Full wwPDB X-ray Structure Validation Report (i)

Feb 20, 2016 – 02:20 AM GMT

PDB ID	:	4WR6
Title	:	Complex of 70S ribosome with tRNA-Tyr and mRNA with A-A mismatch in the first position in the A-site.
Authors	:	Rozov, A.; Demeshkina, N.; Yusupov, M.; Yusupova, G.
Deposited on	:	2014-10-23
Resolution	:	3.05 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
http://wwpdb.org/validation/2016/XrayValidationReportHelp
with specific help available everywhere you see the (i) symbol.

The following versions of software and data (see references (1)) were used in the production of this report:

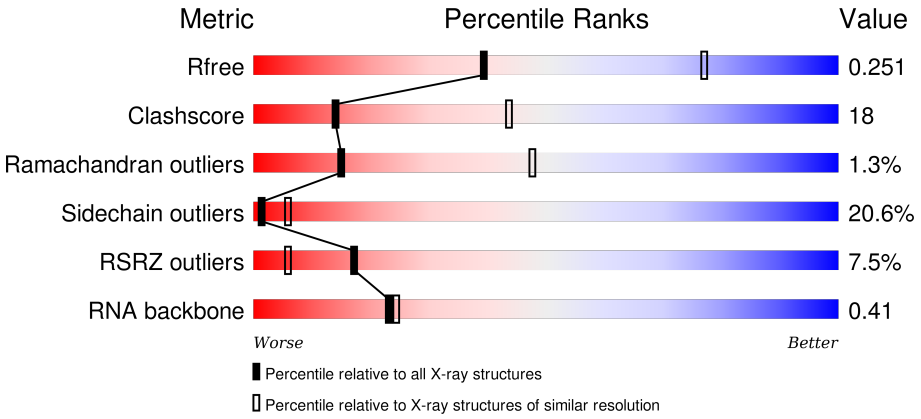
MolProbity	:	4.02b-467
Mogul	:	1.7.1 (RC1), CSD as537be (2016)
Xtriage (Phenix)	:	1.9-1692
EDS	:	rb-20026982
Percentile statistics	:	20151230.v01 (using entries in the PDB archive December 30th 2015)
Refmac	:	5.8.0135
CCP4	:	6.5.0
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP)	:	rb-20026982

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 3.05 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}	91344	1191 (3.10-3.02)
Clashscore	102246	1303 (3.10-3.02)
Ramachandran outliers	100387	1254 (3.10-3.02)
Sidechain outliers	100360	1254 (3.10-3.02)
RSRZ outliers	91569	1197 (3.10-3.02)
RNA backbone	2183	1035 (3.50-2.62)

The table below summarises the geometric issues observed across the polymeric chains and their fit to the electron density. The red, orange, yellow and green segments on the lower bar indicate the fraction of residues that contain outliers for >=3, 2, 1 and 0 types of geometric quality criteria. 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% 30% 46% 19%
2	12	256	3% 37% 42% 14% 7%
2	1E	256	2% 42% 40% 11% 7%
3	22	239	8% 36% 41% 9% 14%

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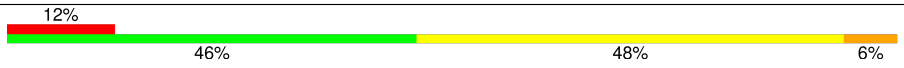
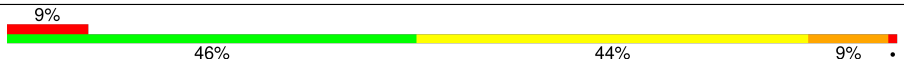
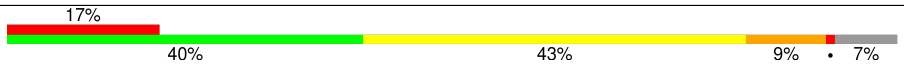
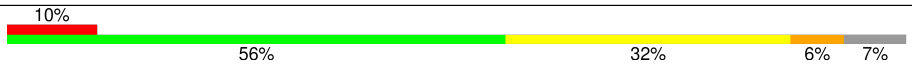
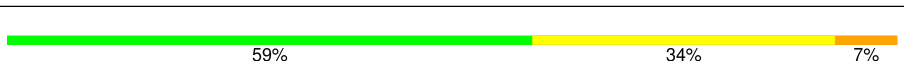
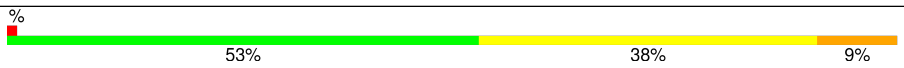
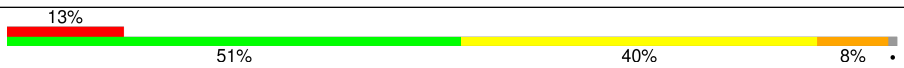
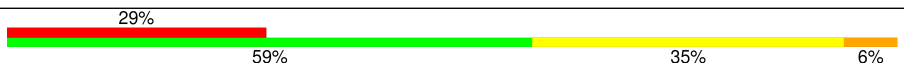
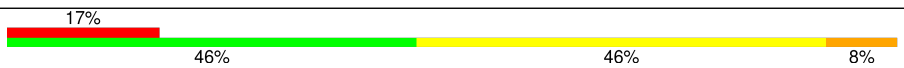
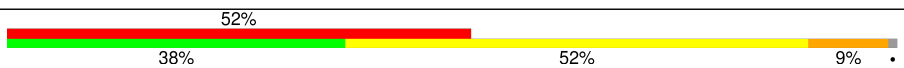
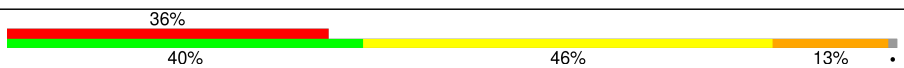
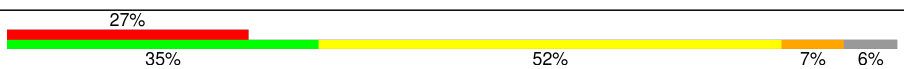
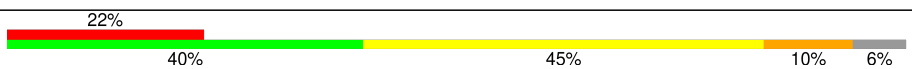
Mol	Chain	Length	Quality of chain
3	2E	239	
4	32	209	
4	3E	209	
5	42	162	
5	4E	162	
6	52	101	
6	5E	101	
7	62	156	
7	6E	156	
8	72	138	
8	7E	138	
9	82	128	
9	8E	128	
10	1A	105	
10	1I	105	
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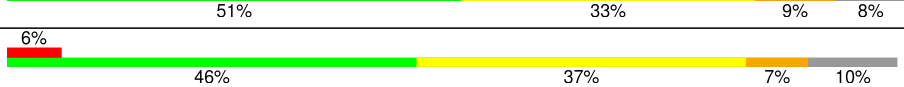
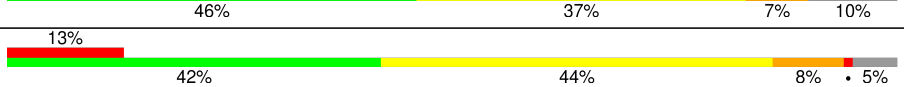
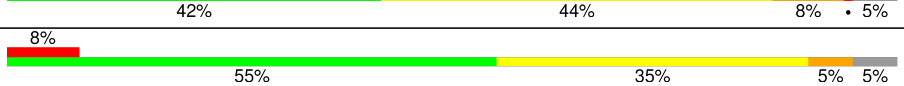
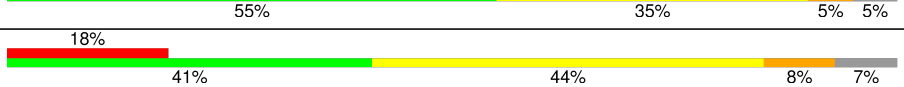
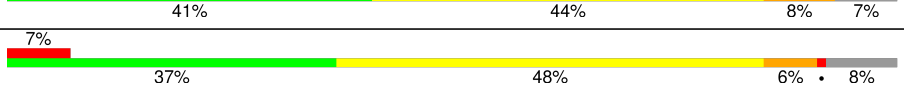
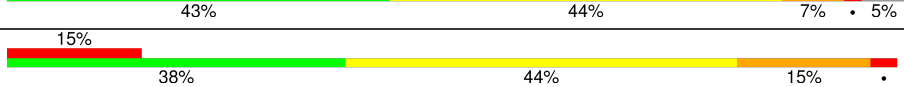
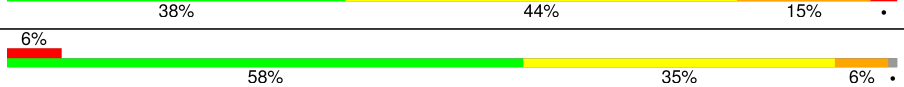
11	2I	129	
12	3A	132	
12	3I	132	
13	4A	126	
13	4I	126	
14	5A	61	
14	5I	61	
15	6A	89	
15	6I	89	

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Mol	Chain	Length	Quality of chain
16	7A	88	39% 64% 28% 5%
16	7I	88	55% 43% 41% 11% 5%
17	8A	105	20% 51% 38% 6% 5%
17	8I	105	11% 34% 50% 11% 5%
18	9A	88	2% 49% 25% 5% 22%
18	9I	88	36% 40% 6% 18%
19	AA	93	12% 39% 40% 10% 12%
19	AI	93	5% 39% 39% 11% 11%
20	BA	106	21% 49% 34% 9% 7%
20	BI	106	32% 48% 40% 6% 7%
21	1B	27	81% 37% 48% 7% 7%
21	1F	27	52% 37% 37% 7% 19%
22	1K	85	6% 22% 44% 28% 6%
22	3K	85	4% 25% 48% 24%
23	2K	77	% 35% 40% 21%
24	4K	27	22% 22% 19% 15% 44%
25	14	2917	% 27% 45% 23% 5%
25	1H	2917	% 24% 42% 26% 7%
26	16	122	36% 41% 18% 5%
26	1J	122	24% 47% 25% 5%
27	11	276	50% 33% 14%
27	19	276	6% 50% 39% 10%
28	21	206	5% 53% 33% 13%
28	29	206	16% 42% 40% 15%
29	31	210	51% 36% 8%

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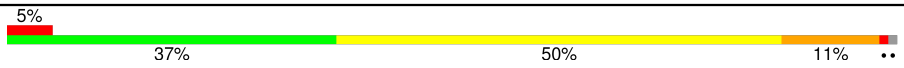
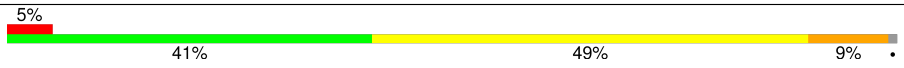
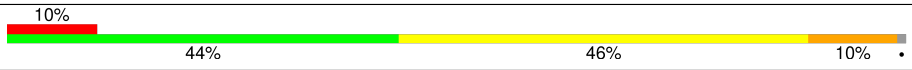
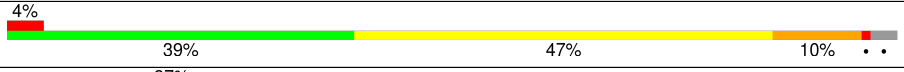
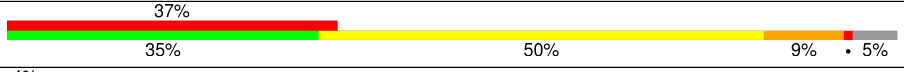
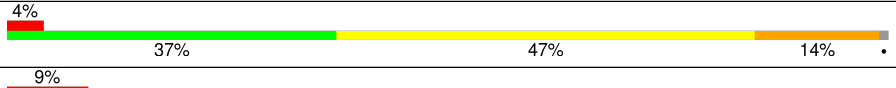
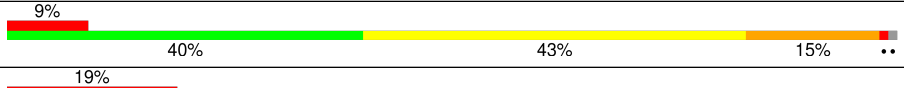
Mol	Chain	Length	Quality of chain
29	39	210	
30	41	182	
30	49	182	
31	51	180	
31	59	180	
32	61	148	
32	69	148	
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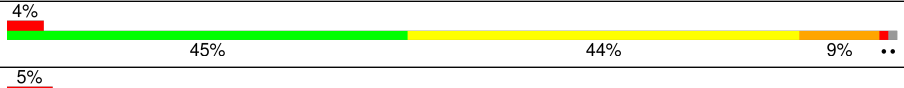
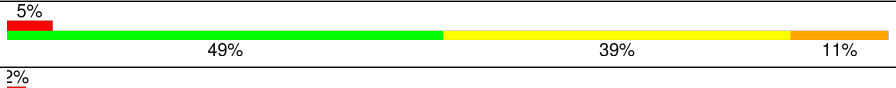
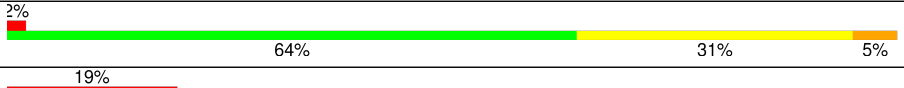
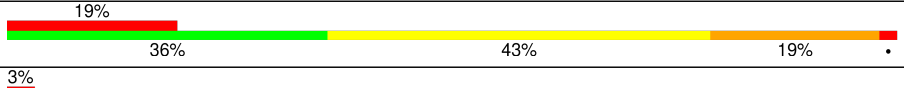
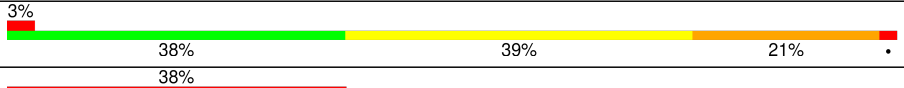
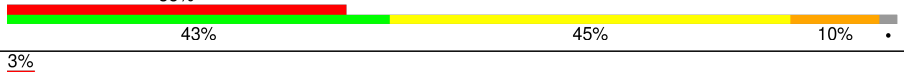
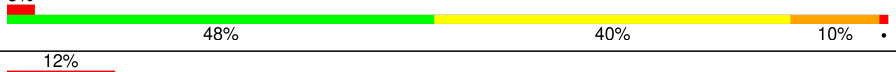
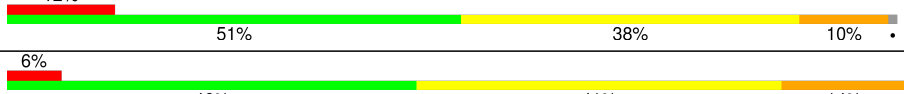
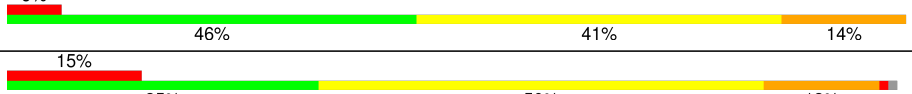
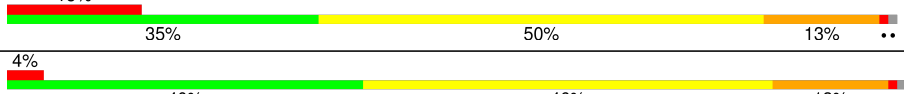
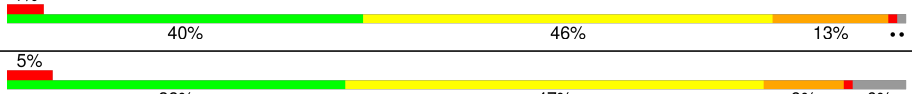
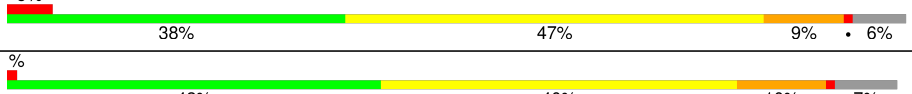
33	58	140	
34	25	122	
34	68	122	
35	35	150	
35	78	150	
36	45	141	
36	88	141	
37	55	118	
37	98	118	
38	65	112	
38	A8	112	
39	75	146	
39	B8	146	
40	85	118	
40	C8	118	
41	95	101	
41	D8	101	

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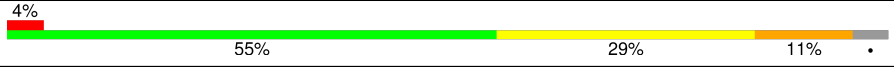
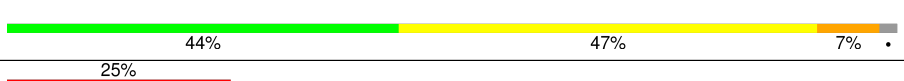
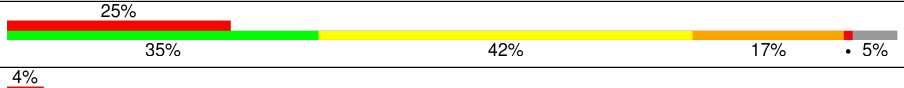
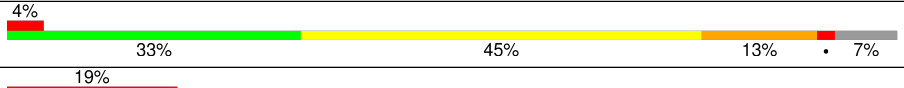
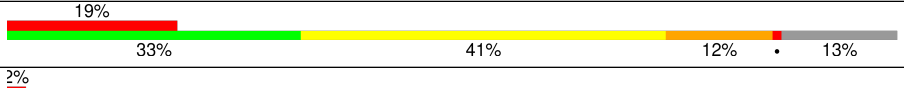
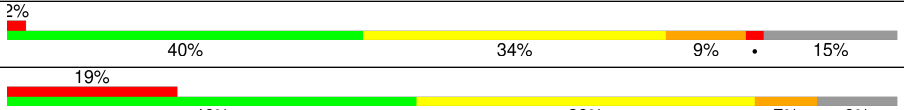
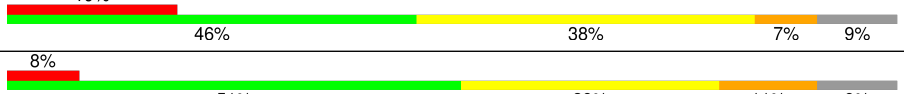
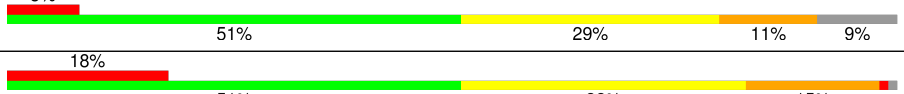
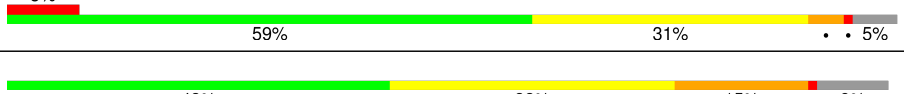
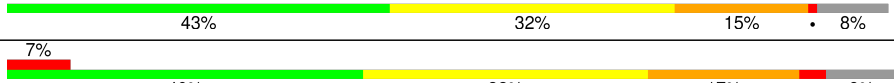
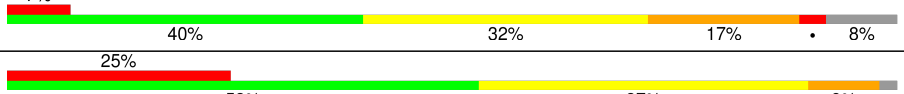
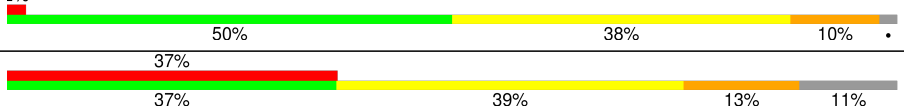
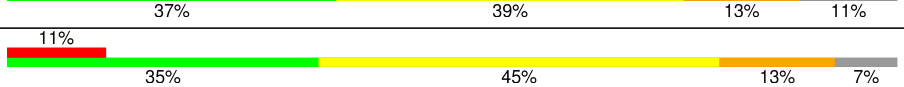
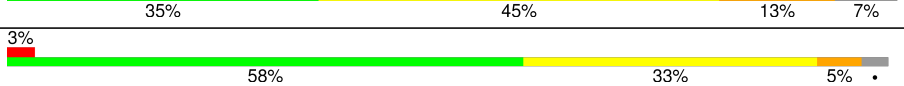
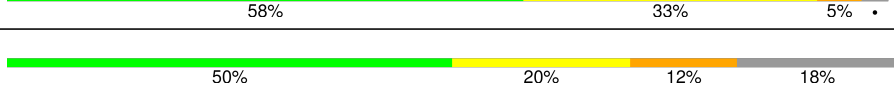
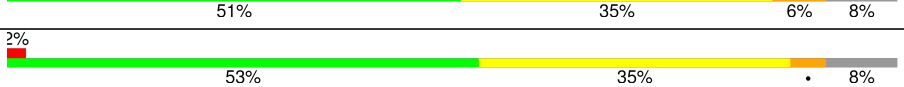
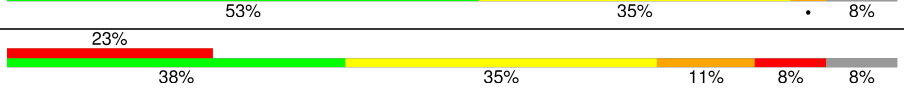
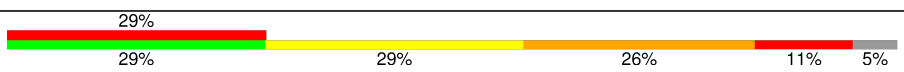
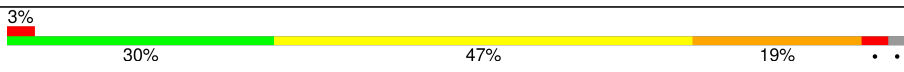
Mol	Chain	Length	Quality of chain
42	A5	113	
42	E8	113	
43	B5	96	
43	F8	96	
44	C5	110	
44	G8	110	
45	D5	206	
45	H8	206	
46	E5	85	
46	I8	85	
47	F5	98	
47	J8	98	
48	G5	72	
48	K8	72	
49	H5	60	
49	L8	60	
50	I5	71	
50	M8	71	
51	J5	60	
51	N8	60	
52	L5	49	
52	P8	49	
53	M5	65	
53	Q8	65	
54	1G	1522	

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Mol	Chain	Length	Quality of chain
55	1L	85	33% 28% 39% 27% 6%
55	3L	85	2% 24% 48% 25%
56	2L	77	% 32% 44% 19%
57	4L	27	30% 26% 19% 15% 41%

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
58	MG	13	1618	-	-	-	X
58	MG	13	1629	-	-	-	X
58	MG	13	1636	-	-	-	X
58	MG	13	1657	-	-	-	X
58	MG	13	1661	-	-	-	X
58	MG	13	1664	-	-	-	X
58	MG	13	1695	-	-	-	X
58	MG	13	1705	-	-	-	X
58	MG	13	1718	-	-	-	X
58	MG	14	3022	-	-	-	X
58	MG	14	3038	-	-	-	X
58	MG	14	3065	-	-	-	X
58	MG	14	3072	-	-	-	X
58	MG	14	3073	-	-	-	X
58	MG	14	3074	-	-	-	X
58	MG	14	3087	-	-	-	X
58	MG	14	3148	-	-	-	X
58	MG	14	3149	-	-	-	X
58	MG	14	3160	-	-	-	X
58	MG	14	3172	-	-	-	X
58	MG	14	3176	-	-	-	X
58	MG	14	3186	-	-	-	X
58	MG	14	3187	-	-	-	X
58	MG	14	3217	-	-	-	X
58	MG	14	3222	-	-	-	X
58	MG	14	3227	-	-	-	X
58	MG	14	3244	-	-	-	X
58	MG	14	3247	-	-	-	X
58	MG	14	3274	-	-	-	X
58	MG	14	3281	-	-	-	X

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Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
58	MG	14	3303	-	-	-	X
58	MG	14	3316	-	-	-	X
58	MG	14	3319	-	-	-	X
58	MG	16	201	-	-	-	X
58	MG	16	206	-	-	-	X
58	MG	16	211	-	-	-	X
58	MG	1G	1647	-	-	-	X
58	MG	1G	1665	-	-	-	X
58	MG	1H	3007	-	-	-	X
58	MG	1H	3016	-	-	-	X
58	MG	1H	3025	-	-	-	X
58	MG	1H	3043	-	-	-	X
58	MG	1H	3051	-	-	-	X
58	MG	1H	3053	-	-	-	X
58	MG	1H	3054	-	-	-	X
58	MG	1H	3055	-	-	-	X
58	MG	1H	3066	-	-	-	X
58	MG	1H	3070	-	-	-	X
58	MG	1H	3081	-	-	-	X
58	MG	1H	3085	-	-	-	X
58	MG	1H	3090	-	-	-	X
58	MG	1H	3100	-	-	-	X
58	MG	1H	3121	-	-	-	X
58	MG	1H	3154	-	-	-	X
58	MG	1H	3161	-	-	-	X
58	MG	1H	3162	-	-	-	X
58	MG	1H	3164	-	-	-	X
58	MG	1H	3166	-	-	-	X
58	MG	1H	3188	-	-	-	X
58	MG	1H	3197	-	-	-	X
58	MG	1H	3199	-	-	-	X
58	MG	1H	3204	-	-	-	X
58	MG	1H	3206	-	-	-	X
58	MG	1H	3220	-	-	-	X
58	MG	1H	3231	-	-	-	X
58	MG	1H	3238	-	-	-	X
58	MG	1H	3258	-	-	-	X
58	MG	1H	3261	-	-	-	X
58	MG	1H	3263	-	-	-	X
58	MG	1H	3288	-	-	-	X
58	MG	1H	3292	-	-	-	X
58	MG	1H	3299	-	-	-	X

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Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
58	MG	1H	3331	-	-	-	X
58	MG	1H	3338	-	-	-	X
58	MG	1H	3342	-	-	-	X
58	MG	1H	3347	-	-	-	X
58	MG	1H	3350	-	-	-	X
58	MG	1H	3356	-	-	-	X
58	MG	2K	103	-	-	-	X
59	ZN	3E	302	-	-	-	X

2 Entry composition

There are 60 unique types of molecules in this entry. The entry contains 299318 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
1	13	1498	Total	C	N	O	P	0	0	0
			32207	14334	5973	10402	1498			

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

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

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

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

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

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

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

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

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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	127	Total	C	N	O	0	0	0
			1009	639	197	173			

- 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.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
14	5I	61	Total	C	N	O	S	0	0	0
			498	316	105	72	5			
14	5A	58	Total	C	N	O	S	0	0	0
			475	303	99	69	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	69	Total	C	N	O	0	0	0
			564	361	110	93			

- 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
			640	407	118	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	22	Total	C	N	O	0	0	0
			188	116	44	28			

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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	1K	85	Total	C	N	O	P	S	0	0	0
			1825	822	323	593	85	2			
22	3K	85	Total	C	N	O	P	S	0	0	0
			1825	822	323	593	85	2			

- Molecule 23 is a RNA chain called tRNA-fMet.

Mol	Chain	Residues	Atoms						ZeroOcc	AltConf	Trace
23	2K	77	Total	C	N	O	P	S	0	0	0
			1646	735	298	535	77	1			

- Molecule 24 is a RNA chain called mRNA.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
24	4K	15	Total	C	N	O	P	0	1	0
			349	158	75	100	16			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
25	1H	2912	Total	C	N	O	P	0	0	0
			62707	27911	11722	20163	2911			
25	14	2907	Total	C	N	O	P	0	0	0
			62605	27865	11708	20126	2906			

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 26 is a RNA chain called 5S ribosomal RNA.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
26	16	122	Total	C	N	O	P	0	0	0
			2617	1166	486	844	121			
26	1J	122	Total	C	N	O	P	0	0	0
			2617	1166	486	844	121			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
27	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			
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			

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Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
31	59	171	Total	C	N	O	S	0	0	0
			1316	835	247	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	138	Total	C	N	O	S	0	0	0
			1098	702	208	181	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 967 604 203 159 1	0	0	0
37	55	117	Total C N O 959 599 202 158	0	0	0

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

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

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

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf	Trace
39	B8	136	Total C N O 1133 705 233 195	0	0	0
39	75	137	Total C N O S 1141 710 234 196 1	0	0	0

- 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 963 610 202 150 1	0	0	0
40	85	117	Total C N O S 963 610 202 150 1	0	0	0

- 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 778 501 142 134 1	0	0	0
41	95	101	Total C N O S 778 501 142 134 1	0	0	0

- 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	S	0	0	0
			742	482	134	125	1			
43	B5	92	Total	C	N	O		0	0	0
			725	471	131	123				

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
44	G8	102	Total	C	N	O	S	0	0	0
			778	501	147	125	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	77	Total	C	N	O	S	0	0	0
			612	379	129	103	1			
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	93	Total	C	N	O	S	0	0	0
			729	457	145	126	1			

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Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
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	66	Total	C	N	O	S	0	0	0
			558	346	113	98	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	49	Total	C	N	O	S	0	0	0
			374	232	76	61	5			
51	J5	58	Total	C	N	O	S	0	0	0
			453	285	89	74	5			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
52	P8	45	Total	C	N	O	S	0	0	0
			391	240	97	52	2			
52	L5	45	Total	C	N	O	S	0	0	0
			391	240	97	52	2			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
53	Q8	62	Total	C	N	O	S	0	0	0
			448	284	86	76	2			
53	M5	60	Total	C	N	O	S	0	0	0
			480	306	98	74	2			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
54	1G	1498	Total	C	N	O	P	0	0	0
			32204	14334	5973	10400	1497			

- Molecule 55 is a RNA chain called tRNA-Tyr.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
55	1L	85	Total	C	N	O	P	0	0	0
			1807	807	323	592	85			
55	3L	85	Total	C	N	O	P	0	0	0
			1807	807	323	592	85			

- Molecule 56 is a RNA chain called tRNA-fMet.

Mol	Chain	Residues	Atoms						ZeroOcc	AltConf	Trace
56	2L	77	Total	C	N	O	P	S	0	0	0
			1645	734	298	535	77	1			

There is a discrepancy between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
2L	18	C	U	conflict	GB 675817920

- Molecule 57 is a RNA chain called mRNA.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
57	4L	16	Total	C	N	O	P	0	0	0
			349	158	75	100	16			

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

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
58	98	2	Total	Mg	0	0
			2	2		

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Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
58	45	1	Total Mg 1 1	0	0
58	P8	1	Total Mg 1 1	0	0
58	85	1	Total Mg 1 1	0	0
58	C5	1	Total Mg 1 1	0	0
58	13	138	Total Mg 138 138	0	0
58	1J	6	Total Mg 6 6	0	0
58	16	13	Total Mg 13 13	0	0
58	25	1	Total Mg 1 1	0	0
58	21	2	Total Mg 2 2	0	0
58	31	4	Total Mg 4 4	0	0
58	L8	2	Total Mg 2 2	0	0
58	I8	2	Total Mg 2 2	0	0
58	8E	1	Total Mg 1 1	0	0
58	L5	1	Total Mg 1 1	0	0
58	29	3	Total Mg 3 3	0	0
58	2K	6	Total Mg 6 6	0	0
58	1L	1	Total Mg 1 1	0	0
58	39	1	Total Mg 1 1	0	0
58	1G	90	Total Mg 90 90	0	0
58	4E	1	Total Mg 1 1	0	0
58	11	1	Total Mg 1 1	0	0

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Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
58	1H	475	Total Mg 475 475	0	0
58	3I	1	Total Mg 1 1	0	0
58	14	398	Total Mg 398 398	0	0
58	78	1	Total Mg 1 1	0	0
58	3E	1	Total Mg 1 1	0	0
58	3L	1	Total Mg 1 1	0	0
58	1K	1	Total Mg 1 1	0	0
58	2L	3	Total Mg 3 3	0	0

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

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
59	32	1	Total Zn 1 1	0	0
59	3E	1	Total Zn 1 1	0	0
59	5I	1	Total Zn 1 1	0	0
59	5A	1	Total Zn 1 1	0	0
59	G8	1	Total Zn 1 1	0	0
59	C5	1	Total Zn 1 1	0	0

- Molecule 60 is water.

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
60	13	100	Total O 100 100	0	0
60	3E	2	Total O 2 2	0	0
60	3I	2	Total O 2 2	0	0

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Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
60	5I	1	Total O 1 1	0	0
60	7I	1	Total O 1 1	0	0
60	1K	1	Total O 1 1	0	0
60	2K	6	Total O 6 6	0	0
60	4K	2	Total O 2 2	0	0
60	1H	538	Total O 538 538	0	0
60	16	11	Total O 11 11	0	0
60	11	4	Total O 4 4	0	0
60	21	2	Total O 2 2	0	0
60	31	4	Total O 4 4	0	0
60	78	4	Total O 4 4	0	0
60	D8	1	Total O 1 1	0	0
60	F8	1	Total O 1 1	0	0
60	L8	3	Total O 3 3	0	0
60	1G	51	Total O 51 51	0	0
60	32	1	Total O 1 1	0	0
60	BA	1	Total O 1 1	0	0
60	4L	1	Total O 1 1	0	0
60	14	409	Total O 409 409	0	0
60	19	7	Total O 7 7	0	0
60	29	2	Total O 2 2	0	0

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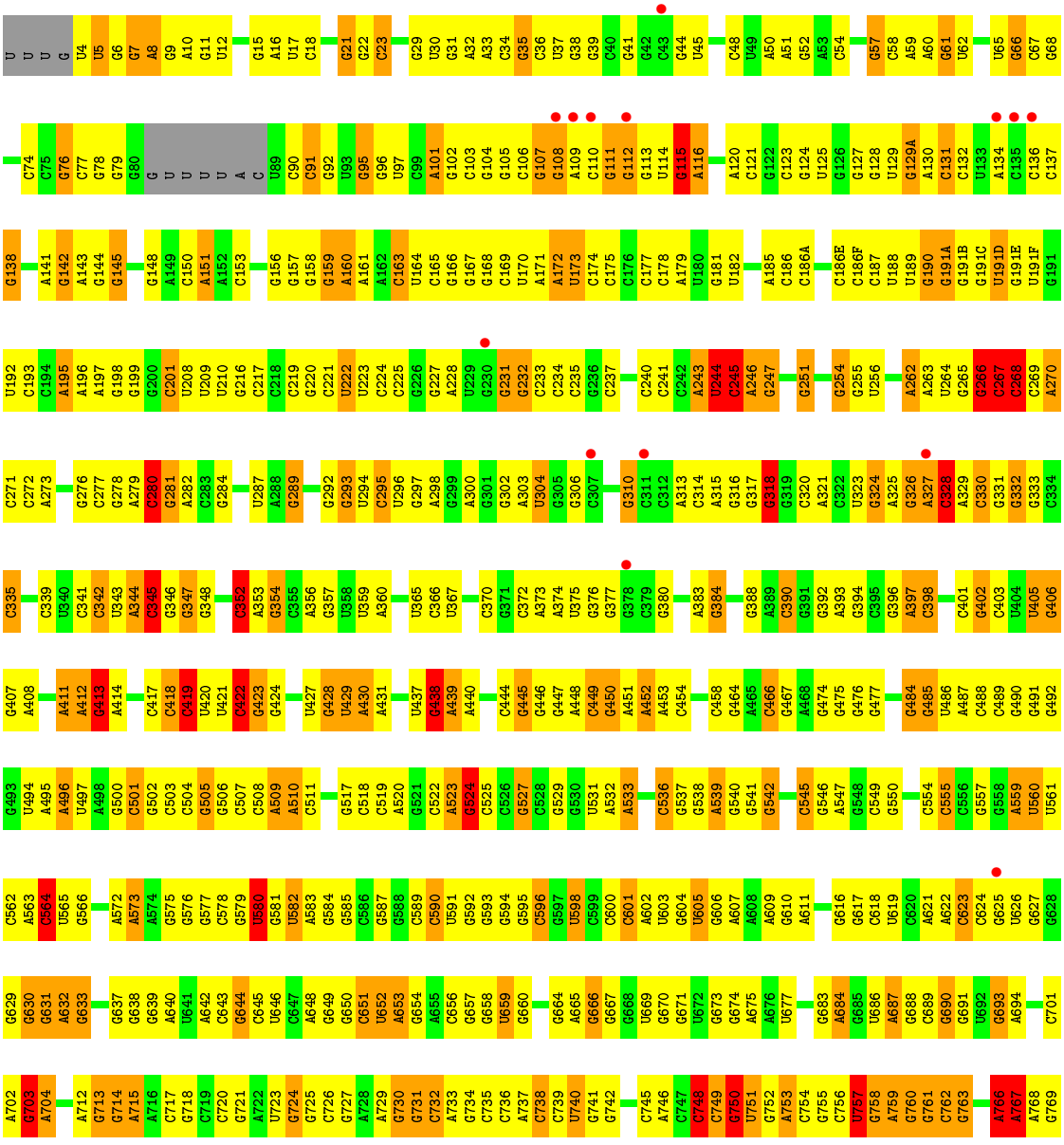
Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
60	39	4	Total O 4 4	0	0
60	35	1	Total O 1 1	0	0
60	55	1	Total O 1 1	0	0
60	75	1	Total O 1 1	0	0
60	85	1	Total O 1 1	0	0

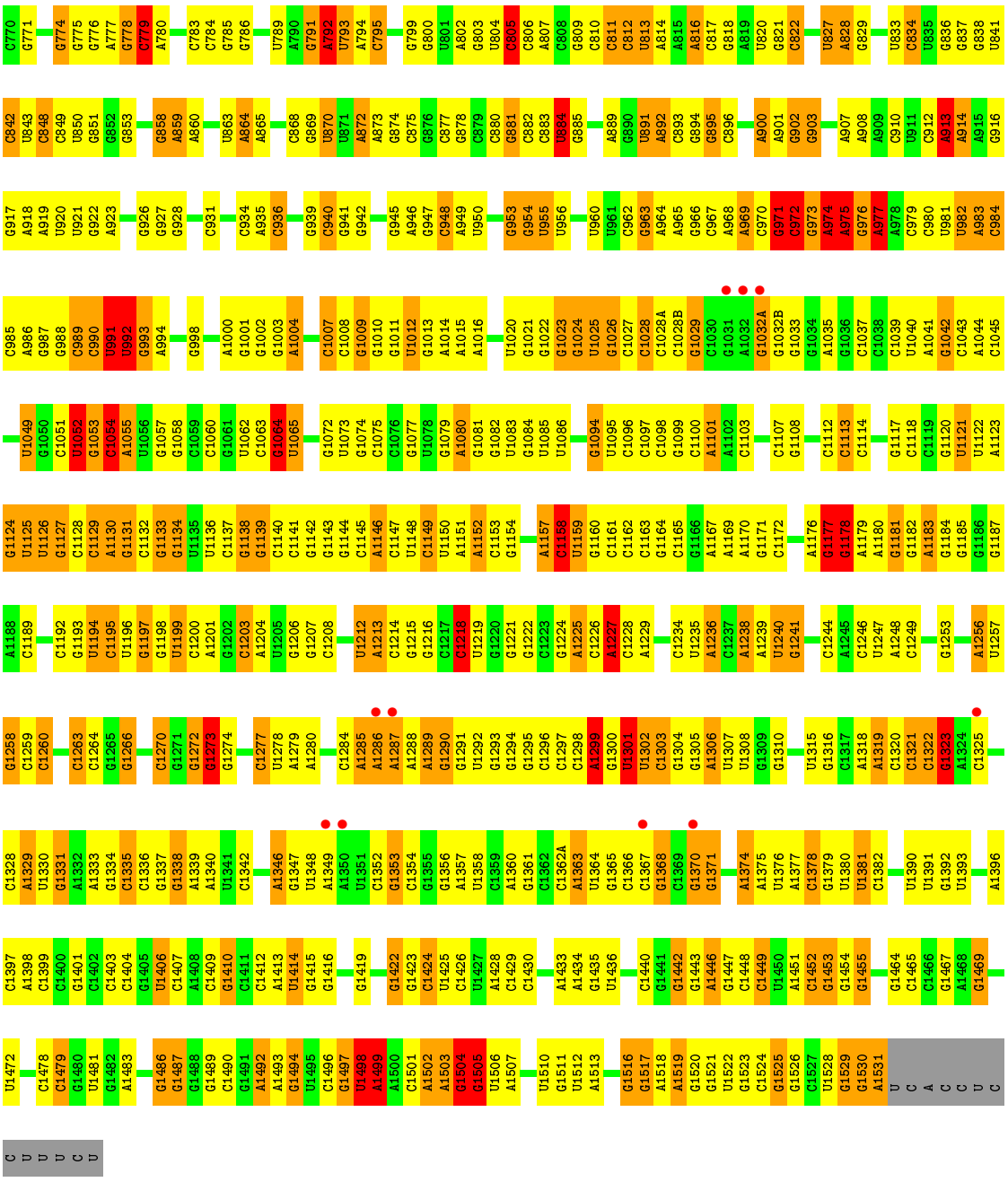
3 Residue-property plots (i)

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

- Molecule 1: 16S ribosomal RNA

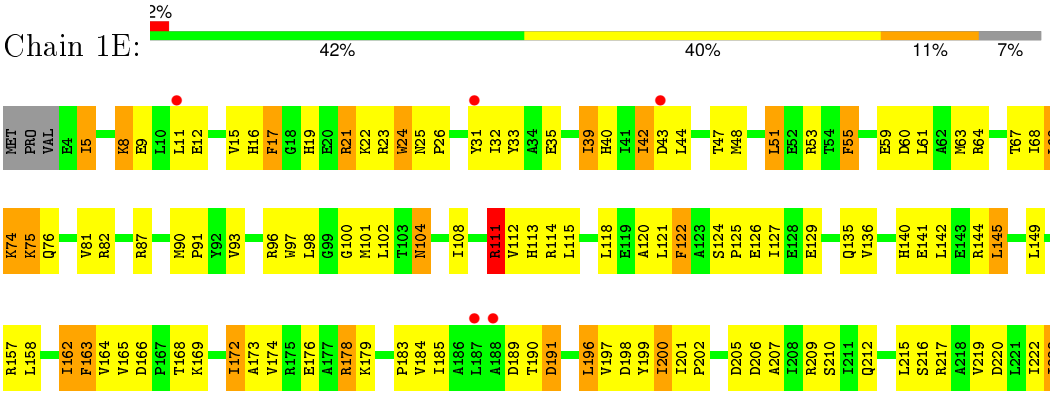
Chain 13: 2% 30% 46% 19%





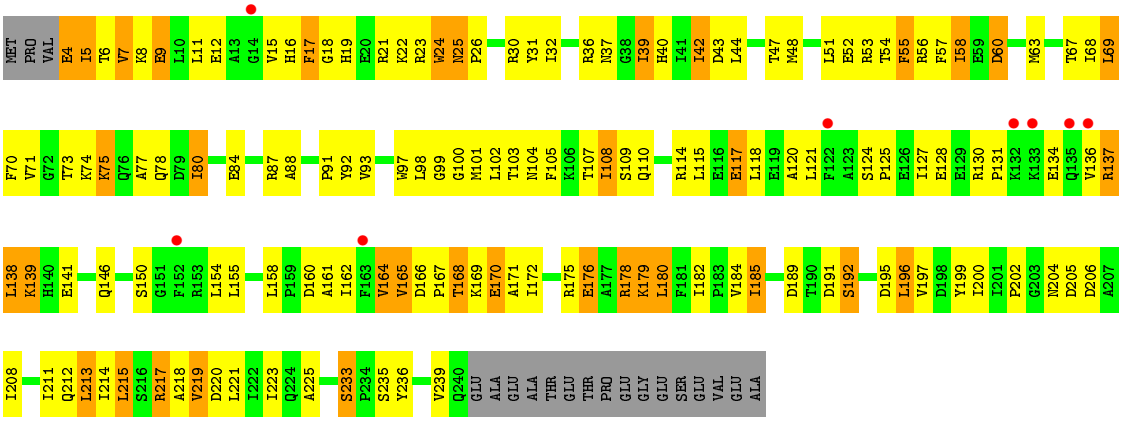
• Molecule 2: 30S ribosomal protein S2

Chain 1E:



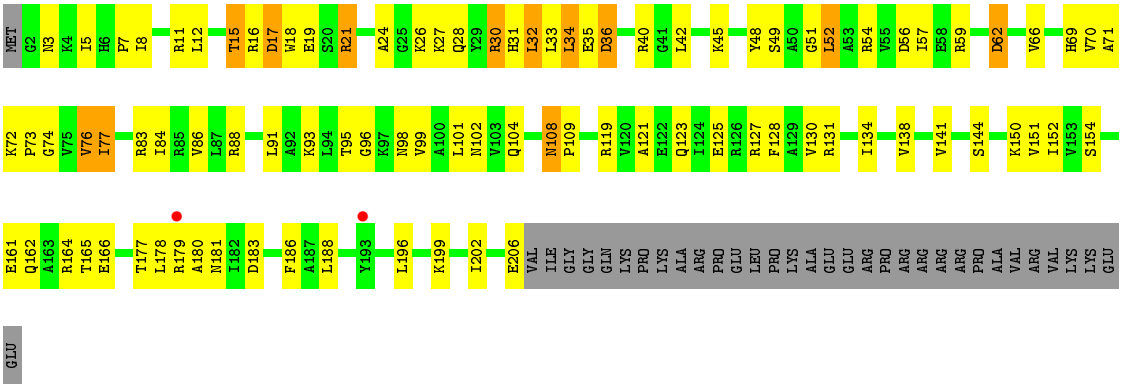
• Molecule 2: 30S ribosomal protein S2

Chain 12:



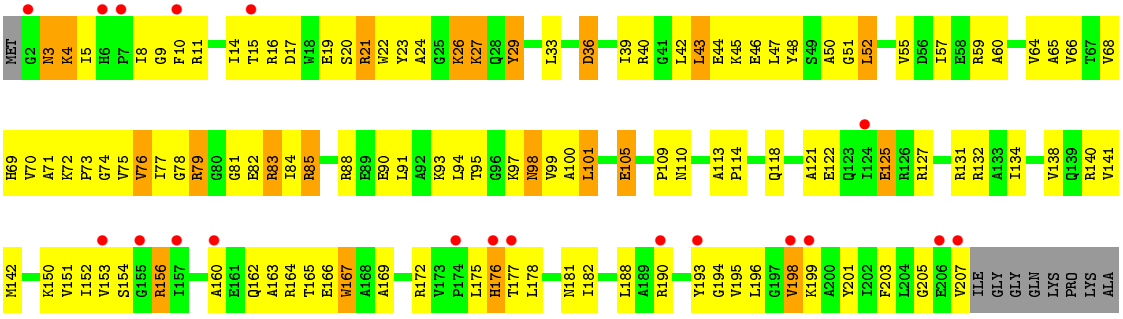
• Molecule 3: 30S ribosomal protein S3

Chain 2E:



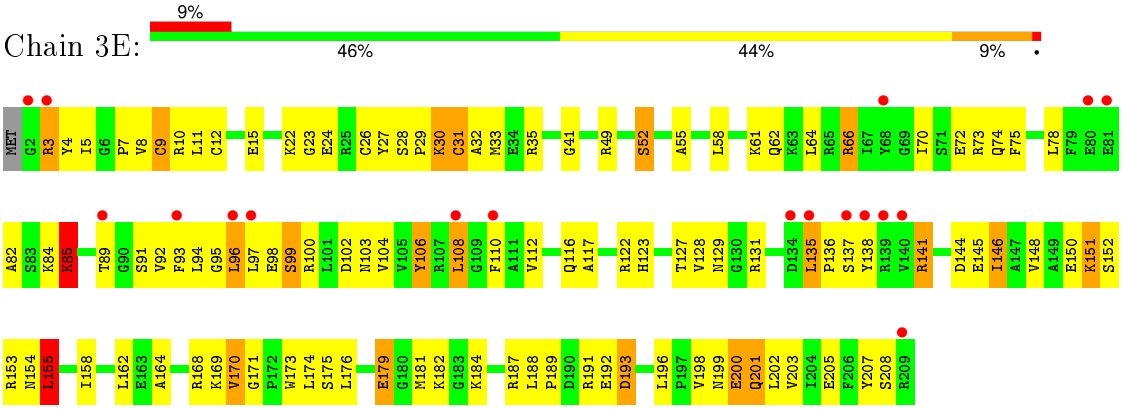
• Molecule 3: 30S ribosomal protein S3

Chain 22:



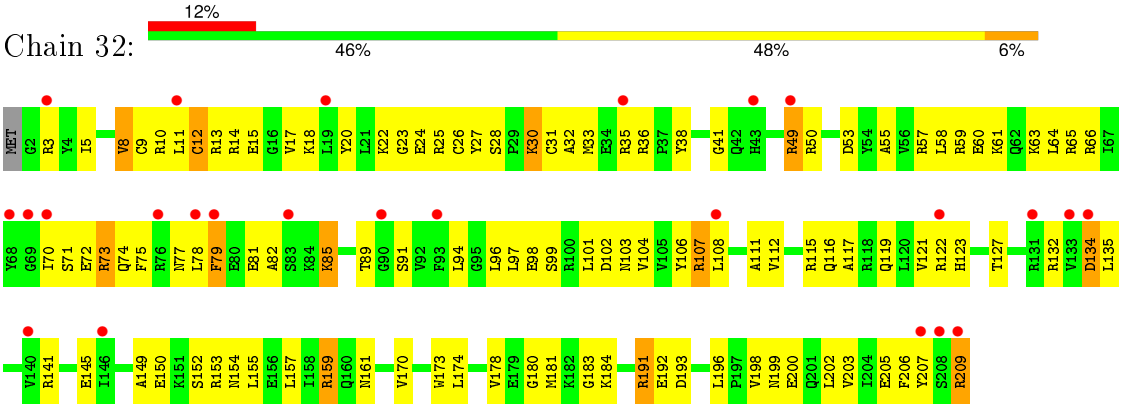
- Molecule 4: 30S ribosomal protein S4

Chain 3E:



