:13:1358:U:C2	3.04	0.46
1:13:1011:G:N2	1:13:1019:C:O2	2.49	0.46
1:13:1149:C:H2'	1:13:1150:U:C6	2.50	0.46
1:13:1239:A:H62	1:13:1299:A:H62	1.62	0.46
1:13:1305:G:H21	1:13:1331:G:H2'	1.81	0.46
2:1E:112:VAL:O	2:1E:115:LEU:N	2.49	0.46
5:4E:12:LEU:HB3	5:4E:31:LEU:HB2	1.97	0.46
8:7E:100:ILE:HA	8:7E:101:PRO:HD3	1.64	0.46
22:2K:70:C:H2'	22:2K:71:C:H6	1.81	0.46
22:3K:85:A:H5"	47:J8:30:VAL:HG11	1.98	0.46
24:1H:106:C:H2'	24:1H:107:C:C6	2.51	0.46
24:1H:624:C:O2'	24:1H:657:U:H5"	2.15	0.46
24:1H:1299:G:H3'	24:1H:1639:U:O4	2.16	0.46
24:1H:1636:C:P	57:1H:3558:HOH:O	2.74	0.46
24:1H:2032:G:C8	57:1H:4560:HOH:O	2.66	0.46
24:1H:2590:A:H2'	24:1H:2591:C:C6	2.51	0.46
30:41:63:ILE:HB	30:41:141:PHE:CD2	2.51	0.46
31:51:13:LYS:HE3	31:51:13:LYS:HB3	1.61	0.46
33:58:67:LEU:HA	33:58:87:LEU:HD12	1.97	0.46
37:98:52:ILE:O	37:98:55:ALA:N	2.46	0.46
43:F8:30:VAL:HG23	43:F8:31:HIS:O	2.16	0.46
54:1G:25:C:H2'	54:1G:26:A:C8	2.51	0.46
54:1G:160:A:H1'	54:1G:344:A:C5	2.51	0.46
54:1G:688:G:H2'	54:1G:689:C:H6	1.81	0.46
54:1G:1291:G:H4'	9:82:38:GLN:O	2.16	0.46
3:22:9:GLY:HA3	14:5A:49:HIS:HA	1.98	0.46
3:22:113:ALA:HB2	3:22:202:ILE:HG13	1.98	0.46
14:5A:28:GLY:C	14:5A:29:ARG:HG3	2.36	0.46
17:8A:59:ILE:HG22	17:8A:71:PHE:HD2	1.81	0.46
24:14:51:G:N3	24:14:119:A:C2	2.84	0.46
24:14:602:G:O2'	24:14:655:A:N6	2.49	0.46
24:14:792:G:H5"	24:14:793:A:H5'	1.97	0.46
24:14:1084:A:O2'	24:14:1105:U:O2'	2.05	0.46
24:14:1101:U:H2'	24:14:1102:C:C6	2.50	0.46
24:14:1173:G:H2'	24:14:1175:U:OP2	2.15	0.46
24:14:1331:A:O2'	24:14:1332:G:H8	1.98	0.46
24:14:1659:U:C4	24:14:1660:C:C5	3.04	0.46
24:14:1964:G:H4'	24:14:1965:C:OP2	2.16	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:14:2002:G:OP2	37:55:9:LYS:NZ	2.49	0.46
24:14:2113:U:H3'	24:14:2114:A:H4'	1.98	0.46
24:14:2503:A:H4'	24:14:2504:U:OP1	2.16	0.46
24:14:2630:G:H21	24:14:2892:A:H1'	1.79	0.46
29:39:63:LYS:HZ1	29:39:67:GLN:HB2	1.81	0.46
30:49:28:VAL:HG13	30:49:31:VAL:HG11	1.98	0.46
35:35:55:ARG:HG2	35:35:56:SER:N	2.30	0.46
36:45:63:LYS:HB2	45:D5:116:VAL:HG11	1.98	0.46
43:B5:63:LYS:H	43:B5:63:LYS:CE	2.24	0.46
50:I5:7:PRO:HB2	50:I5:27:THR:HG22	1.98	0.46
1:13:257:G:C4	1:13:258:G:C8	3.04	0.46
1:13:741:G:H2'	1:13:742:G:O4'	2.16	0.46
6:5E:28:ARG:O	6:5E:31:GLU:HB3	2.15	0.46
17:8I:75:ARG:HH22	17:8I:77:VAL:HG13	1.80	0.46
19:AI:31:ILE:HD13	19:AI:49:ILE:HG12	1.97	0.46
22:2K:2:G:H2'	22:2K:3:U:C6	2.51	0.46
22:3K:71:C:H2'	22:3K:72:U:C6	2.51	0.46
24:1H:551:G:OP1	41:D8:68:LYS:NZ	2.48	0.46
24:1H:580:C:H2'	24:1H:581:C:C6	2.51	0.46
24:1H:768:G:C4	24:1H:769:G:C8	3.05	0.46
24:1H:2286:A:H4'	24:1H:2287:A:O4'	2.16	0.46
24:1H:2483:C:N3	36:88:124:LYS:HE3	2.30	0.46
24:1H:2566:A:H4'	24:1H:2567:G:O5'	2.15	0.46
25:16:38:C:H2'	25:16:39:A:O4'	2.16	0.46
27:11:68:LYS:HB3	27:11:70:TRP:CZ3	2.51	0.46
27:11:144:ALA:HB3	27:11:192:THR:HG23	1.98	0.46
28:21:119:ARG:HD2	28:21:120:TRP:NE1	2.31	0.46
30:41:15:VAL:HG13	30:41:175:LEU:HB2	1.98	0.46
31:51:101:ARG:HE	31:51:101:ARG:HB3	1.58	0.46
33:58:73:THR:CG2	33:58:84:LYS:HG2	2.41	0.46
36:88:48:GLU:O	36:88:48:GLU:HG3	2.15	0.46
45:H8:142:SER:CB	45:H8:143:GLY:HA2	2.45	0.46
52:P8:26:GLY:O	52:P8:30:VAL:HG23	2.16	0.46
54:1G:342:C:C2'	54:1G:343:U:H5'	2.46	0.46
54:1G:834:C:C4	54:1G:835:U:C4	3.04	0.46
54:1G:961:U:OP2	54:1G:1223:C:O2'	2.17	0.46
54:1G:1002:G:H2'	54:1G:1003:G:C8	2.51	0.46
54:1G:1226:C:C5	13:4A:104:ARG:HA	2.51	0.46
8:72:5:PRO:O	8:72:8:ASP:HB3	2.16	0.46
10:1A:81:THR:O	10:1A:85:LEU:HG	2.16	0.46
20:BA:20:LEU:O	20:BA:23:ARG:HB3	2.16	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:BA:73:HIS:HB3	20:BA:74:LYS:H	1.49	0.46
22:2L:31:G:H2'	22:2L:32:A:H8	1.80	0.46
24:14:270(L):U:O2'	24:14:270(M):U:OP1	2.30	0.46
24:14:389:G:H1	35:35:71:VAL:HG12	1.81	0.46
24:14:592:G:N2	53:M5:4:MET:HE1	2.23	0.46
24:14:839:U:H2'	24:14:840:C:C6	2.51	0.46
24:14:1504:C:H2'	24:14:1505:C:C6	2.51	0.46
24:14:1514:U:H2'	24:14:1515:C:C6	2.51	0.46
24:14:2059:A:H5'	24:14:2060:A:OP2	2.15	0.46
24:14:2086:U:H2'	24:14:2087:G:C8	2.51	0.46
24:14:2496:C:OP1	36:45:82:ARG:HB3	2.16	0.46
24:14:2540:C:H2'	24:14:2541:A:O4'	2.15	0.46
24:14:2579:C:H2'	24:14:2580:U:O4'	2.16	0.46
24:14:2638:G:O2'	24:14:2639:A:C8	2.65	0.46
24:14:2747:G:O3'	31:59:70:THR:HG21	2.15	0.46
25:1J:43:C:H4'	30:49:66:GLN:OE1	2.16	0.46
29:39:128:ALA:O	29:39:142:TRP:NE1	2.49	0.46
30:49:104:GLU:CD	50:I5:23:GLU:HG2	2.37	0.46
34:25:23:ARG:HG3	34:25:24:VAL:N	2.31	0.46
44:C5:86:ARG:NH2	44:C5:91:GLU:OE2	2.46	0.46
45:D5:103:ARG:HB2	45:D5:138:GLU:HA	1.98	0.46
47:F5:88:LYS:HB3	47:F5:88:LYS:HE2	1.69	0.46
1:13:143:A:H2	1:13:220:G:H1	1.64	0.45
1:13:155:C:H1'	1:13:167:G:N2	2.31	0.45
1:13:785:G:N7	57:13:1890:HOH:O	2.36	0.45
1:13:902:G:H2'	1:13:903:G:C8	2.51	0.45
1:13:1129:C:H4'	1:13:1130:A:H5'	1.98	0.45
2:1E:95:GLN:O	2:1E:96:ARG:HD2	2.15	0.45
4:3E:29:PRO:C	4:3E:30:LYS:HD3	2.36	0.45
13:4I:14:ARG:HB3	13:4I:17:VAL:HG12	1.98	0.45
22:2K:18:G:H5"	22:2K:19:C:H1'	1.98	0.45
24:1H:764:A:OP1	27:11:208:LYS:HE2	2.16	0.45
24:1H:1296:G:O2'	24:1H:1297:C:H5'	2.16	0.45
24:1H:2129:C:H2'	24:1H:2130:U:O4'	2.17	0.45
24:1H:2209:C:O2	24:1H:2216:G:C2	2.68	0.45
24:1H:2470:G:H5'	36:88:56:ARG:HH21	1.81	0.45
25:16:15:A:H5'	25:16:16:G:C8	2.51	0.45
30:41:80:PHE:O	30:41:81:LYS:HB2	2.17	0.45
35:78:6:LEU:O	35:78:7:ARG:HG2	2.16	0.45
39:B8:50:ILE:HG12	39:B8:64:ARG:HB3	1.98	0.45
40:C8:112:ARG:NH2	41:D8:48:GLY:H	2.13	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:H8:124:ILE:HD12	45:H8:125:LEU:H	1.81	0.45
45:H8:132:ASN:OD1	45:H8:132:ASN:N	2.50	0.45
52:P8:5:TRP:NE1	52:P8:7:PRO:HG3	2.31	0.45
54:1G:197:A:H3'	54:1G:197:A:OP2	2.16	0.45
54:1G:1349:A:H2'	54:1G:1350:A:O4'	2.16	0.45
2:12:97:TRP:CZ3	2:12:99:GLY:HA2	2.51	0.45
3:22:24:ALA:HB1	3:22:28:GLN:HB2	1.97	0.45
5:42:79:GLU:OE1	8:72:104:ARG:HA	2.16	0.45
11:2A:22:HIS:HB3	11:2A:29:ILE:HG12	1.97	0.45
12:3A:69:TYR:HD2	12:3A:99:HIS:CD2	2.35	0.45
16:7A:49:LEU:HD12	16:7A:50:LYS:H	1.81	0.45
18:9A:29:PHE:CD2	18:9A:39:VAL:HG11	2.51	0.45
24:14:1141:U:H2'	33:15:63:THR:HG21	1.97	0.45
24:14:1443:G:N2	24:14:1549:C:C2	2.85	0.45
25:1J:13:A:N1	25:1J:69:G:O2'	2.36	0.45
25:1J:15:A:H1'	25:1J:109:G:C8	2.51	0.45
28:29:77:ILE:CG2	28:29:79:ARG:HE	2.21	0.45
30:49:125:PHE:HB3	30:49:166:ASP:OD2	2.16	0.45
50:I5:20:ASN:CG	50:I5:21:VAL:H	2.19	0.45
50:I5:60:GLN:CD	50:I5:60:GLN:H	2.19	0.45
1:13:48:C:H5"	1:13:365:U:O4	2.15	0.45
1:13:368:U:P	32:69:91:SER:HG	2.39	0.45
1:13:376:G:H5"	16:7I:5:ARG:HB2	1.98	0.45
1:13:418:C:O2'	1:13:540:G:H1'	2.15	0.45
1:13:627:G:H2'	1:13:628:G:H8	1.81	0.45
1:13:664:G:OP1	18:9I:64:ARG:NE	2.39	0.45
1:13:1281:U:P	1:13:1282:C:H41	2.34	0.45
1:13:1405:G:O4'	1:13:1519:A:H4'	2.16	0.45
3:2E:3:ASN:N	3:2E:3:ASN:OD1	2.49	0.45
7:6E:89:MET:SD	7:6E:156:TRP:HD1	2.39	0.45
8:7E:104:ARG:HD2	8:7E:138:TRP:CG	2.51	0.45
9:8E:65:VAL:HG21	9:8E:73:GLN:HB3	1.98	0.45
12:3I:53:ARG:HH12	12:3I:92:ASP:CB	2.29	0.45
22:3K:43:G:H2'	22:3K:44:C:C6	2.50	0.45
24:1H:280:C:N4	24:1H:360:G:H1	2.15	0.45
24:1H:698:C:O2'	24:1H:734:A:N6	2.49	0.45
24:1H:1178:C:O2	24:1H:1178:C:H2'	2.15	0.45
24:1H:1413:G:O5'	24:1H:1413:G:H8	2.00	0.45
24:1H:1776:G:OP2	57:1H:3604:HOH:O	2.20	0.45
27:11:101:GLU:OE1	27:11:103:ARG:HD3	2.16	0.45
27:11:213:ARG:HD2	27:11:213:ARG:HA	1.51	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:21:2:LYS:HD2	28:21:95:ILE:HG22	1.98	0.45
30:41:81:LYS:HD3	30:41:81:LYS:N	2.31	0.45
30:41:103:LEU:HD23	30:41:106:LEU:HD23	1.98	0.45
31:51:26:VAL:HG11	31:51:75:ALA:O	2.17	0.45
33:58:17:ASP:O	33:58:56:ASN:HB2	2.16	0.45
33:58:25:ARG:O	33:58:29:LYS:HG3	2.15	0.45
54:1G:327:A:C5	54:1G:329:A:C5	3.04	0.45
54:1G:946:A:H61	54:1G:1234:C:H42	1.63	0.45
54:1G:991:U:H3	54:1G:1212:U:HO2'	1.61	0.45
2:12:34:ALA:O	2:12:41:ILE:N	2.33	0.45
2:12:136:VAL:HG13	2:12:139:LYS:NZ	2.31	0.45
2:12:174:VAL:HG13	2:12:184:VAL:HG11	1.98	0.45
3:22:131:ARG:NH1	3:22:164:ARG:HH22	2.14	0.45
11:2A:50:TYR:HD2	11:2A:60:ALA:HB2	1.81	0.45
12:3A:111:LYS:O	12:3A:112:ASP:HB2	2.16	0.45
13:4A:29:ARG:HD3	13:4A:64:TRP:CZ2	2.51	0.45
24:14:1024:G:H5"	24:14:1025:G:H5"	1.97	0.45
24:14:1113:U:H2'	24:14:1114:G:O4'	2.15	0.45
24:14:1288:U:C2	24:14:1327:C:O2	2.69	0.45
24:14:1479:G:O2'	24:14:1558:A:H5'	2.15	0.45
24:14:2187:G:C5	24:14:2188:C:C4	3.04	0.45
27:19:70:TRP:O	27:19:73:VAL:HG23	2.16	0.45
29:39:84:VAL:C	29:39:86:GLY:H	2.19	0.45
39:75:22:PHE:HA	39:75:91:ARG:HH21	1.81	0.45
41:95:1:MET:SD	41:95:43:GLU:HB2	2.56	0.45
45:D5:56:VAL:HG23	45:D5:133:ILE:HD13	1.98	0.45
52:L5:35:ARG:HG3	52:L5:42:LEU:HD11	1.98	0.45
1:13:1244:C:H2'	1:13:1245:A:C8	2.52	0.45
1:13:1446:A:OP1	1:13:1446:A:H4'	2.15	0.45
2:1E:5:ILE:HG13	2:1E:6:THR:H	1.81	0.45
2:1E:21:ARG:CB	2:1E:39:ILE:HA	2.44	0.45
12:3I:58:VAL:O	12:3I:65:GLU:HA	2.17	0.45
14:5I:58:LYS:HB3	14:5I:58:LYS:HE2	1.68	0.45
24:1H:64:A:O3'	43:F8:71:GLY:HA3	2.17	0.45
24:1H:280:C:H42	24:1H:360:G:H1	1.63	0.45
24:1H:990:A:H1'	24:1H:1156:A:N3	2.31	0.45
24:1H:1170:G:N2	24:1H:1180:C:C2	2.83	0.45
24:1H:1339:G:N2	24:1H:1603:A:H1'	2.30	0.45
24:1H:1799:G:H5"	24:1H:1819:A:N6	2.31	0.45
24:1H:2133:G:O2'	24:1H:2158:A:N1	2.43	0.45
24:1H:2532:G:H4'	24:1H:2657:A:C2	2.51	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:11:12:SER:O	27:11:16:MET:HB2	2.16	0.45
32:61:69:LYS:O	32:61:69:LYS:HG2	2.16	0.45
45:H8:30:ASN:HA	45:H8:89:PHE:HE1	1.82	0.45
54:1G:338:A:OP1	34:25:97:ARG:NH2	2.49	0.45
54:1G:683:G:H2'	54:1G:684:A:C8	2.52	0.45
54:1G:998(A):C:H2'	54:1G:999:U:O4'	2.16	0.45
9:82:13:ALA:HB2	9:82:68:GLY:HA3	1.98	0.45
11:2A:46:GLY:HA2	11:2A:50:TYR:O	2.17	0.45
11:2A:58:PRO:HG3	11:2A:89:ALA:O	2.16	0.45
17:8A:81:ARG:NH2	17:8A:84:LEU:HD21	2.32	0.45
19:AA:66:MET:HB3	19:AA:69:HIS:CG	2.52	0.45
24:14:25:U:H5'	42:A5:79:GLY:HA2	1.99	0.45
24:14:729:G:OP2	27:19:13:ARG:NH1	2.49	0.45
24:14:1045:A:O2'	24:14:1047:G:O4'	2.31	0.45
24:14:2151:G:H2'	24:14:2152:G:C8	2.51	0.45
24:14:2577:A:H5'	51:J5:3:LYS:HD3	1.99	0.45
28:29:116:VAL:HG13	28:29:122:PHE:HB2	1.99	0.45
30:49:121:ASN:ND2	30:49:123:ASN:HB2	2.24	0.45
36:45:136:ALA:O	36:45:139:GLU:HG2	2.15	0.45
38:65:14:VAL:O	38:65:18:ILE:HG23	2.16	0.45
40:85:65:ILE:O	40:85:68:ALA:N	2.50	0.45
1:13:633:G:H5'	1:13:634:C:OP2	2.16	0.45
1:13:1014:A:H4'	19:AI:14:HIS:CD2	2.51	0.45
3:2E:50:ALA:HA	3:2E:72:LYS:NZ	2.31	0.45
8:7E:11:THR:HG23	8:7E:14:ARG:HH12	1.80	0.45
24:1H:67:U:H2'	24:1H:68:G:C8	2.52	0.45
24:1H:299:A:H5'	24:1H:300:A:OP2	2.16	0.45
24:1H:415:A:H2'	24:1H:416:C:C6	2.50	0.45
24:1H:746:A:H2'	24:1H:2612:C:H5"	1.99	0.45
24:1H:1021:A:C8	24:1H:1022:G:H5"	2.52	0.45
24:1H:1250:G:OP2	35:78:21:ARG:HD3	2.17	0.45
24:1H:1553:A:C6	24:1H:1555:G:H1'	2.52	0.45
24:1H:2572:A:OP1	24:1H:2574:G:H4'	2.16	0.45
24:1H:2816:C:O3'	37:98:99:LYS:HE2	2.17	0.45
24:1H:2862:G:C6	24:1H:2863:C:C4	3.04	0.45
31:51:157:TYR:CE1	31:51:172:LYS:HB2	2.51	0.45
34:68:52:VAL:HG12	34:68:94:ARG:NH2	2.31	0.45
35:78:81:GLN:HG2	35:78:106:LEU:HD23	1.98	0.45
39:B8:11:GLU:HB2	39:B8:14:TYR:CE2	2.50	0.45
45:H8:29:TYR:HA	45:H8:33:LEU:O	2.16	0.45
49:L8:38:GLU:HB3	49:L8:40:THR:HG22	1.98	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:1G:607:A:H2'	54:1G:608:A:O4'	2.17	0.45
54:1G:1329:A:O2'	13:4A:24:GLY:HA2	2.16	0.45
4:32:25:ARG:HG3	4:32:31:CYS:H	1.82	0.45
4:32:50:ARG:HA	4:32:51:PRO:HD3	1.78	0.45
5:42:131:ILE:O	5:42:134:ALA:HB3	2.16	0.45
7:62:102:ARG:O	7:62:106:GLN:HG3	2.16	0.45
9:82:34:ASN:HA	9:82:37:PHE:HD1	1.82	0.45
13:4A:34:LEU:HD23	13:4A:56:LEU:HD21	1.99	0.45
16:7A:39:TYR:HB2	16:7A:49:LEU:HD13	1.98	0.45
24:14:125:G:C6	52:L5:10:ARG:HG3	2.52	0.45
24:14:807:U:H2'	24:14:808:G:H8	1.80	0.45
24:14:1949:G:H2'	24:14:1950:G:O4'	2.17	0.45
24:14:2238:G:H2'	24:14:2238:G:N3	2.30	0.45
24:14:2350:C:H2'	24:14:2351:G:O4'	2.17	0.45
24:14:2853:C:H2'	24:14:2854:G:C8	2.52	0.45
28:29:127:ASP:HA	28:29:135:HIS:ND1	2.32	0.45
31:59:146:ALA:O	31:59:150:ALA:N	2.47	0.45
38:65:88:ASP:OD1	38:65:90:GLY:N	2.47	0.45
39:75:108:ARG:HA	39:75:111:ARG:NH1	2.31	0.45
41:95:1:MET:HG3	41:95:43:GLU:N	2.30	0.45
41:95:76:LYS:HD2	41:95:80:GLN:O	2.17	0.45
45:D5:72:ARG:HD3	45:D5:72:ARG:HA	1.61	0.45
48:G5:10:LEU:HD13	48:G5:59:ARG:HD2	1.98	0.45
51:J5:56:LYS:NZ	51:J5:58:LEU:HB2	2.30	0.45
1:13:89:U:C2	1:13:90:C:H5	2.35	0.45
1:13:746:A:H8	1:13:746:A:O5'	2.00	0.45
1:13:1091:U:H2'	1:13:1093:A:OP2	2.15	0.45
6:5E:18:GLN:O	6:5E:21:LEU:HB2	2.17	0.45
11:2I:33:THR:HA	11:2I:39:PRO:HA	1.97	0.45
19:AI:18:LYS:O	19:AI:22:LEU:HG	2.17	0.45
20:BI:33:ILE:O	20:BI:37:SER:OG	2.20	0.45
22:2K:38:MIA:H161	23:4K:15:A:H2	1.81	0.45
23:4K:14:A:N6	23:4K:15:A:N1	2.63	0.45
24:1H:96:G:H4'	48:K8:48:HIS:CE1	2.52	0.45
24:1H:511:U:C5	24:1H:512:G:C5	3.03	0.45
24:1H:1344:G:H4'	24:1H:1384:A:C5	2.51	0.45
24:1H:1635:G:H2'	24:1H:1636:C:H6	1.81	0.45
24:1H:2399:G:H2'	24:1H:2400:G:O4'	2.16	0.45
24:1H:2670:A:C2	24:1H:2671:A:C4	3.05	0.45
24:1H:2726:U:O2'	24:1H:2727:G:H5'	2.17	0.45
26:71:194:ARG:HA	26:71:197:GLU:HG3	1.97	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:98:87:TYR:OH	37:98:116:LEU:HB3	2.17	0.45
39:B8:54:ARG:HA	39:B8:59:THR:OG1	2.16	0.45
44:G8:54:LYS:O	44:G8:55:TYR:CG	2.69	0.45
53:Q8:16:ILE:HD13	53:Q8:58:ILE:HG12	1.98	0.45
54:1G:433:C:O2'	54:1G:434:U:H5'	2.16	0.45
54:1G:731:G:OP1	54:1G:766:A:H1'	2.16	0.45
11:2A:100:ALA:O	11:2A:101:SER:OG	2.27	0.45
14:5A:21:TYR:HE2	14:5A:23:ARG:CZ	2.30	0.45
23:4L:13:A:H2'	23:4L:13:A:N3	2.31	0.45
24:14:332:A:C2	24:14:335:C:C5	3.04	0.45
24:14:653:A:H5"	24:14:654:A:C8	2.51	0.45
24:14:2262:U:O2'	24:14:2263:C:H5'	2.17	0.45
24:14:2401:U:O2	24:14:2402:C:C5	2.70	0.45
24:14:2612:C:OP2	51:J5:2:ALA:HA	2.17	0.45
24:14:2621:A:P	28:29:119:ARG:HH22	2.40	0.45
24:14:2817:G:OP1	37:55:42:LYS:NZ	2.48	0.45
25:1J:38:C:O4'	38:65:95:HIS:NE2	2.49	0.45
28:29:37:ARG:HG3	28:29:44:TYR:CZ	2.52	0.45
33:15:36:GLY:HA3	33:15:48:MET:HG2	1.98	0.45
37:55:38:VAL:HG22	37:55:112:ALA:HB2	1.98	0.45
38:65:15:ARG:O	38:65:19:LYS:HD2	2.17	0.45
44:C5:17:SER:OG	44:C5:18:GLY:N	2.48	0.45
45:D5:98:MET:HE3	45:D5:98:MET:HB2	1.84	0.45
45:D5:112:ARG:HA	45:D5:112:ARG:HD2	1.71	0.45
45:D5:115:GLY:HA2	45:D5:179:ASP:HB2	1.98	0.45
1:13:144:G:N2	1:13:179:A:H1'	2.32	0.45
1:13:509:A:H5'	4:3E:54:TYR:HD2	1.81	0.45
1:13:865:A:H5'	1:13:1078:U:O4	2.17	0.45
1:13:1305:G:H22	1:13:1331:G:H2'	1.82	0.45
1:13:1504:G:H3'	57:13:1732:HOH:O	2.16	0.45
1:13:1510:U:H2'	1:13:1511:G:C8	2.51	0.45
2:1E:178:ARG:NH2	8:7E:74:PRO:HB3	2.32	0.45
3:2E:148:GLY:HA3	3:2E:172:ARG:O	2.15	0.45
4:3E:85:LYS:O	4:3E:89:THR:OG1	2.22	0.45
4:3E:155:LEU:O	4:3E:158:ILE:N	2.49	0.45
6:5E:23:LYS:HA	6:5E:26:ILE:HD12	1.99	0.45
20:BI:69:GLY:O	20:BI:73:HIS:NE2	2.49	0.45
24:1H:2:G:N2	24:1H:2901:C:H42	2.14	0.45
24:1H:142:G:H1'	43:F8:37:THR:CG2	2.44	0.45
24:1H:459:U:H4'	52:P8:40:TRP:CZ3	2.51	0.45
24:1H:489:G:N7	42:E8:49:LYS:NZ	2.60	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:1H:1167:U:O2	24:1H:1183:G:N2	2.49	0.45
24:1H:1189:A:OP2	57:1H:3838:HOH:O	2.19	0.45
24:1H:2317:C:H2'	24:1H:2318:G:O4'	2.16	0.45
24:1H:2388:A:N7	24:1H:2389:G:C6	2.84	0.45
25:16:71:C:C4	25:16:72:G:N7	2.85	0.45
27:11:32:SER:HA	27:11:34:VAL:HG22	1.99	0.45
33:58:32:THR:HG22	33:58:37:LYS:HB2	1.99	0.45
42:E8:4:LYS:HB3	42:E8:106:ILE:HB	1.97	0.45
54:1G:1300:G:HO2'	54:1G:1301:U:P	2.39	0.45
3:22:131:ARG:NH2	3:22:164:ARG:HH22	2.14	0.45
4:32:76:ARG:O	4:32:79:PHE:HB3	2.16	0.45
5:42:81:GLU:CD	5:42:81:GLU:N	2.70	0.45
19:AA:20:LEU:O	19:AA:23:ASN:HB2	2.17	0.45
24:14:244:A:C2	24:14:255:A:C4	3.05	0.45
24:14:395:U:O2'	24:14:396:G:C8	2.66	0.45
24:14:491:G:H2'	24:14:492:A:C8	2.51	0.45
24:14:956:G:OP1	36:45:88:GLY:N	2.50	0.45
24:14:1203:G:H3'	24:14:1204:A:H5"	1.98	0.45
24:14:1226:G:H4'	41:95:84:LYS:HA	1.99	0.45
24:14:2685:G:O2'	24:14:2726:U:H5	1.99	0.45
27:19:58:HIS:CD2	27:19:59:LYS:H	2.35	0.45
34:25:113:LYS:O	34:25:117:LEU:HD13	2.17	0.45
35:35:71:VAL:HG13	35:35:72:PRO:HD3	1.98	0.45
38:65:21:THR:HG23	38:65:23:ARG:H	1.82	0.45
45:D5:5:LEU:HD12	45:D5:5:LEU:HA	1.70	0.45
45:D5:40:ASP:OD2	45:D5:42:VAL:HG23	2.16	0.45
47:F5:46:LEU:O	47:F5:47:GLN:NE2	2.50	0.45
50:I5:58:ARG:HH22	50:I5:62:ARG:HB2	1.81	0.45
1:13:5:U:HO2'	1:13:6:G:P	2.40	0.45
1:13:45:U:H2'	1:13:46:G:C8	2.52	0.45
1:13:602:A:H2'	1:13:603:U:O4'	2.15	0.45
1:13:953:G:N7	13:4I:104:ARG:NH2	2.64	0.45
1:13:1079:G:C6	1:13:1080:A:N6	2.85	0.45
1:13:1300:G:O2'	1:13:1301:U:OP2	2.35	0.45
1:13:1459:C:H5"	20:BI:27:LYS:HE3	1.98	0.45
3:2E:149:ALA:HA	3:2E:201:TYR:O	2.17	0.45
6:5E:67:MET:SD	6:5E:75:LEU:HD12	2.57	0.45
7:6E:72:ARG:HG3	7:6E:142:GLU:OE1	2.16	0.45
24:1H:273(F):C:O2	24:1H:273(F):C:H2'	2.17	0.45
24:1H:484:C:H2'	24:1H:485:C:C6	2.51	0.45
24:1H:606:U:OP2	29:31:104:LYS:HE3	2.17	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:1H:618:G:H2'	24:1H:618(A):C:O4'	2.17	0.45
24:1H:784:A:C5	27:11:229:VAL:HG21	2.51	0.45
24:1H:1502:C:O2'	24:1H:1503:U:H5'	2.17	0.45
24:1H:1568:G:H5"	27:11:61:LEU:HD23	1.98	0.45
24:1H:1844:C:H2'	24:1H:1845:G:C8	2.51	0.45
24:1H:1951:U:O2	24:1H:1953:A:H8	2.00	0.45
24:1H:2115:G:O2'	24:1H:2165:G:N2	2.48	0.45
24:1H:2532:G:C6	24:1H:2533:A:C6	3.05	0.45
37:98:20:LEU:HD21	37:98:40:LYS:HD3	1.99	0.45
39:B8:29:ARG:HB2	39:B8:46:GLU:HB2	1.99	0.45
45:H8:52:SER:C	45:H8:54:HIS:H	2.18	0.45
53:Q8:30:ARG:HG3	53:Q8:30:ARG:O	2.16	0.45
54:1G:803:G:H2'	54:1G:804:U:C6	2.52	0.45
54:1G:1116:C:H2'	54:1G:1117:G:O4'	2.17	0.45
54:1G:1321:C:N3	54:1G:1322:C:N4	2.65	0.45
54:1G:1421:G:H1	54:1G:1479:C:H42	1.64	0.45
54:1G:1522:U:H2'	54:1G:1523:G:C8	2.52	0.45
2:12:19:HIS:CE1	2:12:204:ASN:HB3	2.52	0.45
2:12:74:LYS:O	2:12:78:GLN:HB3	2.16	0.45
2:12:169:LYS:HE3	2:12:169:LYS:HB3	1.59	0.45
2:12:190:THR:O	2:12:191:ASP:HB3	2.16	0.45
13:4A:57:ARG:HH12	50:I5:17:GLY:HA3	1.82	0.45
16:7A:1:MET:HE1	16:7A:65:GLN:HB2	1.98	0.45
24:14:1198:U:C2	24:14:1199:U:C5	3.05	0.45
24:14:1283:G:N2	24:14:1285:G:H3'	2.32	0.45
24:14:1311:G:C2'	52:L5:47:ARG:HH21	2.30	0.45
24:14:1910:G:H1	24:14:1920:C:H42	1.65	0.45
24:14:2208:U:H4'	27:19:151:LYS:HG2	1.99	0.45
24:14:2315:G:OP1	30:49:36:LYS:NZ	2.50	0.45
27:19:271:ILE:O	27:19:272:ALA:HB2	2.17	0.45
28:29:105:THR:HG21	28:29:164:ARG:NE	2.31	0.45
29:39:110:LEU:HD12	29:39:202:PHE:HE1	1.81	0.45
32:69:68:LEU:HA	32:69:71:ILE:HG22	1.98	0.45
41:95:21:ARG:HH22	41:95:65:GLY:C	2.20	0.45
1:13:191(F):U:H2'	1:13:191:G:H8	1.81	0.45
1:13:233:C:H2'	1:13:234:C:H6	1.82	0.45
1:13:688:G:H2'	1:13:689:C:C6	2.50	0.45
1:13:1252:A:H2'	1:13:1253:G:O4'	2.17	0.45
2:1E:172:ILE:O	2:1E:176:GLU:HG3	2.17	0.45
4:3E:86:LYS:H	4:3E:86:LYS:HG2	1.65	0.45
7:6E:15:ASP:HB3	7:6E:19:GLY:H	1.82	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:6E:16:LEU:HG	9:8E:42:ARG:HA	1.98	0.45
11:2I:16:SER:O	11:2I:35:PRO:HG3	2.15	0.45
24:1H:2074:U:H2'	24:1H:2075:U:C6	2.51	0.45
24:1H:2181:G:C2	24:1H:2182:G:C5	3.05	0.45
24:1H:2290:G:C6	24:1H:2291:U:N3	2.85	0.45
24:1H:2590:A:O2'	24:1H:2591:C:H5'	2.16	0.45
24:1H:2808:U:H2'	24:1H:2809:A:H8	1.82	0.45
36:88:2:LEU:HB3	36:88:69:PHE:CE1	2.52	0.45
44:G8:7:VAL:CG2	44:G8:37:VAL:HG11	2.46	0.45
51:N8:58:LEU:H	51:N8:58:LEU:HD12	1.81	0.45
54:1G:803:G:C5	54:1G:804:U:C4	3.04	0.45
54:1G:972:C:O2	10:1A:55:LYS:HD3	2.17	0.45
7:62:38:LEU:O	7:62:42:ILE:HG13	2.17	0.45
8:72:17:THR:HG22	8:72:63:LEU:HG	1.98	0.45
22:2L:1:G:N3	22:2L:2:G:C8	2.85	0.45
22:2L:17:OMG:O2'	22:2L:18:G:H5'	2.17	0.45
22:2L:59:A:H61	22:2L:60:A:H62	1.64	0.45
22:2L:81:C:C4	22:2L:82:A:N7	2.84	0.45
24:14:455:C:N3	24:14:473:G:H5'	2.31	0.45
24:14:540:G:H2'	24:14:541:C:H6	1.81	0.45
24:14:892:G:N7	24:14:893:C:C4	2.85	0.45
24:14:1504:C:H2'	24:14:1505:C:H6	1.82	0.45
24:14:2274:A:C6	24:14:2276:G:C8	3.04	0.45
24:14:2311:A:H1'	30:49:82:LEU:HD11	1.98	0.45
25:1J:12:C:O2	46:E5:74:ARG:NH1	2.50	0.45
27:19:159:ALA:HB1	27:19:198:ASN:O	2.17	0.45
27:19:218:ARG:HB3	27:19:219:PRO:HD2	1.98	0.45
28:29:135:HIS:CD2	28:29:135:HIS:H	2.33	0.45
30:49:11:TYR:HA	30:49:15:VAL:HB	1.99	0.45
35:35:101:VAL:HG22	35:35:107:LYS:O	2.17	0.45
39:75:9:LEU:C	39:75:9:LEU:HD13	2.37	0.45
42:A5:15:ARG:O	42:A5:19:LEU:HD13	2.16	0.45
47:F5:32:LYS:HE2	47:F5:32:LYS:HB3	1.75	0.45
49:H5:40:THR:HG23	49:H5:43:ILE:CG1	2.47	0.45
51:J5:20:ARG:HA	51:J5:23:HIS:ND1	2.32	0.45
53:M5:40:GLU:H	53:M5:43:GLN:HG3	1.82	0.45
1:13:391:G:C6	1:13:392:G:C5	3.05	0.45
1:13:690:G:H22	11:2I:55:LYS:HZ2	1.65	0.45
1:13:947:G:OP1	13:4I:108:ARG:HB3	2.17	0.45
1:13:1032(A):G:H2'	1:13:1032(B):G:H8	1.81	0.45
1:13:1355:G:H2'	1:13:1356:G:H8	1.82	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:2E:13:GLY:HA2	14:5I:57:ARG:HE	1.80	0.45
22:2K:59:A:O2'	22:2K:60:A:H5'	2.17	0.45
22:3K:8:4SU:H1'	22:3K:9:U:OP1	2.17	0.45
22:3K:15:G:N2	22:3K:68:A:H1'	2.31	0.45
24:1H:780:G:OP1	27:11:218:ARG:NH2	2.50	0.45
24:1H:997:G:C2'	24:1H:998:C:H5'	2.47	0.45
24:1H:1509:C:H3'	24:1H:1510:A:H5"	1.98	0.45
24:1H:1639:U:H2'	24:1H:1640:C:H5"	1.99	0.45
24:1H:1769:G:O2'	24:1H:1958:C:OP1	2.18	0.45
24:1H:1894:C:O2'	24:1H:1895:C:H5'	2.16	0.45
24:1H:2740:A:OP2	24:1H:2763:G:N1	2.38	0.45
29:31:29:ASN:HB3	29:31:112:MET:HE1	1.98	0.45
30:41:135:LEU:O	30:41:154:GLY:HA3	2.16	0.45
37:98:25:ALA:O	37:98:26:LYS:C	2.55	0.45
39:B8:26:ASP:O	39:B8:49:VAL:HG22	2.16	0.45
41:D8:51:VAL:HG12	41:D8:52:VAL:H	1.82	0.45
43:F8:32:PRO:HA	43:F8:77:LYS:HD2	1.97	0.45
47:J8:12:PRO:HB3	47:J8:43:TYR:CD1	2.52	0.45
49:L8:5:LYS:HD2	49:L8:34:GLU:OE1	2.16	0.45
52:P8:19:ARG:NH2	52:P8:23:ARG:HH22	2.15	0.45
54:1G:41:G:H2'	54:1G:42:G:H8	1.82	0.45
54:1G:188:U:O2'	54:1G:189:U:H5'	2.17	0.45
54:1G:273:A:N6	54:1G:274:A:C6	2.84	0.45
54:1G:434:U:H2'	54:1G:435:C:C6	2.52	0.45
54:1G:562:C:H4'	54:1G:563:A:O5'	2.16	0.45
54:1G:873:A:H8	54:1G:873:A:OP1	2.00	0.45
54:1G:1036:G:H3'	54:1G:1037:C:C6	2.52	0.45
54:1G:1046:A:H3'	54:1G:1047:G:C8	2.51	0.45
54:1G:1466:C:H2'	54:1G:1467:G:O4'	2.17	0.45
3:22:83:ARG:NH1	3:22:87:LEU:HD11	2.32	0.45
13:4A:20:THR:HG22	13:4A:26:GLY:O	2.16	0.45
15:6A:75:PRO:O	15:6A:78:TYR:HB3	2.15	0.45
22:3L:31:G:H2'	22:3L:32:A:H8	1.81	0.45
24:14:127:A:H5"	24:14:128:C:C6	2.51	0.45
24:14:545:G:H8	24:14:545:G:O5'	2.00	0.45
24:14:900:A:H3'	24:14:901:A:H8	1.81	0.45
24:14:1678:G:N2	24:14:1989:G:N2	2.64	0.45
24:14:1849:G:H2'	24:14:1850:G:H8	1.81	0.45
24:14:2209:C:O2	24:14:2216:G:C2	2.70	0.45
24:14:2516:G:C5	24:14:2517:C:C5	3.05	0.45
24:14:2673:G:O3'	34:25:26:LYS:NZ	2.50	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:19:93:ALA:HB2	27:19:107:ALA:HB2	1.99	0.45
29:39:120:GLU:HG3	29:39:122:LYS:HG2	1.98	0.45
32:69:101:LEU:HA	32:69:105:HIS:HB2	1.99	0.45
44:C5:57:GLN:HB3	44:C5:58:GLY:H	1.63	0.45
1:13:163:C:H2'	1:13:164:U:C6	2.51	0.45
1:13:187:C:O2	1:13:191(A):G:N1	2.50	0.45
1:13:310:G:P	16:7I:27:LYS:HZ1	2.32	0.45
1:13:1288:A:H2'	1:13:1289:A:O4'	2.17	0.45
6:5E:44:GLY:HA2	6:5E:59:TYR:CE1	2.52	0.45
19:AI:18:LYS:NZ	19:AI:22:LEU:HD21	2.32	0.45
19:AI:40:ILE:O	19:AI:41:VAL:HG22	2.17	0.45
24:1H:139:G:N3	24:1H:141:A:N1	2.64	0.45
24:1H:172:C:H2'	24:1H:173:G:C8	2.51	0.45
24:1H:270(X):G:C6	24:1H:270(Y):G:N1	2.85	0.45
24:1H:273(F):C:H3'	24:1H:274:G:C5'	2.46	0.45
24:1H:547:A:C5	24:1H:548:A:C6	3.05	0.45
24:1H:601:C:OP1	29:31:108:LYS:HE3	2.17	0.45
24:1H:607:U:N3	24:1H:621:A:C2	2.80	0.45
24:1H:1239:G:H2'	24:1H:1240:U:O4'	2.17	0.45
24:1H:1268:A:H2'	24:1H:1269:A:O4'	2.16	0.45
24:1H:2272:U:H5"	24:1H:2273:A:OP1	2.17	0.45
24:1H:2582:G:N2	24:1H:2583:G:H1'	2.31	0.45
24:1H:2830:G:C8	24:1H:2830:G:H5"	2.51	0.45
27:11:172:TYR:CD2	27:11:186:HIS:HA	2.52	0.45
28:21:116:VAL:HG13	28:21:122:PHE:CG	2.51	0.45
30:41:56:ALA:HB2	30:41:153:ARG:NE	2.32	0.45
32:61:130:TYR:HB3	32:61:136:VAL:HG13	1.99	0.45
33:58:133:GLN:O	33:58:134:ARG:NH1	2.50	0.45
36:88:78:PRO:HG2	36:88:81:VAL:HG11	1.99	0.45
45:H8:19:ARG:NH1	45:H8:84:GLU:HB2	2.32	0.45
54:1G:313:A:H2'	54:1G:314:C:C6	2.52	0.45
54:1G:464:G:N2	54:1G:467:G:C8	2.85	0.45
54:1G:854:G:C2	54:1G:855:G:C8	3.04	0.45
54:1G:993:G:H2'	54:1G:995:C:H41	1.82	0.45
54:1G:1103:C:H5"	2:12:98:LEU:HD13	1.98	0.45
54:1G:1143:G:H2'	54:1G:1144:G:C8	2.52	0.45
54:1G:1270:C:OP2	21:1B:24:ARG:NH2	2.49	0.45
54:1G:1323:G:H2'	54:1G:1324:A:O4'	2.17	0.45
54:1G:1342:C:H2'	54:1G:1343:G:H8	1.82	0.45
54:1G:1386:G:C2	54:1G:1387:G:N7	2.85	0.45
2:12:161:ALA:HB1	2:12:185:ILE:HD11	1.98	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:7A:65:GLN:HA	16:7A:66:PRO:HD3	1.78	0.45
24:14:314:A:H2'	24:14:315:G:H8	1.82	0.45
24:14:820:A:N3	24:14:943:U:H4'	2.32	0.45
24:14:952:G:C6	24:14:953:A:N7	2.85	0.45
24:14:1754:C:OP2	39:75:113:LYS:NZ	2.47	0.45
24:14:2209:C:O2'	24:14:2211:G:N2	2.50	0.45
24:14:2773:C:H2'	24:14:2774:C:H6	1.83	0.45
28:29:53:PRO:HA	28:29:74:PRO:HB3	1.99	0.45
29:39:187:VAL:HG12	35:35:3:LEU:HG	1.98	0.45
32:69:75:LEU:HD12	32:69:139:GLN:O	2.17	0.45
33:15:137:LYS:HD3	33:15:137:LYS:HA	1.48	0.45
40:85:83:LEU:CD2	40:85:88:ILE:HB	2.46	0.45
1:13:232:G:C6	1:13:233:C:C4	3.05	0.44
1:13:738:C:C2	1:13:739:C:C5	3.05	0.44
1:13:827:U:C5	1:13:870:U:C5	3.05	0.44
1:13:1414:U:H2'	1:13:1415:G:H8	1.82	0.44
1:13:1525:G:P	11:2I:120:ARG:HH22	2.40	0.44
2:1E:208:ILE:H	2:1E:208:ILE:HG13	1.58	0.44
24:1H:173:G:H2'	24:1H:174:C:C6	2.51	0.44
24:1H:654(N):G:H2'	24:1H:654(O):G:C8	2.52	0.44
24:1H:736:C:O5'	24:1H:736:C:H6	1.99	0.44
24:1H:749:C:OP2	57:1H:4354:HOH:O	2.21	0.44
24:1H:825:C:H4'	24:1H:2428:G:C5	2.52	0.44
24:1H:1077:A:H2	24:1H:1088:A:N6	2.15	0.44
24:1H:1079:C:N4	24:1H:1088:A:OP1	2.49	0.44
24:1H:1176:G:H5"	24:1H:1177:A:N7	2.33	0.44
24:1H:1275:A:N1	24:1H:1295:C:O2'	2.43	0.44
24:1H:1359:A:N6	24:1H:1372:U:H3	2.13	0.44
24:1H:1443:G:N7	57:1H:3688:HOH:O	2.36	0.44
24:1H:1479:G:H5'	24:1H:1558:A:H2	1.81	0.44
24:1H:1491:G:O2'	24:1H:1492:G:H5'	2.17	0.44
24:1H:1952:A:C4	34:68:22:ILE:HG13	2.52	0.44
24:1H:2760:C:O2'	24:1H:2761:G:H5'	2.16	0.44
30:41:33:ARG:O	30:41:162:THR:HG23	2.17	0.44
33:58:37:LYS:O	40:C8:67:ALA:HB2	2.17	0.44
40:C8:47:TYR:HA	40:C8:50:ARG:CZ	2.47	0.44
44:G8:21:LYS:HB3	44:G8:21:LYS:HE2	1.36	0.44
45:H8:7:ALA:HB2	45:H8:59:LEU:HD13	1.99	0.44
54:1G:15:G:H4'	5:42:24:ARG:HH12	1.80	0.44
54:1G:186:C:H42	54:1G:191:G:H1	1.65	0.44
54:1G:577:G:H2'	54:1G:578:C:H6	1.82	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:1G:582:U:H5"	15:6A:64:ARG:NH2	2.32	0.44
54:1G:735:C:H2'	54:1G:736:C:H6	1.83	0.44
2:12:91:PRO:HG3	2:12:154:LEU:HB2	1.99	0.44
2:12:222:ILE:HG22	2:12:226:ARG:HD2	1.99	0.44
8:72:82:HIS:C	8:72:82:HIS:CD2	2.91	0.44
12:3A:53:ARG:HH12	12:3A:92:ASP:CB	2.30	0.44
19:AA:81:ARG:HE	19:AA:81:ARG:HB2	1.34	0.44
24:14:71:A:H5'	24:14:71:A:H8	1.82	0.44
24:14:212:G:H2'	24:14:213:A:C8	2.52	0.44
24:14:654(D):G:N2	24:14:654(Q):C:N3	2.47	0.44
24:14:1410:G:N2	24:14:1593:G:C4	2.85	0.44
24:14:1971:A:H5"	57:14:3597:HOH:O	2.16	0.44
24:14:2538:C:H2'	24:14:2539:C:H6	1.82	0.44
26:79:30:LYS:HD2	26:79:182:PRO:HD3	1.98	0.44
31:59:26:VAL:HG13	31:59:27:LYS:H	1.82	0.44
32:69:97:ILE:O	32:69:100:ALA:HB3	2.16	0.44
32:69:103:ARG:HH21	32:69:104:GLN:HB3	1.81	0.44
38:65:25:ARG:O	38:65:39:ILE:HA	2.17	0.44
39:75:19:LEU:HD22	39:75:86:ILE:HG23	1.98	0.44
40:85:92:ARG:HD2	41:95:11:GLN:OE1	2.18	0.44
45:D5:76:LEU:HA	45:D5:83:PRO:HA	1.99	0.44
1:13:21:G:OP1	57:13:1766:HOH:O	2.20	0.44
1:13:989:C:H42	1:13:1216:G:H1	1.64	0.44
1:13:1071:C:H2'	1:13:1072:G:H8	1.82	0.44
1:13:1151:A:N6	1:13:1152:A:N6	2.65	0.44
3:2E:47:LEU:HG	3:2E:50:ALA:HB3	2.00	0.44
6:5E:97:PHE:HB3	18:9I:31:LEU:HB2	1.99	0.44
10:1I:40:LEU:HB2	10:1I:69:ASN:CB	2.47	0.44
13:4I:50:GLU:O	13:4I:54:VAL:HG23	2.17	0.44
15:6I:82:ILE:O	15:6I:86:GLY:N	2.44	0.44
20:BI:14:LYS:HB2	20:BI:17:ARG:NH2	2.32	0.44
20:BI:56:MET:O	20:BI:59:ALA:HB3	2.16	0.44
24:1H:141:A:C8	24:1H:1408:C:H1'	2.52	0.44
24:1H:182:A:H2'	24:1H:183:C:C6	2.52	0.44
24:1H:458:G:O2'	24:1H:469:G:O6	2.26	0.44
24:1H:811:U:H2'	35:78:21:ARG:HA	1.98	0.44
24:1H:860:U:C5	24:1H:917:A:H2	2.33	0.44
24:1H:1036:G:H2'	24:1H:1037:G:O4'	2.18	0.44
24:1H:1062:G:OP1	24:1H:1070:A:H4'	2.16	0.44
24:1H:1545(A):A:H2'	24:1H:1546:C:O4'	2.17	0.44
24:1H:1815:A:C5	24:1H:1817:G:C6	3.06	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:1H:1965:C:H3'	24:1H:1966:A:H2'	1.99	0.44
31:51:95:ARG:HB3	31:51:95:ARG:NH1	2.32	0.44
32:61:75:LEU:HD11	32:61:105:HIS:CE1	2.51	0.44
33:58:67:LEU:O	33:58:88:GLU:HG3	2.17	0.44
35:78:59:LEU:O	35:78:61:ARG:N	2.47	0.44
35:78:89:ALA:HA	35:78:121:LYS:HD3	1.98	0.44
39:B8:50:ILE:O	39:B8:99:LEU:HB2	2.17	0.44
45:H8:97:GLU:HB2	45:H8:125:LEU:HD11	1.99	0.44
54:1G:1213:A:N6	54:1G:1215:G:N3	2.64	0.44
54:1G:1522:U:H2'	54:1G:1523:G:H8	1.82	0.44
3:22:148:GLY:HA3	3:22:172:ARG:O	2.16	0.44
6:52:5:GLU:HG3	6:52:93:SER:OG	2.17	0.44
10:1A:11:PHE:HE1	10:1A:67:THR:HG22	1.82	0.44
11:2A:120:ARG:HA	11:2A:121:PRO:HD3	1.70	0.44
22:3L:11:C:H42	22:3L:25:G:H1	1.64	0.44
23:4L:15:A:H8	23:4L:15:A:O5'	2.00	0.44
24:14:526:A:N3	24:14:2044:C:H1'	2.33	0.44
24:14:527:C:OP2	24:14:2779:U:C5	2.70	0.44
24:14:844:C:H3'	24:14:845:G:C8	2.52	0.44
24:14:1503:U:H2'	24:14:1504:C:C6	2.52	0.44
24:14:2081:C:H2'	24:14:2082:A:C8	2.52	0.44
24:14:2136:C:N4	24:14:2156:G:H22	2.16	0.44
24:14:2168:G:H21	24:14:2169:A:H8	1.66	0.44
25:1J:40:U:H1'	25:1J:46:A:N1	2.32	0.44
25:1J:56:G:H4'	25:1J:57:A:H8	1.83	0.44
29:39:157:VAL:HB	29:39:194:MET:HB3	1.98	0.44
31:59:7:LEU:HA	31:59:65:HIS:CE1	2.53	0.44
44:C5:61:ILE:HB	44:C5:63:LYS:HD3	2.00	0.44
52:L5:43:THR:HG23	52:L5:44:PRO:HD2	1.99	0.44
1:13:380:G:N2	1:13:384:G:C5	2.85	0.44
1:13:448:A:H2'	1:13:449:C:O2	2.18	0.44
1:13:575:G:C8	1:13:881:G:N2	2.85	0.44
1:13:730:G:C5	1:13:731:G:H1'	2.52	0.44
1:13:751:U:O4'	15:6I:24:SER:HA	2.18	0.44
1:13:1200:C:H4'	1:13:1201:A:H5"	2.00	0.44
1:13:1243:C:O2	1:13:1295:G:N2	2.51	0.44
1:13:1293:G:H2'	1:13:1294:G:O4'	2.17	0.44
2:1E:22:LYS:HD3	2:1E:40:HIS:HE1	1.81	0.44
2:1E:111:ARG:HG2	2:1E:111:ARG:NH1	2.31	0.44
4:3E:194:LEU:HD12	4:3E:195:ALA:N	2.32	0.44
12:3I:36:VAL:O	12:3I:59:ARG:N	2.45	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:BI:30:LYS:NZ	20:BI:80:ARG:HH12	2.15	0.44
24:1H:1006:C:O2	33:58:106:MET:HG2	2.17	0.44
24:1H:1021:A:C8	24:1H:1021:A:C3'	3.00	0.44
24:1H:1021:A:C2	24:1H:1023:U:C2	3.05	0.44
24:1H:1140:C:OP1	33:58:23:LEU:HB3	2.17	0.44
24:1H:1728:G:H5'	24:1H:1729:A:OP2	2.17	0.44
24:1H:1748:G:H2'	24:1H:1749:A:C8	2.52	0.44
24:1H:2180:U:H2'	24:1H:2181:G:O4'	2.17	0.44
24:1H:2420:C:OP1	53:Q8:33:ASN:HA	2.17	0.44
24:1H:2799:A:H2'	24:1H:2801:A:H8	1.83	0.44
25:16:94:C:H2'	25:16:95:U:H6	1.82	0.44
28:21:57:LYS:C	28:21:59:VAL:H	2.21	0.44
32:61:1:MET:O	32:61:20:ASP:HA	2.17	0.44
36:88:20:ALA:HB3	45:H8:79:ARG:HH12	1.82	0.44
42:E8:18:ARG:HD3	42:E8:76:VAL:HG13	1.99	0.44
46:I8:48:GLY:HA3	46:I8:80:HIS:ND1	2.32	0.44
53:Q8:54:GLU:OE2	53:Q8:54:GLU:HA	2.16	0.44
54:1G:243:A:C2	54:1G:245:C:C2	3.05	0.44
54:1G:687:A:H4'	54:1G:688:G:O5'	2.17	0.44
54:1G:1118:C:H5'	9:82:104:ARG:HG2	1.99	0.44
57:1G:1876:HOH:O	4:32:151:LYS:NZ	2.27	0.44
5:42:71:LEU:HD11	5:42:114:GLY:O	2.16	0.44
5:42:78:HIS:CE1	5:42:142:LEU:HD23	2.52	0.44
6:52:11:ASN:HB3	6:52:14:LEU:HG	2.00	0.44
7:62:22:LEU:HD12	7:62:97:GLN:HE21	1.82	0.44
7:62:138:LYS:HE2	7:62:142:GLU:CD	2.37	0.44
11:2A:114:VAL:HA	11:2A:115:PRO:HD3	1.84	0.44
19:AA:11:VAL:HG12	19:AA:12:ASP:N	2.31	0.44
19:AA:71:LEU:HD23	19:AA:71:LEU:HA	1.78	0.44
24:14:455:C:N3	24:14:472:A:H2'	2.32	0.44
24:14:566:U:H2'	24:14:567:A:O4'	2.17	0.44
24:14:1225:C:O2'	41:95:85:LYS:N	2.50	0.44
24:14:1833:U:H2'	24:14:1834:U:H6	1.83	0.44
24:14:2535:G:H2'	24:14:2536:G:O4'	2.18	0.44
42:A5:18:ARG:HA	42:A5:21:VAL:HB	1.98	0.44
45:D5:14:LYS:HA	45:D5:15:PRO:HD3	1.72	0.44
50:I5:50:VAL:HG23	50:I5:51:ASP:H	1.83	0.44
51:J5:48:GLU:OE1	51:J5:48:GLU:N	2.50	0.44
1:13:134:A:H1'	1:13:325:A:C5	2.52	0.44
1:13:186(D):C:H42	1:13:191(C):G:H1	1.65	0.44
1:13:373:A:C2	1:13:482:A:C6	3.06	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:13:428:G:C8	1:13:430:A:C4	3.06	0.44
1:13:561:U:HO2'	1:13:562:C:P	2.41	0.44
1:13:625:G:C4	1:13:626:U:C5	3.05	0.44
1:13:826:C:C2	1:13:827:U:O2	2.71	0.44
1:13:1081:G:H2'	1:13:1082:G:C8	2.52	0.44
1:13:1198:G:O2'	10:1I:55:LYS:HD3	2.16	0.44
1:13:1203:C:H2'	1:13:1204:A:O4'	2.18	0.44
1:13:1367:C:H5'	10:1I:60:ARG:CZ	2.48	0.44
1:13:1392:G:H8	1:13:1392:G:O5'	1.99	0.44
3:2E:51:GLY:O	3:2E:115:LEU:HD11	2.18	0.44
13:4I:8:GLU:O	13:4I:10:PRO:HD3	2.17	0.44
13:4I:11:ARG:NH1	13:4I:12:ASN:HB2	2.33	0.44
19:AI:42:PRO:O	19:AI:45:VAL:HG13	2.18	0.44
20:BI:57:ARG:HH11	20:BI:103:GLY:HA2	1.83	0.44
22:3K:72:U:H2'	22:3K:73:U:O4'	2.17	0.44
24:1H:1417:C:H2'	24:1H:1418:G:O4'	2.17	0.44
24:1H:2032:G:O2'	28:21:145:LYS:HE3	2.17	0.44
24:1H:2184:G:C6	24:1H:2185:C:C4	3.05	0.44
24:1H:2283:C:N3	24:1H:2389:G:C2	2.86	0.44
28:21:21:VAL:HG12	28:21:23:VAL:HG13	2.00	0.44
29:31:65:TRP:HZ3	29:31:73:ALA:O	2.00	0.44
33:58:28:THR:HA	33:58:106:MET:HE2	1.99	0.44
38:A8:59:LYS:HG2	38:A8:60:GLY:H	1.81	0.44
43:F8:31:HIS:HA	43:F8:32:PRO:HD3	1.75	0.44
43:F8:67:GLY:C	43:F8:69:TYR:H	2.19	0.44
54:1G:333:G:O2'	54:1G:334:C:H5'	2.18	0.44
54:1G:827:U:H2'	54:1G:859:A:H61	1.81	0.44
54:1G:1117:G:O3'	9:82:9:ARG:NH2	2.35	0.44
54:1G:1224:G:N1	54:1G:1322:C:H1'	2.31	0.44
54:1G:1232:U:H2'	54:1G:1233:G:O4'	2.16	0.44
2:12:87:ARG:CZ	2:12:232:PRO:HA	2.47	0.44
3:22:6:HIS:HA	3:22:7:PRO:HD3	1.83	0.44
4:32:18:LYS:HE2	4:32:26:CYS:HB3	1.99	0.44
5:42:50:GLU:CB	5:42:53:LEU:HD13	2.47	0.44
8:72:121:ASP:OD2	8:72:125:ARG:NH2	2.50	0.44
9:82:25:LYS:HD3	9:82:25:LYS:HA	1.66	0.44
22:3L:80:C:H2'	22:3L:81:C:C6	2.52	0.44
24:14:395:U:H2'	57:14:4144:HOH:O	2.18	0.44
24:14:972:G:OP2	24:14:974:G:H5"	2.17	0.44
24:14:973:A:H5'	24:14:1188:U:C1'	2.47	0.44
24:14:1754:C:N3	24:14:2716:U:O2'	2.47	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:14:1879:C:O5'	24:14:1879:C:H6	2.01	0.44
24:14:2151:G:H2'	24:14:2152:G:H8	1.81	0.44
24:14:2297:C:C2	24:14:2298:A:C8	3.05	0.44
24:14:2303:G:O2'	30:49:132:ASN:HB2	2.17	0.44
26:79:213:TYR:HD2	26:79:221:SER:HB2	1.82	0.44
36:45:98:LYS:HB3	36:45:99:PRO:HD2	2.00	0.44
38:65:15:ARG:HD2	38:65:88:ASP:OD2	2.18	0.44
42:A5:29:LEU:HD21	42:A5:33:ARG:HH21	1.80	0.44
45:D5:105:VAL:O	45:D5:108:PRO:HD2	2.17	0.44
49:H5:12:PRO:O	49:H5:15:TYR:HB2	2.17	0.44
52:L5:24:THR:O	52:L5:28:ARG:HG3	2.18	0.44
1:13:74:C:H2'	1:13:75:C:O4'	2.16	0.44
1:13:624:C:O3'	16:7I:10:GLY:HA2	2.18	0.44
1:13:731:G:H5'	1:13:766:A:H4'	2.00	0.44
1:13:1048:G:OP1	14:5I:3:ARG:HB3	2.18	0.44
8:7E:104:ARG:HD2	8:7E:138:TRP:CD2	2.53	0.44
11:2I:21:ILE:HB	11:2I:84:VAL:HG12	1.99	0.44
16:7I:23:ASP:OD1	16:7I:25:ARG:HD3	2.18	0.44
17:8I:75:ARG:NH1	17:8I:77:VAL:HG22	2.32	0.44
20:BI:100:ILE:HG12	20:BI:101:GLY:H	1.83	0.44
24:1H:198:C:C2'	24:1H:199:A:H5"	2.47	0.44
24:1H:997:G:OP1	40:C8:92:ARG:HB2	2.18	0.44
24:1H:2074:U:P	57:1H:3636:HOH:O	2.75	0.44
24:1H:2110:G:C2	24:1H:2120:G:H1'	2.53	0.44
24:1H:2393:A:H2'	24:1H:2394:C:C6	2.51	0.44
24:1H:2420:C:P	53:Q8:33:ASN:HA	2.57	0.44
24:1H:2508:G:C4	24:1H:2509:G:C8	3.05	0.44
25:16:19:G:N2	25:16:65:C:C2	2.86	0.44
30:41:107:LEU:HD22	30:41:178:PHE:HA	2.00	0.44
41:D8:34:GLU:O	41:D8:36:PRO:HD3	2.17	0.44
45:H8:24:LEU:HA	45:H8:25:PRO:HD3	1.71	0.44
50:M8:43:TYR:HA	50:M8:46:GLN:HG3	2.00	0.44
54:1G:353:A:H5'	54:1G:353:A:C8	2.44	0.44
54:1G:1257:U:H5'	54:1G:1258:G:C8	2.53	0.44
3:22:191:THR:OG1	3:22:194:GLY:O	2.30	0.44
4:32:38:TYR:HA	4:32:39:PRO:HD3	1.84	0.44
4:32:119:GLN:O	4:32:123:HIS:CD2	2.70	0.44
13:4A:30:ALA:O	13:4A:34:LEU:HG	2.17	0.44
20:BA:53:LEU:HD12	20:BA:101:GLY:CA	2.47	0.44
24:14:270(F):U:H2'	24:14:270(G):C:C6	2.53	0.44
24:14:821:A:C2'	24:14:946:G:H5"	2.48	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:14:853:G:H2'	24:14:854:G:H8	1.83	0.44
24:14:943:U:OP2	35:35:36:LYS:HE2	2.17	0.44
24:14:1285:G:C5	24:14:1329:U:C4	3.06	0.44
24:14:1511:A:H2'	24:14:1512:G:H8	1.79	0.44
24:14:2584:U:H2'	24:14:2585:U:C6	2.53	0.44
41:95:21:ARG:NH2	41:95:65:GLY:O	2.50	0.44
43:B5:18:TYR:C	43:B5:20:GLY:H	2.20	0.44
45:D5:43:GLU:O	45:D5:47:VAL:HG23	2.18	0.44
1:13:142:G:H2'	1:13:143:A:H8	1.82	0.44
1:13:464:G:H2'	1:13:467:G:O6	2.18	0.44
1:13:587:G:C2	1:13:755:G:C6	3.05	0.44
1:13:644:G:H2'	1:13:645:C:O4'	2.18	0.44
1:13:1021:G:C2	1:13:1022:G:H1'	2.52	0.44
1:13:1336:C:H1'	1:13:1337:G:N2	2.33	0.44
2:1E:15:VAL:HG11	2:1E:207:ALA:HB1	1.99	0.44
3:2E:19:GLU:HG3	3:2E:54:ARG:CZ	2.47	0.44
4:3E:99:SER:HB3	4:3E:139:ARG:HG3	1.98	0.44
11:2I:54:ARG:O	11:2I:57:THR:OG1	2.30	0.44
12:3I:62:SER:HB2	12:3I:64:TYR:CD1	2.46	0.44
14:5I:37:PHE:HE1	14:5I:53:LEU:HD22	1.82	0.44
14:5I:53:LEU:HD23	14:5I:53:LEU:HA	1.71	0.44
19:AI:24:ALA:C	19:AI:26:GLY:H	2.21	0.44
24:1H:817:C:H4'	24:1H:932:G:C5	2.52	0.44
24:1H:823:G:H2'	24:1H:824:A:C8	2.53	0.44
24:1H:943:U:OP2	35:78:36:LYS:HG3	2.18	0.44
24:1H:1923:U:H2'	24:1H:1924:C:C6	2.53	0.44
24:1H:1956:U:H2'	24:1H:1957:C:H5'	1.98	0.44
24:1H:1992:G:N2	24:1H:1996:C:O2'	2.51	0.44
24:1H:2002:G:C6	57:1H:4226:HOH:O	2.69	0.44
24:1H:2052:G:C2	24:1H:2053:G:C8	3.06	0.44
24:1H:2115:G:O3'	24:1H:2165:G:N2	2.51	0.44
24:1H:2291:U:O2'	24:1H:2374:C:O2	2.32	0.44
24:1H:2572:A:N7	28:21:145:LYS:HB2	2.32	0.44
25:16:24:G:O6	25:16:56:G:O2'	2.25	0.44
26:71:226:PRO:HG2	26:71:227:HIS:ND1	2.33	0.44
29:31:101:LEU:HD12	29:31:101:LEU:HA	1.78	0.44
33:58:1:MET:HE3	33:58:1:MET:HB3	1.91	0.44
45:H8:108:PRO:HD2	45:H8:113:ALA:H	1.82	0.44
54:1G:147:G:N2	54:1G:148:G:C4	2.86	0.44
54:1G:837:G:H1	54:1G:849:C:N4	2.16	0.44
54:1G:940:C:C2	54:1G:941:G:C8	3.05	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:1G:1117:G:H2'	9:82:104:ARG:NH1	2.32	0.44
2:12:204:ASN:HB2	2:12:210:SER:HB3	1.97	0.44
3:22:131:ARG:HH22	3:22:164:ARG:HH22	1.66	0.44
5:42:9:LYS:O	5:42:33:VAL:HG23	2.18	0.44
5:42:11:ILE:HG22	5:42:12:LEU:HB2	1.99	0.44
5:42:102:ALA:HB2	5:42:120:THR:HG21	1.98	0.44
12:3A:76:ASN:OD1	12:3A:76:ASN:N	2.43	0.44
24:14:150:C:H2'	24:14:151:C:C6	2.53	0.44
24:14:807:U:O2'	24:14:808:G:H5'	2.17	0.44
24:14:1021:A:H2'	24:14:1023:U:H5'	1.98	0.44
24:14:1043:C:H42	24:14:1112:G:H1	1.64	0.44
24:14:1426:G:H8	24:14:1426:G:O5'	2.00	0.44
24:14:2081:C:O2'	24:14:2082:A:H5'	2.18	0.44
24:14:2547:U:O2	34:25:23:ARG:NH2	2.51	0.44
24:14:2712(A):A:O5'	57:14:3571:HOH:O	2.21	0.44
24:14:2784:C:H1'	28:29:37:ARG:NH1	2.32	0.44
30:49:29:TRP:HE3	30:49:33:ARG:NH1	2.15	0.44
37:55:78:LYS:O	37:55:83:ILE:HG13	2.18	0.44
37:55:103:ARG:HD2	42:A5:40:ASN:ND2	2.33	0.44
40:85:27:LEU:HD13	40:85:31:SER:HB3	1.98	0.44
40:85:55:ARG:O	40:85:59:ARG:HB2	2.17	0.44
41:95:21:ARG:CG	41:95:91:TYR:CE1	3.00	0.44
44:C5:89:PHE:O	44:C5:89:PHE:CG	2.69	0.44
45:D5:161:VAL:HB	45:D5:162:GLU:H	1.54	0.44
1:13:44:G:C2	1:13:45:U:H1'	2.52	0.44
1:13:874:G:C4	1:13:875:C:C5	3.06	0.44
1:13:1208:C:H2'	1:13:1209:C:C6	2.53	0.44
1:13:1360:A:H2'	1:13:1361:G:O4'	2.18	0.44
13:4I:14:ARG:HH21	13:4I:42:ALA:HA	1.83	0.44
22:3K:55:U:C4	22:3K:56:U:H1'	2.52	0.44
24:1H:114:U:O2'	43:F8:33:LYS:NZ	2.49	0.44
24:1H:184:C:H2'	24:1H:185:U:C6	2.53	0.44
24:1H:371:A:H8	24:1H:423:A:C2	2.35	0.44
24:1H:654(F):C:N3	24:1H:654(P):G:N2	2.66	0.44
24:1H:1069:A:H2'	24:1H:1073:A:H62	1.83	0.44
24:1H:1222:C:C2	24:1H:1223:C:C5	3.05	0.44
24:1H:1436:G:C6	24:1H:1437:C:C4	3.06	0.44
24:1H:1475:G:C2	24:1H:1519:G:C2	3.06	0.44
24:1H:2315:G:N2	30:41:128:ARG:HH22	2.16	0.44
24:1H:2364:C:H2'	24:1H:2365:G:O4'	2.18	0.44
24:1H:2562:U:H1'	34:68:23:ARG:HE	1.82	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:16:72:G:N2	25:16:103:U:C5	2.86	0.44
31:51:35:VAL:HG12	31:51:37:VAL:HG23	1.99	0.44
35:78:2:LYS:NZ	35:78:5:ASP:OD1	2.50	0.44
35:78:132:LYS:HB3	35:78:132:LYS:HE3	1.58	0.44
44:G8:39:VAL:O	44:G8:42:VAL:HG13	2.18	0.44
54:1G:8:A:N6	4:32:209:ARG:HB2	2.33	0.44
54:1G:186(A):C:H2'	54:1G:186(B):C:C6	2.52	0.44
54:1G:542:G:H2'	54:1G:543:C:C6	2.53	0.44
54:1G:853:G:H2'	54:1G:854:G:H8	1.82	0.44
54:1G:1122:U:C4	54:1G:1123:A:N7	2.85	0.44
54:1G:1320:C:C4	54:1G:1321:C:C4	3.06	0.44
2:12:115:LEU:HB2	2:12:145:LEU:HD23	1.99	0.44
24:14:233:A:H2'	24:14:234:C:H6	1.82	0.44
24:14:586:A:N1	24:14:809:G:O2'	2.45	0.44
24:14:686:G:H5"	52:L5:11:LYS:NZ	2.32	0.44
24:14:858:U:H1'	24:14:2268:A:H2'	2.00	0.44
24:14:923:C:H2'	24:14:924:C:C6	2.53	0.44
24:14:1635:G:N2	24:14:1636:C:C2	2.86	0.44
24:14:1638:C:H1'	24:14:2698:U:O2'	2.18	0.44
24:14:1754:C:H2'	24:14:1755:A:C8	2.52	0.44
24:14:1858:G:H2'	24:14:1883:G:H22	1.83	0.44
24:14:2150:U:H2'	24:14:2151:G:H8	1.83	0.44
24:14:2177:C:H5"	26:79:213:TYR:CD1	2.53	0.44
24:14:2232:U:P	47:F5:40:ARG:HH12	2.41	0.44
24:14:2291:U:OP1	24:14:2381:C:H5'	2.18	0.44
28:29:77:ILE:C	28:29:78:LEU:HG	2.38	0.44
32:69:113:ARG:HG3	32:69:131:LYS:HD2	2.00	0.44
34:25:1:MET:H1	34:25:67:LYS:HB3	1.82	0.44
45:D5:178:GLU:H	45:D5:178:GLU:HG2	1.61	0.44
1:13:41:G:H2'	1:13:42:G:C8	2.53	0.44
1:13:458:C:H2'	1:13:464:G:O4'	2.18	0.44
1:13:509:A:H5'	4:3E:54:TYR:CD2	2.53	0.44
1:13:1024:G:H4'	1:13:1024:G:OP1	2.18	0.44
1:13:1098:C:C2	1:13:1099:G:C8	3.06	0.44
1:13:1299:A:C8	1:13:1301:U:H1'	2.53	0.44
1:13:1315:U:H2'	1:13:1316:G:O4'	2.17	0.44
8:7E:22:GLU:O	8:7E:62:TYR:HA	2.18	0.44
9:8E:111:ARG:HD2	14:5I:61:TRP:C	2.38	0.44
10:1I:78:ASN:HB2	10:1I:81:THR:HG23	1.99	0.44
22:3K:34:U:H6	22:3K:34:U:H5'	1.81	0.44
24:1H:249:C:O2	53:Q8:12:LYS:NZ	2.39	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:1H:646:A:H2'	24:1H:647:G:O4'	2.18	0.44
24:1H:722:A:H2'	24:1H:723:G:C8	2.53	0.44
24:1H:846:C:C4	24:1H:930:U:C4	3.05	0.44
24:1H:1287:A:N7	37:98:107:ASP:HB2	2.33	0.44
24:1H:1496:A:H5'	24:1H:1497:U:OP1	2.18	0.44
24:1H:1762[B]:A:C6	57:1H:3693:HOH:O	2.69	0.44
24:1H:1870:C:H2'	24:1H:1871:A:O4'	2.18	0.44
24:1H:2419:U:O4	53:Q8:31:HIS:CG	2.70	0.44
24:1H:2689:U:H4'	24:1H:2690:C:H5'	2.00	0.44
27:11:30:GLU:OE1	27:11:104:TYR:OH	2.36	0.44
27:11:145:VAL:HG12	27:11:146:GLU:O	2.18	0.44
29:31:24:LEU:HD13	29:31:24:LEU:HA	1.84	0.44
29:31:68:LYS:O	29:31:69:HIS:HB2	2.18	0.44
31:51:27:LYS:HG3	31:51:32:GLU:HB3	1.99	0.44
31:51:77:LYS:HD2	31:51:138:LYS:NZ	2.32	0.44
41:D8:58:VAL:O	41:D8:97:LYS:HB2	2.18	0.44
45:H8:23:LYS:HA	45:H8:40:ASP:HA	2.00	0.44
45:H8:65:GLN:HE21	45:H8:67:LEU:HD21	1.83	0.44
47:J8:88:LYS:O	47:J8:91:LYS:HB2	2.17	0.44
47:J8:89:GLU:C	47:J8:91:LYS:H	2.21	0.44
47:J8:93:GLU:O	47:J8:97:LEU:HA	2.17	0.44
54:1G:123:C:H6	54:1G:123:C:O5'	2.00	0.44
54:1G:828:A:H2'	54:1G:829:G:O4'	2.18	0.44
54:1G:842:C:H5'	54:1G:843:U:OP1	2.18	0.44
54:1G:1202:G:H22	14:5A:46:GLU:CD	2.22	0.44
2:12:119:GLU:O	2:12:122:PHE:HB3	2.17	0.44
2:12:179:LYS:HE3	2:12:179:LYS:HB2	1.85	0.44
9:82:97:LYS:O	9:82:100:GLY:N	2.43	0.44
12:3A:124:LYS:HG3	12:3A:125:PRO:HD2	2.00	0.44
22:3L:8:4SU:H1'	22:3L:57:C:O2	2.17	0.44
24:14:249:C:O2	53:M5:12:LYS:NZ	2.49	0.44
24:14:263:C:H2'	24:14:264:C:O4'	2.18	0.44
24:14:1437:C:H6	24:14:1437:C:H5"	1.83	0.44
24:14:1853:A:N1	24:14:2087:G:H1'	2.32	0.44
24:14:2749:A:N3	31:59:59:ARG:NH1	2.66	0.44
25:1J:32:C:C2	25:1J:51:G:N2	2.85	0.44
26:79:10:LEU:HD11	26:79:34:THR:HG23	2.00	0.44
36:45:51:ARG:O	36:45:54:MET:N	2.49	0.44
37:55:70:LEU:HD23	37:55:70:LEU:HA	1.81	0.44
40:85:9:VAL:O	40:85:13:LYS:HG3	2.18	0.44
41:95:68:LYS:HD3	41:95:68:LYS:HA	1.86	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:G5:14:ARG:HD3	48:G5:63:VAL:HG22	1.99	0.44
48:G5:47:ASN:HD22	48:G5:47:ASN:N	2.15	0.44
51:J5:19:ARG:HH11	51:J5:19:ARG:HD2	1.67	0.44
53:M5:62:LEU:HB3	53:M5:63:PRO:HD2	2.00	0.44
1:13:12:U:H4'	1:13:526:C:H4'	1.99	0.44
1:13:664:G:N2	1:13:741:G:H1	2.13	0.44
1:13:684:A:C6	1:13:685:G:C5	3.06	0.44
1:13:693:G:H2'	1:13:694:A:H8	1.82	0.44
1:13:728:A:O5'	1:13:728:A:H8	2.01	0.44
1:13:902:G:O2'	1:13:903:G:H5'	2.18	0.44
8:7E:36:LEU:O	8:7E:39:LEU:N	2.50	0.44
24:1H:354:G:H2'	24:1H:355:G:C8	2.52	0.44
24:1H:649:G:C5	24:1H:650:C:C4	3.06	0.44
24:1H:674:G:O2'	29:31:74:ARG:HD3	2.18	0.44
24:1H:1057:A:N1	24:1H:1086:A:H2'	2.33	0.44
24:1H:1312:U:H6	24:1H:1312:U:H5'	1.82	0.44
24:1H:1477:A:C6	24:1H:1517:G:C6	3.06	0.44
24:1H:1831:G:H2'	24:1H:1832:C:H6	1.82	0.44
24:1H:2848:G:C8	39:B8:97:ALA:HB2	2.52	0.44
26:71:44:HIS:O	26:71:212:VAL:HA	2.17	0.44
27:11:122:ASP:CG	27:11:123:ALA:H	2.20	0.44
27:11:238:GLY:O	27:11:239:ARG:C	2.54	0.44
31:51:97:ARG:HE	31:51:97:ARG:HB3	1.50	0.44
32:61:3:VAL:HG12	32:61:38:LEU:HA	2.00	0.44
35:78:1:MET:HG2	35:78:5:ASP:HB2	1.99	0.44
37:98:29:LEU:HB3	37:98:75:LEU:HD21	1.98	0.44
41:D8:66:ARG:CZ	41:D8:88:ARG:HD3	2.48	0.44
54:1G:7:G:H5'	54:1G:298:A:O4'	2.18	0.44
54:1G:191:G:O2'	20:BA:103:GLY:HA3	2.17	0.44
54:1G:458:C:H2'	54:1G:464:G:C8	2.52	0.44
54:1G:1151:A:C5	54:1G:1152:A:N7	2.86	0.44
54:1G:1342:C:H2'	54:1G:1343:G:C8	2.53	0.44
54:1G:1349:A:O2'	54:1G:1350:A:H5'	2.18	0.44
2:12:112:VAL:O	2:12:115:LEU:HB3	2.18	0.44
4:32:105:VAL:HG12	4:32:117:ALA:HB1	2.00	0.44
9:82:27:THR:HG23	9:82:31:GLN:O	2.18	0.44
17:8A:59:ILE:HG22	17:8A:71:PHE:HB3	1.99	0.44
24:14:547:A:N7	24:14:548:A:N6	2.66	0.44
24:14:2132:U:C4	26:79:5:LYS:HE2	2.53	0.44
24:14:2296:U:OP2	38:65:6:ALA:HB2	2.18	0.44
27:19:3:VAL:HG12	27:19:17:THR:HB	2.00	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:19:30:GLU:HG3	27:19:31:LYS:O	2.18	0.44
29:39:1:MET:HB2	29:39:2:LYS:HD3	1.99	0.44
30:49:17:PRO:HA	30:49:20:ILE:HG22	1.99	0.44
32:69:6:LEU:HD11	32:69:37:VAL:HG13	1.99	0.44
33:15:96:GLU:HB2	33:15:122:VAL:HG12	1.99	0.44
39:75:10:VAL:HG11	39:75:57:PHE:CG	2.52	0.44
40:85:91:ASP:OD2	40:85:96:ALA:HB2	2.18	0.44
1:13:102:G:C6	1:13:103:C:C4	3.06	0.43
1:13:448:A:P	1:13:485:G:H22	2.40	0.43
1:13:581:G:O2'	1:13:582:U:H5'	2.18	0.43
1:13:635:G:C5	1:13:636:U:C5	3.06	0.43
1:13:874:G:H2'	1:13:875:C:H6	1.82	0.43
1:13:1026:G:C6	1:13:1027:C:N4	2.85	0.43
1:13:1336:C:H1'	1:13:1337:G:C2	2.53	0.43
1:13:1356:G:H2'	1:13:1357:A:C8	2.53	0.43
3:2E:79:ARG:NH1	18:9A:87:ARG:HH12	2.15	0.43
3:2E:91:LEU:O	3:2E:95:THR:OG1	2.25	0.43
3:2E:131:ARG:NH1	3:2E:135:LYS:HZ3	2.16	0.43
5:4E:102:ALA:HB3	5:4E:107:ARG:HB2	1.98	0.43
7:6E:127:ALA:HA	7:6E:135:VAL:HG21	1.99	0.43
10:1I:38:ILE:HA	10:1I:39:PRO:HD3	1.66	0.43
24:1H:483:A:O2'	44:G8:59:GLY:HA2	2.17	0.43
24:1H:483:A:H1'	44:G8:59:GLY:O	2.18	0.43
24:1H:921:G:H4'	24:1H:2269:A:C5	2.53	0.43
24:1H:950:G:H2'	24:1H:951:C:H6	1.81	0.43
24:1H:1111:A:O2'	31:51:2:SER:OG	2.36	0.43
24:1H:1652:A:C2'	24:1H:1653:G:H5'	2.48	0.43
24:1H:2308:G:H2'	24:1H:2308:G:N3	2.33	0.43
24:1H:2635:C:C5'	28:21:78:LEU:HA	2.45	0.43
24:1H:2811:G:OP1	28:21:61:ARG:HB2	2.18	0.43
27:11:6:PHE:CE1	27:11:18:VAL:HG23	2.52	0.43
28:21:14:ILE:HB	28:21:21:VAL:HB	2.00	0.43
29:31:34:TRP:CZ3	29:31:35:GLU:HG2	2.52	0.43
31:51:152:ARG:HA	31:51:152:ARG:HD3	1.77	0.43
38:A8:83:LYS:NZ	38:A8:110:LEU:HB2	2.33	0.43
44:G8:53:PRO:O	44:G8:54:LYS:HG2	2.17	0.43
44:G8:75:ILE:HG23	44:G8:76:CYS:O	2.17	0.43
46:I8:14:ARG:HH11	46:I8:14:ARG:HD3	1.67	0.43
49:L8:3:ARG:HB2	49:L8:59:VAL:HG13	1.99	0.43
54:1G:89:U:HO2'	54:1G:90:C:P	2.38	0.43
54:1G:458:C:H2'	54:1G:464:G:H8	1.82	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:1G:604:G:C5	54:1G:605:U:C5	3.06	0.43
54:1G:604:G:H2'	54:1G:605:U:O4'	2.18	0.43
54:1G:1288:A:H2'	54:1G:1289:A:H8	1.83	0.43
54:1G:1302:U:C6	13:4A:17:VAL:HG11	2.53	0.43
2:12:30:ARG:HH21	2:12:194:PRO:HB2	1.83	0.43
3:22:131:ARG:HH12	3:22:164:ARG:HH22	1.66	0.43
5:42:50:GLU:HB2	5:42:53:LEU:HD13	2.00	0.43
8:72:110:ALA:HB3	8:72:121:ASP:HB3	2.01	0.43
11:2A:123:LYS:HB3	11:2A:123:LYS:HE2	1.66	0.43
24:14:30:G:H2'	24:14:31:C:H6	1.82	0.43
24:14:195:A:H61	24:14:198:C:H3'	1.82	0.43
24:14:259:G:N2	24:14:621:A:H8	2.15	0.43
24:14:830:G:H4'	24:14:831:G:OP2	2.18	0.43
24:14:1019:U:OP1	24:14:1035:U:O2'	2.33	0.43
24:14:1179:C:H2'	24:14:1180:C:H6	1.83	0.43
24:14:1210:A:H5'	24:14:1212:G:O4'	2.18	0.43
24:14:1418:G:H2'	24:14:1579:A:N6	2.32	0.43
24:14:1462:C:H4'	24:14:2703:C:O4'	2.19	0.43
24:14:1512:G:C6	24:14:1513:C:C4	3.06	0.43
24:14:1837:C:H2'	24:14:1838:C:H5'	1.98	0.43
25:1J:104:A:H2'	25:1J:105:G:O4'	2.18	0.43