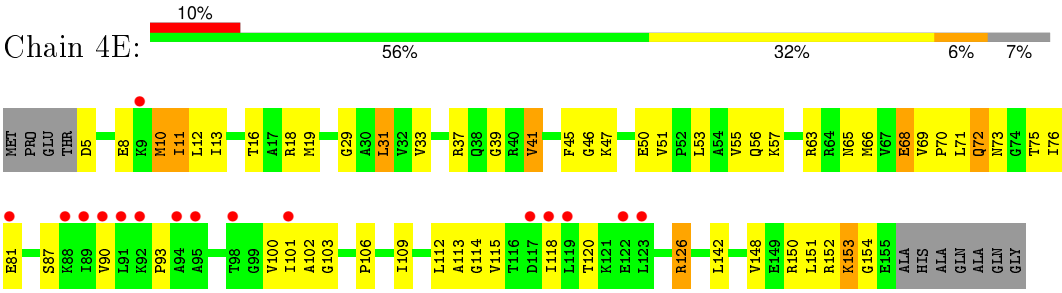
- Molecule 4: 30S ribosomal protein S4

Chain 32:



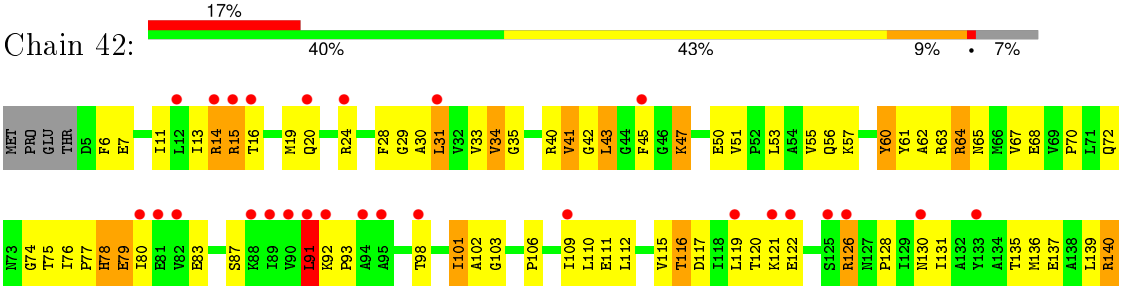
- Molecule 5: 30S ribosomal protein S5

Chain 4E:



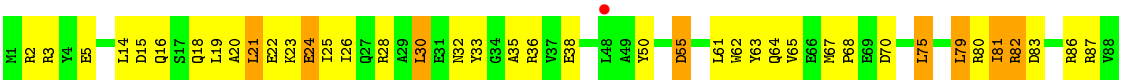
- Molecule 5: 30S ribosomal protein S5

Chain 42:



• Molecule 6: 30S ribosomal protein S6

Chain 5E:

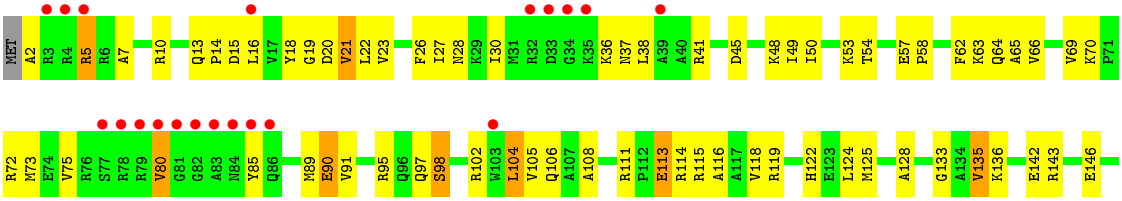


• Molecule 6: 30S ribosomal protein S6

Chain 52:

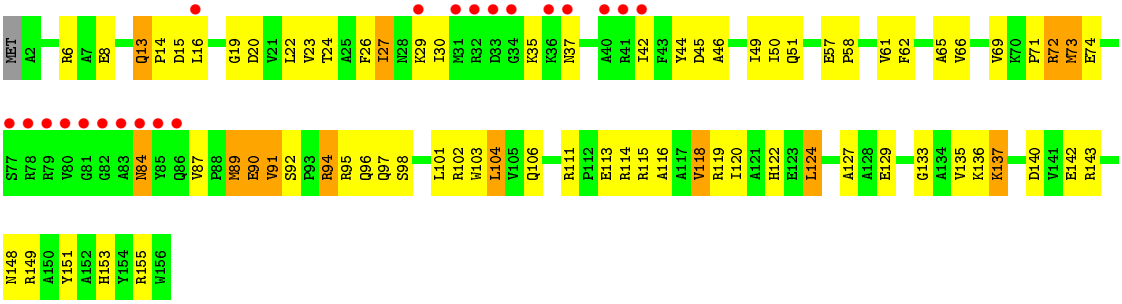
• Molecule 7: 30S ribosomal protein S7

Chain 6E:



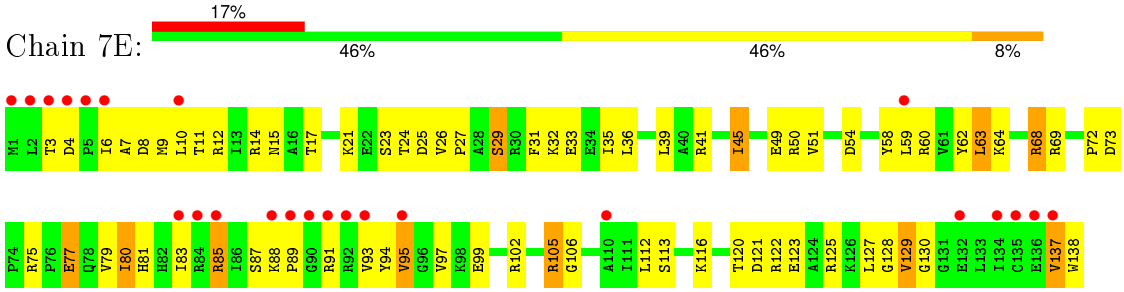
• Molecule 7: 30S ribosomal protein S7

Chain 62:



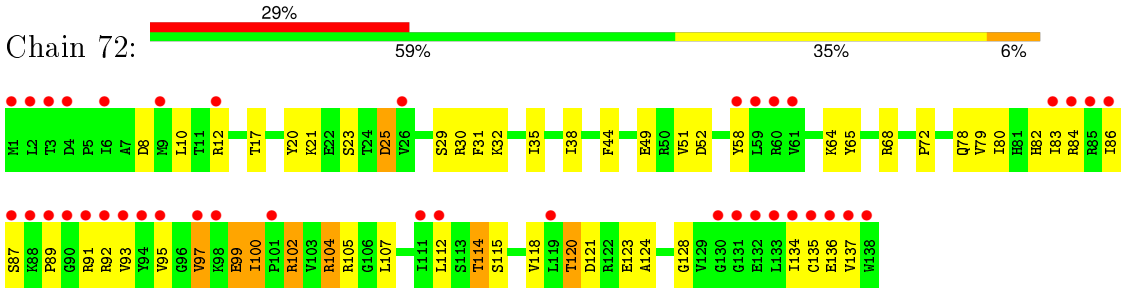
- Molecule 8: 30S ribosomal protein S8

Chain 7E:



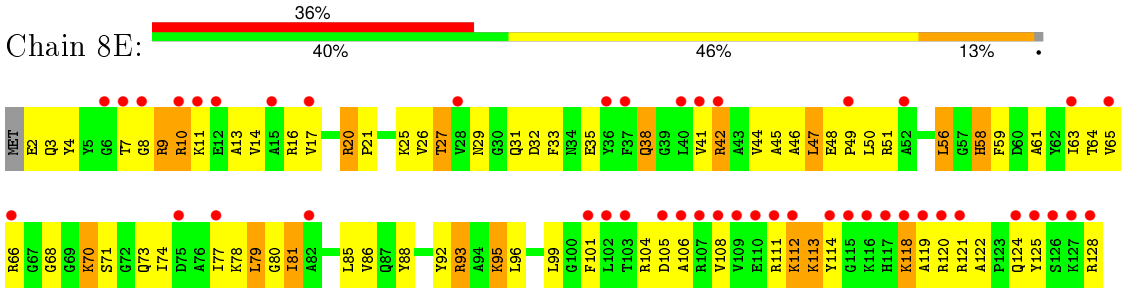
- Molecule 8: 30S ribosomal protein S8

Chain 72:



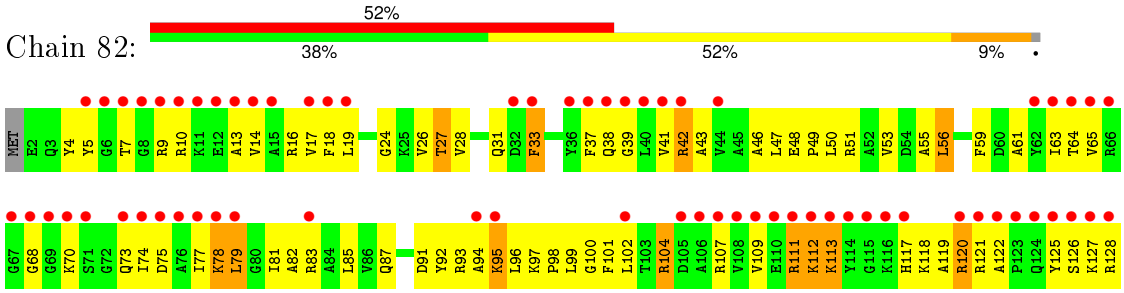
- Molecule 9: 30S ribosomal protein S9

Chain 8E:



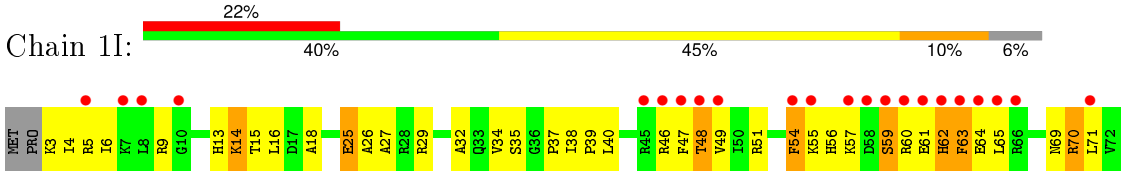
- Molecule 9: 30S ribosomal protein S9

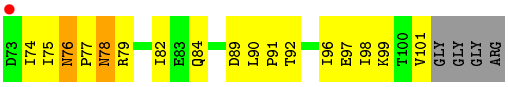
Chain 82:



- Molecule 10: 30S ribosomal protein S10

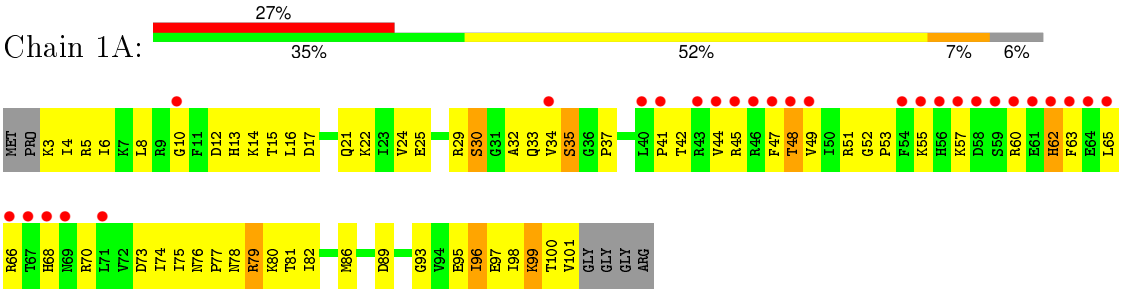
Chain 1I:





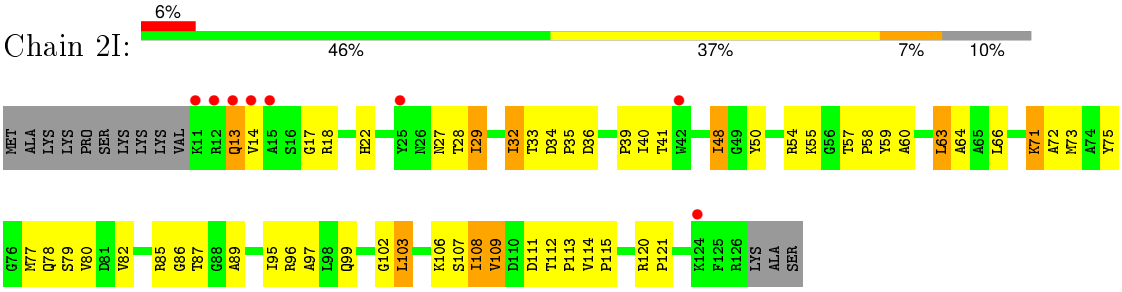
• Molecule 10: 30S ribosomal protein S10

Chain 1A:



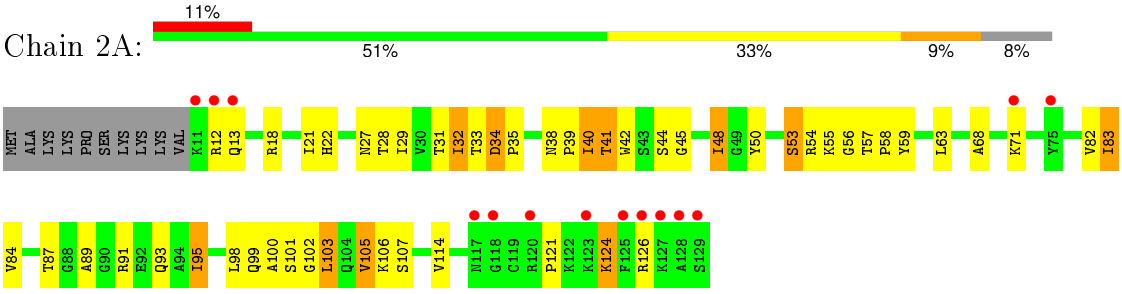
• Molecule 11: 30S ribosomal protein S11

Chain 2I:



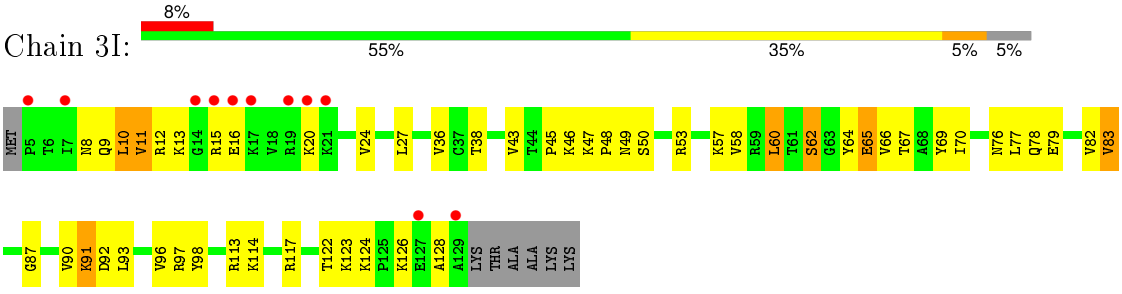
• Molecule 11: 30S ribosomal protein S11

Chain 2A:



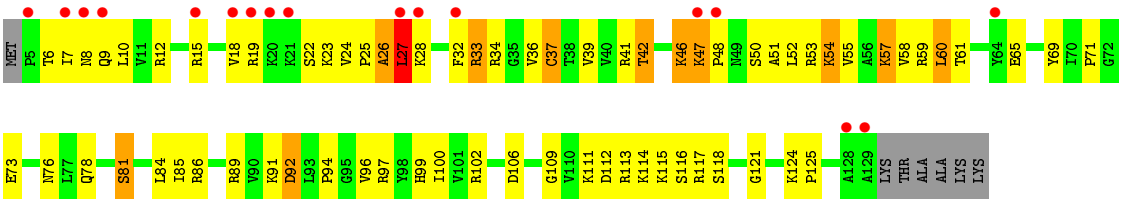
• Molecule 12: 30S ribosomal protein S12

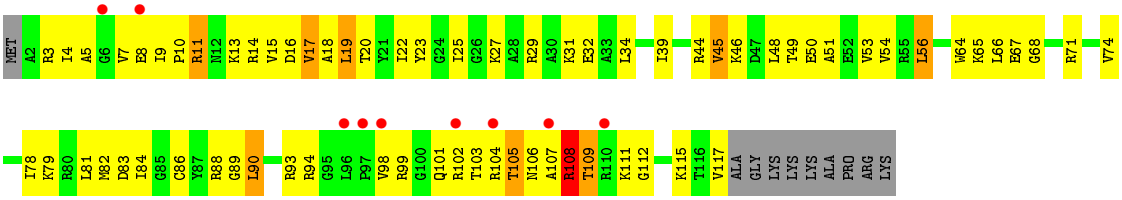
Chain 3I:



• Molecule 12: 30S ribosomal protein S12

Chain 3A:



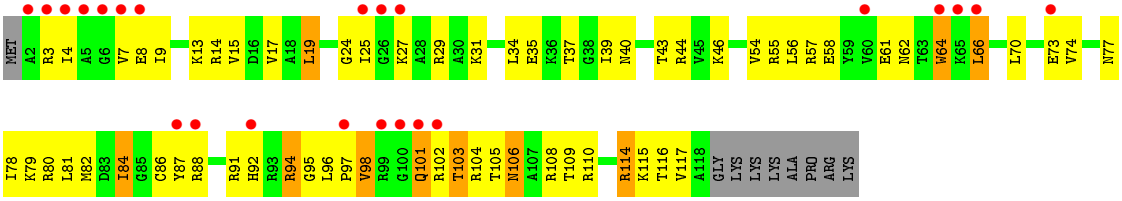


• Molecule 13: 30S ribosomal protein S13

Chain 4I:

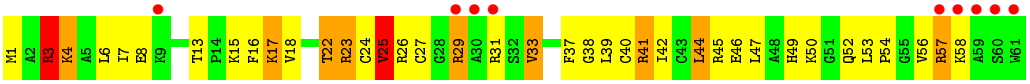
• Molecule 13: 30S ribosomal protein S13

Chain 4A:



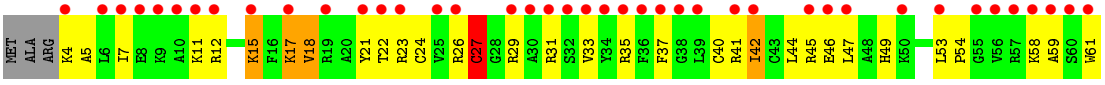
• Molecule 14: 30S ribosomal protein S14

Chain 5I:



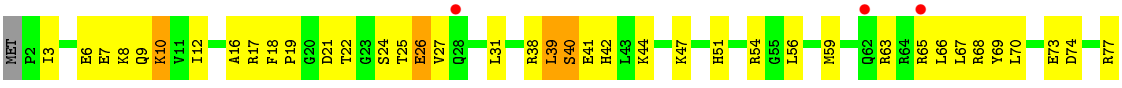
• Molecule 14: 30S ribosomal protein S14

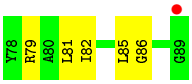
Chain 5A:



• Molecule 15: 30S ribosomal protein S15

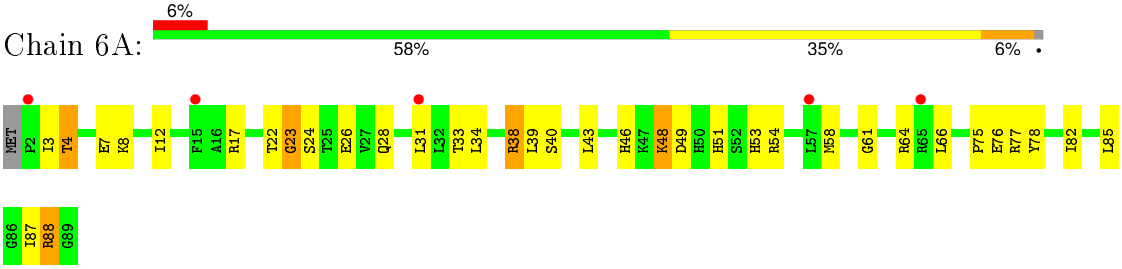
Chain 6I:





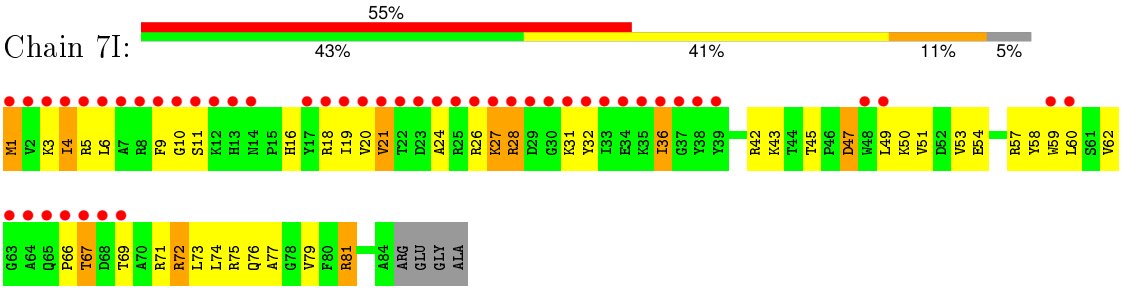
• Molecule 15: 30S ribosomal protein S15

Chain 6A:



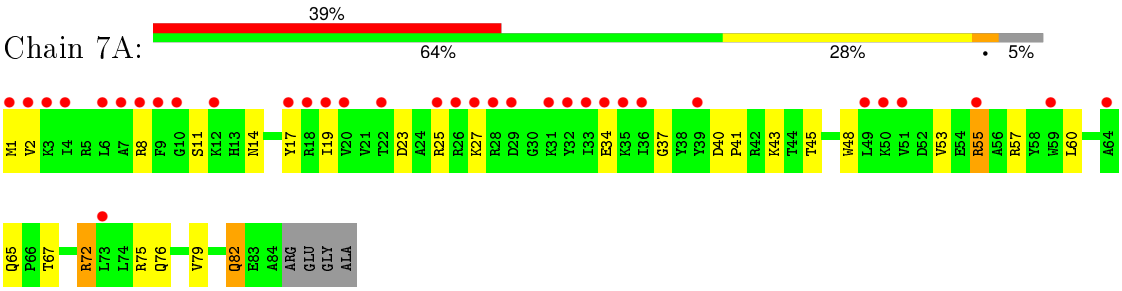
• Molecule 16: 30S ribosomal protein S16

Chain 7I:



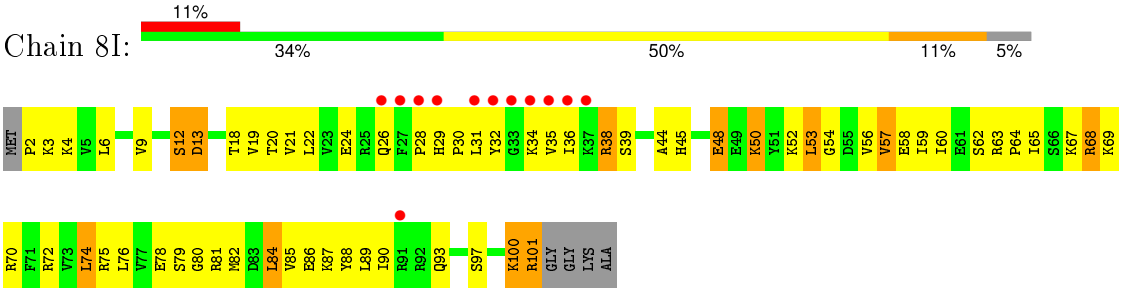
• Molecule 16: 30S ribosomal protein S16

Chain 7A:



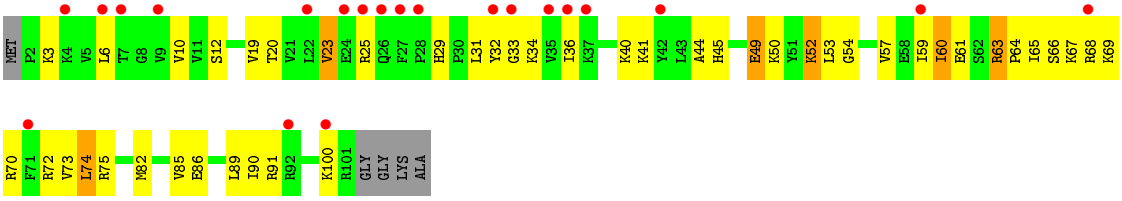
• Molecule 17: 30S ribosomal protein S17

Chain 8I:



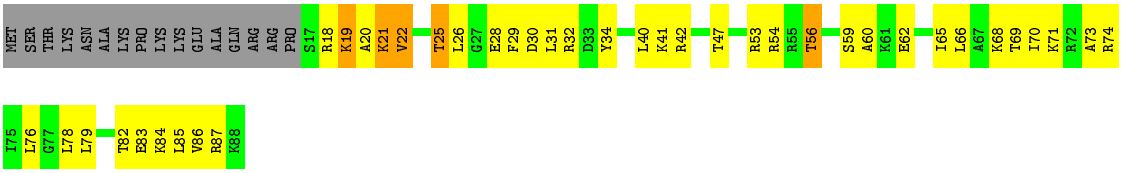
• Molecule 17: 30S ribosomal protein S17

Chain 8A:



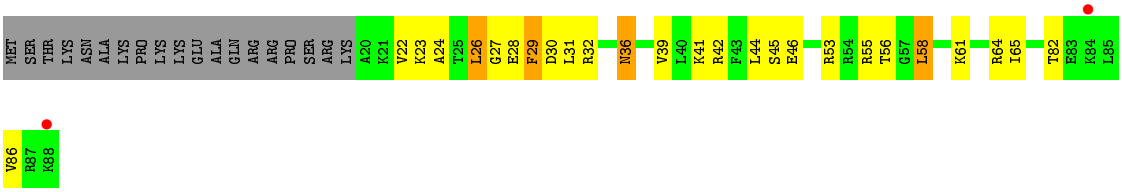
• Molecule 18: 30S ribosomal protein S18

Chain 9I:



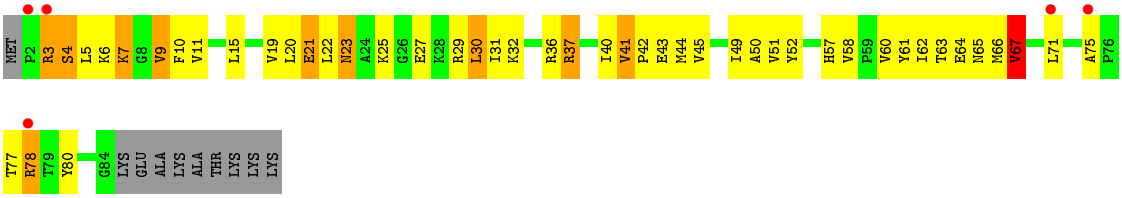
• Molecule 18: 30S ribosomal protein S18

Chain 9A:



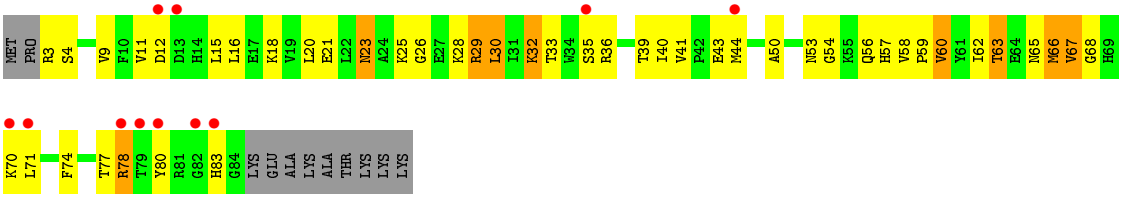
• Molecule 19: 30S ribosomal protein S19

Chain AI:



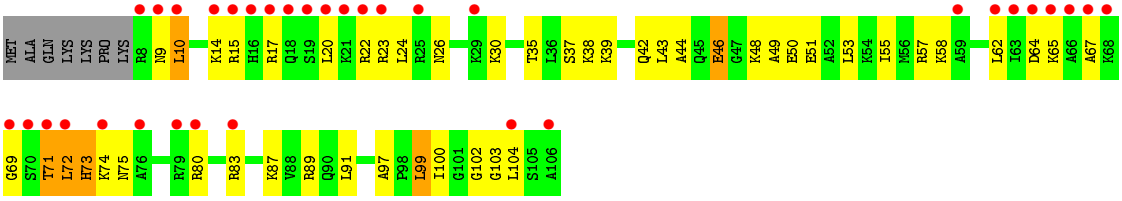
• Molecule 19: 30S ribosomal protein S19

Chain AA:



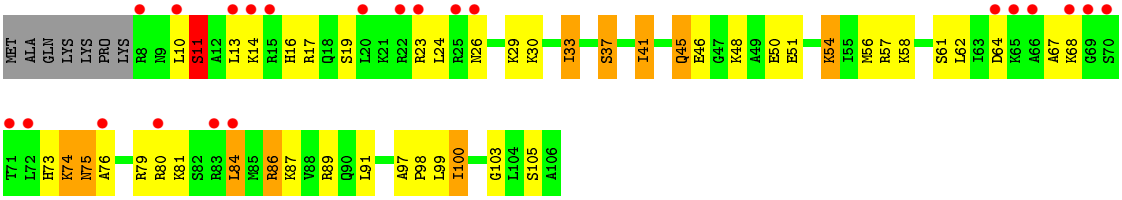
• Molecule 20: 30S ribosomal protein S20

Chain BI:



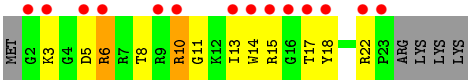
• Molecule 20: 30S ribosomal protein S20

Chain BA:



• Molecule 21: 30S ribosomal protein THX

Chain 1F:

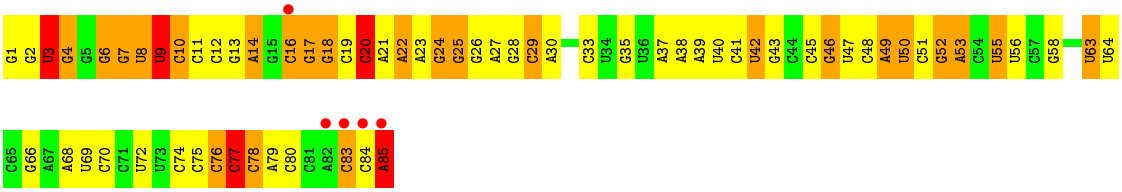


• Molecule 21: 30S ribosomal protein THX

Chain 1B:

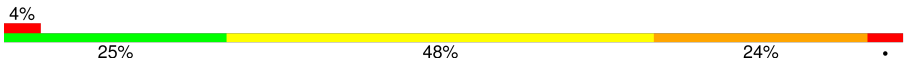
• Molecule 22: tRNA-Tyr

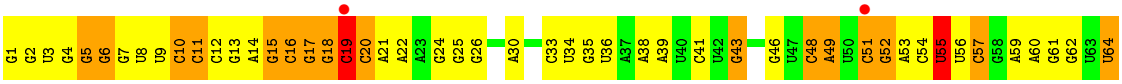
Chain 1K:

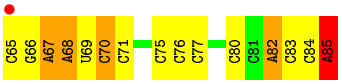


• Molecule 22: tRNA-Tyr

Chain 3K:

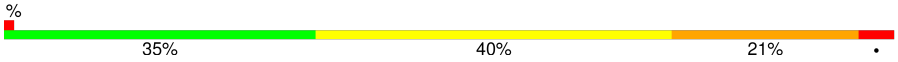


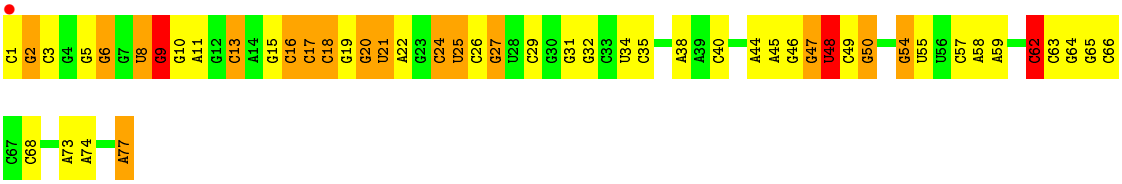




• Molecule 23: tRNA-fMet

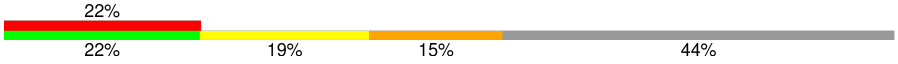
Chain 2K:

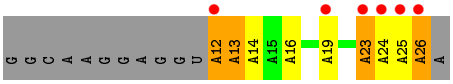




• Molecule 24: mRNA

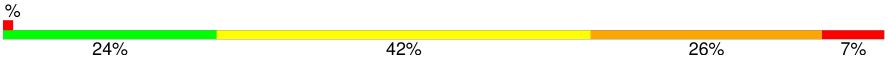
Chain 4K:

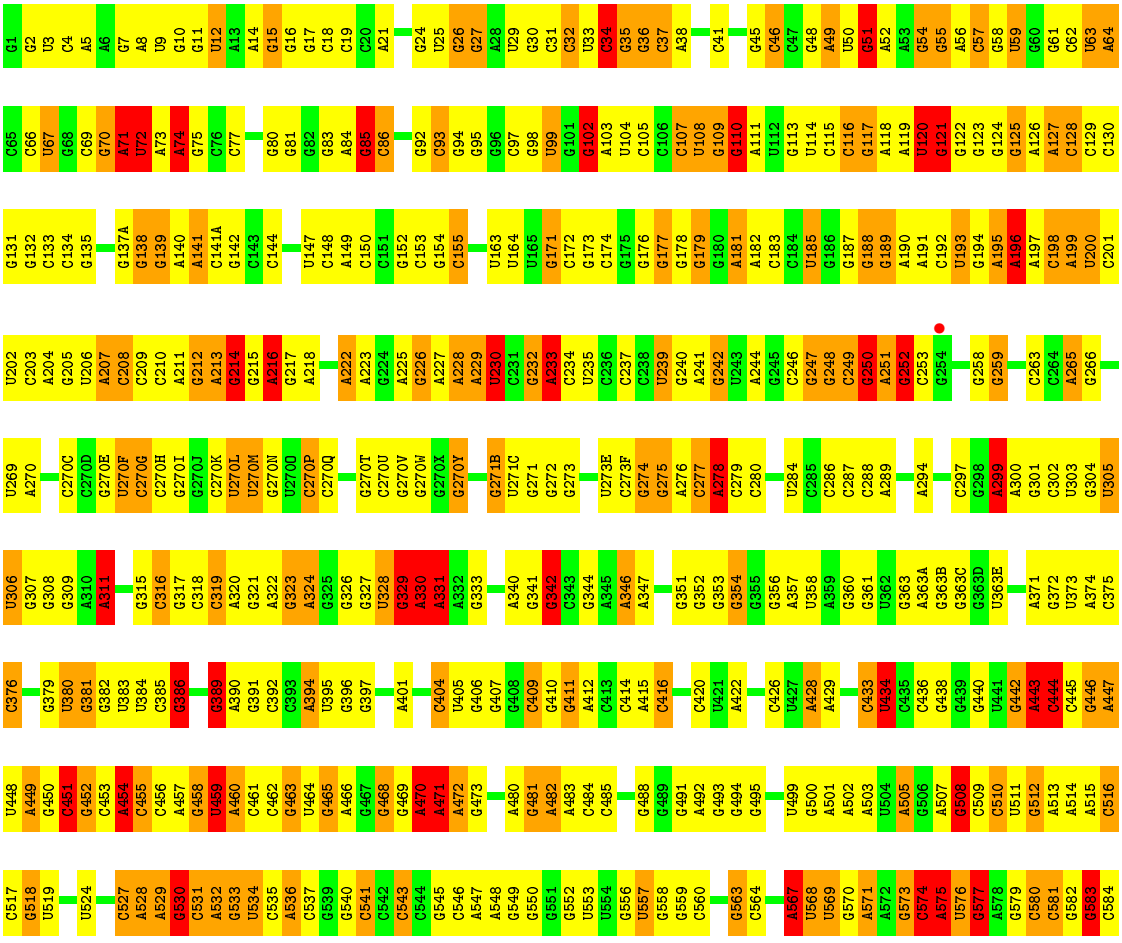


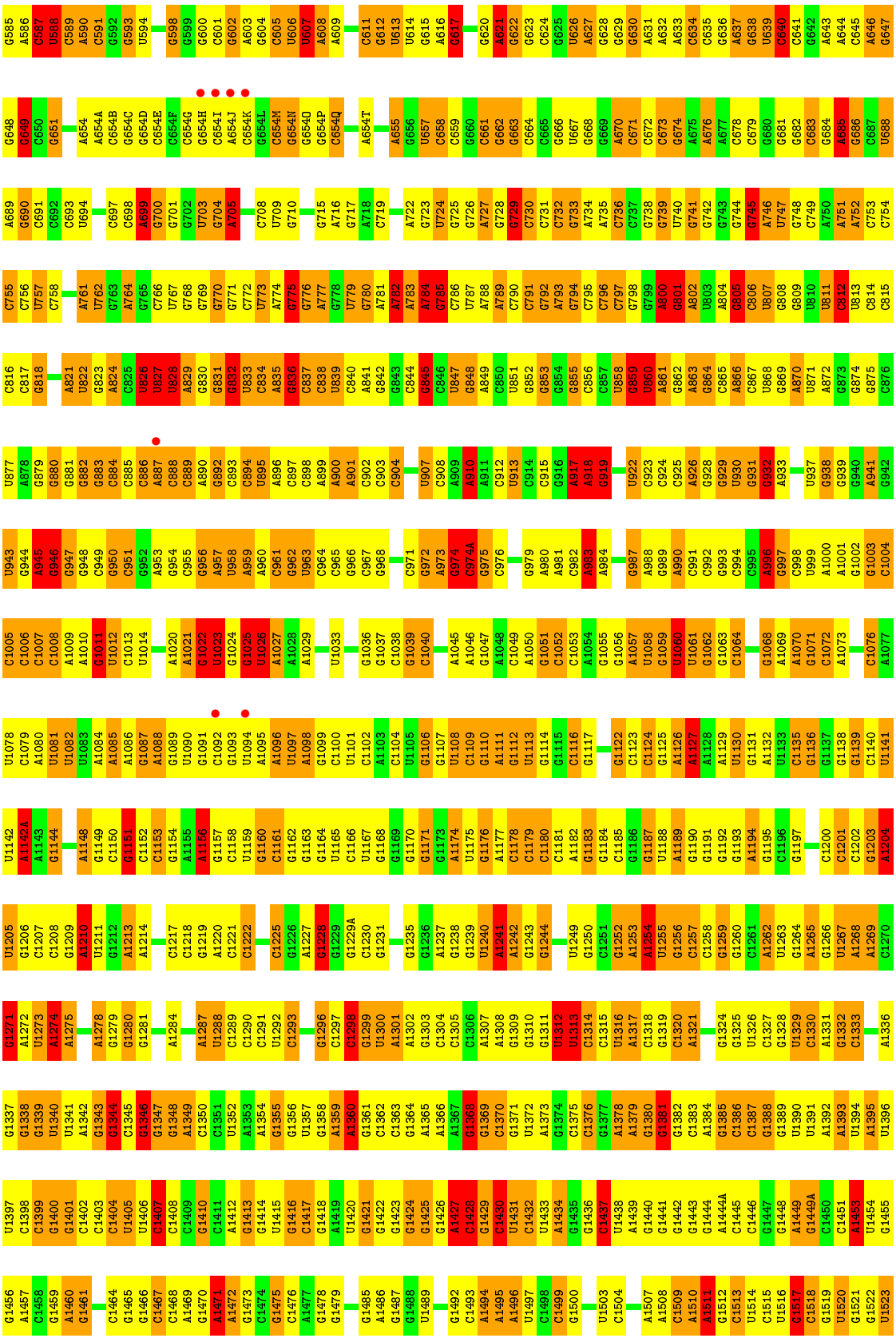


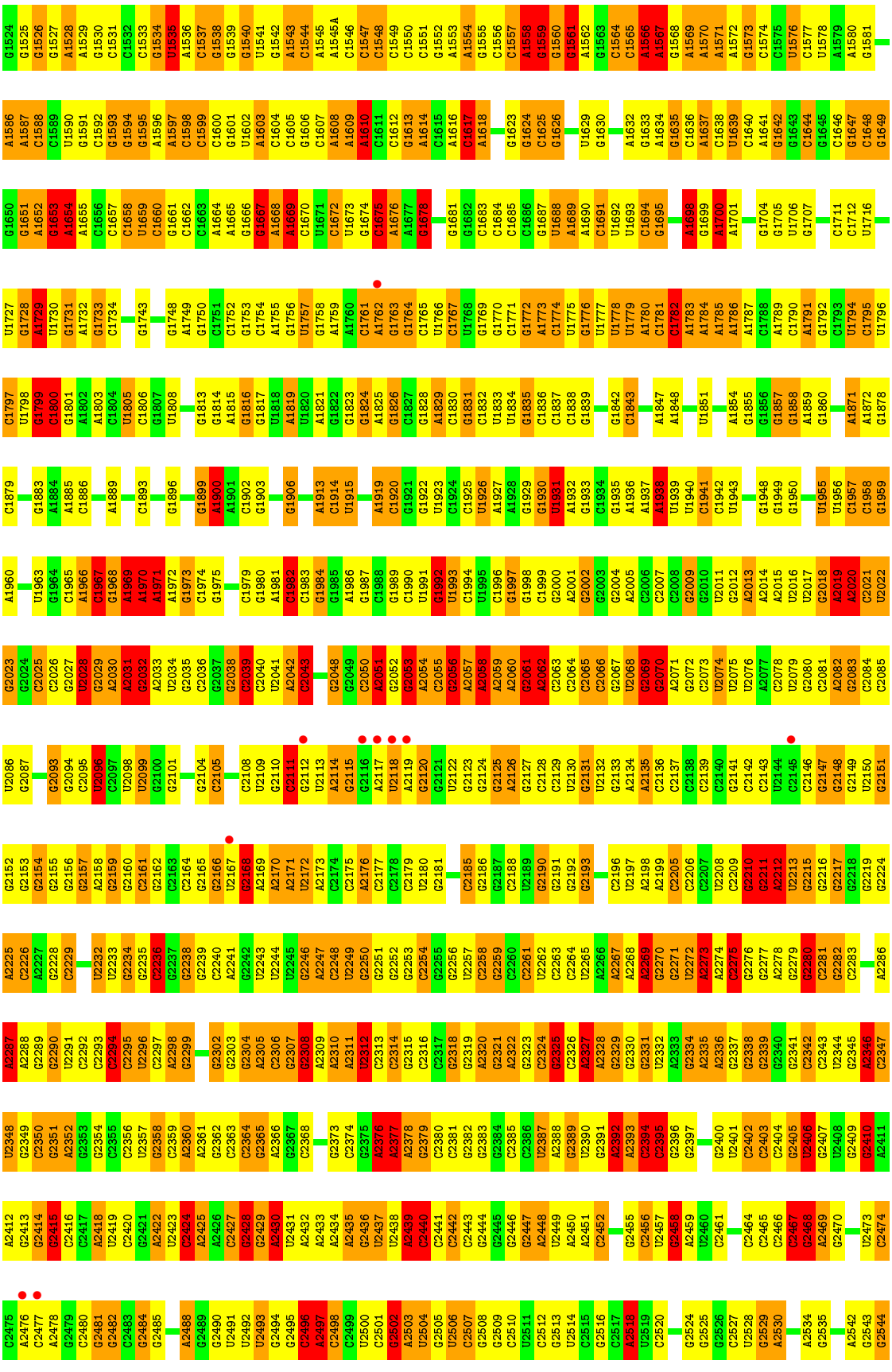
• Molecule 25: 23S ribosomal RNA

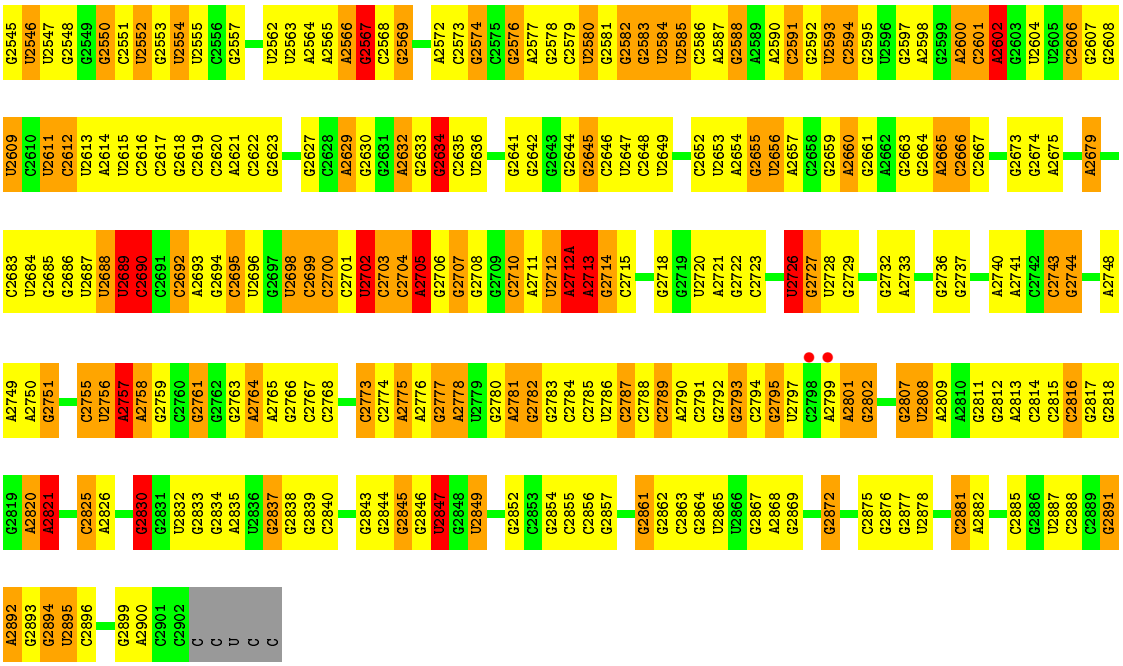
Chain 1H:





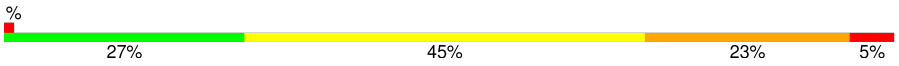


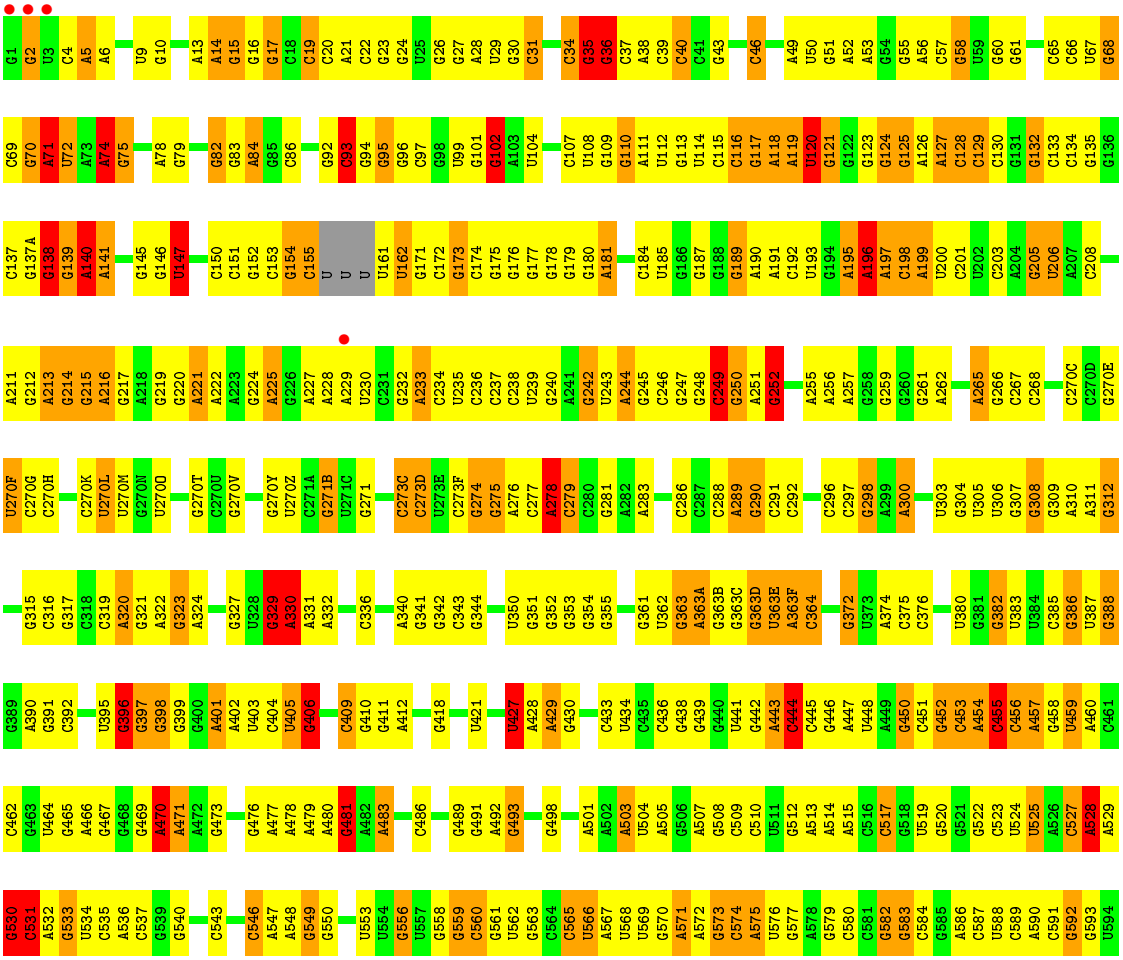


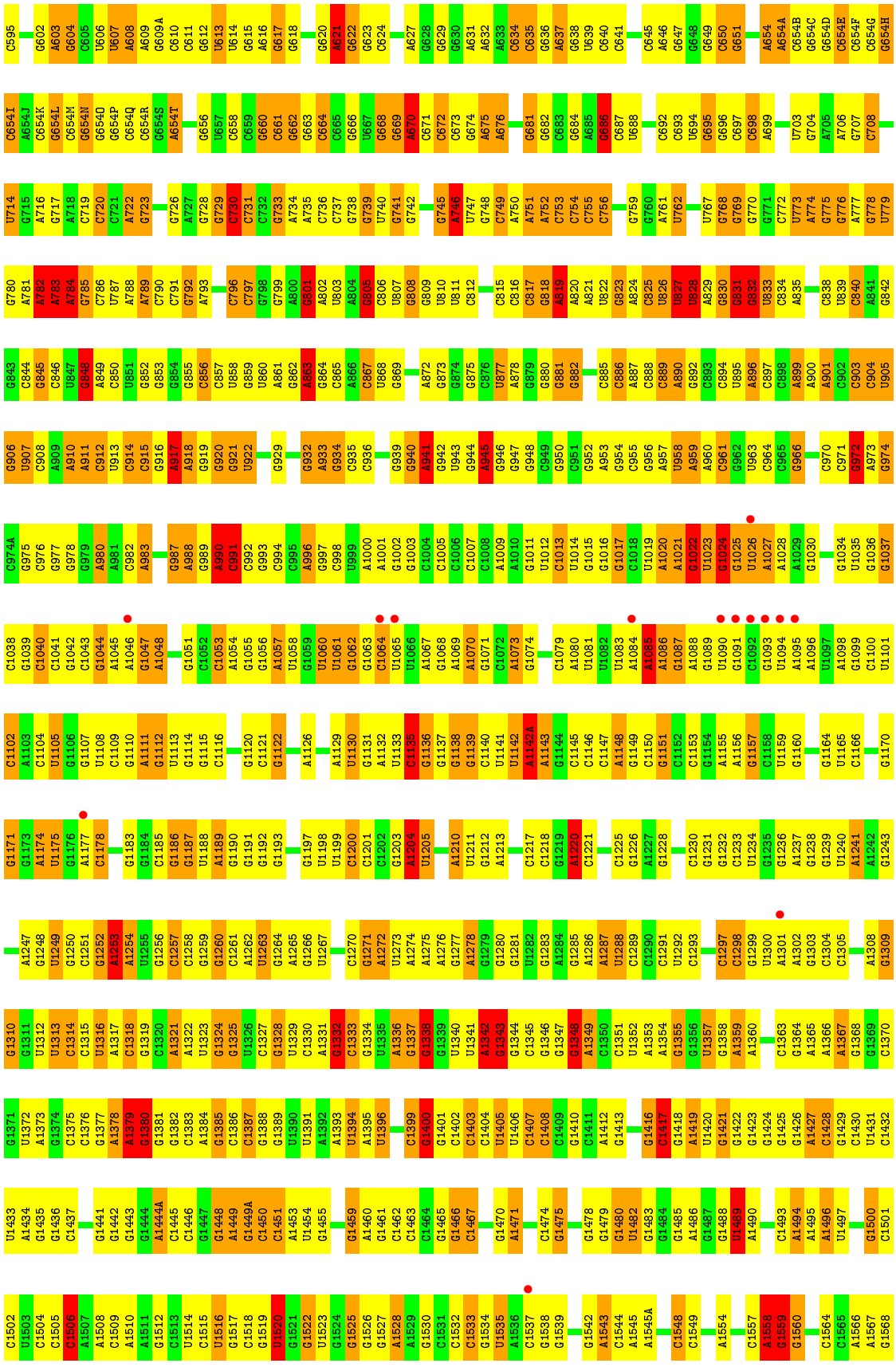


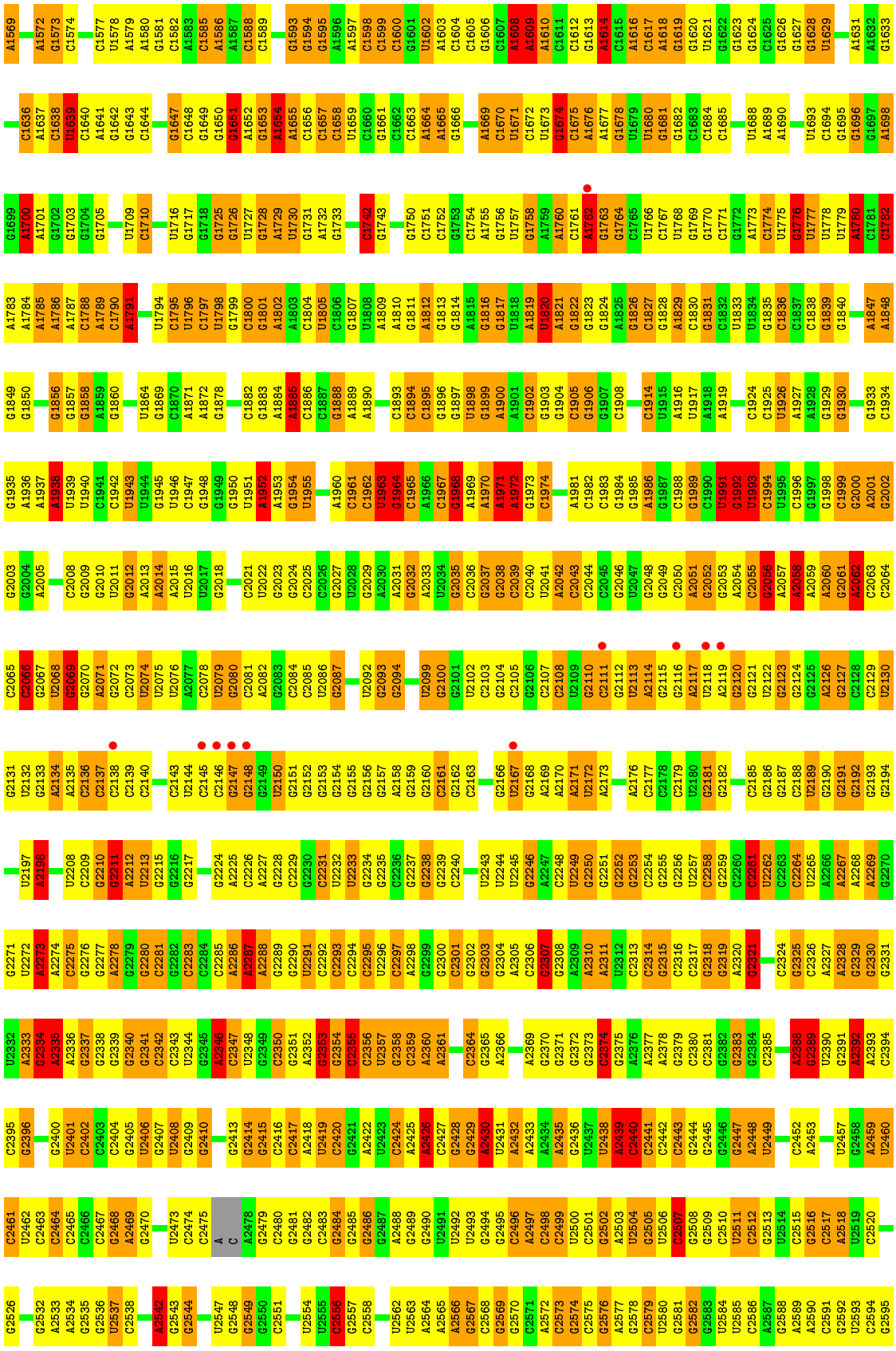
• Molecule 25: 23S ribosomal RNA

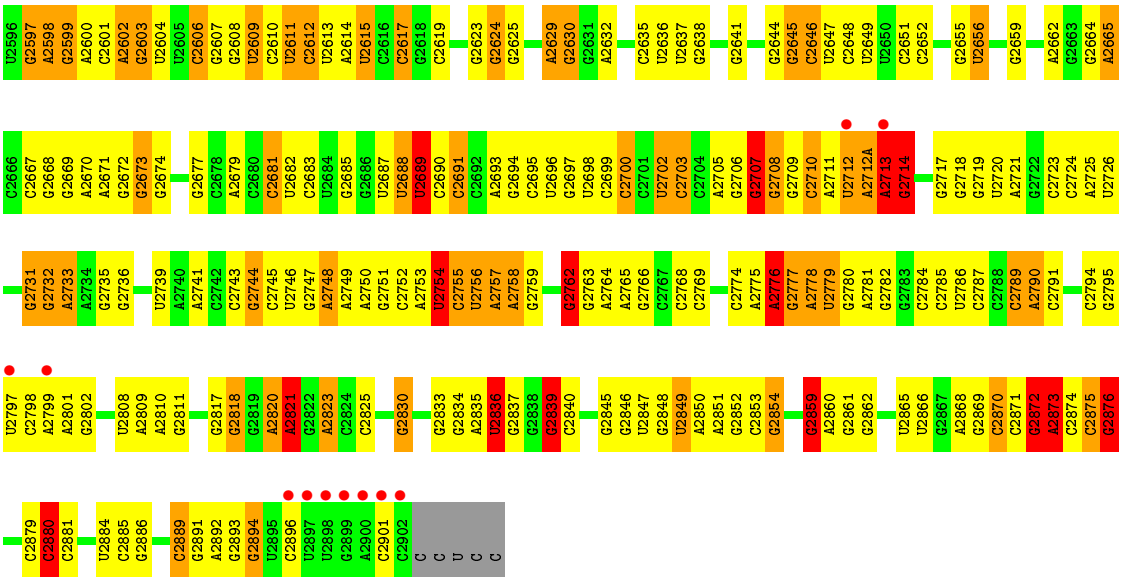
Chain 14:





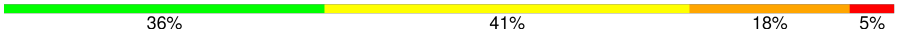


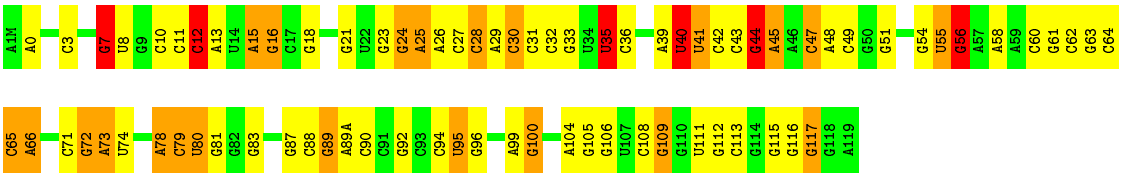




• Molecule 26: 5S ribosomal RNA

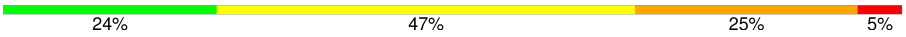
Chain 16:

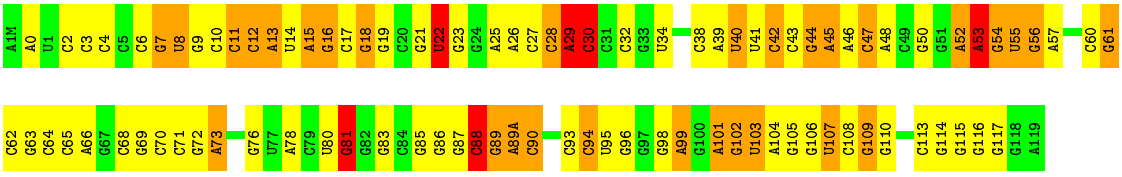




• Molecule 26: 5S ribosomal RNA

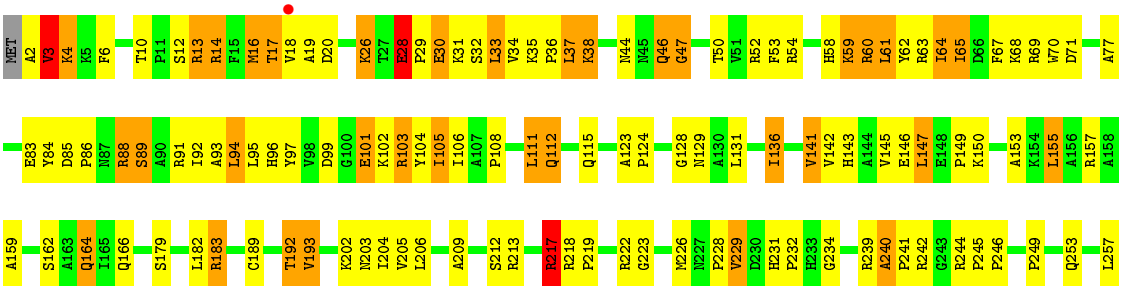
Chain 1J:





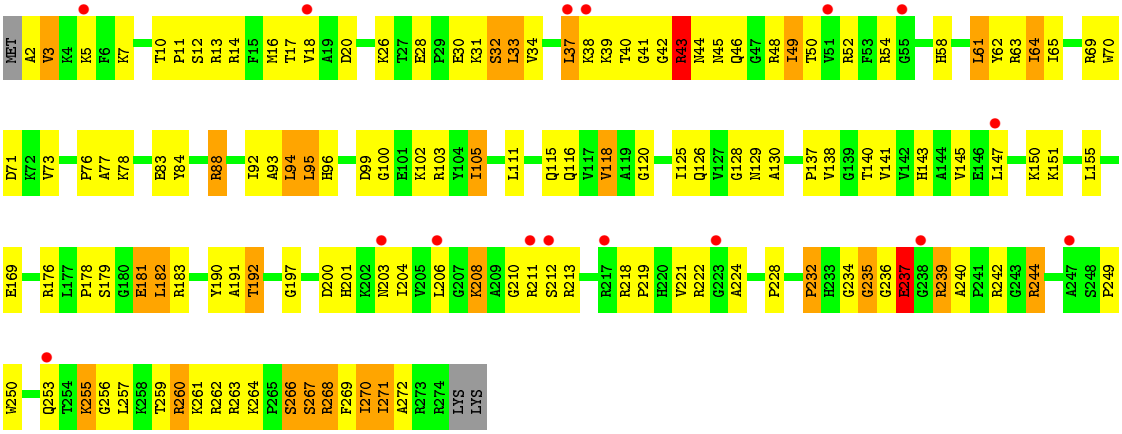
• Molecule 27: 50S ribosomal protein L2

Chain 11:



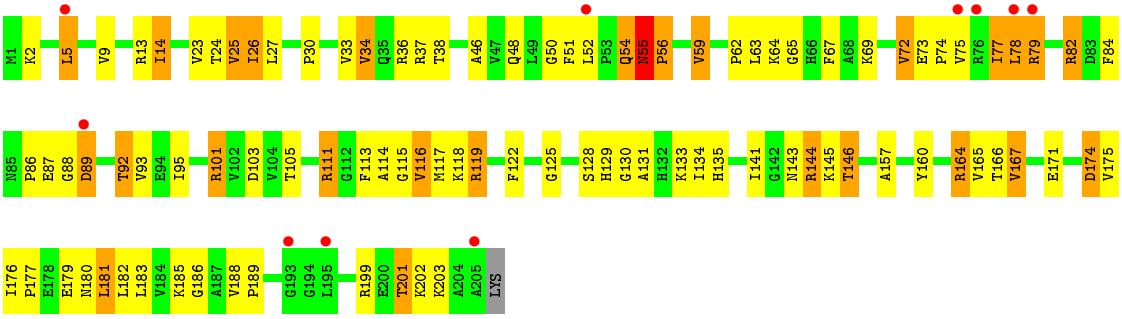
• Molecule 27: 50S ribosomal protein L2

Chain 19:



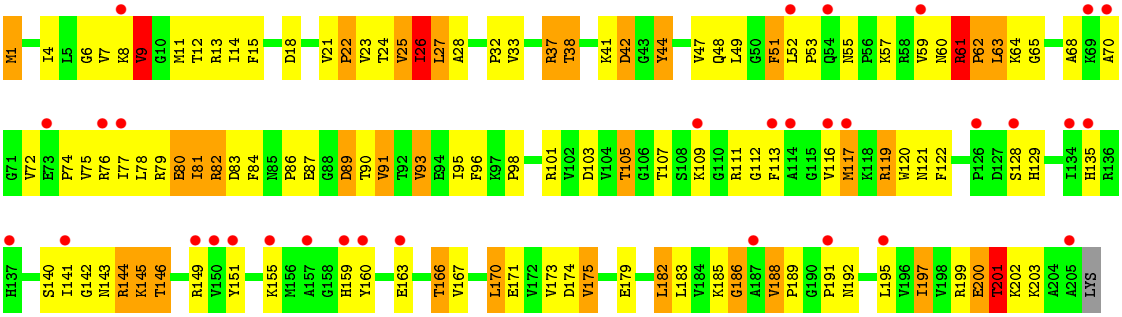
• Molecule 28: 50S ribosomal protein L3

Chain 21:



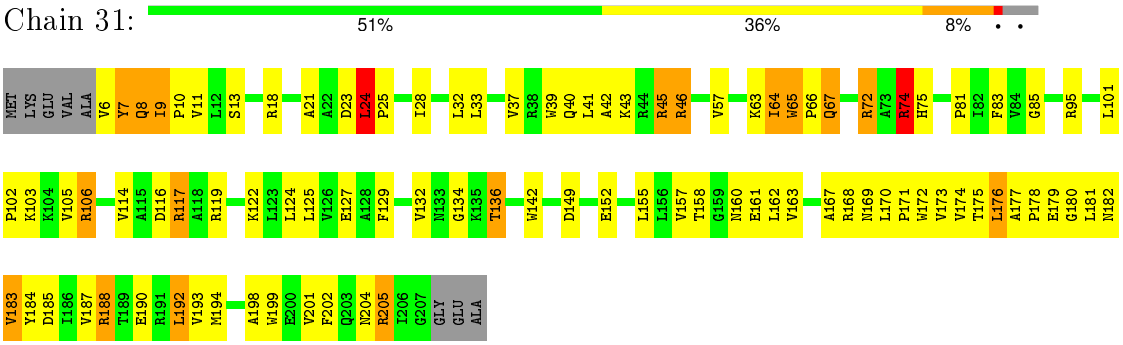
• Molecule 28: 50S ribosomal protein L3

Chain 29:



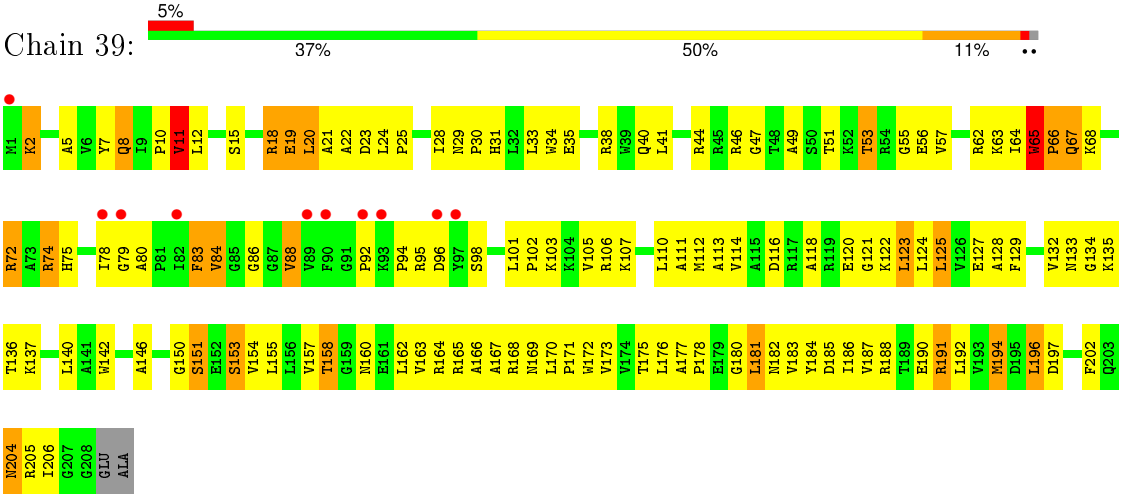
• Molecule 29: 50S ribosomal protein L4

Chain 31:



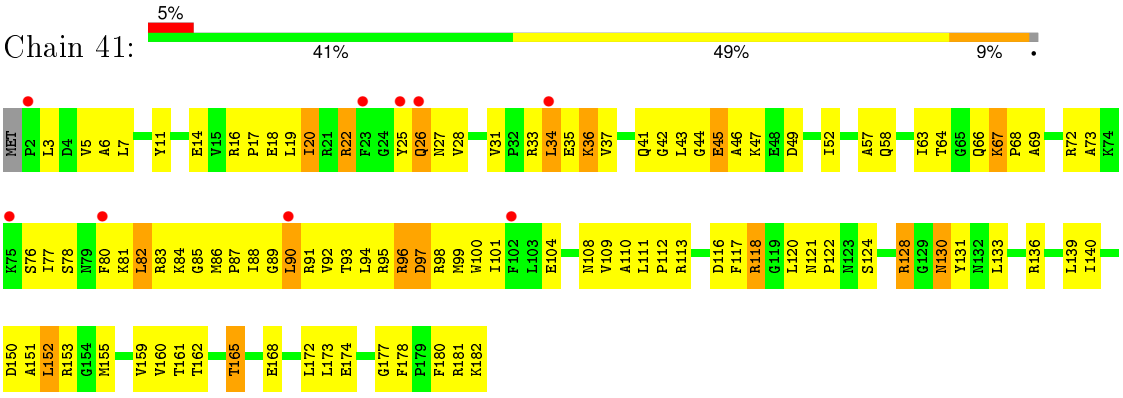
• Molecule 29: 50S ribosomal protein L4

Chain 39:



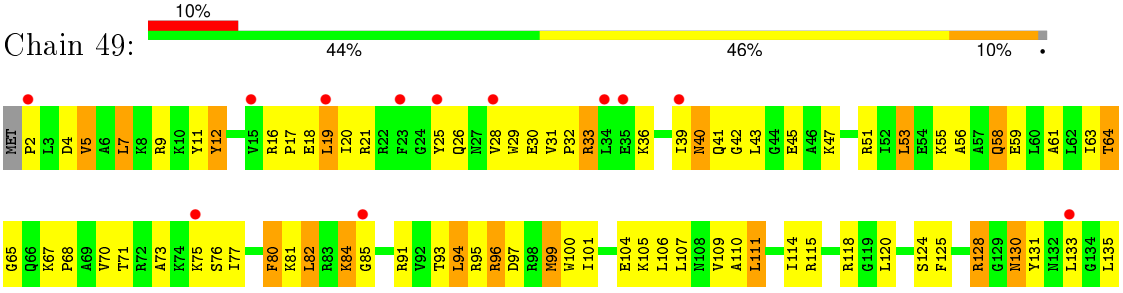
• Molecule 30: 50S ribosomal protein L5

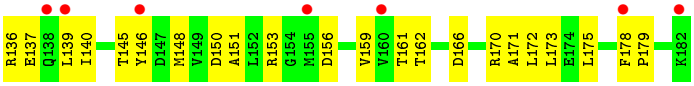
Chain 41:



• Molecule 30: 50S ribosomal protein L5

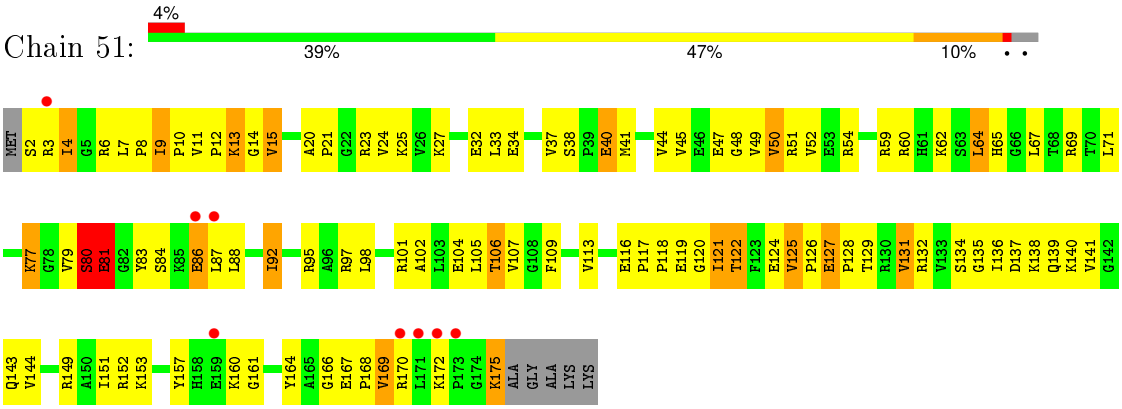
Chain 49:





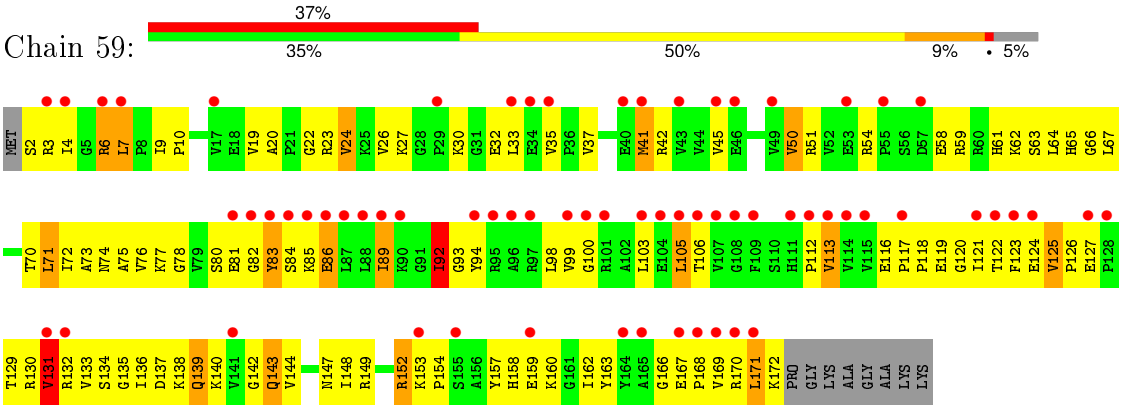
• Molecule 31: 50S ribosomal protein L6

Chain 51:



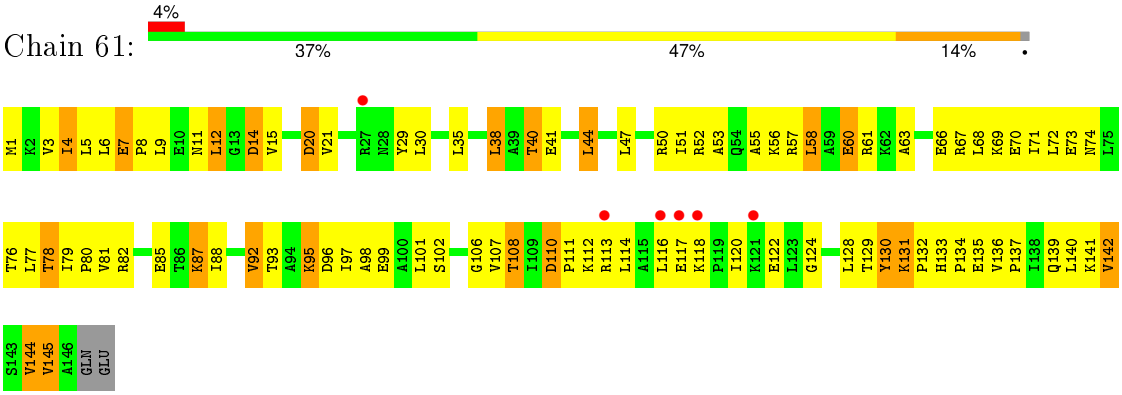
• Molecule 31: 50S ribosomal protein L6

Chain 59:



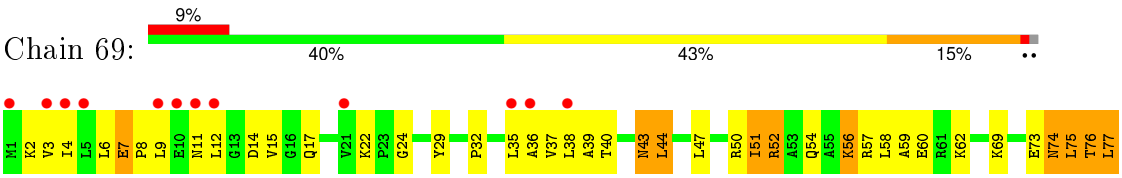
• Molecule 32: 50S ribosomal protein L9

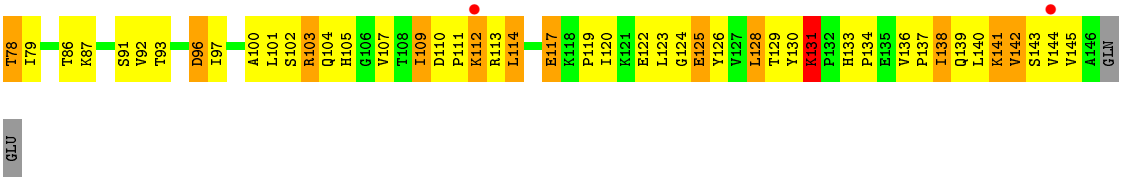
Chain 61:



• Molecule 32: 50S ribosomal protein L9

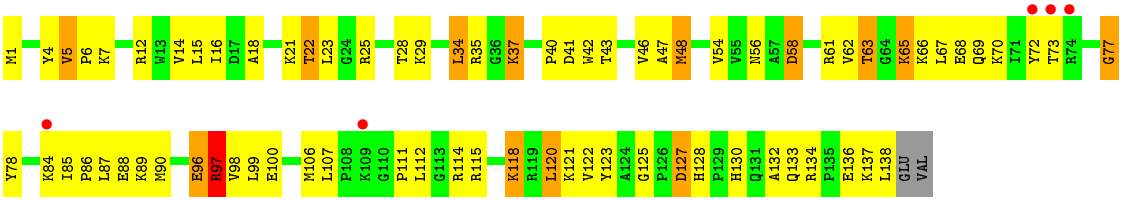
Chain 69:





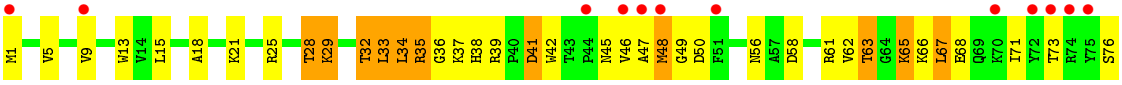
• Molecule 33: 50S ribosomal protein L13

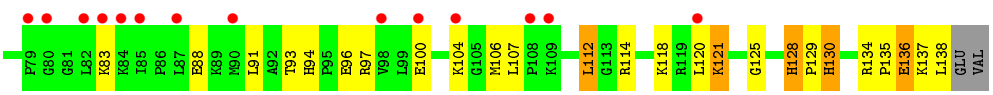
Chain 58:



• Molecule 33: 50S ribosomal protein L13

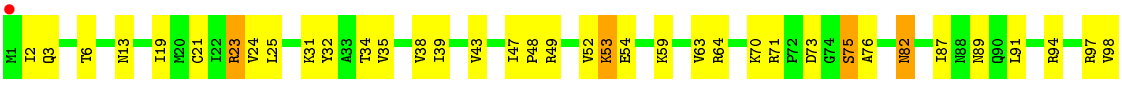
Chain 15:

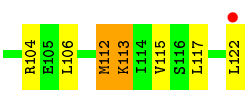




• Molecule 34: 50S ribosomal protein L14

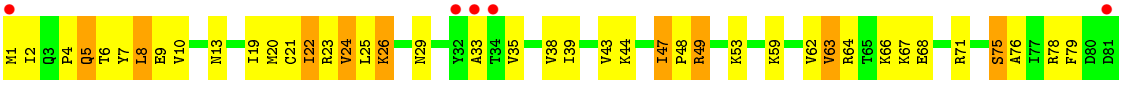
Chain 68:

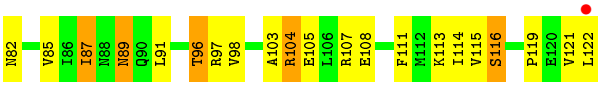




• Molecule 34: 50S ribosomal protein L14

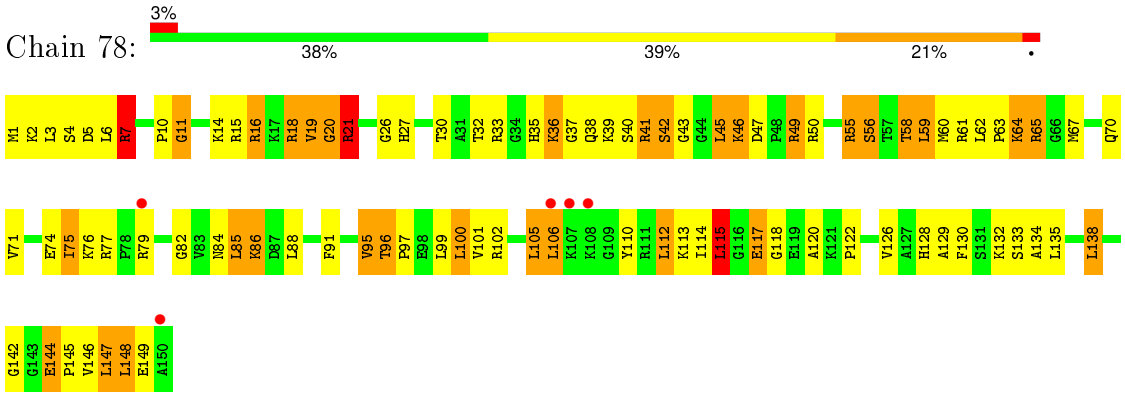
Chain 25:





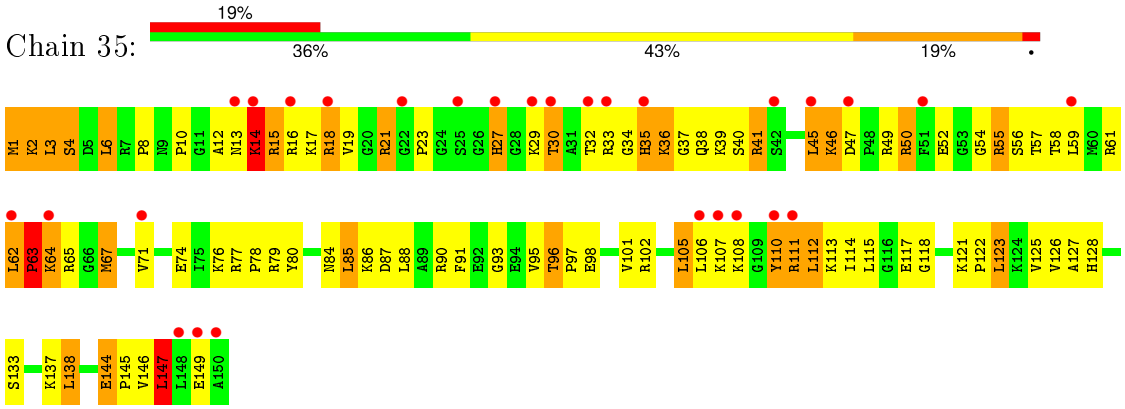
• Molecule 35: 50S ribosomal protein L15

Chain 78:



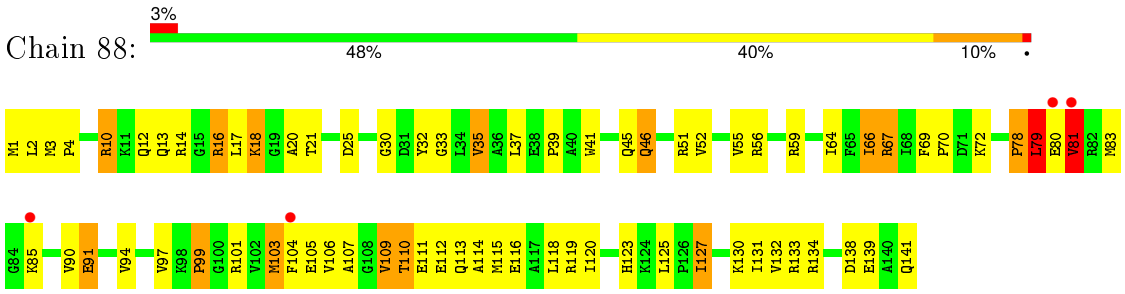
• Molecule 35: 50S ribosomal protein L15

Chain 35:



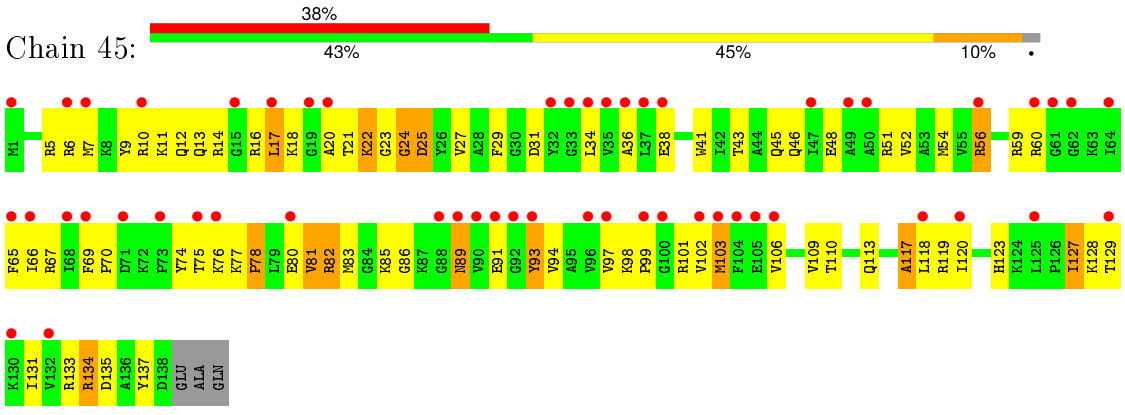
• Molecule 36: 50S ribosomal protein L16

Chain 88:



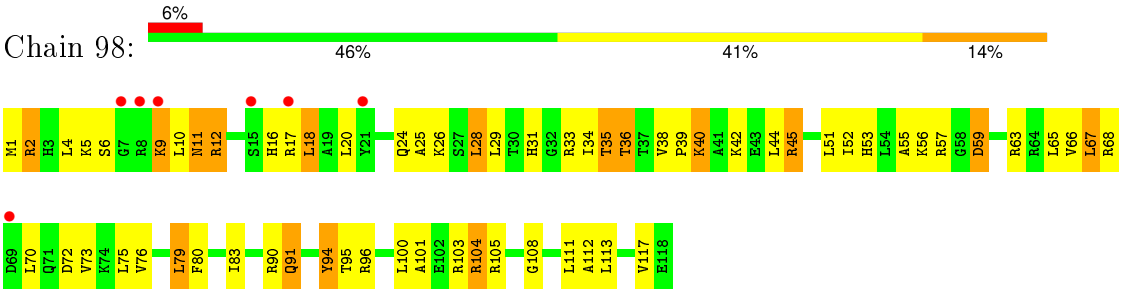
• Molecule 36: 50S ribosomal protein L16

Chain 45:



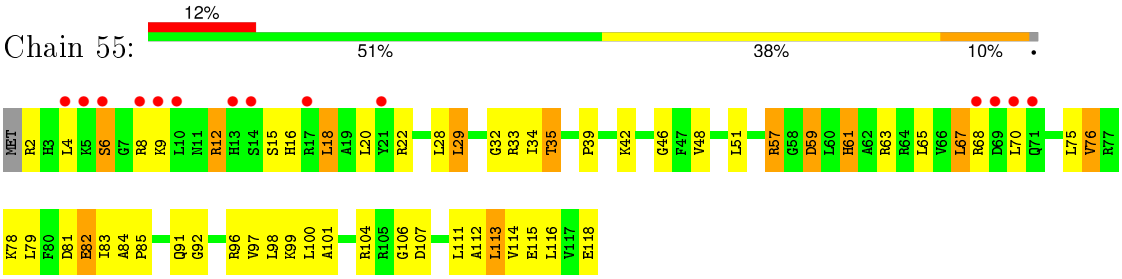
• Molecule 37: 50S ribosomal protein L17

Chain 98:



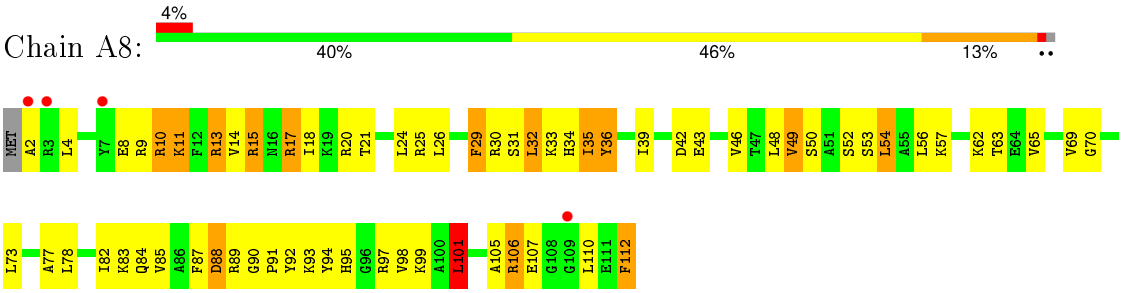
• Molecule 37: 50S ribosomal protein L17

Chain 55:



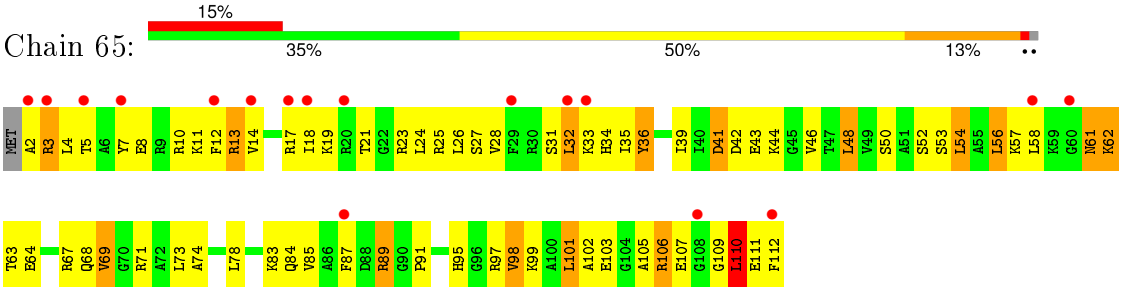
• Molecule 38: 50S ribosomal protein L18

Chain A8:



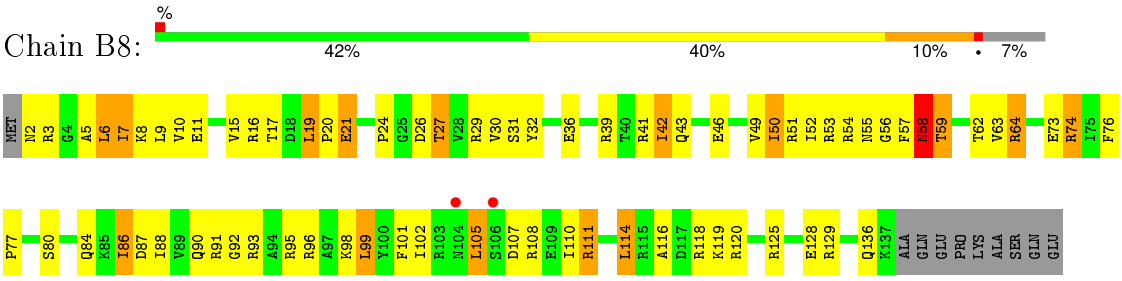
• Molecule 38: 50S ribosomal protein L18

Chain 65:



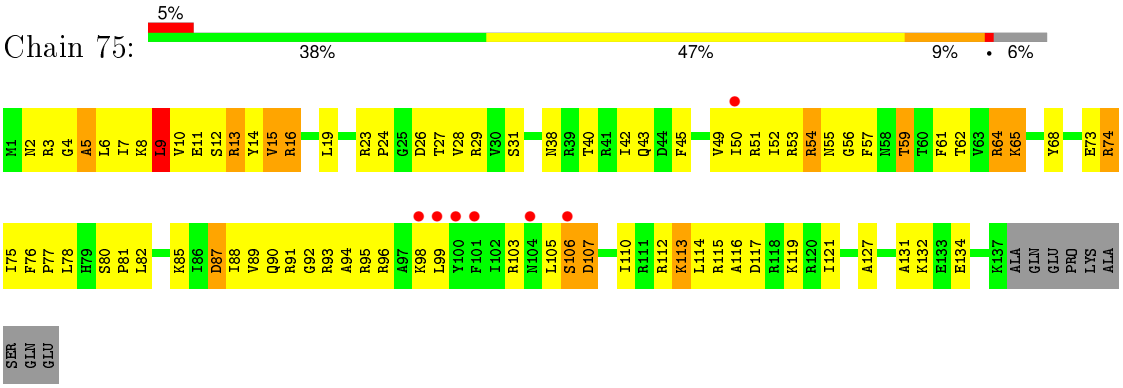
• Molecule 39: 50S ribosomal protein L19

Chain B8:



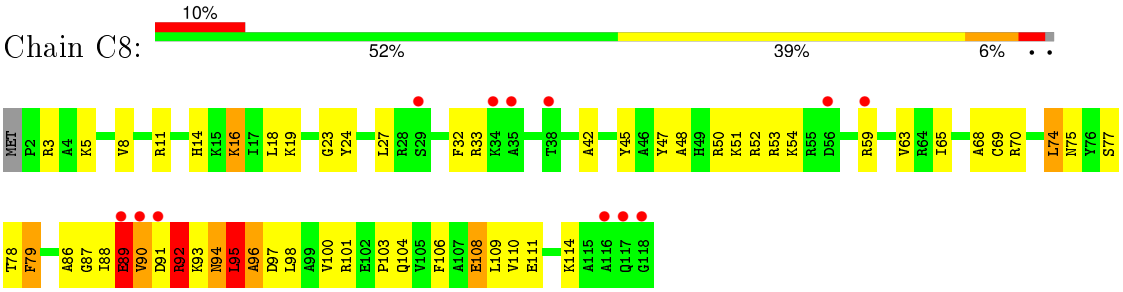
• Molecule 39: 50S ribosomal protein L19

Chain 75:



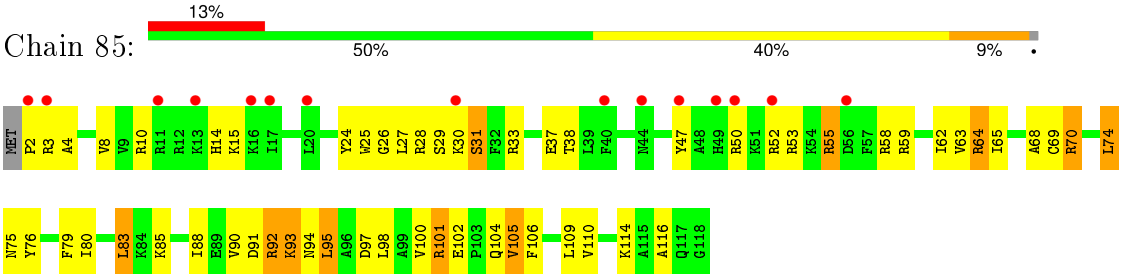
• Molecule 40: 50S ribosomal protein L20

Chain C8:



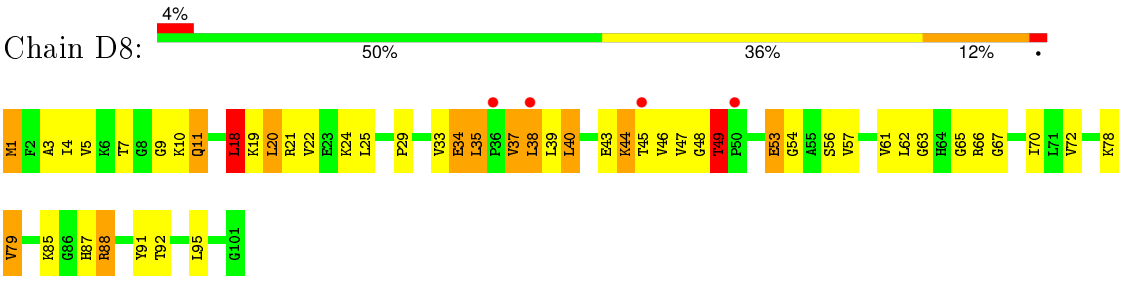
• Molecule 40: 50S ribosomal protein L20