28:29:113:PHE:N	28:29:159:HIS:HD2	2.16	0.43
33:15:61:ARG:HA	33:15:61:ARG:HE	1.83	0.43
34:25:34:THR:O	34:25:37:ASP:HB2	2.18	0.43
34:25:69:ILE:HD12	34:25:77:ILE:O	2.18	0.43
41:95:85:LYS:HD3	41:95:85:LYS:HA	1.86	0.43
50:I5:22:ILE:HG22	50:I5:23:GLU:H	1.83	0.43
1:13:221:C:H2'	1:13:222:U:C6	2.53	0.43
1:13:781:A:H4'	1:13:1522:U:O2'	2.18	0.43
2:1E:30:ARG:H	2:1E:30:ARG:HG2	1.58	0.43
3:2E:155:GLY:HA3	3:2E:196:LEU:HB3	2.00	0.43
4:3E:162:LEU:O	4:3E:165:MET:HB2	2.18	0.43
6:5E:94:GLN:OE1	18:9I:32:ARG:NH1	2.51	0.43
7:6E:26:PHE:O	7:6E:30:ILE:HG13	2.18	0.43
12:3I:78:GLN:N	12:3I:81:SER:OG	2.49	0.43
17:8I:45:HIS:O	17:8I:73:VAL:HG23	2.18	0.43
21:1F:9:ARG:O	21:1F:13:ILE:HG13	2.18	0.43
22:3K:52:G:H2'	22:3K:53:A:H8	1.78	0.43
24:1H:322:A:C5	24:1H:340:A:C2	3.06	0.43
24:1H:1515:C:H2'	24:1H:1516:U:C6	2.53	0.43
24:1H:1651:G:N2	24:1H:2007:C:C2	2.86	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:1H:1932:A:H2'	24:1H:1933:G:O4'	2.19	0.43
24:1H:2137:C:N4	24:1H:2154:G:H1	2.15	0.43
24:1H:2528:U:O2'	24:1H:2529:G:H3'	2.19	0.43
24:1H:2563:U:O2'	34:68:28:SER:HB3	2.18	0.43
25:16:108:C:H5'	25:16:109:G:O5'	2.18	0.43
27:11:43:ARG:HA	27:11:48:ARG:O	2.19	0.43
28:21:81:ILE:O	28:21:81:ILE:HG22	2.18	0.43
29:31:183:VAL:O	29:31:187:VAL:HG23	2.18	0.43
31:51:67:LEU:HD12	31:51:71:LEU:HD13	2.00	0.43
37:98:74:LYS:C	37:98:76:VAL:N	2.71	0.43
38:A8:35:ILE:HD11	38:A8:101:LEU:CD2	2.48	0.43
40:C8:74:LEU:HD22	40:C8:74:LEU:HA	1.66	0.43
47:J8:73:LEU:HD13	47:J8:90:ILE:O	2.18	0.43
54:1G:833:U:H2'	54:1G:834:C:H6	1.82	0.43
54:1G:1217:C:H2'	54:1G:1218:C:O4'	2.18	0.43
2:12:132:LYS:O	2:12:132:LYS:HD3	2.18	0.43
4:32:119:GLN:HA	4:32:122:ARG:HB2	2.00	0.43
5:42:7:GLU:O	5:42:34:VAL:HA	2.17	0.43
5:42:60:TYR:CZ	5:42:64:ARG:NH2	2.86	0.43
6:52:69:GLU:H	6:52:69:GLU:CD	2.21	0.43
7:62:69:VAL:HG13	7:62:134:ALA:O	2.18	0.43
15:6A:10:LYS:HA	15:6A:10:LYS:HD2	1.76	0.43
15:6A:15:PHE:HD2	15:6A:30:ALA:CB	2.30	0.43
24:14:117:G:C6	24:14:119:A:C6	3.06	0.43
24:14:863:A:H2	24:14:914:C:H41	1.65	0.43
24:14:1022:G:C6	24:14:1140:C:N3	2.86	0.43
24:14:1658:C:H2'	24:14:1659:U:C6	2.53	0.43
24:14:2819:G:H1	24:14:2827:C:H42	1.66	0.43
24:14:2853:C:O2'	24:14:2854:G:H5'	2.18	0.43
25:1J:33:G:C6	25:1J:34:U:N3	2.87	0.43
25:1J:89:G:C5	25:1J:89(A):A:C6	3.06	0.43
27:19:58:HIS:CD2	27:19:59:LYS:N	2.86	0.43
28:29:46:ALA:HB2	28:29:82:ARG:HA	2.00	0.43
32:69:77:LEU:HD12	32:69:78:THR:H	1.83	0.43
36:45:75:THR:HA	36:45:90:VAL:HA	1.98	0.43
44:C5:13:VAL:HB	44:C5:72:VAL:HB	2.00	0.43
44:C5:54:LYS:HD3	44:C5:54:LYS:HA	1.69	0.43
44:C5:82:PRO:HB3	44:C5:99:CYS:HB3	2.00	0.43
45:D5:70:LEU:HA	45:D5:70:LEU:HD23	1.85	0.43
46:E5:49:LYS:NZ	46:E5:82:ARG:HG2	2.33	0.43
47:F5:57:GLU:O	47:F5:58:ILE:HD13	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:13:218:C:H4'	1:13:466:C:H42	1.83	0.43
1:13:735:C:H5'	18:9I:71:LYS:HD3	2.00	0.43
1:13:1059:C:O2'	10:1I:53:PRO:HD3	2.17	0.43
1:13:1060:C:H2'	1:13:1061:G:H8	1.83	0.43
1:13:1078:U:O2'	5:4E:130:ASN:OD1	2.09	0.43
2:1E:172:ILE:H	2:1E:172:ILE:HG13	1.44	0.43
3:2E:76:VAL:HG21	3:2E:103:VAL:HG11	2.01	0.43
3:2E:124:ILE:HG22	3:2E:191:THR:HG21	2.00	0.43
5:4E:126:ARG:HG3	5:4E:126:ARG:NH1	2.26	0.43
13:4I:56:LEU:HD12	13:4I:56:LEU:HA	1.79	0.43
20:BI:89:ARG:HB2	20:BI:104:LEU:HD21	2.01	0.43
22:3K:33:C:C4	22:3K:34:U:C5	3.05	0.43
24:1H:71:A:OP1	24:1H:72:U:H2'	2.19	0.43
24:1H:1045:A:H4'	24:1H:1045:A:OP1	2.19	0.43
24:1H:1300:U:H4'	24:1H:1301:A:H5'	2.00	0.43
24:1H:2230:G:H1'	47:J8:45:ASN:CB	2.48	0.43
24:1H:2244:U:H2'	24:1H:2245:U:O4'	2.18	0.43
24:1H:2479:G:O5'	24:1H:2479:G:H8	2.01	0.43
27:11:81:ALA:HB3	27:11:94:LEU:HB2	2.00	0.43
29:31:112:MET:HE3	29:31:112:MET:HB3	1.86	0.43
30:41:57:ALA:HB2	30:41:90:LEU:HG	2.00	0.43
31:51:30:LYS:HD2	31:51:81:GLU:H	1.83	0.43
54:1G:628:G:H2'	54:1G:629:G:C8	2.53	0.43
54:1G:946:A:O2'	54:1G:1333:A:N3	2.46	0.43
54:1G:963:G:H1	54:1G:972:C:H42	1.64	0.43
54:1G:1287:A:H2'	54:1G:1288:A:C8	2.53	0.43
3:22:166:GLU:HG3	3:22:167:TRP:H	1.83	0.43
12:3A:47:LYS:HB3	12:3A:48:PRO:HD3	1.99	0.43
22:2L:8:4SU:H5'	22:2L:9:U:OP1	2.18	0.43
22:2L:18:G:H4'	22:2L:19:C:OP1	2.12	0.43
24:14:108:U:C2	24:14:109:G:C8	3.06	0.43
24:14:329:G:OP2	44:C5:71:LYS:HD3	2.19	0.43
24:14:637:A:H2'	35:35:117:GLU:OE2	2.18	0.43
24:14:777:A:O2'	24:14:778:G:H5'	2.18	0.43
24:14:943:U:OP2	35:35:36:LYS:HG3	2.18	0.43
24:14:1406:U:N3	24:14:1597:A:C2	2.86	0.43
24:14:1647:G:OP2	24:14:1647:G:H3'	2.18	0.43
24:14:1677:A:H2'	24:14:1678:G:C8	2.53	0.43
24:14:1690:A:H5"	24:14:1691:C:OP2	2.18	0.43
24:14:2244:U:O5'	24:14:2244:U:H6	2.01	0.43
24:14:2790:A:H8	24:14:2790:A:OP2	2.00	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:1J:44:G:H5”	25:1J:45:A:OP1	2.18	0.43
27:19:175:LEU:HD12	27:19:185:VAL:HG21	1.99	0.43
29:39:132:VAL:HG22	29:39:133:ASN:N	2.33	0.43
31:59:97:ARG:HB3	31:59:97:ARG:NH1	2.34	0.43
36:45:51:ARG:O	36:45:53:ALA:N	2.50	0.43
39:75:99:LEU:HA	39:75:99:LEU:HD23	1.76	0.43
44:C5:48:ALA:HB3	44:C5:59:GLY:HA2	1.99	0.43
50:I5:14:ILE:O	50:I5:20:ASN:HB3	2.17	0.43
1:13:47:C:O2	1:13:49:U:C5	2.72	0.43
1:13:740:U:O2’	1:13:741:G:H5’	2.18	0.43
1:13:909:A:N3	1:13:1413:A:O2’	2.47	0.43
1:13:1057:G:H5”	3:2E:154:SER:O	2.18	0.43
1:13:1184:G:O5’	1:13:1184:G:H8	2.01	0.43
1:13:1308:U:H5”	13:4I:98:VAL:HG22	1.98	0.43
4:3E:61:LYS:HD3	4:3E:206:PHE:CE2	2.53	0.43
4:3E:173:TRP:CD1	4:3E:174:LEU:HG	2.53	0.43
14:5I:25:VAL:HG13	14:5I:38:GLY:O	2.18	0.43
16:7I:4:ILE:HA	16:7I:20:VAL:O	2.18	0.43
16:7I:9:PHE:HB2	16:7I:16:HIS:O	2.18	0.43
22:2K:14:A:N1	22:2K:22:A:O2’	2.33	0.43
22:2K:19:C:H3’	22:2K:20:C:C2’	2.37	0.43
24:1H:420:C:H2’	24:1H:421:U:C6	2.53	0.43
24:1H:458:G:C8	52:P8:37:LYS:HG2	2.53	0.43
24:1H:870:A:C5’	36:88:5:ARG:HH21	2.31	0.43
24:1H:911:A:H5”	24:1H:912:C:H5”	2.01	0.43
24:1H:1125:G:C6	24:1H:1126:A:N6	2.86	0.43
24:1H:1354:A:H2’	24:1H:1355:G:O4’	2.19	0.43
24:1H:1533:C:C2	24:1H:1534:G:C8	3.06	0.43
24:1H:1649:G:C6	24:1H:2009:G:C6	3.07	0.43
24:1H:1783:A:H5’	24:1H:2608:G:H4’	2.01	0.43
24:1H:2591:C:O5’	24:1H:2591:C:H6	2.01	0.43
24:1H:2771:C:H2’	24:1H:2772:C:C6	2.54	0.43
25:16:9:G:H8	25:16:9:G:H5”	1.83	0.43
29:31:28:ILE:HD12	29:31:116:ASP:HB2	1.99	0.43
30:41:110:ALA:HA	30:41:140:ILE:O	2.18	0.43
31:51:4:ILE:HG13	31:51:6:ARG:CZ	2.48	0.43
41:D8:47:VAL:HG22	41:D8:48:GLY:N	2.32	0.43
54:1G:565:U:H3’	54:1G:566:G:H2’	2.00	0.43
54:1G:746:A:H2’	54:1G:747:C:C6	2.54	0.43
54:1G:1072:G:H2’	54:1G:1073:U:H6	1.83	0.43
54:1G:1181:G:O2’	54:1G:1182:G:O5’	2.28	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:1G:1227:A:H8	54:1G:1227:A:H3'	1.83	0.43
54:1G:1298:C:H5	7:62:114:ARG:HD2	1.84	0.43
54:1G:1442:G:N7	54:1G:1446:A:C6	2.86	0.43
2:12:106:LYS:O	2:12:110:GLN:HG3	2.19	0.43
2:12:218:ALA:O	2:12:221:LEU:N	2.51	0.43
5:42:126:ARG:HH11	5:42:126:ARG:CG	2.30	0.43
13:4A:36:LYS:HB3	13:4A:36:LYS:HE2	1.62	0.43
19:AA:29:ARG:HB3	19:AA:31:ILE:HG22	2.00	0.43
22:3L:84:C:O5'	22:3L:84:C:H6	2.01	0.43
24:14:627:A:O4'	24:14:637:A:N6	2.51	0.43
24:14:699:A:H2'	24:14:700:G:O4'	2.17	0.43
24:14:1366:A:H2'	24:14:1367:A:O4'	2.18	0.43
24:14:1368:G:OP1	52:L5:28:ARG:NH2	2.51	0.43
24:14:1516:U:H2'	24:14:1517:G:C8	2.53	0.43
24:14:1728:G:N1	24:14:1730:U:OP2	2.51	0.43
24:14:2052:G:O4'	28:29:142:GLY:HA3	2.18	0.43
24:14:2091:U:O2'	47:F5:47:GLN:HG3	2.18	0.43
24:14:2184:G:H2'	24:14:2185:C:C6	2.53	0.43
24:14:2525:G:N2	24:14:2539:C:C2	2.87	0.43
24:14:2889:C:H3'	24:14:2891:G:H8	1.82	0.43
28:29:137:HIS:HB3	28:29:138:PRO:HD2	2.00	0.43
30:49:138:GLN:HG3	30:49:139:LEU:N	2.33	0.43
32:69:84:GLY:O	32:69:85:GLU:HB3	2.17	0.43
34:25:119:PRO:HB2	39:75:68:TYR:CE2	2.53	0.43
39:75:108:ARG:HA	39:75:111:ARG:HH11	1.84	0.43
40:85:74:LEU:HD11	40:85:110:VAL:HG13	1.99	0.43
44:C5:30:VAL:HG12	44:C5:31:LEU:N	2.32	0.43
45:D5:99:TYR:CD2	45:D5:123:ASP:HB2	2.52	0.43
45:D5:127:LYS:HE3	45:D5:127:LYS:HB2	1.79	0.43
45:D5:145:GLU:O	45:D5:174:VAL:HB	2.18	0.43
1:13:277:C:OP1	17:8I:68:ARG:NH2	2.32	0.43
1:13:322:C:H5	1:13:328:C:C5	2.36	0.43
1:13:769:G:H4'	1:13:1513:A:H4'	2.01	0.43
3:2E:19:GLU:O	3:2E:56:ASP:HA	2.18	0.43
4:3E:29:PRO:HA	4:3E:34:GLU:HG3	2.00	0.43
17:8I:48:GLU:H	17:8I:48:GLU:HG3	1.50	0.43
20:BI:53:LEU:HB2	20:BI:100:ILE:CG2	2.47	0.43
21:1F:9:ARG:NH2	21:1F:23:PRO:HD2	2.32	0.43
24:1H:323:G:O2'	24:1H:1205:U:N3	2.42	0.43
24:1H:475:U:C4	24:1H:481:G:O6	2.72	0.43
24:1H:529:A:C8	24:1H:530:G:C6	3.07	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:1H:1012:U:O4	33:58:25:ARG:HA	2.18	0.43
24:1H:1198:U:H2'	24:1H:1199:U:H6	1.82	0.43
24:1H:1658:C:H2'	24:1H:1659:U:C6	2.53	0.43
24:1H:2238:G:H4'	24:1H:2239:G:OP1	2.18	0.43
25:16:14:U:O3'	25:16:107:U:O2'	2.31	0.43
26:71:46:LYS:HE3	26:71:210:ARG:HE	1.84	0.43
27:11:69:ARG:NH2	27:11:128:GLY:O	2.44	0.43
29:31:123:LEU:HD12	29:31:124:LEU:H	1.84	0.43
31:51:33:LEU:HD21	31:51:136:ILE:HG22	2.01	0.43
33:58:94:HIS:HA	33:58:95:PRO:HD2	1.65	0.43
49:L8:8:LEU:HD22	49:L8:31:LEU:HD22	2.00	0.43
50:M8:38:LYS:HD2	50:M8:38:LYS:HA	1.72	0.43
51:N8:40:LYS:HE2	51:N8:47:PRO:CG	2.48	0.43
54:1G:1145:C:H4'	54:1G:1146:A:C8	2.52	0.43
2:12:6:THR:OG1	2:12:7:VAL:N	2.50	0.43
5:42:101:ILE:HG12	5:42:118:ILE:O	2.18	0.43
8:72:51:VAL:HG22	8:72:52:ASP:N	2.29	0.43
9:82:77:ILE:O	9:82:81:ILE:HG23	2.18	0.43
22:2L:33:C:H2'	22:2L:34:U:H5'	2.00	0.43
24:14:219:G:H2'	24:14:220:G:C8	2.54	0.43
24:14:621:A:H3'	24:14:622:G:H8	1.83	0.43
24:14:1001:A:H2'	24:14:1002:G:O4'	2.19	0.43
24:14:1015:G:C6	24:14:1148:A:C2	3.07	0.43
24:14:1508:A:H4'	24:14:1510:A:C6	2.53	0.43
24:14:2065:C:H1'	24:14:2449:U:O2	2.19	0.43
24:14:2291:U:H2'	24:14:2292:C:C6	2.54	0.43
24:14:2334:G:O6	46:E5:74:ARG:NH2	2.51	0.43
24:14:2365:G:H2'	24:14:2366:A:C8	2.54	0.43
24:14:2494:G:C4	24:14:2495:G:C8	3.07	0.43
24:14:2678:C:H2'	24:14:2679:A:O4'	2.18	0.43
25:1J:76:G:H2'	25:1J:77:U:O4'	2.19	0.43
25:1J:100:G:OP2	57:1J:219:HOH:O	2.21	0.43
28:29:178:GLU:H	28:29:178:GLU:CD	2.21	0.43
29:39:11:VAL:HG23	29:39:12:LEU:H	1.84	0.43
31:59:6:ARG:O	31:59:69:ARG:HG2	2.19	0.43
34:25:113:LYS:O	34:25:117:LEU:HD22	2.18	0.43
37:55:28:LEU:O	37:55:28:LEU:HD22	2.19	0.43
40:85:92:ARG:NH2	41:95:10:LYS:HB3	2.33	0.43
41:95:53:GLU:C	41:95:55:ALA:H	2.22	0.43
48:G5:64:LEU:O	48:G5:64:LEU:HD23	2.19	0.43
52:L5:47:ARG:HG3	52:L5:47:ARG:NH1	2.33	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:13:68:G:HO2'	1:13:152:A:H2	1.64	0.43
1:13:735:C:C2	1:13:736:C:C5	3.07	0.43
1:13:868:C:H2'	1:13:869:G:O4'	2.19	0.43
1:13:1002:G:H2'	1:13:1003:G:O4'	2.19	0.43
2:1E:63:MET:HA	2:1E:225:ALA:HB1	2.01	0.43
5:4E:33:VAL:HG11	5:4E:109:ILE:HA	2.01	0.43
11:2I:96:ARG:O	11:2I:99:GLN:HG2	2.18	0.43
18:9I:59:SER:H	18:9I:62:GLU:HB2	1.84	0.43
22:2K:5:G:H8	22:2K:5:G:O5'	2.01	0.43
24:1H:870:A:O5'	36:88:5:ARG:NH2	2.51	0.43
24:1H:875:G:C6	24:1H:876:C:C4	3.07	0.43
24:1H:1048:A:P	24:1H:1110:G:H22	2.42	0.43
24:1H:1100:C:H2'	24:1H:1101:U:H6	1.84	0.43
24:1H:1441:G:H2'	24:1H:1442:G:H8	1.81	0.43
24:1H:2054:A:C2	51:N8:8:LYS:HD3	2.53	0.43
24:1H:2128:C:H2'	24:1H:2129:C:C6	2.54	0.43
27:11:72:LYS:NZ	27:11:101:GLU:OE2	2.32	0.43
31:51:116:GLU:OE1	31:51:117:PRO:HD2	2.18	0.43
51:N8:42:PRO:O	51:N8:44:THR:OG1	2.36	0.43
51:N8:45:VAL:HG22	51:N8:51:TYR:CD2	2.54	0.43
54:1G:9:G:OP1	5:42:122:GLU:HB2	2.18	0.43
54:1G:131:C:O2'	54:1G:262:A:N3	2.47	0.43
54:1G:173:U:O2	54:1G:197:A:N6	2.52	0.43
54:1G:246:A:OP1	17:8A:100:LYS:NZ	2.51	0.43
54:1G:1250:A:H4'	9:82:68:GLY:N	2.34	0.43
2:12:185:ILE:CG2	2:12:199:TYR:HB2	2.46	0.43
6:52:26:ILE:O	6:52:29:ALA:HB3	2.19	0.43
12:3A:24:VAL:N	12:3A:25:PRO:HD3	2.33	0.43
12:3A:117:ARG:O	12:3A:121:GLY:N	2.51	0.43
14:5A:37:PHE:HB3	14:5A:39:LEU:HG	2.00	0.43
24:14:331:A:N6	24:14:1210:A:OP2	2.43	0.43
24:14:499:U:O3'	44:C5:44:ILE:HD11	2.19	0.43
24:14:887:A:H3'	24:14:888:C:H5'	2.01	0.43
24:14:1164:G:H1	24:14:1185:C:N4	2.16	0.43
24:14:1418:G:OP1	24:14:1588:C:O2'	2.36	0.43
24:14:2094:G:C2'	24:14:2095:C:H5'	2.49	0.43
24:14:2772:C:O5'	24:14:2772:C:H6	2.01	0.43
24:14:2822:G:C5	57:14:3528:HOH:O	2.71	0.43
27:19:92:ILE:HD12	27:19:104:TYR:CE1	2.54	0.43
30:49:47:LYS:HE2	30:49:81:LYS:HG2	2.01	0.43
36:45:2:LEU:HB3	36:45:69:PHE:CE1	2.53	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:A5:13:SER:O	42:A5:16:LYS:HB2	2.19	0.43
48:G5:28:LYS:HA	48:G5:28:LYS:HD3	1.78	0.43
50:I5:9:LEU:HA	50:I5:26:SER:O	2.19	0.43
51:J5:16:ARG:HH12	51:J5:17:ASP:CG	2.21	0.43
1:13:1157:A:N7	1:13:1178:G:N2	2.66	0.43
9:8E:95:LYS:H	9:8E:95:LYS:HG2	1.71	0.43
9:8E:128:ARG:HE	22:2K:36:U:P	2.41	0.43
11:2I:115:PRO:C	11:2I:117:ASN:H	2.22	0.43
24:1H:528:A:OP2	33:58:114:ARG:NH1	2.52	0.43
24:1H:1210:A:H5'	24:1H:1210:A:H8	1.84	0.43
24:1H:2345:G:H4'	24:1H:2346:A:O5'	2.19	0.43
25:16:38:C:O4'	38:A8:95:HIS:CE1	2.71	0.43
26:71:6:ARG:NH1	26:71:7:TYR:HB2	2.32	0.43
27:11:71:ASP:OD1	27:11:71:ASP:N	2.52	0.43
33:58:12:ARG:HG2	33:58:13:TRP:N	2.33	0.43
35:78:85:LEU:HA	35:78:88:LEU:CD2	2.49	0.43
37:98:9:LYS:HA	37:98:17:ARG:NE	2.34	0.43
48:K8:42:GLY:C	48:K8:44:LEU:H	2.22	0.43
54:1G:77:C:H2'	54:1G:78:G:O4'	2.18	0.43
54:1G:1238:A:N7	54:1G:1303:C:H1'	2.34	0.43
54:1G:1298:C:C5	7:62:114:ARG:HD2	2.53	0.43
54:1G:1410:G:N2	54:1G:1490:C:O2	2.42	0.43
2:12:44:LEU:H	2:12:44:LEU:HG	1.62	0.43
3:22:23:TYR:CD1	3:22:24:ALA:N	2.87	0.43
3:22:32:LEU:O	3:22:36:ASP:HB2	2.19	0.43
4:32:120:LEU:HB3	4:32:126:ILE:HD11	1.99	0.43
6:52:50:TYR:OH	18:9A:74:ARG:O	2.23	0.43
8:72:13:ILE:O	8:72:17:THR:HG23	2.19	0.43
16:7A:55:ARG:HA	16:7A:55:ARG:HE	1.83	0.43
22:3L:77:C:H2'	22:3L:78:C:H6	1.84	0.43
24:14:55:G:O2'	24:14:127:A:N1	2.41	0.43
24:14:784:A:C8	24:14:792:G:C5	3.07	0.43
24:14:1244:G:OP1	35:35:7:ARG:HD3	2.18	0.43
24:14:1716:U:O2'	24:14:1717:G:H5'	2.19	0.43
29:39:24:LEU:HD12	29:39:25:PRO:HD2	2.00	0.43
34:25:71:ARG:HH21	34:25:105:GLU:CD	2.22	0.43
45:D5:176:PRO:HA	45:D5:177:PRO:HD3	1.77	0.43
52:L5:5:TRP:NE1	52:L5:7:PRO:HG3	2.33	0.43
1:13:119:A:H2'	57:13:1819:HOH:O	2.19	0.43
1:13:517:G:N2	1:13:533:A:OP2	2.47	0.43
1:13:964:A:N3	1:13:969:A:O2'	2.44	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:13:1148:U:H2'	1:13:1149:C:O4'	2.19	0.43
1:13:1304:G:C5	1:13:1305:G:C6	3.07	0.43
3:2E:131:ARG:HD3	5:4E:50:GLU:HG2	2.01	0.43
6:5E:87:ARG:HH11	6:5E:87:ARG:CG	2.23	0.43
14:5I:15:LYS:HB3	14:5I:16:PHE:CD2	2.53	0.43
24:1H:248:G:H2'	57:1H:3608:HOH:O	2.19	0.43
24:1H:654(K):C:H3'	24:1H:654(L):G:H5"	2.01	0.43
24:1H:705:A:C8	24:1H:727:A:C2	3.07	0.43
24:1H:729:G:O2'	24:1H:763:G:H4'	2.18	0.43
24:1H:918:A:H1'	25:16:80:U:H1'	1.99	0.43
24:1H:988:A:O5'	49:L8:11:SER:HB2	2.18	0.43
24:1H:991:C:H2'	24:1H:992:C:H6	1.82	0.43
24:1H:2194:G:H2'	24:1H:2195:C:C6	2.53	0.43
24:1H:2261:C:H2'	24:1H:2262:U:H6	1.83	0.43
24:1H:2270:G:H2'	24:1H:2271:G:O4'	2.18	0.43
28:21:116:VAL:HG13	28:21:122:PHE:HB2	2.00	0.43
45:H8:46:LYS:HB2	45:H8:46:LYS:HE3	1.83	0.43
54:1G:160:A:H2'	54:1G:161:A:O4'	2.19	0.43
54:1G:570:G:H2'	54:1G:571:U:C6	2.53	0.43
54:1G:789:U:O2'	54:1G:791:G:O6	2.36	0.43
54:1G:792:A:N3	54:1G:794:A:C5	2.87	0.43
54:1G:896:C:C4	54:1G:897:C:C5	3.07	0.43
54:1G:938:A:C6	54:1G:939:G:C5	3.06	0.43
54:1G:1322:C:HO2'	54:1G:1323:G:P	2.40	0.43
54:1G:1366:C:H2'	54:1G:1367:C:H6	1.84	0.43
5:42:57:LYS:O	5:42:60:TYR:HB3	2.18	0.43
7:62:16:LEU:HD12	9:82:41:VAL:O	2.19	0.43
12:3A:84:LEU:HD23	12:3A:105:TYR:HE2	1.84	0.43
19:AA:29:ARG:HD2	19:AA:48:THR:O	2.18	0.43
19:AA:51:VAL:HB	19:AA:75:ALA:HB2	2.01	0.43
20:BA:95:ALA:O	20:BA:97:ALA:N	2.51	0.43
22:3L:11:C:N4	22:3L:25:G:H1	2.16	0.43
22:3L:30:A:H2'	22:3L:31:G:O4'	2.19	0.43
24:14:271(A):C:H1'	24:14:272:G:H1'	2.00	0.43
24:14:988:A:H8	24:14:988:A:O5'	2.02	0.43
24:14:988:A:H3'	49:H5:11:SER:OG	2.19	0.43
24:14:1048:A:H5'	24:14:1049:C:OP2	2.19	0.43
24:14:1100:C:H2'	24:14:1101:U:C6	2.54	0.43
24:14:1285:G:C6	24:14:1329:U:C5	3.07	0.43
24:14:1507:A:H2'	24:14:1508:A:O4'	2.19	0.43
24:14:1576:U:N3	24:14:1577:C:C5	2.86	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:14:2239:G:P	57:14:3492:HOH:O	2.77	0.43
24:14:2267:A:H3'	57:14:4113:HOH:O	2.18	0.43
24:14:2569:G:C2	24:14:2570:G:C8	3.06	0.43
24:14:2773:C:H5"	28:29:164:ARG:HG2	2.00	0.43
24:14:2860:A:N7	24:14:2861:G:H1'	2.34	0.43
28:29:81:ILE:O	28:29:81:ILE:HG22	2.19	0.43
39:75:99:LEU:HD22	39:75:101:PHE:HE1	1.83	0.43
44:C5:82:PRO:HG3	44:C5:97:ARG:HB3	2.00	0.43
53:M5:57:ARG:HB2	53:M5:57:ARG:CZ	2.49	0.43
1:13:19:C:OP1	5:4E:125:SER:OG	2.16	0.43
1:13:109:A:C6	1:13:326:G:C5	3.07	0.43
1:13:380:G:C2	1:13:384:G:C6	3.07	0.43
1:13:581:G:N2	1:13:582:U:C4	2.87	0.43
1:13:725:G:H2'	1:13:726:C:H6	1.83	0.43
1:13:1157:A:H1'	1:13:1158:C:C4	2.53	0.43
2:1E:210:SER:O	2:1E:214:ILE:HG22	2.18	0.43
4:3E:110:PHE:CE2	4:3E:148:VAL:HG23	2.53	0.43
10:1I:53:PRO:HA	14:5I:42:ILE:HD12	2.00	0.43
11:2I:34:ASP:OD1	11:2I:37:GLY:N	2.52	0.43
13:4I:16:ASP:OD1	13:4I:16:ASP:N	2.51	0.43
15:6I:26:GLU:H	15:6I:26:GLU:HG2	1.43	0.43
22:3K:62:G:H3'	22:3K:63:5MU:H71	2.01	0.43
24:1H:539:G:H2'	24:1H:539:G:N3	2.34	0.43
24:1H:569:U:C4	24:1H:570:G:C6	3.07	0.43
24:1H:603:A:H4'	24:1H:604:G:O5'	2.19	0.43
24:1H:882:G:H1'	24:1H:883:G:C8	2.54	0.43
24:1H:994:C:O2'	24:1H:996:A:OP1	2.26	0.43
24:1H:1453:A:O2'	24:1H:1454:U:H2'	2.18	0.43
24:1H:1454:U:OP1	37:98:77:ARG:HD3	2.19	0.43
24:1H:1475:G:C2	24:1H:1519:G:N3	2.87	0.43
24:1H:2720:U:O2	24:1H:2720:U:H2'	2.19	0.43
24:1H:2862:G:C5	24:1H:2863:C:C5	3.07	0.43
27:11:159:ALA:HB1	27:11:198:ASN:O	2.18	0.43
30:41:116:ASP:HB2	30:41:117:PHE:H	1.68	0.43
31:51:23:ARG:NH1	31:51:25:LYS:HG3	2.34	0.43
31:51:51:ARG:HG2	31:51:52:VAL:H	1.83	0.43
35:78:19:VAL:HG23	35:78:27:HIS:CB	2.45	0.43
36:88:109:VAL:HG13	36:88:113:GLN:OE1	2.18	0.43
39:B8:90:GLN:OE1	39:B8:121:ILE:HD11	2.19	0.43
40:C8:31:SER:O	40:C8:32:PHE:C	2.57	0.43
45:H8:52:SER:O	45:H8:54:HIS:N	2.52	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:1G:631:G:H3'	54:1G:632:A:H8	1.83	0.43
54:1G:668:G:O4'	15:6A:49:ASP:HB2	2.18	0.43
54:1G:669:U:H2'	54:1G:670:G:C8	2.54	0.43
54:1G:707:C:OP1	11:2A:85:ARG:NH1	2.50	0.43
54:1G:1203:C:H2'	54:1G:1204:A:O4'	2.18	0.43
54:1G:1221:G:H5'	19:AA:36:ARG:HD3	1.99	0.43
7:62:18:TYR:HB3	7:62:59:LEU:HD12	2.00	0.43
7:62:83:ALA:HB2	22:3L:35:QUO:O14	2.19	0.43
13:4A:39:ILE:HD12	13:4A:56:LEU:HG	2.00	0.43
17:8A:29:HIS:CG	17:8A:30:PRO:HD2	2.54	0.43
22:2L:12:C:H41	22:2L:24:G:H1	1.66	0.43
24:14:34:C:H2'	24:14:35:G:H5'	2.01	0.43
24:14:1647:G:H2'	57:14:3710:HOH:O	2.18	0.43
24:14:1902:C:H2'	24:14:1903:G:O4'	2.18	0.43
24:14:2528:U:H2'	24:14:2530:A:O5'	2.19	0.43
24:14:2805:G:H2'	24:14:2807:G:C8	2.54	0.43
24:14:2840:C:H4'	37:55:53:HIS:CE1	2.54	0.43
25:1J:90:C:H5'	36:45:18:LYS:HA	2.00	0.43
25:1J:95:U:H2'	25:1J:96:G:H8	1.84	0.43
30:49:59:GLU:OE1	30:49:153:ARG:NE	2.52	0.43
32:69:44:LEU:HD23	32:69:44:LEU:HA	1.73	0.43
35:35:46:LYS:HE2	35:35:46:LYS:HB3	1.43	0.43
1:13:222:U:C2	1:13:223:U:C5	3.07	0.43
1:13:236:G:H5"	17:8I:42:TYR:OH	2.19	0.43
1:13:1021:G:H2'	1:13:1022:G:O4'	2.18	0.43
1:13:1052:U:H5"	1:13:1053:G:OP2	2.19	0.43
1:13:1401:G:C2	1:13:1402:C:H1'	2.54	0.43
5:4E:8:GLU:HA	5:4E:34:VAL:HG22	2.00	0.43
13:4I:11:ARG:HH12	13:4I:12:ASN:HD22	1.67	0.43
15:6I:63:ARG:HH21	15:6I:87:ILE:HG21	1.82	0.43
24:1H:253:C:H2'	24:1H:254:G:O4'	2.19	0.43
24:1H:299:A:N3	24:1H:319:C:O2'	2.51	0.43
24:1H:942:G:O2'	24:1H:1189:A:N3	2.42	0.43
24:1H:1856:G:N2	24:1H:1887:C:C2	2.87	0.43
27:11:73:VAL:O	27:11:75:ILE:HD12	2.19	0.43
30:41:139:LEU:HD11	30:41:146:TYR:HD1	1.83	0.43
31:51:154:PRO:HD3	31:51:162:ILE:O	2.19	0.43
33:58:38:HIS:CE1	33:58:39:ARG:HG3	2.54	0.43
39:B8:5:ALA:O	39:B8:6:LEU:C	2.57	0.43
39:B8:33:LYS:HG2	39:B8:42:ILE:HD11	2.00	0.43
54:1G:267:C:OP1	17:8A:67:LYS:HB2	2.19	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:1G:545:C:H5'	4:32:72:GLU:HB2	2.00	0.43
54:1G:557:G:C6	54:1G:558:G:C6	3.07	0.43
54:1G:612:C:H42	54:1G:628:G:H1	1.64	0.43
54:1G:862:C:O4'	54:1G:874:G:H4'	2.19	0.43
54:1G:940:C:H2'	54:1G:941:G:H8	1.84	0.43
4:32:15:GLU:OE1	4:32:59:ARG:NH2	2.28	0.43
24:14:240:G:H1'	24:14:257:A:N6	2.34	0.43
24:14:270(G):C:H2'	24:14:270(H):C:H6	1.84	0.43
24:14:447:A:C5	24:14:473:G:C5	3.07	0.43
24:14:537:C:O2	33:15:45:ASN:ND2	2.52	0.43
24:14:588:U:H1'	29:39:90:PHE:CD1	2.54	0.43
24:14:729:G:C5	27:19:208:LYS:HB2	2.54	0.43
24:14:1665:A:N6	57:14:3649:HOH:O	2.44	0.43
24:14:2388:A:C2'	24:14:2389:G:H5'	2.49	0.43
25:1J:117:G:C6	25:1J:118:G:C8	3.07	0.43
29:39:53:THR:HG22	29:39:56:GLU:CD	2.39	0.43
32:69:33:ARG:O	32:69:35:LEU:HD23	2.19	0.43
32:69:93:THR:O	32:69:97:ILE:HG13	2.18	0.43
40:85:66:ASN:HB2	40:85:76:TYR:HB2	2.00	0.43
45:D5:133:ILE:HA	45:D5:134:PRO:HD2	1.87	0.43
1:13:246:A:C4	1:13:282:A:N6	2.87	0.42
1:13:587:G:N2	1:13:755:G:C5	2.87	0.42
1:13:1157:A:N6	1:13:1178:G:N2	2.58	0.42
1:13:1258:G:H2'	1:13:1259:C:C6	2.54	0.42
1:13:1264:C:H1'	1:13:1272:G:H22	1.84	0.42
6:5E:67:MET:CE	6:5E:75:LEU:HD12	2.49	0.42
9:8E:106:ALA:O	9:8E:108:VAL:HG22	2.19	0.42
14:5I:6:LEU:HD23	14:5I:6:LEU:HA	1.87	0.42
20:BI:40:ALA:HB2	20:BI:55:ILE:HG22	2.01	0.42
24:1H:53:A:C8	24:1H:54:G:C8	3.07	0.42
24:1H:601:C:O2'	24:1H:605:C:OP1	2.32	0.42
24:1H:1120:G:H2'	24:1H:1121:C:C6	2.54	0.42
24:1H:1127:A:O2'	24:1H:2518:A:OP1	2.31	0.42
24:1H:1263:U:H2'	24:1H:1264:G:C8	2.54	0.42
24:1H:1535:U:H5	24:1H:1537:C:H1'	1.84	0.42
24:1H:2102:U:H3	24:1H:2187:G:H1	1.67	0.42
24:1H:2839:G:C6	24:1H:2840:C:N3	2.87	0.42
29:31:155:LEU:HD11	29:31:176:LEU:HD22	2.00	0.42
31:51:80:SER:C	31:51:81:GLU:HG3	2.39	0.42
44:G8:33:LYS:HE2	44:G8:33:LYS:HB2	1.84	0.42
49:L8:28:LEU:HA	49:L8:33:GLN:NE2	2.33	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:1G:363:A:OP2	12:3A:34:ARG:NH1	2.52	0.42
54:1G:503:C:O2'	54:1G:504:C:H5'	2.18	0.42
54:1G:743:U:H2'	54:1G:744:C:C6	2.54	0.42
54:1G:828:A:H5"	54:1G:859:A:N1	2.34	0.42
54:1G:1057:G:H2'	54:1G:1058:G:C8	2.54	0.42
54:1G:1229:A:OP2	13:4A:114:ARG:HD3	2.19	0.42
3:22:188:LEU:HD13	3:22:189:ALA:N	2.34	0.42
9:82:77:ILE:HG13	9:82:78:LYS:N	2.34	0.42
10:1A:30:SER:HB3	10:1A:81:THR:HG22	2.02	0.42
19:AA:35:SER:HB2	19:AA:37:ARG:HD3	2.01	0.42
20:BA:87:LYS:HB2	20:BA:87:LYS:HE3	1.64	0.42
22:2L:17:OMG:N2	22:2L:67:A:C8	2.86	0.42
22:3L:73:U:H2'	22:3L:74:C:O4'	2.18	0.42
24:14:528:A:N1	24:14:2042:A:H2'	2.34	0.42
24:14:887:A:H3'	24:14:888:C:C5'	2.47	0.42
24:14:1189:A:P	57:14:3755:HOH:O	2.77	0.42
24:14:1925:C:C2'	24:14:1926:U:H5'	2.49	0.42
24:14:2823:A:OP1	28:29:113:PHE:HB2	2.18	0.42
24:14:2823:A:P	28:29:159:HIS:HE2	2.41	0.42
25:1J:56:G:H4'	25:1J:57:A:C8	2.54	0.42
27:19:158:ALA:HB3	27:19:161:THR:HG21	2.01	0.42
28:29:31:CYS:HB3	28:29:49:LEU:HB3	2.00	0.42
32:69:144:VAL:HG22	32:69:145:VAL:H	1.84	0.42
36:45:48:GLU:O	36:45:52:VAL:HG13	2.19	0.42
37:55:45:ARG:HA	37:55:95:THR:HG21	2.01	0.42
44:C5:87:LYS:HE2	44:C5:88:LYS:HG3	2.01	0.42
1:13:191(C):G:H2'	1:13:191(D):U:O4'	2.19	0.42
1:13:864:A:H2'	1:13:865:A:C8	2.54	0.42
1:13:939:G:C4	1:13:940:C:C5	3.08	0.42
1:13:1399:C:C2	1:13:1401:G:C5	3.08	0.42
2:1E:41:ILE:HD12	2:1E:41:ILE:HA	1.66	0.42
4:3E:149:ALA:O	4:3E:153:ARG:HG2	2.18	0.42
5:4E:78:HIS:HB3	8:7E:107:LEU:HD12	2.01	0.42
7:6E:149:ARG:HD3	11:2I:59:TYR:CE1	2.54	0.42
11:2I:122:LYS:HB2	11:2I:122:LYS:HE3	1.55	0.42
13:4I:35:GLU:H	13:4I:35:GLU:HG2	1.74	0.42
22:2K:9:U:O2'	22:2K:10:C:C5	2.72	0.42
22:2K:35:QUO:H8	22:2K:35:QUO:O5'	2.19	0.42
22:2K:81:C:C4	22:2K:82:A:N7	2.87	0.42
24:1H:82:G:N1	24:1H:103:A:OP2	2.43	0.42
24:1H:143:C:H2'	24:1H:144:C:H6	1.84	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:1H:442:G:C4'	29:31:46:ARG:HG3	2.46	0.42
24:1H:1591:G:H2'	24:1H:1592:C:C6	2.53	0.42
24:1H:1654:A:OP1	37:98:1:MET:N	2.50	0.42
24:1H:1936:A:C8	24:1H:1940:U:O2	2.72	0.42
24:1H:2467:C:C2'	24:1H:2468:G:H5'	2.49	0.42
24:1H:2612:C:OP2	51:N8:2:ALA:HA	2.18	0.42
24:1H:2766:G:H5"	24:1H:2767:C:OP2	2.19	0.42
57:1H:3774:HOH:O	35:78:44:GLY:O	2.22	0.42
26:71:13:LYS:NZ	26:71:31:GLU:O	2.48	0.42
26:71:42:GLU:OE2	26:71:217:THR:HA	2.19	0.42
27:11:23:GLU:H	27:11:23:GLU:HG2	1.49	0.42
32:61:67:ARG:HH21	32:61:68:LEU:HB2	1.84	0.42
35:78:101:VAL:HA	35:78:105:LEU:O	2.19	0.42
43:F8:44:GLU:HG2	43:F8:49:VAL:O	2.19	0.42
54:1G:198:G:H2'	54:1G:199:G:C8	2.54	0.42
54:1G:232:G:H2'	54:1G:233:C:O4'	2.19	0.42
54:1G:373:A:C2	54:1G:374:A:C8	3.06	0.42
54:1G:1109:C:O5'	54:1G:1109:C:H6	2.01	0.42
54:1G:1129:C:OP2	9:82:62:TYR:OH	2.25	0.42
2:12:5:ILE:HG12	2:12:6:THR:O	2.20	0.42
2:12:120:ALA:O	2:12:124:SER:HB3	2.19	0.42
4:32:101:LEU:HD23	4:32:121:VAL:CG1	2.48	0.42
11:2A:93:GLN:HA	11:2A:96:ARG:HE	1.84	0.42
15:6A:43:LEU:HD11	15:6A:53:HIS:HA	2.01	0.42
18:9A:52:PRO:O	18:9A:56:THR:HG23	2.19	0.42
19:AA:15:LEU:HG	19:AA:33:THR:HG23	2.01	0.42
19:AA:65:ASN:HB3	50:I5:55:ARG:CZ	2.50	0.42
22:3L:39:A:C6	22:3L:40:PSU:C2	3.07	0.42
24:14:126:A:OP2	52:L5:19:ARG:HG3	2.18	0.42
24:14:768:G:H2'	24:14:769:G:H8	1.84	0.42
24:14:873:G:N2	24:14:905:U:C2	2.87	0.42
24:14:1204:A:N1	24:14:1241:A:N1	2.67	0.42
24:14:1365:A:OP1	47:F5:41:ARG:NH2	2.53	0.42
24:14:1391:U:O2	24:14:1393:A:H8	2.01	0.42
24:14:2112:G:H2'	24:14:2113:U:H5	1.85	0.42
24:14:2206:C:H2'	24:14:2207:C:C6	2.53	0.42
24:14:2476:A:H2'	24:14:2476:A:N3	2.34	0.42
24:14:2526:G:H5'	24:14:2742:C:O2'	2.18	0.42
24:14:2611:U:O4	51:J5:3:LYS:HG3	2.19	0.42
28:29:79:ARG:N	28:29:79:ARG:HD2	2.33	0.42
31:59:152:ARG:HG3	31:59:153:LYS:HB2	2.01	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:95:62:LEU:HD21	41:95:95:LEU:HB2	2.01	0.42
43:B5:48:LYS:HE2	43:B5:48:LYS:HB2	1.90	0.42
45:D5:171:ILE:HD12	45:D5:171:ILE:HA	1.86	0.42
1:13:165:C:H2'	1:13:166:G:C8	2.54	0.42
1:13:779:C:H2'	1:13:780:A:O4'	2.19	0.42
6:5E:8:ILE:HG23	6:5E:85:VAL:HG13	2.00	0.42
13:4I:30:ALA:O	13:4I:34:LEU:HD23	2.20	0.42
15:6I:31:LEU:HD12	15:6I:31:LEU:HA	1.68	0.42
24:1H:1:G:H1	24:1H:2902:C:N4	2.12	0.42
24:1H:428:A:P	57:1H:3709:HOH:O	2.77	0.42
24:1H:654(I):C:H2'	24:1H:654(J):A:C5	2.54	0.42
24:1H:655:A:H8	24:1H:656:G:O4'	2.03	0.42
24:1H:935:C:H2'	24:1H:936:C:C6	2.54	0.42
24:1H:1062:G:N2	24:1H:1076:C:O2	2.52	0.42
24:1H:1165:U:H2'	24:1H:1166:C:C6	2.55	0.42
24:1H:1657:C:O3'	28:21:133:LYS:HG2	2.19	0.42
24:1H:1863:G:H2'	24:1H:1864:U:O4'	2.19	0.42
24:1H:2643:G:H2'	24:1H:2644:G:O4'	2.18	0.42
25:16:48:A:H4'	38:A8:95:HIS:ND1	2.35	0.42
27:11:25:THR:CG2	27:11:26:LYS:N	2.82	0.42
28:21:93:VAL:HG21	28:21:177:PRO:HA	2.02	0.42
32:61:62:LYS:HG2	32:61:66:GLU:OE1	2.19	0.42
33:58:4:TYR:CE2	40:C8:100:VAL:HG11	2.54	0.42
36:88:54:MET:SD	36:88:118:LEU:HD23	2.59	0.42
40:C8:76:TYR:CD1	40:C8:76:TYR:C	2.92	0.42
44:G8:49:VAL:HG21	44:G8:55:TYR:CE1	2.53	0.42
45:H8:30:ASN:HA	45:H8:89:PHE:CE1	2.55	0.42
48:K8:50:ILE:O	48:K8:54:LYS:HB2	2.19	0.42
54:1G:981:U:H5'	14:5A:21:TYR:CZ	2.54	0.42
54:1G:1128:C:C4	54:1G:1139:G:C5	3.07	0.42
54:1G:1436:U:OP1	20:BA:23:ARG:NH2	2.51	0.42
5:42:6:PHE:HB2	5:42:63:ARG:CZ	2.50	0.42
6:52:99:ALA:HB2	18:9A:31:LEU:HD22	2.01	0.42
9:82:78:LYS:HZ3	9:82:101:PHE:HD1	1.67	0.42
12:3A:24:VAL:HG12	12:3A:98:TYR:HE1	1.82	0.42
24:14:1210:A:H5'	24:14:1212:G:H5'	2.01	0.42
24:14:2448:A:P	57:14:3519:HOH:O	2.66	0.42
24:14:2513:G:N2	28:29:143:ASN:HD21	2.17	0.42
30:49:178:PHE:HA	30:49:179:PRO:HD2	1.88	0.42
45:D5:52:SER:O	45:D5:53:ILE:HG12	2.19	0.42
1:13:486:U:H2'	1:13:487:A:H8	1.84	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:13:1060:C:H5”	10:1I:51:ARG:HG2	2.01	0.42
1:13:1255:G:N2	1:13:1259:C:O2	2.37	0.42
1:13:1405:G:O2’	1:13:1519:A:H5’	2.20	0.42
2:1E:30:ARG:HB2	2:1E:46:LYS:NZ	2.34	0.42
2:1E:212:GLN:O	2:1E:216:SER:HB2	2.19	0.42
4:3E:154:ASN:CG	4:3E:155:LEU:H	2.18	0.42
7:6E:146:GLU:O	7:6E:149:ARG:HB2	2.19	0.42
12:3I:110:VAL:CG2	12:3I:120:TYR:HB3	2.50	0.42
13:4I:11:ARG:NH2	13:4I:46:LYS:HG3	2.34	0.42
13:4I:15:VAL:HG23	13:4I:43:THR:O	2.19	0.42
24:1H:34:C:C6	24:1H:34:C:OP2	2.72	0.42
24:1H:654(F):C:H42	24:1H:654(O):G:H1	1.68	0.42
24:1H:818:G:H5’	24:1H:839:U:OP1	2.19	0.42
24:1H:1087:G:C5	24:1H:1089:G:H1’	2.54	0.42
24:1H:1103:A:H3’	24:1H:1104:C:C5	2.54	0.42
24:1H:1248:G:O5’	29:31:92:PRO:HD3	2.19	0.42
24:1H:1387:C:C2	24:1H:1388:G:C8	3.07	0.42
24:1H:2401:U:H2’	24:1H:2402:C:H1’	2.00	0.42
24:1H:2721:A:H1’	24:1H:2873:A:O2’	2.19	0.42
24:1H:2840:C:O3’	37:98:53:HIS:NE2	2.52	0.42
24:1H:2870:C:H5”	37:98:65:LEU:HD21	2.01	0.42
24:1H:2896:C:H2’	24:1H:2897:U:C6	2.54	0.42
28:21:97:LYS:O	28:21:100:GLU:HG3	2.19	0.42
29:31:49:ALA:O	29:31:92:PRO:HB2	2.18	0.42
31:51:90:LYS:O	31:51:94:TYR:HD2	2.03	0.42
32:61:67:ARG:HE	32:61:67:ARG:HB3	1.51	0.42
46:I8:46:LYS:HE2	46:I8:46:LYS:HB3	1.90	0.42
47:J8:92:LYS:HA	47:J8:95:LEU:HD12	2.01	0.42
48:K8:17:SER:HB2	48:K8:20:GLU:HG3	2.01	0.42
53:Q8:62:LEU:CB	53:Q8:63:PRO:HD2	2.50	0.42
54:1G:1224:G:O2’	13:4A:102:ARG:NH1	2.52	0.42
54:1G:1255:G:P	10:1A:45:ARG:HH22	2.42	0.42
4:32:14:ARG:HB2	4:32:40:PRO:HD2	2.00	0.42
4:32:15:GLU:OE2	4:32:63:LYS:HE2	2.19	0.42
7:62:65:ALA:HB1	7:62:127:ALA:HB3	2.01	0.42
19:AA:66:MET:N	19:AA:67:VAL:HB	2.34	0.42
24:14:14:A:H5”	24:14:15:G:OP2	2.19	0.42
24:14:68:G:H2’	24:14:69:C:C6	2.54	0.42
24:14:387:U:P	57:14:4141:HOH:O	2.76	0.42
24:14:624:C:OP1	53:M5:64:TYR:CZ	2.73	0.42
24:14:761:A:N6	57:14:4299:HOH:O	2.30	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:14:883:G:N2	24:14:893:C:N3	2.65	0.42
24:14:1034:G:H2'	24:14:1035:U:O4'	2.20	0.42
24:14:1047:G:N2	24:14:1111:A:H62	2.15	0.42
24:14:1279:G:H5"	37:55:33:ARG:HH21	1.85	0.42
24:14:1384:A:N3	24:14:1405:U:H1'	2.33	0.42
24:14:1832:C:N4	24:14:1833:U:C4	2.87	0.42
24:14:2130:U:C2	24:14:2158:A:H2	2.37	0.42
24:14:2723:C:O5'	24:14:2723:C:H6	2.02	0.42
24:14:2732:G:H3'	24:14:2733:A:O4'	2.19	0.42
24:14:2849:U:H4'	24:14:2868:A:C2	2.55	0.42
24:14:2850:A:C2	24:14:2851:A:C4	3.08	0.42
27:19:162:SER:HB3	27:19:195:ALA:CB	2.49	0.42
30:49:15:VAL:HG13	30:49:175:LEU:CB	2.49	0.42
31:59:6:ARG:HB2	31:59:66:GLY:HA2	2.01	0.42
31:59:26:VAL:CG1	31:59:33:LEU:H	2.32	0.42
32:69:144:VAL:HG13	32:69:145:VAL:H	1.83	0.42
36:45:11:LYS:HD3	36:45:87:LYS:HG2	2.02	0.42
37:55:42:LYS:HB3	37:55:45:ARG:NH2	2.34	0.42
38:65:61:ASN:OD1	38:65:64:GLU:HB2	2.20	0.42
39:75:50:ILE:HD13	39:75:64:ARG:HB3	2.01	0.42
41:95:24:LYS:HA	41:95:92:THR:OG1	2.19	0.42
48:G5:47:ASN:O	48:G5:49:LYS:N	2.52	0.42
1:13:54:C:N4	1:13:353:A:OP2	2.49	0.42
1:13:600:C:H2'	1:13:601:C:H6	1.85	0.42
1:13:746:A:H4'	1:13:837:G:O2'	2.19	0.42
1:13:1095:U:H5'	1:13:1109:C:O2	2.20	0.42
1:13:1219:U:H2'	1:13:1220:G:C8	2.52	0.42
1:13:1386:G:O2'	1:13:1387:G:H5'	2.19	0.42
2:1E:149:LEU:HD23	2:1E:149:LEU:HA	1.64	0.42
3:2E:134:ILE:HD11	3:2E:153:VAL:HG21	2.00	0.42
8:7E:14:ARG:O	8:7E:18:ARG:HD3	2.19	0.42
21:1F:17:THR:O	21:1F:22:ARG:HD3	2.20	0.42
24:1H:274:G:H2'	24:1H:275:G:O4'	2.19	0.42
24:1H:685:A:H1'	24:1H:688:U:O4	2.20	0.42
24:1H:993:G:C6	24:1H:994:C:N4	2.87	0.42
24:1H:1230:C:H2'	24:1H:1231:G:C8	2.54	0.42
24:1H:1332:G:N2	24:1H:1609:A:H2'	2.35	0.42
24:1H:1417:C:P	57:1H:4019:HOH:O	2.75	0.42
24:1H:1533:C:C5	24:1H:1534:G:H3'	2.54	0.42
24:1H:1590:U:H2'	24:1H:1591:G:H8	1.83	0.42
24:1H:1652:A:N6	37:98:11:ASN:OD1	2.45	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:1H:1686:C:H2'	24:1H:1687:G:O4'	2.19	0.42
24:1H:1825:A:H1'	27:11:255:LYS:NZ	2.35	0.42
24:1H:2212:A:H8	24:1H:2212:A:H2'	1.75	0.42
24:1H:2329:G:H2'	24:1H:2330:G:C8	2.54	0.42
26:71:42:GLU:HB2	26:71:215:THR:HG23	2.01	0.42
27:11:245:PRO:HA	27:11:246:PRO:HD3	1.91	0.42
31:51:121:ILE:HD11	31:51:141:VAL:HA	2.02	0.42
36:88:4:PRO:HD3	36:88:70:PRO:O	2.20	0.42
36:88:28:ALA:HB3	36:88:29:PHE:CD1	2.54	0.42
40:C8:110:VAL:O	40:C8:113:ALA:HB3	2.19	0.42
42:E8:60:ASN:OD1	42:E8:60:ASN:N	2.53	0.42
43:F8:53:LYS:HG2	43:F8:82:GLN:HB2	2.00	0.42
49:L8:17:LYS:H	49:L8:17:LYS:HG2	1.69	0.42
54:1G:1014:A:P	54:1G:1014:A:H8	2.43	0.42
54:1G:1057:G:H1	54:1G:1203:C:H42	1.67	0.42
54:1G:1095:U:H2'	54:1G:1096:C:C6	2.55	0.42
54:1G:1285:A:H4'	54:1G:1286:A:O5'	2.19	0.42
2:12:231:GLU:HA	2:12:232:PRO:HD3	1.78	0.42
13:4A:101:GLN:HE21	13:4A:101:GLN:HB3	1.65	0.42
24:14:214:G:O2'	24:14:216:A:O2'	2.32	0.42
24:14:429:A:H2'	24:14:430:G:C8	2.54	0.42
24:14:456:C:H2'	43:B5:69:TYR:HE2	1.84	0.42
24:14:1252:G:O2'	24:14:1253:A:C8	2.73	0.42
24:14:1500:G:H5"	24:14:1501:C:OP2	2.20	0.42
24:14:1664:A:OP2	57:14:3654:HOH:O	2.22	0.42
24:14:1707:G:C5	24:14:1756:G:C6	3.07	0.42
24:14:1797:C:HO2'	27:19:259:THR:HG1	1.63	0.42
24:14:2036:C:H5'	24:14:2036:C:H6	1.85	0.42
24:14:2494:G:C5	24:14:2495:G:N7	2.88	0.42
28:29:82:ARG:HA	28:29:82:ARG:HD3	1.84	0.42
30:49:15:VAL:HG13	30:49:175:LEU:HB3	2.00	0.42
30:49:19:LEU:HD23	30:49:19:LEU:HA	1.92	0.42
36:45:83:MET:N	36:45:83:MET:SD	2.91	0.42
1:13:232:G:H1'	1:13:262:A:N1	2.34	0.42
1:13:298:A:H8	1:13:298:A:OP1	2.03	0.42
1:13:985:C:N3	1:13:1221:G:C2	2.87	0.42
1:13:1117:G:H5"	9:8E:104:ARG:CZ	2.49	0.42
1:13:1378:C:C5	1:13:1379:G:C8	3.08	0.42
1:13:1402:C:H2'	1:13:1403:C:O4'	2.20	0.42
2:1E:61:LEU:HD23	2:1E:68:ILE:HD11	2.01	0.42
3:2E:59:ARG:HA	3:2E:63:ASN:O	2.20	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:2E:125:GLU:HA	3:2E:191:THR:HG22	2.02	0.42
10:1I:35:SER:HB2	10:1I:73:ASP:HB2	2.02	0.42
16:7I:58:TYR:O	16:7I:62:VAL:HG22	2.20	0.42
17:8I:82:MET:HE3	17:8I:82:MET:HB3	2.00	0.42
19:AI:41:VAL:HB	19:AI:42:PRO:HA	2.02	0.42
19:AI:68:GLY:H	50:M8:55:ARG:NH2	2.15	0.42
20:BI:49:ALA:O	20:BI:53:LEU:HG	2.20	0.42
24:1H:35:G:H2'	24:1H:36:G:O4'	2.20	0.42
24:1H:94:G:H2'	24:1H:95:G:O4'	2.19	0.42
24:1H:878:A:C2	24:1H:879:G:C4	3.07	0.42
24:1H:910:A:N6	36:88:12:GLN:HA	2.31	0.42
24:1H:1260:G:C6	24:1H:1261:C:C4	3.08	0.42
24:1H:1553:A:N6	24:1H:1555:G:H1'	2.35	0.42
24:1H:1606:G:H8	24:1H:1606:G:O5'	2.02	0.42
24:1H:2106:G:C2	24:1H:2184:G:C2	3.08	0.42
24:1H:2360:A:H2'	24:1H:2361:A:O4'	2.20	0.42
24:1H:2400:G:H3'	24:1H:2401:U:C6	2.55	0.42
34:68:118:ALA:HA	34:68:119:PRO:HD2	1.80	0.42
35:78:113:LYS:HG2	35:78:115:LEU:HD23	2.01	0.42
36:88:118:LEU:HD23	36:88:118:LEU:HA	1.74	0.42
41:D8:64:HIS:CG	41:D8:92:THR:HG22	2.54	0.42
47:J8:40:ARG:HE	47:J8:40:ARG:HB2	1.71	0.42
54:1G:1037:C:H2'	54:1G:1038:C:C6	2.54	0.42
4:32:3:ARG:HG3	4:32:5:ILE:CD1	2.47	0.42
4:32:30:LYS:HG3	4:32:35:ARG:HE	1.84	0.42
4:32:59:ARG:HA	4:32:62:GLN:HB2	2.01	0.42
13:4A:14:ARG:H	13:4A:44:ARG:NH1	2.15	0.42
15:6A:24:SER:O	15:6A:28:GLN:HG3	2.18	0.42
19:AA:49:ILE:HD13	19:AA:62:ILE:HD13	2.01	0.42
24:14:11:G:O5'	24:14:11:G:H8	2.03	0.42
24:14:29:U:O4	57:14:4112:HOH:O	2.21	0.42
24:14:336:C:H4'	44:C5:6:HIS:CD2	2.54	0.42
24:14:813:U:C2	24:14:1195:G:N2	2.88	0.42
24:14:976:C:H42	24:14:987:G:H1	1.67	0.42
24:14:1003:G:N2	24:14:1153:C:C2	2.87	0.42
24:14:1394:U:H2'	24:14:1395:A:O4'	2.19	0.42
24:14:1827:C:OP2	27:19:222:ARG:HD2	2.20	0.42
24:14:2115:G:H4'	24:14:2166:G:O2'	2.20	0.42
24:14:2286:A:H4'	24:14:2287:A:O4'	2.19	0.42
32:69:69:LYS:HA	32:69:136:VAL:HG21	2.02	0.42
39:75:4:GLY:O	39:75:5:ALA:CB	2.68	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:75:36:GLU:OE2	39:75:41:ARG:HD3	2.20	0.42
39:75:98:LYS:HB3	39:75:100:TYR:CE2	2.54	0.42
39:75:125:ARG:HA	39:75:125:ARG:HD3	1.77	0.42
40:85:92:ARG:O	40:85:94:ASN:N	2.51	0.42
40:85:100:VAL:O	40:85:101:ARG:HG2	2.20	0.42
41:95:71:LEU:HD12	41:95:71:LEU:HA	1.83	0.42
44:C5:17:SER:HB3	44:C5:71:LYS:HB3	2.01	0.42
44:C5:88:LYS:HB2	44:C5:89:PHE:H	1.67	0.42
46:E5:50:ASN:O	46:E5:62:LEU:HB2	2.19	0.42
48:G5:29:LYS:HG2	48:G5:57:ILE:HD13	2.02	0.42
53:M5:33:ASN:OD1	53:M5:33:ASN:N	2.52	0.42
1:13:1264:C:O2	1:13:1272:G:C2	2.72	0.42
1:13:1286:A:N6	1:13:1354:C:H5"	2.34	0.42
3:2E:29:TYR:OH	14:5I:54:PRO:HD2	2.20	0.42
3:2E:73:PRO:O	3:2E:76:VAL:HG22	2.19	0.42
4:3E:68:TYR:CE2	4:3E:97:LEU:HB3	2.55	0.42
5:4E:121:LYS:HA	5:4E:121:LYS:HD2	1.75	0.42
6:5E:23:LYS:HD3	6:5E:61:LEU:HD21	2.00	0.42
7:6E:65:ALA:HB1	7:6E:127:ALA:HB3	2.02	0.42
9:8E:18:PHE:HD2	9:8E:62:TYR:CD2	2.31	0.42
10:1I:92:THR:HG22	10:1I:94:VAL:HG23	2.01	0.42
15:6I:78:TYR:CZ	15:6I:82:ILE:HD11	2.54	0.42
24:1H:760:G:OP1	57:1H:3782:HOH:O	2.21	0.42
24:1H:1038:C:H2'	24:1H:1039:G:O4'	2.20	0.42
24:1H:1113:U:OP1	31:51:2:SER:N	2.51	0.42
24:1H:1970:A:H4'	24:1H:1970:A:OP1	2.19	0.42
24:1H:2240:C:O2'	24:1H:2241:A:H5'	2.20	0.42
24:1H:2397:G:C2	24:1H:2420:C:O2	2.72	0.42
24:1H:2450:A:C2	24:1H:2451:A:C4	3.07	0.42
26:71:45:ALA:HA	26:71:211:SER:O	2.19	0.42
29:31:111:ALA:HB2	29:31:206:ILE:HD12	2.01	0.42
30:41:95:ARG:O	30:41:99:MET:N	2.53	0.42
31:51:4:ILE:HG13	31:51:6:ARG:HB2	2.00	0.42
41:D8:67:GLY:O	41:D8:88:ARG:HB3	2.20	0.42
50:M8:12:ALA:HB3	50:M8:24:THR:HB	2.02	0.42
54:1G:160:A:H1'	54:1G:344:A:N7	2.34	0.42
54:1G:452:A:C4	54:1G:453:A:C8	3.07	0.42
54:1G:536:C:H2'	54:1G:537:G:C8	2.55	0.42
54:1G:574:A:H5"	54:1G:575:G:OP2	2.20	0.42
54:1G:900:A:H2'	54:1G:901:A:C8	2.55	0.42
2:12:51:LEU:HD23	2:12:51:LEU:HA	1.87	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:12:56:ARG:HA	2:12:56:ARG:HD3	1.81	0.42
3:22:4:LYS:HE3	3:22:4:LYS:HB2	1.91	0.42
5:42:57:LYS:HG2	5:42:61:TYR:CE1	2.54	0.42
7:62:99:LEU:HD23	7:62:102:ARG:NH1	2.35	0.42
24:14:138:G:O2'	24:14:139:G:H5'	2.20	0.42
24:14:185:U:H2'	24:14:186:G:C8	2.55	0.42
24:14:1260:G:C6	24:14:1261:C:C4	3.07	0.42
24:14:2516:G:C6	24:14:2517:C:N4	2.88	0.42
24:14:2825:C:H2'	24:14:2826:A:H5'	2.01	0.42
25:1J:76:G:H21	45:D5:75:ASN:HD22	1.66	0.42
27:19:12:SER:HB2	27:19:207:GLY:O	2.20	0.42
27:19:73:VAL:HG13	27:19:120:GLY:CA	2.50	0.42
28:29:144:ARG:HB3	28:29:145:LYS:H	1.54	0.42
29:39:63:LYS:HA	29:39:76:GLY:O	2.20	0.42
30:49:47:LYS:HG2	30:49:48:GLU:HG3	2.01	0.42
32:69:123:LEU:HD23	32:69:123:LEU:HA	1.84	0.42
36:45:29:PHE:HB3	36:45:65:PHE:CD2	2.54	0.42
37:55:61:HIS:CE1	37:55:65:LEU:HD11	2.55	0.42
38:65:64:GLU:O	38:65:68:GLN:HG3	2.19	0.42
41:95:21:ARG:HH22	41:95:65:GLY:CA	2.33	0.42
46:E5:62:LEU:O	46:E5:63:VAL:HG13	2.20	0.42
1:13:173:U:H5"	1:13:197:A:O4'	2.19	0.42
1:13:458:C:H2'	1:13:464:G:H8	1.84	0.42
1:13:536:C:OP2	57:13:1791:HOH:O	2.21	0.42
1:13:952:U:H4'	1:13:964:A:N1	2.35	0.42
2:1E:163:PHE:HA	2:1E:185:ILE:O	2.20	0.42
2:1E:180:LEU:HD23	2:1E:180:LEU:HA	1.88	0.42
6:5E:24:GLU:HG2	6:5E:28:ARG:NH2	2.35	0.42
20:BI:87:LYS:HA	20:BI:87:LYS:HD2	1.87	0.42
22:2K:17:OMG:HM21	22:2K:18:G:C8	2.54	0.42
22:2K:59:A:N6	22:2K:60:A:N6	2.68	0.42
22:3K:42:U:H2'	22:3K:43:G:C8	2.55	0.42
24:1H:652:C:H2'	24:1H:653:A:H5'	2.01	0.42
24:1H:918:A:H8	24:1H:918:A:O5'	2.02	0.42
24:1H:1166:C:O2	24:1H:1184:G:N2	2.53	0.42
24:1H:1356:G:C5	24:1H:1357:U:C5	3.08	0.42
24:1H:1652:A:H2'	24:1H:1653:G:H5'	2.02	0.42
24:1H:1854:A:H2'	24:1H:1855:G:O4'	2.20	0.42
24:1H:1857:G:O6	57:1H:4346:HOH:O	2.21	0.42
24:1H:2564:A:OP1	24:1H:2648:C:H4'	2.20	0.42
24:1H:2875:C:H2'	24:1H:2876:G:O4'	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:16:2:C:H2'	25:16:3:C:C6	2.55	0.42
27:11:37:LEU:HD13	27:11:62:TYR:HB2	2.01	0.42
28:21:119:ARG:NH1	28:21:156:MET:O	2.53	0.42
29:31:6:VAL:HG12	29:31:7:TYR:N	2.35	0.42
29:31:82:ILE:H	29:31:82:ILE:HG13	1.49	0.42
29:31:136:THR:O	29:31:140:LEU:HB2	2.20	0.42
30:41:67:LYS:HE2	50:M8:5:ILE:HG23	2.01	0.42
32:61:57:ARG:O	32:61:61:ARG:HG2	2.20	0.42
32:61:118:LYS:HA	32:61:119:PRO:HD3	1.87	0.42
35:78:100:LEU:HD12	35:78:100:LEU:HA	1.82	0.42
36:88:74:TYR:O	36:88:90:VAL:O	2.37	0.42
40:C8:27:LEU:HD22	40:C8:27:LEU:HA	1.83	0.42
50:M8:40:HIS:HB3	50:M8:41:PRO:HD3	2.02	0.42
50:M8:56:VAL:O	50:M8:60:GLN:NE2	2.53	0.42
54:1G:1014:A:H4'	19:AA:14:HIS:HD2	1.85	0.42
54:1G:1059:C:OP2	3:22:199:LYS:NZ	2.44	0.42
54:1G:1123:A:O2'	10:1A:38:ILE:HG12	2.20	0.42
54:1G:1208:C:H2'	54:1G:1209:C:C6	2.55	0.42
54:1G:1306:A:N6	54:1G:1331:G:H1'	2.35	0.42
54:1G:1446:A:C5	39:75:118:ARG:CZ	3.03	0.42
2:12:58:ILE:H	2:12:58:ILE:HG12	1.35	0.42
3:22:27:LYS:HG2	3:22:28:GLN:HG3	2.02	0.42
5:42:28:PHE:O	5:42:47:LYS:HA	2.20	0.42
6:52:70:ASP:OD1	6:52:71:ARG:N	2.52	0.42
8:72:69:ARG:HD3	8:72:75:ARG:O	2.18	0.42
24:14:486:C:H4'	42:A5:60:ASN:HD22	1.84	0.42
24:14:590:A:H2'	24:14:591:C:C6	2.55	0.42
24:14:826:U:H2'	24:14:828:U:O4'	2.20	0.42
24:14:844:C:C5	24:14:845:G:C6	3.08	0.42
24:14:986:C:H3'	57:14:4154:HOH:O	2.18	0.42
24:14:1336:A:H2'	24:14:1337:G:H8	1.85	0.42
24:14:1370:C:HO2'	24:14:1811:G:HO2'	1.64	0.42
24:14:2111:C:H1'	24:14:2118:U:H4'	2.02	0.42
24:14:2231:C:H2'	24:14:2232:U:O4'	2.20	0.42
24:14:2543:G:H2'	24:14:2544:G:O4'	2.19	0.42
24:14:2712:U:H2'	24:14:2714:G:H5"	2.01	0.42
25:1J:12:C:C6	25:1J:12:C:OP2	2.73	0.42
30:49:43:LEU:O	30:49:88:ILE:HG13	2.19	0.42
34:25:13:ASN:HD21	34:25:97:ARG:H	1.68	0.42
46:E5:20:ARG:HD2	46:E5:20:ARG:HH11	1.67	0.42
1:13:438:G:O2'	1:13:494:U:O4	2.22	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:13:708:C:H2'	1:13:709:G:H8	1.85	0.42
1:13:1347:G:H5"	9:8E:107:ARG:HG2	2.02	0.42
1:13:1357:A:N6	1:13:1358:U:O4	2.52	0.42
6:5E:39:LYS:HD2	6:5E:39:LYS:N	2.35	0.42
8:7E:41:ARG:NH1	8:7E:123:GLU:OE2	2.53	0.42
11:2I:124:LYS:HE3	11:2I:125:PHE:CE1	2.55	0.42
20:BI:48:LYS:O	20:BI:50:GLU:N	2.53	0.42
24:1H:17:G:H2'	24:1H:18:C:C6	2.55	0.42
24:1H:784:A:C8	24:1H:792:G:C5	3.08	0.42
24:1H:1077:A:H2	24:1H:1088:A:H62	1.67	0.42
24:1H:2000:G:N7	57:1H:4360:HOH:O	2.37	0.42
24:1H:2283:C:C4	24:1H:2389:G:C4	3.08	0.42
28:21:3:GLY:HA3	28:21:81:ILE:HG21	2.01	0.42
28:21:61:ARG:HB3	28:21:61:ARG:NH1	2.30	0.42
28:21:144:ARG:HB3	28:21:145:LYS:H	1.53	0.42
31:51:125:VAL:HG13	31:51:131:VAL:HB	2.02	0.42
31:51:126:PRO:HB2	31:51:130:ARG:HH12	1.84	0.42
35:78:121:LYS:HB3	35:78:122:PRO:HD2	2.01	0.42
37:98:14:SER:HA	37:98:17:ARG:NH1	2.34	0.42
39:B8:80:SER:HA	39:B8:81:PRO:HD3	1.94	0.42
40:C8:50:ARG:HG2	40:C8:53:ARG:NH2	2.35	0.42
54:1G:579:G:C4	54:1G:580:U:C5	3.08	0.42
54:1G:631:G:P	54:1G:632:A:N7	2.92	0.42
54:1G:660:G:H1	54:1G:745:C:N4	2.17	0.42
54:1G:825:G:H2'	54:1G:826:C:O4'	2.20	0.42
54:1G:1137:C:H5"	54:1G:1138:G:OP1	2.20	0.42
54:1G:1300:G:O2'	54:1G:1301:U:P	2.76	0.42
2:12:77:ALA:O	2:12:81:VAL:HG23	2.20	0.42
5:42:9:LYS:HB2	5:42:112:LEU:HD11	2.02	0.42
9:82:111:ARG:HG3	14:5A:61:TRP:NE1	2.34	0.42
24:14:184:C:H2'	24:14:185:U:C6	2.55	0.42
24:14:221:A:C4	24:14:266:G:N7	2.88	0.42
24:14:392:C:H5"	24:14:409:C:H5"	2.01	0.42
24:14:572:A:H5"	24:14:573:G:OP2	2.19	0.42
24:14:932:G:P	49:H5:29:ARG:NH2	2.93	0.42
24:14:976:C:O2	24:14:976:C:H2'	2.18	0.42
24:14:1197:G:H1'	24:14:1250:G:N2	2.35	0.42
24:14:1299:G:N2	24:14:1640:C:C6	2.87	0.42
24:14:1311:G:H2'	52:L5:47:ARG:HH21	1.85	0.42
24:14:1641:A:N6	24:14:1642:G:C2	2.87	0.42
24:14:1645:G:H5"	24:14:1646:C:H5'	2.02	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:14:2195:C:O2'	24:14:2196:C:H5'	2.19	0.42
24:14:2250:G:C6	36:45:83:MET:HB3	2.54	0.42
24:14:2300:G:N2	24:14:2317:C:O2	2.53	0.42
24:14:2485:G:H5"	36:45:46:GLN:HE21	1.84	0.42
26:79:10:LEU:O	26:79:220:PRO:HG3	2.19	0.42
28:29:30:PRO:HD3	28:29:180:ASN:CG	2.41	0.42
35:35:39:LYS:HG3	35:35:45:LEU:CD2	2.48	0.42
38:65:63:THR:O	38:65:66:ALA:HB3	2.20	0.42
45:D5:100:VAL:HG13	45:D5:101:PRO:HD2	2.00	0.42
47:F5:23:LYS:O	47:F5:31:GLY:HA2	2.19	0.42
50:I5:16:CYS:H	50:I5:20:ASN:H	1.68	0.42
51:J5:56:LYS:HZ3	51:J5:58:LEU:HB2	1.84	0.42
1:13:302:G:C6	1:13:303:A:C5	3.08	0.42
1:13:321:A:O2'	1:13:322:C:H5'	2.19	0.42
1:13:322:C:OP2	1:13:328:C:N4	2.49	0.42
1:13:429:U:H1'	1:13:430:A:H5"	2.01	0.42
1:13:991:U:O4	1:13:1212:U:O2'	2.30	0.42
1:13:1031:G:H2'	1:13:1032:A:C8	2.55	0.42
1:13:1117:G:H5"	9:8E:104:ARG:NH1	2.35	0.42
1:13:1303:C:C4	1:13:1304:G:C5	3.07	0.42
3:2E:16:ARG:HH12	3:2E:183:ASP:HA	1.85	0.42
8:7E:6:ILE:HD11	8:7E:31:PHE:CD2	2.53	0.42
12:3I:85:ILE:HG23	12:3I:85:ILE:HD12	1.72	0.42
16:7I:23:ASP:CG	16:7I:25:ARG:HH11	2.22	0.42
24:1H:7:G:C2	24:1H:8:A:C4	3.08	0.42
24:1H:262:A:H2'	24:1H:263:C:O4'	2.20	0.42
24:1H:588:U:C2	29:31:90:PHE:CE1	3.08	0.42
24:1H:602:G:O2'	24:1H:655:A:N6	2.53	0.42
24:1H:638:G:H2'	24:1H:639:U:O4'	2.20	0.42
24:1H:728:G:HO2'	24:1H:730:C:H6	1.64	0.42
24:1H:747:U:C4	24:1H:2613:U:C5	3.08	0.42
24:1H:821:A:C2'	24:1H:946:G:H5"	2.50	0.42
24:1H:1372:U:H2'	24:1H:1373:A:O4'	2.19	0.42
24:1H:2140:C:H2'	24:1H:2141:G:H8	1.85	0.42
26:71:190:ARG:HB3	26:71:194:ARG:NH1	2.35	0.42
26:71:208:PHE:HD2	26:71:209:LEU:HD23	1.85	0.42
28:21:85:ASN:HA	28:21:86:PRO:HD3	1.88	0.42
30:41:73:ALA:HB3	30:41:82:LEU:HD21	2.01	0.42
32:61:101:LEU:HA	32:61:101:LEU:HD23	1.79	0.42
33:58:38:HIS:ND1	33:58:39:ARG:HG3	2.35	0.42
54:1G:325:A:N6	54:1G:326:G:C2	2.87	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:1G:918:A:H2'	54:1G:919:A:O4'	2.20	0.42
54:1G:1287:A:N3	54:1G:1353:G:O2'	2.41	0.42
54:1G:1523:G:OP1	11:2A:123:LYS:HD3	2.20	0.42
17:8A:63:ARG:HG2	17:8A:64:PRO:CD	2.49	0.42
22:2L:15:G:H2'	22:2L:68:A:C2	2.54	0.42
24:14:194:G:H2'	24:14:195:A:O4'	2.20	0.42
24:14:298:G:C5	57:14:3839:HOH:O	2.73	0.42
24:14:588:U:C2	29:39:90:PHE:CE1	3.08	0.42
24:14:858:U:O2	24:14:2268:A:H2'	2.20	0.42
24:14:1473:G:H2'	24:14:1474:C:O4'	2.19	0.42
24:14:1857:G:C6	24:14:1858:G:N1	2.88	0.42
24:14:1955:U:O2'	24:14:1956:U:H5'	2.20	0.42
25:1J:56:G:H4'	25:1J:57:A:O5'	2.20	0.42
27:19:16:MET:HE1	27:19:208:LYS:HD3	2.02	0.42
28:29:147:PRO:HB2	28:29:149:ARG:HG2	2.01	0.42
29:39:33:LEU:O	29:39:37:VAL:HG23	2.19	0.42
29:39:64:ILE:HD12	29:39:65:TRP:CE2	2.54	0.42
30:49:145:THR:C	30:49:147:ASP:H	2.24	0.42
32:69:5:LEU:HD12	32:69:17:GLN:O	2.19	0.42
32:69:41:GLU:H	32:69:41:GLU:HG3	1.72	0.42
37:55:65:LEU:O	37:55:68:ARG:HB2	2.19	0.42
38:65:7:TYR:CZ	38:65:91:PRO:HG2	2.55	0.42
38:65:14:VAL:HG21	38:65:90:GLY:O	2.19	0.42
39:75:3:ARG:HA	39:75:4:GLY:C	2.40	0.42
45:D5:30:ASN:HA	45:D5:89:PHE:HE1	1.85	0.42
46:E5:68:GLU:HG3	46:E5:82:ARG:NH1	2.35	0.42
50:I5:23:GLU:C	50:I5:24:THR:HG1	2.23	0.42
1:13:58:C:O2'	1:13:388:G:N7	2.48	0.41
1:13:360:A:H2'	1:13:361:G:C8	2.55	0.41
1:13:827:U:C5	1:13:872:A:N1	2.88	0.41
1:13:1079:G:H2'	1:13:1080:A:C8	2.55	0.41
1:13:1333:A:H3'	1:13:1334:G:H8	1.84	0.41
1:13:1350:A:C5	1:13:1351:U:C4	3.08	0.41
1:13:1413:A:H2'	1:13:1414:U:O4'	2.20	0.41
1:13:1442:G:C6	1:13:1446:A:N6	2.88	0.41
1:13:1497:G:C2'	1:13:1498:U:H5'	2.49	0.41
4:3E:39:PRO:HA	4:3E:40:PRO:HD3	1.90	0.41
4:3E:62:GLN:OE1	4:3E:62:GLN:HA	2.19	0.41
4:3E:188:LEU:HA	4:3E:189:PRO:HD2	1.81	0.41
6:5E:26:ILE:O	6:5E:30:LEU:HD12	2.20	0.41
10:1I:81:THR:OG1	10:1I:82:ILE:N	2.53	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:8I:68:ARG:O	17:8I:68:ARG:HG3	2.20	0.41
18:9I:21:LYS:HB3	18:9I:57:GLY:HA3	2.01	0.41
18:9I:25:THR:HB	18:9I:42:ARG:HH12	1.84	0.41
20:BI:57:ARG:HH11	20:BI:103:GLY:CA	2.33	0.41
24:1H:218:A:C2	24:1H:235:U:H4'	2.54	0.41
24:1H:269:U:N3	24:1H:424:G:C6	2.88	0.41
24:1H:412:A:N6	24:1H:2412:A:O4'	2.52	0.41
24:1H:415:A:H2'	24:1H:416:C:H6	1.84	0.41
24:1H:536:A:OP1	40:C8:53:ARG:NH1	2.53	0.41
24:1H:940:G:H2'	24:1H:941:A:O4'	2.20	0.41
24:1H:945:A:OP2	24:1H:945:A:H4'	2.20	0.41
24:1H:988:A:C5	49:L8:13:ILE:HD12	2.54	0.41
24:1H:1141:U:H6	33:58:63:THR:OG1	2.01	0.41
24:1H:1219:G:OP2	40:C8:19:LYS:HE3	2.20	0.41
24:1H:1277:G:H2'	24:1H:1278:A:O4'	2.20	0.41
24:1H:1304:C:O2'	24:1H:1305:C:H5'	2.20	0.41
24:1H:1356:G:C6	24:1H:1357:U:C4	3.08	0.41
24:1H:2032:G:OP1	57:1H:4560:HOH:O	2.21	0.41
24:1H:2306:C:H3'	24:1H:2307:G:C5'	2.49	0.41
24:1H:2853:C:O2'	24:1H:2854:G:H5'	2.20	0.41
32:61:25:TYR:HE1	32:61:29:TYR:CD2	2.38	0.41
35:78:39:LYS:CG	35:78:45:LEU:HD21	2.50	0.41
35:78:82:GLY:HA2	35:78:113:LYS:O	2.20	0.41
36:88:29:PHE:HB3	36:88:65:PHE:CE1	2.55	0.41
37:98:78:LYS:O	37:98:78:LYS:HG2	2.20	0.41
39:B8:50:ILE:CD1	39:B8:102:ILE:HD11	2.48	0.41
54:1G:838:G:N2	54:1G:848:C:N3	2.68	0.41
54:1G:1068:G:N3	54:1G:1191:A:C2	2.88	0.41
54:1G:1111:A:H2'	54:1G:1112:C:C6	2.55	0.41
54:1G:1320:C:C2	19:AA:72:GLY:HA3	2.55	0.41
11:2A:81:ASP:OD1	11:2A:107:SER:OG	2.32	0.41
24:14:8:A:H2	24:14:2895:U:H3	1.67	0.41
24:14:289:A:H2'	24:14:289:A:N3	2.35	0.41
24:14:469:G:O6	52:L5:37:LYS:HE2	2.20	0.41
24:14:569:U:C4	24:14:570:G:C6	3.08	0.41
24:14:851:U:O2'	49:H5:42:ALA:O	2.34	0.41
24:14:2029:G:N7	24:14:2031:A:H5'	2.34	0.41
24:14:2115:G:N2	24:14:2172:U:O4	2.53	0.41
24:14:2695:C:O2'	24:14:2696:U:H5'	2.20	0.41
24:14:2715:C:H2'	24:14:2716:U:H6	1.84	0.41
24:14:2745:C:O2	31:59:139:GLN:NE2	2.31	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:14:2789:C:O2'	24:14:2893:G:N2	2.52	0.41
29:39:132:VAL:C	29:39:134:GLY:H	2.23	0.41
36:45:101:ARG:HG3	36:45:102:VAL:N	2.34	0.41
40:85:95:LEU:HD13	41:95:4:ILE:HG23	2.01	0.41
44:C5:6:HIS:CE1	44:C5:7:VAL:HG13	2.55	0.41
44:C5:76:CYS:SG	44:C5:97:ARG:HG3	2.60	0.41
49:H5:55:ARG:CZ	49:H5:55:ARG:HB3	2.50	0.41
1:13:482:A:H2'	1:13:483:C:O4'	2.20	0.41
1:13:728:A:C5	15:6I:54:ARG:HD2	2.55	0.41
1:13:1350:A:H2	7:6E:34:GLY:HA3	1.85	0.41
57:13:1760:HOH:O	14:5I:21:TYR:HB3	2.20	0.41
3:2E:47:LEU:HD12	3:2E:47:LEU:HA	1.86	0.41
5:4E:118:ILE:HG12	5:4E:119:LEU:N	2.34	0.41
7:6E:23:VAL:O	7:6E:27:ILE:N	2.48	0.41
8:7E:61:VAL:HG12	8:7E:63:LEU:HD12	2.02	0.41
17:8I:13:ASP:OD1	17:8I:14:LYS:NZ	2.41	0.41
20:BI:35:THR:O	20:BI:39:LYS:HE3	2.20	0.41
22:3K:35:QUO:H162	22:3K:35:QUO:H101	1.64	0.41
24:1H:106:C:H2'	24:1H:107:C:H6	1.85	0.41
24:1H:280:C:C2	24:1H:361:G:N2	2.88	0.41
24:1H:588:U:H1'	29:31:90:PHE:CD1	2.54	0.41
24:1H:822:U:C2'	24:1H:823:G:H5'	2.50	0.41
24:1H:1416:G:H1	24:1H:1582:C:H42	1.67	0.41
24:1H:1836:C:O2'	24:1H:1837:C:H5'	2.20	0.41
26:71:214:VAL:HG23	26:71:224:ILE:HG12	2.02	0.41
28:21:14:ILE:HG13	28:21:173:VAL:HG11	2.03	0.41
30:41:6:ALA:HB3	50:M8:23:GLU:HG3	2.02	0.41
30:41:7:LEU:N	30:41:104:GLU:OE2	2.53	0.41
30:41:130:ASN:HB3	30:41:159:VAL:O	2.21	0.41
35:78:121:LYS:HB2	35:78:123:LEU:HG	2.01	0.41
45:H8:11:GLU:O	45:H8:36:LYS:NZ	2.40	0.41
46:I8:18:ALA:HB3	46:I8:20:ARG:NH1	2.35	0.41
46:I8:51:VAL:HG23	46:I8:81:VAL:HG12	2.00	0.41
46:I8:66:VAL:O	46:I8:81:VAL:HG23	2.20	0.41
50:M8:55:ARG:HB3	50:M8:56:VAL:H	1.62	0.41
54:1G:115:G:O5'	54:1G:115:G:H8	2.03	0.41
54:1G:596:C:H2'	54:1G:597:G:H8	1.84	0.41
54:1G:711:G:P	6:52:54:LYS:NZ	2.93	0.41
54:1G:977:A:O2'	54:1G:979:C:OP2	2.36	0.41
54:1G:1103:C:C4	54:1G:1104:G:N7	2.88	0.41
54:1G:1118:C:H1'	54:1G:1179:A:C4	2.55	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:32:173:TRP:NE1	4:32:174:LEU:HG	2.35	0.41
24:14:252:G:OP2	35:35:50:ARG:NH1	2.48	0.41
24:14:559:G:H2'	24:14:560:C:O4'	2.20	0.41
24:14:768:G:O2'	24:14:1379:A:N6	2.53	0.41
24:14:875:G:N2	24:14:903:C:C2	2.87	0.41
24:14:1135:C:N4	24:14:1138:G:OP2	2.50	0.41
24:14:1287:A:H5"	24:14:1288:U:OP2	2.20	0.41
24:14:1678:G:H22	24:14:1989:G:N2	2.18	0.41
24:14:1769:G:C2'	24:14:1770:G:H5'	2.51	0.41
24:14:1950:G:C2	24:14:1951:U:C5	3.08	0.41
24:14:2002:G:C5	57:14:4013:HOH:O	2.73	0.41
24:14:2030:A:H4'	24:14:2031:A:C8	2.55	0.41
24:14:2252:G:H2'	24:14:2253:G:O4'	2.20	0.41
24:14:2317:C:N4	24:14:2318:G:N7	2.69	0.41
24:14:2554:U:H2'	24:14:2555:U:C6	2.55	0.41
27:19:126:GLN:HB2	27:19:129:ASN:ND2	2.36	0.41
28:29:4:ILE:HG21	28:29:4:ILE:HD13	1.78	0.41
29:39:1:MET:HB2	29:39:2:LYS:H	1.65	0.41
29:39:200:GLU:O	29:39:203:GLN:HB2	2.20	0.41
30:49:96:ARG:HE	30:49:96:ARG:HB3	1.68	0.41
34:25:17:ARG:H	34:25:46:ALA:HA	1.85	0.41
34:25:63:VAL:HB	34:25:102:VAL:HG12	2.01	0.41
38:65:27:SER:HA	38:65:88:ASP:HB3	2.02	0.41
40:85:83:LEU:HD21	40:85:88:ILE:HB	2.02	0.41
44:C5:43:ASN:N	44:C5:43:ASN:OD1	2.53	0.41
45:D5:146:ILE:HD13	45:D5:176:PRO:HD3	2.01	0.41
53:M5:54:GLU:CG	53:M5:57:ARG:HH22	2.28	0.41
1:13:8:A:N3	5:4E:103:GLY:HA2	2.35	0.41
1:13:313:A:H2'	1:13:314:C:H6	1.83	0.41
1:13:884:U:H4'	1:13:885:G:H5"	2.02	0.41
1:13:1082:G:H2'	1:13:1083:U:O4'	2.20	0.41
1:13:1106:G:H2'	1:13:1107:C:H6	1.85	0.41
2:1E:71:VAL:O	2:1E:164:VAL:HA	2.20	0.41
3:2E:19:GLU:HG3	3:2E:54:ARG:NH1	2.35	0.41
3:2E:70:VAL:HG12	3:2E:72:LYS:N	2.36	0.41
4:3E:163:GLU:O	4:3E:166:LYS:HE3	2.20	0.41
8:7E:83:ILE:HG13	8:7E:137:VAL:HG22	2.01	0.41
10:1I:84:GLN:HA	10:1I:87:THR:HG1	1.85	0.41
20:BI:12:ALA:O	20:BI:15:ARG:HB2	2.21	0.41
24:1H:74:A:C5'	24:1H:74:A:H8	2.34	0.41
24:1H:91:A:C4	24:1H:92:G:C8	3.09	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:1H:248:G:O2'	24:1H:2432:A:OP1	2.32	0.41
24:1H:1011:G:C2	24:1H:1151:G:C2	3.08	0.41
24:1H:1021:A:H8	24:1H:1022:G:H5"	1.85	0.41
24:1H:1035:U:H2'	24:1H:1036:G:C8	2.55	0.41
24:1H:1312:U:OP2	43:F8:63:LYS:HE2	2.19	0.41
24:1H:1945:G:H2'	24:1H:1946:U:C6	2.55	0.41
24:1H:2716:U:O2'	24:1H:2717:G:H5'	2.20	0.41
24:1H:2768:C:C4	24:1H:2769:C:C5	3.09	0.41
25:16:65:C:H41	25:16:108:C:H2'	1.83	0.41
26:71:20:TYR:H	26:71:224:ILE:HA	1.85	0.41
27:11:238:GLY:O	27:11:240:ALA:N	2.54	0.41
28:21:97:LYS:N	28:21:100:GLU:OE1	2.45	0.41
30:41:37:VAL:HG13	30:41:158:ALA:O	2.20	0.41
36:88:38:GLU:HA	36:88:99:PRO:HG3	2.02	0.41
42:E8:39:THR:HG22	42:E8:44:ALA:HB2	2.00	0.41
42:E8:79:GLY:HA3	42:E8:100:THR:HG22	2.03	0.41
44:G8:35:TYR:CD2	44:G8:69:ALA:HB3	2.55	0.41
48:K8:18:PRO:O	48:K8:21:LEU:HB2	2.20	0.41
54:1G:723:U:O2'	54:1G:724:G:OP1	2.34	0.41
54:1G:947:G:O3'	13:4A:109:THR:OG1	2.36	0.41
54:1G:1131:G:H2'	54:1G:1132:C:H6	1.86	0.41
54:1G:1141:C:C2	54:1G:1142:G:C8	3.08	0.41
54:1G:1225:A:H5"	54:1G:1226:C:OP2	2.21	0.41
54:1G:1333:A:O5'	54:1G:1333:A:H8	2.03	0.41
54:1G:1442:G:H2'	39:75:118:ARG:NH2	2.35	0.41
54:1G:1498:U:O5'	54:1G:1498:U:H6	2.03	0.41
2:12:188:ALA:O	2:12:203:GLY:N	2.51	0.41
7:62:62:PHE:HA	7:62:124:LEU:CD2	2.50	0.41
11:2A:51:LYS:HG3	11:2A:51:LYS:O	2.20	0.41
12:3A:7:ILE:O	12:3A:11:VAL:HG23	2.20	0.41
15:6A:8:LYS:O	15:6A:12:ILE:HG13	2.20	0.41
22:2L:63:5MU:H2'	22:2L:64:PSU:H5"	2.02	0.41
24:14:571:A:H5'	24:14:2030:A:N7	2.36	0.41
24:14:816:C:H2'	24:14:817:C:C6	2.55	0.41
24:14:825:C:H2'	24:14:826:U:O4'	2.19	0.41
24:14:1478:G:HO2'	24:14:1558:A:H2	1.66	0.41
24:14:1486:A:H2'	24:14:1487:G:C8	2.55	0.41
24:14:2065:C:H2'	24:14:2066:C:C6	2.54	0.41
24:14:2135:A:H3'	24:14:2136:C:C5	2.55	0.41
24:14:2652:C:N4	24:14:2668:G:H1	2.12	0.41
24:14:2723:C:P	37:55:3:HIS:HD1	2.43	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:1J:2:C:H2'	25:1J:3:C:C6	2.55	0.41
29:39:20:LEU:HD23	29:39:21:ALA:H	1.86	0.41
29:39:34:TRP:CZ2	35:35:8:PRO:HB3	2.55	0.41
30:49:129:GLY:O	30:49:161:THR:HB	2.19	0.41
30:49:138:GLN:HG3	30:49:139:LEU:H	1.84	0.41
31:59:55:PRO:HD2	31:59:61:HIS:HB3	2.02	0.41
32:69:74:ASN:O	32:69:75:LEU:HB2	2.19	0.41
34:25:19:ILE:HB	34:25:41:ALA:HB1	2.03	0.41
35:35:48:PRO:O	35:35:51:PHE:N	2.53	0.41
36:45:16:ARG:O	36:45:17:LEU:HD23	2.20	0.41
42:A5:4:LYS:NZ	42:A5:6:ILE:HD11	2.35	0.41
44:C5:81:LYS:HD2	44:C5:99:CYS:SG	2.61	0.41
45:D5:3:TYR:O	45:D5:57:ILE:HA	2.20	0.41
53:M5:29:LYS:HB2	53:M5:44:LYS:CB	2.50	0.41
1:13:297:G:H4'	1:13:557:G:H4'	2.02	0.41
1:13:368:U:C6	32:69:90:GLY:HA3	2.55	0.41
1:13:811:C:O2'	1:13:901:A:N1	2.52	0.41
1:13:967:C:H3'	1:13:968:A:C8	2.55	0.41
1:13:1070:U:H2'	1:13:1071:C:C6	2.53	0.41
1:13:1118:C:P	9:8E:104:ARG:HH11	2.42	0.41
1:13:1126:U:O2'	1:13:1127:G:OP2	2.36	0.41
1:13:1144:G:C2'	1:13:1145:C:H5'	2.51	0.41
1:13:1153:C:P	10:1I:13:HIS:HE2	2.44	0.41
1:13:1166:G:C2	1:13:1171:G:O6	2.73	0.41
1:13:1286:A:H5"	21:1F:26:LYS:HB3	2.02	0.41
2:1E:31:TYR:CD1	2:1E:31:TYR:N	2.87	0.41
3:2E:6:HIS:CD2	3:2E:7:PRO:HD2	2.55	0.41
5:4E:63:ARG:HA	5:4E:66:MET:HE2	2.02	0.41
6:5E:95:GLU:HA	6:5E:96:PRO:HD3	1.76	0.41
7:6E:63:LYS:HE3	7:6E:63:LYS:HB3	1.82	0.41
7:6E:74:GLU:HG2	7:6E:91:VAL:HG13	2.01	0.41
10:1I:65:LEU:HD13	14:5I:56:VAL:HG22	2.03	0.41
11:2I:45:GLY:O	11:2I:50:TYR:HB2	2.21	0.41
18:9I:74:ARG:HD3	18:9I:81:PHE:HA	2.02	0.41
20:BI:43:LEU:HB2	20:BI:52:ALA:HB2	2.02	0.41
24:1H:140:A:C8	24:1H:1408:C:O2'	2.71	0.41
24:1H:270:A:OP2	24:1H:270(Y):G:N2	2.47	0.41
24:1H:394:A:C2'	24:1H:395:U:H5'	2.50	0.41
24:1H:479:A:HO2'	24:1H:481:G:H8	1.65	0.41
24:1H:574:C:N3	28:21:145:LYS:NZ	2.56	0.41
24:1H:751:A:C6	24:1H:789:A:C5	3.08	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:1H:1141:U:C5	33:58:64:GLY:HA3	2.55	0.41
24:1H:1171:G:C5	24:1H:1174:A:C6	3.07	0.41
24:1H:1259:G:H2'	24:1H:1260:G:C8	2.54	0.41
24:1H:1279:G:H4'	37:98:31:HIS:CE1	2.55	0.41
24:1H:1301:A:O2'	24:1H:1302:A:H3'	2.20	0.41
24:1H:1446:C:H2'	24:1H:1447:G:C8	2.52	0.41
24:1H:1663:C:HO2'	24:1H:1664:A:H8	1.68	0.41
24:1H:1976:U:H5"	24:1H:1977:A:OP1	2.21	0.41
24:1H:2179:C:H2'	24:1H:2180:U:C6	2.56	0.41
24:1H:2260:C:O2'	24:1H:2261:C:H5'	2.20	0.41
27:11:119:ALA:CB	27:11:130:ALA:HB3	2.50	0.41
39:B8:25:GLY:N	39:B8:49:VAL:HG23	2.28	0.41
39:B8:118:ARG:NH2	39:B8:121:ILE:HG21	2.34	0.41
41:D8:17:GLY:N	41:D8:96:ILE:O	2.33	0.41
42:E8:64:MET:O	42:E8:65:LEU:HB2	2.20	0.41
47:J8:13:ILE:HG21	47:J8:13:ILE:HD13	1.83	0.41
54:1G:370:C:H2'	54:1G:371:G:H8	1.85	0.41
54:1G:448:A:O2'	54:1G:449:C:H5'	2.20	0.41
54:1G:791:G:C5	54:1G:792:A:N7	2.89	0.41
54:1G:946:A:H2'	54:1G:947:G:C8	2.55	0.41
54:1G:1057:G:H2'	54:1G:1058:G:O4'	2.20	0.41
54:1G:1227:A:H3'	54:1G:1227:A:C8	2.55	0.41
54:1G:1464:G:OP1	39:75:108:ARG:NH1	2.53	0.41
3:22:32:LEU:HD13	3:22:59:ARG:HH12	1.84	0.41
3:22:84:ILE:HD13	3:22:85:ARG:NH1	2.35	0.41
5:42:59:GLY:O	5:42:62:ALA:HB3	2.21	0.41
6:52:6:VAL:HG22	6:52:90:VAL:HG22	2.02	0.41
9:82:14:VAL:O	9:82:65:VAL:HG23	2.20	0.41
13:4A:33:ALA:O	13:4A:37:THR:N	2.52	0.41
16:7A:73:LEU:HD23	16:7A:73:LEU:HA	1.81	0.41
17:8A:90:ILE:O	17:8A:93:GLN:N	2.51	0.41
22:2L:57:C:H4'	22:2L:58:G:O5'	2.19	0.41
22:3L:22:A:N3	22:3L:22:A:H2'	2.34	0.41
24:14:173:G:C2	24:14:174:C:C2	3.09	0.41
24:14:270(V):G:H2'	24:14:270(W):G:C8	2.55	0.41
24:14:363(C):G:H2'	24:14:363(D):G:H8	1.86	0.41
24:14:1041:C:H2'	24:14:1042:G:C8	2.56	0.41
24:14:1184:G:C6	24:14:1185:C:C4	3.09	0.41
24:14:1332:G:N2	24:14:1609:A:HO2'	2.16	0.41
24:14:1586:A:H3'	24:14:1587:A:H8	1.84	0.41
24:14:1680:U:N3	24:14:1764:G:OP2	2.37	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:14:2065:C:H2'	24:14:2066:C:H6	1.85	0.41
24:14:2170:A:H2'	24:14:2170:A:N3	2.36	0.41
24:14:2468:G:C6	24:14:2481:G:C2	3.09	0.41
25:1J:97:G:C5	25:1J:98:G:C8	3.09	0.41
26:79:10:LEU:HD23	26:79:219:GLY:HA2	2.02	0.41
27:19:41:GLY:C	27:19:43:ARG:H	2.23	0.41
28:29:1:MET:HA	28:29:83:ASP:O	2.20	0.41
30:49:53:LEU:HD23	30:49:53:LEU:HA	1.84	0.41
31:59:101:ARG:HG3	31:59:102:ALA:N	2.36	0.41
31:59:137:ASP:OD2	31:59:139:GLN:HB3	2.20	0.41
36:45:130:LYS:NZ	45:D5:81:ARG:HG2	2.36	0.41
44:C5:96:ILE:HA	44:C5:103:GLY:HA3	2.02	0.41
45:D5:44:PHE:CE1	45:D5:48:PHE:HB2	2.56	0.41
51:J5:16:ARG:NH1	51:J5:16:ARG:HG2	2.25	0.41
52:L5:34:ARG:HH12	52:L5:39:ARG:HD2	1.85	0.41
1:13:828:A:C2	2:1E:26:PRO:HG3	2.55	0.41
1:13:1240:U:H5"	1:13:1241:G:H8	1.85	0.41
1:13:1503:A:O2'	23:4K:13:A:C6	2.72	0.41
2:1E:54:THR:HG21	2:1E:201:ILE:HD11	2.01	0.41
10:1I:50:ILE:HA	10:1I:60:ARG:HG2	2.02	0.41
15:6I:54:ARG:O	15:6I:58:MET:HG3	2.20	0.41
20:BI:23:ARG:O	20:BI:27:LYS:HB3	2.20	0.41
24:1H:111:A:H4'	48:K8:69:ARG:HH22	1.85	0.41
24:1H:265:A:H1'	24:1H:266:G:O4'	2.21	0.41
24:1H:850:C:H5"	49:L8:18:ASP:HB2	2.03	0.41
24:1H:856:C:O2'	46:I8:27:GLU:HB2	2.19	0.41
24:1H:928:G:H2'	24:1H:929:G:O4'	2.20	0.41
24:1H:987:G:O2'	24:1H:1000:A:N3	2.42	0.41
24:1H:1011:G:O2'	24:1H:1012:U:H4'	2.20	0.41
24:1H:1026:U:H4'	24:1H:1027:A:OP1	2.21	0.41
24:1H:1138:G:H21	33:58:106:MET:CE	2.21	0.41
24:1H:1141:U:H4'	24:1H:1142(A):A:O4'	2.20	0.41
24:1H:1174:A:H3'	24:1H:1175:U:H5"	2.02	0.41
24:1H:1409:C:N4	24:1H:1593:G:H1	2.18	0.41
24:1H:1533:C:H3'	24:1H:1534:G:H5"	2.02	0.41
24:1H:2108:C:N3	24:1H:2181:G:N2	2.57	0.41
24:1H:2148:G:H2'	24:1H:2149:G:H8	1.85	0.41
24:1H:2232:U:P	47:J8:40:ARG:HH12	2.43	0.41
24:1H:2391:G:O6	24:1H:2425:A:H8	2.04	0.41
24:1H:2485:G:C5'	36:88:46:GLN:HE21	2.22	0.41
27:11:30:GLU:CD	27:11:31:LYS:N	2.74	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:88:12:GLN:HG2	36:88:73:PRO:HD2	2.02	0.41
45:H8:135:GLU:HG3	45:H8:136:PHE:CD2	2.55	0.41
46:I8:51:VAL:N	46:I8:62:LEU:HD12	2.35	0.41
53:Q8:28:GLY:O	53:Q8:44:LYS:HD3	2.20	0.41
54:1G:445:G:H2'	54:1G:446:G:O4'	2.20	0.41
54:1G:1161:C:H2'	54:1G:1162:C:C6	2.55	0.41
54:1G:1230:C:O5'	54:1G:1230:C:H6	2.03	0.41
54:1G:1311:G:N2	54:1G:1326:C:O2	2.51	0.41
2:12:20:GLU:O	2:12:39:ILE:HG23	2.21	0.41
22:2L:23:A:O2'	22:2L:24:G:OP1	2.36	0.41
24:14:547:A:C5	24:14:548:A:C6	3.08	0.41
24:14:638:G:C6	24:14:639:U:C4	3.08	0.41
24:14:957:A:H5'	36:45:76:LYS:HG3	2.03	0.41
24:14:1183:G:H8	24:14:1183:G:OP2	2.03	0.41
24:14:1331:A:O2'	24:14:1332:G:C8	2.73	0.41
24:14:1543:A:H2	24:14:1545:A:C5	2.38	0.41
24:14:1762[A]:A:H8	24:14:1762[A]:A:O5'	2.04	0.41
24:14:1946:U:H2'	24:14:1947:C:C6	2.56	0.41
24:14:2080:G:O2'	24:14:2081:C:H5'	2.20	0.41
24:14:2109:U:H3	24:14:2180:U:H3	1.68	0.41
24:14:2419:U:OP1	53:M5:34:TRP:CE3	2.63	0.41
24:14:2462:U:H2'	24:14:2463:C:C6	2.55	0.41
24:14:2637:U:H2'	24:14:2638:G:O4'	2.20	0.41
24:14:2661:G:H2'	24:14:2662:A:O4'	2.20	0.41
25:1J:14:U:H5'	25:1J:71:C:C1'	2.51	0.41
27:19:13:ARG:HA	27:19:13:ARG:HD2	1.75	0.41
27:19:96:HIS:CE1	27:19:102:LYS:HD3	2.55	0.41
29:39:187:VAL:HG13	35:35:1:MET:O	2.20	0.41
32:69:144:VAL:HG13	32:69:145:VAL:N	2.35	0.41
35:35:125:VAL:HG13	35:35:144:GLU:HB3	2.02	0.41
45:D5:95:PRO:HA	45:D5:129:SER:HA	2.02	0.41
48:G5:64:LEU:O	48:G5:68:ARG:HG2	2.21	0.41
49:H5:50:VAL:HB	49:H5:53:LEU:HD11	2.02	0.41
53:M5:57:ARG:HH11	53:M5:57:ARG:HA	1.85	0.41
1:13:425:G:O3'	4:3E:45:GLN:NE2	2.53	0.41
1:13:443:C:H42	1:13:491:G:H1	1.68	0.41
1:13:1192:C:OP2	3:2E:4:LYS:NZ	2.49	0.41
1:13:1236:A:H5"	1:13:1236:A:H8	1.84	0.41
1:13:1300:G:C5	1:13:1334:G:C6	3.08	0.41
1:13:1327:C:OP1	21:1F:21:TYR:HD1	2.03	0.41
2:1E:48:MET:HA	2:1E:51:LEU:HB2	2.02	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:2E:172:ARG:NH2	3:2E:174:PRO:HG3	2.34	0.41
5:4E:19:MET:HE2	5:4E:19:MET:HB3	1.70	0.41
6:5E:78:GLU:O	6:5E:81:ILE:HG13	2.20	0.41
9:8E:112:LYS:HG2	9:8E:117:HIS:O	2.21	0.41
12:3I:85:ILE:CG2	12:3I:98:TYR:HB3	2.51	0.41
12:3I:102:ARG:HA	12:3I:102:ARG:HD2	1.94	0.41
24:1H:511:U:O4	24:1H:512:G:C2	2.73	0.41
24:1H:831:G:N7	57:1H:4118:HOH:O	2.37	0.41
24:1H:1100:C:H2'	24:1H:1101:U:C6	2.56	0.41
24:1H:1728:G:N2	24:1H:1730:U:OP2	2.53	0.41
24:1H:2244:U:O2'	24:1H:2245:U:H5'	2.20	0.41
24:1H:2302:G:C4	24:1H:2303:G:C8	3.09	0.41
57:1H:4581:HOH:O	27:11:244:ARG:HG2	2.19	0.41
30:41:106:LEU:HD12	30:41:110:ALA:HB3	2.03	0.41
30:41:142:PRO:HB2	50:M8:31:ILE:HG21	2.02	0.41
34:68:88:ASN:ND2	34:68:92:GLU:HB2	2.36	0.41
37:98:34:ILE:HA	37:98:34:ILE:HD13	1.84	0.41
43:F8:25:LYS:HA	43:F8:81:VAL:O	2.21	0.41
46:I8:41:ARG:NE	46:I8:41:ARG:HA	2.31	0.41
46:I8:70:GLN:CD	46:I8:72:ARG:HD3	2.39	0.41
47:J8:60:PHE:HE2	47:J8:91:LYS:HE2	1.86	0.41
48:K8:38:GLN:O	48:K8:44:LEU:HB2	2.20	0.41
54:1G:198:G:H2'	54:1G:199:G:H8	1.85	0.41
54:1G:224:C:H2'	54:1G:225:C:C6	2.55	0.41
54:1G:1213:A:C5	54:1G:1215:G:C4	3.09	0.41
54:1G:1379:G:OP2	7:62:6:ARG:HD2	2.21	0.41
2:12:12:GLU:HG3	2:12:14:GLY:H	1.85	0.41
2:12:164:VAL:HG23	2:12:186:ALA:CB	2.50	0.41
5:42:80:ILE:CD1	5:42:91:LEU:HB2	2.51	0.41
6:52:25:ILE:O	6:52:28:ARG:N	2.53	0.41
8:72:38:ILE:HD12	8:72:118:VAL:HG12	2.01	0.41
13:4A:68:GLY:O	13:4A:72:ALA:N	2.42	0.41
13:4A:91:ARG:HH11	13:4A:94:ARG:NH2	2.19	0.41
19:AA:53:ASN:HB2	19:AA:77:THR:HA	2.02	0.41
24:14:453:C:OP1	57:14:3814:HOH:O	2.21	0.41
24:14:528:A:C2	24:14:2043:C:H4'	2.56	0.41
24:14:725:G:H8	24:14:725:G:O5'	2.03	0.41
24:14:909:A:O2'	24:14:910:A:H5"	2.20	0.41
24:14:925:C:H2'	24:14:926:A:C8	2.56	0.41
24:14:1423:G:C4	24:14:1424:G:C8	3.09	0.41
24:14:2165:G:N3	24:14:2165:G:H2'	2.36	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:14:2258:C:O2'	24:14:2427:C:OP2	2.36	0.41
25:1J:55:U:H1'	30:49:29:TRP:HE1	1.85	0.41
25:1J:66:A:C6	25:1J:108:C:C6	3.08	0.41
27:19:133:LEU:HD13	27:19:173:VAL:CG2	2.51	0.41
27:19:232:PRO:HB3	27:19:244:ARG:CZ	2.50	0.41
30:49:139:LEU:HA	30:49:144:ILE:HB	2.01	0.41
35:35:15:ARG:HA	35:35:15:ARG:HD3	1.70	0.41
42:A5:8:ARG:O	42:A5:9:TYR:HB2	2.20	0.41
1:13:197:A:H4'	1:13:198:G:O5'	2.21	0.41
1:13:527:G:O6	12:3I:49:ASN:ND2	2.53	0.41
1:13:649:G:C4	1:13:650:G:C8	3.09	0.41
1:13:660:G:C2	1:13:746:A:C2	3.09	0.41
1:13:688:G:C5	1:13:689:C:C5	3.09	0.41
1:13:737:A:O2'	1:13:738:C:H5'	2.20	0.41
1:13:892:A:C2	1:13:893:C:C2	3.09	0.41
1:13:1057:G:C4	1:13:1204:A:C2	3.09	0.41
1:13:1127:G:H8	1:13:1127:G:O5'	2.04	0.41
1:13:1349:A:OP1	9:8E:118:LYS:HB2	2.21	0.41
8:7E:7:ALA:HA	8:7E:85:ARG:HG3	2.03	0.41
15:6I:57:LEU:HD23	15:6I:57:LEU:HA	1.79	0.41
16:7I:38:TYR:O	16:7I:38:TYR:CD1	2.74	0.41
22:3K:16:C:N4	22:3K:68:A:C5	2.89	0.41
22:3K:77:C:H2'	22:3K:78:C:H6	1.86	0.41
24:1H:307:G:C8	57:1H:4290:HOH:O	2.70	0.41
24:1H:311:A:C6	24:1H:328:U:C4	3.09	0.41
24:1H:325:G:N2	24:1H:337:C:O2	2.52	0.41
24:1H:493:G:O2'	42:E8:6:ILE:O	2.33	0.41
24:1H:578:A:P	57:1H:4547:HOH:O	2.78	0.41
24:1H:1028:A:H2'	24:1H:1029:A:C8	2.56	0.41
24:1H:1205:U:H4'	24:1H:1206:G:OP2	2.20	0.41
24:1H:1263:U:O3'	51:N8:11:THR:OG1	2.36	0.41
24:1H:1678:G:H22	24:1H:1989:G:H22	1.60	0.41
24:1H:1690:A:H3'	24:1H:1691:C:H6	1.85	0.41
24:1H:2054:A:N3	51:N8:8:LYS:HD3	2.36	0.41
24:1H:2124:G:H5'	26:71:174:PRO:HD3	2.02	0.41
24:1H:2199:A:H5"	24:1H:2205:C:H5	1.86	0.41
26:71:23:ASP:CG	26:71:190:ARG:HH22	2.24	0.41
28:21:11:MET:HG2	28:21:24:THR:HA	2.03	0.41
29:31:149:ASP:OD1	29:31:149:ASP:N	2.34	0.41
30:41:46:ALA:HB3	30:41:87:PRO:O	2.21	0.41
32:61:81:VAL:HG21	32:61:88:ILE:HD13	2.02	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:58:112:LEU:HD12	33:58:112:LEU:HA	1.62	0.41
33:58:135:PRO:O	33:58:137:LYS:HD2	2.20	0.41
40:C8:28:ARG:HD3	40:C8:38:THR:OG1	2.21	0.41
46:I8:11:ARG:NH1	46:I8:11:ARG:HB2	2.35	0.41
47:J8:91:LYS:O	47:J8:94:LEU:N	2.49	0.41
54:1G:195:A:C6	54:1G:196:A:N1	2.89	0.41
54:1G:327:A:O2'	54:1G:329:A:H8	2.04	0.41
54:1G:373:A:N3	54:1G:374:A:C8	2.88	0.41
54:1G:1015:A:C6	54:1G:1016:A:C6	3.09	0.41
54:1G:1023:G:H3'	54:1G:1024:G:H5"	2.02	0.41
54:1G:1080:A:H4'	5:42:16:THR:OG1	2.20	0.41
54:1G:1132:C:H2'	54:1G:1133:G:C8	2.56	0.41
54:1G:1256:A:N7	54:1G:1277:C:H2'	2.36	0.41
2:12:5:ILE:HD11	2:12:55:PHE:CD2	2.55	0.41
2:12:178:ARG:HD2	2:12:178:ARG:HA	1.73	0.41
4:32:106:TYR:HE1	4:32:113:SER:HA	1.85	0.41
4:32:124:GLY:HA3	4:32:132:ARG:HD2	2.03	0.41
5:42:137:GLU:O	5:42:141:GLN:HB2	2.20	0.41
13:4A:66:LEU:O	13:4A:69:GLU:HG2	2.20	0.41
22:2L:34:U:O2'	22:2L:35:QUO:H3'	2.21	0.41
24:14:489:G:N7	42:A5:49:LYS:NZ	2.67	0.41
24:14:507:A:H5"	24:14:508:G:H3'	2.02	0.41
24:14:671:C:OP1	35:35:42:SER:O	2.39	0.41
24:14:1007:C:H5"	33:15:35:ARG:NH1	2.36	0.41
24:14:1027:A:C2	24:14:2488:A:H5'	2.56	0.41
24:14:1954:G:C2	24:14:2551:C:H5"	2.56	0.41
24:14:2861:G:C2	24:14:2862:G:C4	3.08	0.41
25:1J:51:G:N7	38:65:62:LYS:NZ	2.58	0.41
29:39:205:ARG:HH11	29:39:205:ARG:HD2	1.76	0.41
33:15:82:LEU:HD12	33:15:82:LEU:HA	1.78	0.41
34:25:89:ASN:OD1	34:25:89:ASN:N	2.54	0.41
38:65:26:LEU:O	38:65:88:ASP:HB3	2.21	0.41
39:75:80:SER:HA	39:75:81:PRO:HD3	1.75	0.41
41:95:44:LYS:C	41:95:46:VAL:N	2.73	0.41
44:C5:68:HIS:O	44:C5:71:LYS:HG3	2.20	0.41
46:E5:24:LYS:HD3	46:E5:24:LYS:HA	1.84	0.41
46:E5:72:ARG:HG3	46:E5:75:LEU:HB2	2.02	0.41
51:J5:46:CYS:SG	51:J5:48:GLU:HG2	2.60	0.41
1:13:153:C:N4	1:13:168:G:H1	2.18	0.41
1:13:255:G:H2'	1:13:256:U:C6	2.55	0.41
1:13:390:C:O3'	16:7I:28:ARG:NH2	2.49	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:13:536:C:H2'	1:13:537:G:H8	1.86	0.41
1:13:639:G:H2'	1:13:640:A:C8	2.53	0.41
1:13:806:C:H2'	1:13:807:A:C8	2.52	0.41
2:1E:145:LEU:HA	2:1E:145:LEU:HD13	1.91	0.41
2:1E:167:PRO:HG2	2:1E:192:SER:CB	2.51	0.41
4:3E:142:PRO:HA	4:3E:185:PHE:HD2	1.86	0.41
5:4E:74:GLY:HA3	5:4E:116:THR:HG23	2.02	0.41
5:4E:138:ALA:O	5:4E:142:LEU:HG	2.20	0.41
7:6E:57:GLU:HB2	7:6E:60:LYS:HG2	2.02	0.41
13:4I:55:ARG:O	13:4I:59:TYR:HB2	2.20	0.41
15:6I:63:ARG:NH2	15:6I:87:ILE:HG21	2.36	0.41
22:3K:33:C:N4	22:3K:34:U:C4	2.89	0.41
24:1H:31:C:O5'	24:1H:31:C:H6	2.03	0.41
24:1H:96:G:H4'	48:K8:48:HIS:NE2	2.35	0.41
24:1H:141(A):C:H2'	24:1H:142:G:O4'	2.20	0.41
24:1H:301:G:C4	24:1H:302:C:C5	3.09	0.41
24:1H:1264:G:H5'	51:N8:11:THR:OG1	2.20	0.41
24:1H:1462:C:H4'	24:1H:2703:C:O4'	2.20	0.41
24:1H:1793:C:H2'	24:1H:1794:U:H6	1.84	0.41
24:1H:2135:A:N6	24:1H:2156:G:H1'	2.36	0.41
24:1H:2305:A:H2'	24:1H:2306:C:O4'	2.21	0.41
28:21:4:ILE:HG22	28:21:96:PHE:HE2	1.85	0.41
28:21:116:VAL:H	28:21:157:ALA:HB2	1.85	0.41
30:41:71:THR:OG1	30:41:89:GLY:O	2.37	0.41
40:C8:6:THR:O	40:C8:9:VAL:HG23	2.20	0.41
40:C8:91:ASP:HB2	40:C8:94:ASN:OD1	2.20	0.41
43:F8:14:SER:O	43:F8:15:GLU:C	2.59	0.41
47:J8:24:ALA:HB3	47:J8:27:GLU:HG3	2.03	0.41
54:1G:256:U:H2'	54:1G:257:G:H8	1.86	0.41
54:1G:345:C:O2'	54:1G:346:G:O5'	2.38	0.41
54:1G:707:C:H2'	54:1G:708:C:H6	1.81	0.41
54:1G:940:C:H2'	54:1G:941:G:C8	2.56	0.41
2:12:84:GLU:HB3	2:12:219:VAL:HG11	2.03	0.41
4:32:3:ARG:HD2	4:32:3:ARG:HA	1.57	0.41
6:52:36:ARG:NH2	6:52:66:GLU:OE1	2.53	0.41
7:62:94:ARG:H	7:62:94:ARG:HG3	1.40	0.41
13:4A:76:ALA:O	13:4A:80:ARG:HG3	2.21	0.41
13:4A:95:GLY:O	13:4A:110:ARG:HG3	2.20	0.41
18:9A:37:VAL:HG11	18:9A:78:LEU:HB3	2.02	0.41
19:AA:70:LYS:HD2	19:AA:70:LYS:N	2.36	0.41
22:2L:70:C:O2'	22:2L:71:C:H2'	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:3L:44:C:H2'	22:3L:45:C:O4'	2.20	0.41
22:3L:64:PSU:N3	22:3L:67:A:OP2	2.29	0.41
24:14:353:G:H2'	24:14:354:G:C8	2.55	0.41
24:14:578:A:OP1	24:14:1255:U:O2'	2.25	0.41
24:14:696:G:H2'	24:14:697:C:H6	1.86	0.41
24:14:853:G:O2'	24:14:854:G:H5'	2.20	0.41
24:14:1568:G:OP1	27:19:63:ARG:NH1	2.41	0.41
24:14:1890:A:OP2	57:14:4126:HOH:O	2.22	0.41
24:14:2328:A:H2'	24:14:2329:G:C8	2.55	0.41
24:14:2329:G:H2'	24:14:2330:G:C8	2.56	0.41
24:14:2642:G:OP1	33:15:76:SER:OG	2.33	0.41
25:1J:89(A):A:H5'	25:1J:90:C:OP2	2.20	0.41
28:29:8:LYS:CB	28:29:192:ASN:HA	2.48	0.41
29:39:43:LYS:HB2	29:39:43:LYS:HE3	1.70	0.41
30:49:81:LYS:HG3	30:49:82:LEU:H	1.84	0.41
35:35:85:LEU:HB3	35:35:114:ILE:CD1	2.51	0.41
41:95:20:LEU:HD12	41:95:20:LEU:HA	1.72	0.41
43:B5:49:VAL:HB	43:B5:83:VAL:HG21	2.03	0.41
44:C5:52:SER:HA	44:C5:55:TYR:O	2.21	0.41
45:D5:8:TYR:HD2	45:D5:38:TYR:CE2	2.38	0.41
45:D5:65:GLN:OE1	45:D5:67:LEU:HD21	2.21	0.41
1:13:711:G:H2'	1:13:712:A:H8	1.86	0.41
1:13:818:G:O2'	1:13:819:A:H5'	2.20	0.41
1:13:875:C:C4	1:13:876:G:N7	2.89	0.41
1:13:928:G:C2	1:13:1390:U:O2	2.74	0.41
1:13:1235:U:H2'	1:13:1236:A:O4'	2.21	0.41
1:13:1262:C:H2'	1:13:1263:C:C6	2.56	0.41
4:3E:31:CYS:HB3	4:3E:33:MET:HG3	2.02	0.41
4:3E:65:ARG:HH11	4:3E:65:ARG:HG2	1.85	0.41
4:3E:108:LEU:HD21	4:3E:183:GLY:HA3	2.02	0.41
6:5E:96:PRO:HB3	18:9I:30:ASP:CG	2.41	0.41
7:6E:107:ALA:O	7:6E:110:GLN:HB2	2.21	0.41
8:7E:39:LEU:O	8:7E:44:PHE:N	2.52	0.41
9:8E:70:LYS:O	9:8E:74:ILE:HG13	2.21	0.41
9:8E:112:LYS:HA	9:8E:119:ALA:HB2	2.03	0.41
11:2I:29:ILE:HG13	11:2I:44:SER:HB3	2.03	0.41
13:4I:40:ASN:HA	13:4I:41:PRO:HD3	1.85	0.41
13:4I:90:LEU:HD13	19:AI:78:ARG:NH2	2.36	0.41
15:6I:27:VAL:HG12	15:6I:31:LEU:HD22	2.03	0.41
16:7I:8:ARG:HG3	16:7I:9:PHE:N	2.36	0.41
16:7I:52:ASP:OD1	16:7I:54:GLU:HB3	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:AI:32:LYS:HG2	19:AI:50:ALA:HB3	2.03	0.41
22:2K:61:G:C4	22:2K:62:G:C8	3.09	0.41
22:3K:18:G:H1	22:3K:65:C:H42	1.69	0.41
24:1H:289:A:C4	24:1H:353:G:N2	2.89	0.41
24:1H:458:G:O2'	52:P8:39:ARG:HD3	2.21	0.41
24:1H:932:G:H4'	24:1H:933:A:O5'	2.21	0.41
24:1H:973:A:O4'	24:1H:1188:U:C6	2.74	0.41
24:1H:998:C:P	40:C8:92:ARG:NH2	2.94	0.41
24:1H:1009:A:OP2	57:1H:4153:HOH:O	2.21	0.41
24:1H:1011:G:H4'	40:C8:75:ASN:HD22	1.86	0.41
24:1H:1335:U:H2'	24:1H:1336:A:O4'	2.20	0.41
24:1H:1386:C:H2'	24:1H:1387:C:C6	2.46	0.41
24:1H:1449(A):G:H1	24:1H:1462:C:H42	1.69	0.41
24:1H:1466:G:N2	24:1H:1547:C:N3	2.69	0.41
24:1H:1726:G:H2'	24:1H:1727:U:O4'	2.21	0.41
24:1H:1748:G:H2'	24:1H:1749:A:H8	1.85	0.41
24:1H:2280:G:C2	24:1H:2281:C:C6	3.09	0.41
24:1H:2516:G:C6	24:1H:2517:C:N4	2.89	0.41
24:1H:2579:C:H2'	24:1H:2580:U:O4'	2.21	0.41
24:1H:2712(A):A:H5"	37:98:13:HIS:CD2	2.55	0.41
24:1H:2881:C:H2'	24:1H:2882:A:C8	2.56	0.41
25:16:71:C:N3	25:16:72:G:C8	2.89	0.41
25:16:110:G:C5	25:16:111:U:C5	3.08	0.41
27:11:53:PHE:HB3	27:11:218:ARG:O	2.21	0.41
27:11:59:LYS:HD2	27:11:60:ARG:N	2.32	0.41
27:11:108:PRO:HG3	27:11:143:HIS:HE1	1.86	0.41
27:11:232:PRO:HB3	27:11:244:ARG:NH1	2.36	0.41
28:21:54:GLN:HB3	28:21:55:ASN:H	1.47	0.41
29:31:33:LEU:HD13	29:31:112:MET:HE2	2.03	0.41
29:31:54:ARG:HB3	29:31:81:PRO:HD3	2.03	0.41
36:88:52:VAL:O	36:88:56:ARG:HB2	2.20	0.41
36:88:86:GLY:HA3	36:88:87:LYS:CG	2.50	0.41
36:88:104:PHE:O	36:88:105:GLU:HB3	2.20	0.41
39:B8:78:LEU:HD12	39:B8:79:HIS:CE1	2.56	0.41
42:E8:42:ARG:HH11	42:E8:42:ARG:HD3	1.69	0.41
42:E8:86:LEU:HD12	42:E8:86:LEU:C	2.42	0.41
43:F8:80:ILE:O	43:F8:80:ILE:HG12	2.19	0.41
44:G8:50:ARG:HG2	44:G8:51:VAL:H	1.85	0.41
47:J8:13:ILE:HD11	47:J8:42:GLN:OE1	2.21	0.41
48:K8:36:ARG:HH11	48:K8:36:ARG:HG3	1.86	0.41
48:K8:53:LEU:O	48:K8:57:ILE:HG13	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:M8:15:ILE:HB	50:M8:32:TYR:CD1	2.56	0.41
51:N8:33:CYS:SG	51:N8:46:CYS:HB2	2.61	0.41
54:1G:4:U:H5"	4:32:87:GLY:H	1.86	0.41
54:1G:32:A:N3	54:1G:33:A:C8	2.89	0.41
54:1G:45:U:H2'	54:1G:46:G:C8	2.56	0.41
54:1G:216:G:H2'	54:1G:217:C:C6	2.54	0.41
54:1G:1013:G:O2'	54:1G:1014:A:N7	2.46	0.41
54:1G:1202:G:H2'	54:1G:1203:C:O4'	2.20	0.41
54:1G:1206:G:C6	54:1G:1207:G:C5	3.09	0.41
54:1G:1246:C:C4	54:1G:1247:U:C4	3.08	0.41
54:1G:1315:U:H2'	54:1G:1316:G:O4'	2.21	0.41
54:1G:1321:C:C3'	54:1G:1322:C:H5"	2.48	0.41
3:22:156:ARG:NE	3:22:160:ALA:O	2.54	0.41
4:32:153:ARG:NH1	4:32:181:MET:HB2	2.34	0.41
5:42:63:ARG:HA	5:42:66:MET:HE1	2.03	0.41
7:62:26:PHE:HB2	7:62:101:LEU:HD22	2.02	0.41
8:72:106:GLY:HA2	8:72:122:ARG:HH22	1.86	0.41
12:3A:17:LYS:HA	12:3A:17:LYS:HD3	1.93	0.41
15:6A:62:GLN:O	15:6A:65:ARG:N	2.54	0.41
22:3L:2:G:H2'	22:3L:3:U:C6	2.56	0.41
24:14:596:G:H2'	24:14:597:U:O4'	2.21	0.41
24:14:602:G:N2	24:14:655:A:C8	2.85	0.41
24:14:649:G:H2'	24:14:650:C:O4'	2.21	0.41
24:14:654(R):C:N4	24:14:654(S):G:O6	2.54	0.41
24:14:874:G:C2	24:14:904:C:N3	2.89	0.41
24:14:950:G:C6	24:14:951:C:C4	3.08	0.41
24:14:1006:C:C2	24:14:1138:G:N2	2.88	0.41
24:14:1187:G:OP2	57:14:3760:HOH:O	2.21	0.41
24:14:1275:A:C5	37:55:16:HIS:CD2	3.09	0.41
24:14:1439:A:N6	24:14:1552:G:O2'	2.53	0.41
24:14:1838:C:H4'	24:14:1839:G:C8	2.56	0.41
24:14:1849:G:H2'	24:14:1850:G:C8	2.56	0.41
24:14:1903:G:P	27:19:241:PRO:HB2	2.61	0.41
24:14:2103:C:H2'	24:14:2104:G:C8	2.55	0.41
24:14:2114:A:C8	24:14:2115:G:N7	2.89	0.41
24:14:2116:G:H2'	24:14:2117:A:O4'	2.21	0.41
24:14:2259:G:C2	24:14:2282:G:N1	2.89	0.41
24:14:2290:G:C2	24:14:2343:C:O2	2.74	0.41
24:14:2584:U:C6	24:14:2585:U:C5	3.08	0.41
24:14:2644:G:C6	24:14:2645:G:C6	3.09	0.41
25:1J:11:C:O5'	25:1J:12:C:H5	2.04	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:1J:50:G:P	38:65:62:LYS:HB2	2.60	0.41
25:1J:101:A:H8	25:1J:101:A:OP2	2.04	0.41
27:19:20:ASP:OD1	27:19:22:SER:OG	2.38	0.41
27:19:106:ILE:O	27:19:108:PRO:HD3	2.20	0.41
27:19:133:LEU:HD22	27:19:175:LEU:HD21	2.03	0.41
32:69:62:LYS:NZ	32:69:62:LYS:HB3	2.36	0.41
32:69:91:SER:HB3	32:69:121:LYS:HD2	2.03	0.41
32:69:103:ARG:NE	32:69:104:GLN:H	2.18	0.41
33:15:102:ALA:O	33:15:106:MET:HG3	2.20	0.41
36:45:29:PHE:HB3	36:45:65:PHE:CE2	2.55	0.41
42:A5:12:ILE:HG13	42:A5:42:ARG:NH1	2.36	0.41
45:D5:67:LEU:HA	45:D5:68:PRO:HD3	1.90	0.41
45:D5:99:TYR:HB3	45:D5:123:ASP:HB2	2.02	0.41
45:D5:115:GLY:HA2	45:D5:179:ASP:CB	2.50	0.41
51:J5:25:LEU:HD23	51:J5:25:LEU:HA	1.86	0.41
1:13:439:A:C5	1:13:440:A:H1'	2.55	0.41
1:13:592:G:C2	1:13:593:G:N7	2.89	0.41
1:13:662:G:H2'	1:13:663:A:C8	2.56	0.41
1:13:704:A:H8	1:13:704:A:OP2	2.04	0.41
1:13:942:G:C2	1:13:1342:C:C2	3.08	0.41
2:1E:61:LEU:HD12	2:1E:64:ARG:HD2	2.03	0.41
6:5E:87:ARG:HG3	6:5E:87:ARG:NH1	2.25	0.41
8:7E:11:THR:HG23	8:7E:14:ARG:NH1	2.36	0.41
8:7E:111:ILE:HD12	8:7E:135:CYS:SG	2.61	0.41
9:8E:13:ALA:HB1	9:8E:73:GLN:HG2	2.03	0.41
11:2I:25:TYR:HD1	11:2I:25:TYR:HA	1.61	0.41
15:6I:20:GLY:O	15:6I:22:THR:HG22	2.20	0.41
20:BI:35:THR:HA	20:BI:38:LYS:HE3	2.02	0.41
22:3K:78:C:H2'	22:3K:79:A:O4'	2.21	0.41
24:1H:90:U:H1'	24:1H:91:A:C8	2.56	0.41
24:1H:582:G:H2'	24:1H:583:G:C8	2.56	0.41
24:1H:620:G:H8	24:1H:622:G:O6	2.04	0.41
24:1H:851:U:O2'	49:L8:42:ALA:O	2.32	0.41
24:1H:1388:G:N2	24:1H:1400:G:C4	2.89	0.41
24:1H:1463:C:N3	24:1H:1464:C:C5	2.89	0.41
24:1H:2177:C:H5"	26:71:213:TYR:CD1	2.56	0.41
24:1H:2250:G:O2'	24:1H:2496:C:OP1	2.28	0.41
24:1H:2278:A:OP1	36:88:11:LYS:HD2	2.21	0.41
24:1H:2637:U:H5'	28:21:44:TYR:CE1	2.55	0.41
24:1H:2680:C:H5'	28:21:189:PRO:HA	2.02	0.41
57:1H:3651:HOH:O	28:21:135:HIS:CE1	2.73	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:16:94:C:H2'	25:16:95:U:C6	2.56	0.41
27:11:232:PRO:HB3	27:11:244:ARG:CZ	2.49	0.41
30:41:165:THR:OG1	30:41:168:GLU:HG3	2.21	0.41
31:51:23:ARG:HH12	31:51:25:LYS:HE3	1.85	0.41
37:98:62:ALA:O	37:98:66:VAL:HG23	2.21	0.41
39:B8:7:ILE:HG13	39:B8:10:VAL:CG2	2.50	0.41
45:H8:78:LYS:H	45:H8:78:LYS:HG2	1.54	0.41
47:J8:19:GLN:O	47:J8:35:THR:N	2.44	0.41
48:K8:36:ARG:HG3	48:K8:36:ARG:NH1	2.36	0.41
54:1G:135:C:C2	16:7A:1:MET:HB3	2.56	0.41
54:1G:160:A:O2'	54:1G:344:A:N6	2.54	0.41
54:1G:685:G:C2	54:1G:686:U:C4	3.09	0.41
54:1G:929:G:N2	54:1G:1388:C:O2	2.42	0.41
54:1G:1204:A:OP1	14:5A:3:ARG:NH1	2.51	0.41
10:1A:40:LEU:HG	10:1A:41:PRO:HD2	2.03	0.41
12:3A:53:ARG:HH11	12:3A:53:ARG:HG3	1.86	0.41
24:14:83:G:H22	24:14:102:G:C2'	2.34	0.41
24:14:740:U:H2'	24:14:741:G:C8	2.56	0.41
24:14:768:G:H5'	24:14:1622:G:H4'	2.03	0.41
24:14:1146:C:O2'	24:14:1147:C:H5'	2.21	0.41
24:14:2300:G:C2	24:14:2317:C:O2	2.74	0.41
24:14:2320:A:N1	24:14:2333:A:C8	2.89	0.41
24:14:2419:U:O4	53:M5:31:HIS:CG	2.74	0.41
24:14:2635:C:H5"	28:29:77:ILE:O	2.20	0.41
24:14:2638:G:OP2	28:29:82:ARG:NH2	2.54	0.41
25:1J:95:U:H2'	25:1J:96:G:C8	2.56	0.41
28:29:27:LEU:HA	28:29:181:LEU:HA	2.03	0.41
29:39:15:SER:HB3	29:39:16:GLY:H	1.68	0.41
30:49:19:LEU:HG	30:49:175:LEU:HD12	2.02	0.41
32:69:27:ARG:HD2	47:F5:71:TYR:CZ	2.56	0.41
39:75:50:ILE:HD11	39:75:102:ILE:HD11	2.01	0.41
44:C5:47:LYS:HA	44:C5:60:PHE:CD2	2.56	0.41
44:C5:97:ARG:NH1	44:C5:104:GLY:H	2.19	0.41
53:M5:57:ARG:HA	53:M5:57:ARG:HD3	1.74	0.41
1:13:238:G:P	17:8I:25:ARG:HH22	2.41	0.40
1:13:414:A:H2'	1:13:415:A:O4'	2.21	0.40
1:13:555:C:H2'	1:13:556:C:C6	2.56	0.40
1:13:1124:G:H2'	1:13:1145:C:C5	2.57	0.40
1:13:1292:U:P	7:6E:41:ARG:HH22	2.42	0.40
1:13:1365:G:C6	1:13:1366:C:C4	3.10	0.40
1:13:1382:C:H1'	7:6E:79:ARG:NE	2.37	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:6E:16:LEU:HD13	7:6E:16:LEU:HA	1.76	0.40
8:7E:68:ARG:HA	8:7E:76:PRO:HB3	2.03	0.40
11:2I:44:SER:OG	11:2I:47:VAL:HG23	2.21	0.40
17:8I:89:LEU:HD13	17:8I:89:LEU:HA	1.89	0.40
20:BI:63:ILE:HD12	20:BI:81:LYS:HG2	2.02	0.40
22:3K:20:C:O2'	22:3K:22:A:O5'	2.34	0.40
24:1H:302:C:H2'	24:1H:303:U:H6	1.85	0.40
24:1H:443:A:N7	29:31:45:ARG:HG2	2.36	0.40
24:1H:654(N):G:N1	24:1H:654(O):G:O6	2.55	0.40
24:1H:926:A:H2'	24:1H:926:A:N3	2.36	0.40
24:1H:1204:A:C2	24:1H:1241:A:N1	2.89	0.40
24:1H:1331:A:O2'	24:1H:1332:G:H8	2.04	0.40
24:1H:2652:C:H2'	24:1H:2653:U:O4'	2.21	0.40
24:1H:2844:G:C5	24:1H:2845:G:C8	3.09	0.40
25:16:11:C:H3'	25:16:12:C:H6	1.84	0.40
27:11:61:LEU:HD13	27:11:61:LEU:HA	1.91	0.40
29:31:182:ASN:ND2	29:31:185:ASP:HB2	2.36	0.40
34:68:71:ARG:HH11	39:B8:74:ARG:NH2	2.17	0.40
36:88:18:LYS:HB3	36:88:18:LYS:HE2	1.56	0.40
37:98:61:HIS:O	37:98:64:ARG:N	2.54	0.40
43:F8:78:LYS:O	43:F8:78:LYS:HG2	2.19	0.40
45:H8:15:PRO:O	45:H8:19:ARG:HB2	2.22	0.40
45:H8:48:PHE:HE1	45:H8:71:VAL:HG21	1.86	0.40
54:1G:35:G:H2'	54:1G:36:C:C6	2.56	0.40
54:1G:101:A:C2'	54:1G:102:G:H5'	2.51	0.40
54:1G:310:G:H4'	16:7A:31:LYS:HD2	2.04	0.40
54:1G:578:C:H3'	57:1G:1884:HOH:O	2.21	0.40
54:1G:1089:G:N2	54:1G:1096:C:O2	2.49	0.40
54:1G:1329:A:OP1	13:4A:28:ALA:HB3	2.20	0.40
2:12:12:GLU:HA	2:12:15:VAL:HG12	2.03	0.40
7:62:42:ILE:HG23	7:62:117:ALA:HA	2.03	0.40
8:72:21:LYS:HE2	8:72:21:LYS:HB2	1.80	0.40
10:1A:42:THR:HG22	10:1A:68:HIS:HA	2.03	0.40
10:1A:80:LYS:HD2	10:1A:80:LYS:HA	1.85	0.40
11:2A:83:ILE:HG12	11:2A:109:VAL:HG23	2.02	0.40
16:7A:40:ASP:O	16:7A:48:TRP:HB2	2.20	0.40
24:14:67:U:N3	24:14:74:A:H2	2.01	0.40
24:14:199:A:HO2'	24:14:200:U:H6	1.64	0.40
24:14:492:A:H2'	24:14:493:G:O4'	2.21	0.40
24:14:996:A:C2	24:14:997:G:C8	3.09	0.40
24:14:1190:G:O2'	24:14:1191:G:H5'	2.21	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:14:1321:A:H2'	24:14:1322:A:O4'	2.22	0.40
24:14:1332:G:H5'	24:14:1332:G:H8	1.83	0.40
24:14:1757:U:O2	24:14:1762[B]:A:N6	2.45	0.40
24:14:2365:G:H4'	46:E5:60:PHE:CZ	2.55	0.40
24:14:2772:C:H2'	24:14:2773:C:C6	2.57	0.40
24:14:2862:G:C6	24:14:2863:C:C4	3.09	0.40
25:1J:33:G:C2	25:1J:34:U:C2	3.08	0.40
26:79:13:LYS:HD2	26:79:32:LEU:HD23	2.02	0.40
27:19:204:ILE:HD12	27:19:204:ILE:O	2.21	0.40
28:29:47:VAL:HG22	28:29:49:LEU:HD12	2.03	0.40
28:29:111:ARG:HD2	28:29:160:TYR:CD2	2.56	0.40
29:39:31:HIS:CD2	29:39:31:HIS:O	2.74	0.40
29:39:66:PRO:O	29:39:68:LYS:N	2.54	0.40
30:49:36:LYS:HE2	30:49:36:LYS:HB3	1.89	0.40
35:35:87:ASP:O	35:35:90:ARG:HD3	2.20	0.40
38:65:37:ALA:HB2	38:65:101:LEU:HD21	2.03	0.40
38:65:109:GLY:C	38:65:111:GLU:H	2.12	0.40
40:85:94:ASN:OD1	40:85:95:LEU:HG	2.21	0.40
43:B5:5:TYR:CZ	48:G5:30:ARG:HB2	2.55	0.40
45:D5:111:VAL:HG11	45:D5:145:GLU:OE2	2.21	0.40
47:F5:83:GLU:H	47:F5:83:GLU:HG3	1.63	0.40
1:13:279:A:OP2	17:8I:95:TYR:OH	2.34	0.40
1:13:516:U:C4	1:13:517:G:C6	3.08	0.40
1:13:1226:C:H4'	19:AI:80:TYR:CZ	2.56	0.40
1:13:1298:C:N4	7:6E:114:ARG:HB3	2.36	0.40
1:13:1318:A:H5"	19:AI:10:PHE:CG	2.55	0.40
1:13:1328:C:H2'	1:13:1329:A:C8	2.57	0.40
1:13:1336:C:O2	1:13:1336:C:H2'	2.20	0.40
2:1E:51:LEU:HD22	2:1E:55:PHE:CE1	2.51	0.40
4:3E:188:LEU:HA	4:3E:188:LEU:HD22	1.85	0.40
6:5E:91:VAL:HG12	6:5E:92:LYS:O	2.21	0.40
12:3I:53:ARG:HH12	12:3I:92:ASP:HB2	1.86	0.40
16:7I:37:GLY:HA2	16:7I:50:LYS:HD3	2.03	0.40
17:8I:53:LEU:HD23	17:8I:82:MET:SD	2.61	0.40
24:1H:49:A:H5"	24:1H:51:G:O4'	2.22	0.40
24:1H:341:G:C5	57:1H:3736:HOH:O	2.73	0.40
24:1H:552:G:C6	24:1H:553:U:C4	3.09	0.40
24:1H:613:U:O2	24:1H:613:U:O4'	2.37	0.40
24:1H:942:G:OP2	35:78:39:LYS:HE2	2.21	0.40
24:1H:1027:A:C2	24:1H:2488:A:H5'	2.56	0.40
24:1H:1062:G:C2	24:1H:1063:G:N1	2.89	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:1H:1432:C:H2'	24:1H:1433:U:O4'	2.21	0.40
24:1H:1532:C:H2'	24:1H:1533:C:O4'	2.21	0.40
24:1H:1541:U:H2'	24:1H:1542:G:O4'	2.21	0.40
24:1H:1784:A:H5"	57:1H:3929:HOH:O	2.21	0.40
24:1H:1814:G:P	27:11:40:THR:HG21	2.60	0.40
24:1H:1878:G:H2'	24:1H:1879:C:H6	1.85	0.40
24:1H:1902:C:N3	24:1H:1903:G:H1'	2.37	0.40
24:1H:2038:G:H2'	24:1H:2039:C:O4'	2.22	0.40
24:1H:2210:G:H5'	24:1H:2211:G:C5	2.56	0.40
24:1H:2513:G:N2	28:21:143:ASN:OD1	2.54	0.40
25:16:21:G:N2	25:16:62:C:N3	2.60	0.40
27:11:33:LEU:O	27:11:64:ILE:HG23	2.21	0.40
28:21:45:THR:O	28:21:83:ASP:N	2.49	0.40
30:41:49:ASP:OD2	30:41:51:ARG:HB3	2.21	0.40
30:41:83:ARG:NH1	30:41:83:ARG:HB3	2.36	0.40
32:61:120:ILE:HD12	32:61:126:TYR:CZ	2.56	0.40
35:78:50:ARG:NH2	35:78:50:ARG:HG3	2.34	0.40
36:88:19:GLY:O	36:88:21:THR:OG1	2.24	0.40
37:98:74:LYS:O	37:98:76:VAL:N	2.52	0.40
43:F8:65:ARG:HG3	43:F8:67:GLY:H	1.85	0.40
48:K8:22:GLU:OE2	48:K8:68:ARG:NH2	2.49	0.40
48:K8:30:ARG:O	48:K8:34:GLU:HG3	2.20	0.40
54:1G:235:C:C5'	17:8A:70:ARG:HG2	2.51	0.40
54:1G:579:G:H8	54:1G:579:G:OP2	2.04	0.40
54:1G:579:G:C6	54:1G:580:U:C4	3.09	0.40
54:1G:605:U:H2'	54:1G:606:G:O4'	2.22	0.40
54:1G:706:A:C4'	11:2A:29:ILE:HD11	2.51	0.40
54:1G:1104:G:C4	54:1G:1105:A:C8	3.09	0.40
54:1G:1179:A:H2'	54:1G:1180:A:O4'	2.21	0.40
54:1G:1503:A:O2'	54:1G:1504:G:O5'	2.37	0.40
3:22:88:ARG:NH1	3:22:101:LEU:HD12	2.37	0.40
4:32:119:GLN:HG2	4:32:123:HIS:CD2	2.56	0.40
4:32:150:GLU:O	4:32:152:SER:N	2.54	0.40
6:52:28:ARG:HA	6:52:28:ARG:HD3	1.96	0.40
9:82:4:TYR:HE1	9:82:88:TYR:HD2	1.68	0.40
11:2A:38:ASN:HA	11:2A:39:PRO:HD3	1.90	0.40
11:2A:122:LYS:HE2	11:2A:122:LYS:HB3	1.88	0.40
20:BA:91:LEU:HD23	20:BA:91:LEU:HA	1.95	0.40
22:2L:34:U:O2'	22:2L:36:U:OP2	2.39	0.40
22:2L:74:C:H2'	22:2L:75:C:C6	2.53	0.40
24:14:711:G:C6	24:14:712:G:C5	3.08	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:14:768:G:C5	24:14:769:G:N7	2.89	0.40
24:14:820:A:H1'	24:14:943:U:H1'	2.02	0.40
24:14:835:A:C2'	24:14:836:G:H5'	2.51	0.40
24:14:854:G:C2	24:14:855:G:C5	3.10	0.40
24:14:925:C:H2'	24:14:926:A:H8	1.87	0.40
24:14:1087:G:N1	24:14:1103:A:H2	2.19	0.40
24:14:1140:C:H1'	24:14:1143:A:C8	2.56	0.40
24:14:1342:A:H2	24:14:1602:U:H3	1.68	0.40
24:14:1347:G:C5	24:14:1348:G:N7	2.89	0.40
24:14:1388:G:H2'	24:14:1389:G:C8	2.57	0.40
24:14:1686:C:H2'	24:14:1687:G:O4'	2.20	0.40
24:14:2111:C:C2	24:14:2118:U:H4'	2.56	0.40
24:14:2320:A:H1'	24:14:2321:G:C5	2.56	0.40
24:14:2594:C:N4	57:14:3627:HOH:O	2.55	0.40
24:14:2864:G:OP1	39:75:119:LYS:HD2	2.22	0.40
25:1J:78:A:H2'	25:1J:79:C:O4'	2.21	0.40
28:29:12:THR:HG21	39:75:9:LEU:HD12	2.04	0.40
34:25:47:ILE:HD12	34:25:47:ILE:HA	1.89	0.40
35:35:144:GLU:CD	35:35:144:GLU:N	2.75	0.40
36:45:78:PRO:HB2	36:45:81:VAL:HG11	2.03	0.40
37:55:98:LEU:HD22	51:J5:51:TYR:CD2	2.56	0.40
1:13:417:C:H2'	1:13:418:C:H6	1.85	0.40
1:13:522:C:H2'	1:13:523:A:O4'	2.21	0.40
1:13:524:G:H2'	1:13:525:C:C6	2.57	0.40
1:13:607:A:H2'	1:13:608:A:O4'	2.21	0.40
1:13:672:U:O2'	1:13:673:G:H5'	2.20	0.40
1:13:690:G:H22	11:2I:55:LYS:NZ	2.20	0.40
1:13:730:G:H2'	1:13:766:A:H5'	2.04	0.40
1:13:774:G:N3	1:13:774:G:H2'	2.35	0.40
1:13:961:U:H2'	1:13:962:C:O4'	2.22	0.40
2:1E:5:ILE:HG22	2:1E:224:GLN:OE1	2.21	0.40
2:1E:211:ILE:H	2:1E:211:ILE:HG13	1.73	0.40
3:2E:79:ARG:HH11	18:9A:87:ARG:NH1	2.18	0.40
3:2E:113:ALA:HB3	3:2E:114:PRO:HD3	2.02	0.40
4:3E:110:PHE:HE2	4:3E:148:VAL:HG23	1.85	0.40
6:5E:87:ARG:HG2	6:5E:88:VAL:N	2.35	0.40
10:1I:34:VAL:HG12	10:1I:74:ILE:HG22	2.02	0.40
12:3I:57:LYS:HD3	12:3I:65:GLU:OE2	2.21	0.40
12:3I:85:ILE:HD13	12:3I:85:ILE:HA	1.77	0.40
16:7I:4:ILE:CG2	16:7I:36:ILE:HD11	2.52	0.40
24:1H:197:A:N6	24:1H:2430:A:H2'	2.36	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:1H:249:C:H4'	24:1H:250:G:O5'	2.22	0.40
24:1H:483:A:O2'	44:G8:49:VAL:O	2.27	0.40
24:1H:764:A:N3	27:11:213:ARG:NH1	2.69	0.40
24:1H:821:A:H2'	24:1H:946:G:H5"	2.04	0.40
24:1H:1287:A:O4'	37:98:104:ARG:HD3	2.21	0.40
24:1H:1465:G:C6	24:1H:1466:G:C5	3.09	0.40
24:1H:1571:A:H2'	24:1H:1572:A:C8	2.56	0.40
24:1H:1676:A:N6	24:1H:1677:A:C6	2.89	0.40
24:1H:1681:G:N2	24:1H:1762[B]:A:H5'	2.35	0.40
24:1H:2027:G:C5	24:1H:2028:U:C5	3.10	0.40
24:1H:2169:A:N7	24:1H:2170:A:C6	2.90	0.40
24:1H:2271:G:C5'	46:I8:20:ARG:HD2	2.50	0.40
24:1H:2575:C:H6	24:1H:2575:C:O5'	2.04	0.40
24:1H:2751:G:N2	31:51:3:ARG:HG2	2.36	0.40
25:16:73:A:H2'	25:16:74:U:H5'	2.02	0.40
26:71:59:ARG:HD2	26:71:164:ARG:CZ	2.51	0.40
32:61:1:MET:N	32:61:21:VAL:O	2.47	0.40
33:58:110:GLY:O	33:58:114:ARG:HG3	2.21	0.40
35:78:46:LYS:HE2	35:78:46:LYS:HB3	1.93	0.40
40:C8:91:ASP:HB3	40:C8:93:LYS:HB3	2.04	0.40
44:G8:65:ALA:HA	44:G8:66:PRO:HD3	1.87	0.40
45:H8:24:LEU:HD12	45:H8:25:PRO:O	2.21	0.40
47:J8:5:CYS:HB3	47:J8:9:GLY:N	2.35	0.40
53:Q8:61:LEU:O	53:Q8:62:LEU:HD12	2.21	0.40
54:1G:29:G:O2'	54:1G:295:C:H4'	2.21	0.40
54:1G:57:G:C4	54:1G:58:C:C5	3.09	0.40
54:1G:80:G:O2'	54:1G:81:G:OP1	2.35	0.40
54:1G:269:C:H2'	54:1G:270:A:C8	2.56	0.40
54:1G:380:G:C2	54:1G:384:G:C6	3.08	0.40
54:1G:456:C:N4	54:1G:476:G:H1	2.19	0.40
54:1G:788:U:C5	54:1G:789:U:C4	3.09	0.40
54:1G:803:G:C6	54:1G:804:U:C4	3.10	0.40
54:1G:980:C:H3'	54:1G:981:U:H6	1.85	0.40
54:1G:992:U:O2'	54:1G:993:G:OP2	2.35	0.40
54:1G:1028:C:H2'	54:1G:1028(A):C:O4'	2.21	0.40
54:1G:1060:C:H2'	54:1G:1061:G:H8	1.86	0.40
54:1G:1152:A:H2'	54:1G:1153:C:O4'	2.21	0.40
54:1G:1202:G:N2	14:5A:46:GLU:OE1	2.53	0.40
54:1G:1306:A:C6	54:1G:1307:U:C2	3.09	0.40
54:1G:1493:A:H3'	54:1G:1494:G:H5'	2.04	0.40
2:12:75:LYS:O	2:12:78:GLN:HG2	2.21	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:32:13:ARG:HD2	4:32:38:TYR:O	2.22	0.40
4:32:117:ALA:O	4:32:121:VAL:HG23	2.21	0.40
5:42:101:ILE:HD11	5:42:119:LEU:CD2	2.32	0.40
7:62:101:LEU:O	7:62:105:VAL:HG23	2.22	0.40
8:72:39:LEU:HD12	8:72:44:PHE:CD2	2.56	0.40
24:14:7:G:H2'	24:14:8:A:O4'	2.21	0.40
24:14:71:A:H4'	24:14:72:U:H5"	2.03	0.40
24:14:764:A:N3	27:19:213:ARG:HD3	2.36	0.40
24:14:774:A:HO2'	24:14:775:G:H8	1.67	0.40
24:14:864:G:OP2	36:45:22:LYS:HD3	2.22	0.40
24:14:923:C:O2'	24:14:924:C:H5'	2.21	0.40
24:14:1396:U:O2	24:14:1396:U:H2'	2.21	0.40
24:14:1568:G:H21	27:19:58:HIS:CE1	2.38	0.40
24:14:1999:C:H4'	24:14:2723:C:O2	2.21	0.40
24:14:2177:C:H1'	26:79:44:HIS:HB3	2.03	0.40
24:14:2361:A:OP1	53:M5:27:THR:HG23	2.21	0.40
24:14:2581:G:H3'	57:14:4242:HOH:O	2.22	0.40
24:14:2766:G:H5"	24:14:2767:C:OP2	2.21	0.40
27:19:34:VAL:CG1	27:19:61:LEU:HG	2.50	0.40
27:19:44:ASN:CG	27:19:46:GLN:H	2.24	0.40
29:39:181:LEU:CD1	29:39:186:ILE:HD11	2.43	0.40
30:49:95:ARG:O	30:49:98:ARG:N	2.53	0.40
35:35:98:GLU:HA	35:35:101:VAL:HB	2.03	0.40
35:35:112:LEU:HD22	35:35:114:ILE:HG22	2.04	0.40
36:45:33:GLY:HA2	36:45:105:GLU:HA	2.03	0.40
47:F5:73:LEU:HD23	47:F5:73:LEU:HA	1.90	0.40
1:13:42:G:H1	1:13:400:C:H42	1.69	0.40
1:13:91:C:H2'	1:13:92:G:O4'	2.21	0.40
1:13:373:A:C2	1:13:374:A:C8	3.10	0.40
1:13:774:G:H5"	1:13:775:G:OP2	2.20	0.40
1:13:933:G:H5"	1:13:934:C:OP2	2.22	0.40
1:13:1075:C:OP1	2:1E:179:LYS:HE2	2.22	0.40
1:13:1190:G:OP1	3:2E:4:LYS:HA	2.21	0.40
2:1E:104:ASN:HD22	2:1E:104:ASN:HA	1.59	0.40
2:1E:118:LEU:HD13	2:1E:142:LEU:HA	2.03	0.40
9:8E:48:GLU:N	9:8E:49:PRO:HD2	2.36	0.40
11:2I:62:GLN:HB2	11:2I:93:GLN:OE1	2.21	0.40
15:6I:71:GLN:HG2	15:6I:71:GLN:O	2.22	0.40
22:2K:14:A:H61	22:2K:22:A:H2'	1.86	0.40
22:3K:63:5MU:C2'	22:3K:64:PSU:H5"	2.50	0.40
24:1H:80:G:C5	57:1H:3724:HOH:O	2.75	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:1H:580:C:H2'	24:1H:581:C:H6	1.86	0.40
24:1H:654(N):G:C2	24:1H:654(O):G:C6	3.10	0.40
24:1H:768:G:C6	24:1H:769:G:C5	3.09	0.40
24:1H:1044:G:O2'	24:1H:1111:A:N6	2.54	0.40
24:1H:1181:C:H2'	24:1H:1182:A:C8	2.57	0.40
24:1H:1206:G:C6	24:1H:1207:C:C4	3.09	0.40
24:1H:1221:C:C2	24:1H:1222:C:C5	3.10	0.40
24:1H:1340:U:H4'	24:1H:1341:U:OP2	2.22	0.40
24:1H:1530:G:C6	24:1H:1531:C:C4	3.09	0.40
24:1H:1792:G:H2'	24:1H:1793:C:C6	2.57	0.40
24:1H:1826:G:H4'	27:11:242:ARG:HE	1.86	0.40
24:1H:1858:G:C6	24:1H:1883:G:C6	3.09	0.40
24:1H:2262:U:O2'	24:1H:2263:C:H5'	2.21	0.40
24:1H:2275:C:O2	36:88:85:LYS:HG3	2.21	0.40
24:1H:2299:G:OP2	24:1H:2299:G:H8	2.05	0.40
28:21:125:GLY:HA3	28:21:134:ILE:HD13	2.03	0.40
29:31:119:ARG:CZ	29:31:119:ARG:HB3	2.50	0.40
30:41:101:ILE:HD13	30:41:101:ILE:HA	1.87	0.40
30:41:131:TYR:HB3	30:41:159:VAL:HG23	2.03	0.40
37:98:73:VAL:O	37:98:77:ARG:HG3	2.21	0.40
54:1G:4:U:H5"	4:32:87:GLY:N	2.36	0.40
54:1G:164:U:H2'	54:1G:165:C:C6	2.56	0.40
54:1G:409:G:H2'	54:1G:410:G:O4'	2.22	0.40
54:1G:728:A:C2	54:1G:729:A:C5	3.09	0.40
54:1G:799:G:C6	54:1G:800:G:C4	3.09	0.40
54:1G:1141:C:H2'	54:1G:1142:G:C8	2.56	0.40
2:12:46:LYS:O	2:12:50:GLU:HG2	2.22	0.40
5:42:30:ALA:O	5:42:45:PHE:HA	2.21	0.40
5:42:142:LEU:HD23	5:42:142:LEU:HA	1.88	0.40
13:4A:92:HIS:HE1	13:4A:98:VAL:HG21	1.84	0.40
14:5A:29:ARG:HB2	14:5A:30:ALA:H	1.68	0.40
20:BA:69:GLY:O	20:BA:73:HIS:CE1	2.73	0.40
22:2L:81:C:C2'	22:2L:82:A:H5'	2.52	0.40
24:14:68:G:C2	24:14:69:C:C2	3.09	0.40
24:14:171:G:H2'	24:14:172:C:C6	2.56	0.40
24:14:557:U:H5"	33:15:111:PRO:HB2	2.03	0.40
24:14:569:U:H5"	24:14:821:A:C2	2.57	0.40
24:14:748:G:O6	42:A5:90:ARG:NH1	2.54	0.40
24:14:768:G:C6	24:14:769:G:C5	3.10	0.40
24:14:838:C:H2'	24:14:839:U:H6	1.86	0.40
24:14:857:C:H4'	46:E5:23:VAL:HG21	2.02	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:14:911:A:C5	36:45:9:TYR:CD2	3.09	0.40
24:14:1062:G:C6	24:14:1075:C:N4	2.89	0.40
24:14:1439:A:H2'	24:14:1440:G:O4'	2.21	0.40
24:14:1589:C:H2'	24:14:1590:U:H6	1.86	0.40
24:14:1750:G:O2'	24:14:1751:C:H5'	2.21	0.40
24:14:2256:G:O6	57:14:3862:HOH:O	2.22	0.40
24:14:2306:C:O5'	24:14:2307:G:H5"	2.22	0.40
29:39:101:LEU:HG	29:39:102:PRO:HD2	2.03	0.40
32:69:120:ILE:HG21	32:69:126:TYR:CE2	2.57	0.40
34:25:4:PRO:O	34:25:5:GLN:CB	2.68	0.40
34:25:87:ILE:HG23	34:25:88:ASN:O	2.22	0.40
35:35:147:LEU:HB2	35:35:148:LEU:H	1.37	0.40
37:55:8:ARG:NE	37:55:43:GLU:OE2	2.44	0.40
38:65:18:ILE:HD11	38:65:25:ARG:HG3	2.03	0.40
41:95:100:ARG:H	41:95:100:ARG:HG2	1.77	0.40
42:A5:59:VAL:HG12	42:A5:60:ASN:N	2.35	0.40
44:C5:90:LEU:HA	44:C5:91:GLU:HA	1.82	0.40
51:J5:20:ARG:HG2	51:J5:23:HIS:CD2	2.56	0.40
52:L5:14:LYS:HG2	52:L5:14:LYS:H	1.68	0.40
1:13:111:G:H8	1:13:111:G:O5'	2.05	0.40
1:13:370:C:C2	1:13:392:G:N2	2.90	0.40
1:13:427:U:H3'	1:13:428:G:H2'	2.02	0.40
1:13:484:G:O2'	1:13:485:G:OP2	2.29	0.40
1:13:792:A:H1'	1:13:794:A:N7	2.37	0.40
1:13:1287:A:C6	1:13:1288:A:C6	3.09	0.40
1:13:1442:G:H1	1:13:1461:G:H21	1.70	0.40
2:1E:237:ALA:C	2:1E:239:VAL:N	2.74	0.40
7:6E:57:GLU:HB2	7:6E:60:LYS:HE2	2.03	0.40
10:1I:79:ARG:HD3	10:1I:79:ARG:HA	1.90	0.40
12:3I:83:VAL:HG22	12:3I:84:LEU:H	1.87	0.40
24:1H:142:G:C1'	43:F8:37:THR:HG21	2.45	0.40
24:1H:234:C:H2'	24:1H:235:U:C6	2.56	0.40
24:1H:266:G:C6	24:1H:267:C:C5	3.09	0.40
24:1H:527:C:OP2	24:1H:2779:U:C5	2.75	0.40
24:1H:577:G:C6	24:1H:578:A:C6	3.10	0.40
24:1H:748:G:O6	42:E8:90:ARG:NH1	2.55	0.40
24:1H:804:A:H5"	57:1H:3775:HOH:O	2.20	0.40
24:1H:862:G:H2'	24:1H:863:A:O4'	2.22	0.40
24:1H:1265:A:H3'	51:N8:19:ARG:NH1	2.36	0.40
24:1H:1386:C:C2	24:1H:1387:C:C5	3.09	0.40
24:1H:1973:G:H2'	24:1H:1974:C:H6	1.86	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:1H:2323:G:C6	24:1H:2324:C:C4	3.10	0.40
24:1H:2537:U:H2'	24:1H:2538:C:C6	2.57	0.40
24:1H:2600:A:N6	57:1H:3629:HOH:O	2.16	0.40
28:21:14:ILE:HD13	28:21:14:ILE:HA	1.72	0.40
29:31:39:TRP:O	29:31:43:LYS:HG2	2.21	0.40
29:31:64:ILE:HD13	29:31:64:ILE:HA	1.79	0.40
30:41:109:VAL:HG13	50:M8:33:VAL:HG22	2.04	0.40
43:F8:11:PRO:HG2	43:F8:13:LEU:HD21	2.04	0.40
44:G8:35:TYR:CE2	44:G8:69:ALA:HB3	2.56	0.40
45:H8:120:ILE:HD13	45:H8:121:HIS:N	2.36	0.40
48:K8:9:GLN:O	48:K8:13:ALA:HB2	2.22	0.40
48:K8:47:ASN:C	48:K8:49:LYS:N	2.73	0.40
51:N8:40:LYS:HG3	51:N8:47:PRO:HD2	2.04	0.40
54:1G:15:G:H1'	5:42:19:MET:CE	2.51	0.40
54:1G:28:G:C6	54:1G:29:G:C5	3.10	0.40
54:1G:87:A:C6	54:1G:88:C:C4	3.09	0.40
54:1G:309:G:H1'	54:1G:608:A:C2	2.56	0.40
54:1G:376:G:H5"	16:7A:5:ARG:HD3	2.03	0.40
54:1G:408:A:H2'	54:1G:409:G:O4'	2.20	0.40
54:1G:1216:G:H5"	14:5A:5:ALA:HB2	2.02	0.40
54:1G:1230:C:H2'	54:1G:1231:G:C8	2.57	0.40
54:1G:1461:G:O5'	54:1G:1461:G:H8	2.04	0.40
3:22:23:TYR:HA	10:1A:11:PHE:CE2	2.56	0.40
3:22:81:GLY:CA	3:22:85:ARG:HH21	2.27	0.40
6:52:25:ILE:H	6:52:25:ILE:HG12	1.64	0.40
19:AA:78:ARG:O	19:AA:79:THR:OG1	2.39	0.40
20:BA:20:LEU:HD23	20:BA:20:LEU:HA	1.70	0.40
22:2L:36:U:H2'	22:2L:37:A:H8	1.86	0.40
24:14:60:G:C8	24:14:63:U:C5	3.10	0.40
24:14:61:G:H5'	48:G5:50:ILE:HD12	2.03	0.40
24:14:162:U:H4'	24:14:171:G:C4	2.57	0.40
24:14:217:G:H2'	24:14:218:A:O4'	2.22	0.40
24:14:350:U:H2'	24:14:351:G:O4'	2.22	0.40
24:14:580:C:H2'	24:14:581:C:C6	2.56	0.40
24:14:768:G:C4	24:14:769:G:C8	3.10	0.40
24:14:1099:G:C6	24:14:1100:C:C4	3.10	0.40
24:14:1110:G:H8	24:14:1110:G:O5'	2.05	0.40
24:14:1313:U:H2'	24:14:1610:A:N1	2.37	0.40
24:14:1448:G:O2'	24:14:1528:A:N6	2.54	0.40
24:14:2212:A:H4'	24:14:2213:U:C5	2.41	0.40
24:14:2262:U:H5	46:E5:16:SER:HG	1.69	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:14:2375:G:N7	57:14:3914:HOH:O	2.37	0.40
24:14:2391:G:O6	24:14:2425:A:H8	2.04	0.40
24:14:2553:G:H5"	24:14:2554:U:OP2	2.21	0.40
24:14:2688:U:H5	24:14:2720:U:OP2	2.05	0.40
25:1J:17:C:H2'	25:1J:18:G:O4'	2.21	0.40
30:49:145:THR:O	30:49:146:TYR:HB3	2.22	0.40
32:69:97:ILE:HG23	32:69:140:LEU:HD23	2.03	0.40
36:45:78:PRO:O	36:45:79:LEU:HB3	2.20	0.40
37:55:18:LEU:HD23	37:55:18:LEU:HA	1.80	0.40
37:55:54:LEU:HD21	37:55:65:LEU:HD23	2.02	0.40
44:C5:27:VAL:HA	44:C5:39:VAL:CG1	2.52	0.40
45:D5:111:VAL:O	45:D5:114:GLY:N	2.49	0.40
45:D5:144:LEU:HB2	45:D5:174:VAL:CG1	2.49	0.40