Chain 85:



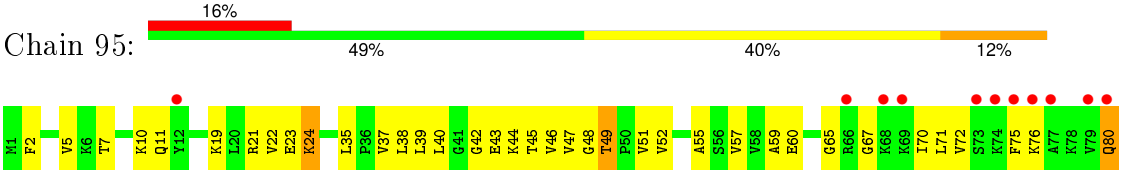
• Molecule 41: 50S ribosomal protein L21

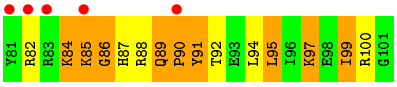
Chain D8:



• Molecule 41: 50S ribosomal protein L21

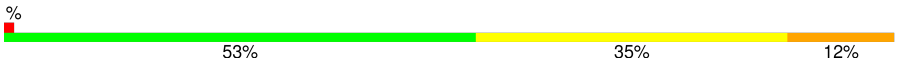
Chain 95:

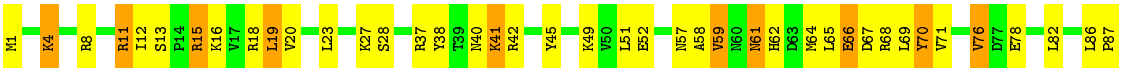


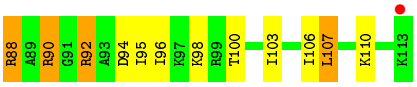


• Molecule 42: 50S ribosomal protein L22

Chain E8:

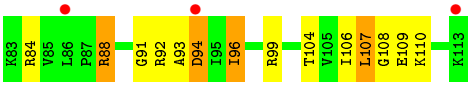






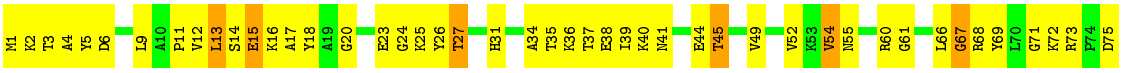
• Molecule 42: 50S ribosomal protein L22

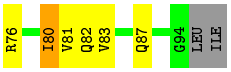
Chain A5:



• Molecule 43: 50S ribosomal protein L23

Chain F8:



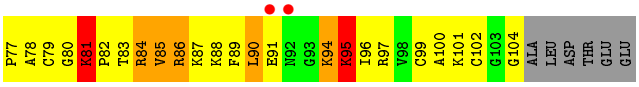


• Molecule 43: 50S ribosomal protein L23

Chain B5:

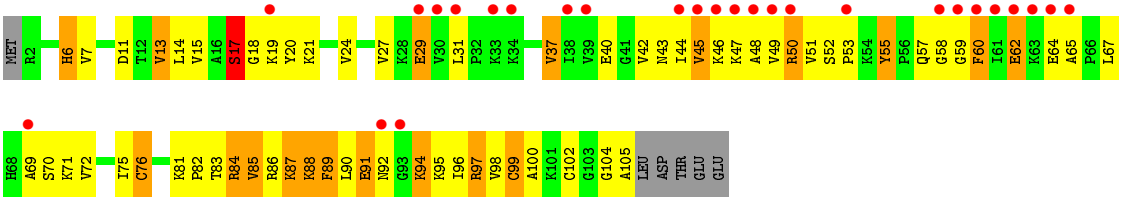
• Molecule 44: 50S ribosomal protein L24

Chain G8:



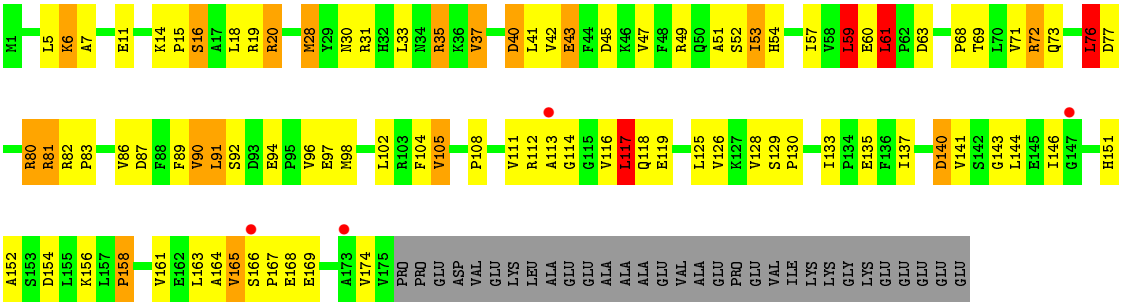
- Molecule 44: 50S ribosomal protein L24

Chain C5:



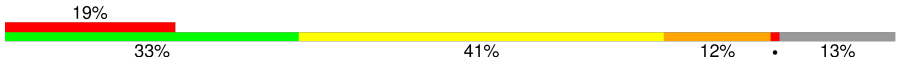
- Molecule 45: 50S ribosomal protein L25

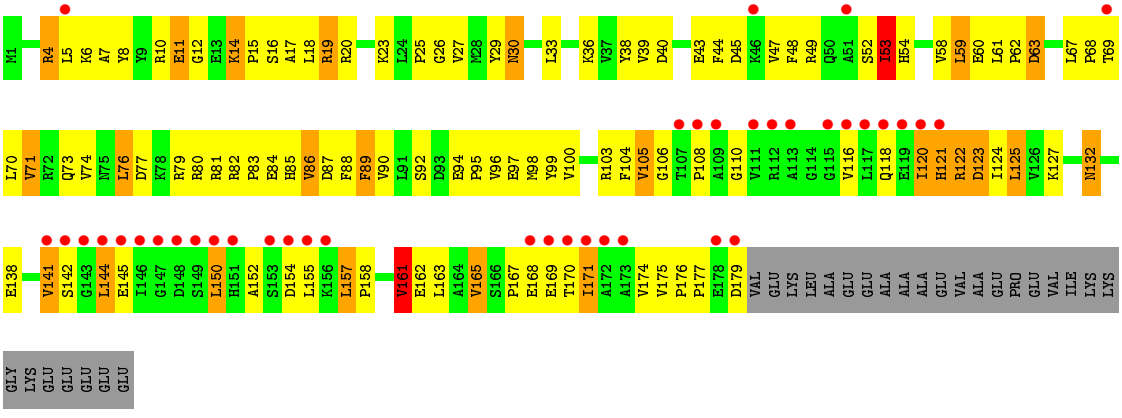
Chain H8:



- Molecule 45: 50S ribosomal protein L25

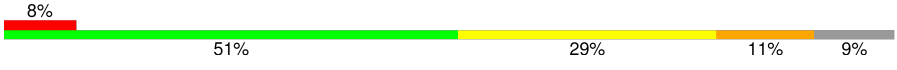
Chain D5:

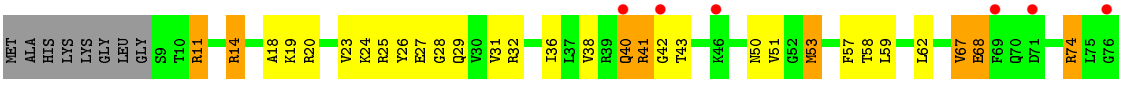


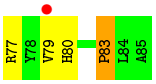


- Molecule 46: 50S ribosomal protein L27

Chain I8:

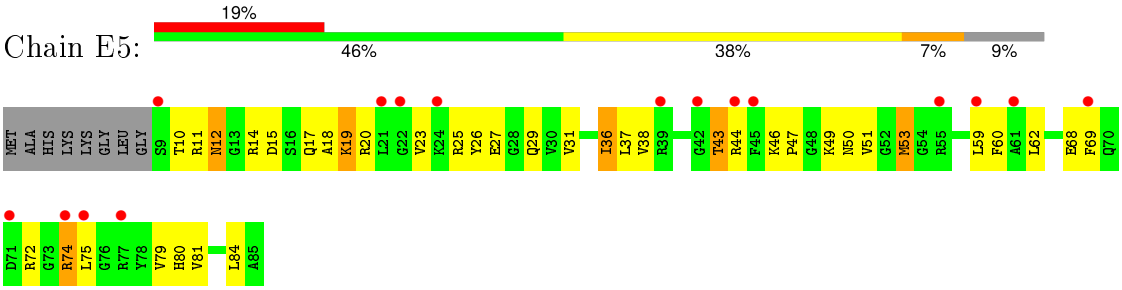






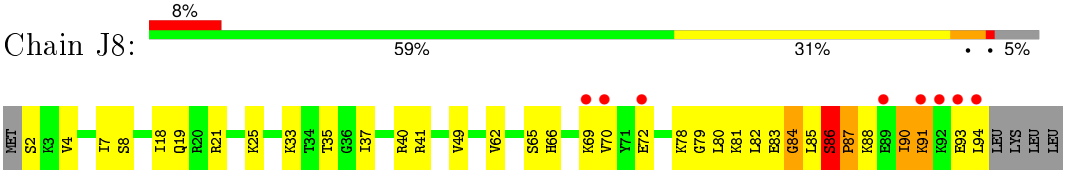
• Molecule 46: 50S ribosomal protein L27

Chain E5:



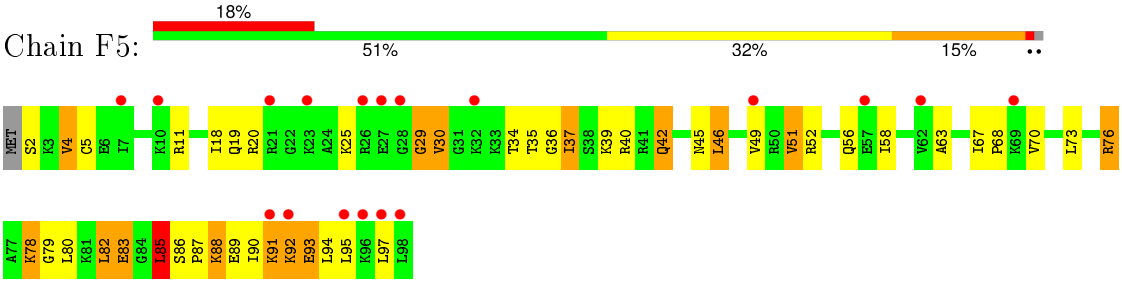
• Molecule 47: 50S ribosomal protein L28

Chain J8:



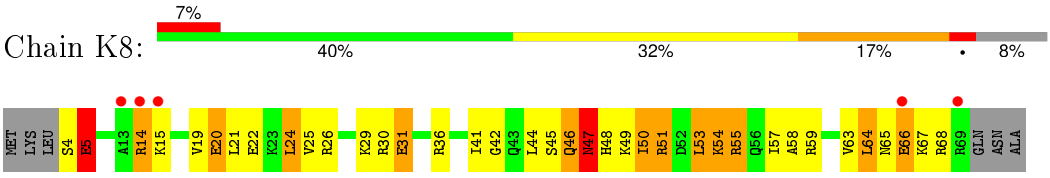
• Molecule 47: 50S ribosomal protein L28

Chain F5:



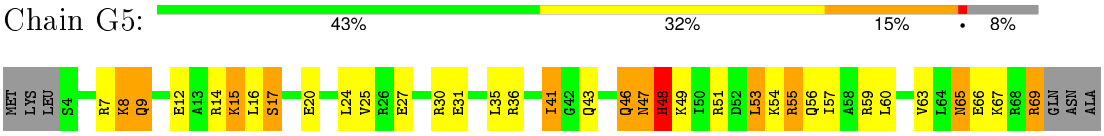
• Molecule 48: 50S ribosomal protein L29

Chain K8:



• Molecule 48: 50S ribosomal protein L29

Chain G5:

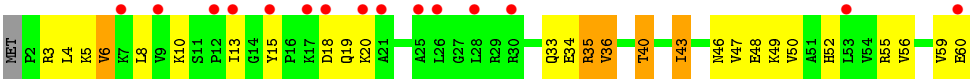


• Molecule 49: 50S ribosomal protein L30

Chain L8:

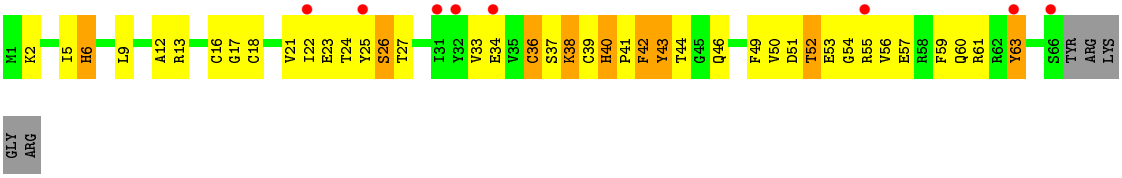
• Molecule 49: 50S ribosomal protein L30

Chain H5:



• Molecule 50: 50S ribosomal protein L31

Chain M8:



• Molecule 50: 50S ribosomal protein L31

Chain I5:

• Molecule 51: 50S ribosomal protein L32

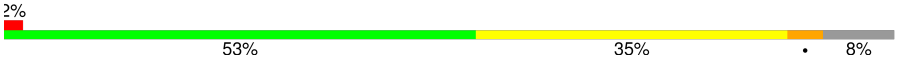
Chain N8:

• Molecule 51: 50S ribosomal protein L32

Chain J5:

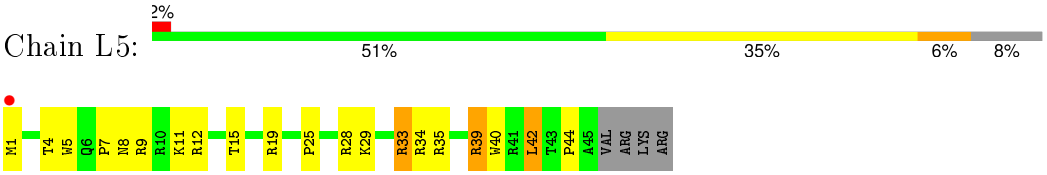
• Molecule 52: 50S ribosomal protein L34

Chain P8:



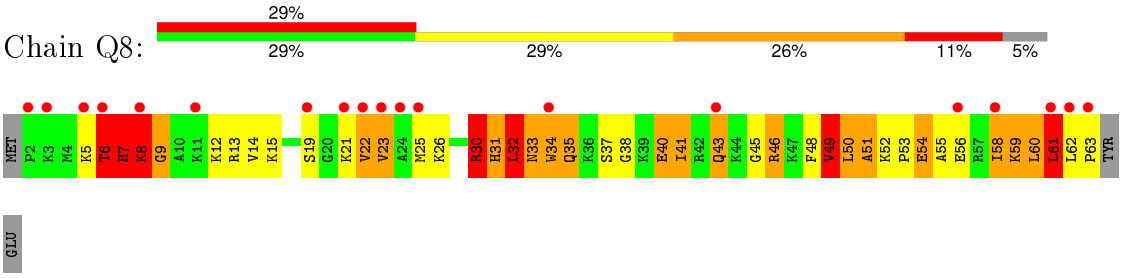
• Molecule 52: 50S ribosomal protein L34

Chain L5:



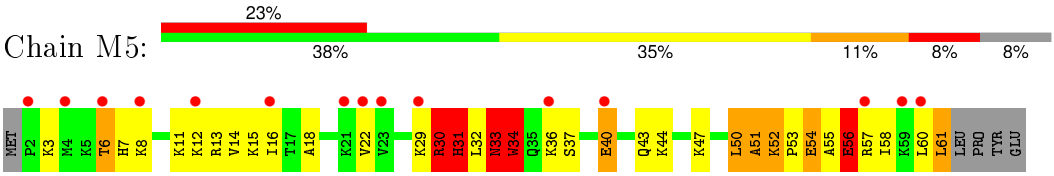
• Molecule 53: 50S ribosomal protein L35

Chain Q8:



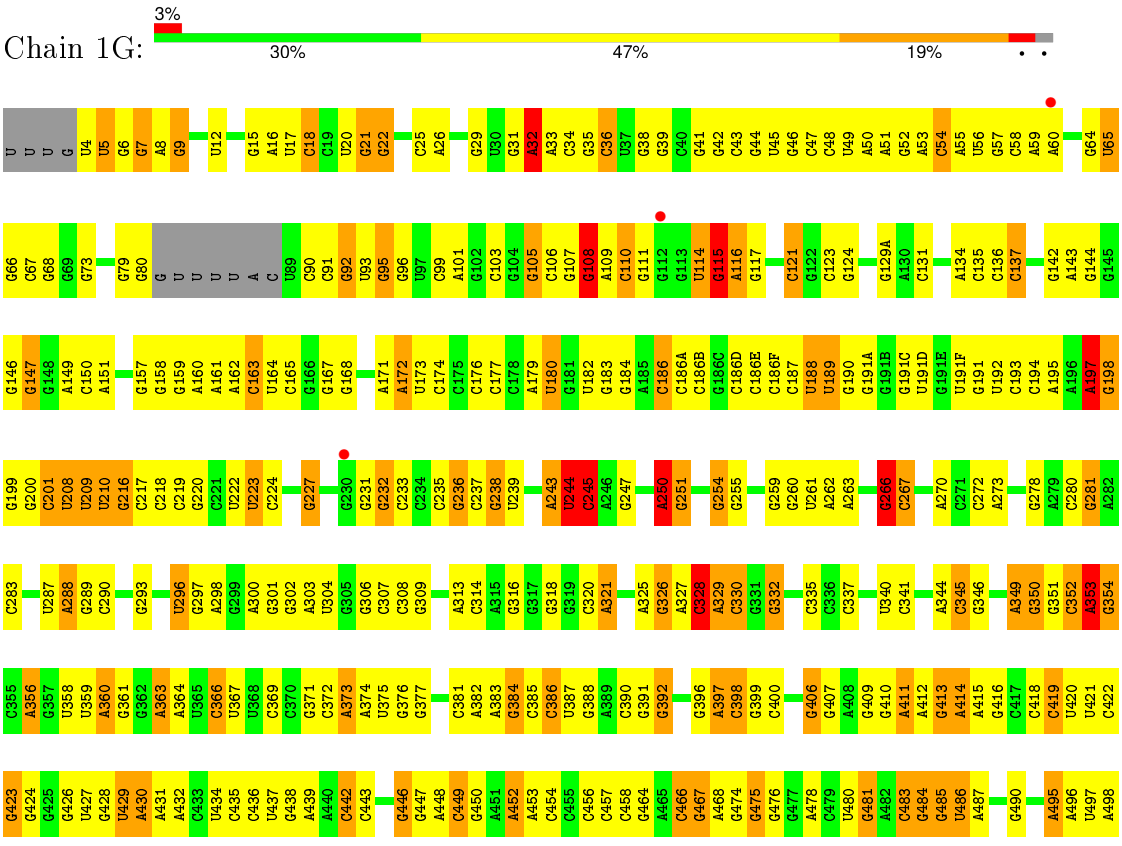
• Molecule 53: 50S ribosomal protein L35

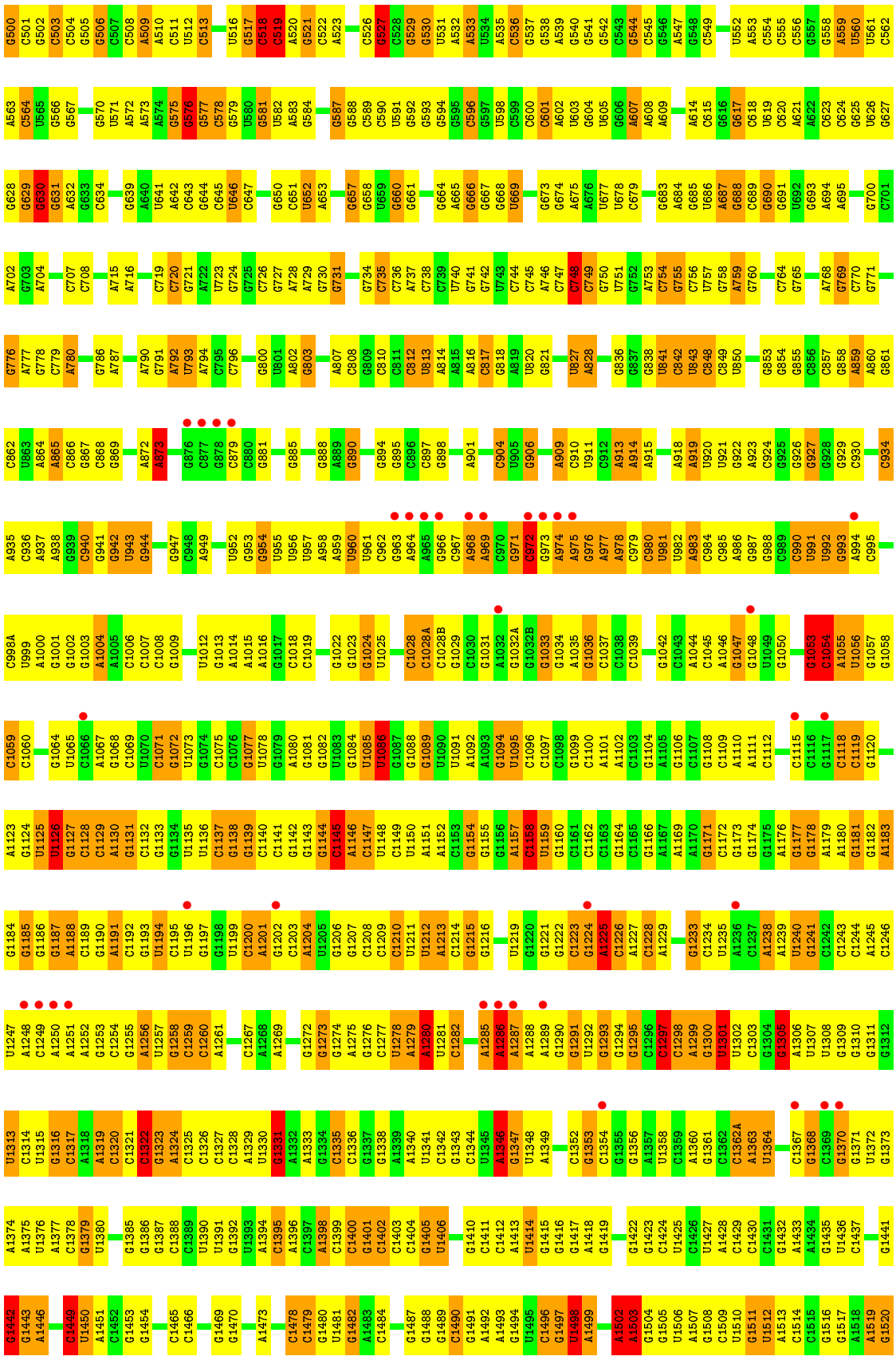
Chain M5:

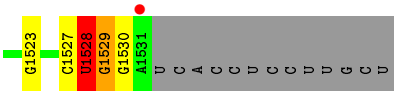


• Molecule 54: 16S ribosomal RNA

Chain 1G:

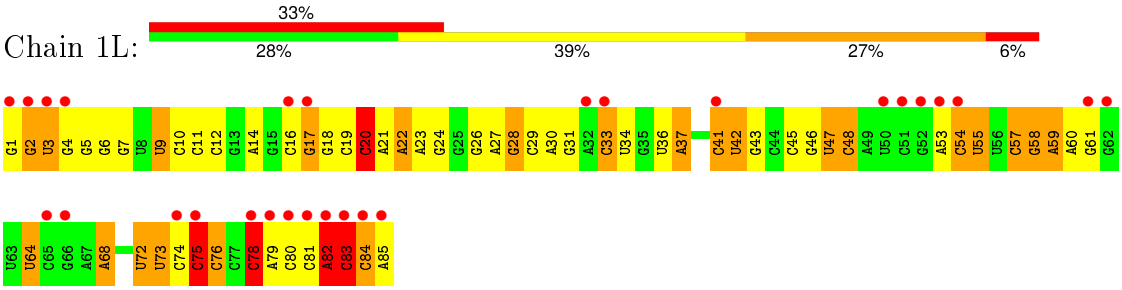






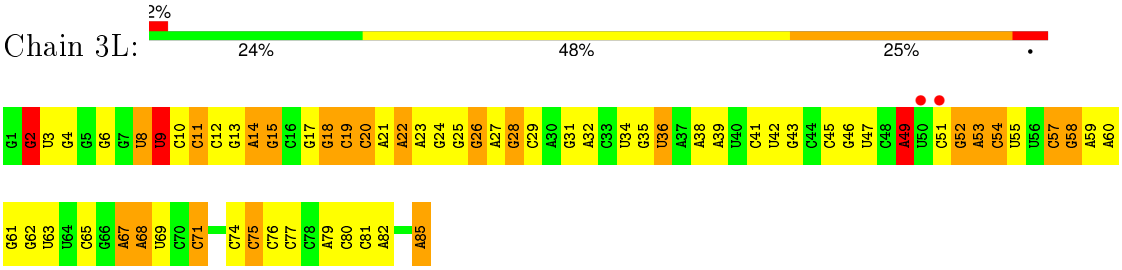
- Molecule 55: tRNA-Tyr

Chain 1L:



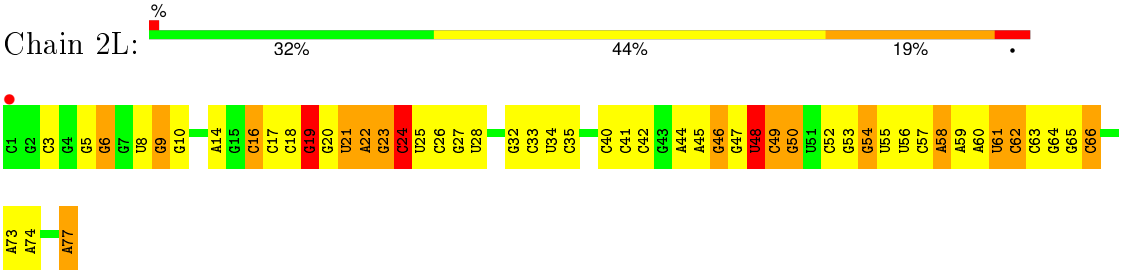
- Molecule 55: tRNA-Tyr

Chain 3L:



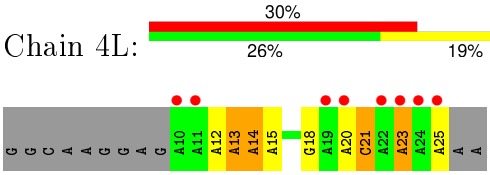
- Molecule 56: tRNA-fMet

Chain 2L:



- Molecule 57: mRNA

Chain 4L:



4 Data and refinement statistics (i)

Property	Value	Source
Space group	P 21 21 21	Depositor
Cell constants a, b, c, α, β, γ	209.90Å 450.30Å 619.50Å 90.00° 90.00° 90.00°	Depositor
Resolution (Å)	225.15 – 3.05 255.20 – 3.05	Depositor EDS
% Data completeness (in resolution range)	99.9 (225.15-3.05) 93.6 (255.20-3.05)	Depositor EDS
R_{merge}	0.42	Depositor
R_{sym}	(Not available)	Depositor
$< I/\sigma(I) >$ [1]	1.64 (at 3.07Å)	Xtriage
Refinement program	PHENIX	Depositor
R, R_{free}	0.205 , 0.249 0.206 , 0.251	Depositor DCC
R_{free} test set	2000 reflections (0.19%)	DCC
Wilson B-factor (Å^2)	74.3	Xtriage
Anisotropy	0.273	Xtriage
Bulk solvent k_{sol}(e/Å^3), B_{sol}(Å^2)	0.26 , 75.5	EDS
Estimated twinning fraction	No twinning to report.	Xtriage
L-test for twinning[2]	$< \|L\| > = 0.41$, $< L^2 > = 0.23$	Xtriage
Outliers	0 of 1100882 reflections	Xtriage
F_o,F_c correlation	0.89	EDS
Total number of atoms	299318	wwPDB-VP
Average B, all atoms (Å^2)	104.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 1.41% 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, 0.375 respectively for untwinned datasets, and 0.333, 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, OMC, ZN, OMG, MIA, MG, H2U, 4SU, 7MG, QUO, PSU

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	0.78	10/36053 (0.0%)	1.46	488/56270 (0.9%)
2	12	0.35	0/1959	0.61	0/2642
2	1E	0.42	0/1959	0.66	1/2642 (0.0%)
3	22	0.40	0/1636	0.60	0/2205
3	2E	0.51	0/1629	0.66	0/2195
4	32	0.48	0/1732	0.71	0/2318
4	3E	0.65	3/1732 (0.2%)	0.80	2/2318 (0.1%)
5	42	0.45	0/1171	0.70	1/1576 (0.1%)
5	4E	0.55	0/1171	0.70	0/1576
6	52	0.50	0/855	0.70	0/1154
6	5E	0.56	0/855	0.74	0/1154
7	62	0.43	0/1275	0.59	0/1709
7	6E	0.46	0/1275	0.61	0/1709
8	72	0.42	0/1135	0.64	0/1527
8	7E	0.53	0/1135	0.71	0/1527
9	82	0.42	0/1028	0.63	0/1379
9	8E	0.45	0/1028	0.66	0/1379
10	1A	0.36	0/814	0.60	0/1095
10	1I	0.46	0/814	0.67	0/1095
11	2A	0.46	0/899	0.69	0/1213
11	2I	0.53	0/879	0.72	1/1187 (0.1%)
12	3A	0.52	0/991	0.81	2/1327 (0.2%)
12	3I	0.71	0/991	0.85	0/1327
13	4A	0.37	0/943	0.60	0/1265
13	4I	0.47	0/938	0.72	1/1258 (0.1%)
14	5A	0.43	0/484	0.72	0/643
14	5I	0.59	0/507	0.92	1/672 (0.1%)
15	6A	0.45	0/744	0.62	1/992 (0.1%)
15	6I	0.57	0/744	0.77	0/992
16	7A	0.51	0/721	0.71	0/970
16	7I	0.47	0/721	0.72	0/970
17	8A	0.52	1/847 (0.1%)	0.64	0/1131

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	#|Z| >5	RMSZ	#|Z| >5
17	8I	0.55	0/847	0.74	0/1131
18	9A	0.50	0/569	0.69	0/757
18	9I	0.50	0/595	0.73	0/790
19	AA	0.41	0/654	0.70	0/884
19	AI	0.51	0/680	0.77	0/915
20	BA	0.48	0/764	0.76	0/1007
20	BI	0.43	0/764	0.68	0/1007
21	1B	0.48	0/221	0.65	0/288
21	1F	0.55	0/192	0.74	0/252
22	1K	0.76	0/1851	1.36	18/2877 (0.6%)
22	3K	0.64	0/1851	1.17	10/2877 (0.3%)
23	2K	0.90	1/1699 (0.1%)	1.64	40/2648 (1.5%)
24	4K	0.93	0/394	1.31	2/612 (0.3%)
25	14	0.95	72/70119 (0.1%)	1.66	1690/109464 (1.5%)
25	1H	1.12	193/70233 (0.3%)	1.89	2816/109643 (2.6%)
26	16	0.86	0/2928	1.60	51/4568 (1.1%)
26	1J	0.76	0/2928	1.48	37/4568 (0.8%)
27	11	0.83	0/2165	1.00	3/2919 (0.1%)
27	19	0.77	0/2170	0.98	6/2926 (0.2%)
28	21	0.66	0/1601	0.93	1/2160 (0.0%)
28	29	0.66	0/1601	0.89	1/2160 (0.0%)
29	31	0.79	1/1620 (0.1%)	0.90	2/2194 (0.1%)
29	39	0.62	1/1662 (0.1%)	0.84	2/2249 (0.1%)
30	41	0.55	0/1498	0.74	0/2016
30	49	0.42	0/1498	0.69	0/2016
31	51	0.60	0/1362	0.88	2/1841 (0.1%)
31	59	0.38	0/1341	0.67	1/1813 (0.1%)
32	61	0.50	0/1151	0.76	0/1558
32	69	0.47	0/1151	0.74	2/1558 (0.1%)
33	15	0.50	0/1131	0.69	0/1525
33	58	0.61	0/1131	0.84	0/1525
34	25	0.65	0/942	0.81	1/1269 (0.1%)
34	68	0.70	0/942	0.81	0/1269
35	35	0.65	0/1161	1.09	3/1544 (0.2%)
35	78	0.75	0/1161	1.06	1/1544 (0.1%)
36	45	0.68	0/1119	0.92	2/1496 (0.1%)
36	88	0.88	2/1142 (0.2%)	1.01	1/1527 (0.1%)
37	55	0.65	0/973	0.83	0/1302
37	98	0.64	0/981	0.85	0/1312
38	65	0.55	0/891	0.92	3/1187 (0.3%)
38	A8	0.65	0/891	0.89	2/1187 (0.2%)
39	75	0.60	0/1155	0.81	1/1542 (0.1%)
39	B8	0.66	0/1147	0.80	0/1532

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	#|Z| >5	RMSZ	#|Z| >5
40	85	0.61	0/981	0.76	0/1306
40	C8	0.72	0/981	0.93	3/1306 (0.2%)
41	95	0.59	0/789	0.81	0/1057
41	D8	0.61	0/789	0.85	2/1057 (0.2%)
42	A5	0.74	0/910	0.82	0/1220
42	E8	0.70	0/910	0.93	3/1220 (0.2%)
43	B5	0.78	0/739	0.86	0/993
43	F8	0.82	0/756	0.95	1/1014 (0.1%)
44	C5	0.60	0/807	0.82	0/1076
44	G8	0.76	1/791 (0.1%)	0.98	3/1055 (0.3%)
45	D5	0.41	0/1460	0.67	0/1982
45	H8	0.50	0/1427	0.82	2/1935 (0.1%)
46	E5	0.64	0/620	0.85	0/827
46	I8	0.85	0/620	0.94	0/827
47	F5	0.63	0/769	0.85	0/1022
47	J8	0.77	0/736	0.93	0/978
48	G5	0.60	0/560	0.79	0/741
48	K8	0.85	1/560 (0.2%)	0.92	0/741
49	H5	0.53	0/473	0.70	0/635
49	L8	0.57	0/473	0.70	0/635
50	I5	0.43	0/527	0.73	0/709
50	M8	0.45	0/545	0.70	0/733
51	J5	0.62	0/467	0.80	0/632
51	N8	0.65	0/386	0.84	0/523
52	L5	0.82	0/399	0.94	0/526
52	P8	0.96	0/399	0.98	0/526
53	M5	0.83	1/486 (0.2%)	1.13	2/638 (0.3%)
53	Q8	1.03	0/454	1.44	4/607 (0.7%)
54	1G	0.68	1/36049 (0.0%)	1.34	271/56262 (0.5%)
55	1L	0.85	1/2018 (0.0%)	1.32	24/3142 (0.8%)
55	3L	0.67	2/2018 (0.1%)	1.25	12/3142 (0.4%)
56	2L	0.73	0/1725	1.37	12/2689 (0.4%)
57	4L	0.81	0/394	1.29	2/612 (0.3%)
All	All	0.85	291/322559 (0.1%)	1.47	5537/483244 (1.1%)

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

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

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Mol	Chain	#Chirality outliers	#Planarity outliers
3	2E	0	1
4	3E	0	2
6	5E	0	1
11	2A	0	1
12	3I	0	1
13	4I	0	1
14	5A	0	1
14	5I	0	1
17	8I	0	1
19	AI	0	1
20	BA	0	1
20	BI	0	1
27	11	0	5
27	19	0	5
28	21	0	3
28	29	0	4
29	39	0	2
30	41	0	1
31	51	0	1
31	59	0	1
32	61	0	4
32	69	0	1
33	58	0	1
35	35	0	2
35	78	0	5
36	45	0	5
36	88	0	4
39	75	0	1
39	B8	0	1
40	85	0	2
40	C8	0	1
41	95	0	2
41	D8	0	1
43	B5	0	2
44	C5	0	2
44	G8	0	5
45	D5	0	1
45	H8	0	3
47	F5	0	2
47	J8	0	2
48	G5	0	3
50	M8	0	1

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Mol	Chain	#Chirality outliers	#Planarity outliers
53	M5	0	3
53	Q8	0	4
All	All	0	95

All (291) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
25	1H	783	A	N3-C4	-12.01	1.27	1.34
25	1H	774	A	N9-C4	-10.83	1.31	1.37
25	1H	2430	A	N9-C4	-10.39	1.31	1.37
25	14	783	A	N9-C4	-9.88	1.31	1.37
25	14	774	A	N9-C4	-9.74	1.32	1.37
25	1H	676	A	N9-C8	9.70	1.45	1.37
25	1H	1786	A	N9-C4	-9.62	1.32	1.37
25	14	1332	G	N9-C4	-9.56	1.30	1.38
25	1H	1614	A	N9-C4	-9.43	1.32	1.37
25	1H	2346	A	N3-C4	-9.31	1.29	1.34
4	3E	12	CYS	CB-SG	9.31	1.98	1.82
25	14	2287	A	N9-C4	-9.25	1.32	1.37
25	1H	2430	A	C5-C6	-9.09	1.32	1.41
25	1H	71	A	N9-C4	-9.03	1.32	1.37
25	14	2518	A	N9-C4	-9.01	1.32	1.37
25	1H	676	A	C5-C4	8.90	1.45	1.38
25	1H	821	A	N7-C5	-8.84	1.33	1.39
25	1H	945	A	N7-C5	-8.67	1.34	1.39
25	14	783	A	N7-C5	-8.65	1.34	1.39
25	1H	1786	A	N7-C5	-8.38	1.34	1.39
25	1H	945	A	N3-C4	-8.37	1.29	1.34
25	1H	2713	A	C5-C4	8.20	1.44	1.38
25	1H	1142(A)	A	N9-C4	-8.17	1.32	1.37
25	14	2346	A	N3-C4	-8.16	1.29	1.34
25	14	1332	G	N3-C4	-8.15	1.29	1.35
25	1H	2287	A	N9-C4	-7.90	1.33	1.37
25	1H	676	A	N9-C4	-7.87	1.33	1.37
25	1H	777	A	N3-C4	-7.85	1.30	1.34
25	1H	1786	A	N3-C4	-7.75	1.30	1.34
25	1H	829	A	N7-C5	-7.68	1.34	1.39
25	1H	2490	G	N9-C8	7.67	1.43	1.37
25	1H	1786	A	C5-C6	-7.62	1.34	1.41
25	14	1786	A	N9-C4	-7.61	1.33	1.37
25	1H	1698	A	N3-C4	-7.56	1.30	1.34
25	14	751	A	N9-C4	-7.50	1.33	1.37

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
25	1H	1678	G	N9-C4	-7.50	1.31	1.38
1	13	810	C	N1-C6	-7.50	1.32	1.37
25	1H	138	G	N9-C8	7.45	1.43	1.37
25	14	1678	G	N9-C4	-7.45	1.31	1.38
25	1H	1899	G	N9-C8	7.44	1.43	1.37
25	1H	945	A	C5-C6	-7.42	1.34	1.41
25	1H	621	A	N9-C4	-7.41	1.33	1.37
25	14	1142(A)	A	N9-C4	-7.41	1.33	1.37
25	14	1983	C	N1-C6	-7.41	1.32	1.37
25	14	777	A	N3-C4	-7.25	1.30	1.34
4	3E	9	CYS	CB-SG	7.24	1.94	1.82
25	1H	783	A	N9-C4	-7.21	1.33	1.37
25	1H	693	C	N3-C4	-7.19	1.28	1.33
25	1H	1332	G	N9-C4	-7.16	1.32	1.38
25	14	676	A	N9-C8	7.10	1.43	1.37
25	14	528	A	N9-C4	-7.08	1.33	1.37
25	1H	783	A	C5-C6	-7.04	1.34	1.41
25	1H	2452	C	N1-C6	-7.04	1.32	1.37
25	1H	689	A	N3-C4	-7.00	1.30	1.34
25	1H	74	A	N9-C4	-7.00	1.33	1.37
25	14	945	A	C5-C6	-6.99	1.34	1.41
25	1H	1814	G	N7-C5	-6.99	1.35	1.39
25	1H	1616	A	C5-C6	-6.99	1.34	1.41
25	1H	1899	G	N9-C4	-6.95	1.32	1.38
25	1H	2248	C	N3-C4	-6.95	1.29	1.33
25	14	2062	A	N3-C4	6.91	1.39	1.34
25	1H	1617	C	N1-C6	-6.84	1.33	1.37
25	1H	766	C	N1-C6	-6.80	1.33	1.37
25	1H	774	A	N9-C8	6.76	1.43	1.37
25	1H	2392	A	N9-C4	-6.71	1.33	1.37
25	14	1698	A	N7-C5	-6.71	1.35	1.39
25	1H	1698	A	N9-C4	-6.69	1.33	1.37
25	1H	330	A	N9-C4	-6.68	1.33	1.37
25	14	783	A	N3-C4	-6.67	1.30	1.34
25	14	2346	A	N9-C4	-6.67	1.33	1.37
25	14	1605	C	N1-C6	-6.66	1.33	1.37
25	14	1142(A)	A	N3-C4	-6.62	1.30	1.34
25	1H	1349	A	N9-C8	6.61	1.43	1.37
25	1H	749	C	N1-C6	-6.60	1.33	1.37
25	1H	805	G	N9-C8	-6.55	1.33	1.37
25	1H	783	A	N7-C5	-6.54	1.35	1.39
53	M5	56	GLU	CG-CD	6.50	1.61	1.51

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
25	1H	2251	G	N9-C8	-6.48	1.33	1.37
25	14	71	A	N9-C4	-6.43	1.33	1.37
25	1H	1210	A	N7-C5	-6.41	1.35	1.39
25	1H	812	C	N1-C2	-6.41	1.33	1.40
25	1H	1569	A	N3-C4	-6.40	1.31	1.34
25	14	1950	G	C2-N3	6.39	1.37	1.32
25	1H	1899	G	N3-C4	-6.38	1.30	1.35
25	14	1616	A	N9-C4	-6.35	1.34	1.37
25	1H	988	A	N7-C5	-6.35	1.35	1.39
25	1H	71	A	C5-C4	6.33	1.43	1.38
25	1H	197	A	C6-N1	-6.32	1.31	1.35
25	14	1890	A	N9-C4	-6.31	1.34	1.37
25	1H	1678	G	N9-C8	6.30	1.42	1.37
48	K8	5	GLU	CB-CG	6.29	1.64	1.52
25	14	945	A	N9-C4	-6.28	1.34	1.37
25	1H	663	G	C6-N1	-6.27	1.35	1.39
25	14	945	A	N7-C5	-6.25	1.35	1.39
4	3E	31	CYS	CB-SG	-6.24	1.71	1.82
25	1H	1678	G	C5-C6	-6.22	1.36	1.42
25	1H	829	A	N9-C4	-6.21	1.34	1.37
25	1H	860	U	N1-C2	6.21	1.44	1.38
25	1H	2082	A	N3-C4	-6.21	1.31	1.34
25	1H	793	A	N9-C8	-6.21	1.32	1.37
1	13	768	A	N3-C4	-6.17	1.31	1.34
25	14	2582	G	N7-C5	-6.16	1.35	1.39
25	1H	1410	G	C5-C4	-6.16	1.34	1.38
36	88	91	GLU	CB-CG	6.15	1.63	1.52
25	14	783	A	C5-C6	-6.10	1.35	1.41
25	1H	2031	A	N9-C4	6.08	1.41	1.37
25	1H	1571	A	N3-C4	-6.07	1.31	1.34
25	1H	2608	G	C2-N3	-6.07	1.27	1.32
25	1H	2451	A	N9-C4	-6.06	1.34	1.37
25	1H	528	A	N9-C4	-6.04	1.34	1.37
25	1H	330	A	N3-C4	-6.04	1.31	1.34
25	1H	2256	G	N1-C2	-6.04	1.32	1.37
25	1H	574	C	N1-C6	-6.01	1.33	1.37
25	1H	2392	A	C5-C4	6.01	1.43	1.38
25	1H	945	A	N9-C4	-5.99	1.34	1.37
25	14	396	G	N7-C5	-5.98	1.35	1.39
25	1H	71	A	N9-C8	5.94	1.42	1.37
25	1H	140	A	C5-C6	-5.93	1.35	1.41
25	1H	732	C	N1-C6	-5.93	1.33	1.37

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
25	1H	1210	A	C5-C6	-5.92	1.35	1.41
25	1H	2713	A	N9-C4	-5.92	1.34	1.37
1	13	792	A	C5-C6	-5.90	1.35	1.41
25	1H	2346	A	N9-C4	-5.89	1.34	1.37
25	1H	471	A	N7-C5	-5.88	1.35	1.39
25	1H	1950	G	N9-C8	5.87	1.42	1.37
25	1H	2064	C	N3-C4	-5.86	1.29	1.33
25	1H	1698	A	C5-C6	-5.85	1.35	1.41
25	1H	2053	G	C5-C4	-5.84	1.34	1.38
25	14	751	A	N3-C4	-5.84	1.31	1.34
25	1H	451	C	N1-C2	-5.80	1.34	1.40
25	1H	2525	G	N3-C4	5.80	1.39	1.35
1	13	1529	G	N9-C8	5.80	1.42	1.37
25	1H	472	A	N3-C4	-5.80	1.31	1.34
25	14	1678	G	N3-C4	-5.79	1.31	1.35
25	1H	1210	A	N9-C4	-5.79	1.34	1.37
25	1H	2058	A	N3-C4	-5.78	1.31	1.34
25	14	1786	A	C5-C4	5.78	1.42	1.38
25	14	671	C	N3-C4	-5.78	1.29	1.33
36	88	91	GLU	CG-CD	5.77	1.60	1.51
25	14	784	A	C5-C4	-5.77	1.34	1.38
25	14	1698	A	C5-C6	-5.76	1.35	1.41
25	1H	1678	G	N3-C4	-5.74	1.31	1.35
25	1H	503	A	N3-C4	-5.73	1.31	1.34
25	1H	1203	G	N9-C4	5.73	1.42	1.38
25	1H	1349	A	C5-C4	5.73	1.42	1.38
29	31	65	TRP	CB-CG	-5.72	1.40	1.50
25	14	676	A	C5-C4	5.71	1.42	1.38
25	1H	140	A	N9-C4	-5.69	1.34	1.37
25	14	774	A	N9-C8	5.68	1.42	1.37
25	1H	793	A	N7-C5	-5.67	1.35	1.39
25	1H	698	C	N1-C6	-5.67	1.33	1.37
25	1H	777	A	N9-C4	-5.66	1.34	1.37
25	1H	1617	C	C4-C5	-5.66	1.38	1.43
25	1H	1900	A	N7-C5	-5.66	1.35	1.39
25	1H	1825	A	N3-C4	-5.62	1.31	1.34
25	1H	440	G	N7-C5	-5.61	1.35	1.39
25	1H	1204	A	N9-C4	-5.61	1.34	1.37
25	1H	2713	A	N1-C2	5.61	1.39	1.34
25	1H	2498	C	N1-C6	5.60	1.40	1.37
25	1H	1825	A	C6-N1	-5.59	1.31	1.35
25	1H	1993	U	C2-O2	-5.59	1.17	1.22

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
25	1H	1896	G	N7-C5	5.58	1.42	1.39
25	1H	1393	A	N3-C4	-5.57	1.31	1.34
25	1H	452	G	N1-C2	-5.57	1.33	1.37
25	14	503	A	N3-C4	-5.55	1.31	1.34
25	14	1676	A	N3-C4	-5.54	1.31	1.34
25	14	1204	A	N9-C4	-5.53	1.34	1.37
25	1H	124	G	N9-C4	-5.51	1.33	1.38
25	1H	57	C	N3-C4	-5.51	1.30	1.33
25	1H	1974	C	C4-C5	-5.50	1.38	1.43
25	1H	1799	G	N9-C4	5.50	1.42	1.38
25	1H	1660	C	C2-N3	-5.49	1.31	1.35
25	1H	461	C	N1-C6	-5.49	1.33	1.37
25	1H	2000	G	C5-C4	-5.49	1.34	1.38
25	14	2435	A	N9-C4	5.47	1.41	1.37
25	1H	2688	U	N3-C4	-5.47	1.33	1.38
25	1H	2070	G	N9-C8	-5.46	1.34	1.37
25	1H	71	A	C5-C6	-5.45	1.36	1.41
54	1G	771	G	C6-N1	-5.45	1.35	1.39
25	1H	2032	G	N3-C4	-5.44	1.31	1.35
25	1H	2506	U	N1-C2	5.43	1.43	1.38
25	1H	2584	U	C2-N3	-5.43	1.33	1.37
25	1H	2297	C	N3-C4	-5.42	1.30	1.33
25	14	2599	G	N9-C8	-5.42	1.34	1.37
25	1H	808	G	N7-C5	-5.42	1.36	1.39
25	14	2599	G	C6-N1	-5.41	1.35	1.39
25	1H	793	A	C5-C4	-5.41	1.34	1.38
1	13	792	A	N9-C4	-5.40	1.34	1.37
25	1H	1202	C	N1-C6	-5.39	1.33	1.37
25	1H	56	A	C5-C6	-5.39	1.36	1.41
25	14	1308	A	N7-C5	-5.39	1.36	1.39
25	14	1288	U	C4-C5	-5.37	1.38	1.43
1	13	767	A	C6-N1	-5.37	1.31	1.35
25	14	1608	A	C6-N1	-5.36	1.31	1.35
29	39	65	TRP	CB-CG	-5.35	1.40	1.50
25	1H	2011	U	N1-C2	-5.35	1.33	1.38
25	1H	37	C	N3-C4	-5.35	1.30	1.33
25	1H	530	G	N9-C8	5.34	1.41	1.37
25	14	2424	C	N3-C4	-5.32	1.30	1.33
25	1H	1572	A	N9-C4	-5.32	1.34	1.37
25	1H	2392	A	N9-C8	5.31	1.42	1.37
25	1H	71	A	C6-N6	-5.30	1.29	1.33
25	1H	1683	C	N3-C4	-5.30	1.30	1.33