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

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:5E:15:ASP:OD1	4:32:27:TYR:OH[4_555]	2.13	0.07
24:1H:277:C:O2'	48:G5:49:LYS:NZ[2_564]	2.14	0.06

5.3 Torsion angles (i)

5.3.1 Protein backbone (i)

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

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

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles
2	12	235/256 (92%)	201 (86%)	32 (14%)	2 (1%)	17 56
2	1E	235/256 (92%)	198 (84%)	32 (14%)	5 (2%)	7 37
3	22	204/239 (85%)	180 (88%)	24 (12%)	0	100 100
3	2E	203/239 (85%)	183 (90%)	20 (10%)	0	100 100
4	32	206/209 (99%)	180 (87%)	25 (12%)	1 (0%)	29 67

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles
4	3E	206/209 (99%)	191 (93%)	13 (6%)	2 (1%)	15 54
5	42	149/162 (92%)	144 (97%)	5 (3%)	0	100 100
5	4E	149/162 (92%)	139 (93%)	9 (6%)	1 (1%)	22 61
6	52	99/101 (98%)	93 (94%)	6 (6%)	0	100 100
6	5E	99/101 (98%)	94 (95%)	5 (5%)	0	100 100
7	62	153/156 (98%)	145 (95%)	8 (5%)	0	100 100
7	6E	153/156 (98%)	145 (95%)	8 (5%)	0	100 100
8	72	136/138 (99%)	129 (95%)	5 (4%)	2 (2%)	10 44
8	7E	136/138 (99%)	123 (90%)	13 (10%)	0	100 100
9	82	124/128 (97%)	113 (91%)	11 (9%)	0	100 100
9	8E	125/128 (98%)	113 (90%)	12 (10%)	0	100 100
10	1A	97/105 (92%)	87 (90%)	10 (10%)	0	100 100
10	1I	97/105 (92%)	83 (86%)	14 (14%)	0	100 100
11	2A	117/129 (91%)	107 (92%)	10 (8%)	0	100 100
11	2I	114/129 (88%)	104 (91%)	9 (8%)	1 (1%)	17 56
12	3A	123/132 (93%)	110 (89%)	11 (9%)	2 (2%)	9 43
12	3I	123/132 (93%)	114 (93%)	9 (7%)	0	100 100
13	4A	115/126 (91%)	100 (87%)	11 (10%)	4 (4%)	3 24
13	4I	114/126 (90%)	100 (88%)	14 (12%)	0	100 100
14	5A	58/61 (95%)	50 (86%)	8 (14%)	0	100 100
14	5I	58/61 (95%)	50 (86%)	8 (14%)	0	100 100
15	6A	86/89 (97%)	82 (95%)	4 (5%)	0	100 100
15	6I	86/89 (97%)	77 (90%)	9 (10%)	0	100 100
16	7A	82/88 (93%)	77 (94%)	5 (6%)	0	100 100
16	7I	82/88 (93%)	79 (96%)	3 (4%)	0	100 100
17	8A	98/105 (93%)	93 (95%)	5 (5%)	0	100 100
17	8I	98/105 (93%)	92 (94%)	6 (6%)	0	100 100
18	9A	70/88 (80%)	66 (94%)	4 (6%)	0	100 100
18	9I	70/88 (80%)	66 (94%)	3 (4%)	1 (1%)	11 46
19	AA	80/93 (86%)	59 (74%)	18 (22%)	3 (4%)	3 22
19	AI	81/93 (87%)	66 (82%)	14 (17%)	1 (1%)	13 49

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
20	BA	97/106 (92%)	83 (86%)	14 (14%)	0	100	100
20	BI	97/106 (92%)	87 (90%)	10 (10%)	0	100	100
21	1B	23/27 (85%)	20 (87%)	3 (13%)	0	100	100
21	1F	23/27 (85%)	21 (91%)	2 (9%)	0	100	100
26	71	131/229 (57%)	130 (99%)	1 (1%)	0	100	100
26	79	131/229 (57%)	129 (98%)	2 (2%)	0	100	100
27	11	270/276 (98%)	246 (91%)	19 (7%)	5 (2%)	8	39
27	19	271/276 (98%)	252 (93%)	16 (6%)	3 (1%)	14	51
28	21	203/206 (98%)	174 (86%)	28 (14%)	1 (0%)	29	67
28	29	203/206 (98%)	158 (78%)	38 (19%)	7 (3%)	3	24
29	31	200/210 (95%)	187 (94%)	13 (6%)	0	100	100
29	39	206/210 (98%)	176 (85%)	25 (12%)	5 (2%)	6	34
30	41	179/182 (98%)	154 (86%)	24 (13%)	1 (1%)	25	64
30	49	179/182 (98%)	148 (83%)	30 (17%)	1 (1%)	25	64
31	51	172/180 (96%)	145 (84%)	24 (14%)	3 (2%)	9	42
31	59	169/180 (94%)	133 (79%)	34 (20%)	2 (1%)	13	49
32	61	144/148 (97%)	123 (85%)	18 (12%)	3 (2%)	7	37
32	69	144/148 (97%)	120 (83%)	22 (15%)	2 (1%)	11	46
33	15	136/140 (97%)	126 (93%)	9 (7%)	1 (1%)	22	61
33	58	136/140 (97%)	115 (85%)	15 (11%)	6 (4%)	2	19
34	25	120/122 (98%)	111 (92%)	9 (8%)	0	100	100
34	68	120/122 (98%)	113 (94%)	7 (6%)	0	100	100
35	35	148/150 (99%)	119 (80%)	24 (16%)	5 (3%)	3	24
35	78	148/150 (99%)	114 (77%)	30 (20%)	4 (3%)	5	30
36	45	139/141 (99%)	113 (81%)	23 (16%)	3 (2%)	6	35
36	88	139/141 (99%)	113 (81%)	22 (16%)	4 (3%)	4	28
37	55	115/118 (98%)	102 (89%)	12 (10%)	1 (1%)	17	56
37	98	116/118 (98%)	106 (91%)	10 (9%)	0	100	100
38	65	109/112 (97%)	95 (87%)	12 (11%)	2 (2%)	8	41
38	A8	109/112 (97%)	91 (84%)	17 (16%)	1 (1%)	17	56
39	75	135/146 (92%)	113 (84%)	19 (14%)	3 (2%)	6	35

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
39	B8	135/146 (92%)	115 (85%)	20 (15%)	0	100	100
40	85	115/118 (98%)	105 (91%)	10 (9%)	0	100	100
40	C8	115/118 (98%)	111 (96%)	4 (4%)	0	100	100
41	95	99/101 (98%)	84 (85%)	12 (12%)	3 (3%)	4	28
41	D8	99/101 (98%)	87 (88%)	12 (12%)	0	100	100
42	A5	111/113 (98%)	102 (92%)	9 (8%)	0	100	100
42	E8	111/113 (98%)	105 (95%)	6 (5%)	0	100	100
43	B5	91/96 (95%)	86 (94%)	4 (4%)	1 (1%)	14	51
43	F8	92/96 (96%)	85 (92%)	6 (6%)	1 (1%)	14	51
44	C5	102/110 (93%)	70 (69%)	29 (28%)	3 (3%)	4	28
44	G8	102/110 (93%)	80 (78%)	19 (19%)	3 (3%)	4	28
45	D5	177/206 (86%)	141 (80%)	31 (18%)	5 (3%)	5	29
45	H8	173/206 (84%)	141 (82%)	25 (14%)	7 (4%)	3	21
46	E5	75/85 (88%)	69 (92%)	5 (7%)	1 (1%)	12	47
46	I8	81/85 (95%)	72 (89%)	8 (10%)	1 (1%)	13	49
47	F5	95/98 (97%)	85 (90%)	9 (10%)	1 (1%)	14	51
47	J8	95/98 (97%)	86 (90%)	7 (7%)	2 (2%)	7	37
48	G5	67/72 (93%)	57 (85%)	10 (15%)	0	100	100
48	K8	64/72 (89%)	61 (95%)	1 (2%)	2 (3%)	4	26
49	H5	57/60 (95%)	52 (91%)	4 (7%)	1 (2%)	8	41
49	L8	57/60 (95%)	54 (95%)	3 (5%)	0	100	100
50	I5	61/71 (86%)	35 (57%)	22 (36%)	4 (7%)	1	9
50	M8	64/71 (90%)	44 (69%)	19 (30%)	1 (2%)	9	43
51	J5	57/60 (95%)	48 (84%)	7 (12%)	2 (4%)	3	24
51	N8	57/60 (95%)	50 (88%)	6 (10%)	1 (2%)	8	41
52	L5	47/49 (96%)	45 (96%)	2 (4%)	0	100	100
52	P8	45/49 (92%)	41 (91%)	2 (4%)	2 (4%)	2	19
53	M5	61/65 (94%)	54 (88%)	4 (7%)	3 (5%)	2	17
53	Q8	60/65 (92%)	49 (82%)	7 (12%)	4 (7%)	1	9
All	All	11538/12404 (93%)	10164 (88%)	1238 (11%)	136 (1%)	13	49

All (136) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
18	9I	22	VAL
27	11	122	ASP
33	58	22	THR
33	58	95	PRO
33	58	96	GLU
36	88	87	LYS
44	G8	81	LYS
48	K8	43	GLN
52	P8	45	ALA
52	P8	46	VAL
53	Q8	35	GLN
28	29	51	PHE
28	29	81	ILE
35	35	49	ARG
38	65	110	LEU
44	C5	40	GLU
45	D5	53	ILE
50	I5	5	ILE
27	11	123	ALA
31	51	8	PRO
36	88	66	ILE
45	H8	53	ILE
53	Q8	31	HIS
12	3A	27	LEU
19	AA	9	VAL
29	39	84	VAL
32	69	144	VAL
41	95	84	LYS
44	C5	29	GLU
53	M5	31	HIS
53	M5	62	LEU
2	1E	237	ALA
27	11	26	LYS
33	58	128	HIS
35	78	117	GLU
44	G8	5	MET
45	H8	6	LYS
45	H8	151	HIS
45	H8	165	VAL
48	K8	47	ASN
28	29	9	VAL
36	45	7	MET
44	C5	78	ALA

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Mol	Chain	Res	Type
45	D5	161	VAL
49	H5	13	ILE
53	M5	63	PRO
2	1E	95	GLN
2	1E	238	LEU
4	3E	154	ASN
4	3E	155	LEU
31	51	83	TYR
33	58	9	VAL
35	78	19	VAL
36	88	90	VAL
38	A8	4	LEU
44	G8	84	ARG
45	H8	141	VAL
45	H8	171	ILE
46	I8	7	LEU
50	M8	34	GLU
53	Q8	30	ARG
53	Q8	32	LEU
2	12	20	GLU
19	AA	29	ARG
28	29	82	ARG
29	39	25	PRO
32	69	83	ALA
35	35	48	PRO
36	45	51	ARG
37	55	6	SER
41	95	45	THR
45	D5	60	GLU
2	1E	194	PRO
31	51	167	GLU
43	F8	68	ARG
45	H8	60	GLU
12	3A	26	ALA
27	19	240	ALA
27	19	272	ALA
29	39	28	ILE
29	39	85	GLY
33	15	128	HIS
35	35	46	LYS
35	35	56	SER
38	65	105	ALA

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Mol	Chain	Res	Type
39	75	7	ILE
39	75	8	LYS
45	D5	8	TYR
46	E5	63	VAL
50	I5	31	ILE
2	1E	155	LEU
36	88	6	ARG
4	32	189	PRO
13	4A	5	ALA
29	39	22	ALA
35	35	7	ARG
32	61	133	HIS
27	19	3	VAL
28	29	62	PRO
36	45	90	VAL
47	F5	30	VAL
50	I5	22	ILE
11	2I	82	VAL
27	11	240	ALA
30	41	5	VAL
35	78	95	VAL
39	75	10	VAL
50	I5	33	VAL
51	J5	5	PRO
19	AI	9	VAL
27	11	3	VAL
28	21	72	VAL
32	61	145	VAL
33	58	11	PRO
35	78	7	ARG
51	N8	6	VAL
2	12	39	ILE
13	4A	84	ILE
28	29	25	VAL
28	29	52	LEU
30	49	5	VAL
43	B5	51	VAL
45	D5	141	VAL
5	4E	115	VAL
47	J8	86	SER
8	72	100	ILE
8	72	103	VAL

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Mol	Chain	Res	Type
13	4A	117	VAL
19	AA	67	VAL
41	95	99	ILE
32	61	118	LYS
13	4A	4	ILE
31	59	17	VAL
31	59	136	ILE
51	J5	57	VAL
47	J8	87	PRO

5.3.2 Protein sidechains (i)

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

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

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles
2	12	205/220 (93%)	170 (83%)	35 (17%)	2 10
2	1E	205/220 (93%)	168 (82%)	37 (18%)	1 9
3	22	160/188 (85%)	131 (82%)	29 (18%)	1 8
3	2E	159/188 (85%)	136 (86%)	23 (14%)	3 15
4	32	180/181 (99%)	152 (84%)	28 (16%)	2 12
4	3E	180/181 (99%)	155 (86%)	25 (14%)	3 16
5	42	116/123 (94%)	96 (83%)	20 (17%)	2 10
5	4E	116/123 (94%)	92 (79%)	24 (21%)	1 6
6	52	90/90 (100%)	81 (90%)	9 (10%)	7 30
6	5E	90/90 (100%)	79 (88%)	11 (12%)	5 22
7	62	126/127 (99%)	110 (87%)	16 (13%)	4 20
7	6E	126/127 (99%)	111 (88%)	15 (12%)	5 22
8	72	119/119 (100%)	103 (87%)	16 (13%)	4 18
8	7E	119/119 (100%)	108 (91%)	11 (9%)	9 33
9	82	97/99 (98%)	81 (84%)	16 (16%)	2 10
9	8E	98/99 (99%)	85 (87%)	13 (13%)	4 18
10	1A	89/92 (97%)	79 (89%)	10 (11%)	6 25

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles
10	1I	89/92 (97%)	78 (88%)	11 (12%)	4 21
11	2A	90/99 (91%)	79 (88%)	11 (12%)	5 22
11	2I	88/99 (89%)	79 (90%)	9 (10%)	7 29
12	3A	104/109 (95%)	90 (86%)	14 (14%)	4 18
12	3I	104/109 (95%)	93 (89%)	11 (11%)	6 27
13	4A	94/101 (93%)	79 (84%)	15 (16%)	2 11
13	4I	94/101 (93%)	85 (90%)	9 (10%)	8 32
14	5A	49/50 (98%)	43 (88%)	6 (12%)	5 22
14	5I	49/50 (98%)	41 (84%)	8 (16%)	2 11
15	6A	79/80 (99%)	72 (91%)	7 (9%)	9 35
15	6I	79/80 (99%)	72 (91%)	7 (9%)	9 35
16	7A	72/74 (97%)	61 (85%)	11 (15%)	2 13
16	7I	72/74 (97%)	58 (81%)	14 (19%)	1 7
17	8A	95/97 (98%)	84 (88%)	11 (12%)	5 24
17	8I	95/97 (98%)	82 (86%)	13 (14%)	3 17
18	9A	63/77 (82%)	56 (89%)	7 (11%)	6 25
18	9I	63/77 (82%)	56 (89%)	7 (11%)	6 25
19	AA	67/80 (84%)	61 (91%)	6 (9%)	9 34
19	AI	72/80 (90%)	63 (88%)	9 (12%)	4 21
20	BA	76/82 (93%)	67 (88%)	9 (12%)	5 23
20	BI	76/82 (93%)	66 (87%)	10 (13%)	4 19
21	1B	20/22 (91%)	19 (95%)	1 (5%)	24 60
21	1F	20/22 (91%)	19 (95%)	1 (5%)	24 60
26	71	111/181 (61%)	106 (96%)	5 (4%)	27 63
26	79	111/181 (61%)	109 (98%)	2 (2%)	59 82
27	11	214/218 (98%)	174 (81%)	40 (19%)	1 8
27	19	214/218 (98%)	176 (82%)	38 (18%)	2 9
28	21	165/166 (99%)	140 (85%)	25 (15%)	3 13
28	29	165/166 (99%)	141 (86%)	24 (14%)	3 15
29	31	161/166 (97%)	133 (83%)	28 (17%)	2 10
29	39	165/166 (99%)	132 (80%)	33 (20%)	1 6

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles
30	41	155/156 (99%)	132 (85%)	23 (15%)	3 14
30	49	155/156 (99%)	135 (87%)	20 (13%)	4 19
31	51	145/148 (98%)	117 (81%)	28 (19%)	1 8
31	59	142/148 (96%)	118 (83%)	24 (17%)	2 10
32	61	122/124 (98%)	105 (86%)	17 (14%)	3 16
32	69	122/124 (98%)	91 (75%)	31 (25%)	0 2
33	15	117/119 (98%)	96 (82%)	21 (18%)	2 9
33	58	117/119 (98%)	94 (80%)	23 (20%)	1 7
34	25	100/100 (100%)	79 (79%)	21 (21%)	1 6
34	68	100/100 (100%)	87 (87%)	13 (13%)	4 19
35	35	116/116 (100%)	85 (73%)	31 (27%)	0 2
35	78	116/116 (100%)	80 (69%)	36 (31%)	0 0
36	45	111/111 (100%)	96 (86%)	15 (14%)	4 18
36	88	111/111 (100%)	93 (84%)	18 (16%)	2 11
37	55	100/101 (99%)	80 (80%)	20 (20%)	1 6
37	98	101/101 (100%)	85 (84%)	16 (16%)	2 12
38	65	87/88 (99%)	68 (78%)	19 (22%)	1 5
38	A8	87/88 (99%)	65 (75%)	22 (25%)	0 2
39	75	117/127 (92%)	93 (80%)	24 (20%)	1 6
39	B8	120/127 (94%)	92 (77%)	28 (23%)	1 3
40	85	93/94 (99%)	78 (84%)	15 (16%)	2 11
40	C8	93/94 (99%)	80 (86%)	13 (14%)	3 16
41	95	82/82 (100%)	63 (77%)	19 (23%)	1 3
41	D8	82/82 (100%)	58 (71%)	24 (29%)	0 1
42	A5	92/92 (100%)	78 (85%)	14 (15%)	3 13
42	E8	92/92 (100%)	71 (77%)	21 (23%)	1 4
43	B5	74/78 (95%)	63 (85%)	11 (15%)	3 14
43	F8	75/78 (96%)	61 (81%)	14 (19%)	1 8
44	C5	85/91 (93%)	62 (73%)	23 (27%)	0 1
44	G8	85/91 (93%)	65 (76%)	20 (24%)	1 3
45	D5	158/179 (88%)	133 (84%)	25 (16%)	2 12

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles
45	H8	154/179 (86%)	118 (77%)	36 (23%)	1 3
46	E5	62/67 (92%)	50 (81%)	12 (19%)	1 7
46	I8	61/67 (91%)	50 (82%)	11 (18%)	1 9
47	F5	82/83 (99%)	66 (80%)	16 (20%)	1 7
47	J8	82/83 (99%)	65 (79%)	17 (21%)	1 6
48	G5	64/67 (96%)	53 (83%)	11 (17%)	2 10
48	K8	62/67 (92%)	46 (74%)	16 (26%)	0 2
49	H5	51/52 (98%)	39 (76%)	12 (24%)	1 3
49	L8	51/52 (98%)	35 (69%)	16 (31%)	0 0
50	I5	57/63 (90%)	42 (74%)	15 (26%)	0 2
50	M8	59/63 (94%)	49 (83%)	10 (17%)	2 10
51	J5	51/52 (98%)	41 (80%)	10 (20%)	1 7
51	N8	51/52 (98%)	38 (74%)	13 (26%)	0 2
52	L5	42/42 (100%)	34 (81%)	8 (19%)	1 8
52	P8	40/42 (95%)	34 (85%)	6 (15%)	3 14
53	M5	53/55 (96%)	41 (77%)	12 (23%)	1 4
53	Q8	52/55 (94%)	39 (75%)	13 (25%)	0 2
All	All	9717/10256 (95%)	8094 (83%)	1623 (17%)	2 10

All (1623) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
2	1E	4	GLU
2	1E	8	LYS
2	1E	9	GLU
2	1E	12	GLU
2	1E	16	HIS
2	1E	17	PHE
2	1E	21	ARG
2	1E	41	ILE
2	1E	42	ILE
2	1E	60	ASP
2	1E	63	MET
2	1E	75	LYS
2	1E	97	TRP
2	1E	104	ASN

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Mol	Chain	Res	Type
2	1E	108	ILE
2	1E	111	ARG
2	1E	128	GLU
2	1E	139	LYS
2	1E	145	LEU
2	1E	153	ARG
2	1E	155	LEU
2	1E	163	PHE
2	1E	168	THR
2	1E	170	GLU
2	1E	172	ILE
2	1E	185	ILE
2	1E	187	LEU
2	1E	191	ASP
2	1E	195	ASP
2	1E	208	ILE
2	1E	210	SER
2	1E	214	ILE
2	1E	215	LEU
2	1E	216	SER
2	1E	220	ASP
2	1E	226	ARG
2	1E	230	VAL
3	2E	3	ASN
3	2E	8	ILE
3	2E	30	ARG
3	2E	34	LEU
3	2E	42	LEU
3	2E	46	GLU
3	2E	52	LEU
3	2E	62	ASP
3	2E	76	VAL
3	2E	95	THR
3	2E	102	ASN
3	2E	131	ARG
3	2E	136	GLN
3	2E	143	GLU
3	2E	154	SER
3	2E	164	ARG
3	2E	165	THR
3	2E	175	LEU
3	2E	184	TYR

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Mol	Chain	Res	Type
3	2E	193	TYR
3	2E	196	LEU
3	2E	202	ILE
3	2E	206	GLU
4	3E	3	ARG
4	3E	9	CYS
4	3E	10	ARG
4	3E	30	LYS
4	3E	33	MET
4	3E	35	ARG
4	3E	58	LEU
4	3E	66	ARG
4	3E	78	LEU
4	3E	83	SER
4	3E	89	THR
4	3E	92	VAL
4	3E	96	LEU
4	3E	122	ARG
4	3E	127	THR
4	3E	135	LEU
4	3E	137	SER
4	3E	150	GLU
4	3E	156	GLU
4	3E	158	ILE
4	3E	159	ARG
4	3E	165	MET
4	3E	166	LYS
4	3E	188	LEU
4	3E	193	ASP
5	4E	5	ASP
5	4E	10	MET
5	4E	11	ILE
5	4E	12	LEU
5	4E	13	ILE
5	4E	14	ARG
5	4E	19	MET
5	4E	41	VAL
5	4E	50	GLU
5	4E	51	VAL
5	4E	53	LEU
5	4E	55	VAL
5	4E	64	ARG

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Mol	Chain	Res	Type
5	4E	66	MET
5	4E	68	GLU
5	4E	81	GLU
5	4E	87	SER
5	4E	91	LEU
5	4E	121	LYS
5	4E	131	ILE
5	4E	133	TYR
5	4E	144	THR
5	4E	147	ASP
5	4E	153	LYS
6	5E	23	LYS
6	5E	25	ILE
6	5E	39	LYS
6	5E	45	LEU
6	5E	65	VAL
6	5E	75	LEU
6	5E	80	ARG
6	5E	81	ILE
6	5E	86	ARG
6	5E	87	ARG
6	5E	92	LYS
7	6E	12	LEU
7	6E	27	ILE
7	6E	54	THR
7	6E	66	VAL
7	6E	75	VAL
7	6E	90	GLU
7	6E	91	VAL
7	6E	92	SER
7	6E	95	ARG
7	6E	104	LEU
7	6E	109	ASN
7	6E	113	GLU
7	6E	122	HIS
7	6E	155	ARG
7	6E	156	TRP
8	7E	3	THR
8	7E	18	ARG
8	7E	26	VAL
8	7E	60	ARG
8	7E	68	ARG

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Mol	Chain	Res	Type
8	7E	82	HIS
8	7E	85	ARG
8	7E	95	VAL
8	7E	98	LYS
8	7E	112	LEU
8	7E	127	LEU
9	8E	9	ARG
9	8E	47	LEU
9	8E	58	HIS
9	8E	64	THR
9	8E	75	ASP
9	8E	85	LEU
9	8E	92	TYR
9	8E	95	LYS
9	8E	108	VAL
9	8E	112	LYS
9	8E	114	TYR
9	8E	118	LYS
9	8E	126	SER
10	1I	5	ARG
10	1I	6	ILE
10	1I	17	ASP
10	1I	19	SER
10	1I	34	VAL
10	1I	38	ILE
10	1I	56	HIS
10	1I	59	SER
10	1I	62	HIS
10	1I	70	ARG
10	1I	96	ILE
11	2I	14	VAL
11	2I	25	TYR
11	2I	36	ASP
11	2I	91	ARG
11	2I	99	GLN
11	2I	103	LEU
11	2I	109	VAL
11	2I	114	VAL
11	2I	124	LYS
12	3I	24	VAL
12	3I	33	ARG
12	3I	47	LYS

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Mol	Chain	Res	Type
12	3I	52	LEU
12	3I	55	VAL
12	3I	60	LEU
12	3I	62	SER
12	3I	66	VAL
12	3I	78	GLN
12	3I	114	LYS
12	3I	118	SER
13	4I	19	LEU
13	4I	45	VAL
13	4I	50	GLU
13	4I	63	THR
13	4I	64	TRP
13	4I	70	LEU
13	4I	88	ARG
13	4I	102	ARG
13	4I	108	ARG
14	5I	3	ARG
14	5I	9	LYS
14	5I	12	ARG
14	5I	18	VAL
14	5I	22	THR
14	5I	33	VAL
14	5I	44	LEU
14	5I	58	LYS
15	6I	22	THR
15	6I	26	GLU
15	6I	31	LEU
15	6I	38	ARG
15	6I	41	GLU
15	6I	47	LYS
15	6I	87	ILE
16	7I	1	MET
16	7I	2	VAL
16	7I	6	LEU
16	7I	8	ARG
16	7I	11	SER
16	7I	20	VAL
16	7I	21	VAL
16	7I	25	ARG
16	7I	28	ARG
16	7I	40	ASP

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Mol	Chain	Res	Type
16	7I	45	THR
16	7I	55	ARG
16	7I	69	THR
16	7I	71	ARG
17	8I	7	THR
17	8I	14	LYS
17	8I	15	MET
17	8I	23	VAL
17	8I	38	ARG
17	8I	48	GLU
17	8I	52	LYS
17	8I	53	LEU
17	8I	60	ILE
17	8I	68	ARG
17	8I	77	VAL
17	8I	89	LEU
17	8I	97	SER
18	9I	32	ARG
18	9I	39	VAL
18	9I	54	ARG
18	9I	55	ARG
18	9I	82	THR
18	9I	83	GLU
18	9I	87	ARG
19	AI	15	LEU
19	AI	29	ARG
19	AI	31	ILE
19	AI	51	VAL
19	AI	52	TYR
19	AI	58	VAL
19	AI	60	VAL
19	AI	64	GLU
19	AI	67	VAL
20	BI	9	ASN
20	BI	16	HIS
20	BI	26	ASN
20	BI	34	LYS
20	BI	38	LYS
20	BI	54	LYS
20	BI	62	LEU
20	BI	70	SER
20	BI	73	HIS

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Mol	Chain	Res	Type
20	BI	75	ASN
21	1F	8	THR
26	71	10	LEU
26	71	34	THR
26	71	172	HIS
26	71	207	THR
26	71	209	LEU
27	11	3	VAL
27	11	4	LYS
27	11	17	THR
27	11	23	GLU
27	11	25	THR
27	11	28	GLU
27	11	30	GLU
27	11	31	LYS
27	11	38	LYS
27	11	46	GLN
27	11	61	LEU
27	11	64	ILE
27	11	65	ILE
27	11	68	LYS
27	11	73	VAL
27	11	88	ARG
27	11	94	LEU
27	11	95	LEU
27	11	98	VAL
27	11	99	ASP
27	11	105	ILE
27	11	106	ILE
27	11	118	VAL
27	11	126	GLN
27	11	140	THR
27	11	155	LEU
27	11	165	ILE
27	11	171	ASP
27	11	173	VAL
27	11	192	THR
27	11	205	VAL
27	11	212	SER
27	11	217	ARG
27	11	221	VAL
27	11	228	PRO

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Mol	Chain	Res	Type
27	11	229	VAL
27	11	242	ARG
27	11	257	LEU
27	11	262	ARG
27	11	271	ILE
28	21	13	ARG
28	21	23	VAL
28	21	26	ILE
28	21	27	LEU
28	21	34	VAL
28	21	37	ARG
28	21	61	ARG
28	21	64	LYS
28	21	66	HIS
28	21	67	PHE
28	21	75	VAL
28	21	80	GLU
28	21	82	ARG
28	21	93	VAL
28	21	111	ARG
28	21	117	MET
28	21	119	ARG
28	21	144	ARG
28	21	146	THR
28	21	154	LYS
28	21	175	VAL
28	21	178	GLU
28	21	196	VAL
28	21	197	ILE
28	21	202	LYS
29	31	7	TYR
29	31	8	GLN
29	31	9	ILE
29	31	13	SER
29	31	24	LEU
29	31	28	ILE
29	31	33	LEU
29	31	41	LEU
29	31	57	VAL
29	31	64	ILE
29	31	68	LYS
29	31	70	THR

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Mol	Chain	Res	Type
29	31	74	ARG
29	31	77	ASP
29	31	82	ILE
29	31	89	VAL
29	31	106	ARG
29	31	117	ARG
29	31	127	GLU
29	31	136	THR
29	31	158	THR
29	31	170	LEU
29	31	174	VAL
29	31	175	THR
29	31	181	LEU
29	31	183	VAL
29	31	189	THR
29	31	201	VAL
30	41	33	ARG
30	41	45	GLU
30	41	47	LYS
30	41	49	ASP
30	41	52	ILE
30	41	67	LYS
30	41	70	VAL
30	41	78	SER
30	41	81	LYS
30	41	82	LEU
30	41	88	ILE
30	41	90	LEU
30	41	94	LEU
30	41	96	ARG
30	41	116	ASP
30	41	118	ARG
30	41	121	ASN
30	41	128	ARG
30	41	130	ASN
30	41	140	ILE
30	41	153	ARG
30	41	155	MET
30	41	162	THR
31	51	2	SER
31	51	4	ILE
31	51	7	LEU

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Mol	Chain	Res	Type
31	51	11	VAL
31	51	13	LYS
31	51	24	VAL
31	51	26	VAL
31	51	40	GLU
31	51	43	VAL
31	51	45	VAL
31	51	47	GLU
31	51	49	VAL
31	51	50	VAL
31	51	53	GLU
31	51	68	THR
31	51	77	LYS
31	51	80	SER
31	51	81	GLU
31	51	87	LEU
31	51	95	ARG
31	51	104	GLU
31	51	129	THR
31	51	131	VAL
31	51	132	ARG
31	51	139	GLN
31	51	151	ILE
31	51	153	LYS
31	51	170	ARG
32	61	3	VAL
32	61	25	TYR
32	61	37	VAL
32	61	40	THR
32	61	41	GLU
32	61	64	GLU
32	61	67	ARG
32	61	70	GLU
32	61	81	VAL
32	61	86	THR
32	61	92	VAL
32	61	116	LEU
32	61	121	LYS
32	61	122	GLU
32	61	131	LYS
32	61	135	GLU
32	61	142	VAL

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Mol	Chain	Res	Type
33	58	1	MET
33	58	10	GLU
33	58	12	ARG
33	58	15	LEU
33	58	32	THR
33	58	34	LEU
33	58	35	ARG
33	58	37	LYS
33	58	38	HIS
33	58	43	THR
33	58	48	MET
33	58	58	ASP
33	58	60	ILE
33	58	87	LEU
33	58	90	MET
33	58	99	LEU
33	58	118	LYS
33	58	120	LEU
33	58	128	HIS
33	58	130	HIS
33	58	131	GLN
33	58	134	ARG
33	58	137	LYS
34	68	5	GLN
34	68	22	ILE
34	68	24	VAL
34	68	32	TYR
34	68	35	VAL
34	68	38	VAL
34	68	42	SER
34	68	53	LYS
34	68	66	LYS
34	68	108	GLU
34	68	115	VAL
34	68	116	SER
34	68	119	PRO
35	78	1	MET
35	78	4	SER
35	78	6	LEU
35	78	10	PRO
35	78	18	ARG
35	78	19	VAL

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Mol	Chain	Res	Type
35	78	21	ARG
35	78	27	HIS
35	78	30	THR
35	78	36	LYS
35	78	41	ARG
35	78	45	LEU
35	78	46	LYS
35	78	56	SER
35	78	57	THR
35	78	59	LEU
35	78	62	LEU
35	78	75	ILE
35	78	81	GLN
35	78	85	LEU
35	78	88	LEU
35	78	96	THR
35	78	99	LEU
35	78	100	LEU
35	78	101	VAL
35	78	105	LEU
35	78	106	LEU
35	78	107	LYS
35	78	112	LEU
35	78	114	ILE
35	78	115	LEU
35	78	126	VAL
35	78	132	LYS
35	78	138	LEU
35	78	144	GLU
35	78	147	LEU
36	88	5	ARG
36	88	6	ARG
36	88	7	MET
36	88	10	ARG
36	88	16	ARG
36	88	25	ASP
36	88	26	TYR
36	88	45	GLN
36	88	78	PRO
36	88	79	LEU
36	88	82	ARG
36	88	85	LYS

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Mol	Chain	Res	Type
36	88	89	ASN
36	88	103	MET
36	88	110	THR
36	88	112	GLU
36	88	130	LYS
36	88	139	GLU
37	98	18	LEU
37	98	28	LEU
37	98	29	LEU
37	98	36	THR
37	98	44	LEU
37	98	45	ARG
37	98	59	ASP
37	98	65	LEU
37	98	67	LEU
37	98	73	VAL
37	98	74	LYS
37	98	75	LEU
37	98	78	LYS
37	98	79	LEU
37	98	97	VAL
37	98	105	ARG
38	A8	8	GLU
38	A8	14	VAL
38	A8	15	ARG
38	A8	20	ARG
38	A8	24	LEU
38	A8	27	SER
38	A8	30	ARG
38	A8	35	ILE
38	A8	36	TYR
38	A8	43	GLU
38	A8	46	VAL
38	A8	49	VAL
38	A8	52	SER
38	A8	53	SER
38	A8	57	LYS
38	A8	58	LEU
38	A8	69	VAL
38	A8	83	LYS
38	A8	89	ARG
38	A8	98	VAL

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Mol	Chain	Res	Type
38	A8	107	GLU
38	A8	111	GLU
39	B8	1	MET
39	B8	6	LEU
39	B8	7	ILE
39	B8	12	SER
39	B8	15	VAL
39	B8	21	GLU
39	B8	26	ASP
39	B8	27	THR
39	B8	38	ASN
39	B8	49	VAL
39	B8	50	ILE
39	B8	58	ASN
39	B8	62	THR
39	B8	64	ARG
39	B8	65	LYS
39	B8	74	ARG
39	B8	85	LYS
39	B8	86	ILE
39	B8	87	ASP
39	B8	88	ILE
39	B8	96	ARG
39	B8	98	LYS
39	B8	100	TYR
39	B8	105	LEU
39	B8	106	SER
39	B8	118	ARG
39	B8	125	ARG
39	B8	136	GLN
40	C8	5	LYS
40	C8	27	LEU
40	C8	52	ARG
40	C8	56	ASP
40	C8	70	ARG
40	C8	74	LEU
40	C8	75	ASN
40	C8	90	VAL
40	C8	92	ARG
40	C8	95	LEU
40	C8	98	LEU
40	C8	111	GLU

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Mol	Chain	Res	Type
40	C8	112	ARG
41	D8	5	VAL
41	D8	7	THR
41	D8	18	LEU
41	D8	22	VAL
41	D8	28	GLU
41	D8	35	LEU
41	D8	37	VAL
41	D8	39	LEU
41	D8	40	LEU
41	D8	45	THR
41	D8	47	VAL
41	D8	49	THR
41	D8	50	PRO
41	D8	57	VAL
41	D8	58	VAL
41	D8	70	ILE
41	D8	72	VAL
41	D8	73	SER
41	D8	76	LYS
41	D8	82	ARG
41	D8	88	ARG
41	D8	91	TYR
41	D8	95	LEU
41	D8	98	GLU
42	E8	1	MET
42	E8	11	ARG
42	E8	17	VAL
42	E8	20	VAL
42	E8	39	THR
42	E8	51	LEU
42	E8	67	ASP
42	E8	69	LEU
42	E8	70	TYR
42	E8	76	VAL
42	E8	78	GLU
42	E8	86	LEU
42	E8	88	ARG
42	E8	92	ARG
42	E8	95	ILE
42	E8	96	ILE
42	E8	97	LYS

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Mol	Chain	Res	Type
42	E8	100	THR
42	E8	104	THR
42	E8	106	ILE
42	E8	107	LEU
43	F8	3	THR
43	F8	23	GLU
43	F8	27	THR
43	F8	30	VAL
43	F8	35	THR
43	F8	53	LYS
43	F8	54	VAL
43	F8	65	ARG
43	F8	68	ARG
43	F8	78	LYS
43	F8	80	ILE
43	F8	83	VAL
43	F8	92	LEU
43	F8	95	LEU
44	G8	4	LYS
44	G8	5	MET
44	G8	6	HIS
44	G8	24	VAL
44	G8	31	LEU
44	G8	33	LYS
44	G8	38	ILE
44	G8	42	VAL
44	G8	44	ILE
44	G8	51	VAL
44	G8	54	LYS
44	G8	57	GLN
44	G8	64	GLU
44	G8	67	LEU
44	G8	70	SER
44	G8	84	ARG
44	G8	85	VAL
44	G8	86	ARG
44	G8	99	CYS
44	G8	106	LEU
45	H8	4	ARG
45	H8	6	LYS
45	H8	16	SER
45	H8	19	ARG

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Mol	Chain	Res	Type
45	H8	24	LEU
45	H8	33	LEU
45	H8	35	ARG
45	H8	46	LYS
45	H8	47	VAL
45	H8	56	VAL
45	H8	59	LEU
45	H8	61	LEU
45	H8	71	VAL
45	H8	72	ARG
45	H8	74	VAL
45	H8	76	LEU
45	H8	77	ASP
45	H8	78	LYS
45	H8	81	ARG
45	H8	91	LEU
45	H8	97	GLU
45	H8	105	VAL
45	H8	107	THR
45	H8	111	VAL
45	H8	116	VAL
45	H8	120	ILE
45	H8	121	HIS
45	H8	132	ASN
45	H8	140	ASP
45	H8	142	SER
45	H8	154	ASP
45	H8	158	PRO
45	H8	163	LEU
45	H8	165	VAL
45	H8	168	GLU
45	H8	169	GLU
46	I8	10	THR
46	I8	11	ARG
46	I8	14	ARG
46	I8	20	ARG
46	I8	36	ILE
46	I8	41	ARG
46	I8	55	ARG
46	I8	57	PHE
46	I8	64	ASP
46	I8	66	VAL

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Mol	Chain	Res	Type
46	I8	80	HIS
47	J8	30	VAL
47	J8	40	ARG
47	J8	41	ARG
47	J8	53	VAL
47	J8	58	ILE
47	J8	76	ARG
47	J8	78	LYS
47	J8	80	LEU
47	J8	81	LYS
47	J8	82	LEU
47	J8	83	GLU
47	J8	85	LEU
47	J8	86	SER
47	J8	90	ILE
47	J8	91	LYS
47	J8	93	GLU
47	J8	94	LEU
48	K8	4	SER
48	K8	5	GLU
48	K8	14	ARG
48	K8	16	LEU
48	K8	17	SER
48	K8	24	LEU
48	K8	30	ARG
48	K8	32	LEU
48	K8	35	LEU
48	K8	44	LEU
48	K8	45	SER
48	K8	47	ASN
48	K8	48	HIS
48	K8	50	ILE
48	K8	53	LEU
48	K8	64	LEU
49	L8	8	LEU
49	L8	10	LYS
49	L8	11	SER
49	L8	17	LYS
49	L8	23	LEU
49	L8	26	LEU
49	L8	30	ARG
49	L8	33	GLN

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Mol	Chain	Res	Type
49	L8	36	VAL
49	L8	37	LEU
49	L8	38	GLU
49	L8	40	THR
49	L8	53	LEU
49	L8	56	VAL
49	L8	58	VAL
49	L8	59	VAL
50	M8	10	VAL
50	M8	32	TYR
50	M8	43	TYR
50	M8	48	ARG
50	M8	51	ASP
50	M8	53	GLU
50	M8	55	ARG
50	M8	57	GLU
50	M8	60	GLN
50	M8	61	ARG
51	N8	5	PRO
51	N8	6	VAL
51	N8	11	THR
51	N8	16	ARG
51	N8	26	THR
51	N8	29	THR
51	N8	33	CYS
51	N8	40	LYS
51	N8	44	THR
51	N8	51	TYR
51	N8	52	TYR
51	N8	55	ARG
51	N8	56	LYS
52	P8	4	THR
52	P8	8	ASN
52	P8	14	LYS
52	P8	24	THR
52	P8	29	LYS
52	P8	43	THR
53	Q8	4	MET
53	Q8	11	LYS
53	Q8	13	ARG
53	Q8	19	SER
53	Q8	22	VAL

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Mol	Chain	Res	Type
53	Q8	26	LYS
53	Q8	32	LEU
53	Q8	33	ASN
53	Q8	40	GLU
53	Q8	56	GLU
53	Q8	57	ARG
53	Q8	59	LYS
53	Q8	62	LEU
2	12	6	THR
2	12	8	LYS
2	12	19	HIS
2	12	24	TRP
2	12	44	LEU
2	12	47	THR
2	12	58	ILE
2	12	67	THR
2	12	69	LEU
2	12	75	LYS
2	12	87	ARG
2	12	90	MET
2	12	111	ARG
2	12	121	LEU
2	12	140	HIS
2	12	144	ARG
2	12	150	SER
2	12	164	VAL
2	12	176	GLU
2	12	178	ARG
2	12	185	ILE
2	12	187	LEU
2	12	191	ASP
2	12	192	SER
2	12	196	LEU
2	12	200	ILE
2	12	205	ASP
2	12	212	GLN
2	12	215	LEU
2	12	217	ARG
2	12	223	ILE
2	12	230	VAL
2	12	233	SER
2	12	235	SER

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Mol	Chain	Res	Type
2	12	238	LEU
3	22	3	ASN
3	22	4	LYS
3	22	12	LEU
3	22	14	ILE
3	22	15	THR
3	22	18	TRP
3	22	27	LYS
3	22	29	TYR
3	22	34	LEU
3	22	42	LEU
3	22	47	LEU
3	22	59	ARG
3	22	76	VAL
3	22	79	ARG
3	22	84	ILE
3	22	88	ARG
3	22	89	GLU
3	22	94	LEU
3	22	97	LYS
3	22	99	VAL
3	22	102	ASN
3	22	119	ARG
3	22	120	VAL
3	22	153	VAL
3	22	167	TRP
3	22	172	ARG
3	22	188	LEU
3	22	202	ILE
3	22	204	LEU
4	32	3	ARG
4	32	11	LEU
4	32	12	CYS
4	32	18	LYS
4	32	24	GLU
4	32	27	TYR
4	32	30	LYS
4	32	36	ARG
4	32	45	GLN
4	32	49	ARG
4	32	50	ARG
4	32	53	ASP

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Mol	Chain	Res	Type
4	32	58	LEU
4	32	59	ARG
4	32	96	LEU
4	32	98	GLU
4	32	119	GLN
4	32	122	ARG
4	32	127	THR
4	32	134	ASP
4	32	135	LEU
4	32	151	LYS
4	32	154	ASN
4	32	168	ARG
4	32	191	ARG
4	32	192	GLU
4	32	200	GLU
4	32	202	LEU
5	42	13	ILE
5	42	16	THR
5	42	25	ARG
5	42	26	PHE
5	42	33	VAL
5	42	38	GLN
5	42	47	LYS
5	42	71	LEU
5	42	73	ASN
5	42	78	HIS
5	42	79	GLU
5	42	80	ILE
5	42	81	GLU
5	42	90	VAL
5	42	91	LEU
5	42	107	ARG
5	42	112	LEU
5	42	120	THR
5	42	141	GLN
5	42	144	THR
6	52	3	ARG
6	52	7	ASN
6	52	19	LEU
6	52	25	ILE
6	52	40	VAL
6	52	46	ARG

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Mol	Chain	Res	Type
6	52	77	ARG
6	52	80	ARG
6	52	87	ARG
7	62	6	ARG
7	62	8	GLU
7	62	12	LEU
7	62	21	VAL
7	62	24	THR
7	62	45	ASP
7	62	54	THR
7	62	73	MET
7	62	75	VAL
7	62	89	MET
7	62	94	ARG
7	62	101	LEU
7	62	114	ARG
7	62	118	VAL
7	62	124	LEU
7	62	155	ARG
8	72	1	MET
8	72	23	SER
8	72	25	ASP
8	72	29	SER
8	72	33	GLU
8	72	39	LEU
8	72	49	GLU
8	72	56	LYS
8	72	82	HIS
8	72	91	ARG
8	72	92	ARG
8	72	97	VAL
8	72	102	ARG
8	72	111	ILE
8	72	112	LEU
8	72	115	SER
9	82	2	GLU
9	82	4	TYR
9	82	7	THR
9	82	9	ARG
9	82	10	ARG
9	82	37	PHE
9	82	65	VAL

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Mol	Chain	Res	Type
9	82	77	ILE
9	82	79	LEU
9	82	81	ILE
9	82	89	ASN
9	82	91	ASP
9	82	92	TYR
9	82	95	LYS
9	82	104	ARG
9	82	118	LYS
10	1A	22	LYS
10	1A	29	ARG
10	1A	33	GLN
10	1A	40	LEU
10	1A	59	SER
10	1A	62	HIS
10	1A	66	ARG
10	1A	79	ARG
10	1A	92	THR
10	1A	95	GLU
11	2A	14	VAL
11	2A	18	ARG
11	2A	24	SER
11	2A	48	ILE
11	2A	70	LYS
11	2A	93	GLN
11	2A	103	LEU
11	2A	104	GLN
11	2A	109	VAL
11	2A	114	VAL
11	2A	129	SER
12	3A	20	LYS
12	3A	24	VAL
12	3A	27	LEU
12	3A	33	ARG
12	3A	34	ARG
12	3A	41	ARG
12	3A	54	LYS
12	3A	57	LYS
12	3A	64	TYR
12	3A	83	VAL
12	3A	84	LEU
12	3A	92	ASP

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Mol	Chain	Res	Type
12	3A	111	LYS
12	3A	118	SER
13	4A	3	ARG
13	4A	7	VAL
13	4A	12	ASN
13	4A	23	TYR
13	4A	47	ASP
13	4A	48	LEU
13	4A	77	ASN
13	4A	79	LYS
13	4A	83	ASP
13	4A	88	ARG
13	4A	94	ARG
13	4A	101	GLN
13	4A	103	THR
13	4A	108	ARG
13	4A	109	THR
14	5A	8	GLU
14	5A	16	PHE
14	5A	29	ARG
14	5A	33	VAL
14	5A	44	LEU
14	5A	57	ARG
15	6A	3	ILE
15	6A	17	ARG
15	6A	39	LEU
15	6A	40	SER
15	6A	82	ILE
15	6A	84	LYS
15	6A	88	ARG
16	7A	1	MET
16	7A	2	VAL
16	7A	5	ARG
16	7A	6	LEU
16	7A	11	SER
16	7A	20	VAL
16	7A	21	VAL
16	7A	45	THR
16	7A	53	VAL
16	7A	55	ARG
16	7A	67	THR
17	8A	6	LEU

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Mol	Chain	Res	Type
17	8A	16	GLN
17	8A	48	GLU
17	8A	52	LYS
17	8A	57	VAL
17	8A	63	ARG
17	8A	68	ARG
17	8A	74	LEU
17	8A	76	LEU
17	8A	84	LEU
17	8A	85	VAL
18	9A	26	LEU
18	9A	31	LEU
18	9A	32	ARG
18	9A	42	ARG
18	9A	65	ILE
18	9A	82	THR
18	9A	84	LYS
19	AA	7	LYS
19	AA	9	VAL
19	AA	37	ARG
19	AA	40	ILE
19	AA	43	GLU
19	AA	83	HIS
20	BA	14	LYS
20	BA	37	SER
20	BA	56	MET
20	BA	72	LEU
20	BA	75	ASN
20	BA	80	ARG
20	BA	83	ARG
20	BA	84	LEU
20	BA	85	MET
21	1B	22	ARG
26	79	10	LEU
26	79	196	LEU
27	19	27	THR
27	19	30	GLU
27	19	33	LEU
27	19	43	ARG
27	19	49	ILE
27	19	61	LEU
27	19	64	ILE

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Mol	Chain	Res	Type
27	19	65	ILE
27	19	68	LYS
27	19	88	ARG
27	19	94	LEU
27	19	98	VAL
27	19	99	ASP
27	19	103	ARG
27	19	105	ILE
27	19	109	ASP
27	19	118	VAL
27	19	136	ILE
27	19	138	VAL
27	19	141	VAL
27	19	154	LYS
27	19	155	LEU
27	19	166	GLN
27	19	182	LEU
27	19	192	THR
27	19	193	VAL
27	19	200	ASP
27	19	211	ARG
27	19	212	SER
27	19	213	ARG
27	19	239	ARG
27	19	242	ARG
27	19	244	ARG
27	19	255	LYS
27	19	257	LEU
27	19	262	ARG
27	19	263	ARG
27	19	271	ILE
28	29	21	VAL
28	29	41	LYS
28	29	48	GLN
28	29	51	PHE
28	29	63	LEU
28	29	69	LYS
28	29	76	ARG
28	29	78	LEU
28	29	82	ARG
28	29	87	GLU
28	29	89	ASP

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Mol	Chain	Res	Type
28	29	91	VAL
28	29	93	VAL
28	29	116	VAL
28	29	119	ARG
28	29	141	ILE
28	29	144	ARG
28	29	154	LYS
28	29	171	GLU
28	29	175	VAL
28	29	197	ILE
28	29	200	GLU
28	29	201	THR
28	29	203	LYS
29	39	1	MET
29	39	2	LYS
29	39	4	VAL
29	39	6	VAL
29	39	8	GLN
29	39	11	VAL
29	39	19	GLU
29	39	20	LEU
29	39	23	ASP
29	39	41	LEU
29	39	44	ARG
29	39	50	SER
29	39	62	ARG
29	39	63	LYS
29	39	68	LYS
29	39	70	THR
29	39	74	ARG
29	39	82	ILE
29	39	83	PHE
29	39	88	VAL
29	39	108	LYS
29	39	110	LEU
29	39	151	SER
29	39	158	THR
29	39	164	ARG
29	39	175	THR
29	39	181	LEU
29	39	183	VAL
29	39	192	LEU

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Mol	Chain	Res	Type
29	39	196	LEU
29	39	197	ASP
29	39	200	GLU
29	39	205	ARG
30	49	3	LEU
30	49	26	GLN
30	49	39	ILE
30	49	40	ASN
30	49	43	LEU
30	49	45	GLU
30	49	47	LYS
30	49	48	GLU
30	49	60	LEU
30	49	67	LYS
30	49	71	THR
30	49	80	PHE
30	49	81	LYS
30	49	97	ASP
30	49	116	ASP
30	49	133	LEU
30	49	146	TYR
30	49	148	MET
30	49	159	VAL
30	49	173	LEU
31	59	4	ILE
31	59	6	ARG
31	59	9	ILE
31	59	11	VAL
31	59	30	LYS
31	59	32	GLU
31	59	41	MET
31	59	47	GLU
31	59	49	VAL
31	59	83	TYR
31	59	88	LEU
31	59	89	ILE
31	59	95	ARG
31	59	99	VAL
31	59	103	LEU
31	59	105	LEU
31	59	107	VAL
31	59	123	PHE

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Mol	Chain	Res	Type
31	59	127	GLU
31	59	129	THR
31	59	136	ILE
31	59	157	TYR
31	59	164	TYR
31	59	171	LEU
32	69	4	ILE
32	69	18	VAL
32	69	19	VAL
32	69	40	THR
32	69	44	LEU
32	69	50	ARG
32	69	52	ARG
32	69	64	GLU
32	69	67	ARG
32	69	76	THR
32	69	77	LEU
32	69	81	VAL
32	69	86	THR
32	69	87	LYS
32	69	92	VAL
32	69	101	LEU
32	69	103	ARG
32	69	104	GLN
32	69	105	HIS
32	69	109	ILE
32	69	114	LEU
32	69	116	LEU
32	69	117	GLU
32	69	128	LEU
32	69	130	TYR
32	69	133	HIS
32	69	136	VAL
32	69	139	GLN
32	69	140	LEU
32	69	143	SER
32	69	145	VAL
33	15	1	MET
33	15	7	LYS
33	15	9	VAL
33	15	12	ARG
33	15	22	THR