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
25	1H	728	G	N9-C8	-5.30	1.34	1.37
25	14	786	C	N3-C4	-5.30	1.30	1.33
1	13	1502	A	C5-C6	-5.29	1.36	1.41
25	14	808	G	N7-C5	-5.29	1.36	1.39
25	14	788	A	N7-C5	-5.29	1.36	1.39
25	14	2361	A	N9-C4	-5.27	1.34	1.37
25	1H	733	G	N9-C8	-5.26	1.34	1.37
25	1H	945	A	C2-N3	5.25	1.38	1.33
25	1H	1661	G	C5-C4	-5.25	1.34	1.38
25	1H	1782	C	N1-C6	-5.25	1.33	1.37
25	1H	1313	U	C4-C5	-5.25	1.38	1.43
25	1H	1968	G	C5-C4	-5.25	1.34	1.38
25	1H	316	C	N3-C4	-5.24	1.30	1.33
23	2K	24	C	N3-C4	-5.23	1.30	1.33
25	14	1661	G	N9-C8	-5.23	1.34	1.37
25	1H	2448	A	N9-C4	-5.22	1.34	1.37
25	14	1363	C	N3-C4	-5.22	1.30	1.33
25	1H	1660	C	N3-C4	-5.22	1.30	1.33
55	3L	22	A	N9-C4	5.22	1.41	1.37
25	14	2058	A	C6-N1	-5.21	1.31	1.35
25	1H	111	A	N3-C4	-5.21	1.31	1.34
25	1H	1308	A	N3-C4	-5.21	1.31	1.34
25	1H	798	G	N9-C4	-5.21	1.33	1.38
25	1H	869	G	C6-N1	-5.20	1.35	1.39
25	1H	2602	A	N3-C4	5.20	1.38	1.34
25	14	737	C	N1-C6	-5.20	1.34	1.37
25	1H	1784	A	N7-C5	5.19	1.42	1.39
25	14	181	A	N9-C4	-5.19	1.34	1.37
25	14	676	A	N9-C4	-5.19	1.34	1.37
25	1H	197	A	N3-C4	-5.18	1.31	1.34
25	14	2579	C	C4-C5	-5.17	1.38	1.43
25	1H	789	A	N9-C4	-5.17	1.34	1.37
25	1H	1668	A	N3-C4	-5.17	1.31	1.34
25	1H	694	U	C2-N3	-5.17	1.34	1.37
55	1L	82	A	N9-C4	5.16	1.41	1.37
25	1H	762	U	N1-C2	5.16	1.43	1.38
25	1H	188	G	C5-C4	-5.15	1.34	1.38
1	13	1521	G	N7-C5	-5.15	1.36	1.39
25	1H	786	C	N3-C4	-5.14	1.30	1.33
55	3L	49	A	N9-C4	5.14	1.41	1.37
25	1H	527	C	N1-C6	-5.14	1.34	1.37
25	1H	124	G	C5-C4	-5.14	1.34	1.38

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
25	14	517	C	N3-C4	-5.14	1.30	1.33
25	1H	774	A	C2-N3	-5.13	1.28	1.33
25	1H	2450	A	C5-C6	5.12	1.45	1.41
25	1H	2246	G	C8-N7	-5.12	1.27	1.30
25	1H	2490	G	N9-C4	-5.12	1.33	1.38
25	1H	2256	G	C5-C4	-5.11	1.34	1.38
1	13	1523	G	N3-C4	-5.11	1.31	1.35
25	1H	690	G	C4'-C3'	-5.11	1.47	1.52
25	14	1289	C	N1-C6	-5.10	1.34	1.37
25	1H	2675	A	N7-C5	-5.10	1.36	1.39
25	14	2062	A	C6-N1	5.09	1.39	1.35
25	1H	452	G	C6-N1	-5.09	1.35	1.39
25	14	1613	G	N7-C5	-5.09	1.36	1.39
25	1H	1189	A	C5-C6	-5.08	1.36	1.41
25	14	828	U	N3-C4	-5.08	1.33	1.38
25	14	1785	A	N7-C5	-5.08	1.36	1.39
25	1H	204	A	N3-C4	-5.07	1.31	1.34
25	1H	939	G	N3-C4	-5.07	1.31	1.35
25	1H	2062	A	N3-C4	5.07	1.37	1.34
25	1H	2287	A	N3-C4	-5.07	1.31	1.34
25	1H	945	A	N1-C2	5.06	1.39	1.34
25	1H	1616	A	N7-C5	-5.06	1.36	1.39
25	1H	472	A	N9-C4	-5.06	1.34	1.37
25	1H	785	G	C6-N1	-5.05	1.36	1.39
25	1H	663	G	N9-C8	-5.05	1.34	1.37
25	14	2430	A	N3-C4	-5.05	1.31	1.34
25	1H	2280	G	N9-C8	-5.04	1.34	1.37
25	14	784	A	N9-C8	-5.04	1.33	1.37
17	8A	49	GLU	CG-CD	5.04	1.59	1.51
25	1H	689	A	N9-C4	-5.04	1.34	1.37
25	14	768	G	C6-N1	-5.04	1.36	1.39
25	1H	607	U	C2-N3	-5.03	1.34	1.37
25	1H	1161	C	N1-C6	5.03	1.40	1.37
25	14	1950	G	C5-C4	5.03	1.41	1.38
25	1H	210	C	C4-N4	-5.03	1.29	1.33
44	G8	102	CYS	CB-SG	5.02	1.90	1.82
25	1H	829	A	N9-C8	-5.02	1.33	1.37
25	1H	2761	G	N9-C4	-5.02	1.33	1.38
1	13	539	A	N3-C4	-5.02	1.31	1.34
25	1H	1831	G	C2-N3	-5.01	1.28	1.32
25	1H	1201	C	C4-C5	-5.01	1.39	1.43
25	14	733	G	N9-C8	-5.01	1.34	1.37

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
25	1H	1765	C	N3-C4	-5.01	1.30	1.33
25	1H	686	G	N7-C5	-5.01	1.36	1.39
25	1H	473	G	N1-C2	-5.00	1.33	1.37
25	1H	1966	A	N9-C4	-5.00	1.34	1.37