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Mol	Chain	Res	Type
33	15	28	THR
33	15	32	THR
33	15	33	LEU
33	15	34	LEU
33	15	43	THR
33	15	48	MET
33	15	63	THR
33	15	87	LEU
33	15	93	THR
33	15	94	HIS
33	15	99	LEU
33	15	104	LYS
33	15	112	LEU
33	15	116	LEU
33	15	123	TYR
33	15	130	HIS
34	25	1	MET
34	25	5	GLN
34	25	8	LEU
34	25	10	VAL
34	25	24	VAL
34	25	29	ASN
34	25	32	TYR
34	25	35	VAL
34	25	52	VAL
34	25	66	LYS
34	25	69	ILE
34	25	71	ARG
34	25	73	ASP
34	25	78	ARG
34	25	87	ILE
34	25	94	ARG
34	25	97	ARG
34	25	108	GLU
34	25	114	ILE
34	25	115	VAL
34	25	117	LEU
35	35	2	LYS
35	35	5	ASP
35	35	7	ARG
35	35	15	ARG
35	35	18	ARG

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Mol	Chain	Res	Type
35	35	30	THR
35	35	32	THR
35	35	41	ARG
35	35	45	LEU
35	35	46	LYS
35	35	55	ARG
35	35	61	ARG
35	35	65	ARG
35	35	70	GLN
35	35	79	ARG
35	35	83	VAL
35	35	85	LEU
35	35	90	ARG
35	35	91	PHE
35	35	95	VAL
35	35	98	GLU
35	35	100	LEU
35	35	105	LEU
35	35	111	ARG
35	35	114	ILE
35	35	123	LEU
35	35	125	VAL
35	35	133	SER
35	35	138	LEU
35	35	139	LYS
35	35	144	GLU
36	45	3	MET
36	45	10	ARG
36	45	35	VAL
36	45	45	GLN
36	45	60	ARG
36	45	64	ILE
36	45	66	ILE
36	45	83	MET
36	45	103	MET
36	45	109	VAL
36	45	110	THR
36	45	118	LEU
36	45	127	ILE
36	45	131	ILE
36	45	137	TYR
37	55	2	ARG

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Mol	Chain	Res	Type
37	55	6	SER
37	55	8	ARG
37	55	9	LYS
37	55	18	LEU
37	55	23	ASN
37	55	28	LEU
37	55	33	ARG
37	55	35	THR
37	55	37	THR
37	55	44	LEU
37	55	48	VAL
37	55	67	LEU
37	55	75	LEU
37	55	76	VAL
37	55	79	LEU
37	55	81	ASP
37	55	95	THR
37	55	113	LEU
37	55	117	VAL
38	65	3	ARG
38	65	12	PHE
38	65	13	ARG
38	65	14	VAL
38	65	15	ARG
38	65	17	ARG
38	65	18	ILE
38	65	24	LEU
38	65	29	PHE
38	65	36	TYR
38	65	40	ILE
38	65	56	LEU
38	65	57	LYS
38	65	58	LEU
38	65	69	VAL
38	65	71	ARG
38	65	101	LEU
38	65	107	GLU
38	65	110	LEU
39	75	9	LEU
39	75	13	ARG
39	75	15	VAL
39	75	17	THR

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Mol	Chain	Res	Type
39	75	21	GLU
39	75	27	THR
39	75	28	VAL
39	75	30	VAL
39	75	35	LYS
39	75	42	ILE
39	75	49	VAL
39	75	50	ILE
39	75	57	PHE
39	75	59	THR
39	75	62	THR
39	75	67	SER
39	75	74	ARG
39	75	85	LYS
39	75	86	ILE
39	75	91	ARG
39	75	112	ARG
39	75	117	ASP
39	75	125	ARG
39	75	132	LYS
40	85	8	VAL
40	85	20	LEU
40	85	27	LEU
40	85	30	LYS
40	85	31	SER
40	85	34	LYS
40	85	55	ARG
40	85	64	ARG
40	85	74	LEU
40	85	75	ASN
40	85	83	LEU
40	85	92	ARG
40	85	94	ASN
40	85	97	ASP
40	85	100	VAL
41	95	7	THR
41	95	21	ARG
41	95	22	VAL
41	95	26	ASP
41	95	32	THR
41	95	34	GLU
41	95	35	LEU

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Mol	Chain	Res	Type
41	95	37	VAL
41	95	45	THR
41	95	47	VAL
41	95	49	THR
41	95	61	VAL
41	95	62	LEU
41	95	68	LYS
41	95	73	SER
41	95	81	TYR
41	95	84	LYS
41	95	88	ARG
41	95	95	LEU
42	A5	1	MET
42	A5	11	ARG
42	A5	23	LEU
42	A5	51	LEU
42	A5	52	GLU
42	A5	60	ASN
42	A5	65	LEU
42	A5	76	VAL
42	A5	92	ARG
42	A5	94	ASP
42	A5	100	THR
42	A5	107	LEU
42	A5	110	LYS
42	A5	111	HIS
43	B5	9	LEU
43	B5	30	VAL
43	B5	49	VAL
43	B5	53	LYS
43	B5	54	VAL
43	B5	57	LEU
43	B5	60	ARG
43	B5	63	LYS
43	B5	69	TYR
43	B5	80	ILE
43	B5	92	LEU
44	C5	2	ARG
44	C5	6	HIS
44	C5	9	LYS
44	C5	14	LEU
44	C5	23	ARG

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Mol	Chain	Res	Type
44	C5	29	GLU
44	C5	37	VAL
44	C5	38	ILE
44	C5	39	VAL
44	C5	43	ASN
44	C5	47	LYS
44	C5	50	ARG
44	C5	51	VAL
44	C5	60	PHE
44	C5	61	ILE
44	C5	62	GLU
44	C5	84	ARG
44	C5	86	ARG
44	C5	87	LYS
44	C5	88	LYS
44	C5	98	VAL
44	C5	99	CYS
44	C5	102	CYS
45	D5	2	GLU
45	D5	16	SER
45	D5	24	LEU
45	D5	41	LEU
45	D5	42	VAL
45	D5	45	ASP
45	D5	61	LEU
45	D5	70	LEU
45	D5	71	VAL
45	D5	72	ARG
45	D5	74	VAL
45	D5	76	LEU
45	D5	79	ARG
45	D5	81	ARG
45	D5	107	THR
45	D5	120	ILE
45	D5	123	ASP
45	D5	132	ASN
45	D5	137	ILE
45	D5	138	GLU
45	D5	148	ASP
45	D5	154	ASP
45	D5	161	VAL
45	D5	174	VAL

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Mol	Chain	Res	Type
45	D5	175	VAL
46	E5	9	SER
46	E5	11	ARG
46	E5	12	ASN
46	E5	20	ARG
46	E5	36	ILE
46	E5	43	THR
46	E5	50	ASN
46	E5	51	VAL
46	E5	58	THR
46	E5	63	VAL
46	E5	74	ARG
46	E5	75	LEU
47	F5	23	LYS
47	F5	30	VAL
47	F5	32	LYS
47	F5	38	SER
47	F5	46	LEU
47	F5	52	ARG
47	F5	59	THR
47	F5	67	ILE
47	F5	76	ARG
47	F5	80	LEU
47	F5	81	LYS
47	F5	82	LEU
47	F5	83	GLU
47	F5	91	LYS
47	F5	93	GLU
47	F5	97	LEU
48	G5	5	GLU
48	G5	16	LEU
48	G5	17	SER
48	G5	20	GLU
48	G5	21	LEU
48	G5	24	LEU
48	G5	30	ARG
48	G5	32	LEU
48	G5	50	ILE
48	G5	53	LEU
48	G5	62	THR
49	H5	5	LYS
49	H5	8	LEU

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Mol	Chain	Res	Type
49	H5	9	VAL
49	H5	11	SER
49	H5	17	LYS
49	H5	18	ASP
49	H5	20	LYS
49	H5	35	ARG
49	H5	36	VAL
49	H5	40	THR
49	H5	54	VAL
49	H5	55	ARG
50	I5	2	LYS
50	I5	5	ILE
50	I5	10	VAL
50	I5	14	ILE
50	I5	15	ILE
50	I5	22	ILE
50	I5	31	ILE
50	I5	32	TYR
50	I5	42	PHE
50	I5	43	TYR
50	I5	50	VAL
50	I5	51	ASP
50	I5	53	GLU
50	I5	58	ARG
50	I5	62	ARG
51	J5	12	SER
51	J5	16	ARG
51	J5	23	HIS
51	J5	26	THR
51	J5	29	THR
51	J5	40	LYS
51	J5	48	GLU
51	J5	51	TYR
51	J5	56	LYS
51	J5	59	GLU
52	L5	1	MET
52	L5	4	THR
52	L5	14	LYS
52	L5	24	THR
52	L5	41	ARG
52	L5	46	VAL
52	L5	47	ARG

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Mol	Chain	Res	Type
52	L5	48	LYS
53	M5	6	THR
53	M5	16	ILE
53	M5	22	VAL
53	M5	33	ASN
53	M5	40	GLU
53	M5	50	LEU
53	M5	52	LYS
53	M5	57	ARG
53	M5	59	LYS
53	M5	60	LEU
53	M5	61	LEU
53	M5	63	PRO

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (30) such sidechains are listed below:

Mol	Chain	Res	Type
2	1E	16	HIS
3	2E	6	HIS
13	4I	92	HIS
26	71	17	ASN
26	71	44	HIS
27	11	46	GLN
27	11	143	HIS
32	61	104	GLN
34	68	5	GLN
35	78	27	HIS
35	78	35	HIS
37	98	24	GLN
37	98	31	HIS
39	B8	79	HIS
43	F8	55	ASN
45	H8	32	HIS
45	H8	54	HIS
48	K8	47	ASN
53	Q8	33	ASN
2	12	135	GLN
4	32	201	GLN
7	62	97	GLN
13	4A	92	HIS
15	6A	9	GLN
27	19	58	HIS

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Mol	Chain	Res	Type
36	45	45	GLN
37	55	61	HIS
48	G5	38	GLN
50	I5	6	HIS
50	I5	60	GLN

5.3.3 RNA (i)

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
1	13	1496/1522 (98%)	326 (21%)	24 (1%)
22	2K	78/85 (91%)	28 (35%)	5 (6%)
22	2L	73/85 (85%)	25 (34%)	7 (9%)
22	3K	82/85 (96%)	22 (26%)	3 (3%)
22	3L	82/85 (96%)	22 (26%)	3 (3%)
23	4K	11/27 (40%)	3 (27%)	1 (9%)
23	4L	5/27 (18%)	2 (40%)	0
24	14	2907/2917 (99%)	652 (22%)	38 (1%)
24	1H	2910/2917 (99%)	677 (23%)	45 (1%)
25	16	121/122 (99%)	26 (21%)	0
25	1J	121/122 (99%)	29 (23%)	1 (0%)
54	1G	1503/1522 (98%)	322 (21%)	33 (2%)
All	All	9389/9516 (98%)	2134 (22%)	160 (1%)

All (2134) RNA backbone outliers are listed below:

Mol	Chain	Res	Type
1	13	6	G
1	13	10	A
1	13	22	G
1	13	25	C
1	13	32	A
1	13	39	G
1	13	47	C
1	13	48	C
1	13	50	A
1	13	51	A
1	13	61	G
1	13	65	U
1	13	66	G
1	13	76	G
1	13	78	G

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Mol	Chain	Res	Type
1	13	79	G
1	13	80	G
1	13	89	U
1	13	91	C
1	13	95	G
1	13	101	A
1	13	108	G
1	13	116	A
1	13	121	C
1	13	131	C
1	13	144	G
1	13	156	G
1	13	160	A
1	13	163	C
1	13	169	C
1	13	173	U
1	13	174	C
1	13	182	U
1	13	183	G
1	13	186(A)	C
1	13	188	U
1	13	189	U
1	13	190	G
1	13	192	U
1	13	195	A
1	13	208	U
1	13	209	U
1	13	210	U
1	13	216	G
1	13	226	G
1	13	243	A
1	13	244	U
1	13	245	C
1	13	247	G
1	13	251	G
1	13	266	G
1	13	267	C
1	13	281	G
1	13	289	G
1	13	316	G
1	13	318	G
1	13	321	A

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Mol	Chain	Res	Type
1	13	324	G
1	13	328	C
1	13	329	A
1	13	330	C
1	13	332	G
1	13	345	C
1	13	346	G
1	13	347	G
1	13	352	C
1	13	353	A
1	13	354	G
1	13	367	U
1	13	372	C
1	13	373	A
1	13	382	A
1	13	383	A
1	13	388	G
1	13	390	C
1	13	397	A
1	13	398	C
1	13	406	G
1	13	412	A
1	13	413	G
1	13	419	C
1	13	421	U
1	13	422	C
1	13	423	G
1	13	429	U
1	13	430	A
1	13	439	A
1	13	442	C
1	13	466	C
1	13	467	G
1	13	477	G
1	13	479	C
1	13	484	G
1	13	485	G
1	13	487	A
1	13	495	A
1	13	496	A
1	13	497	U
1	13	498	A

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Mol	Chain	Res	Type
1	13	505	G
1	13	509	A
1	13	510	A
1	13	511	C
1	13	513	C
1	13	518	C
1	13	521	G
1	13	527	G
1	13	531	U
1	13	533	A
1	13	536	C
1	13	545	C
1	13	547	A
1	13	559	A
1	13	560	U
1	13	561	U
1	13	564	C
1	13	572	A
1	13	573	A
1	13	576	G
1	13	582	U
1	13	596	C
1	13	599	C
1	13	607	A
1	13	618	C
1	13	620	C
1	13	630	G
1	13	631	G
1	13	632	A
1	13	633	G
1	13	642	A
1	13	651	C
1	13	652	U
1	13	653	A
1	13	659	U
1	13	671	G
1	13	686	U
1	13	687	A
1	13	688	G
1	13	702	A
1	13	703	G
1	13	704	A

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Mol	Chain	Res	Type
1	13	711	G
1	13	723	U
1	13	724	G
1	13	731	G
1	13	740	U
1	13	748	C
1	13	749	C
1	13	753	A
1	13	755	G
1	13	759	A
1	13	774	G
1	13	776	G
1	13	777	A
1	13	790	A
1	13	791	G
1	13	792	A
1	13	793	U
1	13	794	A
1	13	796	C
1	13	800	G
1	13	802	A
1	13	813	U
1	13	817	C
1	13	818	G
1	13	821	G
1	13	828	A
1	13	836	G
1	13	841	U
1	13	842	C
1	13	843	U
1	13	848	C
1	13	857	C
1	13	864	A
1	13	866	C
1	13	869	G
1	13	870	U
1	13	874	G
1	13	876	G
1	13	902	G
1	13	914	A
1	13	916	G
1	13	926	G

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Mol	Chain	Res	Type
1	13	927	G
1	13	933	G
1	13	934	C
1	13	935	A
1	13	936	C
1	13	941	G
1	13	942	G
1	13	948	C
1	13	958	A
1	13	960	U
1	13	961	U
1	13	966	G
1	13	968	A
1	13	969	A
1	13	972	C
1	13	974	A
1	13	975	A
1	13	976	G
1	13	977	A
1	13	982	U
1	13	991	U
1	13	992	U
1	13	993	G
1	13	1002	G
1	13	1004	A
1	13	1006	C
1	13	1009	G
1	13	1011	G
1	13	1017	G
1	13	1020	U
1	13	1021	G
1	13	1024	G
1	13	1025	U
1	13	1026	G
1	13	1027	C
1	13	1028	C
1	13	1029	G
1	13	1030	C
1	13	1032(A)	G
1	13	1040	U
1	13	1042	G
1	13	1046	A

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Mol	Chain	Res	Type
1	13	1054	C
1	13	1065	U
1	13	1066	C
1	13	1081	G
1	13	1088	G
1	13	1094	G
1	13	1095	U
1	13	1101	A
1	13	1103	C
1	13	1108	G
1	13	1109	C
1	13	1124	G
1	13	1125	U
1	13	1126	U
1	13	1127	G
1	13	1131	G
1	13	1132	C
1	13	1136	U
1	13	1137	C
1	13	1138	G
1	13	1139	G
1	13	1146	A
1	13	1151	A
1	13	1157	A
1	13	1158	C
1	13	1159	U
1	13	1160	G
1	13	1177	G
1	13	1178	G
1	13	1181	G
1	13	1182	G
1	13	1183	A
1	13	1184	G
1	13	1188	A
1	13	1193	G
1	13	1195	C
1	13	1196	U
1	13	1197	G
1	13	1201	A
1	13	1211	U
1	13	1212	U
1	13	1213	A

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Mol	Chain	Res	Type
1	13	1214	C
1	13	1225	A
1	13	1227	A
1	13	1238	A
1	13	1240	U
1	13	1248	A
1	13	1256	A
1	13	1257	U
1	13	1258	G
1	13	1260	C
1	13	1262	C
1	13	1270	C
1	13	1272	G
1	13	1278	U
1	13	1279	A
1	13	1280	A
1	13	1282	C
1	13	1286	A
1	13	1287	A
1	13	1299	A
1	13	1300	G
1	13	1302	U
1	13	1305	G
1	13	1319	A
1	13	1320	C
1	13	1322	C
1	13	1331	G
1	13	1335	C
1	13	1336	C
1	13	1337	G
1	13	1346	A
1	13	1347	G
1	13	1350	A
1	13	1353	G
1	13	1361	G
1	13	1364	U
1	13	1370	G
1	13	1379	G
1	13	1419	G
1	13	1422	G
1	13	1435	G
1	13	1442	G

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Mol	Chain	Res	Type
1	13	1443	G
1	13	1446	A
1	13	1451	A
1	13	1452	C
1	13	1453	G
1	13	1454	G
1	13	1469	G
1	13	1487	G
1	13	1497	G
1	13	1499	A
1	13	1503	A
1	13	1504	G
1	13	1506	U
1	13	1517	G
1	13	1529	G
1	13	1530	G
1	13	1533	C
22	2K	6	G
22	2K	8	4SU
22	2K	9	U
22	2K	14	A
22	2K	15	G
22	2K	18	G
22	2K	19	C
22	2K	20	C
22	2K	21	A
22	2K	23	A
22	2K	24	G
22	2K	27	A
22	2K	28	G
22	2K	44	C
22	2K	45	C
22	2K	47	U
22	2K	48	C
22	2K	49	A
22	2K	54	C
22	2K	55	U
22	2K	60	A
22	2K	61	G
22	2K	62	G
22	2K	64	PSU
22	2K	72	U

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Mol	Chain	Res	Type
22	2K	73	U
22	2K	74	C
22	2K	85	A
22	3K	6	G
22	3K	9	U
22	3K	14	A
22	3K	15	G
22	3K	16	C
22	3K	17	OMG
22	3K	18	G
22	3K	19	C
22	3K	20	C
22	3K	21	A
22	3K	22	A
22	3K	32	A
22	3K	36	U
22	3K	46	G
22	3K	48	C
22	3K	51	C
22	3K	52	G
22	3K	56	U
22	3K	62	G
22	3K	64	PSU
22	3K	68	A
22	3K	85	A
23	4K	13	A
23	4K	14	A
23	4K	15	A
24	1H	4	C
24	1H	5	A
24	1H	9	U
24	1H	12	U
24	1H	14	A
24	1H	15	G
24	1H	26	G
24	1H	34	C
24	1H	35	G
24	1H	46	C
24	1H	51	G
24	1H	54	G
24	1H	55	G
24	1H	60	G

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Mol	Chain	Res	Type
24	1H	63	U
24	1H	64	A
24	1H	70	G
24	1H	71	A
24	1H	72	U
24	1H	74	A
24	1H	75	G
24	1H	85	G
24	1H	95	G
24	1H	102	G
24	1H	118	A
24	1H	119	A
24	1H	120	U
24	1H	123	G
24	1H	125	G
24	1H	131	G
24	1H	155	C
24	1H	163	U
24	1H	164	U
24	1H	165	U
24	1H	181	A
24	1H	196	A
24	1H	199	A
24	1H	214	G
24	1H	215	G
24	1H	216	A
24	1H	222	A
24	1H	223	A
24	1H	224	G
24	1H	227	A
24	1H	228	A
24	1H	229	A
24	1H	230	U
24	1H	233	A
24	1H	248	G
24	1H	250	G
24	1H	252	G
24	1H	265	A
24	1H	269	U
24	1H	270(L)	U
24	1H	270(M)	U
24	1H	270(O)	U

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Mol	Chain	Res	Type
24	1H	271(C)	U
24	1H	271	G
24	1H	273(A)	G
24	1H	274	G
24	1H	275	G
24	1H	277	C
24	1H	278	A
24	1H	299	A
24	1H	311	A
24	1H	315	G
24	1H	323	G
24	1H	324	A
24	1H	329	G
24	1H	330	A
24	1H	333	G
24	1H	352	G
24	1H	354	G
24	1H	357	A
24	1H	363	G
24	1H	372	G
24	1H	386	G
24	1H	392	C
24	1H	396	G
24	1H	405	U
24	1H	407	G
24	1H	411	G
24	1H	412	A
24	1H	428	A
24	1H	435	C
24	1H	443	A
24	1H	444	C
24	1H	447	A
24	1H	448	U
24	1H	451	C
24	1H	454	A
24	1H	455	C
24	1H	457	A
24	1H	460	A
24	1H	470	A
24	1H	471	A
24	1H	481	G
24	1H	482	A

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Mol	Chain	Res	Type
24	1H	491	G
24	1H	494	G
24	1H	505	A
24	1H	509	C
24	1H	513	A
24	1H	528	A
24	1H	529	A
24	1H	530	G
24	1H	531	C
24	1H	532	A
24	1H	533	G
24	1H	537	C
24	1H	539	G
24	1H	540	G
24	1H	546	C
24	1H	547	A
24	1H	556	G
24	1H	563	G
24	1H	564	C
24	1H	567	A
24	1H	570	G
24	1H	573	G
24	1H	575	A
24	1H	586	A
24	1H	593	G
24	1H	595	C
24	1H	603	A
24	1H	607	U
24	1H	609(A)	G
24	1H	614	U
24	1H	615	G
24	1H	617	G
24	1H	618	G
24	1H	618(A)	C
24	1H	621	A
24	1H	622	G
24	1H	627	A
24	1H	637	A
24	1H	645	C
24	1H	646	A
24	1H	654(A)	A
24	1H	654(G)	C

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Mol	Chain	Res	Type
24	1H	654(I)	C
24	1H	654(J)	A
24	1H	654(L)	G
24	1H	654(N)	G
24	1H	654(T)	A
24	1H	654(V)	A
24	1H	664	C
24	1H	686	G
24	1H	699	A
24	1H	730	C
24	1H	731	C
24	1H	738	G
24	1H	746	A
24	1H	747	U
24	1H	748	G
24	1H	752	A
24	1H	753	C
24	1H	762	U
24	1H	765	G
24	1H	775	G
24	1H	776	G
24	1H	777	A
24	1H	780	G
24	1H	782	A
24	1H	784	A
24	1H	785	G
24	1H	790	C
24	1H	791	C
24	1H	792	G
24	1H	793	A
24	1H	805	G
24	1H	812	C
24	1H	819	A
24	1H	823	G
24	1H	824	A
24	1H	827	U
24	1H	828	U
24	1H	836	G
24	1H	845	G
24	1H	847	U
24	1H	855	G
24	1H	859	G

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Mol	Chain	Res	Type
24	1H	866	A
24	1H	870	A
24	1H	880	G
24	1H	881	G
24	1H	882	G
24	1H	883	G
24	1H	885	C
24	1H	886	C
24	1H	887	A
24	1H	888	C
24	1H	890	A
24	1H	893	C
24	1H	894	C
24	1H	895	U
24	1H	896	A
24	1H	897	C
24	1H	898	C
24	1H	899	A
24	1H	900	A
24	1H	901	A
24	1H	904	C
24	1H	907	U
24	1H	910	A
24	1H	917	A
24	1H	932	G
24	1H	941	A
24	1H	946	G
24	1H	957	A
24	1H	959	A
24	1H	961	C
24	1H	968	G
24	1H	972	G
24	1H	974	G
24	1H	974(A)	C
24	1H	983	A
24	1H	990	A
24	1H	996	A
24	1H	1002	G
24	1H	1005	C
24	1H	1008	C
24	1H	1011	G
24	1H	1012	U

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Mol	Chain	Res	Type
24	1H	1013	C
24	1H	1017	G
24	1H	1020	A
24	1H	1022	G
24	1H	1023	U
24	1H	1024	G
24	1H	1025	G
24	1H	1026	U
24	1H	1027	A
24	1H	1033	U
24	1H	1045	A
24	1H	1046	A
24	1H	1047	G
24	1H	1051	G
24	1H	1053	C
24	1H	1055	G
24	1H	1056	G
24	1H	1057	A
24	1H	1058	U
24	1H	1059	G
24	1H	1061	U
24	1H	1062	G
24	1H	1065	U
24	1H	1067	A
24	1H	1068	G
24	1H	1070	A
24	1H	1071	G
24	1H	1073	A
24	1H	1074	G
24	1H	1075	C
24	1H	1076	C
24	1H	1077	A
24	1H	1078	U
24	1H	1083	U
24	1H	1087	G
24	1H	1088	A
24	1H	1089	G
24	1H	1090	U
24	1H	1092	C
24	1H	1093	G
24	1H	1095	A
24	1H	1097	U

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Mol	Chain	Res	Type
24	1H	1104	C
24	1H	1106	G
24	1H	1111	A
24	1H	1112	G
24	1H	1121	C
24	1H	1126	A
24	1H	1129	A
24	1H	1130	U
24	1H	1135	C
24	1H	1136	G
24	1H	1139	G
24	1H	1142	U
24	1H	1142(A)	A
24	1H	1148	A
24	1H	1149	G
24	1H	1151	G
24	1H	1155	A
24	1H	1156	A
24	1H	1157	G
24	1H	1164	G
24	1H	1170	G
24	1H	1173	G
24	1H	1174	A
24	1H	1176	G
24	1H	1177	A
24	1H	1178	C
24	1H	1179	C
24	1H	1180	C
24	1H	1187	G
24	1H	1196	C
24	1H	1205	U
24	1H	1220	A
24	1H	1225	C
24	1H	1237	A
24	1H	1244	G
24	1H	1250	G
24	1H	1253	A
24	1H	1256	G
24	1H	1265	A
24	1H	1267	U
24	1H	1271	G
24	1H	1272	A

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Mol	Chain	Res	Type
24	1H	1273	U
24	1H	1287	A
24	1H	1298	C
24	1H	1300	U
24	1H	1301	A
24	1H	1312	U
24	1H	1313	U
24	1H	1314	C
24	1H	1320	C
24	1H	1329	U
24	1H	1338	G
24	1H	1344	G
24	1H	1345	C
24	1H	1348	G
24	1H	1349	A
24	1H	1352	U
24	1H	1359	A
24	1H	1360	A
24	1H	1365	A
24	1H	1368	G
24	1H	1380	G
24	1H	1385	G
24	1H	1388	G
24	1H	1389	G
24	1H	1395	A
24	1H	1411	C
24	1H	1416	G
24	1H	1417	C
24	1H	1420	U
24	1H	1421	G
24	1H	1428	C
24	1H	1430	C
24	1H	1444(A)	A
24	1H	1449	A
24	1H	1455	G
24	1H	1459	G
24	1H	1460	A
24	1H	1461	G
24	1H	1467	C
24	1H	1471	A
24	1H	1483	G
24	1H	1493	C

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Mol	Chain	Res	Type
24	1H	1497	U
24	1H	1507	A
24	1H	1509	C
24	1H	1510	A
24	1H	1511	A
24	1H	1520	U
24	1H	1522	G
24	1H	1523	U
24	1H	1526	G
24	1H	1533	C
24	1H	1534	G
24	1H	1535	U
24	1H	1536	A
24	1H	1537	C
24	1H	1540	G
24	1H	1543	A
24	1H	1544	C
24	1H	1545	A
24	1H	1554	A
24	1H	1558	A
24	1H	1559	G
24	1H	1562	A
24	1H	1564	C
24	1H	1566	A
24	1H	1569	A
24	1H	1578	U
24	1H	1580	A
24	1H	1581	G
24	1H	1582	C
24	1H	1585	C
24	1H	1586	A
24	1H	1608	A
24	1H	1609	A
24	1H	1610	A
24	1H	1616	A
24	1H	1617	C
24	1H	1620	G
24	1H	1634	A
24	1H	1639	U
24	1H	1640	C
24	1H	1644	C
24	1H	1647	G

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Mol	Chain	Res	Type
24	1H	1648	C
24	1H	1651	G
24	1H	1654	A
24	1H	1674	G
24	1H	1677	A
24	1H	1678	G
24	1H	1682	G
24	1H	1684	C
24	1H	1691	C
24	1H	1694	C
24	1H	1695	G
24	1H	1728	G
24	1H	1729	A
24	1H	1730	U
24	1H	1731	G
24	1H	1733	G
24	1H	1742	C
24	1H	1743	G
24	1H	1750	G
24	1H	1756	G
24	1H	1763	G
24	1H	1764	G
24	1H	1773	A
24	1H	1782	C
24	1H	1786	A
24	1H	1791	A
24	1H	1799	G
24	1H	1800	C
24	1H	1801	G
24	1H	1802	A
24	1H	1816	G
24	1H	1819	A
24	1H	1828	G
24	1H	1829	A
24	1H	1839	G
24	1H	1847	A
24	1H	1869	G
24	1H	1870	C
24	1H	1878	G
24	1H	1882	C
24	1H	1889	A
24	1H	1897	G

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Mol	Chain	Res	Type
24	1H	1900	A
24	1H	1906	G
24	1H	1911	U
24	1H	1912	A
24	1H	1913	A
24	1H	1914	C
24	1H	1919	A
24	1H	1920	C
24	1H	1929	G
24	1H	1930	G
24	1H	1936	A
24	1H	1937	A
24	1H	1938	A
24	1H	1951	U
24	1H	1952	A
24	1H	1955	U
24	1H	1963	U
24	1H	1967	C
24	1H	1968	G
24	1H	1969	A
24	1H	1970	A
24	1H	1971	A
24	1H	1972	A
24	1H	1982	C
24	1H	1992	G
24	1H	1993	U
24	1H	2005	A
24	1H	2020	A
24	1H	2023	G
24	1H	2031	A
24	1H	2032	G
24	1H	2033	A
24	1H	2034	U
24	1H	2043	C
24	1H	2051	A
24	1H	2052	G
24	1H	2055	C
24	1H	2056	G
24	1H	2060	A
24	1H	2061	G
24	1H	2063	C
24	1H	2068	U

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Mol	Chain	Res	Type
24	1H	2069	G
24	1H	2099	U
24	1H	2110	G
24	1H	2111	C
24	1H	2112	G
24	1H	2113	U
24	1H	2114	A
24	1H	2115	G
24	1H	2117	A
24	1H	2119	A
24	1H	2126	A
24	1H	2128	C
24	1H	2129	C
24	1H	2131	G
24	1H	2132	U
24	1H	2133	G
24	1H	2135	A
24	1H	2137	C
24	1H	2145	C
24	1H	2147	G
24	1H	2148	G
24	1H	2151	G
24	1H	2157	G
24	1H	2158	A
24	1H	2159	G
24	1H	2160	G
24	1H	2165	G
24	1H	2168	G
24	1H	2170	A
24	1H	2171	A
24	1H	2173	A
24	1H	2190	G
24	1H	2192	G
24	1H	2198	A
24	1H	2209	C
24	1H	2210	G
24	1H	2211	G
24	1H	2212	A
24	1H	2213	U
24	1H	2215	G
24	1H	2225	A
24	1H	2226	C

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Mol	Chain	Res	Type
24	1H	2238	G
24	1H	2239	G
24	1H	2240	C
24	1H	2242	G
24	1H	2253	G
24	1H	2264	C
24	1H	2265	U
24	1H	2267	A
24	1H	2268	A
24	1H	2269	A
24	1H	2271	G
24	1H	2275	C
24	1H	2283	C
24	1H	2287	A
24	1H	2299	G
24	1H	2305	A
24	1H	2307	G
24	1H	2308	G
24	1H	2309	A
24	1H	2311	A
24	1H	2320	A
24	1H	2325	G
24	1H	2327	A
24	1H	2334	G
24	1H	2336	A
24	1H	2343	C
24	1H	2345	G
24	1H	2346	A
24	1H	2347	C
24	1H	2348	U
24	1H	2350	C
24	1H	2355	C
24	1H	2357	U
24	1H	2360	A
24	1H	2361	A
24	1H	2376	A
24	1H	2377	A
24	1H	2383	G
24	1H	2385	C
24	1H	2389	G
24	1H	2392	A
24	1H	2393	A

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Mol	Chain	Res	Type
24	1H	2402	C
24	1H	2403	C
24	1H	2406	U
24	1H	2413	G
24	1H	2414	G
24	1H	2422	A
24	1H	2423	U
24	1H	2424	C
24	1H	2425	A
24	1H	2426	A
24	1H	2428	G
24	1H	2429	G
24	1H	2430	A
24	1H	2434	A
24	1H	2435	A
24	1H	2439	A
24	1H	2440	C
24	1H	2441	C
24	1H	2445	G
24	1H	2447	G
24	1H	2448	A
24	1H	2464	C
24	1H	2468	G
24	1H	2474	C
24	1H	2477	C
24	1H	2482	G
24	1H	2484	G
24	1H	2489	G
24	1H	2497	A
24	1H	2502	G
24	1H	2503	A
24	1H	2505	G
24	1H	2506	U
24	1H	2507	C
24	1H	2513	G
24	1H	2517	C
24	1H	2518	A
24	1H	2525	G
24	1H	2529	G
24	1H	2531	A
24	1H	2554	U
24	1H	2566	A

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Mol	Chain	Res	Type
24	1H	2567	G
24	1H	2572	A
24	1H	2573	C
24	1H	2582	G
24	1H	2599	G
24	1H	2601	C
24	1H	2602	A
24	1H	2609	U
24	1H	2611	U
24	1H	2612	C
24	1H	2613	U
24	1H	2614	A
24	1H	2615	U
24	1H	2629	A
24	1H	2636	U
24	1H	2646	C
24	1H	2654	A
24	1H	2663	G
24	1H	2665	A
24	1H	2666	C
24	1H	2667	C
24	1H	2673	G
24	1H	2682	U
24	1H	2689	U
24	1H	2690	C
24	1H	2702	U
24	1H	2703	C
24	1H	2705	A
24	1H	2707	G
24	1H	2712(A)	A
24	1H	2713	A
24	1H	2714	G
24	1H	2726	U
24	1H	2727	G
24	1H	2733	A
24	1H	2736	G
24	1H	2744	G
24	1H	2747	G
24	1H	2751	G
24	1H	2757	A
24	1H	2758	A
24	1H	2761	G

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Mol	Chain	Res	Type
24	1H	2764	A
24	1H	2765	A
24	1H	2766	G
24	1H	2777	G
24	1H	2778	A
24	1H	2779	U
24	1H	2781	A
24	1H	2789	C
24	1H	2790	A
24	1H	2791	C
24	1H	2793	G
24	1H	2794	C
24	1H	2795	G
24	1H	2801	A
24	1H	2802	G
24	1H	2803	C
24	1H	2805	G
24	1H	2808	U
24	1H	2820	A
24	1H	2821	A
24	1H	2826	A
24	1H	2833	G
24	1H	2834	G
24	1H	2835	A
24	1H	2850	A
24	1H	2851	A
24	1H	2860	A
24	1H	2866	U
24	1H	2871	C
24	1H	2872	G
24	1H	2880	C
24	1H	2892	A
24	1H	2893	G
25	16	7	G
25	16	9	G
25	16	12	C
25	16	13	A
25	16	15	A
25	16	19	G
25	16	22	U
25	16	24	G
25	16	25	A

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Mol	Chain	Res	Type
25	16	32	C
25	16	39	A
25	16	40	U
25	16	41	U
25	16	42	C
25	16	52	A
25	16	53	A
25	16	56	G
25	16	73	A
25	16	74	U
25	16	84	C
25	16	89	G
25	16	95	U
25	16	105	G
25	16	109	G
25	16	115	G
25	16	116	G
54	1G	5	U
54	1G	6	G
54	1G	7	G
54	1G	9	G
54	1G	22	G
54	1G	32	A
54	1G	39	G
54	1G	47	C
54	1G	48	C
54	1G	50	A
54	1G	51	A
54	1G	66	G
54	1G	76	G
54	1G	77	C
54	1G	79	G
54	1G	81	G
54	1G	90	C
54	1G	91	C
54	1G	92	G
54	1G	95	G
54	1G	101	A
54	1G	105	G
54	1G	108	G
54	1G	116	A
54	1G	120	A

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Mol	Chain	Res	Type
54	1G	121	C
54	1G	131	C
54	1G	144	G
54	1G	163	C
54	1G	173	U
54	1G	174	C
54	1G	182	U
54	1G	186	C
54	1G	186(F)	C
54	1G	187	C
54	1G	188	U
54	1G	189	U
54	1G	190	G
54	1G	191(A)	G
54	1G	191(D)	U
54	1G	195	A
54	1G	197	A
54	1G	198	G
54	1G	209	U
54	1G	210	U
54	1G	216	G
54	1G	220	G
54	1G	244	U
54	1G	245	C
54	1G	247	G
54	1G	251	G
54	1G	266	G
54	1G	267	C
54	1G	281	G
54	1G	289	G
54	1G	298	A
54	1G	318	G
54	1G	321	A
54	1G	328	C
54	1G	330	C
54	1G	332	G
54	1G	345	C
54	1G	346	G
54	1G	347	G
54	1G	350	G
54	1G	351	G
54	1G	352	C

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Mol	Chain	Res	Type
54	1G	353	A
54	1G	354	G
54	1G	363	A
54	1G	367	U
54	1G	372	C
54	1G	373	A
54	1G	381	C
54	1G	382	A
54	1G	384	G
54	1G	388	G
54	1G	397	A
54	1G	398	C
54	1G	406	G
54	1G	411	A
54	1G	412	A
54	1G	413	G
54	1G	417	C
54	1G	421	U
54	1G	422	C
54	1G	423	G
54	1G	429	U
54	1G	430	A
54	1G	439	A
54	1G	452	A
54	1G	466	C
54	1G	467	G
54	1G	484	G
54	1G	485	G
54	1G	486	U
54	1G	496	A
54	1G	497	U
54	1G	505	G
54	1G	509	A
54	1G	510	A
54	1G	511	C
54	1G	518	C
54	1G	527	G
54	1G	530	G
54	1G	531	U
54	1G	532	A
54	1G	533	A
54	1G	547	A

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Mol	Chain	Res	Type
54	1G	549	C
54	1G	554	C
54	1G	559	A
54	1G	561	U
54	1G	562	C
54	1G	563	A
54	1G	572	A
54	1G	573	A
54	1G	575	G
54	1G	576	G
54	1G	577	G
54	1G	596	C
54	1G	607	A
54	1G	608	A
54	1G	614	A
54	1G	618	C
54	1G	631	G
54	1G	632	A
54	1G	633	G
54	1G	651	C
54	1G	652	U
54	1G	653	A
54	1G	661	G
54	1G	665	A
54	1G	674	G
54	1G	686	U
54	1G	688	G
54	1G	702	A
54	1G	722	A
54	1G	723	U
54	1G	724	G
54	1G	728	A
54	1G	731	G
54	1G	745	C
54	1G	749	C
54	1G	755	G
54	1G	760	G
54	1G	764	C
54	1G	777	A
54	1G	793	U
54	1G	794	A
54	1G	801	U

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Mol	Chain	Res	Type
54	1G	811	C
54	1G	816	A
54	1G	817	C
54	1G	821	G
54	1G	828	A
54	1G	836	G
54	1G	842	C
54	1G	843	U
54	1G	848	C
54	1G	859	A
54	1G	873	A
54	1G	885	G
54	1G	913	A
54	1G	914	A
54	1G	916	G
54	1G	921	U
54	1G	922	G
54	1G	926	G
54	1G	927	G
54	1G	934	C
54	1G	935	A
54	1G	936	C
54	1G	940	C
54	1G	958	A
54	1G	960	U
54	1G	961	U
54	1G	966	G
54	1G	967	C
54	1G	968	A
54	1G	969	A
54	1G	971	G
54	1G	972	C
54	1G	974	A
54	1G	975	A
54	1G	976	G
54	1G	977	A
54	1G	980	C
54	1G	989	C
54	1G	991	U
54	1G	992	U
54	1G	993	G
54	1G	994	A

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Mol	Chain	Res	Type
54	1G	1002	G
54	1G	1004	A
54	1G	1009	G
54	1G	1017	G
54	1G	1023	G
54	1G	1024	G
54	1G	1028	C
54	1G	1029	G
54	1G	1030	C
54	1G	1031	G
54	1G	1032(A)	G
54	1G	1032(B)	G
54	1G	1033	G
54	1G	1036	G
54	1G	1038	C
54	1G	1052	U
54	1G	1054	C
54	1G	1055	A
54	1G	1056	U
54	1G	1066	C
54	1G	1067	A
54	1G	1081	G
54	1G	1093	A
54	1G	1094	G
54	1G	1095	U
54	1G	1101	A
54	1G	1110	A
54	1G	1117	G
54	1G	1124	G
54	1G	1126	U
54	1G	1127	G
54	1G	1129	C
54	1G	1138	G
54	1G	1139	G
54	1G	1140	C
54	1G	1146	A
54	1G	1147	C
54	1G	1148	U
54	1G	1154	G
54	1G	1157	A
54	1G	1159	U
54	1G	1171	G

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Mol	Chain	Res	Type
54	1G	1179	A
54	1G	1181	G
54	1G	1182	G
54	1G	1184	G
54	1G	1186	G
54	1G	1187	G
54	1G	1188	A
54	1G	1190	G
54	1G	1192	C
54	1G	1193	G
54	1G	1196	U
54	1G	1197	G
54	1G	1201	A
54	1G	1211	U
54	1G	1212	U
54	1G	1213	A
54	1G	1214	C
54	1G	1215	G
54	1G	1225	A
54	1G	1227	A
54	1G	1232	U
54	1G	1238	A
54	1G	1240	U
54	1G	1243	C
54	1G	1257	U
54	1G	1269	A
54	1G	1270	C
54	1G	1273	G
54	1G	1278	U
54	1G	1279	A
54	1G	1280	A
54	1G	1286	A
54	1G	1287	A
54	1G	1288	A
54	1G	1297	C
54	1G	1299	A
54	1G	1300	G
54	1G	1301	U
54	1G	1303	C
54	1G	1305	G
54	1G	1312	G
54	1G	1317	C

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Mol	Chain	Res	Type
54	1G	1319	A
54	1G	1320	C
54	1G	1322	C
54	1G	1323	G
54	1G	1324	A
54	1G	1325	C
54	1G	1331	G
54	1G	1335	C
54	1G	1336	C
54	1G	1346	A
54	1G	1347	G
54	1G	1353	G
54	1G	1362(A)	C
54	1G	1363	A
54	1G	1364	U
54	1G	1370	G
54	1G	1379	G
54	1G	1397	C
54	1G	1398	A
54	1G	1400	C
54	1G	1401	G
54	1G	1419	G
54	1G	1442	G
54	1G	1443	G
54	1G	1446	A
54	1G	1447	G
54	1G	1449	C
54	1G	1450	U
54	1G	1452	C
54	1G	1453	G
54	1G	1487	G
54	1G	1492	A
54	1G	1493	A
54	1G	1499	A
54	1G	1502	A
54	1G	1503	A
54	1G	1504	G
54	1G	1506	U
54	1G	1517	G
54	1G	1520	G
54	1G	1521	G
54	1G	1529	G

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Mol	Chain	Res	Type
54	1G	1530	G
54	1G	1531	A
54	1G	1532	U
22	2L	8	4SU
22	2L	9	U
22	2L	15	G
22	2L	18	G
22	2L	19	C
22	2L	20	C
22	2L	21	A
22	2L	22	A
22	2L	23	A
22	2L	24	G
22	2L	33	C
22	2L	36	U
22	2L	46	G
22	2L	47	U
22	2L	58	G
22	2L	59	A
22	2L	61	G
22	2L	67	A
22	2L	68	A
22	2L	70	C
22	2L	71	C
22	2L	72	U
22	2L	73	U
22	2L	75	C
22	2L	85	A
22	3L	6	G
22	3L	8	4SU
22	3L	14	A
22	3L	15	G
22	3L	17	OMG
22	3L	18	G
22	3L	19	C
22	3L	20	C
22	3L	21	A
22	3L	36	U
22	3L	41	C
22	3L	49	A
22	3L	51	C
22	3L	52	G

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Mol	Chain	Res	Type
22	3L	56	U
22	3L	57	C
22	3L	58	G
22	3L	64	PSU
22	3L	67	A
22	3L	68	A
22	3L	69	U
22	3L	85	A
23	4L	14	A
23	4L	18	C
24	14	3	U
24	14	4	C
24	14	5	A
24	14	6	A
24	14	9	U
24	14	10	G
24	14	14	A
24	14	15	G
24	14	34	C
24	14	35	G
24	14	36	G
24	14	46	C
24	14	51	G
24	14	58	G
24	14	60	G
24	14	61	G
24	14	71	A
24	14	72	U
24	14	74	A
24	14	75	G
24	14	90	U
24	14	91	A
24	14	93	C
24	14	95	G
24	14	102	G
24	14	118	A
24	14	119	A
24	14	120	U
24	14	129	C
24	14	131	G
24	14	150	C
24	14	153	C

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Mol	Chain	Res	Type
24	14	154	G
24	14	155	C
24	14	161	U
24	14	171	G
24	14	175	G
24	14	181	A
24	14	196	A
24	14	199	A
24	14	214	G
24	14	215	G
24	14	216	A
24	14	217	G
24	14	221	A
24	14	222	A
24	14	225	A
24	14	229	A
24	14	233	A
24	14	239	U
24	14	245	G
24	14	248	G
24	14	250	G
24	14	252	G
24	14	270(K)	C
24	14	270(L)	U
24	14	270(M)	U
24	14	270(O)	U
24	14	271(C)	U
24	14	271	G
24	14	273(C)	C
24	14	273(D)	C
24	14	274	G
24	14	277	C
24	14	278	A
24	14	279	C
24	14	286	C
24	14	289	A
24	14	292	C
24	14	293	U
24	14	294	A
24	14	309	G
24	14	311	A
24	14	329	G

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Mol	Chain	Res	Type
24	14	330	A
24	14	333	G
24	14	347	A
24	14	352	G
24	14	355	G
24	14	358	U
24	14	363	G
24	14	372	G
24	14	386	G
24	14	396	G
24	14	405	U
24	14	406	G
24	14	407	G
24	14	408	G
24	14	411	G
24	14	412	A
24	14	414	C
24	14	428	A
24	14	443	A
24	14	444	C
24	14	448	U
24	14	454	A
24	14	455	C
24	14	457	A
24	14	470	A
24	14	475	U
24	14	480	A
24	14	481	G
24	14	498	G
24	14	504	U
24	14	505	A
24	14	509	C
24	14	512	G
24	14	513	A
24	14	521	G
24	14	528	A
24	14	529	A
24	14	530	G
24	14	531	C
24	14	532	A
24	14	533	G
24	14	537	C

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Mol	Chain	Res	Type
24	14	546	C
24	14	549	G
24	14	556	G
24	14	563	G
24	14	567	A
24	14	573	G
24	14	575	A
24	14	584	C
24	14	586	A
24	14	592	G
24	14	603	A
24	14	607	U
24	14	615	G
24	14	617	G
24	14	621	A
24	14	622	G
24	14	627	A
24	14	637	A
24	14	645	C
24	14	646	A
24	14	647	G
24	14	654	A
24	14	654(G)	C
24	14	654(I)	C
24	14	654(J)	A
24	14	654(K)	C
24	14	654(L)	G
24	14	654(N)	G
24	14	654(O)	G
24	14	654(T)	A
24	14	669	G
24	14	686	G
24	14	690	G
24	14	717	G
24	14	730	C
24	14	739	G
24	14	740	U
24	14	759	G
24	14	762	U
24	14	765	G
24	14	776	G
24	14	779	U

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Mol	Chain	Res	Type
24	14	780	G
24	14	782	A
24	14	784	A
24	14	785	G
24	14	790	C
24	14	792	G
24	14	793	A
24	14	805	G
24	14	812	C
24	14	819	A
24	14	822	U
24	14	827	U
24	14	828	U
24	14	832	G
24	14	846	C
24	14	852	G
24	14	857	C
24	14	859	G
24	14	866	A
24	14	869	G
24	14	877	U
24	14	878	A
24	14	882	G
24	14	885	C
24	14	887	A
24	14	888	C
24	14	889	C
24	14	890	A
24	14	892	G
24	14	894	C
24	14	895	U
24	14	896	A
24	14	897	C
24	14	898	C
24	14	901	A
24	14	910	A
24	14	914	C
24	14	915	C
24	14	917	A
24	14	919	G
24	14	924	C
24	14	926	A

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Mol	Chain	Res	Type
24	14	932	G
24	14	938	G
24	14	941	A
24	14	945	A
24	14	946	G
24	14	953	A
24	14	959	A
24	14	961	C
24	14	974	G
24	14	980	A
24	14	983	A
24	14	986	C
24	14	989	G
24	14	996	A
24	14	1009	A
24	14	1010	A
24	14	1012	U
24	14	1013	C
24	14	1022	G
24	14	1023	U
24	14	1024	G
24	14	1025	G
24	14	1026	U
24	14	1027	A
24	14	1033	U
24	14	1039	G
24	14	1045	A
24	14	1047	G
24	14	1048	A
24	14	1049	C
24	14	1053	C
24	14	1054	A
24	14	1060	U
24	14	1061	U
24	14	1062	G
24	14	1063	G
24	14	1064	C
24	14	1065	U
24	14	1067	A
24	14	1068	G
24	14	1070	A
24	14	1079	C

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Mol	Chain	Res	Type
24	14	1082	U
24	14	1083	U
24	14	1085	A
24	14	1086	A
24	14	1087	G
24	14	1088	A
24	14	1089	G
24	14	1090	U
24	14	1094	U
24	14	1096	A
24	14	1097	U
24	14	1099	G
24	14	1104	C
24	14	1112	G
24	14	1122	G
24	14	1129	A
24	14	1130	U
24	14	1135	C
24	14	1136	G
24	14	1139	G
24	14	1143	A
24	14	1147	C
24	14	1148	A
24	14	1151	G
24	14	1173	G
24	14	1175	U
24	14	1177	A
24	14	1178	C
24	14	1187	G
24	14	1188	U
24	14	1204	A
24	14	1205	U
24	14	1212	G
24	14	1220	A
24	14	1244	G
24	14	1252	G
24	14	1253	A
24	14	1255	U
24	14	1256	G
24	14	1269	A
24	14	1271	G
24	14	1272	A

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Mol	Chain	Res	Type
24	14	1273	U
24	14	1287	A
24	14	1300	U
24	14	1301	A
24	14	1303	G
24	14	1307	A
24	14	1310	G
24	14	1312	U
24	14	1314	C
24	14	1317	A
24	14	1325	G
24	14	1329	U
24	14	1338	G
24	14	1342	A
24	14	1345	C
24	14	1348	G
24	14	1349	A
24	14	1352	U
24	14	1359	A
24	14	1360	A
24	14	1365	A
24	14	1368	G
24	14	1380	G
24	14	1384	A
24	14	1385	G
24	14	1386	C
24	14	1388	G
24	14	1404	C
24	14	1405	U
24	14	1406	U
24	14	1407	C
24	14	1408	C
24	14	1416	G
24	14	1417	C
24	14	1421	G
24	14	1428	C
24	14	1436	G
24	14	1437	C
24	14	1444(A)	A
24	14	1445	C
24	14	1449	A
24	14	1449(A)	G

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Mol	Chain	Res	Type
24	14	1453	A
24	14	1455	G
24	14	1458	C
24	14	1459	G
24	14	1460	A
24	14	1462	C
24	14	1467	C
24	14	1471	A
24	14	1474	C
24	14	1475	G
24	14	1482	U
24	14	1483	G
24	14	1487	G
24	14	1488	G
24	14	1490	A
24	14	1493	C
24	14	1494	A
24	14	1497	U
24	14	1500	G
24	14	1509	C
24	14	1510	A
24	14	1522	G
24	14	1527	G
24	14	1528	A
24	14	1534	G
24	14	1535	U
24	14	1536	A
24	14	1537	C
24	14	1543	A
24	14	1544	C
24	14	1558	A
24	14	1559	G
24	14	1560	G
24	14	1566	A
24	14	1569	A
24	14	1578	U
24	14	1580	A
24	14	1581	G
24	14	1585	C
24	14	1586	A
24	14	1587	A
24	14	1588	C

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Mol	Chain	Res	Type
24	14	1595	G
24	14	1598	C
24	14	1608	A
24	14	1609	A
24	14	1610	A
24	14	1616	A
24	14	1618	A
24	14	1625	C
24	14	1636	C
24	14	1639	U
24	14	1648	C
24	14	1654	A
24	14	1672	C
24	14	1674	G
24	14	1675	C
24	14	1696	G
24	14	1698	A
24	14	1700	A
24	14	1701	A
24	14	1717	G
24	14	1725	G
24	14	1729	A
24	14	1730	U
24	14	1731	G
24	14	1732	A
24	14	1743	G
24	14	1756	G
24	14	1758	G
24	14	1764	G
24	14	1773	A
24	14	1774	C
24	14	1782	C
24	14	1791	A
24	14	1800	C
24	14	1801	G
24	14	1802	A
24	14	1811	G
24	14	1816	G
24	14	1829	A
24	14	1834	U
24	14	1839	G
24	14	1847	A

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Mol	Chain	Res	Type
24	14	1848	A
24	14	1858	G
24	14	1869	G
24	14	1871	A
24	14	1878	G
24	14	1889	A
24	14	1895	C
24	14	1900	A
24	14	1906	G
24	14	1912	A
24	14	1913	A
24	14	1914	C
24	14	1917	U
24	14	1929	G
24	14	1930	G
24	14	1931	U
24	14	1936	A
24	14	1937	A
24	14	1938	A
24	14	1945	G
24	14	1955	U
24	14	1963	U
24	14	1967	C
24	14	1970	A
24	14	1971	A
24	14	1972	A
24	14	1982	C
24	14	1984	G
24	14	1993	U
24	14	2020	A
24	14	2023	G
24	14	2027	G
24	14	2030	A
24	14	2031	A
24	14	2033	A
24	14	2036	C
24	14	2043	C
24	14	2049	G
24	14	2055	C
24	14	2056	G
24	14	2059	A
24	14	2060	A

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Mol	Chain	Res	Type
24	14	2061	G
24	14	2062	A
24	14	2069	G
24	14	2071	A
24	14	2074	U
24	14	2083	G
24	14	2093	G
24	14	2099	U
24	14	2100	G
24	14	2110	G
24	14	2111	C
24	14	2112	G
24	14	2114	A
24	14	2115	G
24	14	2117	A
24	14	2123	G
24	14	2125	G
24	14	2126	A
24	14	2127	G
24	14	2128	C
24	14	2131	G
24	14	2132	U
24	14	2133	G
24	14	2134	A
24	14	2136	C
24	14	2145	C
24	14	2146	C
24	14	2147	G
24	14	2148	G
24	14	2165	G
24	14	2166	G
24	14	2167	U
24	14	2169	A
24	14	2170	A
24	14	2173	A
24	14	2174	C
24	14	2175	C
24	14	2189	U
24	14	2191	G
24	14	2192	G
24	14	2198	A
24	14	2210	G

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Mol	Chain	Res	Type
24	14	2211	G
24	14	2212	A
24	14	2213	U
24	14	2215	G
24	14	2225	A
24	14	2226	C
24	14	2238	G
24	14	2239	G
24	14	2261	C
24	14	2271	G
24	14	2275	C
24	14	2278	A
24	14	2283	C
24	14	2287	A
24	14	2288	A
24	14	2289	G
24	14	2298	A
24	14	2305	A
24	14	2307	G
24	14	2308	G
24	14	2309	A
24	14	2310	A
24	14	2311	A
24	14	2312	U
24	14	2316	C
24	14	2320	A
24	14	2321	G
24	14	2324	C
24	14	2325	G
24	14	2327	A
24	14	2334	G
24	14	2336	A
24	14	2337	G
24	14	2341	G
24	14	2342	C
24	14	2346	A
24	14	2347	C
24	14	2350	C
24	14	2354	G
24	14	2355	C
24	14	2383	G
24	14	2385	C

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Mol	Chain	Res	Type
24	14	2388	A
24	14	2389	G
24	14	2392	A
24	14	2393	A
24	14	2402	C
24	14	2403	C
24	14	2406	U
24	14	2410	G
24	14	2414	G
24	14	2425	A
24	14	2428	G
24	14	2429	G
24	14	2430	A
24	14	2431	U
24	14	2434	A
24	14	2435	A
24	14	2439	A
24	14	2440	C
24	14	2441	C
24	14	2446	G
24	14	2448	A
24	14	2449	U
24	14	2459	A
24	14	2461	C
24	14	2468	G
24	14	2469	A
24	14	2472	G
24	14	2476	A
24	14	2477	C
24	14	2480	C
24	14	2502	G
24	14	2505	G
24	14	2506	U
24	14	2512	C
24	14	2513	G
24	14	2518	A
24	14	2529	G
24	14	2542	A
24	14	2543	G
24	14	2554	U
24	14	2566	A
24	14	2567	G

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Mol	Chain	Res	Type
24	14	2569	G
24	14	2572	A
24	14	2573	C
24	14	2574	G
24	14	2578	G
24	14	2582	G
24	14	2602	A
24	14	2603	G
24	14	2608	G
24	14	2609	U
24	14	2610	C
24	14	2611	U
24	14	2612	C
24	14	2615	U
24	14	2629	A
24	14	2630	G
24	14	2635	C
24	14	2636	U
24	14	2641	G
24	14	2660	A
24	14	2665	A
24	14	2666	C
24	14	2673	G
24	14	2679	A
24	14	2689	U
24	14	2690	C
24	14	2702	U
24	14	2703	C
24	14	2712(A)	A
24	14	2713	A
24	14	2714	G
24	14	2725	A
24	14	2726	U
24	14	2733	A
24	14	2750	A
24	14	2751	G
24	14	2752	C
24	14	2754	U
24	14	2757	A
24	14	2761	G
24	14	2762	G
24	14	2764	A

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Mol	Chain	Res	Type
24	14	2765	A
24	14	2766	G
24	14	2769	C
24	14	2777	G
24	14	2778	A
24	14	2789	C
24	14	2791	C
24	14	2793	G
24	14	2797	U
24	14	2798	C
24	14	2801	A
24	14	2802	G
24	14	2803	C
24	14	2810	A
24	14	2818	G
24	14	2820	A
24	14	2821	A
24	14	2833	G
24	14	2834	G
24	14	2835	A
24	14	2849	U
24	14	2850	A
24	14	2860	A
24	14	2872	G
24	14	2873	A
24	14	2874	C
24	14	2876	G
24	14	2879	C
24	14	2892	A
24	14	2893	G
24	14	2894	G
24	14	2896	C
25	1J	0	A
25	1J	7	G
25	1J	8	U
25	1J	12	C
25	1J	13	A
25	1J	15	A
25	1J	16	G
25	1J	25	A
25	1J	26	A
25	1J	28	C

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Mol	Chain	Res	Type
25	1J	30	C
25	1J	40	U
25	1J	41	U
25	1J	42	C
25	1J	44	G
25	1J	45	A
25	1J	47	C
25	1J	58	A
25	1J	65	C
25	1J	67	G
25	1J	73	A
25	1J	75	G
25	1J	81	G
25	1J	88	C
25	1J	89	G
25	1J	89(A)	A
25	1J	90	C
25	1J	95	U
25	1J	109	G

All (160) RNA pucker outliers are listed below:

Mol	Chain	Res	Type
1	13	5	U
1	13	115	G
1	13	181	G
1	13	244	U
1	13	266	G
1	13	412	A
1	13	429	U
1	13	484	G
1	13	509	A
1	13	535	A
1	13	560	U
1	13	687	A
1	13	703	G
1	13	748	C
1	13	793	U
1	13	812	C
1	13	913	A
1	13	992	U
1	13	1027	C

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Mol	Chain	Res	Type
1	13	1054	C
1	13	1065	U
1	13	1285	A
1	13	1336	C
1	13	1498	U
22	2K	17	OMG
22	2K	20	C
22	2K	54	C
22	2K	61	G
22	2K	71	C
22	3K	8	4SU
22	3K	18	G
22	3K	21	A
23	4K	12	A
24	1H	70	G
24	1H	125	G
24	1H	195	A
24	1H	196	A
24	1H	222	A
24	1H	229	A
24	1H	404	C
24	1H	528	A
24	1H	654(S)	G
24	1H	685	A
24	1H	746	A
24	1H	752	A
24	1H	764	A
24	1H	776	G
24	1H	858	U
24	1H	859	G
24	1H	880	G
24	1H	897	C
24	1H	1022	G
24	1H	1026	U
24	1H	1060	U
24	1H	1178	C
24	1H	1312	U
24	1H	1379	A
24	1H	1396	U
24	1H	1427	A
24	1H	1508	A
24	1H	1558	A

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Mol	Chain	Res	Type
24	1H	1608	A
24	1H	1609	A
24	1H	1653	G
24	1H	1694	C
24	1H	1799	G
24	1H	1899	G
24	1H	1912	A
24	1H	1980	G
24	1H	2211	G
24	1H	2402	C
24	1H	2425	A
24	1H	2439	A
24	1H	2447	G
24	1H	2481	G
24	1H	2566	A
24	1H	2689	U
24	1H	2756	U
54	1G	4	U
54	1G	6	G
54	1G	80	G
54	1G	89	U
54	1G	115	G
54	1G	197	A
54	1G	243	A
54	1G	250	A
54	1G	327	A
54	1G	345	C
54	1G	412	A
54	1G	429	U
54	1G	485	G
54	1G	509	A
54	1G	560	U
54	1G	561	U
54	1G	632	A
54	1G	686	U
54	1G	687	A
54	1G	723	U
54	1G	748	C
54	1G	793	U
54	1G	884	U
54	1G	913	A
54	1G	992	U

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Mol	Chain	Res	Type
54	1G	1126	U
54	1G	1285	A
54	1G	1300	G
54	1G	1322	C
54	1G	1346	A
54	1G	1442	G
54	1G	1498	U
54	1G	1504	G
22	2L	18	G
22	2L	23	A
22	2L	32	A
22	2L	57	C
22	2L	60	A
22	2L	70	C
22	2L	71	C
22	3L	17	OMG
22	3L	18	G
22	3L	57	C
24	14	128	C
24	14	196	A
24	14	249	C
24	14	278	A
24	14	310	A
24	14	386	G
24	14	405	U
24	14	479	A
24	14	654(S)	G
24	14	669	G
24	14	685	A
24	14	746	A
24	14	856	C
24	14	886	C
24	14	888	C
24	14	974	G
24	14	1022	G
24	14	1085	A
24	14	1379	A
24	14	1396	U
24	14	1416	G
24	14	1420	U
24	14	1558	A
24	14	1608	A

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Mol	Chain	Res	Type
24	14	1609	A
24	14	1653	G
24	14	1912	A
24	14	2211	G
24	14	2320	A
24	14	2406	U
24	14	2439	A
24	14	2602	A
24	14	2610	C
24	14	2689	U
24	14	2776	A
24	14	2801	A
24	14	2859	G
24	14	2893	G
25	1J	15	A

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

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

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

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	$\#\|Z\| > 2$	Counts	RMSZ	$\#\|Z\| > 2$
22	PSU	2K	64	22	18,21,22	2.58	5 (27%)	22,30,33	1.73	5 (22%)
22	OMG	2L	17	22	18,26,27	5.32	9 (50%)	19,38,41	3.76	8 (42%)
22	5MU	2K	63	22	19,22,23	3.85	5 (26%)	28,32,35	3.50	9 (32%)
22	PSU	3K	40	22	18,21,22	2.40	5 (27%)	22,30,33	1.46	2 (9%)
22	QUO	2L	35	23,22	29,35,36	5.16	10 (34%)	31,52,55	3.97	10 (32%)
22	QUO	2K	35	23,22	29,35,36	5.23	9 (31%)	31,52,55	3.85	9 (29%)
22	MIA	2K	38	22	24,31,32	2.63	4 (16%)	26,44,47	4.41	9 (34%)
22	QUO	3K	35	22	29,35,36	5.16	10 (34%)	31,52,55	3.38	11 (35%)
22	PSU	3L	64	22	18,21,22	2.60	6 (33%)	22,30,33	1.65	4 (18%)
22	PSU	3L	40	22	18,21,22	2.47	5 (27%)	22,30,33	1.82	4 (18%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	$\#\|Z\|>2$	Counts	RMSZ	$\#\|Z\|>2$
22	MIA	3L	38	22	24,31,32	2.49	3 (12%)	26,44,47	3.43	10 (38%)
22	5MU	3K	63	22	19,22,23	3.84	5 (26%)	28,32,35	3.06	8 (28%)
22	QUO	3L	35	22	29,35,36	5.28	11 (37%)	31,52,55	3.93	10 (32%)
22	PSU	3K	64	22	18,21,22	2.48	5 (27%)	22,30,33	1.74	3 (13%)
22	PSU	2L	40	22	18,21,22	2.37	5 (27%)	22,30,33	1.61	3 (13%)
22	OMG	3L	17	22	18,26,27	5.39	9 (50%)	19,38,41	3.71	7 (36%)
22	5MU	3L	63	22	19,22,23	3.89	5 (26%)	28,32,35	3.05	8 (28%)
22	MIA	3K	38	22	24,31,32	2.74	4 (16%)	26,44,47	2.97	9 (34%)
22	PSU	2K	40	22	18,21,22	2.24	5 (27%)	22,30,33	1.54	4 (18%)
22	PSU	2L	64	22	18,21,22	2.65	6 (33%)	22,30,33	1.68	4 (18%)
22	4SU	3K	8	22	18,21,22	1.78	3 (16%)	26,30,33	2.80	6 (23%)
22	OMG	2K	17	22	18,26,27	5.33	9 (50%)	19,38,41	3.75	9 (47%)
22	5MU	2L	63	22	19,22,23	3.92	5 (26%)	28,32,35	3.46	9 (32%)
22	4SU	2L	8	22	18,21,22	1.86	4 (22%)	26,30,33	2.21	5 (19%)
22	OMG	3K	17	22	18,26,27	5.22	9 (50%)	19,38,41	3.71	7 (36%)
22	4SU	2K	8	22	18,21,22	1.87	3 (16%)	26,30,33	2.53	5 (19%)
22	4SU	3L	8	55,22	18,21,22	1.93	5 (27%)	26,30,33	2.04	5 (19%)
22	MIA	2L	38	22	24,31,32	2.52	3 (12%)	26,44,47	3.47	11 (42%)

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

Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
22	PSU	2K	64	22	-	2/7/25/26	0/2/2/2
22	OMG	2L	17	22	-	4/5/27/28	0/3/3/3
22	5MU	2K	63	22	-	0/7/25/26	0/2/2/2
22	PSU	3K	40	22	-	0/7/25/26	0/2/2/2
22	QUO	2L	35	23,22	-	1/6/43/44	0/4/4/4
22	QUO	2K	35	23,22	-	3/6/43/44	0/4/4/4
22	MIA	2K	38	22	-	7/11/33/34	0/3/3/3
22	QUO	3K	35	22	-	2/6/43/44	0/4/4/4
22	PSU	3L	64	22	-	3/7/25/26	0/2/2/2
22	PSU	3L	40	22	-	0/7/25/26	0/2/2/2
22	MIA	3L	38	22	-	2/11/33/34	0/3/3/3
22	5MU	3K	63	22	-	0/7/25/26	0/2/2/2

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
22	QUO	3L	35	22	-	2/6/43/44	0/4/4/4
22	PSU	3K	64	22	-	4/7/25/26	0/2/2/2
22	PSU	2L	40	22	-	0/7/25/26	0/2/2/2
22	OMG	3L	17	22	-	1/5/27/28	0/3/3/3
22	5MU	3L	63	22	-	0/7/25/26	0/2/2/2
22	MIA	3K	38	22	-	8/11/33/34	0/3/3/3
22	PSU	2K	40	22	-	0/7/25/26	0/2/2/2
22	PSU	2L	64	22	-	0/7/25/26	0/2/2/2
22	4SU	3K	8	22	-	3/7/25/26	0/2/2/2
22	OMG	2K	17	22	-	3/5/27/28	0/3/3/3
22	5MU	2L	63	22	-	0/7/25/26	0/2/2/2
22	4SU	2L	8	22	-	2/7/25/26	0/2/2/2
22	OMG	3K	17	22	-	4/5/27/28	0/3/3/3
22	4SU	2K	8	22	-	0/7/25/26	0/2/2/2
22	4SU	3L	8	55,22	-	0/7/25/26	0/2/2/2
22	MIA	2L	38	22	-	7/11/33/34	0/3/3/3

All (167) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
22	2L	17	OMG	C8-N7	-15.59	1.08	1.35
22	2K	17	OMG	C8-N7	-15.40	1.08	1.35
22	3L	17	OMG	C8-N7	-15.35	1.08	1.35
22	3K	17	OMG	C8-N7	-15.16	1.09	1.35
22	3L	35	QUO	C6-N1	-14.86	1.15	1.37
22	2K	35	QUO	C6-N1	-14.85	1.15	1.37
22	2L	35	QUO	C4-N3	14.44	1.72	1.37
22	3L	35	QUO	C4-N3	14.19	1.71	1.37
22	3K	35	QUO	C4-N3	14.12	1.71	1.37
22	3K	35	QUO	C6-N1	-13.93	1.17	1.37
22	2K	35	QUO	C4-N3	13.64	1.70	1.37
22	2L	35	QUO	C6-N1	-13.30	1.18	1.37
22	2L	63	5MU	C2-N1	13.05	1.59	1.38
22	3L	63	5MU	C2-N1	12.56	1.58	1.38
22	2K	63	5MU	C2-N1	12.31	1.58	1.38
22	3K	63	5MU	C2-N1	12.21	1.58	1.38
22	3K	35	QUO	C8-N9	-10.08	1.23	1.38
22	3L	17	OMG	C4-N3	10.00	1.61	1.37
22	2L	35	QUO	C5-C7	9.79	1.57	1.39
22	2K	17	OMG	C4-N3	9.75	1.61	1.37

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
22	3K	17	OMG	C4-N3	9.70	1.60	1.37
22	2K	35	QUO	C8-N9	-9.69	1.23	1.38
22	3L	35	QUO	C8-N9	-9.61	1.23	1.38
22	2L	17	OMG	C4-N3	9.55	1.60	1.37
22	2L	35	QUO	C8-N9	-9.50	1.24	1.38
22	3L	35	QUO	C5-C7	9.45	1.56	1.39
22	2K	35	QUO	C5-C7	9.24	1.56	1.39
22	3L	17	OMG	C6-N1	-9.15	1.24	1.37
22	3K	35	QUO	C5-C7	9.11	1.56	1.39
22	2K	17	OMG	C6-N1	-9.06	1.24	1.37
22	2L	17	OMG	C6-N1	-8.98	1.24	1.37
22	2L	38	MIA	C13-C14	8.92	1.58	1.32
22	3K	38	MIA	C13-C14	8.78	1.57	1.32
22	2K	38	MIA	C13-C14	8.59	1.57	1.32
22	3K	17	OMG	C6-N1	-8.58	1.25	1.37
22	3L	38	MIA	C13-C14	8.58	1.57	1.32
22	2K	35	QUO	C5-C6	-8.55	1.29	1.47
22	2L	35	QUO	C2-N3	8.27	1.53	1.33
22	3L	35	QUO	C5-C6	-8.03	1.30	1.47
22	3K	35	QUO	C5-C6	-7.80	1.31	1.47
22	2K	35	QUO	C2-N3	7.77	1.52	1.33
22	3K	35	QUO	C2-N3	7.67	1.51	1.33
22	3L	35	QUO	C2-N3	7.59	1.51	1.33
22	2L	35	QUO	C5-C6	-7.47	1.31	1.47
22	2K	17	OMG	C5-C4	7.34	1.61	1.43
22	3L	17	OMG	C5-C4	7.33	1.61	1.43
22	3K	17	OMG	C5-C4	7.20	1.61	1.43
22	2L	17	OMG	C5-C4	7.18	1.61	1.43
22	2L	64	PSU	C6-N1	6.88	1.47	1.36
22	2K	38	MIA	C2-S10	6.46	1.81	1.75
22	3L	64	PSU	C6-N1	6.45	1.46	1.36
22	3K	38	MIA	C6-N6	6.41	1.46	1.34
22	3K	64	PSU	C6-N1	6.32	1.46	1.36
22	3K	40	PSU	C6-N1	6.31	1.46	1.36
22	2K	64	PSU	C6-N1	6.23	1.46	1.36
22	3L	40	PSU	C6-N1	6.20	1.46	1.36
22	2K	64	PSU	C2-N1	6.16	1.45	1.36
22	2L	40	PSU	C6-N1	6.12	1.46	1.36
22	3K	38	MIA	C2-S10	6.09	1.80	1.75
22	2L	63	5MU	C4-N3	-6.08	1.27	1.38
22	2L	64	PSU	C2-N1	6.07	1.44	1.36
22	2K	63	5MU	C4-N3	-6.07	1.27	1.38

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
22	3K	63	5MU	C4-N3	-6.06	1.27	1.38
22	3L	63	5MU	C2-N3	5.99	1.48	1.38
22	3L	8	4SU	C5-C4	5.88	1.50	1.42
22	3L	64	PSU	C2-N1	5.86	1.44	1.36
22	3K	64	PSU	C2-N1	5.86	1.44	1.36
22	2K	40	PSU	C6-N1	5.85	1.45	1.36
22	3L	38	MIA	C6-N6	5.84	1.45	1.34
22	3K	63	5MU	C2-N3	5.83	1.48	1.38
22	2L	63	5MU	C2-N3	5.80	1.48	1.38
22	2K	8	4SU	C5-C4	5.79	1.50	1.42
22	2L	38	MIA	C6-N6	5.78	1.45	1.34
22	2K	63	5MU	C4-C5	5.78	1.54	1.44
22	3L	63	5MU	C4-N3	-5.77	1.28	1.38
22	3L	63	5MU	C6-N1	5.67	1.47	1.38
22	3L	35	QUO	C13-C12	-5.63	1.47	1.53
22	3K	63	5MU	C6-N1	5.58	1.47	1.38
22	2K	38	MIA	C6-N6	5.56	1.44	1.34
22	2L	8	4SU	C5-C4	5.48	1.49	1.42
22	3K	40	PSU	C2-N1	5.34	1.44	1.36
22	2K	63	5MU	C6-N1	5.32	1.47	1.38
22	2K	63	5MU	C2-N3	5.28	1.47	1.38
22	3L	40	PSU	C2-N1	5.27	1.43	1.36
22	2L	63	5MU	C6-N1	5.25	1.47	1.38
22	2L	40	PSU	C2-N1	5.23	1.43	1.36
22	2K	35	QUO	C13-C12	-5.13	1.48	1.53
22	3L	38	MIA	C2-S10	5.01	1.80	1.75
22	2L	35	QUO	C13-C12	-5.00	1.48	1.53
22	3L	63	5MU	C4-C5	4.97	1.53	1.44
22	3K	8	4SU	C5-C4	4.93	1.48	1.42
22	3K	63	5MU	C4-C5	4.93	1.53	1.44
22	3K	35	QUO	C13-C12	-4.91	1.48	1.53
22	2L	38	MIA	C2-S10	4.76	1.79	1.75
22	2L	35	QUO	C2-N2	4.70	1.45	1.34
22	2K	40	PSU	C2-N1	4.67	1.43	1.36
22	2L	63	5MU	C4-C5	4.33	1.52	1.44
22	2K	35	QUO	C2-N2	4.29	1.44	1.34
22	3K	8	4SU	C2-N1	4.16	1.45	1.38
22	3K	35	QUO	C2-N2	4.15	1.44	1.34
22	2K	8	4SU	C2-N1	4.09	1.45	1.38
22	2L	64	PSU	C1'-C5	-4.09	1.40	1.50
22	3K	64	PSU	C1'-C5	-3.98	1.41	1.50
22	3L	64	PSU	C1'-C5	-3.97	1.41	1.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
22	2L	8	4SU	C2-N1	3.96	1.44	1.38
22	3L	17	OMG	C5-C6	-3.89	1.39	1.47
22	3L	35	QUO	C2-N2	3.84	1.43	1.34
22	2K	64	PSU	C2-N3	3.82	1.44	1.37
22	3L	40	PSU	C1'-C5	-3.78	1.41	1.50
22	2L	17	OMG	C5-C6	-3.77	1.39	1.47
22	3K	17	OMG	C5-C6	-3.70	1.39	1.47
22	2K	64	PSU	C1'-C5	-3.63	1.41	1.50
22	3L	64	PSU	C2-N3	3.62	1.43	1.37
22	3K	40	PSU	C1'-C5	-3.59	1.42	1.50
22	3L	8	4SU	C2-N1	3.58	1.44	1.38
22	2K	17	OMG	C5-C6	-3.54	1.40	1.47
22	2K	64	PSU	C4-C5	3.52	1.54	1.44
22	3K	38	MIA	C6-N1	3.40	1.37	1.32
22	2K	40	PSU	C1'-C5	-3.39	1.42	1.50
22	2L	40	PSU	C1'-C5	-3.35	1.42	1.50
22	3L	17	OMG	C2-N3	3.31	1.41	1.33
22	3L	35	QUO	C14-C13	-3.31	1.48	1.53
22	3L	40	PSU	C4-C5	3.24	1.53	1.44
22	2L	40	PSU	C4-C5	3.20	1.53	1.44
22	3L	40	PSU	C2-N3	3.11	1.42	1.37
22	2L	64	PSU	C2-N3	3.07	1.42	1.37
22	2K	17	OMG	C2-N3	3.07	1.40	1.33
22	3L	17	OMG	C2-N2	3.01	1.41	1.34
22	2K	40	PSU	C2-N3	2.97	1.42	1.37
22	3K	17	OMG	C2-N2	2.96	1.41	1.34
22	3K	64	PSU	C2-N3	2.88	1.42	1.37
22	2L	17	OMG	C2-N3	2.87	1.40	1.33
22	3L	8	4SU	C6-N1	2.87	1.44	1.38
22	2L	17	OMG	C2-N2	2.84	1.41	1.34
22	3K	17	OMG	C2-N3	2.84	1.40	1.33
22	2K	40	PSU	C4-C5	2.84	1.52	1.44
22	2K	17	OMG	C2-N2	2.82	1.40	1.34
22	3K	40	PSU	C2-N3	2.82	1.42	1.37
22	2L	35	QUO	C14-C13	-2.81	1.49	1.53
22	3K	40	PSU	C4-C5	2.79	1.52	1.44
22	3L	64	PSU	C4-C5	2.69	1.51	1.44
22	2K	38	MIA	C6-N1	2.65	1.36	1.32
22	2L	17	OMG	O6-C6	-2.62	1.18	1.23
22	2L	8	4SU	C6-N1	2.61	1.44	1.38
22	3L	17	OMG	O6-C6	-2.60	1.18	1.23
22	3K	8	4SU	C6-N1	2.58	1.44	1.38

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
22	3K	35	QUO	C16-C15	2.58	1.61	1.54
22	3K	64	PSU	C4-C5	2.55	1.51	1.44
22	2L	64	PSU	C4-C5	2.50	1.51	1.44
22	2K	35	QUO	C16-C15	2.50	1.60	1.54
22	2K	8	4SU	C6-N1	2.48	1.44	1.38
22	3K	35	QUO	C14-C13	-2.43	1.49	1.53
22	3L	35	QUO	C16-C15	2.38	1.60	1.54
22	2L	35	QUO	C16-C15	2.38	1.60	1.54
22	2L	40	PSU	C2-N3	2.37	1.41	1.37
22	3K	17	OMG	O6-C6	-2.37	1.18	1.23
22	2K	17	OMG	O6-C6	-2.31	1.18	1.23
22	3L	35	QUO	C2-N1	-2.30	1.32	1.37
22	3L	17	OMG	C2-N1	-2.28	1.32	1.37
22	3L	8	4SU	C4-N3	2.27	1.40	1.37
22	2K	17	OMG	C2-N1	-2.18	1.32	1.37
22	2L	17	OMG	C2-N1	-2.10	1.32	1.37
22	3L	64	PSU	C6-C5	2.08	1.37	1.35
22	3L	8	4SU	C2-N3	2.06	1.41	1.38
22	2L	8	4SU	C4-N3	2.04	1.39	1.37
22	2L	64	PSU	C6-C5	2.02	1.37	1.35
22	3K	17	OMG	C2-N1	-2.01	1.32	1.37

All (194) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
22	2K	38	MIA	C11-S10-C2	17.63	115.43	102.27
22	3L	35	QUO	C5-C6-N1	15.99	128.90	115.36
22	2L	35	QUO	C5-C6-N1	14.44	127.58	115.36
22	3K	35	QUO	C5-C6-N1	14.39	127.55	115.36
22	2K	35	QUO	C5-C6-N1	14.20	127.38	115.36
22	2L	38	MIA	C11-S10-C2	13.18	112.11	102.27
22	2L	35	QUO	C8-N9-C1'	-13.16	113.83	125.48
22	2K	35	QUO	C8-N9-C1'	-12.37	114.53	125.48
22	2L	63	5MU	C5-C4-N3	11.33	124.98	115.31
22	2K	63	5MU	C5-C4-N3	11.24	124.90	115.31
22	3L	38	MIA	C11-S10-C2	11.16	110.60	102.27
22	3L	17	OMG	C8-N7-C5	10.23	122.47	102.99
22	3L	63	5MU	C5-C4-N3	10.16	123.98	115.31
22	2K	17	OMG	C8-N7-C5	10.16	122.34	102.99
22	2L	17	OMG	C8-N7-C5	10.13	122.29	102.99
22	3K	17	OMG	C8-N7-C5	10.12	122.27	102.99
22	3K	63	5MU	C5-C4-N3	10.12	123.95	115.31

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
22	3K	38	MIA	C11-S10-C2	9.78	109.57	102.27
22	2K	38	MIA	C12-C13-C14	-9.59	108.47	127.14
22	3L	35	QUO	C8-N9-C1'	-9.44	117.13	125.48
22	2L	17	OMG	C5-C6-N1	9.00	129.85	113.95
22	3L	17	OMG	C5-C6-N1	8.99	129.83	113.95
22	3K	17	OMG	C5-C6-N1	8.82	129.53	113.95
22	2K	17	OMG	C5-C6-N1	8.67	129.25	113.95
22	3K	8	4SU	C4-N3-C2	-8.66	118.93	127.34
22	2K	8	4SU	C4-N3-C2	-8.64	118.95	127.34
22	3L	38	MIA	C12-C13-C14	-8.16	111.25	127.14
22	3K	8	4SU	C5-C4-N3	7.88	122.00	114.69
22	2K	63	5MU	C5-C6-N1	-7.58	115.55	123.34
22	2L	8	4SU	C4-N3-C2	-7.27	120.28	127.34
22	2K	63	5MU	C4-N3-C2	-6.99	118.30	127.35
22	3L	8	4SU	C4-N3-C2	-6.90	120.64	127.34
22	2L	38	MIA	C12-C13-C14	-6.73	114.04	127.14
22	2L	63	5MU	C4-N3-C2	-6.71	118.67	127.35
22	2L	63	5MU	O4-C4-C5	-6.71	117.13	124.90
22	2L	63	5MU	C5-C6-N1	-6.54	116.61	123.34
22	3K	38	MIA	C12-C13-C14	-6.48	114.53	127.14
22	2K	8	4SU	C5-C4-N3	6.38	120.61	114.69
22	3L	35	QUO	O6-C6-N1	-6.12	113.42	120.65
22	2L	63	5MU	C6-C5-C4	6.04	123.08	118.03
22	2K	63	5MU	C6-C5-C4	5.93	122.99	118.03
22	3K	63	5MU	C4-N3-C2	-5.84	119.80	127.35
22	3K	35	QUO	C8-N9-C1'	-5.71	120.43	125.48
22	3L	63	5MU	C4-N3-C2	-5.68	120.00	127.35
22	2L	17	OMG	O6-C6-N1	-5.65	113.98	120.65
22	2K	17	OMG	O6-C6-N1	-5.62	114.01	120.65
22	3K	63	5MU	C5-C6-N1	-5.61	117.56	123.34
22	2K	63	5MU	C5M-C5-C6	-5.59	115.38	122.85
22	3L	35	QUO	C16-C12-C13	5.56	111.43	103.18
22	3L	63	5MU	C5-C6-N1	-5.54	117.64	123.34
22	3K	8	4SU	C5-C4-S4	-5.38	117.54	124.47
22	3L	8	4SU	C5-C4-N3	5.26	119.56	114.69
22	3L	17	OMG	O6-C6-N1	-5.25	114.45	120.65
22	3K	63	5MU	C6-C5-C4	5.24	122.41	118.03
22	3L	63	5MU	C6-C5-C4	5.17	122.35	118.03
22	2L	8	4SU	C5-C4-N3	5.13	119.45	114.69
22	3L	63	5MU	O4-C4-C5	-4.94	119.17	124.90
22	3K	17	OMG	O6-C6-N1	-4.92	114.84	120.65
22	3L	38	MIA	C16-C14-C13	-4.81	108.73	122.65

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
22	2K	38	MIA	C16-C14-C13	-4.74	108.96	122.65
22	3K	64	PSU	C4-N3-C2	-4.73	119.52	126.34
22	2L	35	QUO	O6-C6-N1	-4.68	115.12	120.65
22	3K	63	5MU	O4-C4-C5	-4.59	119.58	124.90
22	2K	38	MIA	C15-C14-C13	-4.55	109.50	122.65
22	3L	38	MIA	C15-C14-C13	-4.55	109.50	122.65
22	2L	35	QUO	N1-C2-N3	-4.53	114.86	123.32
22	2L	38	MIA	C16-C14-C13	-4.53	109.56	122.65
22	3K	17	OMG	O6-C6-C5	-4.47	115.63	124.37
22	3L	40	PSU	N1-C2-N3	4.46	120.19	115.13
22	2K	64	PSU	C4-N3-C2	-4.45	119.92	126.34
22	3L	17	OMG	O6-C6-C5	-4.43	115.72	124.37
22	3K	38	MIA	C2-N3-C4	4.43	121.43	115.32
22	2K	35	QUO	O6-C6-N1	-4.42	115.43	120.65
22	3L	38	MIA	C2-N3-C4	4.41	121.40	115.32
22	3K	35	QUO	O6-C6-N1	-4.39	115.47	120.65
22	2L	64	PSU	C4-N3-C2	-4.36	120.05	126.34
22	2K	38	MIA	C2-N3-C4	4.33	121.29	115.32
22	3K	63	5MU	C5M-C5-C6	-4.28	117.13	122.85
22	3L	63	5MU	C5M-C5-C6	-4.24	117.18	122.85
22	2L	17	OMG	O6-C6-C5	-4.20	116.17	124.37
22	2L	8	4SU	N3-C2-N1	4.08	120.30	114.89
22	3L	40	PSU	C4-N3-C2	-4.08	120.47	126.34
22	3K	38	MIA	C16-C14-C13	-4.03	111.00	122.65
22	2K	8	4SU	N3-C2-N1	4.00	120.20	114.89
22	3K	38	MIA	C15-C14-C13	-3.95	111.23	122.65
22	2K	63	5MU	O4-C4-C5	-3.91	120.37	124.90
22	2K	17	OMG	O6-C6-C5	-3.91	116.73	124.37
22	2L	63	5MU	C5M-C5-C6	-3.90	117.64	122.85
22	3L	64	PSU	N1-C2-N3	3.89	119.54	115.13
22	2K	35	QUO	C16-C12-C13	3.88	108.95	103.18
22	2L	40	PSU	C4-N3-C2	-3.88	120.74	126.34
22	2L	35	QUO	C16-C12-C13	3.88	108.94	103.18
22	3K	35	QUO	N1-C2-N3	-3.87	116.09	123.32
22	3K	64	PSU	N1-C2-N3	3.86	119.50	115.13
22	3L	35	QUO	N1-C2-N3	-3.85	116.14	123.32
22	3K	40	PSU	C4-N3-C2	-3.83	120.82	126.34
22	3L	64	PSU	C4-N3-C2	-3.82	120.84	126.34
22	2L	38	MIA	C15-C14-C13	-3.77	111.76	122.65
22	2K	40	PSU	C4-N3-C2	-3.76	120.92	126.34
22	3L	35	QUO	C15-C14-C13	3.76	109.89	103.91
22	2K	64	PSU	N1-C2-N3	3.70	119.33	115.13

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
22	3K	35	QUO	C16-C12-C13	3.69	108.66	103.18
22	2L	38	MIA	C5-C6-N1	-3.68	117.75	120.81
22	2K	8	4SU	C5-C4-S4	-3.65	119.76	124.47
22	2L	40	PSU	N1-C2-N3	3.62	119.23	115.13
22	2K	38	MIA	N3-C2-N1	-3.58	120.39	126.98
22	2L	8	4SU	C5-C4-S4	-3.55	119.89	124.47
22	3L	8	4SU	N3-C2-N1	3.43	119.44	114.89
22	2L	64	PSU	N1-C2-N3	3.42	119.00	115.13
22	2K	35	QUO	N1-C2-N3	-3.40	116.97	123.32
22	3K	8	4SU	C1'-N1-C2	3.40	123.72	117.57
22	3K	35	QUO	C15-C14-C13	3.35	109.24	103.91
22	3K	35	QUO	O6-C6-C5	-3.34	116.99	123.98
22	2L	38	MIA	C2-N3-C4	3.33	119.91	115.32
22	2K	40	PSU	N1-C2-N3	3.33	118.90	115.13
22	3L	38	MIA	C1'-N9-C4	3.31	132.45	126.64
22	2K	35	QUO	C15-C14-C13	3.26	109.10	103.91
22	2K	35	QUO	O6-C6-C5	-3.24	117.19	123.98
22	3L	8	4SU	C5-C4-S4	-3.21	120.33	124.47
22	2L	35	QUO	O6-C6-C5	-3.19	117.30	123.98
22	3K	35	QUO	N2-C2-N1	3.17	123.47	116.71
22	3K	8	4SU	N3-C2-N1	3.11	119.02	114.89
22	3K	38	MIA	N3-C2-N1	-3.09	121.31	126.98
22	3K	40	PSU	N1-C2-N3	3.07	118.61	115.13
22	3K	17	OMG	C2-N1-C6	3.03	130.68	125.10
22	3L	35	QUO	O6-C6-C5	-3.00	117.68	123.98
22	2L	35	QUO	C15-C14-C13	2.98	108.66	103.91
22	3L	38	MIA	C4-C5-N7	-2.97	106.31	109.40
22	3K	17	OMG	N2-C2-N1	2.96	123.02	116.71
22	2K	64	PSU	O2-C2-N1	-2.93	119.56	122.79
22	3L	40	PSU	C6-N1-C2	-2.92	119.70	122.68
22	3K	38	MIA	C5-C6-N1	-2.91	118.39	120.81
22	3K	38	MIA	C4-C5-N7	-2.85	106.43	109.40
22	2K	35	QUO	N2-C2-N1	2.85	122.77	116.71
22	3L	38	MIA	C12-N6-C6	-2.83	118.35	122.55
22	2K	63	5MU	O4-C4-N3	-2.81	114.72	120.12
22	3K	63	5MU	C6-N1-C2	-2.81	118.45	121.30
22	3K	35	QUO	C7-C8-N9	-2.81	101.01	108.55
22	2L	17	OMG	N2-C2-N1	2.80	122.68	116.71
22	2K	17	OMG	C2-N1-C6	2.77	130.20	125.10
22	3L	64	PSU	C6-N1-C2	-2.77	119.85	122.68
22	3K	35	QUO	C7-C10-N11	-2.76	104.77	112.65
22	2L	35	QUO	C7-C8-N9	-2.76	101.15	108.55

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
22	2K	17	OMG	O2'-C2'-C1'	2.75	114.55	109.09
22	2K	40	PSU	O2-C2-N1	-2.75	119.76	122.79
22	3L	35	QUO	C7-C8-N9	-2.72	101.25	108.55
22	3L	40	PSU	O2-C2-N1	-2.71	119.81	122.79
22	3K	8	4SU	C1'-N1-C6	-2.68	115.01	120.84
22	3K	17	OMG	N1-C2-N3	-2.62	118.42	123.32
22	2L	38	MIA	C16-C14-C15	-2.62	108.82	114.60
22	3L	17	OMG	C2-N1-C6	2.61	129.90	125.10
22	2K	38	MIA	C2-N1-C6	2.60	121.85	117.19
22	2K	63	5MU	C5M-C5-C4	2.60	121.63	118.77
22	3K	35	QUO	C10-N11-C12	-2.59	109.46	114.90
22	2L	17	OMG	C2-N1-C6	2.58	129.85	125.10
22	2L	38	MIA	C4-C5-N7	-2.58	106.72	109.40
22	2K	8	4SU	C1'-N1-C2	2.56	122.21	117.57
22	3L	38	MIA	C5-C6-N1	-2.52	118.71	120.81
22	3L	63	5MU	C6-N1-C2	-2.51	118.76	121.30
22	2K	35	QUO	C7-C8-N9	-2.43	102.01	108.55
22	2K	40	PSU	C6-N1-C2	-2.43	120.20	122.68
22	3L	35	QUO	N2-C2-N1	2.42	121.87	116.71
22	2L	8	4SU	C1'-N1-C2	2.42	121.95	117.57
22	3L	38	MIA	N3-C2-N1	-2.41	122.56	126.98
22	2L	38	MIA	C1'-N9-C4	2.38	130.81	126.64
22	2K	63	5MU	N3-C2-N1	2.38	118.04	114.89
22	3L	17	OMG	N1-C2-N3	-2.36	118.90	123.32
22	2L	63	5MU	C1'-N1-C2	2.34	121.81	117.57
22	2L	35	QUO	N2-C2-N1	2.34	121.70	116.71
22	2K	17	OMG	C3'-C2'-C1'	-2.32	98.53	102.89
22	2K	38	MIA	C4-C5-N7	-2.31	106.99	109.40
22	3K	38	MIA	C2-N1-C6	2.30	121.30	117.19
22	2K	38	MIA	C5-C6-N1	-2.29	118.91	120.81
22	2K	64	PSU	O4-C4-N3	-2.29	115.73	120.12
22	3L	17	OMG	C3'-C2'-C1'	-2.27	98.61	102.89
22	2L	17	OMG	N1-C2-N3	-2.27	119.07	123.32
22	2L	63	5MU	C6-N1-C2	-2.27	119.00	121.30
22	2K	17	OMG	N2-C2-N1	2.24	121.49	116.71
22	2L	38	MIA	N3-C2-N1	-2.23	122.89	126.98
22	3L	64	PSU	O2-C2-N1	-2.22	120.34	122.79
22	3K	63	5MU	N3-C2-N1	2.21	117.82	114.89
22	2L	38	MIA	C2-N1-C6	2.21	121.14	117.19
22	3L	63	5MU	C1'-N1-C2	2.19	121.54	117.57
22	2K	17	OMG	N1-C2-N3	-2.19	119.22	123.32
22	3K	64	PSU	C5-C4-N3	2.18	121.51	116.58

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
22	2L	64	PSU	O4-C4-C5	-2.17	118.38	124.05
22	2L	17	OMG	C3'-C2'-C1'	-2.16	98.83	102.89
22	2K	64	PSU	C6-N1-C2	-2.14	120.50	122.68
22	2L	40	PSU	C6-N1-C2	-2.13	120.50	122.68
22	2L	35	QUO	C10-N11-C12	-2.10	110.48	114.90
22	2L	63	5MU	N3-C2-N1	2.08	117.65	114.89
22	3L	8	4SU	O2-C2-N1	-2.04	120.08	122.79
22	3L	35	QUO	C7-C10-N11	-2.01	106.90	112.65
22	2L	64	PSU	C5-C4-N3	2.01	121.12	116.58

There are no chirality outliers.

All (58) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
22	2K	35	QUO	O4'-C4'-C5'-O5'
22	2K	38	MIA	N1-C2-S10-C11
22	2K	38	MIA	N3-C2-S10-C11
22	2K	38	MIA	N6-C12-C13-C14
22	2K	38	MIA	C12-C13-C14-C15
22	2K	38	MIA	C12-C13-C14-C16
22	2K	64	PSU	O4'-C1'-C5-C4
22	2K	64	PSU	O4'-C1'-C5-C6
22	3K	17	OMG	C1'-C2'-O2'-CM2
22	3K	38	MIA	O4'-C4'-C5'-O5'
22	3K	38	MIA	C5-C6-N6-C12
22	3K	38	MIA	N1-C6-N6-C12
22	3K	38	MIA	N1-C2-S10-C11
22	3K	38	MIA	N3-C2-S10-C11
22	3K	38	MIA	C12-C13-C14-C16
22	3K	64	PSU	O4'-C4'-C5'-O5'
22	2L	38	MIA	C5-C6-N6-C12
22	2L	38	MIA	N1-C6-N6-C12
22	2L	38	MIA	N1-C2-S10-C11
22	2L	38	MIA	N3-C2-S10-C11
22	2L	38	MIA	N6-C12-C13-C14
22	2L	38	MIA	C12-C13-C14-C15
22	2L	38	MIA	C12-C13-C14-C16
22	3L	38	MIA	C12-C13-C14-C15
22	2K	17	OMG	C3'-C4'-C5'-O5'
22	2K	35	QUO	C3'-C4'-C5'-O5'
22	3K	38	MIA	C3'-C4'-C5'-O5'
22	2L	8	4SU	O4'-C4'-C5'-O5'

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Mol	Chain	Res	Type	Atoms
22	2L	17	OMG	O4'-C4'-C5'-O5'
22	2L	17	OMG	C3'-C4'-C5'-O5'
22	2K	38	MIA	N1-C6-N6-C12
22	2K	35	QUO	C7-C10-N11-C12
22	3K	64	PSU	C3'-C4'-C5'-O5'
22	2L	8	4SU	C3'-C4'-C5'-O5'
22	3L	64	PSU	C3'-C4'-C5'-O5'
22	3L	64	PSU	O4'-C4'-C5'-O5'
22	2K	38	MIA	C5-C6-N6-C12
22	3L	35	QUO	C7-C10-N11-C12
22	3K	38	MIA	C12-C13-C14-C15
22	2K	17	OMG	O4'-C4'-C5'-O5'
22	3K	17	OMG	O4'-C4'-C5'-O5'
22	2K	17	OMG	C4'-C5'-O5'-P
22	2L	17	OMG	C4'-C5'-O5'-P
22	3K	17	OMG	C4'-C5'-O5'-P
22	2L	17	OMG	C3'-C2'-O2'-CM2
22	3K	8	4SU	O4'-C1'-N1-C6
22	3L	35	QUO	C16-C12-N11-C10
22	3K	35	QUO	C4'-C5'-O5'-P
22	3K	8	4SU	O4'-C1'-N1-C2
22	3K	64	PSU	O4'-C1'-C5-C4
22	3L	64	PSU	O4'-C1'-C5-C4
22	3K	17	OMG	C3'-C4'-C5'-O5'
22	3K	64	PSU	O4'-C1'-C5-C6
22	3K	8	4SU	C2'-C1'-N1-C2
22	3L	17	OMG	O4'-C4'-C5'-O5'
22	3K	35	QUO	O4'-C4'-C5'-O5'
22	2L	35	QUO	C16-C12-N11-C10
22	3L	38	MIA	N3-C2-S10-C11

There are no ring outliers.

25 monomers are involved in 58 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
22	2K	64	PSU	2	0
22	2L	17	OMG	3	0
22	2L	35	QUO	6	0
22	2K	35	QUO	4	0
22	2K	38	MIA	3	0
22	3K	35	QUO	5	0
22	3L	64	PSU	2	0

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Mol	Chain	Res	Type	Clashes	Symm-Clashes
22	3L	40	PSU	1	0
22	3L	38	MIA	1	0
22	3K	63	5MU	4	0
22	3L	35	QUO	4	0
22	3K	64	PSU	3	0
22	2L	40	PSU	2	0
22	3L	17	OMG	1	0
22	3L	63	5MU	2	0
22	3K	38	MIA	3	0
22	2K	40	PSU	1	0
22	2L	64	PSU	2	0
22	3K	8	4SU	2	0
22	2K	17	OMG	3	0
22	2L	63	5MU	3	0
22	2L	8	4SU	2	0
22	3K	17	OMG	2	0
22	3L	8	4SU	2	0
22	2L	38	MIA	1	0

5.5 Carbohydrates (i)

There are no monosaccharides in this entry.

5.6 Ligand geometry (i)

Of 1387 ligands modelled in this entry, 1387 are monoatomic - leaving 0 for Mogul analysis.

There are no bond length outliers.

There are no bond angle outliers.

There are no chirality outliers.

There are no torsion outliers.

There are no ring outliers.

No monomer is involved in short contacts.

5.7 Other polymers (i)

There are no such residues in this entry.

5.8 Polymer linkage issues (i)

There are no chain breaks in this entry.

6 Fit of model and data

6.1 Protein, DNA and RNA chains

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

Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å^2)	Q<0.9
1	13	1501/1522 (98%)	0.17	32 (2%) 63 49	77, 129, 208, 407	0
2	12	237/256 (92%)	0.43	31 (13%) 3 2	137, 175, 213, 240	0
2	1E	237/256 (92%)	0.70	39 (16%) 1 1	131, 168, 201, 234	0
3	22	206/239 (86%)	0.51	28 (13%) 3 2	135, 156, 189, 209	0
3	2E	205/239 (85%)	0.50	23 (11%) 5 3	122, 142, 197, 207	0
4	32	208/209 (99%)	1.31	58 (27%) 0 0	108, 130, 156, 169	0
4	3E	208/209 (99%)	1.38	53 (25%) 0 0	104, 129, 155, 182	0
5	42	151/162 (93%)	0.43	17 (11%) 5 3	107, 128, 153, 194	0
5	4E	151/162 (93%)	0.57	16 (10%) 6 3	102, 125, 153, 204	0
6	52	101/101 (100%)	0.01	1 (0%) 82 72	101, 120, 138, 153	0
6	5E	101/101 (100%)	0.25	3 (2%) 50 34	105, 129, 146, 163	0
7	62	155/156 (99%)	1.14	33 (21%) 0 1	128, 144, 162, 171	0
7	6E	155/156 (99%)	0.74	27 (17%) 1 1	123, 149, 172, 184	0
8	72	138/138 (100%)	0.76	25 (18%) 1 1	111, 132, 143, 170	0
8	7E	138/138 (100%)	1.27	41 (29%) 0 0	115, 134, 145, 157	0
9	82	126/128 (98%)	2.64	69 (54%) 0 0	124, 170, 197, 213	0
9	8E	127/128 (99%)	1.37	46 (36%) 0 0	119, 163, 179, 191	0
10	1A	99/105 (94%)	1.46	30 (30%) 0 0	135, 170, 191, 206	0
10	1I	99/105 (94%)	0.97	24 (24%) 0 0	121, 166, 195, 209	0
11	2A	119/129 (92%)	0.96	11 (9%) 9 5	105, 125, 157, 256	0
11	2I	116/129 (89%)	0.42	8 (6%) 16 9	93, 126, 153, 203	0
12	3A	125/132 (94%)	1.35	39 (31%) 0 0	96, 114, 144, 188	0
12	3I	125/132 (94%)	1.08	29 (23%) 0 0	91, 104, 136, 239	0
13	4A	117/126 (92%)	1.18	29 (24%) 0 0	138, 174, 197, 229	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å^2)	Q<0.9
13	4I	116/126 (92%)	0.92	26 (22%) 0 0	127, 173, 195, 208	0
14	5A	60/61 (98%)	3.06	38 (63%) 0 0	145, 163, 185, 186	0
14	5I	60/61 (98%)	2.60	38 (63%) 0 0	127, 137, 167, 186	0
15	6A	88/89 (98%)	1.00	23 (26%) 0 0	100, 128, 146, 152	0
15	6I	88/89 (98%)	0.45	7 (7%) 12 6	103, 127, 147, 154	0
16	7A	84/88 (95%)	0.75	15 (17%) 1 1	108, 121, 141, 189	0
16	7I	84/88 (95%)	1.37	29 (34%) 0 0	119, 136, 162, 196	0
17	8A	100/105 (95%)	1.23	24 (24%) 0 0	104, 121, 140, 197	0
17	8I	100/105 (95%)	0.83	14 (14%) 2 1	112, 132, 146, 150	0
18	9A	72/88 (81%)	0.33	1 (1%) 75 63	107, 127, 185, 223	0
18	9I	72/88 (81%)	0.22	4 (5%) 24 13	111, 130, 164, 208	0
19	AA	82/93 (88%)	2.44	45 (54%) 0 0	152, 196, 219, 232	0
19	AI	83/93 (89%)	1.64	30 (36%) 0 0	150, 176, 207, 222	0
20	BA	99/106 (93%)	1.54	38 (38%) 0 0	96, 125, 161, 175	0
20	BI	99/106 (93%)	1.92	43 (43%) 0 0	127, 147, 191, 205	0
21	1B	25/27 (92%)	3.47	19 (76%) 0 0	135, 158, 186, 196	0
21	1F	25/27 (92%)	3.04	15 (60%) 0 0	139, 156, 182, 190	0
22	2K	75/85 (88%)	0.28	8 (10%) 6 3	95, 145, 276, 308	0
22	2L	71/85 (83%)	-0.03	4 (5%) 24 13	95, 146, 228, 250	0
22	3K	78/85 (91%)	-0.40	0 100 100	95, 199, 288, 312	0
22	3L	78/85 (91%)	-0.39	2 (2%) 56 40	93, 213, 284, 309	0
23	4K	11/27 (40%)	0.97	2 (18%) 1 1	105, 139, 160, 164	0
23	4L	6/27 (22%)	1.90	3 (50%) 0 0	116, 126, 146, 163	0
24	14	2909/2917 (99%)	0.27	60 (2%) 63 49	65, 99, 266, 424	0
24	1H	2912/2917 (99%)	0.29	36 (1%) 79 67	57, 92, 251, 431	0
25	16	122/122 (100%)	-0.19	0 100 100	96, 125, 153, 258	0
25	1J	122/122 (100%)	-0.08	2 (1%) 72 59	102, 138, 160, 226	0
26	71	135/229 (58%)	1.45	35 (25%) 0 0	152, 213, 248, 256	0
26	79	135/229 (58%)	1.19	38 (28%) 0 0	159, 237, 261, 265	0
27	11	272/276 (98%)	0.64	16 (5%) 22 13	60, 82, 103, 122	0
27	19	273/276 (98%)	0.86	39 (14%) 2 1	64, 87, 104, 133	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å^2)	Q<0.9
28	21	205/206 (99%)	1.06	42 (20%) 1 1	68, 105, 159, 229	0
28	29	205/206 (99%)	1.21	53 (25%) 0 0	71, 102, 169, 251	0
29	31	202/210 (96%)	0.82	23 (11%) 5 3	61, 94, 137, 152	0
29	39	208/210 (99%)	0.80	24 (11%) 4 3	71, 113, 184, 198	0
30	41	181/182 (99%)	0.61	24 (13%) 3 2	127, 159, 197, 218	0
30	49	181/182 (99%)	1.01	39 (21%) 0 1	142, 165, 197, 213	0
31	51	174/180 (96%)	0.05	2 (1%) 80 69	98, 122, 145, 174	0
31	59	171/180 (95%)	1.35	55 (32%) 0 0	148, 205, 246, 335	0
32	61	146/148 (98%)	0.01	4 (2%) 54 39	99, 136, 162, 176	0
32	69	146/148 (98%)	0.01	4 (2%) 54 39	100, 143, 171, 191	0
33	15	138/140 (98%)	1.15	35 (25%) 0 0	86, 115, 153, 196	0
33	58	138/140 (98%)	0.88	18 (13%) 3 2	86, 108, 153, 174	0
34	25	122/122 (100%)	0.96	22 (18%) 1 1	77, 98, 113, 122	0
34	68	122/122 (100%)	0.47	4 (3%) 46 30	73, 96, 115, 134	0
35	35	150/150 (100%)	1.00	31 (20%) 1 1	74, 119, 159, 213	0
35	78	150/150 (100%)	0.72	16 (10%) 6 3	65, 101, 126, 244	0
36	45	141/141 (100%)	1.46	48 (34%) 0 0	88, 117, 144, 179	0
36	88	141/141 (100%)	0.92	22 (15%) 2 1	78, 107, 139, 170	0
37	55	117/118 (99%)	0.66	7 (5%) 21 12	74, 94, 109, 130	0
37	98	118/118 (100%)	0.58	9 (7%) 13 7	79, 100, 119, 136	0
38	65	111/112 (99%)	1.37	36 (32%) 0 0	109, 130, 159, 180	0
38	A8	111/112 (99%)	1.19	32 (28%) 0 0	102, 123, 157, 203	0
39	75	137/146 (93%)	0.46	9 (6%) 18 11	88, 105, 157, 218	0
39	B8	137/146 (93%)	0.58	11 (8%) 12 6	92, 113, 171, 204	0
40	85	117/118 (99%)	0.78	13 (11%) 5 3	77, 109, 146, 183	0
40	C8	117/118 (99%)	1.27	32 (27%) 0 0	66, 97, 138, 182	0
41	95	101/101 (100%)	0.40	10 (9%) 7 4	80, 136, 158, 200	0
41	D8	101/101 (100%)	1.04	23 (22%) 0 0	71, 118, 159, 234	0
42	A5	113/113 (100%)	1.28	20 (17%) 1 1	74, 89, 125, 209	0
42	E8	113/113 (100%)	0.74	12 (10%) 6 3	74, 89, 121, 226	0
43	B5	93/96 (96%)	0.48	5 (5%) 25 14	86, 97, 119, 137	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å^2)	Q<0.9
43	F8	94/96 (97%)	0.45	5 (5%) 26 14	68, 87, 111, 124	0
44	C5	104/110 (94%)	1.06	21 (20%) 1 1	102, 136, 209, 232	0
44	G8	104/110 (94%)	0.65	12 (11%) 4 3	85, 108, 158, 205	0
45	D5	179/206 (86%)	0.92	34 (18%) 1 1	121, 163, 275, 332	0
45	H8	175/206 (84%)	0.23	12 (6%) 16 9	111, 157, 273, 304	0
46	E5	77/85 (90%)	1.66	31 (40%) 0 0	86, 102, 123, 174	0
46	I8	83/85 (97%)	1.31	25 (30%) 0 0	83, 99, 122, 165	0
47	F5	97/98 (98%)	1.54	31 (31%) 0 0	76, 96, 155, 197	0
47	J8	97/98 (98%)	2.25	44 (45%) 0 0	70, 93, 171, 227	0
48	G5	69/72 (95%)	0.53	3 (4%) 35 22	99, 124, 152, 184	0
48	K8	66/72 (91%)	0.19	0 100 100	74, 95, 120, 165	0
49	H5	59/60 (98%)	1.37	16 (27%) 0 0	91, 112, 169, 182	0
49	L8	59/60 (98%)	0.87	10 (16%) 1 1	87, 103, 149, 177	0
50	I5	63/71 (88%)	1.61	18 (28%) 0 0	165, 225, 254, 292	0
50	M8	66/71 (92%)	2.52	34 (51%) 0 0	156, 231, 273, 282	0
51	J5	59/60 (98%)	0.82	7 (11%) 4 2	71, 96, 206, 229	0
51	N8	59/60 (98%)	0.92	6 (10%) 6 4	64, 101, 224, 243	0
52	L5	49/49 (100%)	1.49	12 (24%) 0 0	69, 74, 108, 147	0
52	P8	47/49 (95%)	0.96	4 (8%) 10 6	60, 66, 88, 140	0
53	M5	63/65 (96%)	2.24	40 (63%) 0 0	82, 96, 122, 134	0
53	Q8	62/65 (95%)	1.28	13 (20%) 1 1	77, 92, 120, 133	0
54	1G	1504/1522 (98%)	0.20	47 (3%) 49 32	83, 130, 201, 419	0
All	All	21123/21920 (96%)	0.64	2476 (11%) 4 2	57, 120, 217, 431	0

All (2476) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
11	2A	129	SER	31.4
50	M8	66	SER	24.2
11	2A	128	ALA	21.5
26	71	1	PRO	20.6
19	AI	2	PRO	19.8
7	62	81	GLY	14.3
47	J8	97	LEU	14.2

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Mol	Chain	Res	Type	RSRZ
7	62	82	GLY	14.2
50	M8	63	TYR	13.5
13	4A	6	GLY	13.2
47	J8	98	LEU	13.1
47	J8	96	LYS	12.9
30	41	2	PRO	12.4
24	1H	4	C	12.4
50	I5	63	TYR	11.9
31	59	96	ALA	11.8
14	5A	2	ALA	11.3
10	1A	64	GLU	11.2
38	65	2	ALA	11.2
24	14	2902	C	11.2
12	3A	129	ALA	11.1
26	79	173	ALA	11.0
9	82	110	GLU	10.8
28	29	205	ALA	10.7
50	I5	42	PHE	10.4
45	D5	112	ARG	10.3
21	1F	16	GLY	10.2
45	D5	151	HIS	10.1
11	2I	11	LYS	10.1
9	82	115	GLY	9.8
14	5A	58	LYS	9.7
7	62	83	ALA	9.5
35	78	150	ALA	9.4
8	72	1	MET	9.3
9	82	111	ARG	9.1
4	32	70	ILE	9.0
24	14	2901	C	8.9
28	29	204	ALA	8.9
13	4I	98	VAL	8.9
14	5I	2	ALA	8.8
7	62	80	VAL	8.8
47	J8	92	LYS	8.7
26	71	175	VAL	8.7
13	4I	97	PRO	8.7
21	1B	13	ILE	8.6
50	M8	65	ASP	8.6
9	82	120	ARG	8.5
47	F5	98	LEU	8.5
50	I5	22	ILE	8.5

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Mol	Chain	Res	Type	RSRZ
26	71	2	LYS	8.4
20	BI	57	ARG	8.4
2	1E	96	ARG	8.3
7	62	84	ASN	8.3
45	D5	143	GLY	8.0
45	D5	150	LEU	8.0
12	3I	129	ALA	7.9
9	82	15	ALA	7.9
13	4I	96	LEU	7.9
26	79	51	PRO	7.8
47	F5	96	LYS	7.8
19	AI	3	ARG	7.8
11	2I	12	ARG	7.8
26	79	58	VAL	7.8
19	AA	79	THR	7.8
26	71	32	LEU	7.7
45	D5	149	SER	7.7
9	82	64	THR	7.7
14	5A	60	SER	7.6
12	3I	19	ARG	7.5
9	82	116	LYS	7.5
19	AA	71	LEU	7.5
14	5A	59	ALA	7.4
13	4I	100	GLY	7.4
11	2A	127	LYS	7.4
26	79	1	PRO	7.4
21	1B	14	TRP	7.4
20	BI	18	GLN	7.3
10	1A	59	SER	7.3
9	8E	117	HIS	7.3
2	1E	148	TYR	7.2
4	3E	3	ARG	7.2
14	5A	61	TRP	7.2
45	D5	147	GLY	7.2
45	D5	179	ASP	7.1
19	AA	10	PHE	7.1
14	5I	17	LYS	7.1
26	79	174	PRO	7.0
28	29	59	VAL	7.0
26	71	43	VAL	6.9
26	79	56	GLN	6.9
8	72	2	LEU	6.9

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Mol	Chain	Res	Type	RSRZ
20	BI	16	HIS	6.9
38	65	32	LEU	6.9
13	4I	110	ARG	6.8
24	14	3	U	6.7
24	14	4	C	6.7
38	65	33	LYS	6.7
24	14	2799	A	6.6
4	3E	209	ARG	6.6
4	32	2	GLY	6.6
13	4A	97	PRO	6.6
2	1E	95	GLN	6.6
4	32	69	GLY	6.6
51	N8	60	VAL	6.6
9	82	66	ARG	6.6
24	1H	654(K)	C	6.5
47	F5	97	LEU	6.5
28	29	151	TYR	6.5
14	5I	14	PRO	6.5
10	1A	67	THR	6.4
13	4I	111	LYS	6.4
3	22	177	THR	6.4
52	L5	48	LYS	6.4
26	71	33	ALA	6.4
46	E5	75	LEU	6.4
45	D5	141	VAL	6.4
4	32	3	ARG	6.4
26	79	52	ARG	6.3
46	E5	21	LEU	6.3
7	62	79	ARG	6.3
19	AI	6	LYS	6.3
9	82	126	SER	6.3
54	1G	1532	U	6.3
14	5A	57	ARG	6.3
9	82	114	TYR	6.3
50	M8	27	THR	6.3
9	82	109	VAL	6.3
21	1F	15	ARG	6.2
30	49	34	LEU	6.2
10	1I	47	PHE	6.2
4	3E	102	ASP	6.2
10	1A	46	ARG	6.1
17	8A	101	ARG	6.1

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Mol	Chain	Res	Type	RSRZ
21	1F	17	THR	6.1
18	9A	88	LYS	6.1
50	M8	22	ILE	6.1
10	1A	47	PHE	6.1
21	1F	2	GLY	6.1
9	82	10	ARG	6.1
14	5A	15	LYS	6.0
3	22	206	GLU	6.0
22	2K	49	A	6.0
19	AA	38	SER	6.0
50	M8	31	ILE	6.0
24	14	5	A	6.0
2	12	97	TRP	6.0
10	1A	66	ARG	6.0
31	59	164	TYR	6.0
35	78	149	GLU	6.0
47	J8	95	LEU	6.0
52	P8	47	ARG	6.0
7	62	85	TYR	6.0
10	1I	59	SER	5.9
13	4I	102	ARG	5.9
13	4A	94	ARG	5.9
30	49	39	ILE	5.9
42	A5	113	LYS	5.9
9	8E	126	SER	5.9
14	5I	30	ALA	5.9
45	H8	117	LEU	5.9
21	1B	2	GLY	5.8
10	1A	65	LEU	5.8
21	1F	14	TRP	5.8
10	1A	62	HIS	5.8
50	M8	62	ARG	5.8
9	8E	127	LYS	5.8
38	A8	13	ARG	5.8
9	82	36	TYR	5.8
31	59	124	GLU	5.7
19	AA	12	ASP	5.7
19	AA	35	SER	5.7
33	15	84	LYS	5.7
9	82	119	ALA	5.7
50	M8	59	PHE	5.7
7	62	32	ARG	5.7

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Mol	Chain	Res	Type	RSRZ
24	14	2802	G	5.7
4	3E	2	GLY	5.7
7	6E	32	ARG	5.7
26	71	173	ALA	5.6
17	8I	26	GLN	5.6
26	79	2	LYS	5.6
50	M8	60	GLN	5.6
9	82	14	VAL	5.6
31	59	169	VAL	5.6
4	3E	138	TYR	5.6
38	A8	92	TYR	5.6
45	D5	173	ALA	5.6
14	5I	12	ARG	5.6
50	I5	54	GLY	5.6
19	AA	33	THR	5.5
8	7E	131	GLY	5.5
8	7E	1	MET	5.5
31	59	33	LEU	5.5
31	59	95	ARG	5.5
21	1B	15	ARG	5.5
50	M8	64	GLY	5.5
31	59	111	HIS	5.5
38	A8	9	ARG	5.5
19	AI	71	LEU	5.5
21	1B	10	ARG	5.5
50	M8	28	LYS	5.5
8	7E	93	VAL	5.5
31	59	152	ARG	5.5
4	32	66	ARG	5.5
14	5A	50	LYS	5.4
9	82	63	ILE	5.4
38	A8	91	PRO	5.4
22	2K	54	C	5.4
7	6E	84	ASN	5.4
4	32	207	TYR	5.4
9	8E	106	ALA	5.4
8	7E	132	GLU	5.4
35	35	110	TYR	5.4
38	A8	8	GLU	5.3
10	1I	60	ARG	5.3
13	4A	87	TYR	5.3
39	75	106	SER	5.3

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Mol	Chain	Res	Type	RSRZ
4	32	73	ARG	5.3
9	82	11	LYS	5.3
19	AA	83	HIS	5.3
53	M5	40	GLU	5.3
4	32	74	GLN	5.3
19	AI	78	ARG	5.3
39	B8	106	SER	5.3
3	22	207	VAL	5.2
4	3E	21	LEU	5.2
9	8E	8	GLY	5.2
22	2L	48	C	5.2
13	4A	2	ALA	5.2
34	25	1	MET	5.2
19	AA	53	ASN	5.2
26	71	176	GLY	5.2
2	12	96	ARG	5.2
9	82	107	ARG	5.2
8	72	3	THR	5.2
9	8E	36	TYR	5.2
9	82	69	GLY	5.2
38	65	34	HIS	5.2
4	32	209	ARG	5.2
7	62	16	LEU	5.2
14	5I	13	THR	5.2
24	1H	654(J)	A	5.2
38	65	20	ARG	5.2
28	21	205	ALA	5.2
24	1H	1536	A	5.2
33	15	75	TYR	5.2
14	5A	39	LEU	5.2
30	49	75	LYS	5.2
8	7E	3	THR	5.2
26	71	28	LEU	5.1
46	I8	40	GLN	5.1
26	71	218	MET	5.1
26	71	174	PRO	5.1
13	4A	98	VAL	5.1
8	7E	2	LEU	5.1
50	M8	9	LEU	5.1
13	4A	88	ARG	5.1
2	12	163	PHE	5.1
7	6E	79	ARG	5.1

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Mol	Chain	Res	Type	RSRZ
7	6E	82	GLY	5.1
26	79	167	LYS	5.1
9	82	7	THR	5.0
14	5A	53	LEU	5.0
45	D5	177	PRO	5.0
26	79	210	ARG	5.0
10	1A	54	PHE	5.0
2	12	101	MET	5.0
45	D5	170	THR	5.0
26	71	34	THR	5.0
19	AA	49	ILE	5.0
46	E5	76	GLY	5.0
50	I5	41	PRO	5.0
12	3A	128	ALA	5.0
9	82	121	ARG	5.0
2	12	68	ILE	5.0
26	71	171	ILE	4.9
38	65	87	PHE	4.9
7	62	78	ARG	4.9
38	A8	112	PHE	4.9
21	1B	6	ARG	4.9
47	J8	42	GLN	4.9
46	E5	72	ARG	4.9
30	41	142	PRO	4.9
31	51	3	ARG	4.9
31	59	107	VAL	4.9
10	1I	58	ASP	4.9
8	72	131	GLY	4.9
33	15	74	ARG	4.9
19	AA	30	LEU	4.9
41	D8	71	LEU	4.9
52	P8	46	VAL	4.9
30	49	35	GLU	4.9
45	D5	146	ILE	4.8
45	D5	171	ILE	4.8
9	8E	123	PRO	4.8
12	3A	101	VAL	4.8
24	14	902	C	4.8
20	BI	70	SER	4.8
20	BI	17	ARG	4.8
9	82	65	VAL	4.8
26	79	60	GLY	4.8

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Mol	Chain	Res	Type	RSRZ
28	29	54	GLN	4.8
26	71	41	VAL	4.8
8	7E	92	ARG	4.8
19	AI	5	LEU	4.8
9	82	18	PHE	4.8
22	2K	52	G	4.8
26	79	49	ILE	4.8
14	5I	8	GLU	4.7
31	59	88	LEU	4.7
9	82	78	LYS	4.7
12	3A	19	ARG	4.7
9	8E	116	LYS	4.7
38	A8	11	LYS	4.7
26	79	164	ARG	4.7
20	BI	68	LYS	4.7
17	8I	27	PHE	4.7
35	35	35	HIS	4.7
13	4I	87	TYR	4.7
45	D5	168	GLU	4.7
26	79	34	THR	4.7
10	1I	46	ARG	4.7
21	1B	22	ARG	4.7
8	72	86	ILE	4.7
24	1H	2901	C	4.7
9	8E	121	ARG	4.7
45	D5	115	GLY	4.7
47	F5	22	GLY	4.7
4	32	68	TYR	4.7
10	1I	10	GLY	4.7
24	14	2898	U	4.6
35	35	68	GLN	4.6
19	AA	41	VAL	4.6
9	82	75	ASP	4.6
19	AA	13	ASP	4.6
46	E5	71	ASP	4.6
54	1G	1531	A	4.6
17	8I	35	VAL	4.6
15	6A	68	ARG	4.6
40	C8	56	ASP	4.6
12	3A	32	PHE	4.6
3	2E	179	ARG	4.6
3	22	199	LYS	4.6

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Mol	Chain	Res	Type	RSRZ
50	M8	30	GLU	4.6
9	82	42	ARG	4.6
36	45	10	ARG	4.6
9	82	124	GLN	4.6
45	D5	148	ASP	4.6
9	8E	119	ALA	4.6
38	A8	4	LEU	4.6
45	D5	155	LEU	4.6
4	3E	24	GLU	4.6
12	3I	47	LYS	4.6
12	3A	89	ARG	4.6
28	29	152	LYS	4.6
38	65	29	PHE	4.6
33	15	85	ILE	4.6
16	7I	9	PHE	4.6
7	62	36	LYS	4.6
26	71	11	LEU	4.6
9	8E	115	GLY	4.5
29	39	44	ARG	4.5
19	AA	31	ILE	4.5
8	7E	133	LEU	4.5
41	95	74	LYS	4.5
51	N8	59	GLU	4.5
17	8A	32	TYR	4.5
36	45	12	GLN	4.5
2	1E	102	LEU	4.5
21	1F	3	LYS	4.5
9	8E	120	ARG	4.5
38	A8	12	PHE	4.5
19	AA	11	VAL	4.5
19	AA	80	TYR	4.5
21	1F	10	ARG	4.5
9	8E	109	VAL	4.5
38	65	5	THR	4.5
24	1H	2167	U	4.5
51	J5	58	LEU	4.5
22	2K	48	C	4.5
13	4A	101	GLN	4.4
13	4I	104	ARG	4.4
16	7I	18	ARG	4.4
30	41	64	THR	4.4
35	35	62	LEU	4.4

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Mol	Chain	Res	Type	RSRZ
36	88	20	ALA	4.4
41	D8	84	LYS	4.4
9	8E	110	GLU	4.4
12	3A	87	GLY	4.4
3	2E	196	LEU	4.4
2	12	70	PHE	4.4
3	22	10	PHE	4.4
20	BI	22	ARG	4.4
7	6E	11	GLN	4.4
16	7I	1	MET	4.4
46	E5	74	ARG	4.4
30	49	28	VAL	4.4
24	1H	1058	U	4.4
14	5A	38	GLY	4.4
16	7I	30	GLY	4.4
36	45	68	ILE	4.4
46	E5	77	ARG	4.4
16	7I	22	THR	4.4
8	7E	135	CYS	4.4
26	79	170	ALA	4.4
38	A8	2	ALA	4.4
20	BA	65	LYS	4.4
26	79	171	ILE	4.4
40	C8	29	SER	4.4
52	L5	1	MET	4.4
10	1I	57	LYS	4.4
40	C8	27	LEU	4.3
31	59	106	THR	4.3
4	3E	5	ILE	4.3
28	29	116	VAL	4.3
35	35	65	ARG	4.3
19	AI	10	PHE	4.3
3	2E	200	ALA	4.3
16	7I	29	ASP	4.3
36	45	11	LYS	4.3
45	D5	172	ALA	4.3
10	1I	65	LEU	4.3
14	5A	41	ARG	4.3
41	D8	70	ILE	4.3
9	8E	37	PHE	4.3
19	AI	40	ILE	4.3
28	21	56	PRO	4.3

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Mol	Chain	Res	Type	RSRZ
31	59	89	ILE	4.3
9	82	19	LEU	4.3
49	L8	53	LEU	4.3
14	5A	34	TYR	4.3
51	N8	58	LEU	4.3
41	D8	81	TYR	4.3
43	B5	33	LYS	4.3
10	1A	60	ARG	4.3
47	F5	32	LYS	4.3
4	32	4	TYR	4.3
36	45	6	ARG	4.3
13	4I	99	ARG	4.3
3	22	178	LEU	4.3
20	BI	56	MET	4.3
14	5I	15	LYS	4.3
26	71	69	GLY	4.3
45	D5	142	SER	4.3
8	72	89	PRO	4.3
47	J8	48	LYS	4.3
10	1A	101	VAL	4.3
5	42	20	GLN	4.3
10	1A	61	GLU	4.3
19	AI	37	ARG	4.3
9	82	70	LYS	4.2
30	49	155	MET	4.2
47	J8	36	GLY	4.2
1	13	108	G	4.2
14	5I	59	ALA	4.2
14	5A	30	ALA	4.2
36	45	7	MET	4.2
2	1E	196	LEU	4.2
30	49	41	GLN	4.2
13	4A	7	VAL	4.2
20	BA	26	ASN	4.2
46	E5	55	ARG	4.2
9	82	108	VAL	4.2
24	14	1092	C	4.2
26	71	58	VAL	4.2
14	5I	31	ARG	4.2
44	G8	92	ASN	4.2
4	3E	118	ARG	4.2
14	5A	26	ARG	4.2

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Mol	Chain	Res	Type	RSRZ
20	BA	83	ARG	4.2
21	1F	6	ARG	4.2
4	32	208	SER	4.2
28	29	150	VAL	4.2
53	Q8	28	GLY	4.2
38	A8	7	TYR	4.2
38	A8	17	ARG	4.2
50	I5	46	GLN	4.2
41	D8	87	HIS	4.2
4	32	137	SER	4.2
33	58	109	LYS	4.2
21	1F	13	ILE	4.2
31	59	171	LEU	4.2
14	5A	25	VAL	4.2
46	E5	44	ARG	4.2
8	7E	136	GLU	4.2
47	F5	21	ARG	4.1
36	45	17	LEU	4.1
38	65	36	TYR	4.1
20	BI	71	THR	4.1
9	8E	15	ALA	4.1
5	4E	18	ARG	4.1
19	AA	37	ARG	4.1
30	49	36	LYS	4.1
47	F5	92	LYS	4.1
50	I5	40	HIS	4.1
16	7I	31	LYS	4.1
19	AA	8	GLY	4.1
14	5I	19	ARG	4.1
26	71	172	HIS	4.1
30	49	37	VAL	4.1
22	2K	53	A	4.1
24	14	2900	A	4.1
5	4E	24	ARG	4.1
13	4I	94	ARG	4.1
31	59	153	LYS	4.1
36	45	22	LYS	4.1
9	82	44	VAL	4.1
4	3E	115	ARG	4.1
14	5I	7	ILE	4.1
28	21	141	ILE	4.1
9	82	113	LYS	4.1

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Mol	Chain	Res	Type	RSRZ
46	E5	41	ARG	4.1
17	8A	10	VAL	4.1
45	D5	178	GLU	4.1
10	1I	61	GLU	4.1
46	I8	74	ARG	4.1
53	M5	21	LYS	4.1
38	65	35	ILE	4.1
47	J8	94	LEU	4.1
9	82	8	GLY	4.1
45	H8	86	VAL	4.1
13	4A	99	ARG	4.0
20	BA	80	ARG	4.0
40	C8	28	ARG	4.0
36	45	18	LYS	4.0
13	4A	8	GLU	4.0
36	45	100	GLY	4.0
9	82	62	TYR	4.0
15	6A	71	GLN	4.0
35	35	70	GLN	4.0
12	3I	91	LYS	4.0
12	3I	20	LYS	4.0
14	5A	29	ARG	4.0
3	2E	201	TYR	4.0
14	5I	37	PHE	4.0
10	1I	62	HIS	4.0
13	4I	90	LEU	4.0
38	A8	30	ARG	4.0
47	F5	33	LYS	4.0
35	35	71	VAL	4.0
14	5I	58	LYS	4.0
9	82	74	ILE	4.0
36	45	9	TYR	4.0
31	59	159	GLU	4.0
7	62	31	MET	4.0
38	65	3	ARG	4.0
8	7E	95	VAL	4.0
12	3A	31	PRO	4.0
46	E5	22	GLY	4.0
28	21	79	ARG	4.0
41	D8	74	LYS	4.0
13	4A	111	LYS	4.0
20	BA	28	ALA	4.0

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Mol	Chain	Res	Type	RSRZ
28	21	76	ARG	4.0
7	6E	13	GLN	3.9
13	4A	27	LYS	3.9
9	82	117	HIS	3.9
3	2E	193	TYR	3.9
50	M8	25	TYR	3.9
7	6E	34	GLY	3.9
45	H8	173	ALA	3.9
1	13	111	G	3.9
14	5I	18	VAL	3.9
19	AA	67	VAL	3.9
38	65	28	VAL	3.9
12	3I	89	ARG	3.9
24	14	1535	U	3.9
36	88	4	PRO	3.9
30	49	137	GLU	3.9
3	22	179	ARG	3.9
20	BI	11	SER	3.9
24	14	2801	A	3.9
28	21	55	ASN	3.9
12	3A	47	LYS	3.9
16	7A	29	ASP	3.9
53	Q8	46	ARG	3.9
24	1H	2902	C	3.9
12	3I	31	PRO	3.9
26	71	220	PRO	3.9
28	29	163	GLU	3.9
10	1A	8	LEU	3.9
21	1B	17	THR	3.9
8	72	134	ILE	3.9
45	D5	113	ALA	3.9
43	B5	69	TYR	3.9
4	32	11	LEU	3.9
40	C8	39	LEU	3.9
14	5A	49	HIS	3.9
47	J8	47	GLN	3.9
17	8I	43	LEU	3.9
47	J8	49	VAL	3.9
53	M5	61	LEU	3.9
11	2A	11	LYS	3.9
51	J5	59	GLU	3.9
30	49	82	LEU	3.9

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Mol	Chain	Res	Type	RSRZ
38	65	54	LEU	3.9
21	1B	5	ASP	3.9
9	82	79	LEU	3.9
31	59	103	LEU	3.9
3	22	167	TRP	3.9
12	3I	64	TYR	3.9
46	I8	6	GLY	3.9
5	42	126	ARG	3.8
13	4I	108	ARG	3.8
20	BI	15	ARG	3.8
20	BI	23	ARG	3.8
33	58	46	VAL	3.8
45	D5	117	LEU	3.8
41	D8	75	PHE	3.8
36	45	96	VAL	3.8
14	5A	36	PHE	3.8
20	BA	63	ILE	3.8
20	BI	80	ARG	3.8
27	11	262	ARG	3.8
30	49	160	VAL	3.8
10	1I	63	PHE	3.8
14	5A	37	PHE	3.8
3	2E	149	ALA	3.8
4	3E	120	LEU	3.8
30	49	108	ASN	3.8
14	5I	29	ARG	3.8
24	14	1762[A]	A	3.8
30	41	93	THR	3.8
8	7E	94	TYR	3.8
38	65	108	GLY	3.8
2	12	152	PHE	3.8
4	3E	110	PHE	3.8
4	32	23	GLY	3.8
13	4I	91	ARG	3.8
19	AI	61	TYR	3.8
21	1B	18	TYR	3.8
36	45	99	PRO	3.8
20	BA	25	ARG	3.8
28	29	149	ARG	3.8
37	55	8	ARG	3.8
5	4E	88	LYS	3.8
7	6E	12	LEU	3.8

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Mol	Chain	Res	Type	RSRZ
8	7E	88	LYS	3.8
47	J8	90	ILE	3.8
8	7E	112	LEU	3.8
2	12	99	GLY	3.8
7	62	86	GLN	3.8
14	5A	55	GLY	3.8
41	D8	45	THR	3.8
20	BI	33	ILE	3.8
20	BI	53	LEU	3.8
30	49	90	LEU	3.8
33	15	99	LEU	3.8
9	82	73	GLN	3.8
27	11	236	GLY	3.8
47	F5	25	LYS	3.8
38	65	7	TYR	3.8
17	8A	25	ARG	3.8
38	65	4	LEU	3.8
10	1I	64	GLU	3.8
13	4I	101	GLN	3.8
24	1H	2	G	3.8
22	2L	85	A	3.8
24	1H	2119	A	3.8
28	29	76	ARG	3.8
4	32	78	LEU	3.8
28	29	124	GLY	3.7
12	3I	33	ARG	3.7
17	8A	7	THR	3.7
22	2K	85	A	3.7
50	I5	55	ARG	3.7
12	3A	5	PRO	3.7
4	32	5	ILE	3.7
8	72	92	ARG	3.7
8	72	133	LEU	3.7
28	21	195	LEU	3.7
13	4A	92	HIS	3.7
33	58	108	PRO	3.7
16	7A	8	ARG	3.7
44	C5	29	GLU	3.7
33	15	73	THR	3.7
42	A5	104	THR	3.7
53	M5	58	ILE	3.7
16	7A	26	ARG	3.7

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Mol	Chain	Res	Type	RSRZ
37	55	69	ASP	3.7
24	14	2506	U	3.7
36	45	2	LEU	3.7
8	7E	134	ILE	3.7
16	7I	17	TYR	3.7
40	C8	24	TYR	3.7
30	49	178	PHE	3.7
36	45	8	LYS	3.7
44	C5	92	ASN	3.7
24	1H	615	G	3.7
46	I8	42	GLY	3.7
4	3E	105	VAL	3.7
9	8E	118	LYS	3.7
39	B8	45	PHE	3.7
4	3E	40	PRO	3.7
36	45	33	GLY	3.7
4	3E	122	ARG	3.7
24	14	1091	G	3.7
9	82	122	ALA	3.7
4	32	67	ILE	3.7
30	41	63	ILE	3.7
4	3E	170	VAL	3.7
10	1A	49	VAL	3.7
19	AA	39	THR	3.7
9	82	45	ALA	3.7
20	BA	59	ALA	3.7
16	7I	28	ARG	3.7
19	AA	43	GLU	3.7
53	M5	57	ARG	3.7
7	62	77	SER	3.7
16	7I	68	ASP	3.7
7	62	4	ARG	3.7
8	7E	84	ARG	3.7
34	68	122	LEU	3.6
19	AI	38	SER	3.6
49	H5	15	TYR	3.6
12	3A	46	LYS	3.6
5	42	25	ARG	3.6
46	E5	45	PHE	3.6
9	82	17	VAL	3.6
2	1E	139	LYS	3.6
11	2A	125	PHE	3.6

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Mol	Chain	Res	Type	RSRZ
18	9I	75	ILE	3.6
8	72	87	SER	3.6
3	2E	192	THR	3.6
46	E5	73	GLY	3.6
19	AI	69	HIS	3.6
19	AI	74	PHE	3.6
13	4A	84	ILE	3.6
12	3A	127	GLU	3.6
31	59	43	VAL	3.6
24	1H	2476	A	3.6
19	AA	82	GLY	3.6
14	5A	6	LEU	3.6
8	7E	83	ILE	3.6
51	J5	2	ALA	3.6
50	M8	32	TYR	3.6
41	D8	89	GLN	3.6
9	82	46	ALA	3.6
44	G8	91	GLU	3.6
11	2A	126	ARG	3.6
8	7E	90	GLY	3.6
14	5I	21	TYR	3.6
33	58	107	LEU	3.6
38	A8	16	ASN	3.6
42	A5	38	TYR	3.6
30	49	161	THR	3.6
19	AI	44	MET	3.6
29	31	157	VAL	3.6
10	1I	54	PHE	3.6
14	5I	16	PHE	3.6
11	2A	12	ARG	3.6
38	A8	5	THR	3.6
28	29	159	HIS	3.6
9	82	9	ARG	3.6
42	A5	103	ILE	3.6
9	82	68	GLY	3.6
28	21	193	GLY	3.6
1	13	1492[A]	A	3.6
40	85	59	ARG	3.6
12	3A	90	VAL	3.6
14	5I	9	LYS	3.6
53	M5	14	VAL	3.6
8	7E	87	SER	3.6

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Mol	Chain	Res	Type	RSRZ
4	32	115	ARG	3.5
20	BI	9	ASN	3.5
2	1E	187	LEU	3.5
12	3A	69	TYR	3.5
15	6A	25	THR	3.5
31	59	87	LEU	3.5
49	H5	28	LEU	3.5
42	A5	92	ARG	3.5
2	1E	152	PHE	3.5
14	5I	4	LYS	3.5
9	8E	75	ASP	3.5
23	4L	13	A	3.5
45	D5	154	ASP	3.5
47	F5	93	GLU	3.5
27	11	250	TRP	3.5
31	59	105	LEU	3.5
37	98	8	ARG	3.5
10	1A	63	PHE	3.5
19	AA	69	HIS	3.5
2	1E	165	VAL	3.5
5	4E	123	LEU	3.5
30	49	138	GLN	3.5
47	J8	3	LYS	3.5
36	45	71	ASP	3.5
9	82	83	ARG	3.5
13	4I	105	THR	3.5
19	AA	40	ILE	3.5
41	95	83	ARG	3.5
10	1A	55	LYS	3.5
12	3I	94	PRO	3.5
38	A8	90	GLY	3.5
16	7I	25	ARG	3.5
24	14	2899	G	3.5
28	21	75	VAL	3.5
46	I8	41	ARG	3.5
19	AA	4	SER	3.5
36	88	17	LEU	3.5
5	42	24	ARG	3.5
26	79	57	ASN	3.5
47	F5	18	ILE	3.5
2	12	69	LEU	3.5
13	4A	64	TRP	3.5

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Mol	Chain	Res	Type	RSRZ
30	41	26	GLN	3.5
43	F8	60	ARG	3.5
17	8I	37	LYS	3.5
33	15	48	MET	3.5
17	8A	27	PHE	3.5
4	32	21	LEU	3.5
2	1E	72	GLY	3.5
28	21	192	ASN	3.5
31	59	170	ARG	3.5
46	I8	44	ARG	3.5
9	82	43	ALA	3.5
14	5I	34	TYR	3.5
45	D5	107	THR	3.5
30	49	92	VAL	3.5
30	41	34	LEU	3.5
30	49	33	ARG	3.5
1	13	1323	G	3.5
12	3A	28	LYS	3.5
12	3A	118	SER	3.5
10	1A	10	GLY	3.5
12	3A	20	LYS	3.5
16	7I	12	LYS	3.5
31	59	5	GLY	3.5
26	79	165	ASN	3.4
33	15	69	GLN	3.4
14	5I	60	SER	3.4
24	14	2318	G	3.4
41	D8	36	PRO	3.4
36	45	5	ARG	3.4
42	E8	82	LEU	3.4
47	F5	26	ARG	3.4
21	1F	4	GLY	3.4
36	45	65	PHE	3.4
4	32	80	GLU	3.4
46	E5	12	ASN	3.4
16	7I	19	ILE	3.4
20	BA	72	LEU	3.4
27	19	177	LEU	3.4
28	29	155	LYS	3.4
34	25	31	LYS	3.4
47	J8	17	SER	3.4
24	14	2147	G	3.4

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Mol	Chain	Res	Type	RSRZ
8	72	132	GLU	3.4
30	41	25	TYR	3.4
35	78	71	VAL	3.4
8	7E	89	PRO	3.4
8	72	90	GLY	3.4
14	5I	23	ARG	3.4
36	88	21	THR	3.4
35	78	70	GLN	3.4
24	14	2795	G	3.4
40	C8	11	ARG	3.4
20	BA	70	SER	3.4
33	15	100	GLU	3.4
35	35	106	LEU	3.4
50	I5	50	VAL	3.4
6	5E	89	MET	3.4
2	1E	149	LEU	3.4
13	4I	103	THR	3.4
32	69	146	ALA	3.4
1	13	208	U	3.4
8	72	112	LEU	3.4
52	L5	42	LEU	3.4
4	3E	74	GLN	3.4
20	BI	14	LYS	3.4
39	75	50	ILE	3.4
45	D5	120	ILE	3.4
2	1E	93	VAL	3.4
12	3I	21	LYS	3.4
42	E8	96	ILE	3.4
4	3E	97	LEU	3.4
19	AA	34	TRP	3.4
30	49	32	PRO	3.4
26	79	43	VAL	3.4
42	A5	105	VAL	3.4
47	F5	14	VAL	3.4
39	B8	50	ILE	3.4
4	3E	137	SER	3.4
47	F5	36	GLY	3.4
3	2E	156	ARG	3.4
37	55	9	LYS	3.4
54	1G	1286	A	3.4
14	5I	33	VAL	3.4
19	AI	76	PRO	3.4

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Mol	Chain	Res	Type	RSRZ
28	21	72	VAL	3.4
17	8A	59	ILE	3.4
26	71	189	ILE	3.4
31	59	109	PHE	3.4
4	3E	69	GLY	3.4
29	31	40	GLN	3.4
36	88	19	GLY	3.4
7	6E	78	ARG	3.4
26	79	59	ARG	3.4
38	A8	3	ARG	3.4
27	19	221	VAL	3.3
4	3E	70	ILE	3.3
3	22	172	ARG	3.3
4	3E	139	ARG	3.3
35	35	50	ARG	3.3
26	79	172	HIS	3.3
9	82	106	ALA	3.3
10	1I	50	ILE	3.3
4	3E	23	GLY	3.3
18	9I	68	LYS	3.3
38	65	92	TYR	3.3
40	C8	30	LYS	3.3
20	BI	24	LEU	3.3
33	15	76	SER	3.3
45	D5	121	HIS	3.3
45	D5	144	LEU	3.3
8	7E	116	LYS	3.3
9	8E	122	ALA	3.3
21	1B	20	LYS	3.3
28	29	58	ARG	3.3
50	M8	58	ARG	3.3
2	1E	101	MET	3.3
12	3A	99	HIS	3.3
12	3A	119	LYS	3.3
38	A8	93	LYS	3.3
41	D8	73	SER	3.3
20	BI	21	LYS	3.3
41	D8	69	LYS	3.3
19	AI	75	ALA	3.3
16	7I	32	TYR	3.3
20	BA	71	THR	3.3
26	71	197	GLU	3.3

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Mol	Chain	Res	Type	RSRZ
40	85	2	PRO	3.3
45	H8	25	PRO	3.3
8	7E	85	ARG	3.3
11	2I	122	LYS	3.3
30	49	159	VAL	3.3
31	59	132	ARG	3.3
46	I8	52	GLY	3.3
24	1H	654	A	3.3
53	M5	63	PRO	3.3
49	H5	26	LEU	3.3
26	79	41	VAL	3.3
31	59	113	VAL	3.3
7	62	37	ASN	3.3
9	82	12	GLU	3.3
31	59	85	LYS	3.3
46	I8	5	LYS	3.3
53	M5	11	LYS	3.3
53	Q8	6	THR	3.3
24	1H	2062	A	3.3
27	19	247	ALA	3.3
29	39	43	LYS	3.3
36	45	85	LYS	3.3
20	BI	25	ARG	3.3
24	14	2897	U	3.3
4	3E	15	GLU	3.3
14	5I	28	GLY	3.3
20	BI	8	ARG	3.3
14	5A	4	LYS	3.3
22	2K	55	U	3.3
40	C8	31	SER	3.3
40	C8	34	LYS	3.3
29	39	205	ARG	3.3
12	3A	88	GLY	3.3
42	A5	112	GLY	3.3
28	21	52	LEU	3.3
40	C8	18	LEU	3.3
53	M5	13	ARG	3.2
21	1B	16	GLY	3.2
7	62	33	ASP	3.2
4	3E	66	ARG	3.2
12	3A	86	ARG	3.2
8	7E	111	ILE	3.2

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Mol	Chain	Res	Type	RSRZ
1	13	1451	A	3.2
14	5A	28	GLY	3.2
9	82	112	LYS	3.2
13	4I	114	ARG	3.2
20	BI	64	ASP	3.2
54	1G	1533	C	3.2
33	58	1	MET	3.2
16	7I	27	LYS	3.2
2	12	137	ARG	3.2
31	59	122	THR	3.2
50	I5	59	PHE	3.2
4	3E	101	LEU	3.2
7	62	34	GLY	3.2
27	19	219	PRO	3.2
7	6E	154	TYR	3.2
9	82	125	TYR	3.2
47	F5	20	ARG	3.2
19	AA	60	VAL	3.2
47	J8	60	PHE	3.2
12	3A	91	LYS	3.2
3	2E	162	GLN	3.2
4	3E	158	ILE	3.2
38	A8	19	LYS	3.2
38	65	59	LYS	3.2
49	H5	12	PRO	3.2
8	72	93	VAL	3.2
31	59	94	TYR	3.2
51	J5	60	VAL	3.2
27	19	224	ALA	3.2
53	M5	8	LYS	3.2
54	1G	526	C	3.2
5	4E	89	ILE	3.2
9	82	6	GLY	3.2
29	31	176	LEU	3.2
38	65	60	GLY	3.2
35	78	68	GLN	3.2
36	88	18	LYS	3.2
40	85	50	ARG	3.2
41	D8	82	ARG	3.2
24	1H	654(I)	C	3.2
47	J8	13	ILE	3.2
30	41	66	GLN	3.2

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Mol	Chain	Res	Type	RSRZ
9	8E	108	VAL	3.2
19	AA	9	VAL	3.2
38	65	91	PRO	3.2
24	14	2146	C	3.2
53	M5	5	LYS	3.2
2	12	165	VAL	3.2
14	5A	31	ARG	3.2
44	C5	35	TYR	3.2
4	32	96	LEU	3.2
29	39	181	LEU	3.2
12	3I	17	LYS	3.2
4	3E	25	ARG	3.2
19	AA	48	THR	3.2
30	41	102	PHE	3.2
4	32	197	PRO	3.2
22	2K	47	U	3.2
33	15	116	LEU	3.2
43	F8	68	ARG	3.2
28	29	127	ASP	3.2
1	13	1362(A)	C	3.1
12	3I	23	LYS	3.1
42	E8	80	PRO	3.1
10	1A	50	ILE	3.1
54	1G	1066	C	3.1
4	3E	93	PHE	3.1
16	7A	1	MET	3.1
29	39	22	ALA	3.1
7	6E	85	TYR	3.1
33	15	8	GLN	3.1
42	A5	39	THR	3.1
36	88	2	LEU	3.1
19	AA	3	ARG	3.1
53	M5	15	LYS	3.1
53	M5	47	LYS	3.1
19	AA	78	ARG	3.1
38	A8	20	ARG	3.1
53	M5	46	ARG	3.1
3	22	13	GLY	3.1
17	8I	34	LYS	3.1
1	13	1325	C	3.1
21	1F	18	TYR	3.1
24	14	2138	C	3.1

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Mol	Chain	Res	Type	RSRZ
4	3E	135	LEU	3.1
10	1A	5	ARG	3.1
17	8I	36	ILE	3.1
43	B5	3	THR	3.1
9	8E	65	VAL	3.1
12	3A	23	LYS	3.1
9	8E	9	ARG	3.1
9	8E	124	GLN	3.1
22	3L	16	C	3.1
3	22	176	HIS	3.1
4	3E	134	ASP	3.1
24	14	1093	G	3.1
46	E5	42	GLY	3.1
47	F5	13	ILE	3.1
33	15	83	LYS	3.1
33	15	108	PRO	3.1
52	L5	18	PHE	3.1
13	4A	5	ALA	3.1
24	1H	3	U	3.1
37	98	9	LYS	3.1
46	I8	4	LYS	3.1
10	1I	66	ARG	3.1
15	6A	64	ARG	3.1
28	29	126	PRO	3.1
36	45	103	MET	3.1
35	78	38	GLN	3.1
46	I8	78	TYR	3.1
53	M5	60	LEU	3.1
13	4I	95	GLY	3.1
21	1B	4	GLY	3.1
50	M8	18	CYS	3.1
4	3E	111	ALA	3.1
16	7I	39	TYR	3.1
31	59	83	TYR	3.1
47	F5	95	LEU	3.1
2	1E	76	GLN	3.1
12	3A	7	ILE	3.1
8	7E	4	ASP	3.1
40	C8	21	ALA	3.1
4	32	71	SER	3.1
19	AI	15	LEU	3.1
39	75	99	LEU	3.1

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Mol	Chain	Res	Type	RSRZ
19	AI	39	THR	3.1
16	7A	30	GLY	3.1
53	M5	23	VAL	3.1
9	82	76	ALA	3.1
29	31	156	LEU	3.1
3	22	201	TYR	3.1
5	4E	11	ILE	3.1
11	2I	42	TRP	3.1
24	14	271(C)	U	3.1
46	I8	45	PHE	3.1
7	6E	35	LYS	3.1
36	88	6	ARG	3.1
9	82	123	PRO	3.0
33	15	78	TYR	3.0
49	L8	12	PRO	3.0
29	39	172	TRP	3.0
53	Q8	5	LYS	3.0
38	65	56	LEU	3.0
30	41	23	PHE	3.0
27	11	229	VAL	3.0
16	7I	13	HIS	3.0
35	35	107	LYS	3.0
36	88	104	PHE	3.0
19	AI	8	GLY	3.0
24	14	654(L)	G	3.0
30	49	97	ASP	3.0
47	J8	16	ASN	3.0
42	E8	81	ALA	3.0
9	8E	17	VAL	3.0
24	14	2803	C	3.0
26	71	13	LYS	3.0
33	15	109	LYS	3.0
40	C8	38	THR	3.0
16	7A	10	GLY	3.0
17	8A	36	ILE	3.0
2	1E	81	VAL	3.0
7	6E	80	VAL	3.0
45	H8	74	VAL	3.0
11	2I	124	LYS	3.0
26	79	209	LEU	3.0
33	58	51	PHE	3.0
8	72	91	ARG	3.0

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Mol	Chain	Res	Type	RSRZ
38	A8	15	ARG	3.0
10	1A	6	ILE	3.0
54	1G	1398	A	3.0
17	8A	37	LYS	3.0
31	59	17	VAL	3.0
31	59	25	LYS	3.0
20	BI	72	LEU	3.0
53	M5	2	PRO	3.0
9	82	104	ARG	3.0
10	1A	58	ASP	3.0
29	39	72	ARG	3.0
46	E5	57	PHE	3.0
4	32	8	VAL	3.0
1	13	112	G	3.0
38	A8	89	ARG	3.0
3	2E	4	LYS	3.0
9	82	82	ALA	3.0
28	21	3	GLY	3.0
20	BI	63	ILE	3.0
41	95	72	VAL	3.0
14	5I	6	LEU	3.0
24	14	2118	U	3.0
40	C8	25	TRP	3.0
50	M8	8	LYS	3.0
3	22	184	TYR	3.0
14	5I	25	VAL	3.0
28	29	143	ASN	3.0
27	19	254	THR	3.0
36	45	1	MET	3.0
3	2E	189	ALA	3.0
12	3A	64	TYR	3.0
16	7I	4	ILE	3.0
21	1F	5	ASP	3.0
21	1B	21	TYR	3.0
28	21	111	ARG	3.0
46	I8	79	VAL	3.0
53	M5	22	VAL	3.0
12	3I	28	LYS	3.0
36	45	98	LYS	3.0
21	1B	23	PRO	3.0
31	59	167	GLU	3.0
14	5A	21	TYR	3.0

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Mol	Chain	Res	Type	RSRZ
28	21	198	VAL	3.0
38	65	37	ALA	3.0
47	J8	41	ARG	3.0
45	H8	170	THR	3.0
14	5A	42	ILE	2.9
19	AI	9	VAL	2.9
20	BA	13	LEU	2.9
4	32	206	PHE	2.9
28	29	141	ILE	2.9
35	35	63	PRO	2.9
44	G8	84	ARG	2.9
9	8E	40	LEU	2.9
44	C5	81	LYS	2.9
47	F5	10	LYS	2.9
4	3E	152	SER	2.9
47	F5	17	SER	2.9
12	3I	99	HIS	2.9
24	14	2798	C	2.9
47	F5	28	GLY	2.9
47	F5	42	GLN	2.9
36	88	10	ARG	2.9
4	32	156	GLU	2.9
10	1A	68	HIS	2.9
45	D5	165	VAL	2.9
12	3I	98	TYR	2.9
19	AA	52	TYR	2.9
27	19	53	PHE	2.9
30	41	100	TRP	2.9
10	1A	45	ARG	2.9
13	4A	102	ARG	2.9
21	1B	24	ARG	2.9
44	C5	19	LYS	2.9
22	2L	55	U	2.9
27	19	253	GLN	2.9
20	BI	20	LEU	2.9
20	BA	24	LEU	2.9
39	B8	99	LEU	2.9
29	39	97	TYR	2.9
3	22	186	PHE	2.9
24	1H	2334	G	2.9
1	13	110	C	2.9
53	M5	12	LYS	2.9