All (5537) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
25	1H	1899	G	N3-C4-N9	-19.08	114.55	126.00
25	1H	676	A	C2-N3-C4	-18.37	101.42	110.60
25	1H	945	A	C6-C5-N7	-18.34	119.46	132.30
25	1H	945	A	N1-C6-N6	17.84	129.30	118.60
25	1H	783	A	C2-N3-C4	-17.75	101.73	110.60
25	1H	945	A	C4-C5-C6	16.67	125.33	117.00
25	1H	1786	A	N7-C8-N9	16.44	122.02	113.80
25	1H	1786	A	C2-N3-C4	-16.23	102.48	110.60
25	1H	1786	A	C5-N7-C8	-16.15	95.83	103.90
25	1H	2544	G	N1-C6-O6	16.09	129.56	119.90
25	14	1332	G	N3-C4-N9	-15.66	116.61	126.00
25	14	783	A	C5-N7-C8	-15.48	96.16	103.90
25	1H	1332	G	C2-N3-C4	-15.38	104.21	111.90
25	1H	676	A	C5-N7-C8	-15.17	96.31	103.90
25	1H	2430	A	N1-C6-N6	15.15	127.69	118.60
25	1H	774	A	N3-C4-C5	15.09	137.36	126.80
25	14	1698	A	N1-C6-N6	14.96	127.57	118.60
25	14	2502	G	O5'-P-OP1	-14.95	92.25	105.70
25	14	1786	A	C5-N7-C8	-14.82	96.49	103.90
25	14	741	G	O5'-P-OP1	-14.80	92.38	105.70
25	1H	1614	A	C2-N3-C4	-14.57	103.31	110.60
25	1H	2713	A	C2-N3-C4	-14.54	103.33	110.60
25	14	1332	G	N3-C4-C5	14.51	135.85	128.60
25	14	1332	G	C2-N3-C4	-14.50	104.65	111.90
25	1H	2490	G	C5-N7-C8	-14.49	97.05	104.30
25	1H	1678	G	N3-C4-C5	14.47	135.83	128.60
25	1H	210	C	N3-C4-C5	14.45	127.68	121.90
25	1H	945	A	C2-N3-C4	-14.16	103.52	110.60
25	1H	1698	A	C2-N3-C4	-14.16	103.52	110.60
25	1H	140	A	C5-N7-C8	-14.12	96.84	103.90
25	14	1647	G	O5'-P-OP1	-14.10	93.02	105.70
25	1H	1784	A	O5'-P-OP2	-14.09	93.02	105.70
25	1H	774	A	N3-C4-N9	-14.02	116.19	127.40
25	14	1786	A	C2-N3-C4	-13.98	103.61	110.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
25	14	1786	A	N7-C8-N9	13.98	120.79	113.80
25	14	1899	G	N3-C4-N9	-13.86	117.69	126.00
25	1H	1616	A	C5-N7-C8	-13.84	96.98	103.90
25	1H	2490	G	C4-C5-N7	13.72	116.29	110.80
25	1H	863	A	O5'-P-OP2	-13.71	93.36	105.70
25	1H	2468	G	O4'-C1'-N9	13.71	119.16	108.20
25	1H	774	A	C2-N3-C4	-13.63	103.79	110.60
25	14	2273	A	O5'-P-OP2	-13.60	93.46	105.70
25	1H	1899	G	C2-N3-C4	-13.51	105.14	111.90
25	1H	1950	G	N7-C8-N9	13.50	119.85	113.10
25	1H	2620	C	O5'-P-OP1	-13.43	93.61	105.70
25	1H	1204	A	C2-N3-C4	-13.41	103.89	110.60
25	14	783	A	N7-C8-N9	13.38	120.49	113.80
25	1H	1931	U	N3-C2-O2	-13.19	112.97	122.20
25	1H	2700	C	C6-N1-C2	13.18	125.57	120.30
25	14	783	A	N1-C6-N6	13.10	126.46	118.60
25	1H	71	A	C2-N3-C4	-13.09	104.06	110.60
25	1H	1786	A	C6-C5-N7	-13.06	123.16	132.30
25	14	1993	U	O5'-P-OP1	-13.02	93.98	105.70
25	1H	1784	A	O5'-P-OP1	12.94	126.23	110.70
25	14	945	A	C5-N7-C8	-12.90	97.45	103.90
25	1H	1899	G	N3-C4-C5	12.89	135.04	128.60
25	1H	1332	G	C5-N7-C8	-12.87	97.86	104.30
25	1H	1614	A	C5-N7-C8	-12.84	97.48	103.90
25	14	783	A	C2-N3-C4	-12.80	104.20	110.60
25	14	676	A	C2-N3-C4	-12.79	104.21	110.60
25	1H	783	A	N1-C2-N3	12.76	135.68	129.30
25	14	1698	A	C6-C5-N7	-12.74	123.38	132.30
25	1H	1496	A	C8-N9-C4	-12.72	100.71	105.80
25	1H	1950	G	C5-N7-C8	-12.72	97.94	104.30
25	1H	839	U	O5'-P-OP2	-12.70	94.27	105.70
25	1H	74	A	C2-N3-C4	-12.67	104.26	110.60
25	1H	140	A	C4-C5-N7	12.62	117.01	110.70
25	1H	1786	A	N1-C2-N3	12.62	135.61	129.30
25	1H	1678	G	N3-C4-N9	-12.61	118.43	126.00
25	1H	1786	A	C8-N9-C4	-12.62	100.75	105.80
25	1H	2392	A	C5-N7-C8	-12.57	97.61	103.90
25	14	774	A	C2-N3-C4	-12.52	104.34	110.60
25	14	1984	G	O5'-P-OP2	-12.52	94.44	105.70
25	1H	1899	G	N9-C4-C5	12.49	110.40	105.40
25	1H	621	A	C2-N3-C4	-12.48	104.36	110.60
25	1H	1678	G	C5-N7-C8	-12.48	98.06	104.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
25	1H	676	A	N7-C8-N9	12.45	120.03	113.80
25	14	945	A	C4-C5-N7	12.42	116.91	110.70
25	1H	801	G	O5'-P-OP2	-12.41	94.53	105.70
25	1H	1616	A	C4-C5-N7	12.40	116.90	110.70
25	1H	71	A	C5-N7-C8	-12.40	97.70	103.90
25	14	74	A	C2-N3-C4	-12.39	104.41	110.60
25	1H	1950	G	C8-N9-C4	-12.38	101.45	106.40
25	1H	2430	A	N3-C4-C5	12.37	135.46	126.80
25	1H	126	A	O5'-P-OP2	-12.36	94.58	105.70
25	1H	1321	A	C8-N9-C4	12.33	110.73	105.80
25	1H	1496	A	N7-C8-N9	12.29	119.95	113.80
25	1H	1678	G	C2-N3-C4	-12.28	105.76	111.90
25	1H	2287	A	C2-N3-C4	-12.28	104.46	110.60
25	14	774	A	N3-C4-C5	12.27	135.39	126.80
25	14	2438	U	O5'-P-OP2	-12.27	94.66	105.70
25	1H	945	A	N1-C2-N3	12.23	135.41	129.30
25	1H	676	A	N3-C4-C5	12.19	135.33	126.80
25	14	2287	A	C2-N3-C4	-12.18	104.51	110.60
25	14	1678	G	N3-C4-N9	-12.17	118.70	126.00
25	1H	812	C	N1-C2-O2	-12.17	111.60	118.90
25	1H	1899	G	N3-C2-N2	-12.13	111.41	119.90
25	1H	1499	C	O5'-P-OP1	-12.09	94.82	105.70
25	1H	452	G	N1-C6-O6	-12.03	112.68	119.90
25	1H	1332	G	N3-C4-C5	12.02	134.61	128.60
25	14	783	A	C4-C5-N7	12.01	116.70	110.70
25	1H	2490	G	N3-C4-C5	11.93	134.57	128.60
25	1H	1772	G	N1-C6-O6	-11.93	112.74	119.90
1	13	1195	C	C6-N1-C2	-11.92	115.53	120.30
25	14	704	G	N1-C6-O6	11.92	127.05	119.90
25	1H	211	A	C8-N9-C4	11.90	110.56	105.80
25	1H	945	A	O4'-C1'-N9	11.90	117.72	108.20
25	14	783	A	C6-C5-N7	-11.83	124.02	132.30
25	1H	1617	C	O5'-P-OP1	-11.78	95.10	105.70
25	1H	1899	G	C8-N9-C4	-11.75	101.70	106.40
25	14	945	A	N1-C6-N6	11.70	125.62	118.60
25	1H	140	A	N1-C6-N6	11.69	125.61	118.60
25	1H	831	G	C8-N9-C4	11.66	111.07	106.40
25	1H	49	A	O5'-P-OP2	-11.63	95.23	105.70
22	1K	85	A	C8-N9-C4	-11.60	101.16	105.80
25	1H	329	G	O5'-P-OP2	-11.58	95.28	105.70
25	1H	2430	A	C2-N3-C4	-11.55	104.82	110.60
25	14	1899	G	C2-N3-C4	-11.51	106.15	111.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
25	14	530	G	C8-N9-C4	11.49	111.00	106.40
25	14	562	U	N3-C2-O2	-11.45	114.19	122.20
25	1H	1299	G	O5'-P-OP1	-11.42	95.42	105.70
25	1H	676	A	N3-C4-N9	-11.38	118.29	127.40
25	1H	2085	C	O5'-P-OP2	-11.37	95.46	105.70
25	14	566	U	C5-C6-N1	-11.36	117.02	122.70
25	14	140	A	C5-N7-C8	-11.32	98.24	103.90
25	1H	1616	A	N7-C8-N9	11.31	119.45	113.80
25	1H	945	A	C5-N7-C8	-11.30	98.25	103.90
25	1H	1950	G	C4-C5-N7	11.30	115.32	110.80
25	1H	1616	A	N1-C6-N6	11.27	125.36	118.60
25	14	1678	G	N3-C4-C5	11.26	134.23	128.60
25	1H	2392	A	N7-C8-N9	11.22	119.41	113.80
25	1H	2430	A	C4-C5-N7	11.21	116.31	110.70
25	14	736	C	O5'-P-OP1	-11.18	95.64	105.70
25	1H	783	A	C5-N7-C8	-11.16	98.32	103.90
25	1H	774	A	C6-N1-C2	11.14	125.28	118.60
25	14	1698	A	C4-C5-N7	11.13	116.27	110.70
25	1H	1678	G	C4-C5-N7	11.13	115.25	110.80
25	1H	1368	G	O5'-P-OP2	-11.10	95.71	105.70
22	1K	85	A	N7-C8-N9	11.07	119.33	113.80
25	1H	580	C	C6-N1-C2	-11.07	115.87	120.30
25	1H	451	C	N1-C2-O2	-11.07	112.26	118.90
25	1H	774	A	C5-C6-N1	-11.01	112.19	117.70
25	1H	945	A	C4-N9-C1'	11.01	146.11	126.30
25	1H	1332	G	C4-C5-N7	10.99	115.20	110.80
25	1H	728	G	C8-N9-C4	10.99	110.79	106.40
25	1H	1786	A	N1-C6-N6	10.98	125.19	118.60
25	1H	786	C	N3-C4-N4	-10.94	110.34	118.00
25	1H	128	C	N3-C4-C5	10.93	126.27	121.90
25	14	1698	A	C5-N7-C8	-10.92	98.44	103.90
25	14	140	A	N7-C8-N9	10.91	119.26	113.80
25	14	676	A	C5-N7-C8	-10.91	98.44	103.90
1	13	760	G	N1-C6-O6	10.90	126.44	119.90
25	1H	917	A	C2-N3-C4	-10.90	105.15	110.60
25	1H	783	A	C6-C5-N7	-10.88	124.68	132.30
25	1H	198	C	N3-C4-C5	10.87	126.25	121.90
25	1H	1376	C	O5'-P-OP1	-10.82	95.96	105.70
25	1H	409	C	C6-N1-C2	10.81	124.63	120.30
25	1H	2311	A	N1-C2-N3	10.81	134.70	129.30
25	1H	945	A	N7-C8-N9	10.79	119.20	113.80
25	14	34	C	N1-C2-O2	10.79	125.37	118.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
25	1H	2403	C	C6-N1-C2	-10.76	116.00	120.30
25	1H	667	U	N3-C4-O4	10.74	126.92	119.40
25	1H	140	A	N7-C8-N9	10.73	119.16	113.80
25	14	828	U	C5-C4-O4	10.71	132.33	125.90
25	14	1332	G	N3-C2-N2	-10.71	112.40	119.90
25	1H	2311	A	C2-N3-C4	-10.67	105.26	110.60
25	14	684	G	C8-N9-C4	-10.65	102.14	106.40
25	14	528	A	C2-N3-C4	-10.62	105.29	110.60
25	1H	2390	U	O5'-P-OP1	-10.61	96.15	105.70
25	14	1899	G	N3-C4-C5	10.60	133.90	128.60
25	1H	1614	A	N1-C6-N6	10.60	124.96	118.60
25	1H	1931	U	N1-C2-N3	10.59	121.25	114.90
25	1H	1950	G	C6-C5-N7	-10.55	124.07	130.40
25	1H	1799	G	N3-C4-C5	-10.54	123.33	128.60
25	14	2430	A	N1-C6-N6	10.52	124.91	118.60
25	1H	1312	U	O5'-P-OP1	-10.51	96.24	105.70
25	1H	1021	A	C2-N3-C4	-10.50	105.35	110.60
25	1H	530	G	N1-C6-O6	-10.48	113.61	119.90
25	1H	973	A	C2-N3-C4	-10.47	105.37	110.60
25	14	2346	A	N1-C2-N3	10.46	134.53	129.30
25	1H	1307	A	N1-C6-N6	10.42	124.85	118.60
25	14	2518	A	C2-N3-C4	-10.41	105.39	110.60
1	13	789	U	C5-C4-O4	10.41	132.15	125.90
25	1H	470	A	O5'-P-OP1	-10.38	96.36	105.70
25	1H	735	A	C8-N9-C4	10.38	109.95	105.80
25	1H	793	A	O5'-P-OP2	-10.37	96.36	105.70
25	1H	1654	A	O5'-P-OP1	-10.36	96.38	105.70
25	14	1899	G	N3-C2-N2	-10.35	112.66	119.90
25	1H	2507	C	N1-C2-O2	10.34	125.11	118.90
25	1H	831	G	N7-C8-N9	-10.33	107.94	113.10
25	1H	2490	G	N7-C8-N9	10.32	118.26	113.10
25	1H	729	G	C8-N9-C4	-10.31	102.28	106.40
25	1H	828	U	C5-C4-O4	10.30	132.08	125.90
25	14	2490	G	C8-N9-C4	-10.29	102.28	106.40
25	1H	2374	C	C5-C6-N1	-10.27	115.87	121.00
25	1H	1189	A	N1-C6-N6	10.25	124.75	118.60
25	1H	193	U	N1-C2-O2	-10.24	115.63	122.80
25	1H	1616	A	C6-C5-N7	-10.24	125.13	132.30
25	1H	2346	A	O4'-C1'-N9	10.23	116.39	108.20
25	1H	2330	G	C5-C6-O6	-10.23	122.46	128.60
25	1H	2618	G	C8-N9-C4	-10.22	102.31	106.40
25	1H	452	G	C5-C6-O6	10.22	134.73	128.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
25	1H	2713	A	C5-N7-C8	-10.21	98.80	103.90
25	14	1496	A	N7-C8-N9	10.20	118.90	113.80
25	1H	974(A)	C	N1-C2-O2	10.19	125.01	118.90
25	1H	1799	G	N3-C4-N9	10.18	132.11	126.00
25	1H	676	A	C5-C6-N1	-10.18	112.61	117.70
25	1H	1653	G	P-O3'-C3'	10.17	131.91	119.70
25	1H	1496	A	C5-N7-C8	-10.17	98.82	103.90
25	1H	2439	A	O5'-P-OP2	-10.17	96.55	105.70
25	1H	1782	C	C6-N1-C2	10.16	124.36	120.30
25	1H	1394	U	C5-C6-N1	10.15	127.78	122.70
25	14	669	G	P-O3'-C3'	10.15	131.88	119.70
25	14	2688	U	N3-C2-O2	-10.15	115.09	122.20
25	1H	691	C	C6-N1-C2	10.14	124.36	120.30
25	14	510	C	O5'-P-OP2	-10.11	96.60	105.70
25	1H	762	U	N1-C2-O2	10.11	129.87	122.80
25	1H	1518	C	O5'-P-OP1	-10.09	96.62	105.70
25	1H	2229	C	C6-N1-C2	10.08	124.33	120.30
25	14	2713	A	N1-C6-N6	10.07	124.64	118.60
25	1H	188	G	C8-N9-C4	10.07	110.43	106.40
25	1H	1759	A	O5'-P-OP1	-10.07	96.64	105.70
25	1H	2712	U	N3-C4-O4	-10.07	112.35	119.40
25	1H	1382	G	C5-C6-O6	-10.07	122.56	128.60
25	1H	2554	U	O5'-P-OP1	-10.05	96.65	105.70
25	14	530	G	N9-C4-C5	-10.05	101.38	105.40
25	14	2713	A	C2-N3-C4	-10.05	105.58	110.60
25	1H	621	A	N1-C6-N6	10.04	124.62	118.60
1	13	1517	G	O5'-P-OP2	-10.03	96.67	105.70
25	1H	1614	A	C4-C5-N7	10.02	115.71	110.70
25	1H	621	A	C5-N7-C8	-10.00	98.90	103.90
25	1H	1210	A	C5-N7-C8	-10.00	98.90	103.90
25	1H	2507	C	N3-C2-O2	-9.96	114.93	121.90
25	14	2079	U	O5'-P-OP1	-9.96	96.73	105.70
25	1H	1786	A	C4-C5-N7	9.94	115.67	110.70
25	1H	917	A	N1-C2-N3	9.93	134.27	129.30
25	14	1332	G	C5-N7-C8	-9.93	99.33	104.30
1	13	1529	G	N3-C4-C5	9.91	133.56	128.60
25	1H	1191	G	C8-N9-C4	9.90	110.36	106.40
25	1H	1332	G	N7-C8-N9	9.90	118.05	113.10
1	13	792	A	O4'-C1'-N9	9.90	116.12	108.20
25	1H	972	G	O5'-P-OP2	-9.88	96.81	105.70
25	1H	2699	C	C6-N1-C2	9.87	124.25	120.30
25	1H	945	A	C5-C6-N1	-9.86	112.77	117.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
25	1H	1616	A	O4'-C1'-N9	9.85	116.08	108.20
25	1H	1614	A	C6-C5-N7	-9.84	125.42	132.30
25	1H	676	A	C8-N9-C4	-9.82	101.87	105.80
25	1H	966	G	N1-C6-O6	-9.80	114.02	119.90
25	1H	138	G	C8-N9-C4	-9.78	102.49	106.40
25	1H	2503	A	N1-C6-N6	9.78	124.47	118.60
25	14	1763	G	O5'-P-OP2	-9.78	96.90	105.70
25	14	912	C	C6-N1-C2	-9.76	116.40	120.30
25	1H	1899	G	N1-C2-N3	9.73	129.74	123.90
25	1H	2525	G	N9-C4-C5	-9.73	101.51	105.40
25	14	1379	A	N1-C6-N6	9.73	124.44	118.60
1	13	792	A	N1-C6-N6	9.73	124.44	118.60
25	14	1602	U	O5'-P-OP2	9.73	122.38	110.70
25	14	396	G	N1-C6-O6	9.71	125.73	119.90
25	1H	120	U	C5-C6-N1	-9.70	117.85	122.70
25	1H	2544	G	C5-C6-O6	-9.70	122.78	128.60
25	1H	1660	C	N3-C2-O2	-9.70	115.11	121.90
1	13	690	G	C6-C5-N7	-9.69	124.58	130.40
25	14	2346	A	C2-N3-C4	-9.69	105.76	110.60
1	13	792	A	C2-N3-C4	-9.67	105.76	110.60
25	1H	120	U	C4-C5-C6	9.67	125.50	119.70
25	1H	2830	G	C8-N9-C4	-9.67	102.53	106.40
25	14	783	A	C8-N9-C4	-9.66	101.94	105.80
25	1H	71	A	C4-C5-N7	9.65	115.53	110.70
25	1H	124	G	C5-C6-O6	-9.65	122.81	128.60
25	1H	463	G	N3-C2-N2	9.63	126.64	119.90
40	C8	95	LEU	CA-CB-CG	-9.63	93.15	115.30
25	1H	140	A	C2-N3-C4	-9.63	105.79	110.60
25	1H	1559	G	N1-C6-O6	9.62	125.67	119.90
1	13	1519	A	N1-C6-N6	-9.62	112.83	118.60
25	1H	1204	A	O4'-C1'-N9	9.62	115.89	108.20
25	14	201	C	C5-C6-N1	-9.62	116.19	121.00
25	14	793	A	O5'-P-OP2	-9.61	97.05	105.70
25	1H	1931	U	C4-C5-C6	9.60	125.46	119.70
25	14	704	G	C5-C6-O6	-9.60	122.84	128.60
25	1H	1698	A	N1-C2-N3	9.60	134.10	129.30
25	1H	141	A	N7-C8-N9	9.59	118.60	113.80
25	14	2873	A	N7-C8-N9	9.59	118.60	113.80
25	14	71	A	C5-N7-C8	-9.58	99.11	103.90
25	1H	2429	G	OP2-P-O3'	9.56	126.23	105.20
25	1H	2616	C	N1-C2-O2	-9.55	113.17	118.90
25	14	1698	A	C2-N3-C4	-9.54	105.83	110.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
25	1H	1253	A	N1-C6-N6	9.53	124.32	118.60
25	14	1786	A	C4-C5-N7	9.53	115.47	110.70
25	14	1774	C	O5'-P-OP1	-9.53	97.13	105.70
25	1H	744	G	O5'-P-OP2	-9.50	97.15	105.70
25	1H	2346	A	N1-C2-N3	9.50	134.05	129.30
25	1H	703	U	C5-C4-O4	9.49	131.59	125.90
25	1H	1142(A)	A	C2-N3-C4	-9.48	105.86	110.60
25	1H	1931	U	C5-C4-O4	9.47	131.58	125.90
25	14	1661	G	C8-N9-C4	9.46	110.18	106.40
25	14	138	G	C8-N9-C4	-9.45	102.62	106.40
25	14	2712	U	C5-C6-N1	-9.44	117.98	122.70
25	1H	682	G	O5'-P-OP2	-9.44	97.21	105.70
25	1H	783	A	C8-N9-C4	-9.44	102.03	105.80
25	14	1786	A	C8-N9-C4	-9.44	102.03	105.80
25	1H	2713	A	N7-C8-N9	9.44	118.52	113.80
25	14	2086	U	O5'-P-OP2	-9.44	97.21	105.70
25	14	2056	G	O5'-P-OP2	-9.42	97.22	105.70
25	1H	2439	A	N7-C8-N9	9.41	118.51	113.80
25	1H	676	A	C4-C5-N7	9.40	115.40	110.70
25	1H	2275	C	OP1-P-O3'	9.38	125.85	105.20
25	14	738	G	C8-N9-C4	-9.38	102.65	106.40
25	1H	1772	G	C5-C6-O6	9.38	134.23	128.60
25	1H	1520	U	N3-C2-O2	-9.38	115.64	122.20
25	1H	2490	G	N3-C4-N9	-9.38	120.38	126.00
25	1H	510	C	O5'-P-OP2	-9.37	97.27	105.70
25	1H	860	U	N3-C2-O2	-9.37	115.64	122.20
25	1H	2584	U	N3-C2-O2	-9.36	115.65	122.20
25	14	676	A	N3-C4-C5	9.36	133.35	126.80
26	16	30	C	C6-N1-C2	-9.36	116.56	120.30
1	13	352	C	C5-C6-N1	9.35	125.67	121.00
25	1H	138	G	N7-C8-N9	9.35	117.77	113.10
25	14	756	C	C6-N1-C2	-9.35	116.56	120.30
25	1H	1332	G	N1-C6-O6	9.35	125.51	119.90
25	1H	783	A	N1-C6-N6	9.34	124.20	118.60
25	14	2443	C	O5'-P-OP2	9.34	121.91	110.70
25	1H	789	A	O5'-P-OP1	-9.34	97.29	105.70
25	1H	140	A	C6-C5-N7	-9.32	125.77	132.30
1	13	1354	C	C6-N1-C2	-9.32	116.57	120.30
25	1H	1321	A	N7-C8-N9	-9.32	109.14	113.80
25	1H	2330	G	N1-C6-O6	9.32	125.49	119.90
25	14	668	G	C8-N9-C4	9.32	110.13	106.40
25	14	1348	G	O5'-P-OP2	9.31	121.88	110.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
25	1H	1403	C	C6-N1-C2	-9.31	116.58	120.30
25	1H	2346	A	C2-N3-C4	-9.30	105.95	110.60
25	1H	116	C	N1-C2-O2	-9.30	113.32	118.90
54	1G	904	C	O5'-P-OP1	-9.30	97.33	105.70
25	1H	216	A	O5'-P-OP1	-9.29	97.33	105.70
25	14	676	A	C4-C5-N7	9.29	115.34	110.70
25	1H	508	G	OP1-P-OP2	9.28	133.52	119.60
25	14	750	A	C8-N9-C4	-9.28	102.09	105.80
1	13	792	A	C4-C5-N7	9.27	115.34	110.70
25	1H	2053	G	C5-C6-O6	-9.26	123.05	128.60
25	14	2073	C	O5'-P-OP1	-9.26	97.37	105.70
54	1G	1322	C	N1-C2-O2	9.25	124.45	118.90
25	1H	133	C	C6-N1-C2	9.25	124.00	120.30
25	1H	1938	A	O5'-P-OP1	-9.25	97.38	105.70
25	1H	945	A	C8-N9-C1'	-9.24	111.06	127.70
25	1H	193	U	N1-C2-N3	9.24	120.44	114.90
25	14	774	A	N3-C4-N9	-9.23	120.02	127.40
25	1H	821	A	OP1-P-OP2	9.23	133.44	119.60
25	1H	2713	A	N1-C6-N6	9.22	124.14	118.60
55	1L	20	C	N1-C2-O2	9.21	124.42	118.90
1	13	1502	A	C4-C5-N7	9.21	115.30	110.70
25	1H	2067	G	C8-N9-C4	-9.21	102.72	106.40
1	13	827	U	N3-C2-O2	-9.19	115.77	122.20
25	14	971	C	C6-N1-C2	-9.19	116.62	120.30
25	1H	1660	C	N3-C4-N4	-9.18	111.57	118.00
25	1H	2439	A	C8-N9-C4	-9.18	102.13	105.80
25	1H	226	G	O4'-C1'-N9	9.18	115.54	108.20
1	13	1499	A	O5'-P-OP1	-9.18	97.44	105.70
25	1H	2710	C	C6-N1-C2	9.17	123.97	120.30
25	1H	1210	A	N1-C6-N6	9.16	124.10	118.60
25	1H	512	G	O4'-C1'-N9	9.14	115.52	108.20
25	1H	917	A	N1-C6-N6	9.14	124.09	118.60
25	14	1678	G	C2-N3-C4	-9.14	107.33	111.90
25	1H	141	A	C5-N7-C8	-9.14	99.33	103.90
25	1H	684	G	C8-N9-C4	-9.13	102.75	106.40
25	1H	193	U	C2-N3-C4	-9.12	121.53	127.00
25	14	676	A	O4'-C1'-N9	9.12	115.50	108.20
25	1H	1623	G	N1-C6-O6	-9.12	114.43	119.90
25	14	1653	G	O5'-P-OP2	-9.11	97.50	105.70
25	14	2512	C	N3-C4-C5	9.10	125.54	121.90
25	1H	827	U	O5'-P-OP1	9.10	121.62	110.70
25	1H	1162	G	C8-N9-C4	-9.09	102.77	106.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
25	1H	2830	G	N7-C8-N9	9.09	117.64	113.10
25	1H	465	G	O5'-P-OP2	9.08	121.60	110.70
25	14	1950	G	C8-N9-C4	-9.08	102.77	106.40
25	14	2447	G	N1-C6-O6	9.08	125.35	119.90
56	2L	40	C	C6-N1-C2	-9.07	116.67	120.30
25	14	2392	A	C5-C6-N1	-9.06	113.17	117.70
25	14	752	A	C8-N9-C4	-9.06	102.17	105.80
25	1H	966	G	C5-C6-O6	9.05	134.03	128.60
25	1H	2430	A	C5-N7-C8	-9.05	99.38	103.90
25	14	71	A	C2-N3-C4	-9.04	106.08	110.60
25	14	2490	G	N7-C8-N9	9.04	117.62	113.10
25	14	575	A	O5'-P-OP1	-9.03	97.57	105.70
54	1G	254	G	O5'-P-OP1	-9.03	97.58	105.70
1	13	758	G	N1-C6-O6	9.02	125.31	119.90
25	1H	808	G	O5'-P-OP2	-9.02	97.58	105.70
25	1H	955	C	O5'-P-OP2	-9.02	97.58	105.70
25	1H	128	C	C2-N3-C4	-9.02	115.39	119.90
25	1H	141	A	C8-N9-C4	-9.02	102.19	105.80
25	1H	2597	G	C5-C6-O6	-9.02	123.19	128.60
25	14	530	G	N1-C6-O6	9.02	125.31	119.90
25	14	2067	G	C8-N9-C4	-9.02	102.79	106.40
25	1H	2506	U	N1-C2-O2	9.01	129.10	122.80
25	1H	945	A	C4-C5-N7	9.00	115.20	110.70
25	1H	330	A	C2-N3-C4	-8.99	106.10	110.60
25	14	2005	A	O5'-P-OP2	-8.99	97.61	105.70
25	1H	1201	C	N3-C2-O2	8.97	128.18	121.90
25	1H	1982	C	O5'-P-OP2	-8.97	97.62	105.70
53	Q8	61	LEU	CA-CB-CG	8.97	135.93	115.30
25	1H	182	A	C8-N9-C4	8.96	109.39	105.80
25	1H	784	A	O4'-C1'-N9	8.96	115.37	108.20
25	14	140	A	C4-C5-N7	8.96	115.18	110.70
25	1H	1363	C	C2-N3-C4	-8.95	115.42	119.90
25	1H	1998	G	C8-N9-C4	8.95	109.98	106.40
25	1H	577	G	O5'-P-OP1	8.94	121.43	110.70
25	1H	2712	U	C5-C4-O4	8.93	131.26	125.90
25	14	682	G	O5'-P-OP2	-8.93	97.67	105.70
25	14	1376	C	O5'-P-OP1	-8.93	97.66	105.70
25	1H	974(A)	C	N3-C2-O2	-8.92	115.66	121.90
25	1H	1489	U	C5-C4-O4	8.91	131.25	125.90
1	13	1512	U	N3-C2-O2	-8.90	115.97	122.20
25	1H	1204	A	C5-C6-N1	-8.90	113.25	117.70
25	1H	728	G	N3-C4-N9	8.89	131.34	126.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
25	14	2357	U	O5'-P-OP2	-8.89	97.70	105.70
25	1H	1528	A	C8-N9-C4	-8.88	102.25	105.80
1	13	880	C	C6-N1-C2	8.88	123.85	120.30
25	1H	189	G	N1-C6-O6	8.87	125.22	119.90
25	1H	982	C	C6-N1-C2	-8.87	116.75	120.30
25	1H	1189	A	C5-C6-N6	-8.87	116.61	123.70
25	1H	464	U	C5-C6-N1	-8.87	118.27	122.70
25	1H	833	U	O5'-P-OP1	-8.87	97.72	105.70
25	1H	1300	U	N1-C2-N3	8.86	120.22	114.90
25	14	945	A	C6-C5-N7	-8.86	126.10	132.30
25	1H	577	G	OP1-P-OP2	-8.86	106.32	119.60
25	1H	1210	A	C2-N3-C4	-8.85	106.17	110.60
25	1H	2392	A	C6-N1-C2	8.84	123.91	118.60
25	14	682	G	O5'-P-OP1	8.84	121.31	110.70
1	13	789	U	N3-C2-O2	-8.84	116.02	122.20
1	13	1529	G	N3-C4-N9	-8.83	120.70	126.00
25	1H	2048	G	C4-C5-N7	-8.83	107.27	110.80
55	1L	20	C	C2-N1-C1'	8.83	128.51	118.80
25	1H	1829	A	N1-C6-N6	-8.82	113.31	118.60
25	14	1391	U	O5'-P-OP1	-8.82	97.76	105.70
25	1H	189	G	C8-N9-C4	8.81	109.92	106.40
25	1H	1616	A	C8-N9-C4	-8.81	102.28	105.80
25	1H	774	A	C5-N7-C8	-8.81	99.50	103.90
1	13	975	A	N1-C6-N6	8.80	123.88	118.60
25	14	2439	A	C8-N9-C4	-8.79	102.28	105.80
25	1H	567	A	O5'-P-OP1	-8.79	97.79	105.70
25	1H	1332	G	C6-C5-N7	-8.79	125.13	130.40
1	13	1502	A	C5-N7-C8	-8.78	99.51	103.90
25	14	2062	A	N9-C4-C5	-8.78	102.29	105.80
25	14	2880	C	C6-N1-C2	-8.77	116.79	120.30
25	1H	144	C	C5-C6-N1	-8.77	116.62	121.00
1	13	740	U	O5'-P-OP2	-8.76	97.81	105.70
25	14	396	G	C6-C5-N7	-8.76	125.14	130.40
25	1H	1307	A	N9-C4-C5	-8.75	102.30	105.80
25	14	2253	G	N1-C6-O6	8.75	125.15	119.90
25	14	1496	A	C5-N7-C8	-8.75	99.53	103.90
25	1H	1614	A	N1-C2-N3	8.75	133.67	129.30
25	1H	2430	A	N9-C4-C5	-8.75	102.30	105.80
25	1H	1614	A	N7-C8-N9	8.74	118.17	113.80
25	1H	2688	U	N1-C2-N3	8.74	120.14	114.90
25	14	867	C	O5'-P-OP1	-8.74	97.83	105.70
25	1H	2501	C	C6-N1-C2	8.73	123.79	120.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
25	1H	1825	A	N1-C6-N6	-8.72	113.37	118.60
25	1H	2713	A	N1-C2-N3	8.71	133.66	129.30
25	1H	1332	G	N3-C4-N9	-8.71	120.77	126.00
25	1H	117	G	O5'-P-OP2	-8.70	97.87	105.70
25	1H	207	A	N1-C6-N6	8.70	123.82	118.60
26	1J	60	C	C6-N1-C2	-8.70	116.82	120.30
25	1H	2597	G	C5-C6-N1	8.69	115.84	111.50
26	1J	47	C	C6-N1-C2	8.69	123.78	120.30
25	14	1899	G	C8-N9-C1'	8.68	138.28	127.00
25	1H	216	A	O5'-P-OP2	8.66	121.09	110.70
25	1H	2048	G	N3-C2-N2	-8.65	113.84	119.90
25	1H	1624	G	C8-N9-C4	8.65	109.86	106.40
25	14	741	G	O5'-P-OP2	8.65	121.08	110.70
25	14	915	C	N3-C2-O2	-8.65	115.85	121.90
25	14	2607	G	N9-C4-C5	-8.65	101.94	105.40
25	1H	1314	C	C2-N1-C1'	8.64	128.31	118.80
25	1H	2710	C	C5-C6-N1	-8.64	116.68	121.00
25	1H	860	U	C2-N1-C1'	8.64	128.07	117.70
25	14	2713	A	C5-N7-C8	-8.64	99.58	103.90
26	16	47	C	C6-N1-C2	8.63	123.75	120.30
25	1H	1517	G	OP1-P-O3'	8.63	124.18	105.20
25	1H	2067	G	N9-C4-C5	8.62	108.85	105.40
25	14	2607	G	N1-C2-N2	-8.62	108.44	116.20
4	3E	12	CYS	CA-CB-SG	8.62	129.51	114.00
25	1H	210	C	C6-N1-C2	8.62	123.75	120.30
25	14	117	G	O5'-P-OP2	-8.62	97.94	105.70
1	13	1158	C	N1-C2-O2	8.62	124.07	118.90
25	1H	2424	C	OP1-P-OP2	8.61	132.52	119.60
26	1J	88	C	N1-C2-O2	8.61	124.07	118.90
25	1H	2263	C	C6-N1-C2	-8.61	116.86	120.30
25	1H	2518	A	C5-N7-C8	-8.60	99.60	103.90
25	1H	1313	U	C2-N1-C1'	8.60	128.01	117.70
25	1H	1632	A	N1-C6-N6	8.58	123.75	118.60
25	1H	1603	A	C8-N9-C4	-8.58	102.37	105.80
25	1H	2028	U	C6-N1-C2	-8.58	115.85	121.00
25	14	1204	A	C2-N3-C4	-8.57	106.31	110.60
25	1H	1407	C	C6-N1-C2	-8.56	116.88	120.30
25	1H	216	A	C8-N9-C4	8.56	109.22	105.80
54	1G	1465	C	C6-N1-C2	-8.56	116.88	120.30
25	1H	2585	U	N1-C2-O2	8.55	128.79	122.80
25	1H	508	G	O5'-P-OP1	-8.55	98.00	105.70
25	1H	2392	A	C5-C6-N1	-8.55	113.43	117.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
25	1H	1373	A	O5'-P-OP2	-8.54	98.01	105.70
25	1H	1642	G	O5'-P-OP1	-8.54	98.02	105.70
54	1G	576	G	C4-N9-C1'	8.53	137.58	126.50
25	1H	513	A	C8-N9-C4	-8.52	102.39	105.80
25	1H	1626	G	N3-C2-N2	-8.52	113.94	119.90
25	1H	783	A	C4-C5-N7	8.51	114.95	110.70
25	1H	728	G	N9-C4-C5	-8.50	102.00	105.40
25	14	508	G	O5'-P-OP1	-8.49	98.06	105.70
25	1H	659	C	C6-N1-C2	8.48	123.69	120.30
25	14	1698	A	N7-C8-N9	8.48	118.04	113.80
26	16	40	U	C2-N1-C1'	8.46	127.85	117.70
25	1H	828	U	N3-C4-C5	-8.46	109.53	114.60
25	14	2591	C	N1-C2-O2	-8.46	113.83	118.90
1	13	990	C	C6-N1-C2	-8.45	116.92	120.30
25	14	1602	U	O5'-P-OP1	-8.45	98.09	105.70
25	14	786	C	N3-C4-N4	-8.45	112.08	118.00
25	1H	2447	G	C6-N1-C2	-8.45	120.03	125.10
25	1H	2428	G	O5'-P-OP1	-8.45	98.10	105.70
53	M5	33	ASN	C-N-CA	8.44	142.80	121.70
25	1H	632	A	O5'-P-OP2	8.44	120.83	110.70
35	35	147	LEU	CA-CB-CG	8.43	134.68	115.30
25	1H	1644	C	N3-C2-O2	-8.42	116.01	121.90
25	14	1827	C	C2-N3-C4	-8.42	115.69	119.90
54	1G	1442	G	N3-C4-C5	8.42	132.81	128.60
25	14	945	A	N7-C8-N9	8.42	118.01	113.80
25	1H	828	U	C2-N3-C4	8.41	132.05	127.00
25	1H	2392	A	N3-C4-C5	8.41	132.69	126.80
25	1H	2392	A	C8-N9-C4	-8.41	102.44	105.80
25	1H	2212	A	O4'-C1'-N9	8.40	114.92	108.20
25	1H	728	G	C8-N9-C1'	-8.39	116.09	127.00
25	14	320	A	O5'-P-OP2	-8.39	98.15	105.70
25	1H	94	G	N1-C6-O6	8.39	124.93	119.90
25	14	676	A	N1-C6-N6	8.39	123.63	118.60
25	14	779	U	N3-C4-O4	8.39	125.27	119.40
25	1H	2390	U	O5'-P-OP2	8.38	120.76	110.70
25	14	704	G	N3-C2-N2	-8.39	114.03	119.90
25	1H	1781	C	N3-C4-N4	-8.38	112.13	118.00
25	1H	2249	U	C5-C6-N1	8.38	126.89	122.70
25	1H	773	U	O5'-P-OP2	-8.38	98.16	105.70
25	1H	2070	G	N1-C2-N2	-8.38	108.66	116.20
25	1H	691	C	C5-C6-N1	-8.38	116.81	121.00
25	1H	34	C	N1-C2-O2	8.37	123.92	118.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
25	1H	741	G	C5-C6-O6	-8.37	123.58	128.60
25	14	915	C	C6-N1-C2	-8.37	116.95	120.30
1	13	1260	C	C6-N1-C2	-8.37	116.95	120.30
25	1H	1210	A	N7-C8-N9	8.37	117.98	113.80
25	14	74	A	N7-C8-N9	8.37	117.98	113.80
25	1H	1395	A	O5'-P-OP1	-8.37	98.17	105.70
25	1H	2688	U	C5-C4-O4	8.36	130.92	125.90
25	14	915	C	N1-C2-O2	8.36	123.92	118.90
25	1H	265	A	C5-N7-C8	-8.36	99.72	103.90
25	1H	783	A	N7-C8-N9	8.36	117.98	113.80
25	1H	831	G	C5-N7-C8	8.36	108.48	104.30
25	1H	2430	A	O5'-P-OP2	-8.35	98.19	105.70
25	1H	126	A	OP1-P-OP2	8.35	132.12	119.60
25	1H	2497	A	OP1-P-OP2	-8.35	107.08	119.60
1	13	974	A	O4'-C1'-N9	8.34	114.88	108.20
25	1H	679	C	C6-N1-C2	8.34	123.64	120.30
25	1H	1786	A	C4-C5-C6	8.33	121.17	117.00
25	1H	1499	C	N1-C2-O2	-8.33	113.90	118.90
25	1H	2258	C	C6-N1-C2	-8.33	116.97	120.30
54	1G	366	C	C6-N1-C2	8.32	123.63	120.30
25	14	2518	A	N3-C4-C5	8.32	132.63	126.80
25	1H	684	G	N9-C4-C5	8.31	108.72	105.40
25	14	71	A	C4-C5-N7	8.31	114.85	110.70
38	65	110	LEU	CA-CB-CG	8.31	134.41	115.30
25	1H	966	G	O5'-P-OP2	-8.31	98.22	105.70
26	1J	8	U	O5'-P-OP2	-8.30	98.23	105.70
25	14	265	A	C2-N3-C4	-8.30	106.45	110.60
25	14	74	A	C5-C6-N1	-8.30	113.55	117.70
25	14	2430	A	C5-C6-N1	-8.30	113.55	117.70
25	1H	2510	C	C6-N1-C2	-8.29	116.98	120.30
25	1H	1210	A	C4-C5-N7	8.29	114.84	110.70
25	1H	2252	G	N1-C6-O6	-8.28	114.93	119.90
25	14	2873	A	C5-N7-C8	-8.28	99.76	103.90
25	14	827	U	N1-C2-O2	-8.27	117.01	122.80
25	1H	2741	A	C8-N9-C4	8.26	109.11	105.80
25	1H	1817	G	N1-C6-O6	-8.26	114.94	119.90
25	1H	2507	C	C6-N1-C2	-8.26	117.00	120.30
25	1H	2446	G	C4-C5-N7	8.25	114.10	110.80
25	14	2518	A	O4'-C1'-N9	-8.25	101.60	108.20
25	14	74	A	C5-N7-C8	-8.25	99.78	103.90
25	1H	103	A	C8-N9-C4	8.25	109.10	105.80
25	14	1408	C	N1-C2-O2	-8.25	113.95	118.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
25	1H	1791	A	C2-N3-C4	8.25	114.72	110.60
25	1H	2469	A	N1-C6-N6	8.25	123.55	118.60
25	14	2430	A	C2-N3-C4	-8.25	106.48	110.60
25	1H	246	C	C5-C6-N1	-8.24	116.88	121.00
25	14	530	G	C5-C6-O6	-8.24	123.65	128.60
1	13	1529	G	C5-N7-C8	-8.24	100.18	104.30
25	1H	37	C	O5'-P-OP2	-8.24	98.29	105.70
25	1H	48	G	OP2-P-O3'	8.23	123.31	105.20
25	1H	821	A	C8-N9-C4	-8.23	102.51	105.80
25	1H	2036	C	C6-N1-C2	-8.22	117.01	120.30
25	14	1789	A	N1-C6-N6	-8.22	113.67	118.60
25	1H	1806	C	OP1-P-OP2	8.22	131.93	119.60
25	14	2623	G	N3-C4-C5	-8.22	124.49	128.60
25	1H	2623	G	N1-C6-O6	-8.21	114.97	119.90
25	1H	1786	A	OP1-P-O3'	8.21	123.26	105.20
25	1H	530	G	C8-N9-C4	-8.21	103.12	106.40
25	1H	1401	G	C8-N9-C4	-8.20	103.12	106.40
25	1H	1938	A	N1-C6-N6	8.20	123.52	118.60
25	1H	138	G	C5-N7-C8	-8.20	100.20	104.30
25	14	133	C	C6-N1-C2	8.20	123.58	120.30
25	1H	838	C	N1-C2-O2	-8.19	113.98	118.90
25	1H	2591	C	N1-C2-O2	-8.19	113.99	118.90
25	1H	2401	U	C5-C6-N1	8.18	126.79	122.70
25	14	2779	U	C2-N1-C1'	8.18	127.52	117.70
25	1H	1298	C	C6-N1-C2	-8.18	117.03	120.30
25	14	71	A	O4'-C1'-N9	-8.17	101.67	108.20
25	1H	200	U	O5'-P-OP1	-8.16	98.35	105.70
25	1H	1026	U	O4'-C1'-N1	8.16	114.73	108.20
25	1H	1681	G	N3-C4-C5	8.16	132.68	128.60
25	14	2548	G	O5'-P-OP1	-8.16	98.36	105.70
25	14	140	A	C8-N9-C4	-8.15	102.54	105.80
25	14	1651	G	C8-N9-C4	-8.15	103.14	106.40
25	1H	211	A	N9-C4-C5	-8.14	102.54	105.80
1	13	789	U	N1-C2-N3	8.14	119.79	114.90
25	14	2217	G	C5-C6-O6	-8.14	123.71	128.60
25	1H	774	A	C8-N9-C1'	8.14	142.35	127.70
25	1H	2713	A	C6-C5-N7	-8.14	126.60	132.30
54	1G	320	C	C6-N1-C2	8.14	123.56	120.30
25	14	1786	A	C6-C5-N7	-8.14	126.60	132.30
25	1H	1528	A	O4'-C1'-N9	8.14	114.71	108.20
1	13	792	A	C5-N7-C8	-8.13	99.83	103.90
25	1H	693	C	C5-C6-N1	-8.13	116.93	121.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
25	1H	193	U	C5-C6-N1	-8.13	118.63	122.70
25	1H	530	G	C5-C6-O6	8.13	133.48	128.60
25	1H	2017	U	N3-C4-O4	8.12	125.09	119.40
25	14	801	G	N1-C6-O6	-8.12	115.03	119.90
25	14	1829	A	O5'-P-OP1	-8.12	98.39	105.70
25	1H	445	C	C6-N1-C2	-8.12	117.05	120.30
25	1H	860	U	C4-C5-C6	8.12	124.57	119.70
25	14	330	A	C2-N3-C4	-8.12	106.54	110.60
1	13	760	G	C5-C6-O6	-8.11	123.73	128.60
25	1H	869	G	N1-C6-O6	-8.11	115.04	119.90
25	1H	1328	G	N3-C4-N9	8.11	130.86	126.00
25	1H	1698	A	C6-C5-N7	-8.11	126.62	132.30
25	1H	951	C	N3-C4-C5	8.10	125.14	121.90
25	1H	1558	A	P-O3'-C3'	8.10	129.41	119.70
25	14	945	A	C2-N3-C4	-8.09	106.55	110.60
25	1H	2056	G	OP1-P-O3'	8.09	123.00	105.20
25	1H	2252	G	C5-C6-O6	8.09	133.46	128.60
25	1H	1437	C	C6-N1-C2	-8.09	117.06	120.30
25	1H	2061	G	O5'-P-OP2	-8.09	98.42	105.70
25	1H	2058	A	N9-C4-C5	8.08	109.03	105.80
25	1H	2074	U	O5'-P-OP1	-8.08	98.43	105.70
25	1H	189	G	C5-C6-O6	-8.07	123.75	128.60
25	1H	972	G	O5'-P-OP1	8.07	120.39	110.70
25	1H	1634	A	O5'-P-OP2	-8.07	98.43	105.70
25	14	1145	C	C6-N1-C2	-8.06	117.08	120.30
25	1H	735	A	N7-C8-N9	-8.06	109.77	113.80
54	1G	690	G	C5-N7-C8	-8.06	100.27	104.30
1	13	623	C	C6-N1-C2	-8.05	117.08	120.30
25	1H	832	G	C8-N9-C4	-8.05	103.18	106.40
25	1H	1605	C	N1-C2-O2	-8.05	114.07	118.90
25	1H	2374	C	O5'-P-OP2	-8.04	98.46	105.70
1	13	1502	A	N1-C6-N6	8.04	123.42	118.60
25	14	1332	G	N1-C6-O6	8.04	124.72	119.90
25	14	2607	G	N3-C2-N2	8.04	125.53	119.90
25	1H	71	A	N1-C6-N6	8.03	123.42	118.60
25	1H	2782	G	N1-C6-O6	8.03	124.72	119.90
25	14	1644	C	N3-C2-O2	-8.03	116.28	121.90
25	1H	1670	C	C2-N3-C4	-8.03	115.89	119.90
25	14	1698	A	C5-C6-N6	-8.02	117.28	123.70
25	14	2374	C	C5-C6-N1	-8.02	116.99	121.00
25	1H	1021	A	C5-N7-C8	-8.01	99.89	103.90
22	1K	9	U	N1-C2-O2	8.01	128.41	122.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
54	1G	1259	C	C6-N1-C2	-8.01	117.10	120.30
45	H8	76	LEU	CA-CB-CG	8.01	133.71	115.30
25	1H	918	A	O5'-P-OP1	-8.00	98.50	105.70
25	14	1695	G	C6-C5-N7	-8.00	125.60	130.40
25	14	50	U	C6-N1-C2	8.00	125.80	121.00
54	1G	906	G	C5-C6-O6	-8.00	123.80	128.60
25	14	1325	G	O5'-P-OP2	8.00	120.29	110.70
25	1H	62	C	C6-N1-C2	7.99	123.50	120.30
1	13	1469	G	N7-C8-N9	7.99	117.09	113.10
25	14	2253	G	C5-C6-O6	-7.98	123.81	128.60
25	1H	1993	U	N1-C2-N3	7.98	119.69	114.90
25	1H	1819	A	C8-N9-C4	7.97	108.99	105.80
25	1H	1854	A	N1-C6-N6	-7.96	113.83	118.60
25	1H	2713	A	C5-C6-N1	-7.96	113.72	117.70
25	14	613	U	N3-C2-O2	-7.96	116.63	122.20
25	1H	693	C	C4-C5-C6	7.96	121.38	117.40
25	14	1286	A	N9-C4-C5	7.95	108.98	105.80
25	1H	1227	A	C8-N9-C4	7.95	108.98	105.80
27	19	272	ALA	N-CA-C	7.95	132.46	111.00
25	1H	2503	A	C5-C6-N6	-7.95	117.34	123.70
25	1H	1797	C	C5-C4-N4	-7.94	114.64	120.20
25	1H	1379	A	N1-C6-N6	7.94	123.36	118.60
25	1H	2518	A	N7-C8-N9	7.94	117.77	113.80
25	1H	2726	U	C5-C6-N1	-7.94	118.73	122.70
25	1H	798	G	N3-C4-C5	7.94	132.57	128.60
25	1H	1156	A	O5'-P-OP2	-7.94	98.56	105.70
36	45	82	ARG	N-CA-C	7.94	132.43	111.00
25	1H	1922	G	O5'-P-OP2	-7.93	98.56	105.70
25	14	113	G	C5-C6-O6	-7.93	123.84	128.60
25	1H	1970	A	O5'-P-OP2	-7.92	98.57	105.70
25	14	1604	C	O5'-P-OP1	-7.92	98.57	105.70
25	1H	2059	A	C8-N9-C4	7.92	108.97	105.80
25	14	2441	C	N3-C4-N4	-7.92	112.46	118.00
25	14	138	G	N7-C8-N9	7.91	117.06	113.10
54	1G	337	C	C6-N1-C2	-7.91	117.14	120.30
25	1H	1644	C	N1-C2-O2	7.91	123.64	118.90
1	13	1498	U	P-O3'-C3'	7.90	129.18	119.70
25	1H	2053	G	N3-C2-N2	-7.90	114.37	119.90
25	1H	1518	C	O5'-P-OP2	7.90	120.18	110.70
25	1H	203	C	O5'-P-OP2	7.89	120.17	110.70
25	1H	1670	C	C4-C5-C6	7.89	121.35	117.40
25	14	1824	G	C5-C6-O6	-7.89	123.86	128.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
25	1H	463	G	N1-C2-N2	-7.89	109.10	116.20
25	14	729	G	N1-C2-N2	7.89	123.30	116.20
25	1H	2048	G	N9-C4-C5	7.89	108.56	105.40
25	14	2217	G	N1-C6-O6	7.89	124.63	119.90
25	1H	657	U	O5'-P-OP2	-7.88	98.61	105.70
25	1H	835	A	N1-C6-N6	-7.88	113.87	118.60
35	35	62	LEU	N-CA-C	7.88	132.28	111.00
25	1H	774	A	O5'-P-OP2	-7.87	98.62	105.70
25	1H	1158	C	C5-C6-N1	-7.87	117.06	121.00
25	1H	853	G	O5'-P-OP2	-7.87	98.62	105.70
25	1H	2490	G	C2-N3-C4	-7.86	107.97	111.90
25	1H	2269	A	C8-N9-C4	7.86	108.94	105.80
25	1H	1496	A	C4-C5-N7	7.85	114.63	110.70
25	1H	786	C	C5-C4-N4	7.85	125.70	120.20
54	1G	576	G	C6-C5-N7	-7.85	125.69	130.40
25	14	1827	C	N3-C4-C5	7.85	125.04	121.90
1	13	748	C	C5-C6-N1	7.85	124.92	121.00
25	1H	1296	G	O5'-P-OP2	-7.85	98.64	105.70
25	1H	1658	C	C6-N1-C2	-7.85	117.16	120.30
25	1H	1790	C	N3-C4-C5	7.85	125.04	121.90
25	1H	2439	A	C5-N7-C8	-7.85	99.98	103.90
25	1H	1393	A	O5'-P-OP2	-7.85	98.64	105.70
25	14	528	A	N1-C2-N3	7.85	133.22	129.30
25	1H	1022	G	N3-C2-N2	-7.84	114.41	119.90
25	1H	1587	A	C8-N9-C4	-7.84	102.66	105.80
25	14	788	A	N1-C6-N6	7.84	123.31	118.60
25	1H	1325	G	N1-C6-O6	7.84	124.60	119.90
25	1H	185	U	C5-C6-N1	-7.84	118.78	122.70
25	1H	2459	A	C8-N9-C4	-7.83	102.67	105.80
25	1H	974	G	N1-C6-O6	7.83	124.60	119.90
25	1H	1363	C	N3-C4-C5	7.83	125.03	121.90
25	1H	71	A	N3-C4-C5	7.83	132.28	126.80
25	1H	2286	A	C8-N9-C4	-7.83	102.67	105.80
25	1H	845	G	N3-C4-C5	7.83	132.51	128.60
25	14	453	C	C6-N1-C2	7.83	123.43	120.30
25	1H	605	C	O5'-P-OP1	-7.83	98.66	105.70
1	13	1301	U	P-O3'-C3'	7.82	129.08	119.70
25	14	2439	A	N7-C8-N9	7.82	117.71	113.80
25	14	2599	G	N1-C6-O6	-7.82	115.21	119.90
25	14	945	A	C5-C6-N6	-7.82	117.45	123.70
25	14	2873	A	C8-N9-C4	-7.82	102.67	105.80
25	1H	1969	A	OP1-P-OP2	-7.81	107.88	119.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
25	14	2619	C	C6-N1-C2	7.81	123.42	120.30
25	1H	1189	A	C4-C5-N7	7.80	114.60	110.70
25	14	1614	A	O4'-C1'-N9	7.80	114.44	108.20
25	1H	1616	A	C5-C6-N6	-7.80	117.46	123.70
25	14	1437	C	C6-N1-C2	-7.80	117.18	120.30
25	1H	1253	A	N9-C4-C5	-7.80	102.68	105.80
25	1H	1401	G	N7-C8-N9	7.80	117.00	113.10
25	14	746	A	O5'-P-OP2	7.80	120.06	110.70
25	14	2276	G	C5-C6-N1	-7.80	107.60	111.50
25	1H	1606	G	N9-C4-C5	-7.80	102.28	105.40
25	1H	1629	U	O5'-P-OP2	7.79	120.05	110.70
25	14	2607	G	N3-C4-N9	7.79	130.68	126.00
25	1H	1626	G	C8-N9-C4	-7.79	103.28	106.40
25	1H	2856	C	C6-N1-C2	-7.78	117.19	120.30
22	1K	85	A	O4'-C1'-N9	7.78	114.42	108.20
25	1H	2392	A	C4-C5-N7	7.78	114.59	110.70
55	1L	20	C	C5-C6-N1	7.78	124.89	121.00
25	14	2272	U	C6-N1-C2	-7.78	116.33	121.00
25	1H	1253	A	C5-C6-N6	-7.77	117.48	123.70
25	1H	141(A)	C	OP1-P-O3'	-7.77	88.11	105.20
25	1H	1973	G	C8-N9-C4	-7.77	103.29	106.40
25	14	1795	C	N1-C2-O2	-7.76	114.24	118.90
54	1G	865	A	C8-N9-C4	-7.76	102.70	105.80
25	1H	1022	G	C8-N9-C4	-7.76	103.30	106.40
25	1H	917	A	O5'-P-OP1	-7.75	98.72	105.70
25	14	2707	G	N1-C6-O6	-7.75	115.25	119.90
25	1H	667	U	N1-C2-O2	-7.75	117.37	122.80
25	1H	1950	G	O4'-C1'-N9	7.75	114.40	108.20
25	14	1518	C	O5'-P-OP1	-7.75	98.72	105.70
25	14	1786	A	C5-C6-N1	-7.75	113.83	117.70
25	1H	621	A	N1-C2-N3	7.75	133.18	129.30
25	14	970	C	O5'-P-OP1	-7.75	98.72	105.70
25	14	1391	U	O5'-P-OP2	7.75	120.00	110.70
25	14	1564	C	C6-N1-C2	-7.75	117.20	120.30
54	1G	36	C	C6-N1-C2	-7.75	117.20	120.30
25	1H	1528	A	N7-C8-N9	7.74	117.67	113.80
25	14	1379	A	C5-C6-N6	-7.74	117.51	123.70
25	14	1616	A	C5-N7-C8	-7.74	100.03	103.90
25	1H	1950	G	C4-N9-C1'	7.73	136.55	126.50
25	14	1680	U	O5'-P-OP1	-7.73	98.74	105.70
25	14	2501	C	C2-N1-C1'	-7.73	110.30	118.80
25	14	774	A	C4-C5-N7	7.73	114.56	110.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
25	1H	860	U	N1-C2-O2	7.73	128.21	122.80
25	1H	2598	A	C8-N9-C4	7.73	108.89	105.80
1	13	690	G	C2-N3-C4	-7.72	108.04	111.90
25	1H	2286	A	O5'-P-OP2	-7.72	98.75	105.70
25	1H	651	G	C8-N9-C4	-7.72	103.31	106.40
25	1H	1300	U	N1-C2-O2	-7.72	117.39	122.80
54	1G	576	G	N3-C4-N9	7.72	130.63	126.00
1	13	758	G	C4-C5-N7	7.72	113.89	110.80
25	14	752	A	N7-C8-N9	7.72	117.66	113.80
25	14	2459	A	C8-N9-C4	-7.71	102.71	105.80
25	1H	821	A	O5'-P-OP2	-7.71	98.76	105.70
25	14	1298	C	O5'-P-OP2	-7.71	98.76	105.70
26	1J	81	G	C4-C5-N7	7.71	113.88	110.80
25	14	2681	C	N3-C2-O2	-7.70	116.51	121.90
25	1H	729	G	N7-C8-N9	7.70	116.95	113.10
25	1H	2256	G	N3-C2-N2	7.70	125.29	119.90
25	14	681	G	C8-N9-C4	7.70	109.48	106.40
25	1H	673	C	O5'-P-OP1	7.69	119.93	110.70
1	13	1404	C	N1-C2-O2	-7.69	114.28	118.90
25	1H	1382	G	N1-C6-O6	7.68	124.51	119.90
25	1H	575	A	O5'-P-OP1	-7.68	98.79	105.70
25	1H	124	G	C8-N9-C4	7.68	109.47	106.40
25	1H	1900	A	C8-N9-C4	-7.68	102.73	105.80
25	1H	2544	G	C5-C6-N1	-7.68	107.66	111.50
25	14	1650	G	C8-N9-C4	-7.68	103.33	106.40
25	1H	1255	U	N1-C2-O2	-7.68	117.43	122.80
54	1G	1228	C	O5'-P-OP2	-7.67	98.79	105.70
25	14	774	A	C5-N7-C8	-7.67	100.06	103.90
25	1H	1300	U	O5'-P-OP2	-7.67	98.80	105.70
25	1H	788	A	C5-C6-N1	-7.67	113.87	117.70
25	14	693	C	C5-C6-N1	-7.67	117.17	121.00
25	1H	2490	G	C8-N9-C4	-7.66	103.33	106.40
25	1H	2525	G	C8-N9-C4	7.66	109.47	106.40
25	14	1321	A	C8-N9-C4	7.66	108.86	105.80
25	14	1899	G	C4-N9-C1'	-7.66	116.55	126.50
25	1H	683	C	N3-C4-C5	7.66	124.96	121.90
1	13	1502	A	C6-C5-N7	-7.66	126.94	132.30
25	14	2713	A	C6-C5-N7	-7.66	126.94	132.30
54	1G	503	C	C6-N1-C2	-7.65	117.24	120.30
25	1H	2229	C	C5-C6-N1	-7.65	117.17	121.00
25	14	1022	G	N9-C4-C5	7.65	108.46	105.40
25	1H	1829	A	OP1-P-OP2	7.65	131.07	119.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
25	14	2607	G	C8-N9-C4	7.65	109.46	106.40
25	14	1802	A	C6-N1-C2	-7.65	114.01	118.60
26	16	61	G	C8-N9-C4	-7.64	103.34	106.40
54	1G	576	G	C4-C5-C6	7.64	123.38	118.80
25	1H	94	G	C5-C6-O6	-7.64	124.02	128.60
25	14	1323	U	N1-C2-O2	-7.63	117.46	122.80
25	14	1894	C	N3-C2-O2	-7.63	116.56	121.90
25	1H	416	C	C5-C6-N1	-7.63	117.19	121.00
25	14	2035	G	O4'-C1'-N9	7.63	114.30	108.20
25	1H	211	A	N7-C8-N9	-7.63	109.99	113.80
54	1G	890	G	O4'-C1'-N9	7.63	114.30	108.20
25	14	1999	C	OP2-P-O3'	7.63	121.98	105.20
1	13	115	G	C8-N9-C4	-7.62	103.35	106.40
25	1H	74	A	C5-N7-C8	-7.62	100.09	103.90
25	1H	762	U	C2-N1-C1'	7.62	126.84	117.70
25	1H	1405	U	O5'-P-OP2	-7.62	98.84	105.70
25	1H	2450	A	N1-C6-N6	-7.62	114.03	118.60
25	14	1142	U	C2-N1-C1'	7.62	126.84	117.70
25	1H	774	A	C4-C5-C6	-7.61	113.19	117.00
25	1H	534	U	O5'-P-OP1	-7.61	98.85	105.70
25	1H	1382	G	C4-C5-N7	7.61	113.84	110.80
25	1H	246	C	C2-N3-C4	-7.61	116.09	119.90
25	1H	491	G	O5'-P-OP1	-7.60	98.86	105.70
54	1G	690	G	N3-C4-N9	-7.60	121.44	126.00
25	14	1396	U	O5'-P-OP1	-7.60	98.86	105.70
25	14	1496	A	C8-N9-C4	-7.60	102.76	105.80
54	1G	1529	G	C4-N9-C1'	7.60	136.38	126.50
25	1H	1210	A	C6-C5-N7	-7.60	126.98	132.30
25	14	2249	U	C6-N1-C2	-7.60	116.44	121.00
25	1H	2327	A	N1-C6-N6	-7.59	114.04	118.60
25	1H	973	A	N1-C2-N3	7.59	133.10	129.30
25	1H	2328	A	N1-C2-N3	7.59	133.10	129.30
1	13	1504	G	O5'-P-OP1	-7.59	98.87	105.70
25	1H	134	C	N3-C4-C5	7.59	124.94	121.90
54	1G	266	G	P-O3'-C3'	7.58	128.80	119.70
25	1H	1022	G	N9-C4-C5	7.58	108.43	105.40
1	13	748	C	C6-N1-C2	-7.58	117.27	120.30
25	1H	676	A	C6-N1-C2	7.58	123.15	118.60
25	1H	1603	A	N7-C8-N9	7.58	117.59	113.80
25	1H	663	G	C4-C5-C6	7.58	123.34	118.80
25	1H	2250	G	C8-N9-C4	-7.58	103.37	106.40
25	1H	1971	A	C2-N3-C4	7.57	114.39	110.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
25	1H	2439	A	P-O3'-C3'	7.57	128.78	119.70
1	13	760	G	C6-C5-N7	-7.57	125.86	130.40
25	1H	178	G	C8-N9-C4	7.57	109.43	106.40
25	1H	508	G	C5-N7-C8	-7.56	100.52	104.30
25	1H	594	U	C5-C6-N1	-7.56	118.92	122.70
25	1H	2508	G	N9-C4-C5	7.56	108.42	105.40
25	1H	629	G	N1-C6-O6	-7.56	115.36	119.90
25	1H	193	U	C4-C5-C6	7.55	124.23	119.70
25	14	2002	G	C4-C5-N7	7.55	113.82	110.80
23	2K	27	G	N1-C2-N2	7.55	122.99	116.20
25	1H	2392	A	N3-C4-N9	-7.55	121.36	127.40
25	14	1762	A	C5-C6-N1	-7.55	113.93	117.70
25	1H	71	A	N7-C8-N9	7.54	117.57	113.80
25	1H	777	A	N1-C2-N3	7.54	133.07	129.30
25	1H	845	G	C4-N9-C1'	-7.54	116.69	126.50
25	1H	1670	C	C5-C6-N1	-7.54	117.23	121.00
1	13	975	A	C5-N7-C8	-7.54	100.13	103.90
25	1H	967	C	O5'-P-OP1	7.54	119.75	110.70
25	1H	1241	A	C5-N7-C8	-7.54	100.13	103.90
25	1H	1370	C	O5'-P-OP2	7.54	119.75	110.70
25	14	74	A	N1-C2-N3	7.54	133.07	129.30
1	13	712	A	N1-C6-N6	-7.54	114.08	118.60
25	14	833	U	N3-C4-C5	-7.53	110.08	114.60
25	14	1899	G	N9-C4-C5	7.53	108.41	105.40
25	1H	115	C	N1-C2-O2	-7.53	114.38	118.90
25	1H	974	G	N3-C4-C5	7.53	132.37	128.60
25	14	855	G	C8-N9-C4	-7.53	103.39	106.40
25	14	1820	U	C6-N1-C2	7.53	125.52	121.00
25	1H	208	C	O5'-P-OP2	-7.53	98.93	105.70
25	1H	1255	U	N3-C4-O4	7.52	124.67	119.40
25	1H	1899	G	C5-N7-C8	-7.52	100.54	104.30
25	14	801	G	C4-C5-N7	-7.52	107.79	110.80
55	1L	83	C	N1-C2-O2	7.52	123.41	118.90
25	1H	621	A	C4-C5-N7	7.52	114.46	110.70
25	1H	913	U	O5'-P-OP2	-7.52	98.93	105.70
1	13	1469	G	C8-N9-C4	-7.51	103.39	106.40
54	1G	483	C	C6-N1-C2	7.51	123.31	120.30
1	13	1524	C	C6-N1-C2	7.51	123.31	120.30
25	1H	536	A	N1-C6-N6	-7.51	114.09	118.60
26	1J	114	G	C8-N9-C4	7.51	109.40	106.40
25	1H	945	A	C8-N9-C4	-7.51	102.80	105.80
25	1H	2331	G	C8-N9-C4	7.51	109.40	106.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
25	14	774	A	N1-C6-N6	7.51	123.10	118.60
25	1H	83	G	N1-C6-O6	7.50	124.40	119.90
25	14	1786	A	N9-C1'-C2'	7.50	123.75	114.00
25	1H	801	G	N1-C2-N3	7.50	128.40	123.90
25	1H	2544	G	N9-C4-C5	-7.50	102.40	105.40
25	14	1619	G	O5'-P-OP2	-7.50	98.95	105.70
25	1H	148	C	C2-N3-C4	-7.50	116.15	119.90
25	1H	2070	G	C8-N9-C4	7.50	109.40	106.40
25	14	71	A	N1-C6-N6	7.50	123.10	118.60
25	1H	590	A	O5'-P-OP2	7.50	119.69	110.70
25	1H	1271	G	O5'-P-OP2	-7.50	98.95	105.70
25	1H	1413	G	C8-N9-C4	-7.50	103.40	106.40
25	14	1599	C	C6-N1-C2	-7.50	117.30	120.30
25	1H	693	C	O5'-P-OP2	-7.49	98.96	105.70
25	1H	785	G	N1-C6-O6	-7.49	115.41	119.90
25	1H	1201	C	C5-C4-N4	-7.49	114.96	120.20
25	14	1142(A)	A	C2-N3-C4	-7.49	106.85	110.60
25	1H	784	A	N9-C4-C5	7.49	108.79	105.80
25	1H	195	A	OP2-P-O3'	7.48	121.66	105.20
25	1H	2574	G	C5-C6-N1	7.48	115.24	111.50
54	1G	1523	G	C4-C5-N7	-7.48	107.81	110.80
25	1H	698	C	C6-N1-C2	7.48	123.29	120.30
25	1H	1678	G	N7-C8-N9	7.48	116.84	113.10
40	C8	90	VAL	N-CA-C	-7.48	90.81	111.00
25	1H	1798	U	N3-C4-C5	7.47	119.08	114.60
25	14	2048	G	N1-C6-O6	-7.47	115.42	119.90
25	14	2426	A	N7-C8-N9	7.47	117.54	113.80
1	13	1266	G	N3-C4-N9	-7.47	121.52	126.00
54	1G	576	G	N3-C4-C5	-7.47	124.86	128.60
54	1G	1473	A	C8-N9-C4	7.47	108.79	105.80
25	14	1955	U	C5-C4-O4	7.47	130.38	125.90
25	14	1991	U	C5-C4-O4	7.47	130.38	125.90
25	1H	2360	A	C2-N3-C4	-7.47	106.87	110.60
25	1H	247	G	C5-C6-N1	7.46	115.23	111.50
25	1H	1148	A	N1-C6-N6	-7.46	114.12	118.60
25	14	40	C	N3-C2-O2	-7.46	116.68	121.90
25	14	1988	C	C5-C4-N4	-7.46	114.98	120.20
25	14	2415	G	N7-C8-N9	7.46	116.83	113.10
25	1H	832	G	O5'-P-OP1	7.46	119.65	110.70
25	1H	148	C	N3-C4-C5	7.46	124.88	121.90
54	1G	906	G	N1-C6-O6	7.46	124.37	119.90
25	1H	2574	G	C5-C6-O6	-7.45	124.13	128.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
25	1H	178	G	N7-C8-N9	-7.45	109.38	113.10
25	1H	1379	A	C5-N7-C8	-7.45	100.18	103.90
25	1H	1445	C	C6-N1-C2	-7.45	117.32	120.30
25	1H	1789	A	N1-C6-N6	-7.45	114.13	118.60
25	14	2713	A	C4-C5-N7	7.45	114.42	110.70
25	1H	2544	G	C6-C5-N7	-7.45	125.93	130.40
23	2K	17	C	N1-C2-O2	7.44	123.36	118.90
54	1G	503	C	C5-C6-N1	7.44	124.72	121.00
25	14	1698	A	N9-C4-C5	-7.44	102.82	105.80
25	1H	416	C	C6-N1-C2	7.44	123.28	120.30
25	1H	2552	U	N1-C2-N3	7.44	119.36	114.90
25	14	669	G	C8-N9-C4	-7.43	103.43	106.40
25	14	1569	A	O5'-P-OP2	-7.43	99.02	105.70
25	1H	1971	A	C6-N1-C2	-7.42	114.14	118.60
25	1H	2246	G	N3-C4-N9	7.42	130.46	126.00
25	1H	2330	G	C8-N9-C4	7.42	109.37	106.40
25	1H	2316	C	C6-N1-C2	-7.42	117.33	120.30
54	1G	576	G	C8-N9-C1'	-7.42	117.35	127.00
25	1H	663	G	N3-C4-C5	-7.42	124.89	128.60
25	1H	989	G	O5'-P-OP1	-7.42	99.02	105.70
25	14	1678	G	C5-N7-C8	-7.42	100.59	104.30
25	1H	1330	C	C6-N1-C2	-7.42	117.33	120.30
1	13	792	A	C6-C5-N7	-7.42	127.11	132.30
1	13	690	G	C5-N7-C8	-7.41	100.59	104.30
25	1H	2430	A	C5-C6-N6	-7.41	117.77	123.70
1	13	693	G	N1-C6-O6	-7.40	115.46	119.90
25	1H	1931	U	C5-C6-N1	-7.40	119.00	122.70
22	3K	54	C	C6-N1-C2	-7.40	117.34	120.30
25	1H	2461	C	N3-C4-N4	-7.40	112.82	118.00
25	14	750	A	N7-C8-N9	7.40	117.50	113.80
25	1H	2330	G	OP1-P-OP2	7.40	130.70	119.60
25	14	2441	C	N3-C2-O2	-7.40	116.72	121.90
25	14	2779	U	C6-N1-C1'	-7.40	110.84	121.20
25	14	2360	A	C8-N9-C4	7.40	108.76	105.80
25	14	2439	A	P-O3'-C3'	7.40	128.58	119.70
1	13	1266	G	N3-C4-C5	7.40	132.30	128.60
1	13	789	U	C4-C5-C6	7.39	124.14	119.70
25	1H	436	C	C6-N1-C2	7.39	123.26	120.30
25	1H	1669	A	C8-N9-C4	-7.39	102.84	105.80
54	1G	266	G	N3-C4-C5	-7.39	124.90	128.60
25	14	40	C	C6-N1-C2	-7.39	117.34	120.30
25	14	127	A	N7-C8-N9	-7.39	110.10	113.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
25	14	1342	A	C2-N3-C4	-7.39	106.90	110.60
25	1H	1287	A	C8-N9-C4	-7.39	102.84	105.80
25	14	768	G	OP1-P-OP2	7.39	130.69	119.60
25	1H	1257	C	N1-C2-O2	-7.39	114.47	118.90
54	1G	481	G	N3-C4-C5	-7.39	124.91	128.60
12	3A	27	LEU	CA-CB-CG	7.39	132.29	115.30
25	1H	445	C	O5'-P-OP1	-7.39	99.05	105.70
25	1H	783	A	C5-C6-N1	-7.38	114.01	117.70
25	14	736	C	O5'-P-OP2	7.38	119.56	110.70
25	1H	1298	C	C5-C6-N1	7.38	124.69	121.00
1	13	328	C	N1-C2-O2	7.38	123.33	118.90
25	14	2264	C	O5'-P-OP2	7.38	119.56	110.70
25	1H	1280	G	OP1-P-OP2	-7.38	108.53	119.60
25	1H	1637	A	C8-N9-C4	-7.38	102.85	105.80
25	14	2287	A	N3-C4-C5	7.38	131.96	126.80
25	1H	667	U	C5-C4-O4	-7.38	121.47	125.90
25	1H	1386	C	O5'-P-OP2	-7.38	99.06	105.70
53	Q8	32	LEU	CA-CB-CG	7.37	132.26	115.30
54	1G	690	G	N7-C8-N9	7.37	116.79	113.10
25	14	140	A	N1-C6-N6	7.37	123.02	118.60
25	14	1333	C	O5'-P-OP2	-7.37	99.07	105.70
25	1H	1606	G	C8-N9-C4	7.37	109.35	106.40
25	1H	678	C	C2-N3-C4	-7.36	116.22	119.90
25	1H	783	A	N3-C4-N9	-7.36	121.51	127.40
25	1H	2251	G	C4-C5-N7	-7.36	107.86	110.80
25	1H	524	U	N3-C2-O2	-7.36	117.05	122.20
25	1H	528	A	N3-C4-N9	-7.36	121.51	127.40
25	14	1253	A	C5-C6-N6	-7.36	117.81	123.70
25	1H	918	A	O5'-P-OP2	7.36	119.53	110.70
25	14	781	A	O5'-P-OP1	-7.36	99.08	105.70
1	13	1494	G	N1-C6-O6	-7.35	115.49	119.90
25	1H	123	G	C6-N1-C2	-7.35	120.69	125.10
25	1H	567	A	C5-C6-N6	-7.35	117.82	123.70
25	14	2415	G	C6-C5-N7	-7.35	125.99	130.40
25	1H	848	G	O5'-P-OP2	-7.35	99.09	105.70
25	1H	2346	A	C8-N9-C4	-7.35	102.86	105.80
25	1H	1617	C	O5'-P-OP2	7.35	119.52	110.70
1	13	449	C	C6-N1-C2	-7.34	117.36	120.30
1	13	656	C	C5-C6-N1	7.34	124.67	121.00
25	1H	997	G	N7-C8-N9	-7.34	109.43	113.10
25	14	1241	A	N1-C6-N6	7.34	123.00	118.60
25	1H	140	A	O4'-C1'-N9	7.34	114.07	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
25	14	97	C	O5'-P-OP2	-7.34	99.10	105.70
25	1H	265	A	N7-C8-N9	7.33	117.47	113.80
25	1H	1255	U	C4-C5-C6	7.33	124.10	119.70
25	1H	2452	C	C6-N1-C2	7.33	123.23	120.30
54	1G	481	G	N3-C4-N9	7.33	130.40	126.00
1	13	690	G	N1-C6-O6	7.33	124.30	119.90
25	1H	1284	A	N1-C6-N6	7.33	123.00	118.60
25	1H	1446	C	C6-N1-C2	-7.33	117.37	120.30
25	14	1616	A	N7-C8-N9	7.33	117.46	113.80
25	1H	2708	G	O5'-P-OP2	-7.33	99.11	105.70
1	13	720	C	C6-N1-C2	-7.32	117.37	120.30
1	13	1158	C	C2-N1-C1'	7.32	126.85	118.80
25	1H	2576	G	N9-C4-C5	-7.32	102.47	105.40
25	1H	83	G	C5-C6-O6	-7.32	124.21	128.60
25	1H	1805	U	O5'-P-OP1	-7.32	99.11	105.70
25	1H	2830	G	C5-N7-C8	-7.32	100.64	104.30
25	14	1281	G	C5-N7-C8	-7.32	100.64	104.30
54	1G	1442	G	N3-C4-N9	-7.31	121.61	126.00
25	14	2056	G	C5-C6-O6	-7.31	124.21	128.60
25	1H	734	A	OP1-P-OP2	7.31	130.57	119.60
25	1H	859	G	N3-C4-C5	7.31	132.25	128.60
25	1H	859	G	C4-N9-C1'	-7.31	117.00	126.50
25	14	2440	C	N1-C2-O2	7.31	123.28	118.90
1	13	882	C	C6-N1-C2	-7.31	117.38	120.30
25	14	1627	G	N9-C4-C5	-7.31	102.48	105.40
25	1H	2497	A	C6-N1-C2	-7.30	114.22	118.60
25	1H	131	G	C5-C6-O6	-7.30	124.22	128.60
25	14	2067	G	N9-C4-C5	7.30	108.32	105.40
25	1H	1624	G	N7-C8-N9	-7.30	109.45	113.10
25	14	932	G	N3-C4-N9	-7.30	121.62	126.00
25	1H	821	A	C4-C5-C6	7.30	120.65	117.00
25	14	562	U	N1-C2-O2	7.30	127.91	122.80
1	13	690	G	O4'-C1'-N9	7.29	114.03	108.20
25	14	312	G	O5'-P-OP1	-7.29	99.14	105.70
25	1H	587	C	O5'-P-OP1	-7.29	99.14	105.70
25	1H	1252	G	O4'-C1'-N9	-7.29	102.37	108.20
54	1G	690	G	C8-N9-C4	-7.29	103.49	106.40
25	14	2066	C	C6-N1-C2	-7.29	117.39	120.30
25	14	1770	G	C8-N9-C4	-7.28	103.49	106.40
1	13	335	C	C5-C6-N1	-7.28	117.36	121.00
25	1H	2618	G	N9-C4-C5	7.28	108.31	105.40
25	14	2261	C	O5'-P-OP2	-7.28	99.15	105.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	13	758	G	C5-C6-O6	-7.27	124.24	128.60
25	1H	1307	A	C5-C6-N6	-7.27	117.88	123.70
25	14	1905	C	OP2-P-O3'	7.27	121.19	105.20
25	1H	2755	C	C5-C6-N1	7.27	124.63	121.00
54	1G	186	C	C6-N1-C2	-7.27	117.39	120.30
25	1H	859	G	N3-C4-N9	-7.26	121.64	126.00
25	1H	2503	A	N1-C2-N3	-7.26	125.67	129.30
25	14	1189	A	N1-C6-N6	-7.26	114.24	118.60
25	1H	536	A	C6-N1-C2	-7.26	114.24	118.60
25	1H	1940	U	N3-C4-O4	7.26	124.48	119.40
1	13	690	G	N7-C8-N9	7.25	116.73	113.10
54	1G	866	C	C6-N1-C2	-7.25	117.40	120.30
1	13	1502	A	N9-C4-C5	-7.25	102.90	105.80
25	1H	863	A	C5-C6-N1	7.25	121.32	117.70
25	1H	1819	A	N9-C4-C5	-7.25	102.90	105.80
25	14	2001	A	C6-N1-C2	-7.25	114.25	118.60
25	1H	649	G	N1-C6-O6	7.25	124.25	119.90
25	1H	1778	U	OP2-P-O3'	7.24	121.13	105.20
25	1H	35	G	C5-C6-O6	7.24	132.94	128.60
25	1H	2623	G	N3-C4-C5	-7.24	124.98	128.60
25	14	963	U	O5'-P-OP1	-7.24	99.19	105.70
25	14	2598	A	O5'-P-OP2	7.24	119.39	110.70
25	1H	945	A	C5-C6-N6	-7.24	117.91	123.70
25	1H	252	G	O5'-P-OP1	7.23	119.38	110.70
25	1H	2440	C	O5'-P-OP1	-7.23	99.19	105.70
25	1H	1993	U	O5'-P-OP1	-7.23	99.19	105.70
25	14	2335	A	O4'-C1'-N9	7.23	113.98	108.20
25	14	803	U	O5'-P-OP1	7.22	119.37	110.70
1	13	1519	A	C5-C6-N6	7.22	129.48	123.70
25	1H	796	C	N3-C4-N4	-7.22	112.94	118.00
25	1H	1681	G	N3-C4-N9	-7.22	121.67	126.00
1	13	295	C	O5'-P-OP2	-7.22	99.20	105.70
25	14	774	A	C4-C5-C6	-7.22	113.39	117.00
25	1H	1598	C	C6-N1-C2	-7.21	117.41	120.30
25	14	132	G	C5-C6-N1	-7.21	107.89	111.50
25	14	961	C	N3-C4-C5	7.21	124.78	121.90
25	1H	1559	G	C5-C6-O6	-7.21	124.28	128.60
25	14	828	U	N3-C2-O2	-7.21	117.16	122.20
25	14	2821	A	C2-N3-C4	-7.20	107.00	110.60
25	14	1647	G	O5'-P-OP2	7.20	119.34	110.70
25	1H	391	G	N1-C6-O6	7.20	124.22	119.90
25	1H	2712(A)	A	N1-C6-N6	7.20	122.92	118.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
25	1H	1324	G	C5-C6-N1	-7.20	107.90	111.50
25	1H	984	A	O5'-P-OP2	-7.20	99.22	105.70
25	1H	2054	A	C8-N9-C4	-7.19	102.92	105.80
25	1H	1899	G	C8-N9-C1'	7.19	136.35	127.00
25	1H	2429	G	OP1-P-OP2	-7.19	108.81	119.60
25	14	1695	G	C4-C5-N7	7.19	113.68	110.80
23	2K	40	C	C5-C6-N1	7.19	124.59	121.00
25	1H	330	A	N1-C2-N3	7.19	132.89	129.30
25	1H	534	U	OP2-P-O3'	7.19	121.01	105.20
25	1H	2490	G	N1-C6-O6	7.19	124.21	119.90
25	14	383	U	C5-C6-N1	-7.19	119.11	122.70
54	1G	1469	G	N1-C6-O6	7.18	124.21	119.90
25	14	37	C	O5'-P-OP2	-7.18	99.23	105.70
25	1H	201	C	C6-N1-C2	7.18	123.17	120.30
25	14	2441	C	C5-C4-N4	7.17	125.22	120.20
25	14	1981	A	C8-N9-C4	7.17	108.67	105.80
25	1H	795	C	O5'-P-OP1	-7.17	99.25	105.70
25	14	1791	A	OP1-P-OP2	-7.17	108.84	119.60
25	1H	805	G	OP1-P-O3'	7.17	120.97	105.20
25	1H	2552	U	N1-C2-O2	-7.17	117.78	122.80
25	14	2338	G	O5'-P-OP1	-7.17	99.25	105.70
1	13	405	U	C6-N1-C2	-7.16	116.70	121.00
25	1H	1817	G	C5-C6-O6	7.16	132.90	128.60
54	1G	1322	C	N3-C2-O2	-7.16	116.89	121.90
25	1H	2254	C	N1-C2-O2	-7.16	114.60	118.90
25	14	1955	U	N1-C2-N3	7.16	119.20	114.90
25	1H	698	C	OP1-P-OP2	7.16	130.34	119.60
25	14	130	C	N3-C4-C5	7.16	124.76	121.90
26	1J	103	U	C5-C6-N1	-7.16	119.12	122.70
1	13	761	G	N3-C4-C5	-7.16	125.02	128.60
1	13	585	G	C8-N9-C4	7.16	109.26	106.40
22	1K	85	A	C5-N7-C8	-7.16	100.32	103.90
25	1H	930	U	C5-C4-O4	7.16	130.19	125.90
25	1H	1979	C	C6-N1-C2	-7.16	117.44	120.30
25	14	1981	A	C4-C5-C6	-7.15	113.42	117.00
22	1K	9	U	N3-C2-O2	-7.15	117.19	122.20
54	1G	121	C	N1-C2-O2	7.15	123.19	118.90
23	2K	40	C	C6-N1-C2	-7.15	117.44	120.30
25	14	2497	A	O5'-P-OP2	7.15	119.28	110.70
25	14	2586	C	C5-C4-N4	-7.15	115.20	120.20
25	1H	1623	G	C5-C6-O6	7.14	132.89	128.60
25	1H	1570	A	C8-N9-C4	7.14	108.66	105.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
25	14	1500	G	N1-C6-O6	7.14	124.19	119.90
25	14	1779	U	O5'-P-OP2	-7.14	99.27	105.70
25	1H	2329	G	C8-N9-C4	7.14	109.25	106.40
25	14	1332	G	N1-C2-N3	7.14	128.18	123.90
25	14	1796	U	O5'-P-OP2	7.14	119.27	110.70
25	1H	1633	G	OP2-P-O3'	7.13	120.89	105.20
25	14	676	A	N7-C8-N9	7.13	117.37	113.80
25	1H	482	A	C8-N9-C4	-7.13	102.95	105.80
25	1H	2278	A	C8-N9-C4	-7.13	102.95	105.80
25	1H	144	C	O5'-P-OP2	-7.13	99.28	105.70
25	1H	64	A	N1-C6-N6	-7.13	114.32	118.60
25	1H	508	G	C4-C5-N7	7.13	113.65	110.80
25	14	1780	A	C8-N9-C4	-7.13	102.95	105.80
25	14	2592	G	O5'-P-OP2	-7.12	99.29	105.70
25	14	71	A	N3-C4-C5	7.12	131.79	126.80
25	1H	56	A	N9-C4-C5	-7.12	102.95	105.80
25	1H	1021	A	N7-C8-N9	7.12	117.36	113.80
25	1H	587	C	P-O3'-C3'	7.12	128.24	119.70
25	14	1644	C	N1-C2-O2	7.12	123.17	118.90
25	14	1790	C	C6-N1-C2	7.12	123.15	120.30
25	1H	1192	G	N1-C6-O6	7.11	124.17	119.90
25	1H	1792	G	O5'-P-OP1	-7.11	99.30	105.70
25	14	1359	A	C8-N9-C4	7.11	108.64	105.80
25	1H	1403	C	O5'-P-OP1	-7.11	99.30	105.70
25	1H	2401	U	C6-N1-C2	-7.11	116.73	121.00
25	14	2457	U	N3-C2-O2	-7.11	117.23	122.20
25	1H	1959	G	C8-N9-C4	-7.10	103.56	106.40
25	1H	694	U	N3-C2-O2	-7.10	117.23	122.20
25	1H	2576	G	C8-N9-C4	7.10	109.24	106.40
25	14	779	U	C5-C4-O4	-7.10	121.64	125.90
25	14	829	A	OP1-P-OP2	7.10	130.25	119.60
25	14	2776	A	C8-N9-C4	-7.10	102.96	105.80
25	1H	259	G	N1-C6-O6	7.10	124.16	119.90
25	1H	1790	C	C6-N1-C2	7.10	123.14	120.30
25	1H	2287	A	C5-C6-N1	-7.09	114.15	117.70
25	14	2248	C	N3-C4-C5	-7.09	119.06	121.90
25	1H	1394	U	C2-N3-C4	7.09	131.25	127.00
25	14	830	G	C8-N9-C4	7.09	109.24	106.40
25	1H	2583	G	N1-C6-O6	-7.09	115.65	119.90
25	1H	59	U	C6-N1-C2	-7.09	116.75	121.00
25	1H	311	A	O5'-P-OP1	-7.09	99.32	105.70
25	1H	1249	U	C5-C4-O4	-7.09	121.65	125.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
25	1H	144	C	C2-N3-C4	-7.08	116.36	119.90
25	1H	1707	G	C5-C6-O6	-7.08	124.35	128.60
25	14	2584	U	C2-N1-C1'	7.08	126.20	117.70
25	1H	1204	A	N1-C2-N3	7.08	132.84	129.30
25	1H	2534	A	C8-N9-C4	7.08	108.63	105.80
25	14	1286	A	C8-N9-C4	-7.08	102.97	105.80
1	13	1203	C	C6-N1-C2	-7.08	117.47	120.30
25	1H	999	U	O5'-P-OP2	7.08	119.19	110.70
25	1H	783	A	N3-C4-C5	7.07	131.75	126.80
25	1H	836	G	C8-N9-C4	-7.07	103.57	106.40
25	14	450	G	C6-C5-N7	-7.07	126.16	130.40
25	14	1379	A	C5-N7-C8	-7.07	100.36	103.90
25	1H	787	U	OP1-P-OP2	-7.07	108.99	119.60
25	14	1608	A	N1-C6-N6	-7.07	114.36	118.60
25	1H	56	A	N1-C6-N6	7.07	122.84	118.60
25	1H	1122	G	C5-C6-O6	-7.07	124.36	128.60
25	1H	1819	A	N1-C6-N6	7.07	122.84	118.60
25	1H	1614	A	O5'-P-OP1	-7.07	99.34	105.70
25	1H	1936	A	O4'-C1'-N9	7.07	113.85	108.20
54	1G	1465	C	N1-C2-O2	7.07	123.14	118.90
54	1G	1354	C	C5-C6-N1	7.07	124.53	121.00
25	1H	252	G	O5'-P-OP2	-7.06	99.34	105.70
25	1H	1324	G	N1-C6-O6	7.06	124.14	119.90
25	14	1899	G	N1-C2-N3	7.06	128.14	123.90
25	14	2464	C	C6-N1-C2	7.06	123.12	120.30
1	13	789	U	C6-N1-C2	-7.06	116.76	121.00
25	1H	997	G	C8-N9-C4	7.06	109.22	106.40
25	1H	1471	A	C8-N9-C4	-7.06	102.98	105.80
25	14	2415	G	C8-N9-C4	-7.06	103.58	106.40
25	1H	195	A	P-O3'-C3'	7.06	128.17	119.70
26	16	12	C	C5-C6-N1	-7.06	117.47	121.00
25	14	2392	A	C6-N1-C2	7.06	122.83	118.60
25	14	2447	G	C5-C6-O6	-7.05	124.37	128.60
25	14	621	A	C2-N3-C4	-7.05	107.07	110.60
25	14	1249	U	N1-C2-O2	7.05	127.74	122.80
25	1H	1258	C	OP2-P-O3'	7.05	120.72	105.20
25	1H	2598	A	N9-C4-C5	-7.05	102.98	105.80
25	14	450	G	N1-C6-O6	7.05	124.13	119.90
25	14	40	C	N1-C2-O2	7.04	123.13	118.90
1	13	1195	C	C5-C6-N1	7.04	124.52	121.00
25	1H	801	G	N1-C2-N2	-7.04	109.87	116.20
25	1H	74	A	N1-C2-N3	7.04	132.82	129.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
25	1H	34	C	C2-N1-C1'	7.03	126.54	118.80
25	1H	115	C	N3-C2-O2	7.03	126.82	121.90
25	1H	1303	G	N1-C6-O6	-7.03	115.68	119.90
25	14	1342	A	N1-C2-N3	7.03	132.82	129.30
25	14	2278	A	N1-C2-N3	7.03	132.82	129.30
25	14	2714	G	O5'-P-OP2	-7.03	99.37	105.70
1	13	123	C	O5'-P-OP2	-7.03	99.37	105.70
25	1H	2430	A	C6-N1-C2	7.03	122.82	118.60
25	14	2250	G	OP1-P-OP2	7.03	130.14	119.60
25	14	2579	C	C4-C5-C6	-7.03	113.89	117.40
25	1H	678	C	N3-C4-C5	7.03	124.71	121.90
25	1H	1430	C	OP1-P-O3'	7.03	120.66	105.20
25	14	687	C	O5'-P-OP1	-7.03	99.38	105.70
25	14	2617	C	C6-N1-C2	7.03	123.11	120.30
25	1H	774	A	C4-N9-C1'	-7.02	113.66	126.30
25	1H	2249	U	O5'-P-OP1	-7.02	99.38	105.70
25	1H	2700	C	N3-C4-C5	7.02	124.71	121.90
25	14	1817	G	C5-C6-O6	7.02	132.81	128.60
25	14	1302	A	OP1-P-OP2	7.02	130.12	119.60
1	13	529	G	N1-C6-O6	7.02	124.11	119.90
25	1H	798	G	C8-N9-C4	7.01	109.21	106.40
25	1H	2052	G	OP2-P-O3'	7.01	120.62	105.20
25	1H	1899	G	N7-C8-N9	7.01	116.61	113.10
23	2K	62	C	C6-N1-C2	-7.01	117.50	120.30
25	1H	232	G	N9-C4-C5	-7.00	102.60	105.40
57	4L	21	C	C6-N1-C2	-7.00	117.50	120.30
25	1H	686	G	N9-C4-C5	-7.00	102.60	105.40
25	14	1809	A	O5'-P-OP2	7.00	119.09	110.70
25	1H	815	C	N3-C4-C5	6.99	124.70	121.90
54	1G	913	A	P-O3'-C3'	6.99	128.09	119.70
25	1H	996	A	C8-N9-C4	6.99	108.60	105.80
25	14	2374	C	C6-N1-C2	6.99	123.10	120.30
25	14	831	G	O5'-P-OP1	-6.99	99.41	105.70
25	14	2710	C	C6-N1-C2	6.99	123.10	120.30
25	14	2440	C	O5'-P-OP2	6.99	119.08	110.70
25	1H	265	A	C6-C5-N7	-6.99	127.41	132.30
25	1H	613	U	N3-C2-O2	-6.98	117.31	122.20
22	3K	33	C	C6-N1-C2	-6.98	117.51	120.30
25	1H	513	A	N7-C8-N9	6.98	117.29	113.80
25	1H	1513	C	C5-C6-N1	6.98	124.49	121.00
25	14	811	U	N1-C2-N3	6.98	119.09	114.90
25	14	2435	A	C8-N9-C4	-6.98	103.01	105.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
23	2K	10	G	C5-C6-O6	-6.98	124.41	128.60
25	14	456	C	N1-C2-O2	-6.98	114.71	118.90
25	14	1379	A	C4-C5-N7	6.98	114.19	110.70
23	2K	9	G	N1-C6-O6	-6.98	115.71	119.90
25	1H	974	G	C5-C6-O6	-6.97	124.42	128.60
25	1H	621	A	N7-C8-N9	6.97	117.28	113.80
25	1H	835	A	N9-C4-C5	6.97	108.59	105.80
25	1H	380	U	O5'-P-OP2	-6.97	99.43	105.70
25	1H	679	C	C5-C6-N1	-6.97	117.52	121.00
23	2K	24	C	N3-C4-N4	-6.97	113.12	118.00
25	14	1402	C	N1-C2-O2	-6.97	114.72	118.90
25	1H	2069	G	C6-C5-N7	-6.97	126.22	130.40
25	1H	2320	A	O5'-P-OP2	-6.97	99.43	105.70
25	1H	704	G	N9-C4-C5	6.96	108.19	105.40
25	1H	990	A	C8-N9-C4	-6.96	103.01	105.80
25	1H	1255	U	N3-C4-C5	-6.96	110.42	114.60
25	1H	2685	G	C5-C6-N1	-6.96	108.02	111.50
26	1J	88	C	N3-C2-O2	-6.96	117.03	121.90
25	14	686	G	C4-C5-N7	6.96	113.58	110.80
25	14	2072	G	OP1-P-OP2	-6.96	109.16	119.60
25	1H	780	G	C4-C5-N7	6.96	113.58	110.80
25	1H	2373	G	C2-N3-C4	-6.96	108.42	111.90
1	13	970	C	N1-C2-O2	6.95	123.07	118.90
25	1H	1613	G	N3-C2-N2	6.95	124.77	119.90
25	1H	1767	C	O5'-P-OP1	-6.95	99.44	105.70
25	1H	2278	A	N9-C4-C5	6.95	108.58	105.80
25	14	676	A	N3-C4-N9	-6.95	121.84	127.40
23	2K	6	G	C8-N9-C4	6.95	109.18	106.40
25	1H	1955	U	N1-C2-N3	6.95	119.07	114.90
54	1G	1346	A	P-O3'-C3'	6.95	128.04	119.70
25	14	992	C	N3-C2-O2	-6.95	117.04	121.90
25	14	1204	A	O4'-C1'-N9	6.94	113.75	108.20
25	1H	1302	A	N9-C4-C5	6.94	108.58	105.80
25	1H	1574	C	OP2-P-O3'	6.94	120.47	105.20
25	1H	2430	A	O5'-P-OP1	6.94	119.03	110.70
25	14	1762	A	C8-N9-C4	-6.94	103.02	105.80
25	1H	2018	G	C8-N9-C4	-6.94	103.62	106.40
25	1H	2679	A	O5'-P-OP2	-6.94	99.46	105.70
24	4K	16	A	C8-N9-C4	6.93	108.57	105.80
25	1H	2366	A	C8-N9-C4	-6.93	103.03	105.80
25	14	24	G	C4-C5-N7	6.93	113.57	110.80
25	14	213	A	C8-N9-C4	6.93	108.57	105.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
25	14	684	G	N7-C8-N9	6.93	116.56	113.10
25	14	1971	A	C5-C6-N1	6.92	121.16	117.70
25	1H	1325	G	C5-C6-O6	-6.92	124.45	128.60
1	13	900	A	C8-N9-C4	6.92	108.57	105.80
22	1K	9	U	C2-N1-C1'	6.92	126.00	117.70
25	1H	621	A	C6-C5-N7	-6.92	127.46	132.30
25	14	1333	C	O5'-P-OP1	6.92	119.00	110.70
25	14	2339	G	O5'-P-OP2	-6.92	99.47	105.70
25	1H	98	G	N1-C6-O6	6.92	124.05	119.90
25	14	1681	G	C5-N7-C8	-6.92	100.84	104.30
25	14	2237	G	N1-C2-N2	-6.92	109.98	116.20
26	16	44	G	C8-N9-C4	6.91	109.17	106.40
25	14	1786	A	N1-C2-N3	6.91	132.76	129.30
1	13	1158	C	N3-C2-O2	-6.91	117.06	121.90
25	1H	2513	G	O5'-P-OP2	-6.91	99.48	105.70
25	14	470	A	N1-C6-N6	6.91	122.75	118.60
25	1H	581	C	N1-C2-O2	-6.91	114.75	118.90
25	1H	624	C	O5'-P-OP2	6.91	118.99	110.70
25	14	582	G	C5-C6-O6	-6.91	124.45	128.60
25	14	2459	A	N7-C8-N9	6.91	117.25	113.80
25	1H	2062	A	C8-N9-C4	6.91	108.56	105.80
25	14	1627	G	N3-C2-N2	6.91	124.73	119.90
25	1H	769	G	N1-C2-N2	-6.91	109.98	116.20
25	1H	1202	C	N3-C4-C5	-6.91	119.14	121.90
25	1H	2491	U	C4-C5-C6	-6.91	115.56	119.70
25	14	2526	G	N3-C4-N9	-6.91	121.86	126.00
26	1J	7	G	C8-N9-C4	6.90	109.16	106.40
55	3L	2	G	C8-N9-C4	6.90	109.16	106.40
25	14	2401	U	C5-C6-N1	6.90	126.15	122.70
32	69	131	LYS	C-N-CD	-6.90	105.42	120.60
1	13	1529	G	C2-N3-C4	-6.90	108.45	111.90
25	1H	190	A	C8-N9-C4	6.90	108.56	105.80
26	16	10	C	O5'-P-OP1	-6.90	99.49	105.70
25	1H	1332	G	C5-C6-N1	-6.90	108.05	111.50
55	1L	48	C	C6-N1-C2	-6.90	117.54	120.30
25	14	1636	C	O5'-P-OP1	-6.90	99.49	105.70
25	1H	1998	G	N9-C4-C5	-6.90	102.64	105.40
25	14	1681	G	C4-C5-N7	6.90	113.56	110.80
25	1H	1193	G	O5'-P-OP1	6.89	118.97	110.70
54	1G	1286	A	C8-N9-C4	-6.89	103.04	105.80
25	1H	1819	A	C5-C6-N6	-6.89	118.19	123.70
25	1H	2232	U	N1-C2-N3	6.89	119.03	114.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
25	1H	2299	G	O5'-P-OP2	6.89	118.97	110.70
25	14	2211	G	C4-N9-C1'	6.89	135.46	126.50
25	1H	784	A	N1-C6-N6	-6.89	114.47	118.60
54	1G	197	A	C8-N9-C4	-6.89	103.04	105.80
25	14	729	G	C5-C6-O6	-6.89	124.47	128.60
25	14	1950	G	N7-C8-N9	6.89	116.54	113.10
1	13	254	G	O5'-P-OP1	-6.88	99.50	105.70
25	1H	271(B)	G	N3-C4-C5	-6.88	125.16	128.60
25	1H	683	C	C5-C4-N4	-6.88	115.38	120.20
25	1H	741	G	C4-C5-N7	6.88	113.55	110.80
25	1H	1142(A)	A	N3-C4-C5	6.88	131.62	126.80
25	1H	1657	C	OP1-P-O3'	6.88	120.35	105.20
25	14	2329	G	N1-C6-O6	-6.88	115.77	119.90
25	1H	623	G	C8-N9-C4	6.88	109.15	106.40
25	14	1145	C	C5-C6-N1	6.88	124.44	121.00
25	14	621	A	C5-N7-C8	-6.88	100.46	103.90
25	14	1314	C	N1-C2-O2	6.88	123.03	118.90
25	14	14	A	C5-N7-C8	-6.88	100.46	103.90
1	13	413	G	C2-N3-C4	6.88	115.34	111.90
25	1H	704	G	C8-N9-C4	-6.88	103.65	106.40
25	14	2388	A	O5'-P-OP2	-6.88	99.51	105.70
25	14	2873	A	C2-N3-C4	-6.88	107.16	110.60
25	14	768	G	O5'-P-OP2	-6.88	99.51	105.70
25	1H	2219	G	O5'-P-OP2	-6.87	99.51	105.70
25	1H	954	G	N3-C2-N2	-6.87	115.09	119.90
1	13	816	A	C8-N9-C4	-6.87	103.05	105.80
1	13	827	U	N1-C2-O2	6.87	127.61	122.80
25	14	2277	G	N1-C6-O6	-6.87	115.78	119.90
25	1H	2469	A	C4-C5-N7	6.87	114.13	110.70
26	16	12	C	C4-C5-C6	6.87	120.83	117.40
25	1H	780	G	N1-C6-O6	6.86	124.02	119.90
25	1H	2012	G	N3-C4-N9	6.86	130.12	126.00
25	14	1351	C	C5-C6-N1	-6.86	117.57	121.00
25	14	1964	G	N1-C6-O6	-6.86	115.78	119.90
1	13	757	U	O5'-P-OP2	-6.86	99.53	105.70
25	1H	923	C	C6-N1-C2	-6.86	117.56	120.30
54	1G	812	C	P-O3'-C3'	6.86	127.93	119.70
1	13	21	G	O5'-P-OP2	-6.86	99.53	105.70
25	14	2415	G	C4-N9-C1'	6.86	135.41	126.50
25	1H	1984	G	C5-N7-C8	6.85	107.73	104.30
1	13	1227	A	C5-N7-C8	-6.85	100.47	103.90
25	1H	1257	C	C2-N3-C4	-6.85	116.47	119.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
25	1H	1410	G	C4-N9-C1'	-6.85	117.59	126.50
25	14	1359	A	N7-C8-N9	-6.85	110.37	113.80
25	14	823	G	C5-C6-O6	6.85	132.71	128.60
25	1H	966	G	N3-C2-N2	6.85	124.69	119.90
25	1H	2280	G	C5-C6-N1	-6.85	108.08	111.50
25	14	465	G	C8-N9-C4	-6.85	103.66	106.40
25	14	1341	U	N3-C2-O2	6.85	126.99	122.20
25	1H	2422	A	O4'-C1'-N9	6.84	113.68	108.20
25	1H	1422	G	C8-N9-C4	-6.84	103.66	106.40
25	1H	2861	G	C6-C5-N7	-6.84	126.30	130.40
25	1H	1605	C	C2-N3-C4	-6.84	116.48	119.90
54	1G	1465	C	N3-C2-O2	-6.84	117.11	121.90
25	14	1812	A	N1-C2-N3	6.84	132.72	129.30
25	14	2046	G	N1-C6-O6	-6.84	115.80	119.90
25	1H	241	A	C8-N9-C4	-6.84	103.06	105.80
25	1H	1161	C	C6-N1-C2	-6.84	117.56	120.30
25	1H	676	A	O4'-C1'-N9	6.84	113.67	108.20
25	1H	930	U	N3-C4-O4	-6.84	114.61	119.40
25	1H	2238	G	O5'-P-OP2	-6.84	99.55	105.70
25	14	195	A	P-O3'-C3'	6.84	127.90	119.70
25	1H	1698	A	N1-C6-N6	6.83	122.70	118.60
25	14	2265	U	N3-C4-O4	6.83	124.18	119.40
25	1H	98	G	C5-C6-O6	-6.83	124.50	128.60
25	14	2609	U	C5-C6-N1	-6.83	119.28	122.70
1	13	1224	G	O5'-P-OP1	6.83	118.89	110.70
25	14	2872	G	C8-N9-C4	-6.83	103.67	106.40
54	1G	108	G	C2-N3-C4	6.83	115.31	111.90
25	14	2691	C	O5'-P-OP1	-6.83	99.56	105.70
25	1H	1343	G	N3-C4-C5	-6.82	125.19	128.60
25	1H	2509	G	C5-C6-N1	6.82	114.91	111.50
25	1H	2597	G	C6-N1-C2	-6.82	121.01	125.10
25	1H	141	A	O4'-C1'-N9	6.82	113.66	108.20
25	14	1313	U	C6-N1-C2	-6.82	116.91	121.00
25	14	1355	G	C8-N9-C4	-6.82	103.67	106.40
25	1H	105	C	C6-N1-C2	-6.82	117.57	120.30
55	1L	54	C	C6-N1-C2	-6.82	117.57	120.30
25	1H	2271	G	N3-C2-N2	6.82	124.67	119.90
25	14	179	G	C8-N9-C4	6.82	109.13	106.40
25	14	828	U	N3-C4-O4	-6.82	114.63	119.40
54	1G	660	G	C8-N9-C4	6.82	109.13	106.40
25	1H	2688	U	C4-C5-C6	6.81	123.79	119.70
25	14	2873	A	N1-C2-N3	6.81	132.71	129.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	13	975	A	C4-C5-N7	6.81	114.11	110.70
25	1H	2232	U	N3-C4-C5	-6.81	110.51	114.60
25	14	992	C	N1-C2-O2	6.81	122.99	118.90
25	14	1304	C	N1-C2-O2	6.81	122.99	118.90
25	14	1314	C	C2-N1-C1'	6.81	126.29	118.80
25	1H	397	G	N3-C4-C5	6.81	132.00	128.60
56	2L	24	C	O5'-P-OP1	-6.81	99.57	105.70
25	14	860	U	O5'-P-OP2	-6.81	99.57	105.70
25	14	1349	A	C5-N7-C8	-6.81	100.50	103.90
1	13	1277	C	C6-N1-C2	-6.81	117.58	120.30
25	1H	1008	C	O5'-P-OP1	-6.81	99.57	105.70
25	14	123	G	C5-C6-O6	-6.81	124.52	128.60
25	14	396	G	C4-C5-C6	6.81	122.89	118.80
25	14	1963	U	N1-C2-O2	6.81	127.57	122.80
25	1H	247	G	C8-N9-C4	6.80	109.12	106.40
25	1H	852	G	O5'-P-OP2	-6.80	99.58	105.70
26	16	99	A	OP1-P-OP2	6.80	129.81	119.60
25	14	2307	G	O4'-C1'-N9	6.80	113.64	108.20
25	1H	1192	G	O5'-P-OP2	-6.80	99.58	105.70
1	13	989	C	C6-N1-C2	-6.80	117.58	120.30
54	1G	865	A	N7-C8-N9	6.80	117.20	113.80
25	1H	1204	A	C5-N7-C8	-6.80	100.50	103.90
25	14	835	A	C2-N3-C4	6.80	114.00	110.60
25	14	2233	U	N1-C2-O2	-6.80	118.04	122.80
25	14	2291	U	C5-C4-O4	6.80	129.98	125.90
25	14	2350	C	O5'-P-OP2	-6.80	99.58	105.70
25	1H	1162	G	N9-C4-C5	6.79	108.12	105.40
23	2K	27	G	N3-C2-N2	-6.79	115.14	119.90
25	1H	2247	A	O5'-P-OP1	-6.79	99.59	105.70
54	1G	990	C	C6-N1-C2	-6.79	117.58	120.30
25	14	1305	C	N3-C2-O2	-6.79	117.14	121.90
25	14	2080	G	O5'-P-OP2	-6.79	99.58	105.70
25	1H	468	G	C4-C5-N7	6.79	113.52	110.80
25	1H	2073	C	OP2-P-O3'	6.79	120.14	105.20
25	1H	826	U	OP2-P-O3'	6.79	120.14	105.20
25	1H	1132	A	C8-N9-C4	-6.79	103.08	105.80
43	F8	67	GLY	N-CA-C	-6.79	96.13	113.10
25	1H	1271	G	N3-C4-N9	6.79	130.07	126.00
25	1H	2392	A	C2-N3-C4	-6.79	107.21	110.60
25	1H	1124	C	C4-C5-C6	6.79	120.79	117.40
25	1H	2501	C	C2-N1-C1'	-6.79	111.34	118.80
25	14	2512	C	C2-N3-C4	-6.79	116.51	119.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
25	1H	2234	G	N9-C4-C5	-6.78	102.69	105.40
25	1H	622	G	N3-C2-N2	6.78	124.65	119.90
25	1H	195	A	O5'-P-OP1	6.78	118.83	110.70
25	1H	1831	G	N3-C2-N2	-6.78	115.16	119.90
25	14	929	G	N1-C6-O6	6.78	123.97	119.90
25	14	1252	G	O4'-C1'-N9	-6.78	102.78	108.20
25	14	2276	G	O5'-P-OP1	-6.78	99.60	105.70
25	1H	1598	C	OP1-P-O3'	6.77	120.10	105.20
25	1H	1259	G	OP2-P-O3'	6.77	120.10	105.20
1	13	266	G	C5-N7-C8	-6.77	100.92	104.30
25	1H	1942	C	C4-C5-C6	-6.77	114.02	117.40
25	1H	2490	G	C5-C6-O6	-6.77	124.54	128.60
25	14	686	G	O5'-P-OP2	-6.77	99.61	105.70
25	14	2579	C	C5-C6-N1	6.77	124.38	121.00
25	1H	728	G	OP2-P-O3'	6.77	120.08	105.20
25	14	2707	G	C5-C6-N1	6.77	114.88	111.50
25	1H	974	G	C4-C5-N7	6.76	113.51	110.80
25	14	1448	G	C8-N9-C4	-6.76	103.69	106.40
25	1H	1404	C	C6-N1-C2	6.76	123.00	120.30
25	1H	2439	A	N1-C6-N6	6.76	122.66	118.60
25	1H	655	A	N7-C8-N9	6.76	117.18	113.80
25	1H	1660	C	C5-C4-N4	6.76	124.93	120.20
25	1H	2067	G	N7-C8-N9	6.76	116.48	113.10
25	1H	2069	G	OP2-P-O3'	6.76	120.07	105.20
25	1H	845	G	C8-N9-C1'	6.76	135.79	127.00
54	1G	1479	C	N3-C2-O2	-6.76	117.17	121.90
1	13	324	G	N3-C4-N9	-6.76	121.95	126.00
25	1H	1398	C	O5'-P-OP2	6.76	118.81	110.70
25	1H	2494	G	C5-C6-O6	6.76	132.65	128.60
25	1H	2674	G	N1-C2-N3	6.75	127.95	123.90
25	1H	673	C	C5-C4-N4	-6.75	115.47	120.20
25	1H	1595	G	O5'-P-OP1	-6.75	99.62	105.70
25	1H	1325	G	O5'-P-OP2	6.75	118.80	110.70
55	3L	54	C	C6-N1-C2	-6.75	117.60	120.30
25	1H	130	C	C6-N1-C2	6.75	123.00	120.30
25	1H	99	U	N3-C2-O2	-6.75	117.48	122.20
25	14	252	G	N1-C6-O6	-6.75	115.85	119.90
25	14	1950	G	C4-N9-C1'	6.75	135.27	126.50
25	1H	34	C	C6-N1-C1'	-6.75	112.70	120.80
25	1H	265	A	C4-C5-N7	6.75	114.07	110.70
25	1H	271(B)	G	P-O3'-C3'	6.75	127.80	119.70
25	1H	1799	G	C2-N3-C4	6.75	115.27	111.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
25	1H	2053	G	O5'-P-OP2	-6.75	99.63	105.70
25	1H	2457	U	N3-C2-O2	6.75	126.92	122.20
25	14	791	C	N3-C4-C5	6.75	124.60	121.90
27	11	217	ARG	CG-CD-NE	6.75	125.97	111.80
25	14	1700	A	O5'-P-OP2	6.74	118.79	110.70
25	1H	2584	U	N1-C2-O2	6.74	127.52	122.80
25	1H	508	G	N7-C8-N9	6.74	116.47	113.10
25	1H	1632	A	C4-C5-N7	6.74	114.07	110.70
25	14	775	G	C5-C6-N1	6.74	114.87	111.50
25	1H	557	U	C5-C6-N1	-6.74	119.33	122.70
54	1G	1528	U	C5-C6-N1	-6.74	119.33	122.70
25	14	1338	G	N3-C4-N9	6.74	130.04	126.00
25	14	2511	U	N3-C2-O2	-6.73	117.49	122.20
25	1H	700	G	N1-C6-O6	6.73	123.94	119.90
25	14	1950	G	N3-C4-C5	-6.73	125.24	128.60
26	1J	60	C	C5-C6-N1	6.73	124.36	121.00
22	1K	3	U	P-O3'-C3'	6.73	127.77	119.70
25	1H	468	G	N1-C6-O6	6.73	123.94	119.90
25	1H	742	G	C5-C6-O6	6.72	132.63	128.60
25	1H	1776	G	N9-C4-C5	-6.72	102.71	105.40
25	14	1762	A	N7-C8-N9	6.72	117.16	113.80
25	1H	55	G	C5-N7-C8	-6.72	100.94	104.30
25	1H	783	A	C4-C5-C6	6.72	120.36	117.00
26	1J	88	C	C2-N1-C1'	6.72	126.19	118.80
25	14	1965	C	C6-N1-C2	6.72	122.99	120.30
25	1H	1189	A	N9-C4-C5	-6.72	103.11	105.80
25	1H	1249	U	N3-C2-O2	6.72	126.90	122.20
25	14	460	A	N1-C6-N6	6.72	122.63	118.60
25	14	1827	C	N3-C2-O2	-6.72	117.20	121.90
25	1H	456	C	C6-N1-C2	6.72	122.99	120.30
25	1H	926	A	C8-N9-C4	-6.72	103.11	105.80
54	1G	1158	C	N1-C2-O2	6.72	122.93	118.90
54	1G	953	G	N1-C2-N2	-6.72	110.16	116.20
25	14	252	G	O5'-P-OP2	-6.72	99.66	105.70
25	14	1319	G	O5'-P-OP1	-6.72	99.66	105.70
25	1H	1661	G	N7-C8-N9	-6.71	109.74	113.10
25	14	2307	G	C4-N9-C1'	6.71	135.23	126.50
25	14	746	A	O5'-P-OP1	-6.71	99.66	105.70
25	14	1902	C	N3-C4-N4	-6.71	113.30	118.00
25	14	2067	G	N3-C2-N2	-6.71	115.20	119.90
25	1H	1284	A	C5-N7-C8	-6.71	100.55	103.90
25	14	278	A	OP1-P-O3'	6.71	119.96	105.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
25	14	1299	G	O5'-P-OP1	-6.71	99.66	105.70
25	14	1459	G	N3-C4-N9	-6.71	121.97	126.00
25	14	1698	A	C4-C5-C6	6.71	120.35	117.00
25	1H	2688	U	N3-C2-O2	-6.71	117.51	122.20
25	1H	2013	A	C8-N9-C4	6.71	108.48	105.80
25	14	2346	A	C5-C6-N1	-6.71	114.35	117.70
1	13	690	G	C4-C5-N7	6.70	113.48	110.80
25	1H	606	U	O5'-P-OP2	-6.70	99.67	105.70
25	14	2029	G	O5'-P-OP1	-6.70	99.67	105.70
25	14	2443	C	O5'-P-OP1	-6.70	99.67	105.70
25	1H	1971	A	C5-C6-N1	6.70	121.05	117.70
25	1H	528	A	O4'-C1'-N9	-6.70	102.84	108.20
25	1H	1535	U	C2-N1-C1'	6.70	125.74	117.70
26	16	7	G	C5-N7-C8	-6.70	100.95	104.30
25	14	1924	C	N1-C2-O2	-6.70	114.88	118.90
25	1H	1314	C	C6-N1-C1'	-6.70	112.76	120.80
25	1H	963	U	O5'-P-OP2	6.70	118.74	110.70
25	1H	2043	C	C6-N1-C2	-6.70	117.62	120.30
25	14	56	A	N1-C6-N6	-6.70	114.58	118.60
25	1H	211	A	N1-C6-N6	6.70	122.62	118.60
25	1H	691	C	N1-C2-O2	-6.70	114.88	118.90
25	1H	1637	A	N1-C6-N6	-6.70	114.58	118.60
25	1H	2263	C	N3-C4-C5	-6.70	119.22	121.90
25	14	1254	A	C5-C6-N6	-6.70	118.34	123.70
1	13	758	G	N3-C4-C5	6.69	131.95	128.60
25	14	444	C	N1-C2-O2	-6.69	114.88	118.90
1	13	792	A	C3'-C2'-C1'	-6.69	96.15	101.50
54	1G	1433	A	O5'-P-OP1	-6.69	99.68	105.70
54	1G	1529	G	C8-N9-C1'	-6.69	118.30	127.00
25	14	201	C	C2-N3-C4	-6.69	116.55	119.90
25	14	769	G	OP1-P-O3'	6.69	119.92	105.20
25	14	2490	G	C5-N7-C8	-6.69	100.95	104.30
25	1H	139	G	O5'-P-OP1	-6.69	99.68	105.70
25	1H	630	G	C8-N9-C4	6.69	109.08	106.40
25	1H	2548	G	N1-C6-O6	-6.69	115.89	119.90
25	14	2598	A	O5'-P-OP1	-6.69	99.68	105.70
25	1H	864	G	N3-C4-C5	-6.68	125.26	128.60
25	1H	1555	G	O5'-P-OP1	-6.68	99.69	105.70
25	1H	1831	G	C8-N9-C4	-6.68	103.73	106.40
25	1H	2715	C	N3-C4-C5	6.68	124.57	121.90
25	1H	827	U	O5'-P-OP2	-6.68	99.69	105.70
25	1H	729	G	C5-N7-C8	-6.68	100.96	104.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
25	1H	2063	C	C6-N1-C2	6.68	122.97	120.30
25	1H	141(A)	C	O5'-P-OP1	-6.68	99.69	105.70
25	1H	265	A	C2-N3-C4	-6.68	107.26	110.60
25	1H	859	G	C8-N9-C1'	6.68	135.68	127.00
25	14	783	A	N3-C4-C5	6.68	131.47	126.80
25	14	801	G	N9-C4-C5	6.68	108.07	105.40
25	1H	528	A	N3-C4-C5	6.67	131.47	126.80
25	1H	1660	C	N1-C2-O2	6.67	122.91	118.90
25	1H	2032	G	N3-C4-N9	-6.67	122.00	126.00
25	1H	2377	A	C8-N9-C4	6.67	108.47	105.80
1	13	318	G	N1-C6-O6	6.67	123.90	119.90
25	14	621	A	N7-C8-N9	6.67	117.14	113.80
25	1H	1254	A	N9-C4-C5	-6.67	103.13	105.80
25	1H	2525	G	C5-C6-O6	-6.67	124.60	128.60
26	16	40	U	C6-N1-C1'	-6.67	111.87	121.20
25	14	613	U	N1-C2-O2	6.67	127.47	122.80
25	1H	1489	U	N1-C2-N3	6.66	118.90	114.90
25	1H	974	G	OP1-P-OP2	6.66	129.59	119.60
25	1H	1644	C	C6-N1-C2	-6.66	117.64	120.30
25	1H	1471	A	N7-C8-N9	6.66	117.13	113.80
25	1H	1573	G	OP2-P-O3'	6.66	119.86	105.20
25	1H	1122	G	N1-C6-O6	6.66	123.89	119.90
25	1H	1254	A	C8-N9-C4	6.66	108.46	105.80
25	1H	1594	G	O5'-P-OP2	6.66	118.69	110.70
25	1H	1825	A	N1-C2-N3	6.66	132.63	129.30
25	1H	1830	C	N1-C2-O2	-6.66	114.91	118.90
25	1H	2446	G	C5-C6-O6	-6.66	124.61	128.60
25	14	791	C	C2-N1-C1'	-6.66	111.48	118.80
25	14	2712	U	C5-C4-O4	6.66	129.90	125.90
25	1H	904	C	C6-N1-C2	-6.66	117.64	120.30
1	13	1187	G	C4-N9-C1'	6.66	135.15	126.50
25	1H	415	A	N1-C6-N6	6.66	122.59	118.60
25	1H	807	U	OP1-P-OP2	6.66	129.58	119.60
25	14	1489	U	C2-N1-C1'	-6.66	109.71	117.70
25	14	1489	U	O4'-C1'-N1	6.65	113.52	108.20
54	1G	353	A	C5-N7-C8	-6.65	100.57	103.90
25	14	1253	A	N1-C6-N6	6.65	122.59	118.60
25	14	2588	G	N1-C6-O6	-6.65	115.91	119.90
54	1G	197	A	N7-C8-N9	6.65	117.12	113.80
25	14	515	A	C8-N9-C4	-6.65	103.14	105.80
25	14	566	U	C6-N1-C2	6.65	124.99	121.00
25	14	1657	C	C2-N3-C4	-6.65	116.58	119.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
25	14	2321	G	C8-N9-C4	-6.65	103.74	106.40
25	1H	182	A	N9-C4-C5	-6.65	103.14	105.80
25	14	2599	G	C5-C6-O6	6.64	132.59	128.60
25	1H	623	G	N9-C4-C5	-6.64	102.74	105.40
25	1H	1349	A	C4-C5-N7	6.64	114.02	110.70
25	1H	1427	A	N9-C4-C5	6.64	108.46	105.80
25	1H	1940	U	C4-C5-C6	6.64	123.68	119.70
25	1H	1559	G	N3-C4-C5	6.64	131.92	128.60
25	14	1820	U	OP1-P-O3'	6.64	119.80	105.20
25	1H	567	A	N1-C6-N6	6.63	122.58	118.60
25	1H	1839	G	C8-N9-C1'	-6.63	118.38	127.00
25	1H	2346	A	C5-N7-C8	-6.63	100.58	103.90
25	1H	2401	U	N3-C2-O2	-6.63	117.56	122.20
25	14	196	A	O4'-C1'-N9	6.63	113.51	108.20
25	1H	622	G	N1-C2-N2	-6.63	110.23	116.20
1	13	965	A	N1-C6-N6	6.63	122.58	118.60
25	1H	1006	C	O5'-P-OP1	-6.63	99.73	105.70
25	1H	1698	A	C5-N7-C8	-6.63	100.59	103.90
25	1H	2443	C	N3-C4-N4	6.63	122.64	118.00
25	1H	751	A	OP1-P-OP2	-6.63	109.66	119.60
54	1G	972	C	C6-N1-C2	-6.63	117.65	120.30
25	14	1253	A	N9-C4-C5	-6.63	103.15	105.80
25	14	1651	G	N7-C8-N9	6.63	116.41	113.10
25	1H	928	G	N1-C6-O6	6.62	123.88	119.90
25	1H	1544	C	N1-C2-O2	6.62	122.87	118.90
25	1H	617	G	C8-N9-C4	6.62	109.05	106.40
25	1H	1274	A	C8-N9-C4	-6.62	103.15	105.80
25	14	738	G	N7-C8-N9	6.62	116.41	113.10
25	1H	2503	A	N9-C4-C5	-6.62	103.15	105.80
25	1H	2069	G	N1-C6-O6	6.62	123.87	119.90
25	14	1780	A	N1-C2-N3	6.62	132.61	129.30
25	1H	965	C	OP1-P-OP2	6.61	129.52	119.60
25	1H	2265	U	O5'-P-OP1	-6.61	99.75	105.70
25	1H	1773	A	O5'-P-OP1	6.61	118.64	110.70
25	1H	1410	G	C8-N9-C4	6.61	109.05	106.40
25	1H	2443	C	C5-C4-N4	-6.61	115.57	120.20
25	1H	536	A	N9-C4-C5	6.61	108.44	105.80
25	1H	2258	C	O5'-P-OP1	-6.61	99.75	105.70
25	1H	864	G	N3-C4-N9	6.60	129.96	126.00
25	14	1820	U	C5-C6-N1	-6.60	119.40	122.70
25	14	776	G	N3-C2-N2	-6.60	115.28	119.90
25	1H	826	U	C4-C5-C6	6.60	123.66	119.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
25	1H	860	U	C6-N1-C1'	-6.60	111.96	121.20
25	1H	2689	U	P-O3'-C3'	6.60	127.62	119.70
54	1G	1053	G	OP2-P-O3'	6.60	119.72	105.20
25	14	772	C	C4-C5-C6	6.60	120.70	117.40
25	14	2713	A	N7-C8-N9	6.60	117.10	113.80
25	1H	2238	G	OP1-P-OP2	6.60	129.49	119.60
25	14	2364	C	C5-C6-N1	-6.60	117.70	121.00
25	1H	769	G	N3-C2-N2	6.59	124.52	119.90
25	1H	1634	A	OP1-P-OP2	6.59	129.49	119.60
25	1H	2755	C	C6-N1-C2	-6.59	117.66	120.30
25	14	450	G	C5-C6-O6	-6.59	124.64	128.60
1	13	320	C	C6-N1-C2	6.59	122.94	120.30
25	14	783	A	C5-C6-N1	-6.59	114.40	117.70
1	13	1198	G	O5'-P-OP1	-6.59	99.77	105.70
25	14	671	C	N1-C2-N3	6.59	123.81	119.20
25	14	1950	G	N1-C6-O6	-6.59	115.95	119.90
1	13	792	A	N9-C4-C5	-6.59	103.17	105.80
25	1H	973	A	C5-C6-N1	-6.59	114.41	117.70
25	14	1220	A	N1-C6-N6	-6.59	114.65	118.60
25	1H	197	A	OP2-P-O3'	6.58	119.69	105.20
25	1H	2070	G	N3-C4-N9	6.58	129.95	126.00
25	1H	2513	G	C8-N9-C4	-6.58	103.77	106.40
1	13	811	C	C2-N3-C4	-6.58	116.61	119.90
23	2K	27	G	C5-C6-O6	-6.58	124.65	128.60
25	1H	1678	G	N1-C6-O6	6.58	123.85	119.90
1	13	1299	A	C4-C5-C6	6.58	120.29	117.00
25	1H	247	G	N1-C6-O6	-6.58	115.95	119.90
25	14	1281	G	C4-C5-N7	6.58	113.43	110.80
25	1H	2506	U	N3-C2-O2	-6.58	117.60	122.20
25	14	1315	C	N3-C4-N4	-6.58	113.40	118.00
1	13	1335	C	C6-N1-C2	6.58	122.93	120.30
25	1H	2374	C	C4-C5-C6	6.58	120.69	117.40
25	1H	981	A	N1-C2-N3	-6.57	126.01	129.30
25	1H	1791	A	O5'-P-OP1	-6.57	99.78	105.70
25	14	1277	G	C8-N9-C4	6.57	109.03	106.40
25	1H	328	U	N3-C4-C5	-6.57	110.66	114.60
25	14	1790	C	N3-C2-O2	6.57	126.50	121.90
1	13	1455	G	C8-N9-C4	6.57	109.03	106.40
25	1H	2039	C	C6-N1-C2	-6.57	117.67	120.30
25	14	728	G	N3-C4-N9	6.57	129.94	126.00
25	1H	330	A	C5-N7-C8	-6.57	100.62	103.90
25	14	530	G	N7-C8-N9	-6.57	109.82	113.10

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
25	14	2526	G	N3-C4-C5	6.57	131.88	128.60
25	1H	263	C	N3-C2-O2	-6.57	117.31	121.90
25	1H	528	A	C5-N7-C8	-6.57	100.62	103.90
25	1H	1316	U	C5-C4-O4	6.57	129.84	125.90
25	14	249	C	C6-N1-C2	-6.57	117.67	120.30
25	1H	1781	C	C5-C4-N4	6.56	124.79	120.20
25	1H	2439	A	O4'-C1'-N9	-6.56	102.95	108.20
25	14	1336	A	O5'-P-OP2	-6.56	99.79	105.70
25	14	1786	A	N3-C4-C5	6.56	131.39	126.80
25	1H	426	C	O5'-P-OP1	-6.56	99.80	105.70
25	1H	740	U	OP1-P-O3'	-6.56	90.77	105.20
25	1H	2446	G	C6-C5-N7	-6.56	126.46	130.40
25	14	1905	C	P-O3'-C3'	6.56	127.57	119.70
25	14	2366	A	O5'-P-OP2	-6.56	99.80	105.70
25	14	921	G	C8-N9-C4	-6.56	103.78	106.40
1	13	1502	A	C2-N3-C4	-6.56	107.32	110.60
25	1H	74	A	N7-C8-N9	6.55	117.08	113.80
25	1H	979	G	N3-C2-N2	-6.55	115.31	119.90
25	14	2610	C	N1-C2-O2	6.55	122.83	118.90
1	13	584	G	N3-C4-C5	-6.55	125.32	128.60
25	1H	691	C	C5-C4-N4	-6.55	115.61	120.20
25	1H	508	G	C6-C5-N7	-6.55	126.47	130.40
25	1H	752	A	P-O3'-C3'	6.55	127.56	119.70
1	13	791	G	N3-C4-C5	-6.55	125.33	128.60
25	1H	1302	A	N1-C6-N6	-6.55	114.67	118.60
25	1H	1191	G	N7-C8-N9	-6.55	109.83	113.10
25	14	1904	G	N3-C4-C5	-6.55	125.33	128.60
25	1H	919	G	C8-N9-C4	-6.55	103.78	106.40
25	1H	1410	G	N7-C8-N9	-6.55	109.83	113.10
25	1H	2070	G	C5-N7-C8	6.54	107.57	104.30
25	1H	127	A	C5-C6-N6	-6.54	118.47	123.70
25	14	684	G	N9-C4-C5	6.54	108.02	105.40
25	1H	1249	U	N1-C2-O2	-6.54	118.22	122.80
25	1H	2365	G	C5-C6-O6	-6.54	124.67	128.60
54	1G	121	C	C2-N1-C1'	6.54	126.00	118.80
25	1H	1413	G	N7-C8-N9	6.54	116.37	113.10
25	1H	1969	A	C5-N7-C8	6.54	107.17	103.90
1	13	1529	G	C4-C5-N7	6.54	113.42	110.80
25	1H	214	G	N3-C4-N9	6.54	129.92	126.00
25	1H	481	G	O5'-P-OP2	-6.54	99.82	105.70
25	14	1400	G	O5'-P-OP2	-6.53	99.82	105.70
25	1H	56	A	O5'-P-OP1	-6.53	99.82	105.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
25	1H	1305	C	C6-N1-C2	6.53	122.91	120.30
25	14	1382	G	O5'-P-OP2	-6.53	99.82	105.70
25	1H	815	C	C2-N3-C4	-6.53	116.64	119.90
25	14	1258	C	N1-C2-O2	-6.53	114.98	118.90
25	14	1777	U	N1-C2-N3	6.53	118.82	114.90
25	14	1616	A	C2-N3-C4	-6.52	107.34	110.60
25	14	2070	G	C2-N3-C4	-6.52	108.64	111.90
25	1H	777	A	C6-N1-C2	-6.52	114.69	118.60
54	1G	267	C	N1-C2-O2	6.52	122.81	118.90
25	1H	411	G	C8-N9-C4	-6.52	103.79	106.40
25	1H	1893	C	N3-C4-N4	-6.52	113.44	118.00
35	78	33	ARG	NE-CZ-NH1	-6.52	117.04	120.30
54	1G	503	C	N3-C4-C5	-6.52	119.29	121.90
25	14	2449	U	N3-C4-O4	6.52	123.96	119.40
25	1H	693	C	C5-C4-N4	6.51	124.76	120.20
25	1H	2287	A	N1-C2-N3	6.51	132.56	129.30
25	1H	2387	U	OP2-P-O3'	6.51	119.53	105.20
25	14	1960	A	N1-C6-N6	-6.51	114.69	118.60
26	1J	29	A	N1-C6-N6	6.51	122.51	118.60
25	14	1681	G	N3-C4-C5	6.51	131.86	128.60
25	1H	1360	A	N1-C6-N6	6.51	122.51	118.60
25	1H	1843	C	C2-N3-C4	-6.51	116.64	119.90
25	1H	1942	C	C5-C6-N1	6.51	124.26	121.00
25	1H	2302	G	C5-C6-O6	6.51	132.51	128.60
25	14	2276	G	N3-C2-N2	-6.51	115.34	119.90
25	1H	1281	G	O5'-P-OP2	6.51	118.51	110.70
25	14	1965	C	C2-N1-C1'	-6.51	111.64	118.80
25	1H	774	A	N1-C6-N6	6.51	122.50	118.60
25	1H	2449	U	C6-N1-C2	-6.51	117.10	121.00
25	14	1953	A	O5'-P-OP2	6.51	118.51	110.70
1	13	1054	C	C5-C6-N1	6.50	124.25	121.00
25	1H	697	C	O5'-P-OP1	-6.50	99.85	105.70
25	1H	1632	A	C5-N7-C8	-6.50	100.65	103.90
25	1H	1303	G	C5-C6-O6	6.50	132.50	128.60
25	1H	2566	A	C8-N9-C4	-6.50	103.20	105.80
1	13	985	C	O5'-P-OP1	-6.50	99.85	105.70
25	14	1821	A	C6-N1-C2	-6.50	114.70	118.60
25	1H	2002	G	N1-C6-O6	6.50	123.80	119.90
25	1H	639	U	C4-C5-C6	6.50	123.60	119.70
25	1H	693	C	N3-C4-N4	-6.50	113.45	118.00
25	1H	1271	G	N1-C2-N2	-6.50	110.35	116.20
25	1H	1325	G	C6-C5-N7	-6.50	126.50	130.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
25	1H	1342	A	N1-C6-N6	6.50	122.50	118.60
25	14	515	A	N9-C4-C5	6.50	108.40	105.80
1	13	810	C	N1-C2-O2	-6.50	115.00	118.90
25	14	1475	G	N7-C8-N9	6.50	116.35	113.10
1	13	966	G	C5-C6-O6	-6.49	124.70	128.60
25	1H	821	A	N9-C4-C5	6.49	108.40	105.80
25	14	834	C	OP2-P-O3'	6.49	119.48	105.20
25	14	1694	C	C6-N1-C2	6.49	122.90	120.30
1	13	811	C	C6-N1-C2	6.49	122.90	120.30
25	1H	2446	G	C5-N7-C8	-6.49	101.06	104.30
25	1H	688	U	O5'-P-OP2	-6.49	99.86	105.70
25	14	199	A	C2-N3-C4	6.49	113.84	110.60
25	1H	468	G	C5-C6-O6	-6.49	124.71	128.60
25	1H	1185	C	C6-N1-C2	-6.49	117.70	120.30
25	14	265	A	C5-N7-C8	-6.49	100.66	103.90
25	1H	214	G	N3-C4-C5	-6.49	125.36	128.60
25	14	1761	C	N1-C2-O2	-6.49	115.01	118.90
22	3K	85	A	O5'-P-OP1	-6.48	99.86	105.70
22	1K	55	U	N1-C2-O2	6.48	127.34	122.80
25	1H	2430	A	C8-N9-C4	6.48	108.39	105.80
54	1G	353	A	N7-C8-N9	6.48	117.04	113.80
25	14	672	C	N1-C2-N3	6.48	123.74	119.20
25	14	1618	A	C8-N9-C4	-6.48	103.21	105.80
1	13	324	G	N3-C4-C5	6.48	131.84	128.60
1	13	452	A	C8-N9-C4	6.48	108.39	105.80
25	1H	52	A	O5'-P-OP1	-6.48	99.87	105.70
25	1H	1254	A	N1-C6-N6	6.48	122.49	118.60
25	14	1489	U	C5-C4-O4	6.48	129.79	125.90
25	14	2449	U	C5-C4-O4	-6.48	122.01	125.90
25	1H	834	C	C2-N3-C4	-6.48	116.66	119.90
25	14	1728	G	C2-N3-C4	6.48	115.14	111.90
25	1H	1299	G	N7-C8-N9	6.47	116.34	113.10
54	1G	1432	G	N1-C6-O6	6.47	123.78	119.90
25	14	1826	G	N7-C8-N9	-6.47	109.86	113.10
25	1H	1821	A	C8-N9-C4	-6.47	103.21	105.80
25	14	783	A	N1-C2-N3	6.47	132.53	129.30
25	1H	214	G	C5-C6-O6	-6.47	124.72	128.60
25	1H	1992	G	P-O3'-C3'	6.47	127.46	119.70
56	2L	48	U	P-O3'-C3'	6.47	127.46	119.70
25	1H	410	G	O5'-P-OP1	-6.46	99.88	105.70
25	1H	1786	A	C4-N9-C1'	6.46	137.94	126.30
54	1G	1259	C	C5-C6-N1	6.46	124.23	121.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
25	14	2779	U	N1-C2-O2	6.46	127.33	122.80
1	13	1407	C	N3-C4-N4	-6.46	113.48	118.00
25	1H	2247	A	C2-N3-C4	-6.46	107.37	110.60
25	1H	138	G	C4-C5-N7	6.46	113.38	110.80
25	1H	2328	A	C4-C5-C6	6.46	120.23	117.00
25	14	1644	C	C6-N1-C2	-6.46	117.72	120.30
25	14	2873	A	O4'-C1'-N9	6.46	113.37	108.20
25	1H	74	A	C5-C6-N1	-6.46	114.47	117.70
25	1H	210	C	OP2-P-O3'	6.46	119.41	105.20
25	1H	771	G	O5'-P-OP1	-6.46	99.89	105.70
25	1H	1520	U	N1-C2-O2	6.46	127.32	122.80
25	1H	1700	A	OP1-P-OP2	6.46	129.28	119.60
25	1H	2393	A	O5'-P-OP1	-6.46	99.89	105.70
25	14	1961	C	C2-N1-C1'	-6.46	111.70	118.80
25	1H	19	C	C5-C6-N1	-6.46	117.77	121.00
25	1H	663	G	C4-N9-C1'	6.45	134.89	126.50
25	1H	806	C	OP1-P-OP2	-6.45	109.92	119.60
25	1H	1004	C	N3-C4-C5	-6.45	119.32	121.90
25	1H	2430	A	N3-C4-N9	-6.45	122.24	127.40
54	1G	873	A	N1-C6-N6	-6.45	114.73	118.60
25	14	990	A	O5'-P-OP1	-6.45	99.89	105.70
25	1H	1394	U	O5'-P-OP2	6.45	118.44	110.70
25	14	93	C	C5-C6-N1	6.45	124.22	121.00
25	1H	2250	G	N9-C4-C5	6.45	107.98	105.40
25	14	1888	G	C8-N9-C4	-6.45	103.82	106.40
25	1H	628	G	N1-C6-O6	-6.44	116.03	119.90
1	13	703	G	N3-C4-C5	-6.44	125.38	128.60
25	1H	1204	A	N1-C6-N6	6.44	122.47	118.60
25	1H	2363	C	OP2-P-O3'	6.44	119.37	105.20
25	14	1833	U	C5-C4-O4	6.44	129.76	125.90
53	Q8	30	ARG	NE-CZ-NH1	6.44	123.52	120.30
25	14	729	G	N1-C6-O6	6.44	123.76	119.90
1	13	1199	U	C5-C4-O4	6.44	129.76	125.90
25	1H	114	U	OP1-P-O3'	6.44	119.36	105.20
25	1H	2308	G	C6-N1-C2	6.44	128.96	125.10
25	1H	2576	G	OP2-P-O3'	6.44	119.36	105.20
25	14	828	U	O5'-P-OP1	-6.44	99.91	105.70
25	14	1952	A	C5-C6-N1	6.44	120.92	117.70
25	14	2072	G	C4-C5-N7	6.44	113.38	110.80
25	1H	822	U	N3-C2-O2	-6.44	117.69	122.20
25	1H	1307	A	C8-N9-C4	6.44	108.38	105.80
25	1H	2708	G	C8-N9-C4	6.44	108.97	106.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
25	14	1644	C	C2-N1-C1'	6.44	125.88	118.80
25	14	1992	G	N1-C6-O6	-6.44	116.04	119.90
25	1H	744	G	C8-N9-C4	-6.43	103.83	106.40
25	14	113	G	C8-N9-C4	6.43	108.97	106.40
25	14	1228	G	C4-N9-C1'	6.43	134.87	126.50
25	14	2685	G	C5-C6-N1	-6.43	108.28	111.50
25	1H	838	C	C4-C5-C6	6.43	120.62	117.40
25	1H	2053	G	C6-N1-C2	-6.43	121.24	125.10
25	1H	2249	U	C6-N1-C2	-6.43	117.14	121.00
25	14	729	G	N3-C2-N2	-6.43	115.40	119.90
25	14	1318	C	O5'-P-OP2	6.43	118.42	110.70
25	1H	2458	G	N3-C2-N2	-6.43	115.40	119.90
1	13	1469	G	C6-C5-N7	-6.43	126.54	130.40
25	1H	1192	G	C8-N9-C4	6.43	108.97	106.40
25	1H	2346	A	N7-C8-N9	6.43	117.02	113.80
25	14	1373	A	C8-N9-C4	6.43	108.37	105.80
1	13	108	G	C4-C5-N7	6.43	113.37	110.80
26	16	56	G	C8-N9-C4	-6.43	103.83	106.40
25	14	803	U	O5'-P-OP2	-6.43	99.92	105.70
25	14	2048	G	C8-N9-C4	-6.43	103.83	106.40
25	1H	2322	A	O5'-P-OP1	-6.43	99.92	105.70
25	14	1962	C	C5-C4-N4	-6.43	115.70	120.20
25	14	1304	C	N3-C2-O2	-6.42	117.40	121.90
25	14	1332	G	N7-C8-N9	6.42	116.31	113.10
25	14	1506	C	C6-N1-C2	-6.42	117.73	120.30
25	1H	2427	C	N1-C2-O2	-6.42	115.05	118.90
25	14	1725	G	C4-N9-C1'	6.42	134.85	126.50
25	1H	1559	G	O5'-P-OP1	-6.42	99.92	105.70
1	13	702	A	N1-C6-N6	-6.42	114.75	118.60
25	1H	1652	A	N1-C2-N3	6.42	132.51	129.30
25	1H	2484	G	N3-C4-N9	6.42	129.85	126.00
26	1J	47	C	OP1-P-O3'	6.42	119.32	105.20
25	1H	510	C	OP1-P-OP2	6.42	129.22	119.60
25	1H	689	A	C6-N1-C2	-6.42	114.75	118.60
25	1H	1184	G	N3-C2-N2	-6.42	115.41	119.90
54	1G	1286	A	N7-C8-N9	6.41	117.01	113.80
25	14	192	C	N1-C2-O2	6.41	122.75	118.90
25	14	201	C	C6-N1-C2	6.41	122.86	120.30
25	1H	210	C	C4-C5-C6	-6.41	114.19	117.40
25	1H	1938	A	C5-C6-N6	-6.41	118.57	123.70
25	14	1394	U	O5'-P-OP2	6.41	118.39	110.70
25	1H	2689	U	N3-C4-O4	-6.41	114.91	119.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
25	1H	80	G	O5'-P-OP1	-6.41	99.93	105.70
25	1H	1308	A	N1-C2-N3	6.41	132.50	129.30
25	14	671	C	C2-N3-C4	-6.41	116.70	119.90
25	14	1522	G	C5-C6-O6	-6.41	124.75	128.60
1	13	1404	C	N3-C2-O2	6.41	126.38	121.90
25	1H	922	U	C6-N1-C2	-6.41	117.16	121.00
25	14	1367	A	N1-C6-N6	6.41	122.44	118.60
25	14	2426	A	C5-N7-C8	-6.41	100.70	103.90
25	1H	233	A	N1-C6-N6	-6.40	114.76	118.60
25	1H	2241	A	C2-N3-C4	-6.40	107.40	110.60
25	14	2272	U	N3-C2-O2	-6.40	117.72	122.20
1	13	1519	A	N9-C4-C5	6.40	108.36	105.80
25	1H	2199	A	O5'-P-OP1	-6.40	99.94	105.70
25	14	1489	U	C6-N1-C1'	6.40	130.16	121.20
25	14	2341	G	N1-C6-O6	6.40	123.74	119.90
25	1H	2401	U	N1-C2-O2	6.40	127.28	122.80
25	14	1024	G	N1-C6-O6	6.40	123.74	119.90
23	2K	17	C	C2-N1-C1'	6.40	125.84	118.80
25	1H	385	C	O5'-P-OP1	-6.40	99.94	105.70
25	1H	762	U	C6-N1-C1'	-6.40	112.24	121.20
25	14	1647	G	C8-N9-C4	6.40	108.96	106.40
25	1H	1626	G	N7-C8-N9	6.40	116.30	113.10
25	1H	468	G	C6-C5-N7	-6.39	126.56	130.40
25	1H	1600	C	OP1-P-O3'	6.39	119.26	105.20
25	1H	2342	C	C6-N1-C2	-6.39	117.74	120.30
25	14	827	U	C5-C6-N1	-6.39	119.50	122.70
25	1H	841	A	N1-C6-N6	6.39	122.44	118.60
38	A8	24	LEU	CA-CB-CG	6.39	130.00	115.30
25	1H	1187	G	OP2-P-O3'	6.39	119.25	105.20
25	1H	1936	A	N9-C4-C5	-6.39	103.25	105.80
25	1H	2004	G	O5'-P-OP1	-6.39	99.95	105.70
1	13	963	G	N3-C4-N9	6.39	129.83	126.00
25	1H	1366	A	C2-N3-C4	-6.39	107.41	110.60
25	14	133	C	N3-C4-C5	6.39	124.45	121.90
25	14	197	A	P-O3'-C3'	6.39	127.36	119.70
25	14	912	C	C5-C6-N1	6.39	124.19	121.00
1	13	811	C	C5-C6-N1	-6.38	117.81	121.00
25	1H	838	C	N1-C2-N3	6.38	123.67	119.20
26	16	106	G	C8-N9-C4	6.38	108.95	106.40
25	14	1674	G	N3-C4-N9	6.38	129.83	126.00
25	1H	793	A	C4-C5-C6	6.38	120.19	117.00
25	1H	794	G	O5'-P-OP1	-6.38	99.96	105.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
25	1H	1967	C	C5-C4-N4	6.38	124.67	120.20
1	13	703	G	C4-N9-C1'	6.38	134.79	126.50
25	1H	71	A	O4'-C1'-N9	-6.38	103.09	108.20
25	1H	1151	G	N1-C6-O6	6.38	123.73	119.90
25	1H	1558	A	C2-N3-C4	-6.38	107.41	110.60
25	14	2612	C	N1-C2-O2	6.38	122.73	118.90
25	1H	187	G	C4-C5-N7	6.38	113.35	110.80
25	1H	2891	G	C5-C6-O6	-6.38	124.77	128.60
1	13	545	C	N3-C4-C5	6.38	124.45	121.90
1	13	963	G	N1-C2-N2	-6.38	110.46	116.20
25	1H	839	U	OP1-P-OP2	6.38	129.17	119.60
25	1H	1992	G	N3-C4-C5	-6.38	125.41	128.60
25	14	24	G	O5'-P-OP1	-6.38	99.96	105.70
25	14	1474	C	C6-N1-C2	-6.38	117.75	120.30
25	1H	593	G	N1-C2-N3	6.38	127.73	123.90
25	1H	1315	C	N3-C2-O2	-6.38	117.44	121.90
25	14	2442	C	C2-N3-C4	-6.38	116.71	119.90
25	1H	411	G	N9-C4-C5	6.38	107.95	105.40
25	1H	1025	G	N9-C4-C5	6.38	107.95	105.40
26	16	44	G	N7-C8-N9	-6.38	109.91	113.10
25	1H	1142(A)	A	N3-C4-N9	-6.37	122.30	127.40
25	1H	1499	C	N1-C2-N3	6.37	123.66	119.20
25	1H	2518	A	N1-C6-N6	6.37	122.42	118.60
54	1G	481	G	C4-N9-C1'	6.37	134.78	126.50
25	14	2518	A	C5-N7-C8	-6.37	100.71	103.90
25	1H	845	G	P-O3'-C3'	6.37	127.34	119.70
25	1H	2350	C	N1-C2-O2	6.37	122.72	118.90
25	14	1816	G	O5'-P-OP1	-6.37	99.97	105.70
53	M5	34	TRP	N-CA-C	6.37	128.21	111.00
25	1H	1557	C	O5'-P-OP2	-6.37	99.97	105.70
25	1H	2837	G	C5-C6-O6	-6.37	124.78	128.60
25	1H	1122	G	N9-C4-C5	-6.37	102.85	105.40
25	1H	2700	C	C5-C6-N1	-6.37	117.82	121.00
1	13	237	C	N1-C2-O2	-6.36	115.08	118.90
25	1H	624	C	N3-C2-O2	6.36	126.35	121.90
25	14	2315	G	N3-C4-N9	6.36	129.82	126.00
1	13	1335	C	C2-N1-C1'	-6.36	111.80	118.80
25	14	2369	A	C8-N9-C4	-6.36	103.25	105.80
25	1H	2552	U	C4-C5-C6	6.36	123.52	119.70
25	14	2237	G	N3-C2-N2	6.36	124.35	119.90
25	1H	639	U	C5-C4-O4	6.36	129.72	125.90
25	1H	2029	G	N7-C8-N9	6.36	116.28	113.10