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Mol	Chain	Res	Type	RSRZ
4	3E	8	VAL	2.9
9	8E	111	ARG	2.9
13	4I	107	ALA	2.9
20	BI	19	SER	2.9
54	1G	1393	U	2.9
36	45	73	PRO	2.9
31	59	161	GLY	2.9
35	78	69	GLY	2.9
2	1E	138	LEU	2.9
4	3E	14	ARG	2.9
4	32	122	ARG	2.9
53	M5	41	ILE	2.9
16	7I	11	SER	2.9
49	L8	20	LYS	2.9
20	BI	55	ILE	2.9
36	45	14	ARG	2.9
15	6A	62	GLN	2.9
19	AA	70	LYS	2.9
20	BI	58	LYS	2.9
41	D8	80	GLN	2.9
1	13	1044	A	2.9
14	5A	23	ARG	2.9
28	21	10	GLY	2.9
12	3A	18	VAL	2.9
27	19	51	VAL	2.9
28	21	5	LEU	2.9
52	L5	46	VAL	2.9
20	BA	77	ALA	2.9
28	29	122	PHE	2.9
28	29	123	ALA	2.9
7	6E	4	ARG	2.9
14	5I	32	SER	2.9
29	31	164	ARG	2.9
26	71	215	THR	2.9
49	L8	13	ILE	2.9
54	1G	1067	A	2.9
11	2I	13	GLN	2.9
2	12	134	GLU	2.9
52	L5	49	ARG	2.9
15	6A	70	LEU	2.9
33	58	43	THR	2.9
44	G8	83	THR	2.9

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Mol	Chain	Res	Type	RSRZ
24	1H	5	A	2.9
34	25	33	ALA	2.9
19	AA	18	LYS	2.9
35	78	64	LYS	2.9
36	45	87	LYS	2.9
2	1E	98	LEU	2.9
28	29	189	PRO	2.9
35	78	35	HIS	2.9
53	M5	31	HIS	2.9
5	4E	19	MET	2.8
9	82	77	ILE	2.8
12	3A	100	ILE	2.8
38	A8	49	VAL	2.8
9	82	33	PHE	2.8
10	1A	69	ASN	2.8
10	1I	55	LYS	2.8
44	C5	69	ALA	2.8
15	6A	31	LEU	2.8
9	8E	14	VAL	2.8
50	M8	5	ILE	2.8
2	1E	97	TRP	2.8
20	BA	66	ALA	2.8
31	59	4	ILE	2.8
38	65	13	ARG	2.8
11	2I	50	TYR	2.8
4	32	64	LEU	2.8
9	8E	79	LEU	2.8
16	7A	9	PHE	2.8
53	M5	34	TRP	2.8
4	32	77	ASN	2.8
17	8A	26	GLN	2.8
4	3E	11	LEU	2.8
13	4A	26	GLY	2.8
29	39	208	GLY	2.8
20	BA	87	LYS	2.8
46	I8	77	ARG	2.8
12	3A	71	PRO	2.8
9	8E	6	GLY	2.8
12	3A	53	ARG	2.8
46	E5	40	GLN	2.8
50	I5	62	ARG	2.8
53	M5	29	LYS	2.8

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Mol	Chain	Res	Type	RSRZ
33	15	51	PHE	2.8
16	7I	7	ALA	2.8
42	A5	74	ALA	2.8
3	22	12	LEU	2.8
46	E5	70	GLN	2.8
29	31	174	VAL	2.8
38	65	31	SER	2.8
7	62	42	ILE	2.8
3	2E	161	GLU	2.8
36	45	91	GLU	2.8
20	BA	64	ASP	2.8
19	AA	15	LEU	2.8
30	49	12	TYR	2.8
19	AA	68	GLY	2.8
20	BI	101	GLY	2.8
24	14	654(K)	C	2.8
41	D8	72	VAL	2.8
50	M8	26	SER	2.8
50	I5	49	PHE	2.8
16	7I	8	ARG	2.8
45	H8	79	ARG	2.8
46	I8	70	GLN	2.8
28	21	57	LYS	2.8
35	35	60	MET	2.8
36	45	63	LYS	2.8
8	7E	5	PRO	2.8
26	79	220	PRO	2.8
29	31	181	LEU	2.8
30	49	2	PRO	2.8
35	35	48	PRO	2.8
26	79	175	VAL	2.8
2	12	162	ILE	2.8
8	7E	91	ARG	2.8
33	58	118	LYS	2.8
47	J8	18	ILE	2.8
12	3I	127	GLU	2.8
50	M8	23	GLU	2.8
2	1E	77	ALA	2.8
3	22	200	ALA	2.8
4	32	120	LEU	2.8
17	8A	43	LEU	2.8
34	25	29	ASN	2.8

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Mol	Chain	Res	Type	RSRZ
53	M5	50	LEU	2.8
1	13	377	G	2.8
1	13	1233	G	2.8
40	C8	14	HIS	2.8
15	6I	72	ARG	2.8
15	6A	63	ARG	2.8
39	B8	51	ARG	2.8
42	E8	17	VAL	2.8
46	E5	20	ARG	2.8
49	H5	20	LYS	2.8
5	4E	122	GLU	2.8
9	8E	47	LEU	2.8
15	6A	56	LEU	2.8
26	79	54	SER	2.8
37	55	10	LEU	2.8
9	8E	114	TYR	2.8
19	AA	36	ARG	2.8
35	78	107	LYS	2.8
38	65	30	ARG	2.8
54	1G	1392	G	2.7
35	35	45	LEU	2.7
3	2E	164	ARG	2.7
5	42	29	GLY	2.7
30	49	11	TYR	2.7
32	61	27	ARG	2.7
40	C8	57	PHE	2.7
31	59	168	PRO	2.7
47	J8	70	VAL	2.7
17	8A	65	ILE	2.7
9	82	127	LYS	2.7
10	1A	71	LEU	2.7
30	49	136	ARG	2.7
53	Q8	60	LEU	2.7
24	14	615	G	2.7
24	14	1763	G	2.7
28	29	113	PHE	2.7
44	G8	89	PHE	2.7
47	J8	62	VAL	2.7
1	13	1350	A	2.7
31	59	112	PRO	2.7
15	6A	65	ARG	2.7
40	C8	118	GLY	2.7

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Mol	Chain	Res	Type	RSRZ
22	2L	47	U	2.7
45	H8	166	SER	2.7
10	1I	56	HIS	2.7
36	45	13	GLN	2.7
19	AI	70	LYS	2.7
20	BA	62	LEU	2.7
21	1B	9	ARG	2.7
28	29	195	LEU	2.7
46	I8	53	MET	2.7
7	6E	83	ALA	2.7
36	45	19	GLY	2.7
36	45	74	TYR	2.7
38	A8	6	ALA	2.7
44	C5	93	GLY	2.7
14	5A	56	VAL	2.7
16	7A	12	LYS	2.7
19	AI	4	SER	2.7
34	25	2	ILE	2.7
47	J8	7	ILE	2.7
35	35	14	LYS	2.7
46	E5	39	ARG	2.7
28	29	192	ASN	2.7
50	I5	60	GLN	2.7
29	31	41	LEU	2.7
4	32	54	TYR	2.7
11	2A	50	TYR	2.7
45	D5	175	VAL	2.7
10	1I	98	ILE	2.7
12	3I	46	LYS	2.7
13	4A	25	ILE	2.7
47	J8	10	LYS	2.7
1	13	950	U	2.7
8	7E	59	LEU	2.7
24	14	1078	U	2.7
2	1E	94	ASN	2.7
13	4I	106	ASN	2.7
47	J8	51	VAL	2.7
16	7A	25	ARG	2.7
28	21	77	ILE	2.7
30	49	157	ILE	2.7
40	C8	37	GLU	2.7
53	M5	25	MET	2.7

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Mol	Chain	Res	Type	RSRZ
20	BI	69	GLY	2.7
34	25	26	LYS	2.7
42	E8	113	LYS	2.7
20	BA	76	ALA	2.7
26	71	35	ALA	2.7
46	E5	56	ASP	2.7
28	21	151	TYR	2.7
36	45	80	GLU	2.7
20	BA	20	LEU	2.7
2	1E	133	LYS	2.7
17	8I	28	PRO	2.7
4	32	76	ARG	2.7
19	AI	36	ARG	2.7
20	BI	34	LYS	2.7
20	BA	14	LYS	2.7
41	95	73	SER	2.7
29	31	133	ASN	2.7
29	39	183	VAL	2.7
50	M8	55	ARG	2.7
4	32	161	ASN	2.7
47	J8	6	GLU	2.7
2	12	115	LEU	2.7
12	3A	21	LYS	2.7
2	12	131	PRO	2.7
2	12	71	VAL	2.7
13	4A	100	GLY	2.7
14	5I	26	ARG	2.7
20	BI	85	MET	2.7
21	1B	26	LYS	2.7
35	35	51	PHE	2.7
40	85	54	LYS	2.7
46	E5	19	LYS	2.7
19	AI	14	HIS	2.7
33	58	53	VAL	2.7
7	62	28	ASN	2.7
28	29	134	ILE	2.7
34	25	32	TYR	2.7
35	35	150	ALA	2.7
20	BA	29	LYS	2.7
47	J8	32	LYS	2.7
4	3E	49	ARG	2.7
5	42	22	GLY	2.7

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Mol	Chain	Res	Type	RSRZ
26	71	192	PHE	2.7
28	29	135	HIS	2.7
7	62	40	ALA	2.7
39	75	94	ALA	2.7
47	F5	37	ILE	2.7
14	5A	44	LEU	2.7
29	31	33	LEU	2.7
35	35	47	ASP	2.7
28	21	47	VAL	2.7
36	45	4	PRO	2.7
45	H8	116	VAL	2.7
3	2E	160	ALA	2.7
28	21	159	HIS	2.7
35	35	64	LYS	2.6
49	H5	17	LYS	2.6
13	4I	88	ARG	2.6
27	19	262	ARG	2.6
29	39	32	LEU	2.6
19	AI	12	ASP	2.6
8	72	31	PHE	2.6
28	29	105	THR	2.6
23	4K	15	A	2.6
26	71	31	GLU	2.6
36	45	90	VAL	2.6
4	3E	207	TYR	2.6
26	71	49	ILE	2.6
29	31	167	ALA	2.6
24	14	859	G	2.6
38	A8	87	PHE	2.6
14	5I	22	THR	2.6
2	1E	27	LYS	2.6
2	1E	75	LYS	2.6
39	75	73	GLU	2.6
2	12	201	ILE	2.6
52	L5	47	ARG	2.6
26	71	9	ALA	2.6
27	11	247	ALA	2.6
2	1E	70	PHE	2.6
5	42	45	PHE	2.6
26	71	163	PHE	2.6
38	65	112	PHE	2.6
2	12	130	ARG	2.6

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Mol	Chain	Res	Type	RSRZ
4	32	65	ARG	2.6
15	6A	73	GLU	2.6
19	AI	66	MET	2.6
38	A8	22	GLY	2.6
27	19	183	ARG	2.6
7	6E	38	LEU	2.6
7	62	104	LEU	2.6
12	3A	26	ALA	2.6
16	7I	15	PRO	2.6
27	19	37	LEU	2.6
38	A8	24	LEU	2.6
7	6E	26	PHE	2.6
41	95	75	PHE	2.6
24	1H	976	C	2.6
28	21	109	LYS	2.6
41	D8	79	VAL	2.6
50	M8	56	VAL	2.6
7	6E	16	LEU	2.6
9	8E	63	ILE	2.6
20	BA	36	LEU	2.6
36	45	32	TYR	2.6
49	L8	8	LEU	2.6
14	5A	54	PRO	2.6
21	1F	23	PRO	2.6
24	14	1087	G	2.6
24	14	2321	G	2.6
23	4K	22	A	2.6
47	J8	65	SER	2.6
14	5A	52	GLN	2.6
2	1E	108	ILE	2.6
54	1G	1115	C	2.6
10	1A	48	THR	2.6
13	4A	103	THR	2.6
14	5I	41	ARG	2.6
27	11	53	PHE	2.6
4	32	72	GLU	2.6
10	1I	49	VAL	2.6
31	59	115	VAL	2.6
36	45	15	GLY	2.6
2	1E	142	LEU	2.6
12	3I	7	ILE	2.6
20	BI	76	ALA	2.6

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Mol	Chain	Res	Type	RSRZ
20	BA	21	LYS	2.6
23	4L	14	A	2.6
28	29	133	LYS	2.6
28	29	145	LYS	2.6
47	J8	91	LYS	2.6
7	62	41	ARG	2.6
29	31	175	THR	2.6
2	12	164	VAL	2.6
53	M5	7	HIS	2.6
31	59	41	MET	2.6
7	6E	86	GLN	2.6
4	32	93	PHE	2.6
24	1H	654(L)	G	2.6
33	15	72	TYR	2.6
35	35	18	ARG	2.6
36	45	20	ALA	2.6
17	8A	35	VAL	2.6
14	5I	11	LYS	2.6
40	C8	16	LYS	2.6
52	L5	23	ARG	2.6
4	3E	206	PHE	2.6
27	11	230	ASP	2.6
52	P8	45	ALA	2.6
1	13	389	A	2.6
31	59	160	LYS	2.6
47	F5	23	LYS	2.6
3	22	6	HIS	2.6
7	62	30	ILE	2.6
12	3A	27	LEU	2.6
46	E5	69	PHE	2.6
26	79	50	ASP	2.6
19	AA	76	PRO	2.6
50	M8	7	PRO	2.6
31	51	171	LEU	2.6
53	M5	6	THR	2.6
26	71	3	HIS	2.6
29	39	40	GLN	2.6
49	L8	10	LYS	2.6
27	19	211	ARG	2.6
30	49	128	ARG	2.6
4	3E	154	ASN	2.6
12	3A	49	ASN	2.6

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Mol	Chain	Res	Type	RSRZ
16	7I	6	LEU	2.6
17	8A	22	LEU	2.6
28	29	147	PRO	2.6
49	H5	53	LEU	2.6
51	J5	30	LEU	2.6
53	M5	27	THR	2.6
36	45	104	PHE	2.5
20	BI	81	LYS	2.5
42	A5	4	LYS	2.5
9	82	28	VAL	2.5
17	8A	8	GLY	2.5
25	1J	59	A	2.5
47	J8	93	GLU	2.5
28	21	167	VAL	2.5
29	31	44	ARG	2.5
35	78	79	ARG	2.5
29	31	155	LEU	2.5
41	D8	78	LYS	2.5
48	G5	23	LYS	2.5
4	3E	114	ARG	2.5
9	8E	128	ARG	2.5
20	BA	60	GLU	2.5
27	19	181	GLU	2.5
28	29	7	VAL	2.5
24	1H	2135	A	2.5
30	49	94	LEU	2.5
38	A8	110	LEU	2.5
42	A5	51	LEU	2.5
4	3E	136	PRO	2.5
24	14	1102	C	2.5
26	79	208	PHE	2.5
42	A5	106	ILE	2.5
30	41	27	ASN	2.5
28	29	187	ALA	2.5
35	35	30	THR	2.5
47	F5	29	GLY	2.5
7	62	35	LYS	2.5
52	L5	32	LYS	2.5
8	72	101	PRO	2.5
20	BA	22	ARG	2.5
28	21	138	PRO	2.5
41	D8	88	ARG	2.5

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Mol	Chain	Res	Type	RSRZ
1	13	1397	C	2.5
20	BA	30	LYS	2.5
28	29	118	LYS	2.5
14	5A	35	ARG	2.5
53	Q8	30	ARG	2.5
2	12	112	VAL	2.5
8	7E	118	VAL	2.5
30	41	65	GLY	2.5
33	58	45	ASN	2.5
34	25	74	GLY	2.5
53	M5	10	ALA	2.5
9	8E	7	THR	2.5
41	D8	76	LYS	2.5
35	35	59	LEU	2.5
10	1A	51	ARG	2.5
30	41	13	GLU	2.5
28	29	137	HIS	2.5
28	29	148	GLY	2.5
37	98	71	GLN	2.5
41	D8	77	ALA	2.5
37	55	4	LEU	2.5
31	59	149	ARG	2.5
24	14	901	A	2.5
28	21	51	PHE	2.5
28	29	156	MET	2.5
9	8E	105	ASP	2.5
29	39	36	VAL	2.5
47	J8	15	ALA	2.5
2	1E	175	ARG	2.5
47	J8	61	ARG	2.5
47	F5	40	ARG	2.5
14	5I	61	TRP	2.5
10	1I	48	THR	2.5
28	21	107	THR	2.5
9	8E	78	LYS	2.5
24	14	909	A	2.5
3	22	7	PRO	2.5
12	3A	120	TYR	2.5
27	11	34	VAL	2.5
31	59	114	VAL	2.5
38	65	10	ARG	2.5
40	C8	26	GLY	2.5

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Mol	Chain	Res	Type	RSRZ
19	AA	14	HIS	2.5
4	3E	61	LYS	2.5
5	4E	131	ILE	2.5
30	49	77	ILE	2.5
28	29	117	MET	2.5
34	25	65	THR	2.5
44	C5	75	ILE	2.5
2	1E	59	GLU	2.5
7	6E	5	ARG	2.5
36	45	82	ARG	2.5
26	79	178	ALA	2.5
30	49	25	TYR	2.5
49	H5	31	LEU	2.5
50	I5	45	GLY	2.5
20	BA	18	GLN	2.5
49	H5	32	GLN	2.5
27	19	220	HIS	2.5
36	45	76	LYS	2.5
37	98	5	LYS	2.5
10	1I	38	ILE	2.5
36	88	103	MET	2.5
44	G8	5	MET	2.5
21	1F	22	ARG	2.5
43	B5	68	ARG	2.5
33	15	80	GLY	2.5
33	15	82	LEU	2.5
46	E5	61	ALA	2.5
31	59	123	PHE	2.5
40	C8	32	PHE	2.5
41	95	76	LYS	2.5
42	E8	97	LYS	2.5
24	14	631	A	2.5
51	N8	23	HIS	2.5
12	3I	15	ARG	2.5
4	3E	108	LEU	2.5
34	25	25	LEU	2.5
44	G8	101	LYS	2.5
1	13	107	G	2.5
19	AA	62	ILE	2.5
54	1G	1112	C	2.4
15	6A	66	LEU	2.4
16	7I	10	GLY	2.4

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Mol	Chain	Res	Type	RSRZ
19	AA	45	VAL	2.4
24	14	2320	A	2.4
46	I8	51	VAL	2.4
48	G5	60	LEU	2.4
45	D5	104	PHE	2.4
33	58	8	GLN	2.4
34	25	37	ASP	2.4
2	12	155	LEU	2.4
8	72	98	LYS	2.4
44	G8	94	LYS	2.4
54	1G	1084	G	2.4
2	1E	163	PHE	2.4
20	BI	66	ALA	2.4
36	45	93	TYR	2.4
17	8A	91	ARG	2.4
30	41	143	GLU	2.4
34	25	19	ILE	2.4
44	C5	5	MET	2.4
17	8I	98	LEU	2.4
46	I8	38	VAL	2.4
44	G8	86	ARG	2.4
52	L5	41	ARG	2.4
8	7E	6	ILE	2.4
4	32	51	PRO	2.4
10	1I	37	PRO	2.4
16	7I	3	LYS	2.4
54	1G	1450	U	2.4
15	6A	54	ARG	2.4
27	11	234	GLY	2.4
28	29	79	ARG	2.4
28	29	161	GLY	2.4
15	6A	69	TYR	2.4
29	31	184	TYR	2.4
19	AA	32	LYS	2.4
42	E8	83	LYS	2.4
1	13	390	C	2.4
3	2E	11	ARG	2.4
8	72	9	MET	2.4
31	59	154	PRO	2.4
17	8A	11	VAL	2.4
28	29	9	VAL	2.4
31	59	131	VAL	2.4

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Mol	Chain	Res	Type	RSRZ
32	69	12	LEU	2.4
3	2E	180	ALA	2.4
11	2A	89	ALA	2.4
37	98	21	TYR	2.4
47	J8	38	SER	2.4
2	12	80	ILE	2.4
30	41	164	GLU	2.4
31	59	121	ILE	2.4
15	6A	67	LEU	2.4
28	29	115	GLY	2.4
28	29	125	GLY	2.4
24	14	1090	U	2.4
1	13	1236	A	2.4
29	39	64	ILE	2.4
42	A5	6	ILE	2.4
3	22	204	LEU	2.4
10	1A	40	LEU	2.4
15	6A	32	LEU	2.4
27	11	147	LEU	2.4
33	15	23	LEU	2.4
36	45	97	VAL	2.4
49	H5	9	VAL	2.4
28	29	8	LYS	2.4
4	3E	68	TYR	2.4
26	79	166	ASP	2.4
54	1G	1065	U	2.4
8	7E	109	ILE	2.4
31	59	84	SER	2.4
4	32	157	LEU	2.4
28	21	7	VAL	2.4
33	15	122	VAL	2.4
1	13	331	G	2.4
1	13	1224	G	2.4
47	F5	16	ASN	2.4
54	1G	878	G	2.4
3	22	180	ALA	2.4
14	5I	35	ARG	2.4
16	7A	13	HIS	2.4
3	2E	182	ILE	2.4
34	25	69	ILE	2.4
50	M8	14	ILE	2.4
8	7E	137	VAL	2.4

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Mol	Chain	Res	Type	RSRZ
9	82	102	LEU	2.4
28	29	109	LYS	2.4
40	85	60	LEU	2.4
51	N8	57	VAL	2.4
2	12	140	HIS	2.4
14	5I	5	ALA	2.4
14	5I	57	ARG	2.4
16	7A	28	ARG	2.4
28	29	157	ALA	2.4
31	59	104	GLU	2.4
36	45	38	GLU	2.4
37	55	102	GLU	2.4
39	75	48	ILE	2.4
54	1G	1224	G	2.4
12	3I	27	LEU	2.4
30	49	74	LYS	2.4
35	35	118	GLY	2.4
46	E5	54	GLY	2.4
1	13	1367	C	2.4
13	4A	110	ARG	2.4
54	1G	1395	C	2.4
20	BI	59	ALA	2.4
10	1A	38	ILE	2.4
36	45	75	THR	2.4
47	F5	34	THR	2.4
6	5E	55	ASP	2.4
7	6E	103	TRP	2.4
16	7A	6	LEU	2.4
49	H5	8	LEU	2.4
3	22	2	GLY	2.4
12	3I	18	VAL	2.4
20	BA	69	GLY	2.4
24	14	2319	G	2.4
27	19	15	PHE	2.4
38	A8	27	SER	2.4
52	P8	1	MET	2.4
9	82	13	ALA	2.4
21	1B	3	LYS	2.4
40	C8	46	ALA	2.4
13	4A	63	THR	2.4
33	58	15	LEU	2.4
3	22	198	VAL	2.3

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Mol	Chain	Res	Type	RSRZ
35	35	77	ARG	2.3
42	A5	46	PHE	2.3
47	J8	21	ARG	2.3
9	82	31	GLN	2.3
46	E5	53	MET	2.3
20	BA	68	LYS	2.3
53	Q8	11	LYS	2.3
7	62	12	LEU	2.3
8	7E	13	ILE	2.3
9	8E	125	TYR	2.3
28	29	114	ALA	2.3
4	32	135	LEU	2.3
13	4A	96	LEU	2.3
30	49	88	ILE	2.3
4	3E	73	ARG	2.3
8	72	85	ARG	2.3
17	8I	91	ARG	2.3
28	21	196	VAL	2.3
34	68	35	VAL	2.3
50	I5	61	ARG	2.3
54	1G	879	C	2.3
2	12	141	GLU	2.3
15	6I	71	GLN	2.3
53	Q8	29	LYS	2.3
53	M5	26	LYS	2.3
30	41	35	GLU	2.3
18	9I	17	SER	2.3
24	14	2585	U	2.3
15	6I	31	LEU	2.3
15	6I	67	LEU	2.3
32	61	12	LEU	2.3
40	85	17	ILE	2.3
47	J8	58	ILE	2.3
33	58	115	ARG	2.3
3	2E	195	VAL	2.3
4	32	110	PHE	2.3
9	82	67	GLY	2.3
13	4I	7	VAL	2.3
29	31	193	VAL	2.3
35	35	82	GLY	2.3
38	65	11	LYS	2.3
50	I5	47	GLN	2.3

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Mol	Chain	Res	Type	RSRZ
54	1G	1129	C	2.3
3	22	5	ILE	2.3
8	7E	110	ALA	2.3
11	2A	25	TYR	2.3
12	3I	97	ARG	2.3
12	3A	60	LEU	2.3
15	6I	68	ARG	2.3
16	7I	5	ARG	2.3
20	BA	12	ALA	2.3
27	19	155	LEU	2.3
47	J8	37	ILE	2.3
47	F5	11	ARG	2.3
54	1G	1394	A	2.3
40	C8	15	LYS	2.3
16	7I	67	THR	2.3
36	88	91	GLU	2.3
44	C5	12	THR	2.3
50	M8	20	ASN	2.3
53	Q8	40	GLU	2.3
20	BI	86	ARG	2.3
2	1E	80	ILE	2.3
19	AA	75	ALA	2.3
24	1H	654(H)	G	2.3
46	I8	75	LEU	2.3
7	6E	77	SER	2.3
27	11	246	PRO	2.3
39	B8	30	VAL	2.3
16	7I	37	GLY	2.3
50	M8	34	GLU	2.3
10	1I	70	ARG	2.3
35	35	49	ARG	2.3
46	E5	43	THR	2.3
4	32	134	ASP	2.3
6	5E	92	LYS	2.3
8	72	135	CYS	2.3
11	2I	123	LYS	2.3
27	19	4	LYS	2.3
28	29	154	LYS	2.3
39	75	100	TYR	2.3
39	75	114	LEU	2.3
42	A5	72	LYS	2.3
4	32	7	PRO	2.3

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Mol	Chain	Res	Type	RSRZ
15	6A	27	VAL	2.3
26	79	214	VAL	2.3
30	49	23	PHE	2.3
31	59	125	VAL	2.3
40	85	40	PHE	2.3
50	M8	21	VAL	2.3
51	J5	28	PRO	2.3
53	Q8	14	VAL	2.3
19	AA	44	MET	2.3
33	58	13	TRP	2.3
49	H5	19	GLN	2.3
2	12	148	TYR	2.3
5	4E	31	LEU	2.3
7	6E	33	ASP	2.3
29	39	42	ALA	2.3
29	39	49	ALA	2.3
40	C8	80	ILE	2.3
14	5I	36	PHE	2.3
29	31	129	PHE	2.3
2	1E	26	PRO	2.3
17	8A	24	GLU	2.3
42	E8	92	ARG	2.3
4	32	123	HIS	2.3
9	8E	102	LEU	2.3
28	21	78	LEU	2.3
33	15	107	LEU	2.3
54	1G	693	G	2.3
5	42	17	ALA	2.3
5	42	98	THR	2.3
24	1H	899	A	2.3
25	1J	52	A	2.3
45	D5	116	VAL	2.3
4	32	114	ARG	2.3
27	19	217	ARG	2.3
44	C5	84	ARG	2.3
17	8I	2	PRO	2.3
37	98	6	SER	2.3
1	13	877	C	2.3
2	12	187	LEU	2.3
8	7E	119	LEU	2.3
17	8A	6	LEU	2.3
2	1E	185	ILE	2.3

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Mol	Chain	Res	Type	RSRZ
8	7E	80	ILE	2.3
13	4I	78	ILE	2.3
24	1H	2108	C	2.3
38	65	26	LEU	2.3
27	11	64	ILE	2.3
7	62	117	ALA	2.3
19	AI	41	VAL	2.3
20	BI	75	ASN	2.3
28	21	160	TYR	2.3
27	19	52	ARG	2.3
36	45	69	PHE	2.3
41	95	79	VAL	2.3
54	1G	1235	U	2.3
16	7A	27	LYS	2.3
19	AI	32	LYS	2.3
27	19	5	LYS	2.3
38	65	57	LYS	2.3
54	1G	46	G	2.3
54	1G	502	G	2.3
46	I8	47	PRO	2.3
2	12	138	LEU	2.3
13	4I	92	HIS	2.3
15	6A	72	ARG	2.3
26	71	194	ARG	2.3
33	15	119	ARG	2.3
24	14	868	U	2.3
47	J8	45	ASN	2.3
54	1G	400	C	2.3
27	11	226	MET	2.3
5	4E	101	ILE	2.3
5	42	27	ARG	2.3
14	5A	19	ARG	2.3
24	1H	989	G	2.3
24	14	271(B)	G	2.3
30	41	152	LEU	2.3
38	65	17	ARG	2.3
42	E8	95	ILE	2.3
44	C5	2	ARG	2.3
9	8E	113	LYS	2.3
35	78	51	PHE	2.3
40	C8	35	ALA	2.3
44	C5	47	LYS	2.3

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Mol	Chain	Res	Type	RSRZ
45	H8	85	HIS	2.3
49	H5	10	LYS	2.3
8	72	4	ASP	2.3
24	1H	1537	C	2.3
21	1F	9	ARG	2.3
42	A5	36	LEU	2.3
11	2A	108	ILE	2.3
28	21	197	ILE	2.3
29	39	82	ILE	2.3
41	95	78	LYS	2.3
9	8E	5	TYR	2.3
40	C8	8	VAL	2.3
34	25	36	GLY	2.2
2	1E	73	THR	2.2
3	22	183	ASP	2.2
19	AA	81	ARG	2.2
20	BI	26	ASN	2.2
28	21	105	THR	2.2
37	98	1	MET	2.2
51	J5	26	THR	2.2
53	M5	62	LEU	2.2
41	D8	85	LYS	2.2
53	M5	36	LYS	2.2
4	3E	42	GLN	2.2
4	3E	124	GLY	2.2
6	52	53	ALA	2.2
12	3A	30	ALA	2.2
33	15	47	ALA	2.2
29	39	39	TRP	2.2
45	D5	169	GLU	2.2
47	F5	38	SER	2.2
7	6E	59	LEU	2.2
28	21	183	LEU	2.2
29	39	155	LEU	2.2
46	E5	24	LYS	2.2
36	88	68	ILE	2.2
34	25	58	VAL	2.2
12	3I	95	GLY	2.2
44	G8	35	TYR	2.2
9	8E	42	ARG	2.2
16	7A	18	ARG	2.2
38	65	9	ARG	2.2

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Mol	Chain	Res	Type	RSRZ
3	22	4	LYS	2.2
4	3E	58	LEU	2.2
20	BA	84	LEU	2.2
27	19	38	LYS	2.2
33	15	87	LEU	2.2
9	8E	101	PHE	2.2
46	I8	57	PHE	2.2
45	H8	27	VAL	2.2
2	12	92	TYR	2.2
4	3E	10	ARG	2.2
4	32	117	ALA	2.2
14	5A	45	ARG	2.2
24	1H	2899	G	2.2
24	14	387	U	2.2
26	79	203	GLY	2.2
33	15	77	GLY	2.2
37	98	7	GLY	2.2
44	C5	91	GLU	2.2
7	62	156	TRP	2.2
22	3L	19	C	2.2
8	7E	9	MET	2.2
44	C5	7	VAL	2.2
2	1E	31	TYR	2.2
5	4E	22	GLY	2.2
9	82	72	GLY	2.2
12	3A	72	GLY	2.2
35	35	38	GLN	2.2
36	45	72	LYS	2.2
42	A5	73	ALA	2.2
52	L5	2	LYS	2.2
12	3A	10	LEU	2.2
28	29	78	LEU	2.2
54	1G	43	C	2.2
20	BA	15	ARG	2.2
29	31	173	VAL	2.2
35	78	41	ARG	2.2
40	C8	50	ARG	2.2
40	85	3	ARG	2.2
30	49	89	GLY	2.2
42	E8	94	ASP	2.2
47	J8	69	LYS	2.2
15	6I	62	GLN	2.2

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Mol	Chain	Res	Type	RSRZ
35	35	58	THR	2.2
7	6E	99	LEU	2.2
17	8A	31	LEU	2.2
26	79	47	LEU	2.2
34	25	8	LEU	2.2
2	12	172	ILE	2.2
8	7E	129	VAL	2.2
9	82	71	SER	2.2
15	6A	35	ARG	2.2
26	71	208	PHE	2.2
43	F8	28	PHE	2.2
53	Q8	57	ARG	2.2
1	13	306	G	2.2
28	21	6	GLY	2.2
36	88	12	GLN	2.2
53	M5	24	ALA	2.2
43	B5	92	LEU	2.2
12	3I	32	PHE	2.2
33	15	117	PHE	2.2
34	25	18	LYS	2.2
35	78	76	LYS	2.2
36	88	69	PHE	2.2
3	22	39	ILE	2.2
5	42	129	ILE	2.2
51	N8	13	LYS	2.2
27	19	173	VAL	2.2
42	A5	101	SER	2.2
54	1G	1111	A	2.2
20	BI	60	GLU	2.2
46	I8	73	GLY	2.2
49	L8	14	GLY	2.2
7	62	154	TYR	2.2
12	3I	68	ALA	2.2
4	32	97	LEU	2.2
7	6E	106	GLN	2.2
9	82	47	LEU	2.2
30	41	97	ASP	2.2
41	95	36	PRO	2.2
10	1A	7	LYS	2.2
24	14	1980	G	2.2
29	31	158	THR	2.2
29	39	45	ARG	2.2

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Mol	Chain	Res	Type	RSRZ
33	58	121	LYS	2.2
49	L8	17	LYS	2.2
4	3E	123	HIS	2.2
29	39	75	HIS	2.2
38	A8	18	ILE	2.2
30	41	30	GLU	2.2
49	H5	59	VAL	2.2
28	29	140	SER	2.2
24	1H	887	A	2.2
2	1E	146	GLN	2.2
26	79	53	ARG	2.2
20	BA	55	ILE	2.2
24	14	2804	C	2.2
26	71	27	HIS	2.2
36	45	66	ILE	2.2
38	A8	28	VAL	2.2
45	H8	105	VAL	2.2
31	59	100	GLY	2.2
54	1G	1190	G	2.2
4	32	49	ARG	2.2
4	32	118	ARG	2.2
7	62	2	ALA	2.2
9	8E	112	LYS	2.2
9	82	118	LYS	2.2
12	3A	98	TYR	2.2
27	19	184	LYS	2.2
27	19	212	SER	2.2
30	41	107	LEU	2.2
33	15	115	ARG	2.2
44	G8	33	LYS	2.2
4	32	119	GLN	2.2
34	25	5	GLN	2.2
17	8A	71	PHE	2.2
36	88	65	PHE	2.2
5	4E	81	GLU	2.2
28	21	25	VAL	2.2
30	49	38	VAL	2.2
44	C5	72	VAL	2.2
50	I5	23	GLU	2.2
53	M5	4	MET	2.2
2	12	111	ARG	2.2
17	8I	38	ARG	2.2

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Mol	Chain	Res	Type	RSRZ
26	71	164	ARG	2.2
14	5I	20	ALA	2.2
14	5A	47	LEU	2.2
28	21	131	ALA	2.2
31	59	71	LEU	2.2
34	25	41	ALA	2.2
24	14	2545	G	2.2
29	39	171	PRO	2.2
54	1G	31	G	2.2
5	42	131	ILE	2.2
36	88	97	VAL	2.2
46	E5	23	VAL	2.2
13	4A	95	GLY	2.2
42	A5	29	LEU	2.1
16	7I	64	ALA	2.1
54	1G	1109	C	2.1
24	1H	9	U	2.1
50	M8	29	PRO	2.1
7	62	29	LYS	2.1
19	AI	13	ASP	2.1
26	79	55	ASP	2.1
33	58	2	LYS	2.1
50	M8	13	ARG	2.1
35	35	44	GLY	2.1
54	1G	1064	G	2.1
13	4A	116	THR	2.1
18	9I	69	THR	2.1
27	11	254	THR	2.1
28	21	90	THR	2.1
28	29	132	HIS	2.1
36	88	32	TYR	2.1
4	32	160	GLN	2.1
1	13	43	C	2.1
4	32	133	VAL	2.1
5	42	105	VAL	2.1
53	M5	37	SER	2.1
45	D5	159	PRO	2.1
29	39	96	ASP	2.1
54	1G	789	U	2.1
8	7E	10	LEU	2.1
41	D8	40	LEU	2.1
7	62	39	ALA	2.1

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Mol	Chain	Res	Type	RSRZ
12	3I	61	THR	2.1
33	58	73	THR	2.1
47	J8	71	TYR	2.1
53	Q8	10	ALA	2.1
1	13	1516	G	2.1
24	1H	529	A	2.1
24	14	2645	G	2.1
32	61	7	GLU	2.1
34	68	26	LYS	2.1
34	25	17	ARG	2.1
44	C5	49	VAL	2.1
5	4E	106	PRO	2.1
20	BI	102	GLY	2.1
46	E5	13	GLY	2.1
24	1H	614	U	2.1
27	19	147	LEU	2.1
30	41	94	LEU	2.1
30	49	7	LEU	2.1
54	1G	1240	U	2.1
4	32	20	TYR	2.1
3	2E	190	ARG	2.1
4	32	43	HIS	2.1
5	42	18	ARG	2.1
8	72	12	ARG	2.1
20	BI	89	ARG	2.1
27	19	35	LYS	2.1
27	19	67	PHE	2.1
30	49	80	PHE	2.1
31	59	138	LYS	2.1
38	65	93	LYS	2.1
46	I8	55	ARG	2.1
31	59	99	VAL	2.1
33	15	46	VAL	2.1
39	B8	89	VAL	2.1
2	1E	99	GLY	2.1
12	3I	25	PRO	2.1
14	5A	14	PRO	2.1
24	1H	2173	A	2.1
24	1H	2799	A	2.1
27	19	226	MET	2.1
54	1G	1183	A	2.1
27	19	68	LYS	2.1

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Mol	Chain	Res	Type	RSRZ
39	B8	94	ALA	2.1
41	D8	83	ARG	2.1
52	L5	19	ARG	2.1
54	1G	82	U	2.1
27	19	233	HIS	2.1
49	H5	52	HIS	2.1
3	22	152	ILE	2.1
4	32	126	ILE	2.1
26	79	40	THR	2.1
39	B8	86	ILE	2.1
33	15	36	GLY	2.1
47	F5	31	GLY	2.1
30	41	8	LYS	2.1
33	15	79	PRO	2.1
5	42	14	ARG	2.1
8	72	94	TYR	2.1
24	14	2031	A	2.1
34	25	99	PHE	2.1
40	C8	47	TYR	2.1
42	A5	5	ALA	2.1
50	I5	51	ASP	2.1
17	8A	58	GLU	2.1
4	32	42	GLN	2.1
17	8I	59	ILE	2.1
17	8A	73	VAL	2.1
50	M8	3	GLU	2.1
20	BA	75	ASN	2.1
8	7E	127	LEU	2.1
15	6A	55	GLY	2.1
32	61	118	LYS	2.1
33	15	120	LEU	2.1
44	C5	63	LYS	2.1
50	M8	61	ARG	2.1
53	M5	44	LYS	2.1
9	82	5	TYR	2.1
24	1H	1762[A]	A	2.1
29	31	105	VAL	2.1
50	M8	33	VAL	2.1
24	14	2449	U	2.1
2	1E	111	ARG	2.1
29	31	101	LEU	2.1
29	39	175	THR	2.1

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Mol	Chain	Res	Type	RSRZ
44	C5	31	LEU	2.1
49	L8	31	LEU	2.1
54	1G	586	C	2.1
54	1G	1202	G	2.1
46	E5	47	PRO	2.1
4	3E	71	SER	2.1
28	21	104	VAL	2.1
15	6A	51	HIS	2.1
35	78	75	ILE	2.1
40	C8	51	LYS	2.1
20	BA	53	LEU	2.1
28	21	27	LEU	2.1
34	68	1	MET	2.1
37	55	51	LEU	2.1
19	AI	77	THR	2.1
5	4E	17	ALA	2.1
24	1H	654(O)	G	2.1
29	31	25	PRO	2.1
31	59	157	TYR	2.1
54	1G	1103	C	2.1
38	65	6	ALA	2.1
47	J8	89	GLU	2.1
9	8E	81	ILE	2.1
36	88	83	MET	2.1
29	31	182	ASN	2.1
24	14	899	A	2.1
27	11	35	LYS	2.1
40	85	47	TYR	2.1
44	C5	101	LYS	2.1
46	I8	46	LYS	2.1
53	M5	59	LYS	2.1
54	1G	994	A	2.1
14	5A	10	ALA	2.1
4	32	158	ILE	2.1
9	8E	77	ILE	2.1
16	7A	19	ILE	2.1
24	1H	888	C	2.1
32	69	4	ILE	2.1
54	1G	398	C	2.1
3	22	17	ASP	2.1
13	4A	90	LEU	2.1
24	14	2148	G	2.1

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Mol	Chain	Res	Type	RSRZ
27	11	95	LEU	2.1
39	75	105	LEU	2.1
27	19	250	TRP	2.1
13	4I	93	ARG	2.1
15	6A	26	GLU	2.1
26	71	165	ASN	2.1
28	21	154	LYS	2.1
48	G5	15	LYS	2.1
31	59	10	PRO	2.1
47	J8	43	TYR	2.1
3	2E	198	VAL	2.1
5	4E	90	VAL	2.1
36	88	90	VAL	2.1
38	65	14	VAL	2.1
1	13	1324	A	2.1
2	1E	69	LEU	2.1
20	BA	33	ILE	2.1
28	29	5	LEU	2.1
32	69	38	LEU	2.1
40	85	27	LEU	2.1
45	D5	163	LEU	2.1
46	I8	59	LEU	2.1
24	14	2827	C	2.1
38	65	8	GLU	2.0
46	I8	72	ARG	2.0
28	29	160	TYR	2.0
49	L8	15	TYR	2.0
54	1G	112	G	2.0
54	1G	306	G	2.0
54	1G	867	G	2.0
42	E8	85	VAL	2.0
47	J8	34	THR	2.0
13	4A	4	ILE	2.0
1	13	915	A	2.0
3	2E	10	PHE	2.0
26	79	163	PHE	2.0
40	C8	19	LYS	2.0
44	G8	4	LYS	2.0
53	Q8	15	LYS	2.0
30	49	116	ASP	2.0
31	59	6	ARG	2.0
33	58	130	HIS	2.0

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Mol	Chain	Res	Type	RSRZ
1	13	103	C	2.0
47	J8	72	GLU	2.0
7	62	9	VAL	2.0
9	8E	44	VAL	2.0
12	3I	30	ALA	2.0
38	A8	14	VAL	2.0
47	F5	15	ALA	2.0
27	19	55	GLY	2.0
27	19	249	PRO	2.0
40	C8	17	ILE	2.0
40	85	44	ASN	2.0
20	BA	27	LYS	2.0
40	C8	22	LYS	2.0
43	F8	63	LYS	2.0
49	H5	7	LYS	2.0
3	2E	128	PHE	2.0
5	42	28	PHE	2.0
54	1G	1086	U	2.0
53	M5	30	ARG	2.0
40	85	89	GLU	2.0
27	19	182	LEU	2.0
27	19	206	LEU	2.0
33	15	31	ALA	2.0
39	B8	100	TYR	2.0
8	72	88	LYS	2.0
15	6I	56	LEU	2.0
41	95	70	ILE	2.0
47	J8	73	LEU	2.0
50	M8	12	ALA	2.0
17	8A	75	ARG	2.0
40	85	55	ARG	2.0
15	6A	59	MET	2.0
24	14	614	U	2.0
24	14	958	U	2.0
36	88	7	MET	2.0
24	14	250	G	2.0
53	M5	35	GLN	2.0
35	35	27	HIS	2.0
17	8I	42	TYR	2.0
34	25	24	VAL	2.0
8	7E	107	LEU	2.0
20	BI	67	ALA	2.0

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Mol	Chain	Res	Type	RSRZ
27	19	175	LEU	2.0
28	21	134	ILE	2.0
35	78	6	LEU	2.0
1	13	975	A	2.0
3	2E	194	GLY	2.0
8	7E	128	GLY	2.0
53	M5	38	GLY	2.0
54	1G	1451	A	2.0
4	32	40	PRO	2.0
35	35	130	PHE	2.0
4	3E	140	VAL	2.0
36	45	41	TRP	2.0
2	12	145	LEU	2.0
1	13	1520	G	2.0
2	1E	14	GLY	2.0
7	6E	42	ILE	2.0
31	59	130	ARG	2.0
37	98	75	LEU	2.0
26	79	48	GLY	2.0
27	19	42	GLY	2.0
27	19	223	GLY	2.0
54	1G	823	G	2.0
10	1I	53	PRO	2.0
36	88	39	PRO	2.0
23	4L	15	A	2.0
24	14	423	A	2.0
5	42	121	LYS	2.0
33	15	118	LYS	2.0
43	F8	56	THR	2.0
9	82	41	VAL	2.0
39	B8	6	LEU	2.0
44	C5	86	ARG	2.0
47	J8	46	LEU	2.0

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

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

Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
22	4SU	3L	8	20/21	0.77	0.19	193,208,220,222	0
22	PSU	3L	64	20/21	0.77	0.24	167,198,215,220	0
22	PSU	3K	64	20/21	0.81	0.12	175,186,200,205	0
22	OMG	2L	17	24/25	0.81	0.17	161,167,175,176	0
22	OMG	3L	17	24/25	0.82	0.29	201,218,239,245	0
22	5MU	3L	63	21/22	0.84	0.20	164,182,191,194	0
22	4SU	3K	8	20/21	0.84	0.13	182,197,218,229	0
22	PSU	2L	64	20/21	0.85	0.19	147,156,162,165	0
22	OMG	3K	17	24/25	0.86	0.17	201,213,227,235	0
22	OMG	2K	17	24/25	0.87	0.23	150,155,165,169	0
22	4SU	2L	8	20/21	0.90	0.12	142,153,161,169	0
22	QUO	3K	35	32/33	0.90	0.32	131,138,151,152	0
22	5MU	2L	63	21/22	0.90	0.16	144,157,165,169	0
22	PSU	2K	64	20/21	0.90	0.11	139,143,148,152	0
22	QUO	3L	35	32/33	0.91	0.35	131,137,152,158	0
22	5MU	3K	63	21/22	0.91	0.09	168,182,188,191	0
22	4SU	2K	8	20/21	0.91	0.15	139,144,148,151	0
22	PSU	3K	40	20/21	0.93	0.16	132,136,141,143	0
22	PSU	3L	40	20/21	0.93	0.18	132,140,144,144	0
22	5MU	2K	63	21/22	0.93	0.13	136,142,148,150	0
22	MIA	3K	38	29/30	0.93	0.21	128,138,144,146	0
22	MIA	3L	38	29/30	0.94	0.30	131,140,149,159	0
22	QUO	2L	35	32/33	0.94	0.47	111,120,135,136	8
22	MIA	2K	38	29/30	0.95	0.27	101,114,121,126	0
22	PSU	2K	40	20/21	0.95	0.20	96,112,117,120	0
22	PSU	2L	40	20/21	0.95	0.29	108,120,128,130	0
22	QUO	2K	35	32/33	0.96	0.29	103,113,118,124	9
22	MIA	2L	38	29/30	0.96	0.30	112,124,132,146	0

6.3 Carbohydrates (i)

There are no monosaccharides in this entry.

6.4 Ligands (i)

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

Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
55	MG	14	3319	1/1	-0.08	0.34	110,110,110,110	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
55	MG	1H	3268	1/1	0.08	0.22	85,85,85,85	0
55	MG	14	3214	1/1	0.16	0.21	122,122,122,122	0
55	MG	1G	1696	1/1	0.17	0.33	112,112,112,112	0
55	MG	1G	1669	1/1	0.18	0.23	119,119,119,119	0
55	MG	1H	3249	1/1	0.27	0.38	102,102,102,102	0
55	MG	13	1684	1/1	0.36	0.18	99,99,99,99	0
55	MG	14	3342	1/1	0.36	0.30	93,93,93,93	0
55	MG	14	3271	1/1	0.42	0.45	99,99,99,99	0
55	MG	1H	3281	1/1	0.42	0.35	103,103,103,103	0
55	MG	14	3323	1/1	0.42	0.31	113,113,113,113	0
55	MG	1G	1693	1/1	0.42	0.43	106,106,106,106	0
55	MG	14	3324	1/1	0.44	0.19	119,119,119,119	0
55	MG	1G	1665	1/1	0.44	0.23	107,107,107,107	0
55	MG	14	3211	1/1	0.46	0.39	101,101,101,101	0
55	MG	13	1685	1/1	0.47	0.26	119,119,119,119	0
55	MG	1H	3216	1/1	0.47	0.31	93,93,93,93	0
55	MG	2K	103	1/1	0.49	0.36	140,140,140,140	0
55	MG	14	3306	1/1	0.49	0.55	92,92,92,92	0
55	MG	1H	3207	1/1	0.50	0.31	101,101,101,101	0
55	MG	1H	3034	1/1	0.51	0.35	93,93,93,93	0
55	MG	1H	3096	1/1	0.51	0.15	74,74,74,74	0
55	MG	1H	3242	1/1	0.51	0.34	107,107,107,107	0
55	MG	1H	3522	1/1	0.51	0.09	112,112,112,112	0
55	MG	1H	3136	1/1	0.52	0.36	96,96,96,96	0
55	MG	13	1619	1/1	0.52	0.21	81,81,81,81	0
55	MG	14	3247	1/1	0.53	0.33	89,89,89,89	0
55	MG	1H	3333	1/1	0.54	0.43	97,97,97,97	0
55	MG	1H	3131	1/1	0.54	0.50	96,96,96,96	0
55	MG	1H	3157	1/1	0.54	0.40	98,98,98,98	0
55	MG	29	304	1/1	0.56	0.34	115,115,115,115	0
55	MG	1G	1683	1/1	0.57	0.22	102,102,102,102	0
55	MG	1G	1718	1/1	0.57	0.33	94,94,94,94	0
56	ZN	G8	201	1/1	0.57	0.12	201,201,201,201	0
55	MG	1H	3398	1/1	0.58	0.09	110,110,110,110	0
55	MG	14	3317	1/1	0.58	0.28	92,92,92,92	0
55	MG	1H	3158	1/1	0.59	0.41	93,93,93,93	0
55	MG	I8	101	1/1	0.59	0.34	93,93,93,93	0
55	MG	14	3201	1/1	0.59	0.34	84,84,84,84	0
55	MG	1G	1664	1/1	0.60	0.21	112,112,112,112	0
55	MG	14	3081	1/1	0.60	0.28	80,80,80,80	0
55	MG	13	1694	1/1	0.60	0.54	108,108,108,108	0
55	MG	14	3031	1/1	0.61	0.23	95,95,95,95	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
55	MG	14	3246	1/1	0.61	0.26	101,101,101,101	0
55	MG	1H	3178	1/1	0.61	0.57	92,92,92,92	0
55	MG	14	3171	1/1	0.61	0.34	82,82,82,82	0
55	MG	1H	3192	1/1	0.61	0.52	97,97,97,97	0
55	MG	1H	3493	1/1	0.61	0.10	133,133,133,133	0
55	MG	14	3179	1/1	0.62	0.29	107,107,107,107	0
55	MG	13	1690	1/1	0.62	0.36	136,136,136,136	0
55	MG	13	1675	1/1	0.62	0.33	127,127,127,127	0
55	MG	14	3279	1/1	0.63	0.31	103,103,103,103	0
55	MG	29	303	1/1	0.63	0.74	77,77,77,77	0
55	MG	13	1616	1/1	0.63	0.27	133,133,133,133	0
55	MG	1G	1744	1/1	0.63	0.20	126,126,126,126	0
55	MG	1G	1692	1/1	0.64	0.56	141,141,141,141	0
55	MG	14	3097	1/1	0.64	0.27	94,94,94,94	0
55	MG	16	210	1/1	0.64	0.36	117,117,117,117	0
55	MG	45	201	1/1	0.64	0.28	78,78,78,78	0
55	MG	1H	3319	1/1	0.64	0.21	91,91,91,91	0
55	MG	1H	3307	1/1	0.65	0.27	105,105,105,105	0
55	MG	1G	1670	1/1	0.65	0.32	115,115,115,115	0
55	MG	13	1660	1/1	0.65	0.28	108,108,108,108	0
55	MG	1G	1628	1/1	0.66	0.42	95,95,95,95	0
55	MG	1H	3339	1/1	0.66	0.37	122,122,122,122	0
55	MG	1H	3263	1/1	0.66	0.30	78,78,78,78	0
55	MG	14	3226	1/1	0.66	0.19	85,85,85,85	0
55	MG	78	202	1/1	0.66	0.48	91,91,91,91	0
55	MG	14	3326	1/1	0.66	0.51	103,103,103,103	0
55	MG	14	3101	1/1	0.66	0.34	100,100,100,100	0
55	MG	14	3444	1/1	0.66	0.09	113,113,113,113	0
55	MG	14	3257	1/1	0.66	0.29	109,109,109,109	0
55	MG	1G	1704	1/1	0.66	0.20	98,98,98,98	0
55	MG	1H	3175	1/1	0.66	0.43	96,96,96,96	0
55	MG	14	3296	1/1	0.66	0.26	87,87,87,87	0
55	MG	14	3113	1/1	0.67	0.22	85,85,85,85	0
55	MG	1H	3315	1/1	0.67	0.40	107,107,107,107	0
55	MG	13	1687	1/1	0.67	0.11	111,111,111,111	0
55	MG	1H	3273	1/1	0.67	0.42	98,98,98,98	0
55	MG	1H	3511	1/1	0.67	0.15	127,127,127,127	0
55	MG	1G	1717	1/1	0.68	0.15	111,111,111,111	0
55	MG	1H	3025	1/1	0.68	0.15	95,95,95,95	0
55	MG	14	3328	1/1	0.68	0.25	103,103,103,103	0
55	MG	1H	3336	1/1	0.68	0.27	103,103,103,103	0
55	MG	1G	1634	1/1	0.68	0.35	107,107,107,107	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
55	MG	13	1667	1/1	0.68	0.30	99,99,99,99	0
55	MG	1H	3344	1/1	0.68	0.51	95,95,95,95	0
55	MG	1G	1703	1/1	0.68	0.23	113,113,113,113	0
55	MG	1H	3297	1/1	0.68	0.26	104,104,104,104	0
55	MG	1G	1653	1/1	0.69	0.23	90,90,90,90	0
55	MG	14	3264	1/1	0.69	0.40	100,100,100,100	0
55	MG	14	3213	1/1	0.69	0.27	108,108,108,108	0
55	MG	14	3334	1/1	0.69	0.24	93,93,93,93	0
55	MG	13	1659	1/1	0.69	0.14	108,108,108,108	0
55	MG	14	3216	1/1	0.69	0.16	104,104,104,104	0
55	MG	1G	1678	1/1	0.69	0.57	107,107,107,107	0
55	MG	14	3234	1/1	0.69	0.32	96,96,96,96	0
55	MG	1G	1612	1/1	0.69	0.20	108,108,108,108	0
55	MG	14	3206	1/1	0.69	0.24	93,93,93,93	0
55	MG	14	3320	1/1	0.70	0.32	114,114,114,114	0
55	MG	1G	1740	1/1	0.70	0.52	135,135,135,135	0
55	MG	13	1646	1/1	0.70	0.29	100,100,100,100	0
55	MG	14	3249	1/1	0.70	0.28	106,106,106,106	0
55	MG	14	3203	1/1	0.70	0.40	98,98,98,98	0
55	MG	1H	3342	1/1	0.70	0.68	87,87,87,87	0
55	MG	13	1635	1/1	0.70	0.50	106,106,106,106	0
55	MG	1H	3362	1/1	0.70	0.29	112,112,112,112	0
55	MG	1H	3168	1/1	0.70	0.38	75,75,75,75	0
55	MG	1H	3135	1/1	0.70	0.60	102,102,102,102	0
55	MG	14	3140	1/1	0.70	0.28	97,97,97,97	0
55	MG	13	1706	1/1	0.70	0.09	117,117,117,117	0
56	ZN	C5	202	1/1	0.70	0.11	206,206,206,206	0
55	MG	14	3289	1/1	0.71	0.21	100,100,100,100	0
55	MG	2L	103	1/1	0.71	0.21	109,109,109,109	0
55	MG	1G	1676	1/1	0.71	0.21	129,129,129,129	0
55	MG	13	1674	1/1	0.71	0.18	142,142,142,142	0
55	MG	C5	201	1/1	0.71	0.32	95,95,95,95	0
55	MG	13	1689	1/1	0.71	0.38	102,102,102,102	0
55	MG	1H	3155	1/1	0.71	0.36	92,92,92,92	0
55	MG	14	3325	1/1	0.72	0.33	107,107,107,107	0
55	MG	1H	3355	1/1	0.72	0.28	92,92,92,92	0
55	MG	1G	1719	1/1	0.72	0.36	118,118,118,118	0
55	MG	16	209	1/1	0.72	0.12	101,101,101,101	0
55	MG	1G	1658	1/1	0.72	0.31	106,106,106,106	0
55	MG	14	3297	1/1	0.72	0.20	81,81,81,81	0
55	MG	14	3448	1/1	0.72	0.09	123,123,123,123	0
55	MG	14	3235	1/1	0.72	0.36	109,109,109,109	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
55	MG	1H	3133	1/1	0.72	0.17	92,92,92,92	0
55	MG	1H	3363	1/1	0.72	0.21	93,93,93,93	0
55	MG	1H	3051	1/1	0.72	0.42	76,76,76,76	0
55	MG	1H	3290	1/1	0.72	0.21	88,88,88,88	0
55	MG	1H	3348	1/1	0.72	0.28	126,126,126,126	0
55	MG	1H	3243	1/1	0.73	0.18	119,119,119,119	0
55	MG	14	3029	1/1	0.73	0.43	85,85,85,85	0
55	MG	1H	3213	1/1	0.73	0.36	80,80,80,80	0
55	MG	1H	3255	1/1	0.73	0.28	107,107,107,107	0
55	MG	1H	3492	1/1	0.73	0.09	117,117,117,117	0
55	MG	14	3208	1/1	0.73	0.20	83,83,83,83	0
55	MG	14	3339	1/1	0.73	0.55	107,107,107,107	0
55	MG	14	3098	1/1	0.73	0.45	86,86,86,86	0
55	MG	1H	3353	1/1	0.73	0.42	100,100,100,100	0
55	MG	1G	1609	1/1	0.73	0.17	106,106,106,106	0
55	MG	14	3128	1/1	0.73	0.30	85,85,85,85	0
55	MG	14	3299	1/1	0.73	0.40	138,138,138,138	0
55	MG	14	3136	1/1	0.73	0.18	109,109,109,109	0
55	MG	14	3233	1/1	0.73	0.32	84,84,84,84	0
55	MG	1H	3262	1/1	0.73	0.28	101,101,101,101	0
55	MG	14	3146	1/1	0.73	0.40	81,81,81,81	0
55	MG	14	3295	1/1	0.74	0.45	103,103,103,103	0
55	MG	1G	1635	1/1	0.74	0.31	98,98,98,98	0
55	MG	1H	3358	1/1	0.74	0.41	115,115,115,115	0
55	MG	1H	3314	1/1	0.74	0.41	80,80,80,80	0
55	MG	14	3265	1/1	0.74	0.37	85,85,85,85	0
55	MG	14	3237	1/1	0.74	0.32	79,79,79,79	0
55	MG	14	3220	1/1	0.74	0.18	89,89,89,89	0
55	MG	1G	1711	1/1	0.74	0.89	107,107,107,107	0
55	MG	1H	3504	1/1	0.75	0.12	131,131,131,131	0
55	MG	14	3446	1/1	0.75	0.43	120,120,120,120	0
55	MG	13	1642	1/1	0.75	0.21	99,99,99,99	0
55	MG	14	3472	1/1	0.75	0.06	121,121,121,121	0
55	MG	1H	3141	1/1	0.75	0.34	90,90,90,90	0
55	MG	1H	3525	1/1	0.75	0.10	127,127,127,127	0
55	MG	14	3267	1/1	0.75	0.14	99,99,99,99	0
55	MG	1H	3454	1/1	0.75	0.11	89,89,89,89	0
55	MG	1H	3276	1/1	0.75	0.21	89,89,89,89	0
55	MG	1H	3071	1/1	0.75	0.67	80,80,80,80	0
55	MG	14	3316	1/1	0.76	0.29	97,97,97,97	0
55	MG	1H	3280	1/1	0.76	0.21	97,97,97,97	0
55	MG	1G	1623	1/1	0.76	0.29	99,99,99,99	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
55	MG	14	3123	1/1	0.76	0.36	95,95,95,95	0
55	MG	1G	1700	1/1	0.76	0.22	99,99,99,99	0
55	MG	1H	3451	1/1	0.76	0.21	123,123,123,123	0
55	MG	1G	1629	1/1	0.76	0.23	91,91,91,91	0
55	MG	1H	3208	1/1	0.76	0.60	110,110,110,110	0
55	MG	1H	3254	1/1	0.76	0.17	104,104,104,104	0
55	MG	14	3253	1/1	0.76	0.38	94,94,94,94	0
55	MG	1H	3294	1/1	0.76	0.44	91,91,91,91	0
55	MG	14	3197	1/1	0.76	0.33	105,105,105,105	0
55	MG	1H	3346	1/1	0.76	0.24	80,80,80,80	0
55	MG	1H	3210	1/1	0.76	0.22	97,97,97,97	0
55	MG	1H	3351	1/1	0.76	0.44	114,114,114,114	0
55	MG	13	1727	1/1	0.76	0.08	130,130,130,130	0
55	MG	13	1686	1/1	0.76	0.42	111,111,111,111	0
55	MG	14	3212	1/1	0.76	0.21	94,94,94,94	0
55	MG	1H	3230	1/1	0.76	0.39	91,91,91,91	0
55	MG	13	1647	1/1	0.76	0.30	87,87,87,87	0
55	MG	13	1668	1/1	0.76	0.28	94,94,94,94	0
55	MG	1H	3370	1/1	0.76	0.45	87,87,87,87	0
55	MG	1H	3139	1/1	0.77	0.43	101,101,101,101	0
55	MG	1H	3325	1/1	0.77	0.35	78,78,78,78	0
55	MG	1G	1645	1/1	0.77	0.28	104,104,104,104	0
55	MG	1H	3332	1/1	0.77	0.70	101,101,101,101	0
55	MG	1H	3256	1/1	0.77	0.64	82,82,82,82	0
55	MG	14	3147	1/1	0.77	0.19	115,115,115,115	0
55	MG	14	3149	1/1	0.77	0.33	81,81,81,81	0
55	MG	13	1666	1/1	0.77	0.15	95,95,95,95	0
55	MG	1H	3227	1/1	0.77	0.48	83,83,83,83	0
55	MG	5E	201	1/1	0.77	0.32	121,121,121,121	0
55	MG	14	3258	1/1	0.77	0.24	78,78,78,78	0
55	MG	1H	3341	1/1	0.78	0.31	94,94,94,94	0
55	MG	14	3269	1/1	0.78	0.25	93,93,93,93	0
55	MG	42	201	1/1	0.78	0.34	103,103,103,103	0
55	MG	14	3330	1/1	0.78	0.25	85,85,85,85	0
55	MG	1G	1651	1/1	0.78	0.28	92,92,92,92	0
55	MG	14	3025	1/1	0.78	0.09	85,85,85,85	0
55	MG	1H	3099	1/1	0.78	0.11	90,90,90,90	0
55	MG	1H	3126	1/1	0.78	0.24	87,87,87,87	0
55	MG	14	3062	1/1	0.78	0.20	79,79,79,79	0
55	MG	1H	3299	1/1	0.78	0.34	80,80,80,80	0
55	MG	1H	3505	1/1	0.78	0.62	122,122,122,122	0
55	MG	1J	205	1/1	0.78	0.22	112,112,112,112	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
55	MG	1J	206	1/1	0.78	0.35	129,129,129,129	0
55	MG	1H	3179	1/1	0.78	0.24	69,69,69,69	0
55	MG	1H	3397	1/1	0.78	0.09	90,90,90,90	0
55	MG	1H	3020	1/1	0.78	0.13	103,103,103,103	0
55	MG	16	203	1/1	0.78	0.14	105,105,105,105	0
55	MG	1G	1737	1/1	0.78	0.23	147,147,147,147	0
55	MG	1H	3174	1/1	0.78	0.33	80,80,80,80	0
55	MG	1H	3334	1/1	0.79	0.32	88,88,88,88	0
55	MG	1G	1705	1/1	0.79	0.17	110,110,110,110	0
55	MG	14	3410	1/1	0.79	0.11	109,109,109,109	0
55	MG	14	3307	1/1	0.79	0.12	90,90,90,90	0
55	MG	1H	3182	1/1	0.79	0.22	68,68,68,68	0
55	MG	1H	3166	1/1	0.79	0.30	86,86,86,86	0
55	MG	13	1663	1/1	0.79	0.35	108,108,108,108	0
55	MG	13	1693	1/1	0.79	0.28	103,103,103,103	0
55	MG	1H	3301	1/1	0.79	0.28	93,93,93,93	0
55	MG	1H	3345	1/1	0.79	0.27	104,104,104,104	0
55	MG	14	3111	1/1	0.79	0.22	85,85,85,85	0
55	MG	1H	3253	1/1	0.79	0.41	92,92,92,92	0
55	MG	1G	1613	1/1	0.79	0.24	104,104,104,104	0
55	MG	1H	3347	1/1	0.79	0.37	117,117,117,117	0
55	MG	14	3131	1/1	0.79	0.18	81,81,81,81	0
55	MG	13	1681	1/1	0.80	0.81	117,117,117,117	0
55	MG	14	3464	1/1	0.80	0.23	122,122,122,122	0
55	MG	1H	3260	1/1	0.80	0.29	114,114,114,114	0
55	MG	14	3001	1/1	0.80	0.13	84,84,84,84	0
55	MG	14	3104	1/1	0.80	0.39	96,96,96,96	0
55	MG	1J	207	1/1	0.80	0.21	97,97,97,97	0
55	MG	1H	3233	1/1	0.80	0.65	117,117,117,117	0
55	MG	1G	1731	1/1	0.80	0.07	117,117,117,117	0
55	MG	13	1644	1/1	0.80	0.26	91,91,91,91	0
55	MG	1H	3497	1/1	0.80	0.09	152,152,152,152	0
55	MG	1H	3229	1/1	0.80	0.27	86,86,86,86	0
55	MG	14	3223	1/1	0.80	0.23	97,97,97,97	0
55	MG	1H	3266	1/1	0.81	0.35	106,106,106,106	0
55	MG	14	3332	1/1	0.81	0.21	89,89,89,89	0
55	MG	1G	1715	1/1	0.81	0.29	116,116,116,116	0
55	MG	14	3335	1/1	0.81	0.24	93,93,93,93	0
55	MG	14	3162	1/1	0.81	0.19	92,92,92,92	0
55	MG	1H	3084	1/1	0.81	0.29	83,83,83,83	0
55	MG	16	205	1/1	0.81	0.18	109,109,109,109	0
55	MG	14	3417	1/1	0.81	0.07	119,119,119,119	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
55	MG	1H	3328	1/1	0.81	0.19	94,94,94,94	0
55	MG	1G	1725	1/1	0.81	0.10	124,124,124,124	0
55	MG	13	1692	1/1	0.81	0.38	101,101,101,101	0
55	MG	1G	1691	1/1	0.81	0.47	122,122,122,122	0
55	MG	11	301	1/1	0.81	0.35	93,93,93,93	0
55	MG	14	3318	1/1	0.81	0.31	102,102,102,102	0
55	MG	1H	3023	1/1	0.81	0.41	101,101,101,101	0
55	MG	1H	3110	1/1	0.81	0.14	65,65,65,65	0
55	MG	14	3321	1/1	0.81	0.39	93,93,93,93	0
55	MG	1H	3172	1/1	0.81	0.58	94,94,94,94	0
55	MG	1H	3264	1/1	0.81	0.51	85,85,85,85	0
55	MG	1H	3404	1/1	0.81	0.11	71,71,71,71	0
55	MG	14	3219	1/1	0.81	0.12	105,105,105,105	0
56	ZN	5A	101	1/1	0.81	0.14	155,155,155,155	0
55	MG	1G	1666	1/1	0.81	0.28	99,99,99,99	0
55	MG	1H	3187	1/1	0.82	0.44	103,103,103,103	0
55	MG	14	3274	1/1	0.82	0.19	88,88,88,88	0
55	MG	14	3138	1/1	0.82	0.26	90,90,90,90	0
55	MG	1H	3367	1/1	0.82	0.23	97,97,97,97	0
55	MG	14	3144	1/1	0.82	0.16	78,78,78,78	0
55	MG	1H	3324	1/1	0.82	0.27	96,96,96,96	0
55	MG	1H	3279	1/1	0.82	0.42	101,101,101,101	0
55	MG	1H	3152	1/1	0.82	0.39	82,82,82,82	0
55	MG	13	1636	1/1	0.82	0.23	100,100,100,100	0
55	MG	1H	3142	1/1	0.82	0.19	81,81,81,81	0
55	MG	14	3314	1/1	0.82	0.14	111,111,111,111	0
55	MG	1H	3546	1/1	0.82	0.19	89,89,89,89	0
55	MG	14	3184	1/1	0.82	0.24	92,92,92,92	0
55	MG	1H	3361	1/1	0.82	0.35	103,103,103,103	0
55	MG	1H	3185	1/1	0.82	0.19	73,73,73,73	0
55	MG	1H	3259	1/1	0.83	0.38	165,165,165,165	0
55	MG	1H	3061	1/1	0.83	0.29	90,90,90,90	0
55	MG	13	1665	1/1	0.83	0.19	106,106,106,106	0
55	MG	13	1725	1/1	0.83	0.15	157,157,157,157	0
55	MG	14	3281	1/1	0.83	0.25	98,98,98,98	0
55	MG	14	3284	1/1	0.83	0.39	83,83,83,83	0
55	MG	1H	3309	1/1	0.83	0.26	96,96,96,96	0
55	MG	1H	3310	1/1	0.83	0.36	84,84,84,84	0
55	MG	14	3224	1/1	0.83	0.26	87,87,87,87	0
55	MG	14	3160	1/1	0.83	0.21	82,82,82,82	0
55	MG	14	3089	1/1	0.83	0.21	78,78,78,78	0
55	MG	14	3163	1/1	0.83	0.10	86,86,86,86	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
55	MG	14	3455	1/1	0.83	0.19	131,131,131,131	0
55	MG	1H	3312	1/1	0.83	0.40	106,106,106,106	0
55	MG	14	3470	1/1	0.83	0.12	136,136,136,136	0
55	MG	1G	1723	1/1	0.83	0.19	131,131,131,131	0
55	MG	14	3238	1/1	0.83	0.26	153,153,153,153	0
55	MG	1G	1633	1/1	0.83	0.32	91,91,91,91	0
55	MG	1H	3338	1/1	0.83	0.60	88,88,88,88	0
55	MG	1H	3489	1/1	0.83	0.10	108,108,108,108	0
55	MG	1H	3037	1/1	0.83	0.20	78,78,78,78	0
55	MG	29	305	1/1	0.83	1.00	86,86,86,86	0
55	MG	39	301	1/1	0.83	0.13	108,108,108,108	0
55	MG	1H	3146	1/1	0.83	0.45	98,98,98,98	0
55	MG	32	301	1/1	0.83	0.19	109,109,109,109	0
55	MG	14	3209	1/1	0.83	0.34	89,89,89,89	0
55	MG	78	201	1/1	0.83	0.42	94,94,94,94	0
55	MG	5E	202	1/1	0.83	0.21	109,109,109,109	0
55	MG	1H	3073	1/1	0.84	0.42	71,71,71,71	0
55	MG	13	1720	1/1	0.84	0.16	136,136,136,136	0
55	MG	1H	3282	1/1	0.84	0.28	87,87,87,87	0
55	MG	1H	3289	1/1	0.84	0.51	104,104,104,104	0
55	MG	1H	3088	1/1	0.84	0.18	55,55,55,55	0
55	MG	13	1650	1/1	0.84	0.17	116,116,116,116	0
55	MG	3L	102	1/1	0.84	0.41	95,95,95,95	0
55	MG	1G	1632	1/1	0.84	0.31	88,88,88,88	0
55	MG	14	3437	1/1	0.84	0.12	98,98,98,98	0
55	MG	14	3227	1/1	0.84	0.28	112,112,112,112	0
55	MG	1H	3226	1/1	0.84	0.15	89,89,89,89	0
55	MG	14	3302	1/1	0.84	0.72	82,82,82,82	0
55	MG	14	3304	1/1	0.84	0.35	85,85,85,85	0
55	MG	14	3459	1/1	0.84	0.07	114,114,114,114	0
55	MG	14	3460	1/1	0.84	0.09	94,94,94,94	0
55	MG	1G	1701	1/1	0.84	0.41	106,106,106,106	0
55	MG	13	1683	1/1	0.84	0.17	111,111,111,111	0
55	MG	14	3311	1/1	0.84	0.36	106,106,106,106	0
55	MG	14	3479	1/1	0.84	0.32	108,108,108,108	0
55	MG	1H	3534	1/1	0.84	0.10	115,115,115,115	0
55	MG	13	1669	1/1	0.84	0.42	115,115,115,115	0
55	MG	1G	1710	1/1	0.84	0.63	107,107,107,107	0
55	MG	14	3196	1/1	0.84	0.26	107,107,107,107	0
55	MG	1H	3111	1/1	0.84	0.34	111,111,111,111	0
55	MG	1H	3114	1/1	0.84	0.30	94,94,94,94	0
55	MG	13	1695	1/1	0.84	0.17	108,108,108,108	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
55	MG	1H	3399	1/1	0.84	0.18	109,109,109,109	0
55	MG	13	1678	1/1	0.84	0.22	124,124,124,124	0
55	MG	1H	3193	1/1	0.84	0.19	79,79,79,79	0
55	MG	13	1712	1/1	0.84	0.06	119,119,119,119	0
55	MG	1H	3318	1/1	0.84	0.34	86,86,86,86	0
55	MG	1H	3431	1/1	0.85	0.19	127,127,127,127	0
55	MG	14	3157	1/1	0.85	0.25	95,95,95,95	0
55	MG	13	1639	1/1	0.85	0.27	89,89,89,89	0
55	MG	1H	3304	1/1	0.85	0.30	84,84,84,84	0
55	MG	14	3419	1/1	0.85	0.07	104,104,104,104	0
55	MG	1H	3488	1/1	0.85	0.08	117,117,117,117	0
55	MG	14	3440	1/1	0.85	0.16	131,131,131,131	0
55	MG	2K	104	1/1	0.85	0.08	153,153,153,153	0
55	MG	13	1617	1/1	0.85	0.21	99,99,99,99	0
55	MG	1H	3091	1/1	0.85	0.17	81,81,81,81	0
55	MG	14	3185	1/1	0.85	0.16	92,92,92,92	0
55	MG	14	3310	1/1	0.85	0.11	107,107,107,107	0
55	MG	14	3193	1/1	0.85	0.20	90,90,90,90	0
55	MG	14	3462	1/1	0.85	0.21	100,100,100,100	0
55	MG	1H	3240	1/1	0.85	0.38	91,91,91,91	0
55	MG	1H	3502	1/1	0.85	0.12	125,125,125,125	0
55	MG	1H	3211	1/1	0.85	0.33	94,94,94,94	0
55	MG	14	3202	1/1	0.85	0.19	90,90,90,90	0
55	MG	14	3482	1/1	0.85	0.12	118,118,118,118	0
55	MG	1J	204	1/1	0.85	0.25	128,128,128,128	0
55	MG	13	1609	1/1	0.85	0.21	130,130,130,130	0
55	MG	1G	1679	1/1	0.85	0.14	106,106,106,106	0
55	MG	1H	3248	1/1	0.85	0.21	89,89,89,89	0
55	MG	1H	3132	1/1	0.85	0.15	77,77,77,77	0
55	MG	13	1638	1/1	0.85	0.44	103,103,103,103	0
55	MG	1H	3531	1/1	0.85	0.10	116,116,116,116	0
55	MG	14	3270	1/1	0.85	0.15	88,88,88,88	0
55	MG	1H	3270	1/1	0.85	0.38	92,92,92,92	0
55	MG	1H	3537	1/1	0.85	0.10	148,148,148,148	0
55	MG	1H	3300	1/1	0.85	0.16	54,54,54,54	0
55	MG	14	3217	1/1	0.85	0.14	88,88,88,88	0
55	MG	1G	1644	1/1	0.85	0.12	104,104,104,104	0
55	MG	1H	3209	1/1	0.86	0.25	85,85,85,85	0
55	MG	14	3100	1/1	0.86	0.13	81,81,81,81	0
55	MG	1H	3285	1/1	0.86	0.49	91,91,91,91	0
55	MG	14	3336	1/1	0.86	0.63	102,102,102,102	0
55	MG	1G	1709	1/1	0.86	0.28	111,111,111,111	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
55	MG	14	3109	1/1	0.86	0.28	77,77,77,77	0
55	MG	14	3344	1/1	0.86	0.60	89,89,89,89	0
55	MG	14	3393	1/1	0.86	0.19	103,103,103,103	0
55	MG	13	1656	1/1	0.86	0.41	89,89,89,89	0
55	MG	1H	3521	1/1	0.86	0.10	125,125,125,125	0
55	MG	13	1648	1/1	0.86	0.27	94,94,94,94	0
55	MG	14	3420	1/1	0.86	0.05	125,125,125,125	0
55	MG	14	3424	1/1	0.86	0.10	113,113,113,113	0
55	MG	1H	3364	1/1	0.86	0.17	101,101,101,101	0
55	MG	1H	3031	1/1	0.86	0.62	73,73,73,73	0
55	MG	1H	3115	1/1	0.86	0.39	89,89,89,89	0
55	MG	1H	3373	1/1	0.86	0.19	87,87,87,87	0
55	MG	14	3300	1/1	0.86	0.29	85,85,85,85	0
55	MG	14	3449	1/1	0.86	0.09	135,135,135,135	0
55	MG	1H	3121	1/1	0.86	0.20	82,82,82,82	0
55	MG	14	3457	1/1	0.86	0.14	101,101,101,101	0
55	MG	1H	3149	1/1	0.86	0.56	98,98,98,98	0
55	MG	1H	3228	1/1	0.86	0.23	90,90,90,90	0
55	MG	16	206	1/1	0.86	0.28	76,76,76,76	0
55	MG	13	1626	1/1	0.86	0.21	69,69,69,69	0
55	MG	1G	1745	1/1	0.86	0.06	143,143,143,143	0
55	MG	14	3312	1/1	0.86	0.19	98,98,98,98	0
55	MG	14	3313	1/1	0.86	0.44	91,91,91,91	0
55	MG	13	1655	1/1	0.86	0.24	107,107,107,107	0
55	MG	1H	3444	1/1	0.86	0.14	111,111,111,111	0
55	MG	1H	3044	1/1	0.86	0.35	74,74,74,74	0
55	MG	1G	1681	1/1	0.86	0.18	105,105,105,105	0
55	MG	13	1699	1/1	0.86	0.05	137,137,137,137	0
55	MG	1H	3160	1/1	0.86	0.63	91,91,91,91	0
55	MG	1H	3313	1/1	0.86	0.51	100,100,100,100	0
55	MG	1H	3200	1/1	0.86	0.24	109,109,109,109	0
55	MG	1H	3245	1/1	0.86	0.23	74,74,74,74	0
55	MG	1H	3165	1/1	0.86	0.31	81,81,81,81	0
55	MG	1H	3499	1/1	0.86	0.09	116,116,116,116	0
55	MG	14	3266	1/1	0.86	0.20	101,101,101,101	0
55	MG	1H	3060	1/1	0.86	0.29	79,79,79,79	0
55	MG	14	3331	1/1	0.86	0.66	79,79,79,79	0
55	MG	1G	1638	1/1	0.87	0.19	86,86,86,86	0
55	MG	13	1623	1/1	0.87	0.22	104,104,104,104	0
55	MG	1H	3295	1/1	0.87	0.41	87,87,87,87	0
55	MG	14	3068	1/1	0.87	0.17	71,71,71,71	0
55	MG	14	3445	1/1	0.87	0.11	104,104,104,104	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
55	MG	14	3074	1/1	0.87	0.24	97,97,97,97	0
55	MG	1H	3219	1/1	0.87	0.43	90,90,90,90	0
55	MG	1H	3343	1/1	0.87	0.21	75,75,75,75	0
55	MG	1H	3236	1/1	0.87	0.24	77,77,77,77	0
55	MG	11	302	1/1	0.87	0.54	63,63,63,63	0
55	MG	1H	3323	1/1	0.87	0.12	84,84,84,84	0
55	MG	1H	3220	1/1	0.87	0.43	92,92,92,92	0
55	MG	14	3103	1/1	0.87	0.13	74,74,74,74	0
55	MG	1H	3222	1/1	0.87	0.19	83,83,83,83	0
55	MG	1G	1720	1/1	0.87	0.12	97,97,97,97	0
55	MG	14	3471	1/1	0.87	0.08	109,109,109,109	0
55	MG	1H	3508	1/1	0.87	0.14	122,122,122,122	0
55	MG	14	3473	1/1	0.87	0.24	108,108,108,108	0
55	MG	1H	3144	1/1	0.87	0.45	86,86,86,86	0
55	MG	1H	3198	1/1	0.87	0.23	58,58,58,58	0
55	MG	14	3483	1/1	0.87	0.15	113,113,113,113	0
55	MG	14	3124	1/1	0.87	0.15	92,92,92,92	0
55	MG	1H	3411	1/1	0.87	0.09	110,110,110,110	0
55	MG	1G	1680	1/1	0.87	0.15	101,101,101,101	0
55	MG	1G	1625	1/1	0.87	0.50	97,97,97,97	0
55	MG	1J	211	1/1	0.87	0.12	133,133,133,133	0
55	MG	13	1696	1/1	0.87	0.18	89,89,89,89	0
55	MG	13	1670	1/1	0.87	0.28	150,150,150,150	0
55	MG	14	3221	1/1	0.87	0.23	82,82,82,82	0
55	MG	1H	3265	1/1	0.87	0.13	85,85,85,85	0
55	MG	49	201	1/1	0.87	0.22	134,134,134,134	0
55	MG	1H	3359	1/1	0.87	0.27	70,70,70,70	0
55	MG	1H	3486	1/1	0.87	0.08	104,104,104,104	0
55	MG	1H	3250	1/1	0.87	0.23	80,80,80,80	0
55	MG	14	3014	1/1	0.87	0.42	88,88,88,88	0
55	MG	1G	1637	1/1	0.87	0.31	127,127,127,127	0
55	MG	1H	3217	1/1	0.88	0.24	85,85,85,85	0
55	MG	1G	1728	1/1	0.88	0.09	133,133,133,133	0
55	MG	14	3102	1/1	0.88	0.17	86,86,86,86	0
55	MG	13	1691	1/1	0.88	0.13	98,98,98,98	0
55	MG	1H	3205	1/1	0.88	0.45	101,101,101,101	0
55	MG	14	3200	1/1	0.88	0.15	89,89,89,89	0
55	MG	14	3450	1/1	0.88	0.15	113,113,113,113	0
55	MG	14	3452	1/1	0.88	0.09	96,96,96,96	0
55	MG	14	3256	1/1	0.88	0.41	96,96,96,96	0
55	MG	1H	3402	1/1	0.88	0.10	110,110,110,110	0
55	MG	13	1672	1/1	0.88	0.16	105,105,105,105	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
55	MG	1H	3316	1/1	0.88	0.38	78,78,78,78	0
55	MG	21	301	1/1	0.88	0.21	69,69,69,69	0
55	MG	1G	1698	1/1	0.88	0.57	86,86,86,86	0
55	MG	14	3466	1/1	0.88	0.06	104,104,104,104	0
55	MG	14	3468	1/1	0.88	0.11	134,134,134,134	0
55	MG	1H	3430	1/1	0.88	0.16	99,99,99,99	0
55	MG	13	1653	1/1	0.88	0.10	97,97,97,97	0
55	MG	14	3133	1/1	0.88	0.18	85,85,85,85	0
55	MG	88	202	1/1	0.88	0.19	98,98,98,98	0
55	MG	14	3474	1/1	0.88	0.14	142,142,142,142	0
55	MG	14	3137	1/1	0.88	0.38	107,107,107,107	0
55	MG	14	3480	1/1	0.88	0.11	90,90,90,90	0
55	MG	14	3275	1/1	0.88	0.10	84,84,84,84	0
55	MG	1H	3173	1/1	0.88	0.26	88,88,88,88	0
55	MG	1G	1663	1/1	0.88	0.20	110,110,110,110	0
55	MG	1G	1608	1/1	0.88	0.23	110,110,110,110	0
55	MG	1H	3321	1/1	0.88	0.24	88,88,88,88	0
55	MG	14	3046	1/1	0.88	0.23	88,88,88,88	0
55	MG	1J	209	1/1	0.88	0.06	110,110,110,110	0
55	MG	14	3340	1/1	0.88	0.25	103,103,103,103	0
55	MG	13	1641	1/1	0.88	0.31	117,117,117,117	0
55	MG	1H	3483	1/1	0.88	0.10	117,117,117,117	0
55	MG	1H	3078	1/1	0.88	0.35	81,81,81,81	0
55	MG	1G	1671	1/1	0.88	0.14	102,102,102,102	0
55	MG	14	3301	1/1	0.88	0.19	91,91,91,91	0
55	MG	1H	3197	1/1	0.88	0.24	93,93,93,93	0
55	MG	1H	3122	1/1	0.88	0.27	77,77,77,77	0
55	MG	1H	3330	1/1	0.88	0.38	91,91,91,91	0
55	MG	14	3425	1/1	0.88	0.14	89,89,89,89	0
55	MG	14	3236	1/1	0.88	0.21	113,113,113,113	0
55	MG	1H	3143	1/1	0.89	0.23	90,90,90,90	0
55	MG	1G	1646	1/1	0.89	0.17	81,81,81,81	0
55	MG	1H	3543	1/1	0.89	0.26	121,121,121,121	0
55	MG	14	3215	1/1	0.89	0.16	182,182,182,182	0
55	MG	1H	3415	1/1	0.89	0.09	91,91,91,91	0
55	MG	1H	3225	1/1	0.89	0.24	113,113,113,113	0
55	MG	14	3119	1/1	0.89	0.29	82,82,82,82	0
55	MG	13	1628	1/1	0.89	0.30	89,89,89,89	0
55	MG	14	3305	1/1	0.89	0.57	94,94,94,94	0
55	MG	1H	3024	1/1	0.89	0.43	98,98,98,98	0
55	MG	1H	3206	1/1	0.89	0.31	89,89,89,89	0
55	MG	1G	1734	1/1	0.89	0.12	114,114,114,114	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
55	MG	1H	3320	1/1	0.89	0.51	106,106,106,106	0
55	MG	1H	3476	1/1	0.89	0.19	106,106,106,106	0
55	MG	13	1679	1/1	0.89	0.25	101,101,101,101	0
55	MG	13	1708	1/1	0.89	0.14	103,103,103,103	0
55	MG	1H	3487	1/1	0.89	0.17	123,123,123,123	0
55	MG	1H	3134	1/1	0.89	0.27	78,78,78,78	0
55	MG	1H	3298	1/1	0.89	0.35	114,114,114,114	0
55	MG	1H	3326	1/1	0.89	0.21	85,85,85,85	0
55	MG	1H	3235	1/1	0.89	0.26	107,107,107,107	0
55	MG	1H	3113	1/1	0.89	0.10	98,98,98,98	0
55	MG	13	1631	1/1	0.89	0.22	101,101,101,101	0
55	MG	14	3251	1/1	0.89	0.42	90,90,90,90	0
55	MG	1H	3366	1/1	0.89	0.27	113,113,113,113	0
55	MG	1G	1618	1/1	0.89	0.14	110,110,110,110	0
55	MG	14	3035	1/1	0.89	0.19	74,74,74,74	0
55	MG	14	3329	1/1	0.89	0.23	85,85,85,85	0
55	MG	14	3041	1/1	0.89	0.13	76,76,76,76	0
55	MG	1H	3302	1/1	0.89	0.31	90,90,90,90	0
55	MG	13	1718	1/1	0.89	0.17	125,125,125,125	0
55	MG	1H	3371	1/1	0.89	0.11	72,72,72,72	0
55	MG	1H	3305	1/1	0.89	0.54	107,107,107,107	0
55	MG	14	3076	1/1	0.89	0.20	68,68,68,68	0
55	MG	1H	3518	1/1	0.89	0.18	99,99,99,99	0
55	MG	1H	3215	1/1	0.89	0.57	84,84,84,84	0
55	MG	14	3094	1/1	0.89	0.14	68,68,68,68	0
55	MG	1H	3162	1/1	0.89	0.29	87,87,87,87	0
55	MG	14	3347	1/1	0.89	0.19	72,72,72,72	0
55	MG	1H	3524	1/1	0.89	0.33	123,123,123,123	0
55	MG	55	202	1/1	0.89	0.17	108,108,108,108	0
55	MG	1H	3164	1/1	0.89	0.21	95,95,95,95	0
55	MG	M5	101	1/1	0.89	0.14	97,97,97,97	0
55	MG	13	1658	1/1	0.89	0.37	84,84,84,84	0
55	MG	14	3286	1/1	0.89	0.31	78,78,78,78	0
55	MG	13	1721	1/1	0.89	0.15	100,100,100,100	0
55	MG	14	3387	1/1	0.90	0.07	77,77,77,77	0
55	MG	1H	3303	1/1	0.90	0.19	88,88,88,88	0
55	MG	14	3403	1/1	0.90	0.14	88,88,88,88	0
55	MG	1G	1736	1/1	0.90	0.10	151,151,151,151	0
55	MG	1H	3403	1/1	0.90	0.13	78,78,78,78	0
55	MG	16	202	1/1	0.90	0.31	88,88,88,88	0
55	MG	14	3108	1/1	0.90	0.14	87,87,87,87	0
55	MG	14	3423	1/1	0.90	0.14	101,101,101,101	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
55	MG	1G	1741	1/1	0.90	0.08	140,140,140,140	0
55	MG	14	3291	1/1	0.90	0.14	88,88,88,88	0
55	MG	14	3293	1/1	0.90	0.33	105,105,105,105	0
55	MG	1G	1630	1/1	0.90	0.23	75,75,75,75	0
55	MG	13	1671	1/1	0.90	0.28	155,155,155,155	0
55	MG	1H	3288	1/1	0.90	0.33	86,86,86,86	0
55	MG	1H	3223	1/1	0.90	0.25	77,77,77,77	0
55	MG	1H	3419	1/1	0.90	0.17	90,90,90,90	0
55	MG	1H	3153	1/1	0.90	0.12	79,79,79,79	0
55	MG	1H	3214	1/1	0.90	0.62	94,94,94,94	0
55	MG	14	3132	1/1	0.90	0.23	90,90,90,90	0
55	MG	14	3222	1/1	0.90	0.26	112,112,112,112	0
55	MG	1H	3433	1/1	0.90	0.12	92,92,92,92	0
55	MG	14	3016	1/1	0.90	0.28	86,86,86,86	0
55	MG	14	3225	1/1	0.90	0.35	94,94,94,94	0
55	MG	1H	3154	1/1	0.90	0.35	88,88,88,88	0
55	MG	1H	3449	1/1	0.90	0.08	90,90,90,90	0
55	MG	1G	1650	1/1	0.90	0.18	99,99,99,99	0
55	MG	1H	3194	1/1	0.90	0.30	75,75,75,75	0
55	MG	1H	3453	1/1	0.90	0.09	89,89,89,89	0
55	MG	1H	3278	1/1	0.90	0.33	79,79,79,79	0
55	MG	1G	1712	1/1	0.90	0.28	122,122,122,122	0
55	MG	14	3065	1/1	0.90	0.24	86,86,86,86	0
55	MG	14	3158	1/1	0.90	0.27	70,70,70,70	0
55	MG	Q8	101	1/1	0.90	0.27	95,95,95,95	0
55	MG	14	3071	1/1	0.90	0.15	95,95,95,95	0
55	MG	1G	1605	1/1	0.90	0.13	81,81,81,81	0
55	MG	14	3169	1/1	0.90	0.20	69,69,69,69	0
55	MG	14	3484	1/1	0.90	0.09	146,146,146,146	0
55	MG	1J	203	1/1	0.90	0.11	121,121,121,121	0
55	MG	14	3255	1/1	0.90	0.22	107,107,107,107	0
55	MG	1H	3468	1/1	0.90	0.41	120,120,120,120	0
55	MG	14	3079	1/1	0.90	0.20	75,75,75,75	0
55	MG	14	3181	1/1	0.90	0.23	97,97,97,97	0
55	MG	14	3259	1/1	0.90	0.14	86,86,86,86	0
55	MG	14	3263	1/1	0.90	0.41	101,101,101,101	0
55	MG	14	3333	1/1	0.90	0.49	96,96,96,96	0
55	MG	14	3080	1/1	0.90	0.18	66,66,66,66	0
55	MG	1H	3261	1/1	0.90	0.52	109,109,109,109	0
55	MG	14	3087	1/1	0.90	0.26	101,101,101,101	0
55	MG	1H	3195	1/1	0.90	0.15	78,78,78,78	0
55	MG	13	1624	1/1	0.90	0.29	77,77,77,77	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
55	MG	14	3341	1/1	0.90	0.18	102,102,102,102	0
55	MG	55	203	1/1	0.90	0.45	88,88,88,88	0
55	MG	1H	3100	1/1	0.90	0.25	76,76,76,76	0
55	MG	14	3343	1/1	0.90	0.40	83,83,83,83	0
55	MG	1G	1621	1/1	0.90	0.13	90,90,90,90	0
55	MG	1H	3538	1/1	0.90	0.11	67,67,67,67	0
55	MG	14	3373	1/1	0.90	0.17	101,101,101,101	0
55	MG	14	3240	1/1	0.91	0.18	100,100,100,100	0
55	MG	1H	3291	1/1	0.91	0.37	120,120,120,120	0
55	MG	1G	1654	1/1	0.91	0.11	88,88,88,88	0
55	MG	13	1610	1/1	0.91	0.10	104,104,104,104	0
55	MG	14	3250	1/1	0.91	0.18	80,80,80,80	0
55	MG	1H	3138	1/1	0.91	0.18	82,82,82,82	0
55	MG	16	211	1/1	0.91	0.10	114,114,114,114	0
55	MG	1G	1743	1/1	0.91	0.09	128,128,128,128	0
55	MG	13	1676	1/1	0.91	0.30	120,120,120,120	0
55	MG	14	3358	1/1	0.91	0.09	102,102,102,102	0
55	MG	13	1612	1/1	0.91	0.21	117,117,117,117	0
55	MG	14	3381	1/1	0.91	0.09	69,69,69,69	0
55	MG	1H	3118	1/1	0.91	0.15	56,56,56,56	0
55	MG	13	1654	1/1	0.91	0.13	104,104,104,104	0
55	MG	1H	3046	1/1	0.91	0.31	86,86,86,86	0
55	MG	14	3408	1/1	0.91	0.13	103,103,103,103	0
55	MG	1G	1672	1/1	0.91	0.33	111,111,111,111	0
55	MG	14	3412	1/1	0.91	0.07	91,91,91,91	0
55	MG	1G	1675	1/1	0.91	0.29	111,111,111,111	0
55	MG	1H	3494	1/1	0.91	0.07	88,88,88,88	0
55	MG	1H	3204	1/1	0.91	0.31	84,84,84,84	0
55	MG	1H	3123	1/1	0.91	0.30	93,93,93,93	0
55	MG	14	3167	1/1	0.91	0.10	107,107,107,107	0
55	MG	1G	1601	1/1	0.91	0.21	89,89,89,89	0
55	MG	14	3435	1/1	0.91	0.11	123,123,123,123	0
55	MG	13	1688	1/1	0.91	0.38	107,107,107,107	0
55	MG	14	3438	1/1	0.91	0.05	104,104,104,104	0
55	MG	14	3177	1/1	0.91	0.17	91,91,91,91	0
55	MG	14	3277	1/1	0.91	0.15	68,68,68,68	0
55	MG	14	3278	1/1	0.91	0.23	82,82,82,82	0
55	MG	1G	1682	1/1	0.91	0.18	145,145,145,145	0
55	MG	14	3447	1/1	0.91	0.23	90,90,90,90	0
55	MG	1H	3128	1/1	0.91	0.35	77,77,77,77	0
55	MG	1G	1686	1/1	0.91	0.24	121,121,121,121	0
55	MG	1H	3052	1/1	0.91	0.30	72,72,72,72	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
55	MG	14	3287	1/1	0.91	0.14	111,111,111,111	0
55	MG	14	3063	1/1	0.91	0.21	85,85,85,85	0
55	MG	14	3195	1/1	0.91	0.25	103,103,103,103	0
55	MG	13	1640	1/1	0.91	0.20	99,99,99,99	0
55	MG	1H	3509	1/1	0.91	0.05	126,126,126,126	0
55	MG	14	3199	1/1	0.91	0.24	94,94,94,94	0
55	MG	1H	3409	1/1	0.91	0.17	84,84,84,84	0
55	MG	1H	3513	1/1	0.91	0.29	103,103,103,103	0
55	MG	1H	3517	1/1	0.91	0.08	121,121,121,121	0
55	MG	1G	1624	1/1	0.91	0.17	101,101,101,101	0
55	MG	1H	3237	1/1	0.91	0.33	99,99,99,99	0
55	MG	1H	3239	1/1	0.91	0.36	71,71,71,71	0
55	MG	14	3083	1/1	0.91	0.09	64,64,64,64	0
55	MG	14	3086	1/1	0.91	0.22	68,68,68,68	0
55	MG	14	3477	1/1	0.91	0.28	117,117,117,117	0
55	MG	1H	3180	1/1	0.91	0.16	53,53,53,53	0
55	MG	1G	1708	1/1	0.91	0.19	96,96,96,96	0
55	MG	1H	3106	1/1	0.91	0.44	81,81,81,81	0
55	MG	1H	3184	1/1	0.91	0.12	66,66,66,66	0
55	MG	1H	3529	1/1	0.91	0.08	106,106,106,106	0
55	MG	13	1661	1/1	0.91	0.21	127,127,127,127	0
55	MG	14	3315	1/1	0.91	0.39	121,121,121,121	0
55	MG	1G	1713	1/1	0.91	0.15	106,106,106,106	0
55	MG	1G	1714	1/1	0.91	0.12	115,115,115,115	0
55	MG	13	1702	1/1	0.91	0.12	140,140,140,140	0
55	MG	1H	3189	1/1	0.91	0.11	83,83,83,83	0
55	MG	14	3105	1/1	0.91	0.19	82,82,82,82	0
55	MG	14	3107	1/1	0.91	0.15	78,78,78,78	0
55	MG	1H	3356	1/1	0.91	0.32	98,98,98,98	0
55	MG	1H	3191	1/1	0.91	0.43	90,90,90,90	0
55	MG	1H	3252	1/1	0.91	0.22	76,76,76,76	0
55	MG	14	3229	1/1	0.91	0.31	71,71,71,71	0
55	MG	14	3327	1/1	0.91	0.15	101,101,101,101	0
55	MG	14	3232	1/1	0.91	0.10	86,86,86,86	0
55	MG	1G	1721	1/1	0.91	0.09	121,121,121,121	0
55	MG	14	3118	1/1	0.91	0.16	96,96,96,96	0
55	MG	1H	3467	1/1	0.91	0.10	101,101,101,101	0
55	MG	1G	1648	1/1	0.91	0.28	109,109,109,109	0
55	MG	1H	3218	1/1	0.91	0.31	87,87,87,87	0
55	MG	1H	3475	1/1	0.91	0.12	69,69,69,69	0
55	MG	14	3174	1/1	0.92	0.60	85,85,85,85	0
55	MG	1H	3103	1/1	0.92	0.13	74,74,74,74	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
55	MG	13	1680	1/1	0.92	0.40	160,160,160,160	0
55	MG	14	3396	1/1	0.92	0.19	94,94,94,94	0
55	MG	1G	1699	1/1	0.92	0.14	157,157,157,157	0
55	MG	14	3067	1/1	0.92	0.15	66,66,66,66	0
55	MG	1H	3519	1/1	0.92	0.08	132,132,132,132	0
55	MG	1H	3109	1/1	0.92	0.11	57,57,57,57	0
55	MG	1G	1702	1/1	0.92	0.34	173,173,173,173	0
55	MG	1H	3069	1/1	0.92	0.22	86,86,86,86	0
55	MG	1H	3523	1/1	0.92	0.08	135,135,135,135	0
55	MG	14	3422	1/1	0.92	0.08	110,110,110,110	0
55	MG	1H	3042	1/1	0.92	0.32	69,69,69,69	0
55	MG	1H	3442	1/1	0.92	0.11	97,97,97,97	0
55	MG	1H	3112	1/1	0.92	0.29	64,64,64,64	0
55	MG	14	3433	1/1	0.92	0.09	105,105,105,105	0
55	MG	1H	3167	1/1	0.92	0.23	119,119,119,119	0
55	MG	13	1613	1/1	0.92	0.19	123,123,123,123	0
55	MG	14	3205	1/1	0.92	0.12	82,82,82,82	0
55	MG	1H	3257	1/1	0.92	0.41	102,102,102,102	0
55	MG	1H	3076	1/1	0.92	0.29	74,74,74,74	0
55	MG	1H	3327	1/1	0.92	0.25	88,88,88,88	0
55	MG	13	1664	1/1	0.92	0.18	142,142,142,142	0
55	MG	1H	3049	1/1	0.92	0.24	78,78,78,78	0
55	MG	1H	3119	1/1	0.92	0.24	92,92,92,92	0
55	MG	1H	3480	1/1	0.92	0.08	100,100,100,100	0
55	MG	1H	3231	1/1	0.92	0.11	81,81,81,81	0
55	MG	16	207	1/1	0.92	0.29	95,95,95,95	0
55	MG	16	208	1/1	0.92	0.25	76,76,76,76	0
55	MG	14	3218	1/1	0.92	0.14	77,77,77,77	0
55	MG	1G	1656	1/1	0.92	0.31	104,104,104,104	0
55	MG	1G	1726	1/1	0.92	0.07	137,137,137,137	0
55	MG	1H	3485	1/1	0.92	0.08	97,97,97,97	0
55	MG	1H	3232	1/1	0.92	0.18	82,82,82,82	0
55	MG	14	3465	1/1	0.92	0.14	92,92,92,92	0
55	MG	1H	3120	1/1	0.92	0.31	69,69,69,69	0
55	MG	14	3115	1/1	0.92	0.09	94,94,94,94	0
55	MG	14	3117	1/1	0.92	0.11	87,87,87,87	0
55	MG	1H	3377	1/1	0.92	0.19	66,66,66,66	0
55	MG	1H	3378	1/1	0.92	0.12	59,59,59,59	0
55	MG	1G	1668	1/1	0.92	0.34	99,99,99,99	0
55	MG	14	3230	1/1	0.92	0.24	81,81,81,81	0
55	MG	14	3476	1/1	0.92	0.27	110,110,110,110	0
55	MG	14	3231	1/1	0.92	0.07	112,112,112,112	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
55	MG	1H	3384	1/1	0.92	0.12	72,72,72,72	0
55	MG	1H	3394	1/1	0.92	0.15	119,119,119,119	0
55	MG	1H	3147	1/1	0.92	0.44	76,76,76,76	0
55	MG	1H	3050	1/1	0.92	0.36	73,73,73,73	0
55	MG	1G	1674	1/1	0.92	0.20	106,106,106,106	0
55	MG	14	3485	1/1	0.92	0.10	73,73,73,73	0
55	MG	13	1632	1/1	0.92	0.25	87,87,87,87	0
55	MG	2L	102	1/1	0.92	0.16	113,113,113,113	0
55	MG	J8	101	1/1	0.92	0.19	83,83,83,83	0
55	MG	3L	101	1/1	0.92	0.24	189,189,189,189	0
55	MG	14	3142	1/1	0.92	0.10	67,67,67,67	0
55	MG	1H	3212	1/1	0.92	0.16	97,97,97,97	0
55	MG	1J	210	1/1	0.92	0.13	105,105,105,105	0
55	MG	1H	3032	1/1	0.92	0.19	76,76,76,76	0
55	MG	1G	1604	1/1	0.92	0.09	106,106,106,106	0
55	MG	1H	3097	1/1	0.92	0.09	75,75,75,75	0
55	MG	14	3151	1/1	0.92	0.20	79,79,79,79	0
55	MG	14	3018	1/1	0.92	0.22	81,81,81,81	0
55	MG	1H	3407	1/1	0.92	0.08	83,83,83,83	0
55	MG	25	201	1/1	0.92	0.07	129,129,129,129	0
55	MG	1H	3057	1/1	0.92	0.27	76,76,76,76	0
55	MG	55	201	1/1	0.92	0.42	92,92,92,92	0
55	MG	14	3030	1/1	0.92	0.22	92,92,92,92	0
55	MG	1G	1611	1/1	0.92	0.11	92,92,92,92	0
55	MG	1H	3410	1/1	0.92	0.08	82,82,82,82	0
55	MG	14	3348	1/1	0.92	0.16	96,96,96,96	0
55	MG	14	3353	1/1	0.92	0.08	74,74,74,74	0
55	MG	13	1697	1/1	0.92	0.14	100,100,100,100	0
55	MG	1H	3514	1/1	0.92	0.13	129,129,129,129	0
55	MG	1H	3477	1/1	0.93	0.09	80,80,80,80	0
55	MG	1H	3479	1/1	0.93	0.05	97,97,97,97	0
55	MG	14	3430	1/1	0.93	0.07	114,114,114,114	0
55	MG	16	212	1/1	0.93	0.16	126,126,126,126	0
55	MG	13	1634	1/1	0.93	0.14	79,79,79,79	0
55	MG	14	3088	1/1	0.93	0.13	99,99,99,99	0
55	MG	14	3164	1/1	0.93	0.16	89,89,89,89	0
55	MG	14	3439	1/1	0.93	0.06	109,109,109,109	0
55	MG	14	3165	1/1	0.93	0.15	90,90,90,90	0
55	MG	14	3443	1/1	0.93	0.07	106,106,106,106	0
55	MG	13	1722	1/1	0.93	0.10	103,103,103,103	0
55	MG	1H	3520	1/1	0.93	0.07	104,104,104,104	0
55	MG	14	3170	1/1	0.93	0.13	77,77,77,77	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
55	MG	1H	3484	1/1	0.93	0.10	98,98,98,98	0
55	MG	14	3239	1/1	0.93	0.13	101,101,101,101	0
55	MG	13	1662	1/1	0.93	0.33	85,85,85,85	0
55	MG	14	3242	1/1	0.93	0.13	100,100,100,100	0
55	MG	14	3176	1/1	0.93	0.15	75,75,75,75	0
55	MG	1H	3247	1/1	0.93	0.17	89,89,89,89	0
55	MG	14	3456	1/1	0.93	0.06	125,125,125,125	0
55	MG	1H	3145	1/1	0.93	0.28	84,84,84,84	0
55	MG	1G	1649	1/1	0.93	0.19	125,125,125,125	0
55	MG	I8	103	1/1	0.93	0.31	94,94,94,94	0
55	MG	14	3252	1/1	0.93	0.24	79,79,79,79	0
55	MG	1H	3374	1/1	0.93	0.15	64,64,64,64	0
55	MG	14	3190	1/1	0.93	0.14	85,85,85,85	0
55	MG	1H	3163	1/1	0.93	0.40	111,111,111,111	0
55	MG	1H	3530	1/1	0.93	0.19	97,97,97,97	0
55	MG	14	3003	1/1	0.93	0.25	67,67,67,67	0
55	MG	1H	3181	1/1	0.93	0.18	69,69,69,69	0
55	MG	1G	1657	1/1	0.93	0.27	93,93,93,93	0
55	MG	14	3017	1/1	0.93	0.20	79,79,79,79	0
55	MG	1H	3267	1/1	0.93	0.40	95,95,95,95	0
55	MG	14	3021	1/1	0.93	0.42	87,87,87,87	0
55	MG	1H	3536	1/1	0.93	0.04	130,130,130,130	0
55	MG	1H	3390	1/1	0.93	0.10	67,67,67,67	0
55	MG	1G	1610	1/1	0.93	0.13	156,156,156,156	0
55	MG	14	3481	1/1	0.93	0.34	112,112,112,112	0
55	MG	13	1652	1/1	0.93	0.37	98,98,98,98	0
55	MG	14	3272	1/1	0.93	0.45	94,94,94,94	0
55	MG	14	3125	1/1	0.93	0.22	93,93,93,93	0
55	MG	14	3210	1/1	0.93	0.17	89,89,89,89	0
55	MG	14	3345	1/1	0.93	0.19	116,116,116,116	0
55	MG	14	3126	1/1	0.93	0.27	110,110,110,110	0
55	MG	1H	3542	1/1	0.93	0.16	123,123,123,123	0
55	MG	13	1604	1/1	0.93	0.13	96,96,96,96	0
55	MG	14	3357	1/1	0.93	0.13	83,83,83,83	0
55	MG	1G	1716	1/1	0.93	0.13	98,98,98,98	0
55	MG	14	3282	1/1	0.93	0.26	77,77,77,77	0
55	MG	14	3375	1/1	0.93	0.11	75,75,75,75	0
55	MG	29	302	1/1	0.93	0.58	81,81,81,81	0
55	MG	14	3380	1/1	0.93	0.09	92,92,92,92	0
55	MG	1G	1617	1/1	0.93	0.15	74,74,74,74	0
55	MG	1H	3335	1/1	0.93	0.26	90,90,90,90	0
55	MG	1H	3027	1/1	0.93	0.24	88,88,88,88	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
55	MG	14	3066	1/1	0.93	0.21	82,82,82,82	0
55	MG	14	3400	1/1	0.93	0.18	61,61,61,61	0
55	MG	1G	1673	1/1	0.93	0.18	101,101,101,101	0
55	MG	13	1719	1/1	0.93	0.06	140,140,140,140	0
55	MG	1H	3124	1/1	0.93	0.43	85,85,85,85	0
55	MG	1H	3473	1/1	0.93	0.05	95,95,95,95	0
55	MG	13	1704	1/1	0.93	0.11	89,89,89,89	0
55	MG	E5	102	1/1	0.93	0.34	116,116,116,116	0
55	MG	14	3298	1/1	0.93	0.75	88,88,88,88	0
55	MG	1H	3512	1/1	0.93	0.25	103,103,103,103	0
55	MG	1H	3127	1/1	0.93	0.61	93,93,93,93	0
55	MG	14	3156	1/1	0.93	0.10	84,84,84,84	0
55	MG	14	3262	1/1	0.94	0.13	84,84,84,84	0
55	MG	1G	1695	1/1	0.94	0.14	108,108,108,108	0
55	MG	1H	3368	1/1	0.94	0.28	64,64,64,64	0
55	MG	14	3168	1/1	0.94	0.18	86,86,86,86	0
55	MG	1G	1614	1/1	0.94	0.17	89,89,89,89	0
55	MG	1G	1615	1/1	0.94	0.27	83,83,83,83	0
55	MG	1H	3337	1/1	0.94	0.39	87,87,87,87	0
55	MG	1H	3058	1/1	0.94	0.25	88,88,88,88	0
55	MG	1H	3462	1/1	0.94	0.09	104,104,104,104	0
55	MG	1H	3372	1/1	0.94	0.10	68,68,68,68	0
55	MG	14	3273	1/1	0.94	0.19	92,92,92,92	0
55	MG	14	3178	1/1	0.94	0.51	87,87,87,87	0
55	MG	1H	3527	1/1	0.94	0.14	118,118,118,118	0
55	MG	14	3276	1/1	0.94	0.27	75,75,75,75	0
55	MG	1H	3528	1/1	0.94	0.06	115,115,115,115	0
55	MG	1G	1706	1/1	0.94	0.16	116,116,116,116	0
55	MG	1H	3201	1/1	0.94	0.12	98,98,98,98	0
55	MG	1H	3469	1/1	0.94	0.17	109,109,109,109	0
55	MG	14	3431	1/1	0.94	0.05	106,106,106,106	0
55	MG	1H	3340	1/1	0.94	0.25	81,81,81,81	0
55	MG	14	3283	1/1	0.94	0.40	81,81,81,81	0
55	MG	1H	3533	1/1	0.94	0.18	88,88,88,88	0
55	MG	1H	3375	1/1	0.94	0.12	65,65,65,65	0
55	MG	1H	3283	1/1	0.94	0.54	104,104,104,104	0
55	MG	1H	3203	1/1	0.94	0.35	83,83,83,83	0
55	MG	14	3442	1/1	0.94	0.27	84,84,84,84	0
55	MG	1H	3478	1/1	0.94	0.07	99,99,99,99	0
55	MG	1H	3539	1/1	0.94	0.09	123,123,123,123	0
55	MG	1H	3541	1/1	0.94	0.12	89,89,89,89	0
55	MG	1H	3095	1/1	0.94	0.33	72,72,72,72	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
55	MG	1H	3186	1/1	0.94	0.24	74,74,74,74	0
55	MG	1G	1647	1/1	0.94	0.14	102,102,102,102	0
55	MG	14	3207	1/1	0.94	0.12	96,96,96,96	0
55	MG	1H	3482	1/1	0.94	0.18	99,99,99,99	0
55	MG	16	201	1/1	0.94	0.18	112,112,112,112	0
55	MG	1H	3393	1/1	0.94	0.09	99,99,99,99	0
55	MG	1H	3075	1/1	0.94	0.42	80,80,80,80	0
55	MG	16	204	1/1	0.94	0.14	121,121,121,121	0
55	MG	1H	3395	1/1	0.94	0.40	107,107,107,107	0
55	MG	1H	3244	1/1	0.94	0.34	75,75,75,75	0
55	MG	14	3112	1/1	0.94	0.32	81,81,81,81	0
55	MG	1G	1735	1/1	0.94	0.06	128,128,128,128	0
55	MG	14	3114	1/1	0.94	0.30	83,83,83,83	0
55	MG	1H	3188	1/1	0.94	0.30	88,88,88,88	0
55	MG	1H	3019	1/1	0.94	0.17	73,73,73,73	0
55	MG	1G	1738	1/1	0.94	0.28	108,108,108,108	0
55	MG	1G	1739	1/1	0.94	0.15	112,112,112,112	0
55	MG	14	3121	1/1	0.94	0.21	88,88,88,88	0
55	MG	1H	3349	1/1	0.94	0.15	95,95,95,95	0
55	MG	1H	3159	1/1	0.94	0.66	90,90,90,90	0
55	MG	1H	3352	1/1	0.94	0.12	84,84,84,84	0
55	MG	13	1605	1/1	0.94	0.11	103,103,103,103	0
55	MG	1G	1667	1/1	0.94	0.13	92,92,92,92	0
55	MG	1H	3496	1/1	0.94	0.12	91,91,91,91	0
55	MG	1H	3408	1/1	0.94	0.08	102,102,102,102	0
55	MG	1H	3016	1/1	0.94	0.24	75,75,75,75	0
55	MG	14	3134	1/1	0.94	0.27	77,77,77,77	0
55	MG	1H	3501	1/1	0.94	0.13	93,93,93,93	0
55	MG	1H	3272	1/1	0.94	0.15	97,97,97,97	0
55	MG	14	3487	1/1	0.94	0.16	73,73,73,73	0
55	MG	1H	3030	1/1	0.94	0.12	66,66,66,66	0
55	MG	14	3139	1/1	0.94	0.25	102,102,102,102	0
55	MG	1H	3413	1/1	0.94	0.11	83,83,83,83	0
55	MG	1H	3275	1/1	0.94	0.23	85,85,85,85	0
55	MG	1H	3151	1/1	0.94	0.19	80,80,80,80	0
55	MG	14	3145	1/1	0.94	0.27	75,75,75,75	0
55	MG	1H	3277	1/1	0.94	0.46	88,88,88,88	0
55	MG	1H	3196	1/1	0.94	0.29	106,106,106,106	0
55	MG	1H	3306	1/1	0.94	0.27	109,109,109,109	0
55	MG	1H	3365	1/1	0.94	0.24	96,96,96,96	0
55	MG	14	3152	1/1	0.94	0.16	80,80,80,80	0
55	MG	14	3022	1/1	0.94	0.11	60,60,60,60	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
55	MG	1G	1606	1/1	0.94	0.14	108,108,108,108	0
55	MG	1H	3515	1/1	0.94	0.06	125,125,125,125	0
55	MG	14	3254	1/1	0.94	0.19	95,95,95,95	0
55	MG	1H	3117	1/1	0.94	0.26	83,83,83,83	0
55	MG	14	3161	1/1	0.94	0.28	72,72,72,72	0
55	MG	14	3354	1/1	0.94	0.15	92,92,92,92	0
55	MG	1H	3446	1/1	0.94	0.16	112,112,112,112	0
55	MG	1H	3447	1/1	0.94	0.12	78,78,78,78	0
55	MG	14	3366	1/1	0.94	0.09	71,71,71,71	0
55	MG	1H	3089	1/1	0.94	0.13	62,62,62,62	0
55	MG	14	3260	1/1	0.94	0.13	88,88,88,88	0
55	MG	14	3376	1/1	0.94	0.11	84,84,84,84	0
55	MG	14	3378	1/1	0.94	0.12	99,99,99,99	0
55	MG	13	1728	1/1	0.95	0.09	119,119,119,119	0
55	MG	13	1625	1/1	0.95	0.20	63,63,63,63	0
55	MG	14	3355	1/1	0.95	0.16	97,97,97,97	0
55	MG	13	1714	1/1	0.95	0.07	120,120,120,120	0
55	MG	1H	3033	1/1	0.95	0.18	113,113,113,113	0
55	MG	14	3359	1/1	0.95	0.11	87,87,87,87	0
55	MG	14	3365	1/1	0.95	0.09	72,72,72,72	0
55	MG	1H	3079	1/1	0.95	0.21	50,50,50,50	0
55	MG	14	3367	1/1	0.95	0.14	87,87,87,87	0
55	MG	1H	3081	1/1	0.95	0.15	66,66,66,66	0
55	MG	3I	201	1/1	0.95	0.14	89,89,89,89	0
55	MG	14	3143	1/1	0.95	0.12	58,58,58,58	0
55	MG	1H	3331	1/1	0.95	0.24	62,62,62,62	0
55	MG	1H	3035	1/1	0.95	0.48	98,98,98,98	0
55	MG	1H	3284	1/1	0.95	0.22	83,83,83,83	0
55	MG	2K	101	1/1	0.95	0.18	84,84,84,84	0
55	MG	14	3388	1/1	0.95	0.11	80,80,80,80	0
55	MG	14	3009	1/1	0.95	0.23	67,67,67,67	0
55	MG	14	3150	1/1	0.95	0.14	64,64,64,64	0
55	MG	1H	3287	1/1	0.95	0.17	67,67,67,67	0
55	MG	14	3015	1/1	0.95	0.23	78,78,78,78	0
55	MG	1H	3041	1/1	0.95	0.24	68,68,68,68	0
55	MG	1H	3092	1/1	0.95	0.19	79,79,79,79	0
55	MG	1H	3129	1/1	0.95	0.26	80,80,80,80	0
55	MG	14	3415	1/1	0.95	0.06	96,96,96,96	0
55	MG	1H	3500	1/1	0.95	0.14	87,87,87,87	0
55	MG	14	3268	1/1	0.95	0.19	87,87,87,87	0
55	MG	1G	1677	1/1	0.95	0.28	97,97,97,97	0
55	MG	1H	3130	1/1	0.95	0.36	91,91,91,91	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
55	MG	14	3027	1/1	0.95	0.22	80,80,80,80	0
55	MG	1H	3292	1/1	0.95	0.22	100,100,100,100	0
55	MG	1H	3293	1/1	0.95	0.45	89,89,89,89	0
55	MG	14	3426	1/1	0.95	0.10	96,96,96,96	0
55	MG	13	1716	1/1	0.95	0.07	97,97,97,97	0
55	MG	14	3032	1/1	0.95	0.21	79,79,79,79	0
55	MG	13	1698	1/1	0.95	0.14	77,77,77,77	0
55	MG	14	3434	1/1	0.95	0.11	102,102,102,102	0
55	MG	14	3036	1/1	0.95	0.20	84,84,84,84	0
55	MG	14	3436	1/1	0.95	0.12	99,99,99,99	0
55	MG	1H	3296	1/1	0.95	0.22	92,92,92,92	0
55	MG	1G	1684	1/1	0.95	0.21	108,108,108,108	0
55	MG	14	3280	1/1	0.95	0.59	79,79,79,79	0
55	MG	14	3052	1/1	0.95	0.27	74,74,74,74	0
55	MG	14	3056	1/1	0.95	0.16	74,74,74,74	0
55	MG	14	3059	1/1	0.95	0.14	64,64,64,64	0
55	MG	1H	3510	1/1	0.95	0.06	125,125,125,125	0
55	MG	1G	1688	1/1	0.95	0.17	115,115,115,115	0
55	MG	1H	3251	1/1	0.95	0.44	76,76,76,76	0
55	MG	14	3288	1/1	0.95	0.21	88,88,88,88	0
55	MG	1H	3045	1/1	0.95	0.23	104,104,104,104	0
55	MG	14	3189	1/1	0.95	0.29	98,98,98,98	0
55	MG	14	3292	1/1	0.95	0.23	104,104,104,104	0
55	MG	1H	3416	1/1	0.95	0.15	77,77,77,77	0
55	MG	14	3454	1/1	0.95	0.11	96,96,96,96	0
55	MG	14	3192	1/1	0.95	0.19	74,74,74,74	0
55	MG	1H	3008	1/1	0.95	0.26	74,74,74,74	0
55	MG	1H	3421	1/1	0.95	0.18	63,63,63,63	0
55	MG	1H	3423	1/1	0.95	0.15	64,64,64,64	0
55	MG	1H	3429	1/1	0.95	0.12	65,65,65,65	0
55	MG	1H	3014	1/1	0.95	0.29	69,69,69,69	0
55	MG	1G	1616	1/1	0.95	0.26	85,85,85,85	0
55	MG	1H	3176	1/1	0.95	0.47	93,93,93,93	0
55	MG	14	3303	1/1	0.95	0.34	122,122,122,122	0
55	MG	1H	3102	1/1	0.95	0.21	82,82,82,82	0
55	MG	14	3085	1/1	0.95	0.19	67,67,67,67	0
55	MG	1G	1620	1/1	0.95	0.19	97,97,97,97	0
55	MG	1H	3441	1/1	0.95	0.33	97,97,97,97	0
55	MG	1G	1622	1/1	0.95	0.27	124,124,124,124	0
55	MG	13	1633	1/1	0.95	0.09	107,107,107,107	0
55	MG	1H	3104	1/1	0.95	0.51	84,84,84,84	0
55	MG	14	3095	1/1	0.95	0.43	87,87,87,87	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
55	MG	14	3478	1/1	0.95	0.23	102,102,102,102	0
55	MG	13	1622	1/1	0.95	0.18	96,96,96,96	0
55	MG	1H	3526	1/1	0.95	0.08	106,106,106,106	0
55	MG	1H	3108	1/1	0.95	0.36	79,79,79,79	0
55	MG	1H	3357	1/1	0.95	0.09	87,87,87,87	0
55	MG	1G	1631	1/1	0.95	0.26	81,81,81,81	0
55	MG	13	1615	1/1	0.95	0.31	146,146,146,146	0
55	MG	1H	3452	1/1	0.95	0.10	86,86,86,86	0
55	MG	13	1621	1/1	0.95	0.18	116,116,116,116	0
55	MG	13	1657	1/1	0.95	0.16	109,109,109,109	0
55	MG	1G	1636	1/1	0.95	0.28	97,97,97,97	0
55	MG	1H	3460	1/1	0.95	0.09	94,94,94,94	0
55	MG	1H	3224	1/1	0.95	0.18	87,87,87,87	0
55	MG	1G	1643	1/1	0.95	0.12	128,128,128,128	0
55	MG	1G	1724	1/1	0.95	0.10	95,95,95,95	0
55	MG	13	1726	1/1	0.95	0.05	134,134,134,134	0
55	MG	13	1711	1/1	0.95	0.18	86,86,86,86	0
55	MG	19	301	1/1	0.95	0.23	76,76,76,76	0
55	MG	1H	3148	1/1	0.95	0.29	74,74,74,74	0
55	MG	1H	3471	1/1	0.95	0.10	89,89,89,89	0
55	MG	1G	1733	1/1	0.95	0.10	105,105,105,105	0
55	MG	1H	3190	1/1	0.95	0.21	98,98,98,98	0
55	MG	14	3122	1/1	0.95	0.15	81,81,81,81	0
55	MG	1H	3317	1/1	0.95	0.35	87,87,87,87	0
55	MG	14	3337	1/1	0.95	0.30	111,111,111,111	0
55	MG	14	3338	1/1	0.95	0.19	80,80,80,80	0
55	MG	1H	3028	1/1	0.95	0.38	93,93,93,93	0
55	MG	1H	3547	1/1	0.95	0.36	85,85,85,85	0
55	MG	1G	1652	1/1	0.95	0.35	100,100,100,100	0
55	MG	1H	3029	1/1	0.95	0.26	84,84,84,84	0
55	MG	E5	101	1/1	0.95	0.16	73,73,73,73	0
55	MG	14	3130	1/1	0.95	0.25	85,85,85,85	0
55	MG	1H	3274	1/1	0.95	0.12	97,97,97,97	0
55	MG	1H	3116	1/1	0.95	0.41	92,92,92,92	0
55	MG	14	3241	1/1	0.95	0.10	117,117,117,117	0
55	MG	1G	1742	1/1	0.95	0.34	116,116,116,116	0
55	MG	14	3371	1/1	0.96	0.09	66,66,66,66	0
55	MG	14	3372	1/1	0.96	0.13	65,65,65,65	0
55	MG	1H	3443	1/1	0.96	0.19	97,97,97,97	0
55	MG	14	3374	1/1	0.96	0.10	80,80,80,80	0
55	MG	1H	3506	1/1	0.96	0.17	102,102,102,102	0
55	MG	1H	3311	1/1	0.96	0.18	85,85,85,85	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
55	MG	14	3377	1/1	0.96	0.09	91,91,91,91	0
55	MG	14	3069	1/1	0.96	0.45	86,86,86,86	0
55	MG	1H	3445	1/1	0.96	0.10	76,76,76,76	0
55	MG	14	3072	1/1	0.96	0.24	85,85,85,85	0
55	MG	14	3384	1/1	0.96	0.05	75,75,75,75	0
55	MG	14	3166	1/1	0.96	0.16	86,86,86,86	0
55	MG	1H	3004	1/1	0.96	0.21	74,74,74,74	0
55	MG	14	3391	1/1	0.96	0.25	80,80,80,80	0
55	MG	1H	3379	1/1	0.96	0.14	71,71,71,71	0
55	MG	88	201	1/1	0.96	0.18	93,93,93,93	0
55	MG	14	3397	1/1	0.96	0.07	79,79,79,79	0
55	MG	1H	3381	1/1	0.96	0.17	78,78,78,78	0
55	MG	1H	3005	1/1	0.96	0.17	64,64,64,64	0
55	MG	14	3172	1/1	0.96	0.15	74,74,74,74	0
55	MG	14	3173	1/1	0.96	0.30	103,103,103,103	0
55	MG	1G	1659	1/1	0.96	0.19	97,97,97,97	0
55	MG	14	3414	1/1	0.96	0.13	99,99,99,99	0
55	MG	1G	1662	1/1	0.96	0.20	96,96,96,96	0
55	MG	14	3416	1/1	0.96	0.06	87,87,87,87	0
55	MG	1G	1727	1/1	0.96	0.08	126,126,126,126	0
55	MG	I8	102	1/1	0.96	0.44	73,73,73,73	0
55	MG	1G	1730	1/1	0.96	0.07	100,100,100,100	0
55	MG	1H	3056	1/1	0.96	0.26	67,67,67,67	0
55	MG	14	3182	1/1	0.96	0.16	79,79,79,79	0
55	MG	14	3090	1/1	0.96	0.29	53,53,53,53	0
55	MG	14	3091	1/1	0.96	0.17	73,73,73,73	0
55	MG	14	3285	1/1	0.96	0.08	107,107,107,107	0
55	MG	14	3092	1/1	0.96	0.21	84,84,84,84	0
55	MG	14	3093	1/1	0.96	0.13	66,66,66,66	0
55	MG	14	3432	1/1	0.96	0.10	107,107,107,107	0
55	MG	14	3191	1/1	0.96	0.29	97,97,97,97	0
55	MG	1H	3392	1/1	0.96	0.16	70,70,70,70	0
55	MG	14	3290	1/1	0.96	0.18	102,102,102,102	0
55	MG	1H	3516	1/1	0.96	0.04	126,126,126,126	0
55	MG	14	3096	1/1	0.96	0.20	78,78,78,78	0
55	MG	1H	3171	1/1	0.96	0.23	70,70,70,70	0
55	MG	1H	3458	1/1	0.96	0.15	67,67,67,67	0
55	MG	14	3099	1/1	0.96	0.24	75,75,75,75	0
55	MG	1H	3199	1/1	0.96	0.56	106,106,106,106	0
55	MG	1H	3007	1/1	0.96	0.30	53,53,53,53	0
55	MG	1G	1607	1/1	0.96	0.21	94,94,94,94	0
55	MG	1H	3396	1/1	0.96	0.09	84,84,84,84	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
55	MG	14	3204	1/1	0.96	0.07	104,104,104,104	0
55	MG	1H	3094	1/1	0.96	0.29	72,72,72,72	0
55	MG	13	1701	1/1	0.96	0.05	89,89,89,89	0
55	MG	14	3106	1/1	0.96	0.34	75,75,75,75	0
55	MG	1H	3470	1/1	0.96	0.15	98,98,98,98	0
55	MG	13	1715	1/1	0.96	0.24	108,108,108,108	0
55	MG	13	1620	1/1	0.96	0.28	67,67,67,67	0
55	MG	14	3309	1/1	0.96	0.14	85,85,85,85	0
55	MG	1G	1746	1/1	0.96	0.10	162,162,162,162	0
55	MG	1H	3474	1/1	0.96	0.24	88,88,88,88	0
55	MG	1H	3064	1/1	0.96	0.37	82,82,82,82	0
55	MG	1H	3150	1/1	0.96	0.31	81,81,81,81	0
55	MG	1H	3405	1/1	0.96	0.11	94,94,94,94	0
55	MG	14	3116	1/1	0.96	0.48	89,89,89,89	0
55	MG	1H	3406	1/1	0.96	0.14	103,103,103,103	0
55	MG	1G	1619	1/1	0.96	0.20	92,92,92,92	0
55	MG	1H	3065	1/1	0.96	0.22	74,74,74,74	0
55	MG	14	3120	1/1	0.96	0.21	69,69,69,69	0
55	MG	1H	3066	1/1	0.96	0.26	81,81,81,81	0
55	MG	14	3008	1/1	0.96	0.15	52,52,52,52	0
55	MG	1H	3067	1/1	0.96	0.22	79,79,79,79	0
55	MG	14	3012	1/1	0.96	0.16	62,62,62,62	0
55	MG	14	3475	1/1	0.96	0.35	99,99,99,99	0
55	MG	1H	3269	1/1	0.96	0.25	107,107,107,107	0
55	MG	1H	3329	1/1	0.96	0.33	96,96,96,96	0
55	MG	14	3127	1/1	0.96	0.17	87,87,87,87	0
55	MG	14	3228	1/1	0.96	0.38	93,93,93,93	0
55	MG	1H	3036	1/1	0.96	0.33	72,72,72,72	0
55	MG	14	3129	1/1	0.96	0.19	77,77,77,77	0
55	MG	1G	1694	1/1	0.96	0.18	103,103,103,103	0
55	MG	1G	1627	1/1	0.96	0.21	89,89,89,89	0
55	MG	13	1606	1/1	0.96	0.27	100,100,100,100	0
55	MG	1H	3156	1/1	0.96	0.25	76,76,76,76	0
55	MG	14	3486	1/1	0.96	0.07	64,64,64,64	0
55	MG	13	1729	1/1	0.96	0.14	115,115,115,115	0
55	MG	14	3026	1/1	0.96	0.25	76,76,76,76	0
55	MG	1H	3545	1/1	0.96	0.24	71,71,71,71	0
55	MG	1H	3420	1/1	0.96	0.14	71,71,71,71	0
55	MG	1H	3490	1/1	0.96	0.17	88,88,88,88	0
55	MG	1H	3074	1/1	0.96	0.38	63,63,63,63	0
55	MG	1J	208	1/1	0.96	0.07	104,104,104,104	0
55	MG	14	3141	1/1	0.96	0.50	64,64,64,64	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
55	MG	13	1601	1/1	0.96	0.13	110,110,110,110	0
55	MG	1H	3424	1/1	0.96	0.14	57,57,57,57	0
55	MG	1H	3495	1/1	0.96	0.08	122,122,122,122	0
55	MG	29	301	1/1	0.96	0.11	67,67,67,67	0
55	MG	1G	1707	1/1	0.96	0.21	91,91,91,91	0
55	MG	14	3346	1/1	0.96	0.35	194,194,194,194	0
55	MG	1H	3426	1/1	0.96	0.10	68,68,68,68	0
55	MG	14	3048	1/1	0.96	0.20	69,69,69,69	0
55	MG	14	3352	1/1	0.96	0.09	65,65,65,65	0
55	MG	14	3050	1/1	0.96	0.26	75,75,75,75	0
55	MG	13	1618	1/1	0.96	0.23	86,86,86,86	0
55	MG	13	1637	1/1	0.96	0.18	113,113,113,113	0
55	MG	14	3356	1/1	0.96	0.10	64,64,64,64	0
55	MG	13	1603	1/1	0.96	0.15	107,107,107,107	0
55	MG	14	3154	1/1	0.96	0.42	102,102,102,102	0
55	MG	1H	3308	1/1	0.96	0.19	90,90,90,90	0
55	MG	13	1723	1/1	0.96	0.07	107,107,107,107	0
55	MG	13	1724	1/1	0.96	0.23	113,113,113,113	0
55	MG	F5	101	1/1	0.96	0.18	90,90,90,90	0
55	MG	14	3159	1/1	0.96	0.17	66,66,66,66	0
56	ZN	5I	101	1/1	0.96	0.14	138,138,138,138	0
55	MG	14	3368	1/1	0.96	0.13	75,75,75,75	0
55	MG	14	3369	1/1	0.96	0.13	63,63,63,63	0
55	MG	14	3370	1/1	0.96	0.13	76,76,76,76	0
55	MG	1H	3026	1/1	0.97	0.16	68,68,68,68	0
55	MG	1H	3202	1/1	0.97	0.21	75,75,75,75	0
55	MG	14	3057	1/1	0.97	0.20	63,63,63,63	0
55	MG	14	3382	1/1	0.97	0.11	93,93,93,93	0
55	MG	14	3383	1/1	0.97	0.07	93,93,93,93	0
55	MG	14	3058	1/1	0.97	0.20	64,64,64,64	0
55	MG	14	3385	1/1	0.97	0.13	96,96,96,96	0
55	MG	14	3386	1/1	0.97	0.13	67,67,67,67	0
55	MG	2K	102	1/1	0.97	0.18	106,106,106,106	0
55	MG	13	1630	1/1	0.97	0.22	92,92,92,92	0
55	MG	14	3389	1/1	0.97	0.09	102,102,102,102	0
55	MG	1H	3455	1/1	0.97	0.07	97,97,97,97	0
55	MG	14	3392	1/1	0.97	0.20	65,65,65,65	0
55	MG	1H	3456	1/1	0.97	0.07	86,86,86,86	0
55	MG	14	3394	1/1	0.97	0.10	100,100,100,100	0
55	MG	1H	3383	1/1	0.97	0.12	74,74,74,74	0
55	MG	1H	3459	1/1	0.97	0.16	86,86,86,86	0
55	MG	14	3399	1/1	0.97	0.13	63,63,63,63	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
55	MG	1H	3246	1/1	0.97	0.16	86,86,86,86	0
55	MG	14	3401	1/1	0.97	0.13	69,69,69,69	0
55	MG	1H	3387	1/1	0.97	0.09	83,83,83,83	0
55	MG	14	3405	1/1	0.97	0.11	65,65,65,65	0
55	MG	14	3070	1/1	0.97	0.30	72,72,72,72	0
55	MG	1H	3388	1/1	0.97	0.10	77,77,77,77	0
55	MG	14	3411	1/1	0.97	0.10	60,60,60,60	0
55	MG	1H	3389	1/1	0.97	0.09	72,72,72,72	0
55	MG	1H	3535	1/1	0.97	0.08	115,115,115,115	0
55	MG	14	3075	1/1	0.97	0.19	65,65,65,65	0
55	MG	14	3175	1/1	0.97	0.26	95,95,95,95	0
55	MG	13	1649	1/1	0.97	0.25	121,121,121,121	0
55	MG	1H	3391	1/1	0.97	0.06	84,84,84,84	0
55	MG	1H	3059	1/1	0.97	0.48	90,90,90,90	0
55	MG	13	1709	1/1	0.97	0.08	126,126,126,126	0
55	MG	14	3180	1/1	0.97	0.14	94,94,94,94	0
55	MG	14	3082	1/1	0.97	0.34	100,100,100,100	0
55	MG	1H	3540	1/1	0.97	0.09	54,54,54,54	0
55	MG	14	3084	1/1	0.97	0.17	78,78,78,78	0
55	MG	14	3429	1/1	0.97	0.09	79,79,79,79	0
55	MG	13	1643	1/1	0.97	0.24	111,111,111,111	0
55	MG	14	3186	1/1	0.97	0.11	90,90,90,90	0
55	MG	14	3294	1/1	0.97	0.27	82,82,82,82	0
55	MG	14	3187	1/1	0.97	0.21	103,103,103,103	0
55	MG	14	3188	1/1	0.97	0.19	71,71,71,71	0
55	MG	1G	1639	1/1	0.97	0.14	102,102,102,102	0
55	MG	1G	1640	1/1	0.97	0.17	95,95,95,95	0
55	MG	1G	1641	1/1	0.97	0.19	102,102,102,102	0
55	MG	1G	1642	1/1	0.97	0.29	117,117,117,117	0
55	MG	1H	3062	1/1	0.97	0.24	70,70,70,70	0
55	MG	1H	3101	1/1	0.97	0.20	64,64,64,64	0
55	MG	14	3441	1/1	0.97	0.04	113,113,113,113	0
55	MG	1H	3544	1/1	0.97	0.08	59,59,59,59	0
55	MG	1H	3063	1/1	0.97	0.41	76,76,76,76	0
55	MG	1H	3137	1/1	0.97	0.20	93,93,93,93	0
55	MG	1H	3006	1/1	0.97	0.30	58,58,58,58	0
55	MG	1G	1729	1/1	0.97	0.17	112,112,112,112	0
55	MG	14	3308	1/1	0.97	0.19	74,74,74,74	0
55	MG	1H	3400	1/1	0.97	0.14	87,87,87,87	0
55	MG	1H	3481	1/1	0.97	0.11	77,77,77,77	0
55	MG	1G	1732	1/1	0.97	0.18	113,113,113,113	0
55	MG	1H	3401	1/1	0.97	0.17	82,82,82,82	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
55	MG	1H	3177	1/1	0.97	0.27	69,69,69,69	0
55	MG	13	1682	1/1	0.97	0.31	98,98,98,98	0
55	MG	1H	3258	1/1	0.97	0.31	94,94,94,94	0
55	MG	1H	3105	1/1	0.97	0.32	62,62,62,62	0
55	MG	13	1713	1/1	0.97	0.11	94,94,94,94	0
55	MG	1H	3107	1/1	0.97	0.20	84,84,84,84	0
55	MG	14	3461	1/1	0.97	0.22	88,88,88,88	0
55	MG	1H	3009	1/1	0.97	0.30	67,67,67,67	0
55	MG	1G	1660	1/1	0.97	0.11	112,112,112,112	0
55	MG	1H	3350	1/1	0.97	0.21	72,72,72,72	0
55	MG	14	3110	1/1	0.97	0.22	95,95,95,95	0
55	MG	1H	3183	1/1	0.97	0.26	55,55,55,55	0
55	MG	14	3469	1/1	0.97	0.06	115,115,115,115	0
55	MG	1H	3068	1/1	0.97	0.39	72,72,72,72	0
55	MG	1H	3412	1/1	0.97	0.11	103,103,103,103	0
55	MG	1H	3010	1/1	0.97	0.22	57,57,57,57	0
55	MG	1G	1747	1/1	0.97	0.15	123,123,123,123	0
55	MG	13	1611	1/1	0.97	0.17	103,103,103,103	0
55	MG	1H	3072	1/1	0.97	0.23	65,65,65,65	0
55	MG	1H	3498	1/1	0.97	0.08	71,71,71,71	0
55	MG	1H	3417	1/1	0.97	0.13	70,70,70,70	0
55	MG	1H	3039	1/1	0.97	0.27	55,55,55,55	0
55	MG	1H	3015	1/1	0.97	0.33	56,56,56,56	0
55	MG	13	1700	1/1	0.97	0.11	97,97,97,97	0
55	MG	14	3002	1/1	0.97	0.23	64,64,64,64	0
55	MG	1H	3360	1/1	0.97	0.08	96,96,96,96	0
55	MG	1H	3043	1/1	0.97	0.25	89,89,89,89	0
55	MG	13	1645	1/1	0.97	0.23	84,84,84,84	0
55	MG	1G	1602	1/1	0.97	0.18	84,84,84,84	0
55	MG	1G	1603	1/1	0.97	0.12	99,99,99,99	0
55	MG	1H	3507	1/1	0.97	0.11	82,82,82,82	0
55	MG	1J	201	1/1	0.97	0.16	125,125,125,125	0
55	MG	1J	202	1/1	0.97	0.11	107,107,107,107	0
55	MG	13	1717	1/1	0.97	0.11	91,91,91,91	0
55	MG	1H	3080	1/1	0.97	0.33	67,67,67,67	0
55	MG	1H	3021	1/1	0.97	0.19	61,61,61,61	0
55	MG	1H	3234	1/1	0.97	0.28	89,89,89,89	0
55	MG	1H	3434	1/1	0.97	0.06	109,109,109,109	0
55	MG	14	3023	1/1	0.97	0.22	89,89,89,89	0
55	MG	14	3351	1/1	0.97	0.10	82,82,82,82	0
55	MG	14	3024	1/1	0.97	0.23	81,81,81,81	0
55	MG	1G	1685	1/1	0.97	0.21	83,83,83,83	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
55	MG	13	1627	1/1	0.97	0.15	79,79,79,79	0
55	MG	1G	1687	1/1	0.97	0.23	120,120,120,120	0
55	MG	1H	3322	1/1	0.97	0.12	103,103,103,103	0
55	MG	1G	1689	1/1	0.97	0.21	126,126,126,126	0
55	MG	1H	3085	1/1	0.97	0.32	78,78,78,78	0
55	MG	13	1607	1/1	0.97	0.21	97,97,97,97	0
55	MG	14	3361	1/1	0.97	0.20	75,75,75,75	0
55	MG	14	3362	1/1	0.97	0.17	79,79,79,79	0
55	MG	15	201	1/1	0.97	0.47	110,110,110,110	0
55	MG	14	3364	1/1	0.97	0.04	91,91,91,91	0
55	MG	14	3033	1/1	0.97	0.26	83,83,83,83	0
55	MG	1H	3238	1/1	0.97	0.25	97,97,97,97	0
55	MG	13	1705	1/1	0.97	0.15	85,85,85,85	0
55	MG	14	3037	1/1	0.97	0.11	48,48,48,48	0
55	MG	1H	3090	1/1	0.97	0.25	80,80,80,80	0
55	MG	14	3042	1/1	0.97	0.07	71,71,71,71	0
55	MG	1H	3241	1/1	0.97	0.23	99,99,99,99	0
55	MG	14	3153	1/1	0.97	0.28	91,91,91,91	0
55	MG	14	3261	1/1	0.97	0.48	68,68,68,68	0
55	MG	14	3047	1/1	0.97	0.26	78,78,78,78	0
55	MG	14	3155	1/1	0.97	0.20	99,99,99,99	0
55	MG	1G	1697	1/1	0.97	0.23	83,83,83,83	0
55	MG	1H	3450	1/1	0.97	0.10	100,100,100,100	0
55	MG	14	3019	1/1	0.98	0.15	73,73,73,73	0
55	MG	1H	3369	1/1	0.98	0.75	77,77,77,77	0
55	MG	14	3427	1/1	0.98	0.09	72,72,72,72	0
55	MG	1H	3040	1/1	0.98	0.29	80,80,80,80	0
55	MG	1H	3011	1/1	0.98	0.26	65,65,65,65	0
55	MG	1H	3012	1/1	0.98	0.15	67,67,67,67	0
55	MG	1H	3086	1/1	0.98	0.17	60,60,60,60	0
55	MG	1H	3548	1/1	0.98	0.21	76,76,76,76	0
55	MG	1H	3087	1/1	0.98	0.22	81,81,81,81	0
55	MG	14	3028	1/1	0.98	0.17	76,76,76,76	0
55	MG	1G	1722	1/1	0.98	0.10	83,83,83,83	0
55	MG	13	1651	1/1	0.98	0.16	91,91,91,91	0
55	MG	1H	3457	1/1	0.98	0.11	79,79,79,79	0
55	MG	1H	3376	1/1	0.98	0.10	78,78,78,78	0
55	MG	13	1677	1/1	0.98	0.27	96,96,96,96	0
55	MG	14	3034	1/1	0.98	0.20	67,67,67,67	0
55	MG	13	1710	1/1	0.98	0.15	119,119,119,119	0
55	MG	1H	3461	1/1	0.98	0.12	77,77,77,77	0
55	MG	1H	3018	1/1	0.98	0.21	76,76,76,76	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
55	MG	14	3039	1/1	0.98	0.23	90,90,90,90	0
55	MG	14	3350	1/1	0.98	0.13	73,73,73,73	0
55	MG	14	3040	1/1	0.98	0.14	67,67,67,67	0
55	MG	1H	3464	1/1	0.98	0.09	86,86,86,86	0
55	MG	1H	3465	1/1	0.98	0.24	73,73,73,73	0
55	MG	14	3194	1/1	0.98	0.33	92,92,92,92	0
55	MG	14	3451	1/1	0.98	0.09	92,92,92,92	0
55	MG	14	3043	1/1	0.98	0.47	84,84,84,84	0
55	MG	14	3453	1/1	0.98	0.11	73,73,73,73	0
55	MG	14	3044	1/1	0.98	0.19	78,78,78,78	0
55	MG	14	3045	1/1	0.98	0.28	66,66,66,66	0
55	MG	14	3198	1/1	0.98	0.13	88,88,88,88	0
55	MG	1H	3380	1/1	0.98	0.08	63,63,63,63	0
55	MG	14	3360	1/1	0.98	0.10	64,64,64,64	0
55	MG	1H	3140	1/1	0.98	0.20	87,87,87,87	0
55	MG	1H	3047	1/1	0.98	0.38	84,84,84,84	0
55	MG	14	3363	1/1	0.98	0.13	73,73,73,73	0
55	MG	14	3463	1/1	0.98	0.12	98,98,98,98	0
55	MG	14	3049	1/1	0.98	0.25	65,65,65,65	0
55	MG	13	1614	1/1	0.98	0.23	96,96,96,96	0
55	MG	1H	3385	1/1	0.98	0.10	58,58,58,58	0
55	MG	14	3467	1/1	0.98	0.21	95,95,95,95	0
55	MG	14	3053	1/1	0.98	0.21	49,49,49,49	0
55	MG	14	3055	1/1	0.98	0.17	72,72,72,72	0
55	MG	1H	3386	1/1	0.98	0.14	72,72,72,72	0
55	MG	1H	3271	1/1	0.98	0.16	89,89,89,89	0
55	MG	1H	3354	1/1	0.98	0.16	82,82,82,82	0
55	MG	1G	1690	1/1	0.98	0.12	122,122,122,122	0
55	MG	1H	3425	1/1	0.98	0.12	63,63,63,63	0
55	MG	13	1703	1/1	0.98	0.09	108,108,108,108	0
55	MG	14	3064	1/1	0.98	0.11	84,84,84,84	0
55	MG	1H	3427	1/1	0.98	0.12	71,71,71,71	0
55	MG	1H	3428	1/1	0.98	0.15	60,60,60,60	0
55	MG	1H	3170	1/1	0.98	0.13	69,69,69,69	0
55	MG	14	3379	1/1	0.98	0.09	99,99,99,99	0
55	MG	1H	3221	1/1	0.98	0.21	67,67,67,67	0
55	MG	13	1673	1/1	0.98	0.14	86,86,86,86	0
55	MG	1H	3022	1/1	0.98	0.20	83,83,83,83	0
55	MG	1H	3098	1/1	0.98	0.21	73,73,73,73	0
55	MG	2L	101	1/1	0.98	0.16	92,92,92,92	0
55	MG	14	3073	1/1	0.98	0.20	82,82,82,82	0
55	MG	1H	3436	1/1	0.98	0.13	55,55,55,55	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
55	MG	14	3488	1/1	0.98	0.20	81,81,81,81	0
55	MG	14	3489	1/1	0.98	0.66	91,91,91,91	0
55	MG	14	3148	1/1	0.98	0.10	79,79,79,79	0
55	MG	1H	3438	1/1	0.98	0.15	69,69,69,69	0
55	MG	1H	3532	1/1	0.98	0.18	91,91,91,91	0
55	MG	14	3390	1/1	0.98	0.14	70,70,70,70	0
55	MG	14	3077	1/1	0.98	0.24	80,80,80,80	0
55	MG	14	3078	1/1	0.98	0.23	70,70,70,70	0
55	MG	1H	3053	1/1	0.98	0.27	74,74,74,74	0
55	MG	1G	1655	1/1	0.98	0.17	88,88,88,88	0
55	MG	1H	3054	1/1	0.98	0.18	66,66,66,66	0
55	MG	1H	3055	1/1	0.98	0.23	55,55,55,55	0
55	MG	14	3398	1/1	0.98	0.14	109,109,109,109	0
55	MG	14	3004	1/1	0.98	0.31	62,62,62,62	0
55	MG	14	3005	1/1	0.98	0.24	72,72,72,72	0
55	MG	14	3006	1/1	0.98	0.23	53,53,53,53	0
55	MG	14	3402	1/1	0.98	0.09	76,76,76,76	0
55	MG	14	3007	1/1	0.98	0.28	75,75,75,75	0
55	MG	14	3404	1/1	0.98	0.11	54,54,54,54	0
55	MG	13	1608	1/1	0.98	0.21	91,91,91,91	0
55	MG	14	3407	1/1	0.98	0.07	109,109,109,109	0
55	MG	1H	3491	1/1	0.98	0.12	97,97,97,97	0
55	MG	14	3011	1/1	0.98	0.20	54,54,54,54	0
55	MG	1H	3077	1/1	0.98	0.26	59,59,59,59	0
55	MG	14	3013	1/1	0.98	0.24	75,75,75,75	0
55	MG	14	3413	1/1	0.98	0.15	74,74,74,74	0
55	MG	1G	1661	1/1	0.98	0.12	82,82,82,82	0
55	MG	14	3322	1/1	0.98	0.63	91,91,91,91	0
55	MG	14	3243	1/1	0.98	0.33	89,89,89,89	0
55	MG	14	3245	1/1	0.98	0.13	109,109,109,109	0
55	MG	14	3418	1/1	0.98	0.11	70,70,70,70	0
55	MG	13	1602	1/1	0.98	0.15	88,88,88,88	0
55	MG	1H	3038	1/1	0.98	0.28	56,56,56,56	0
55	MG	14	3248	1/1	0.98	0.16	110,110,110,110	0
55	MG	1H	3448	1/1	0.98	0.21	79,79,79,79	0
55	MG	13	1707	1/1	0.98	0.13	101,101,101,101	0
55	MG	1H	3070	1/1	0.99	0.21	72,72,72,72	0
55	MG	13	1629	1/1	0.99	0.27	88,88,88,88	0
55	MG	14	3060	1/1	0.99	0.24	56,56,56,56	0
55	MG	14	3395	1/1	0.99	0.09	73,73,73,73	0
55	MG	14	3061	1/1	0.99	0.12	79,79,79,79	0
55	MG	1H	3013	1/1	0.99	0.15	57,57,57,57	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
55	MG	1H	3503	1/1	0.99	0.16	75,75,75,75	0
55	MG	14	3244	1/1	0.99	0.17	90,90,90,90	0
55	MG	1H	3286	1/1	0.99	0.17	69,69,69,69	0
55	MG	14	3135	1/1	0.99	0.43	101,101,101,101	0
55	MG	1H	3001	1/1	0.99	0.30	47,47,47,47	0
55	MG	1H	3161	1/1	0.99	0.15	73,73,73,73	0
55	MG	1H	3125	1/1	0.99	0.22	93,93,93,93	0
55	MG	1H	3082	1/1	0.99	0.12	66,66,66,66	0
55	MG	1H	3432	1/1	0.99	0.12	85,85,85,85	0
55	MG	1H	3093	1/1	0.99	0.27	67,67,67,67	0
55	MG	14	3409	1/1	0.99	0.10	99,99,99,99	0
55	MG	1H	3414	1/1	0.99	0.14	51,51,51,51	0
55	MG	1H	3435	1/1	0.99	0.10	60,60,60,60	0
55	MG	14	3038	1/1	0.99	0.17	58,58,58,58	0
55	MG	1H	3382	1/1	0.99	0.16	61,61,61,61	0
55	MG	1H	3437	1/1	0.99	0.14	94,94,94,94	0
55	MG	14	3458	1/1	0.99	0.21	94,94,94,94	0
55	MG	14	3183	1/1	0.99	0.36	98,98,98,98	0
55	MG	14	3010	1/1	0.99	0.19	57,57,57,57	0
55	MG	1H	3083	1/1	0.99	0.18	85,85,85,85	0
55	MG	1H	3463	1/1	0.99	0.10	64,64,64,64	0
55	MG	1G	1626	1/1	0.99	0.24	108,108,108,108	0
55	MG	1H	3440	1/1	0.99	0.12	59,59,59,59	0
55	MG	14	3421	1/1	0.99	0.11	73,73,73,73	0
55	MG	1H	3002	1/1	0.99	0.30	61,61,61,61	0
55	MG	1H	3466	1/1	0.99	0.19	78,78,78,78	0
55	MG	1H	3418	1/1	0.99	0.13	60,60,60,60	0
55	MG	1H	3003	1/1	0.99	0.28	51,51,51,51	0
55	MG	1H	3017	1/1	0.99	0.17	66,66,66,66	0
55	MG	14	3051	1/1	0.99	0.34	78,78,78,78	0
55	MG	14	3428	1/1	0.99	0.11	92,92,92,92	0
55	MG	14	3020	1/1	0.99	0.18	71,71,71,71	0
55	MG	1H	3169	1/1	0.99	0.19	68,68,68,68	0
55	MG	14	3054	1/1	0.99	0.17	65,65,65,65	0
56	ZN	3E	301	1/1	0.99	0.36	109,109,109,109	0
55	MG	14	3349	1/1	0.99	0.16	66,66,66,66	0
55	MG	1H	3422	1/1	0.99	0.12	70,70,70,70	0
56	ZN	32	302	1/1	0.99	0.37	114,114,114,114	0
55	MG	1H	3472	1/1	0.99	0.21	94,94,94,94	0
55	MG	1H	3048	1/1	0.99	0.17	67,67,67,67	0
55	MG	14	3406	1/1	1.00	0.19	76,76,76,76	0
55	MG	1H	3439	1/1	1.00	0.11	63,63,63,63	0

6.5 Other polymers (i)

There are no such residues in this entry.