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
25	14	130	C	C5-C4-N4	-6.36	115.75	120.20
25	1H	836	G	C2-N3-C4	6.36	115.08	111.90
25	1H	869	G	N1-C2-N2	-6.36	110.48	116.20
25	1H	1967	C	N3-C2-O2	-6.36	117.45	121.90
25	1H	2424	C	C2-N3-C4	6.36	123.08	119.90
25	14	116	C	C6-N1-C2	-6.36	117.76	120.30
25	14	124	G	N3-C2-N2	6.36	124.35	119.90
23	2K	1	C	C6-N1-C2	-6.36	117.76	120.30
54	1G	519	C	C6-N1-C2	6.36	122.84	120.30
25	1H	580	C	C5-C6-N1	6.35	124.18	121.00
25	1H	2710	C	OP2-P-O3'	6.35	119.18	105.20
25	14	2330	G	O5'-P-OP1	6.35	118.33	110.70
25	1H	1967	C	O5'-P-OP2	-6.35	99.98	105.70
25	1H	2082	A	C6-N1-C2	-6.35	114.79	118.60
25	14	2420	C	O5'-P-OP1	-6.35	99.98	105.70
25	14	2509	G	O5'-P-OP1	-6.35	99.98	105.70
25	1H	684	G	C4-C5-N7	-6.35	108.26	110.80
25	1H	1762	A	N7-C8-N9	-6.35	110.62	113.80
25	14	2606	C	O5'-P-OP1	-6.35	99.98	105.70
25	1H	772	C	N3-C4-C5	-6.35	119.36	121.90
25	1H	1789	A	C6-N1-C2	-6.35	114.79	118.60
25	14	1399	C	OP2-P-O3'	6.35	119.17	105.20
25	1H	1623	G	N1-C2-N2	-6.35	110.49	116.20
25	1H	444	C	C6-N1-C2	-6.34	117.76	120.30
25	1H	1614	A	C5-C6-N1	-6.34	114.53	117.70
26	16	61	G	N7-C8-N9	6.34	116.27	113.10
25	14	728	G	N9-C4-C5	-6.34	102.86	105.40
25	14	1135	C	N1-C2-O2	6.34	122.71	118.90
25	14	1603	A	N7-C8-N9	6.34	116.97	113.80
25	14	2037	G	N1-C6-O6	-6.34	116.09	119.90
25	1H	1333	C	C5-C6-N1	6.34	124.17	121.00
26	16	49	C	C5-C6-N1	6.34	124.17	121.00
25	14	2392	A	O5'-P-OP2	6.34	118.31	110.70
25	1H	456	C	C5-C6-N1	-6.34	117.83	121.00
25	1H	774	A	C4-C5-N7	6.34	113.87	110.70
25	14	1516	U	N3-C2-O2	-6.34	117.76	122.20
25	14	2623	G	N3-C4-N9	6.34	129.80	126.00
25	1H	397	G	N3-C2-N2	-6.34	115.46	119.90
25	1H	788	A	N1-C6-N6	6.34	122.40	118.60
25	14	1824	G	N1-C6-O6	6.34	123.70	119.90
25	14	2590	A	C8-N9-C4	6.34	108.33	105.80
1	13	529	G	C5-C6-O6	-6.33	124.80	128.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
25	1H	813	U	O5'-P-OP2	-6.33	100.00	105.70
25	1H	946	G	C4-C5-N7	-6.33	108.27	110.80
25	14	755	C	C5-C4-N4	-6.33	115.77	120.20
25	14	1605	C	C4-C5-C6	6.33	120.57	117.40
25	14	2873	A	C6-C5-N7	-6.33	127.87	132.30
1	13	402	G	O5'-P-OP2	-6.33	100.00	105.70
1	13	956	U	C6-N1-C2	-6.33	117.20	121.00
25	1H	129	C	C5-C4-N4	-6.33	115.77	120.20
25	14	801	G	C5-C6-O6	6.33	132.40	128.60
25	14	2014	A	C8-N9-C4	6.33	108.33	105.80
25	14	2712	U	C4-C5-C6	6.33	123.50	119.70
25	1H	780	G	C6-C5-N7	-6.33	126.60	130.40
38	A8	101	LEU	CA-CB-CG	6.33	129.86	115.30
25	1H	728	G	O5'-P-OP2	-6.33	100.00	105.70
25	1H	2430	A	C5-C6-N1	-6.33	114.53	117.70
25	14	1654	A	N1-C6-N6	-6.33	114.80	118.60
25	1H	870	A	O5'-P-OP1	-6.33	100.01	105.70
54	1G	924	C	C6-N1-C2	-6.33	117.77	120.30
25	14	971	C	C5-C6-N1	6.33	124.16	121.00
25	1H	1535	U	N1-C2-O2	6.32	127.23	122.80
25	1H	1612	C	N3-C4-C5	-6.32	119.37	121.90
25	14	790	C	C5-C4-N4	6.32	124.63	120.20
25	14	1286	A	OP2-P-O3'	6.32	119.11	105.20
1	13	172	A	C8-N9-C4	-6.32	103.27	105.80
25	1H	813	U	OP1-P-OP2	6.32	129.08	119.60
25	1H	1123	C	N1-C2-O2	-6.32	115.11	118.90
25	14	2779	U	O4'-C1'-N1	6.32	113.26	108.20
1	13	266	G	N1-C6-O6	6.32	123.69	119.90
25	14	1780	A	N9-C4-C5	6.32	108.33	105.80
25	1H	451	C	N3-C2-O2	6.32	126.32	121.90
25	14	1609	A	C6-N1-C2	-6.32	114.81	118.60
25	1H	51	G	N3-C2-N2	6.31	124.32	119.90
55	1L	20	C	C6-N1-C1'	-6.31	113.22	120.80
25	1H	2466	C	N3-C4-C5	6.31	124.42	121.90
25	14	31	C	C6-N1-C2	-6.31	117.78	120.30
23	2K	62	C	N3-C2-O2	-6.31	117.48	121.90
25	1H	847	U	N1-C2-N3	6.31	118.69	114.90
25	1H	99	U	C5-C4-O4	6.31	129.69	125.90
25	1H	742	G	N1-C6-O6	-6.31	116.11	119.90
25	1H	2444	G	C8-N9-C4	-6.31	103.88	106.40
54	1G	137	C	C6-N1-C2	6.31	122.82	120.30
25	14	2070	G	O5'-P-OP2	-6.31	100.02	105.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
25	14	2713	A	C5-C6-N1	-6.31	114.55	117.70
1	13	1064	G	C6-C5-N7	6.31	134.18	130.40
25	1H	2296	U	N3-C4-O4	6.31	123.81	119.40
1	13	977	A	N1-C6-N6	-6.30	114.82	118.60
25	1H	189	G	N3-C2-N2	-6.30	115.49	119.90
25	1H	1594	G	OP1-P-O3'	6.30	119.07	105.20
25	14	566	U	C2-N3-C4	-6.30	123.22	127.00
25	14	2032	G	C8-N9-C4	6.30	108.92	106.40
25	1H	1769	G	O5'-P-OP2	-6.30	100.03	105.70
25	1H	2170	A	N1-C6-N6	-6.30	114.82	118.60
25	14	517	C	N3-C4-N4	-6.30	113.59	118.00
25	1H	738	G	N1-C2-N3	6.30	127.68	123.90
26	1J	102	G	C5-C6-O6	6.30	132.38	128.60
25	1H	1602	U	N1-C2-N3	6.30	118.68	114.90
25	1H	2232	U	C6-N1-C2	-6.30	117.22	121.00
25	14	1992	G	C5-C6-N1	6.30	114.65	111.50
25	1H	1829	A	O5'-P-OP2	-6.29	100.03	105.70
25	14	584	C	C4-C5-C6	6.29	120.55	117.40
25	1H	1379	A	C4-C5-N7	6.29	113.85	110.70
54	1G	1465	C	C2-N1-C1'	6.29	125.72	118.80
25	14	1518	C	O5'-P-OP2	6.29	118.25	110.70
1	13	532	A	O4'-C1'-N9	6.29	113.23	108.20
25	1H	397	G	N3-C4-N9	-6.29	122.22	126.00
25	1H	2584	U	C5-C4-O4	6.29	129.68	125.90
25	1H	796	C	C5-C4-N4	6.29	124.60	120.20
25	1H	1798	U	N3-C4-O4	-6.29	115.00	119.40
25	1H	2261	C	O5'-P-OP2	-6.29	100.04	105.70
25	14	1779	U	OP1-P-OP2	6.29	129.03	119.60
25	1H	2380	C	C2-N3-C4	-6.29	116.76	119.90
25	14	396	G	C4-N9-C1'	6.29	134.68	126.50
25	1H	446	G	N9-C4-C5	-6.29	102.89	105.40
25	1H	557	U	O5'-P-OP2	-6.29	100.04	105.70
25	1H	2269	A	N9-C4-C5	-6.29	103.29	105.80
25	1H	2620	C	C2-N3-C4	-6.29	116.76	119.90
25	1H	1130	U	N3-C2-O2	-6.28	117.80	122.20
25	1H	1588	C	N1-C2-O2	6.28	122.67	118.90
25	1H	2856	C	N3-C2-O2	-6.28	117.50	121.90
25	14	574	C	N3-C4-N4	-6.28	113.60	118.00
25	1H	407	G	N1-C6-O6	-6.28	116.13	119.90
25	14	1831	G	C4-N9-C1'	6.28	134.67	126.50
1	13	1519	A	C4-C5-N7	-6.28	107.56	110.70
25	1H	773	U	C5-C6-N1	-6.28	119.56	122.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
54	1G	266	G	C4-N9-C1'	6.28	134.66	126.50
54	1G	792	A	C8-N9-C4	6.28	108.31	105.80
1	13	1260	C	C5-C6-N1	6.28	124.14	121.00
25	1H	798	G	C2-N3-C4	-6.28	108.76	111.90
25	1H	1799	G	N3-C2-N2	6.28	124.29	119.90
54	1G	1406	U	N3-C2-O2	-6.28	117.81	122.20
25	1H	2714	G	C5-C6-O6	-6.27	124.84	128.60
25	14	1253	A	N1-C2-N3	-6.27	126.16	129.30
1	13	1299	A	C6-C5-N7	-6.27	127.91	132.30
25	1H	518	G	O5'-P-OP2	-6.27	100.06	105.70
56	2L	58	A	N1-C2-N3	6.27	132.44	129.30
25	1H	2070	G	N1-C6-O6	-6.27	116.14	119.90
25	14	1357	U	C4-C5-C6	6.27	123.46	119.70
25	14	1572	A	C5-C6-N6	-6.27	118.69	123.70
25	1H	1763	G	N3-C4-C5	6.27	131.73	128.60
26	16	44	G	C4-N9-C1'	-6.27	118.35	126.50
54	1G	449	C	N3-C2-O2	-6.27	117.51	121.90
25	14	828	U	N1-C2-O2	6.27	127.19	122.80
25	14	2776	A	P-O3'-C3'	6.27	127.22	119.70
25	1H	839	U	N1-C2-N3	6.27	118.66	114.90
25	1H	331	A	OP1-P-O3'	6.26	118.98	105.20
25	1H	864	G	C2-N3-C4	6.26	115.03	111.90
25	1H	1253	A	C4-C5-N7	6.26	113.83	110.70
25	1H	1823	G	N7-C8-N9	6.26	116.23	113.10
25	14	988	A	N1-C6-N6	6.26	122.36	118.60
25	14	1528	A	N7-C8-N9	6.26	116.93	113.80
25	14	2429	G	OP2-P-O3'	6.26	118.98	105.20
25	1H	961	C	C6-N1-C2	-6.26	117.80	120.30
1	13	767	A	N1-C6-N6	-6.26	114.84	118.60
25	1H	203	C	C2-N3-C4	-6.26	116.77	119.90
25	14	211	A	N1-C6-N6	6.26	122.36	118.60
25	1H	1366	A	C8-N9-C4	6.26	108.30	105.80
25	1H	1626	G	N1-C6-O6	6.26	123.66	119.90
25	1H	1658	C	O5'-P-OP1	-6.26	100.07	105.70
54	1G	630	G	O4'-C1'-N9	6.26	113.21	108.20
25	14	1790	C	N1-C2-O2	-6.26	115.14	118.90
25	1H	2058	A	C8-N9-C4	-6.26	103.30	105.80
25	14	2255	G	C5-C6-N1	6.26	114.63	111.50
1	13	120	A	N1-C6-N6	6.25	122.35	118.60
25	1H	1314	C	OP2-P-O3'	6.25	118.96	105.20
25	14	945	A	C8-N9-C4	-6.25	103.30	105.80
1	13	1455	G	N3-C4-C5	6.25	131.73	128.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
25	1H	2847	U	O5'-P-OP1	-6.25	100.07	105.70
25	14	1657	C	N3-C4-C5	6.25	124.40	121.90
25	14	2179	C	C6-N1-C2	-6.25	117.80	120.30
27	19	43	ARG	CG-CD-NE	6.25	124.93	111.80
25	1H	1387	C	C6-N1-C2	-6.25	117.80	120.30
25	1H	239	U	C5-C6-N1	-6.25	119.58	122.70
25	1H	1204	A	C6-C5-N7	-6.25	127.92	132.30
25	1H	1623	G	OP2-P-O3'	6.25	118.95	105.20
25	1H	1626	G	C5-N7-C8	-6.25	101.18	104.30
25	14	1585	C	N1-C2-O2	6.25	122.65	118.90
25	14	2392	A	C2-N3-C4	-6.25	107.48	110.60
1	13	766	A	N1-C6-N6	6.25	122.35	118.60
25	1H	1241	A	C4-C5-N7	6.25	113.82	110.70
25	1H	1613	G	N9-C4-C5	-6.25	102.90	105.40
25	14	1380	G	C8-N9-C4	6.25	108.90	106.40
25	1H	2451	A	N1-C6-N6	-6.25	114.85	118.60
25	1H	2782	G	C5-C6-O6	-6.25	124.85	128.60
25	1H	591	C	N1-C2-O2	-6.24	115.15	118.90
25	14	477	A	N1-C6-N6	-6.24	114.85	118.60
25	14	574	C	C2-N1-C1'	-6.24	111.93	118.80
25	1H	791	C	OP2-P-O3'	6.24	118.93	105.20
25	1H	2514	U	C5-C6-N1	-6.24	119.58	122.70
25	14	1528	A	C8-N9-C4	-6.24	103.30	105.80
25	1H	1763	G	OP2-P-O3'	6.24	118.92	105.20
25	1H	2620	C	C6-N1-C2	6.24	122.80	120.30
25	14	827	U	N3-C2-O2	6.24	126.57	122.20
25	1H	736	C	O5'-P-OP2	6.24	118.19	110.70
25	1H	2427	C	C4-C5-C6	6.24	120.52	117.40
25	14	2392	A	O5'-P-OP1	-6.24	100.09	105.70
25	1H	772	C	OP2-P-O3'	6.24	118.92	105.20
25	14	773	U	N1-C2-N3	6.24	118.64	114.90
25	14	2406	U	O4'-C1'-N1	-6.24	103.21	108.20
25	1H	1317	A	C2-N3-C4	6.23	113.72	110.60
25	1H	2070	G	C5-C6-O6	6.23	132.34	128.60
54	1G	943	U	C2-N1-C1'	6.23	125.18	117.70
25	14	141	A	C4-C5-N7	6.23	113.82	110.70
25	1H	210	C	C2-N3-C4	-6.23	116.78	119.90
25	1H	2252	G	N7-C8-N9	-6.23	109.98	113.10
25	1H	1757	U	OP1-P-O3'	6.23	118.91	105.20
25	1H	250	G	C8-N9-C4	-6.23	103.91	106.40
25	14	1802	A	C5-C6-N6	-6.23	118.72	123.70
26	1J	81	G	C5-N7-C8	-6.23	101.19	104.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	13	972	C	C6-N1-C2	-6.23	117.81	120.30
54	1G	770	C	O5'-P-OP2	-6.23	100.09	105.70
25	14	2346	A	C4-C5-C6	6.23	120.11	117.00
25	14	2436	G	O5'-P-OP1	-6.23	100.10	105.70
25	1H	1565	C	N3-C2-O2	6.22	126.26	121.90
54	1G	243	A	O4'-C1'-N9	6.22	113.18	108.20
25	14	2256	G	N1-C6-O6	6.22	123.64	119.90
4	3E	31	CYS	CA-CB-SG	-6.22	102.80	114.00
25	1H	1597	A	O4'-C1'-N9	6.22	113.18	108.20
25	1H	2076	U	C5-C6-N1	-6.22	119.59	122.70
25	1H	2424	C	C5-C6-N1	6.22	124.11	121.00
54	1G	953	G	N3-C2-N2	6.22	124.26	119.90
25	14	2326	C	C6-N1-C2	-6.22	117.81	120.30
25	14	2442	C	N3-C4-C5	6.22	124.39	121.90
25	1H	199	A	C4-C5-C6	-6.22	113.89	117.00
25	1H	2025	C	C6-N1-C2	-6.22	117.81	120.30
25	14	1316	U	N3-C2-O2	-6.22	117.84	122.20
25	14	2500	U	OP2-P-O3'	6.22	118.89	105.20
25	1H	452	G	C2-N3-C4	6.22	115.01	111.90
25	1H	685	A	C5-C6-N1	-6.22	114.59	117.70
25	1H	2311	A	O4'-C1'-N9	6.22	113.18	108.20
25	1H	2547	U	C5-C4-O4	-6.22	122.17	125.90
25	1H	188	G	N7-C8-N9	-6.22	109.99	113.10
25	1H	961	C	N3-C4-N4	6.22	122.35	118.00
25	1H	2447	G	N1-C2-N3	6.22	127.63	123.90
54	1G	1158	C	N3-C2-O2	-6.22	117.55	121.90
25	14	1557	C	O5'-P-OP2	-6.22	100.11	105.70
25	14	1981	A	C4-N9-C1'	-6.22	115.11	126.30
25	14	2526	G	C2-N3-C4	-6.22	108.79	111.90
25	1H	1624	G	N1-C6-O6	-6.21	116.17	119.90
25	14	429	A	C8-N9-C4	-6.21	103.31	105.80
25	14	2518	A	N1-C6-N6	6.21	122.33	118.60
25	1H	189	G	N7-C8-N9	-6.21	109.99	113.10
25	1H	728	G	N3-C2-N2	6.21	124.25	119.90
25	1H	847	U	N3-C2-O2	-6.21	117.85	122.20
25	14	281	G	N1-C6-O6	6.21	123.63	119.90
25	14	1621	U	O5'-P-OP1	-6.21	100.11	105.70
25	1H	127	A	N9-C4-C5	-6.21	103.32	105.80
25	1H	917	A	C8-N9-C4	6.21	108.28	105.80
25	1H	746	A	O5'-P-OP2	6.21	118.15	110.70
25	1H	1214	A	OP2-P-O3'	6.21	118.85	105.20
25	1H	1618	A	C8-N9-C4	-6.21	103.32	105.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
25	1H	2699	C	N3-C2-O2	6.21	126.25	121.90
25	14	2240	C	N3-C4-C5	-6.21	119.42	121.90
25	14	2430	A	N1-C2-N3	6.21	132.40	129.30
1	13	651	C	C6-N1-C2	-6.20	117.82	120.30
25	1H	1428	C	O5'-P-OP1	-6.20	100.12	105.70
25	1H	1565	C	C6-N1-C2	6.20	122.78	120.30
25	14	621	A	C5-C6-N1	-6.20	114.60	117.70
25	14	686	G	OP1-P-OP2	6.20	128.91	119.60
25	14	1496	A	N1-C6-N6	6.20	122.32	118.60
25	14	2388	A	O4'-C1'-N9	6.20	113.16	108.20
25	1H	1496	A	C6-C5-N7	-6.20	127.96	132.30
25	14	1237	A	N1-C6-N6	-6.20	114.88	118.60
1	13	893	C	N1-C2-O2	6.20	122.62	118.90
25	1H	2881	C	O5'-P-OP1	-6.20	100.12	105.70
25	14	2644	G	C6-C5-N7	-6.20	126.68	130.40
1	13	1290	G	C6-C5-N7	-6.20	126.68	130.40
54	1G	354	G	C6-C5-N7	-6.20	126.68	130.40
25	14	1776	G	N7-C8-N9	6.20	116.20	113.10
55	1L	54	C	C5-C6-N1	6.20	124.10	121.00
25	1H	671	C	N3-C4-C5	6.19	124.38	121.90
25	1H	2440	C	N3-C4-C5	-6.19	119.42	121.90
25	14	855	G	N7-C8-N9	6.19	116.20	113.10
25	14	1375	C	O5'-P-OP2	6.19	118.13	110.70
1	13	864	A	N9-C4-C5	6.19	108.28	105.80
25	1H	621	A	C5-C6-N1	-6.19	114.61	117.70
25	14	2287	A	C5-C6-N1	-6.19	114.61	117.70
25	14	2584	U	C6-N1-C1'	-6.19	112.54	121.20
25	1H	2469	A	C5-N7-C8	-6.19	100.81	103.90
54	1G	690	G	O4'-C1'-N9	6.19	113.15	108.20
25	14	929	G	C6-C5-N7	-6.19	126.69	130.40
25	1H	608	A	N9-C4-C5	6.19	108.28	105.80
25	1H	837	C	C6-N1-C2	-6.19	117.83	120.30
25	1H	1762	A	C8-N9-C4	6.19	108.28	105.80
25	14	2056	G	N3-C4-N9	6.19	129.71	126.00
1	13	789	U	N3-C4-C5	-6.18	110.89	114.60
1	13	1199	U	C6-N1-C2	-6.18	117.29	121.00
1	13	1203	C	N3-C2-O2	-6.18	117.57	121.90
25	1H	1559	G	C4-C5-N7	6.18	113.27	110.80
25	1H	1669	A	N1-C2-N3	6.18	132.39	129.30
25	14	2360	A	N9-C4-C5	-6.18	103.33	105.80
1	13	328	C	C2-N1-C1'	6.18	125.60	118.80
25	14	1022	G	P-O3'-C3'	6.18	127.11	119.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
25	14	2724	C	C4-C5-C6	6.18	120.49	117.40
25	1H	762	U	N3-C2-O2	-6.18	117.88	122.20
54	1G	337	C	C5-C6-N1	6.18	124.09	121.00
25	1H	62	C	C5-C6-N1	-6.17	117.91	121.00
25	1H	617	G	N7-C8-N9	-6.17	110.01	113.10
25	1H	1192	G	N3-C4-N9	6.17	129.71	126.00
25	14	34	C	C5-C6-N1	6.17	124.09	121.00
25	14	1768	U	C5-C4-O4	6.17	129.60	125.90
25	14	1894	C	N1-C2-O2	6.17	122.61	118.90
1	13	1323	G	N1-C6-O6	6.17	123.60	119.90
44	G8	81	LYS	C-N-CD	-6.17	107.02	120.60
25	14	1655	A	C5-N7-C8	6.17	106.99	103.90
29	39	125	LEU	CA-CB-CG	6.17	129.50	115.30
25	14	670	A	O4'-C1'-N9	-6.17	103.26	108.20
25	14	2001	A	C5-C6-N1	6.17	120.78	117.70
1	13	583	A	O5'-P-OP1	-6.17	100.15	105.70
25	14	781	A	C5-C6-N6	-6.17	118.77	123.70
25	1H	140	A	N3-C4-C5	6.16	131.11	126.80
25	1H	775	G	N3-C4-C5	-6.16	125.52	128.60
25	1H	2403	C	C5-C6-N1	6.16	124.08	121.00
25	1H	2583	G	N1-C2-N2	-6.16	110.65	116.20
55	3L	55	U	O4'-C1'-N1	6.16	113.13	108.20
25	1H	910	A	N1-C6-N6	6.16	122.30	118.60
25	1H	1958	C	OP1-P-O3'	6.16	118.76	105.20
25	1H	1192	G	C5-C6-O6	-6.16	124.90	128.60
25	14	1954	G	N9-C4-C5	6.16	107.86	105.40
25	1H	232	G	N3-C4-N9	6.16	129.69	126.00
25	1H	1600	C	O5'-P-OP2	-6.16	100.16	105.70
25	1H	2253	G	O5'-P-OP2	-6.16	100.16	105.70
1	13	317	G	N3-C4-N9	6.16	129.69	126.00
11	2I	102	GLY	N-CA-C	-6.16	97.71	113.10
25	14	2463	C	C6-N1-C2	6.16	122.76	120.30
25	14	2501	C	C6-N1-C2	6.16	122.76	120.30
25	14	1544	C	N1-C2-O2	6.16	122.59	118.90
25	1H	2070	G	N3-C2-N2	6.15	124.21	119.90
25	1H	2270	G	C8-N9-C4	6.15	108.86	106.40
25	14	1655	A	N7-C8-N9	-6.15	110.72	113.80
25	1H	787	U	O5'-P-OP1	6.15	118.08	110.70
25	1H	1355	G	N1-C6-O6	-6.15	116.21	119.90
25	1H	2869	G	C8-N9-C4	-6.15	103.94	106.40
25	14	464	U	N1-C2-N3	6.15	118.59	114.90
1	13	601	C	C6-N1-C2	-6.15	117.84	120.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
25	1H	1839	G	C4-N9-C1'	6.15	134.50	126.50
25	14	940	G	C8-N9-C4	-6.15	103.94	106.40
25	14	2441	C	C5-C6-N1	-6.15	117.92	121.00
1	13	428	G	N3-C4-N9	-6.15	122.31	126.00
25	1H	813	U	N1-C2-O2	-6.15	118.50	122.80
25	1H	2249	U	C2-N3-C4	6.15	130.69	127.00
25	14	530	G	C6-C5-N7	-6.15	126.71	130.40
25	1H	698	C	C5-C6-N1	-6.15	117.93	121.00
25	1H	2591	C	N3-C2-O2	6.15	126.20	121.90
25	1H	1573	G	C8-N9-C4	6.15	108.86	106.40
25	14	1965	C	N3-C4-N4	-6.15	113.70	118.00
1	13	962	C	C5-C6-N1	-6.14	117.93	121.00
1	13	1064	G	N3-C4-N9	-6.14	122.31	126.00
25	14	783	A	O5'-P-OP2	-6.14	100.17	105.70
25	14	703	U	C5-C4-O4	6.14	129.59	125.90
25	1H	2436	G	N3-C2-N2	-6.14	115.60	119.90
25	14	2544	G	N1-C6-O6	6.14	123.58	119.90
1	13	908	A	O5'-P-OP1	6.14	118.07	110.70
25	1H	997	G	C5-N7-C8	6.14	107.37	104.30
25	14	2415	G	C4-C5-C6	6.14	122.48	118.80
1	13	266	G	C6-C5-N7	-6.14	126.72	130.40
25	14	2430	A	C6-C5-N7	-6.14	128.00	132.30
25	14	2503	A	O5'-P-OP2	-6.14	100.18	105.70
25	1H	1122	G	C4-C5-N7	6.13	113.25	110.80
25	1H	2253	G	N9-C4-C5	6.13	107.85	105.40
25	14	330	A	N1-C2-N3	6.13	132.37	129.30
25	14	834	C	C4-C5-C6	6.13	120.47	117.40
25	14	2689	U	P-O3'-C3'	6.13	127.06	119.70
25	1H	2374	C	OP1-P-OP2	6.13	128.80	119.60
25	14	2518	A	C5-C6-N1	-6.13	114.63	117.70
1	13	129	U	O4'-C1'-N1	6.13	113.10	108.20
1	13	449	C	N3-C2-O2	-6.13	117.61	121.90
25	1H	1669	A	N7-C8-N9	6.13	116.86	113.80
25	1H	265	A	N1-C6-N6	6.13	122.28	118.60
25	1H	2339	G	C8-N9-C4	6.13	108.85	106.40
54	1G	897	C	N1-C2-O2	-6.13	115.22	118.90
25	14	774	A	C4-N9-C1'	-6.13	115.27	126.30
25	14	1283	G	N3-C4-C5	-6.13	125.54	128.60
25	1H	966	G	N1-C2-N2	-6.13	110.69	116.20
25	1H	1971	A	C5-C6-N6	-6.13	118.80	123.70
54	1G	1297	C	P-O3'-C3'	6.13	127.05	119.70
25	14	2256	G	C6-C5-N7	-6.13	126.72	130.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
25	1H	2713	A	C4-C5-N7	6.12	113.76	110.70
54	1G	1145	C	N1-C2-O2	6.12	122.58	118.90
25	14	983	A	OP2-P-O3'	6.12	118.68	105.20
1	13	52	G	O5'-P-OP2	-6.12	100.19	105.70
1	13	191(F)	U	C5-C6-N1	6.12	125.76	122.70
25	1H	1312	U	C5-C4-O4	6.12	129.57	125.90
25	14	1559	G	N3-C4-C5	6.12	131.66	128.60
25	1H	115	C	C5-C4-N4	-6.12	115.92	120.20
1	13	761	G	C4-N9-C1'	6.12	134.46	126.50
25	1H	1936	A	C5-C6-N6	-6.12	118.80	123.70
1	13	1107	C	C6-N1-C2	-6.12	117.85	120.30
25	1H	784	A	C4-C5-N7	-6.12	107.64	110.70
26	16	7	G	C4-C5-N7	6.12	113.25	110.80
54	1G	1484	C	O5'-P-OP2	-6.12	100.19	105.70
25	14	34	C	C2-N1-C1'	6.12	125.53	118.80
25	14	1620	G	OP1-P-OP2	-6.12	110.42	119.60
54	1G	1077	G	C8-N9-C4	6.12	108.85	106.40
25	14	2607	G	O5'-P-OP1	6.12	118.04	110.70
25	1H	141	A	C4-C5-N7	6.12	113.76	110.70
42	E8	23	LEU	CA-CB-CG	6.12	129.37	115.30
25	14	863	A	O5'-P-OP2	-6.12	100.20	105.70
25	14	2066	C	OP1-P-O3'	6.12	118.65	105.20
25	14	2586	C	N3-C4-N4	6.12	122.28	118.00
25	1H	2590	A	OP1-P-O3'	6.11	118.65	105.20
26	16	80	U	N3-C2-O2	-6.11	117.92	122.20
1	13	878	G	N3-C4-N9	6.11	129.67	126.00
25	1H	1815	A	O5'-P-OP2	-6.11	100.20	105.70
25	14	74	A	N1-C6-N6	6.11	122.27	118.60
25	14	2688	U	C4-C5-C6	6.11	123.37	119.70
1	13	834	C	O5'-P-OP2	-6.11	100.20	105.70
25	1H	608	A	N1-C6-N6	-6.11	114.94	118.60
25	1H	1241	A	C6-N1-C2	6.11	122.27	118.60
25	1H	1786	A	N9-C1'-C2'	6.11	121.94	114.00
54	1G	197	A	P-O3'-C3'	6.11	127.03	119.70
25	14	450	G	N9-C4-C5	-6.11	102.96	105.40
25	14	1703	G	C8-N9-C4	6.11	108.84	106.40
25	1H	1614	A	N3-C4-C5	6.11	131.07	126.80
25	1H	2051	A	N1-C2-N3	6.11	132.35	129.30
25	14	641	C	O5'-P-OP2	6.11	118.03	110.70
25	14	658	C	C6-N1-C2	-6.11	117.86	120.30
25	14	819	A	N7-C8-N9	6.11	116.85	113.80
25	14	1328	G	C5-C6-O6	-6.11	124.94	128.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
25	14	1633	G	C8-N9-C4	-6.11	103.96	106.40
54	1G	690	G	N3-C4-C5	6.10	131.65	128.60
25	14	37	C	C6-N1-C2	-6.10	117.86	120.30
25	14	1650	G	N9-C4-C5	6.10	107.84	105.40
25	14	1805	U	C2-N3-C4	-6.10	123.34	127.00
25	1H	36	G	O5'-P-OP2	-6.10	100.21	105.70
25	1H	631	A	N7-C8-N9	-6.10	110.75	113.80
25	1H	974(A)	C	C2-N1-C1'	6.10	125.51	118.80
25	1H	1835	G	C8-N9-C4	-6.10	103.96	106.40
25	1H	2251	G	C5-N7-C8	6.10	107.35	104.30
25	1H	2330	G	C2-N3-C4	-6.10	108.85	111.90
39	75	10	VAL	N-CA-C	-6.10	94.52	111.00
25	1H	1404	C	O5'-P-OP2	-6.10	100.21	105.70
54	1G	1226	C	N1-C2-O2	6.10	122.56	118.90
1	13	903	G	O5'-P-OP2	-6.10	100.21	105.70
25	1H	1476	C	C6-N1-C2	-6.10	117.86	120.30
25	1H	2264	C	OP1-P-O3'	6.10	118.62	105.20
25	1H	2412	A	C6-N1-C2	-6.10	114.94	118.60
54	1G	721	G	C5-C6-N1	-6.10	108.45	111.50
54	1G	1145	C	C2-N1-C1'	6.10	125.51	118.80
25	1H	415	A	C5-C6-N6	-6.10	118.82	123.70
25	1H	1625	C	C6-N1-C2	6.10	122.74	120.30
25	14	481	G	O5'-P-OP2	-6.10	100.21	105.70
25	1H	694	U	C5-C4-O4	6.09	129.56	125.90
25	1H	2032	G	C2-N3-C4	-6.09	108.85	111.90
25	14	470	A	C5-C6-N6	-6.09	118.82	123.70
25	1H	2030	A	C5-C6-N6	-6.09	118.83	123.70
25	1H	2620	C	N3-C4-C5	6.09	124.34	121.90
25	1H	1610	A	N9-C4-C5	-6.09	103.36	105.80
25	1H	1803	A	N1-C2-N3	-6.09	126.25	129.30
25	1H	845	G	N3-C4-N9	-6.09	122.35	126.00
25	1H	299	A	OP2-P-O3'	6.09	118.59	105.20
54	1G	529	G	C4-C5-N7	6.09	113.23	110.80
55	1L	3	U	P-O3'-C3'	6.09	127.00	119.70
25	14	1926	U	N3-C2-O2	-6.09	117.94	122.20
1	13	892	A	C2-N3-C4	-6.08	107.56	110.60
25	1H	1153	C	N1-C2-O2	-6.08	115.25	118.90
25	1H	1785	A	OP2-P-O3'	6.08	118.58	105.20
25	1H	1797	C	C6-N1-C2	6.08	122.73	120.30
1	13	761	G	N1-C2-N2	-6.08	110.73	116.20
1	13	791	G	C6-N1-C2	-6.08	121.45	125.10
25	1H	117	G	O5'-P-OP1	6.08	117.99	110.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
25	1H	1430	C	C6-N1-C2	-6.08	117.87	120.30
54	1G	1159	U	O4'-C1'-N1	6.08	113.06	108.20
25	14	668	G	N7-C8-N9	-6.08	110.06	113.10
25	1H	1302	A	C4-C5-N7	-6.08	107.66	110.70
25	14	788	A	C6-C5-N7	-6.08	128.05	132.30
25	1H	1644	C	C2-N1-C1'	6.08	125.48	118.80
25	14	751	A	O5'-P-OP1	-6.08	100.23	105.70
25	1H	2272	U	O5'-P-OP1	6.07	117.99	110.70
25	1H	2601	C	C6-N1-C2	-6.07	117.87	120.30
54	1G	818	G	C4-C5-N7	-6.07	108.37	110.80
25	14	911	A	OP1-P-O3'	6.07	118.56	105.20
1	13	318	G	C2-N3-C4	-6.07	108.86	111.90
25	14	708	C	C6-N1-C2	-6.07	117.87	120.30
25	14	2755	C	C2-N1-C1'	6.07	125.48	118.80
1	13	266	G	N7-C8-N9	6.07	116.14	113.10
25	1H	1160	G	O5'-P-OP1	6.07	117.98	110.70
25	1H	1386	C	C6-N1-C2	-6.07	117.87	120.30
25	14	604	G	O5'-P-OP1	-6.07	100.24	105.70
25	1H	1761	C	C6-N1-C2	6.07	122.73	120.30
25	1H	2050	C	C4-C5-C6	6.07	120.43	117.40
25	1H	2053	G	C2-N3-C4	6.07	114.93	111.90
25	1H	1993	U	C2-N3-C4	-6.06	123.36	127.00
25	1H	409	C	N3-C2-O2	6.06	126.14	121.90
25	1H	872	A	O5'-P-OP1	-6.06	100.24	105.70
25	14	664	C	C4-C5-C6	6.06	120.43	117.40
25	14	671	C	C6-N1-C2	-6.06	117.88	120.30
1	13	293	G	N1-C6-O6	6.06	123.54	119.90
25	14	1454	U	N1-C2-O2	6.06	127.04	122.80
25	1H	140	A	C8-N9-C4	-6.06	103.38	105.80
31	59	7	LEU	CA-CB-CG	6.06	129.23	115.30
25	14	298	G	N1-C6-O6	6.06	123.53	119.90
25	14	2315	G	N3-C4-C5	-6.06	125.57	128.60
25	14	2597	G	OP2-P-O3'	6.06	118.52	105.20
25	1H	1940	U	C5-C4-O4	-6.05	122.27	125.90
54	1G	1126	U	C5-C6-N1	6.05	125.73	122.70
25	14	991	C	O5'-P-OP1	-6.05	100.25	105.70
25	1H	1293	C	C6-N1-C2	-6.05	117.88	120.30
25	1H	1783	A	OP1-P-OP2	-6.05	110.52	119.60
25	1H	1445	C	C5-C6-N1	6.05	124.03	121.00
25	14	738	G	N3-C4-C5	-6.05	125.57	128.60
23	2K	48	U	P-O3'-C3'	6.05	126.96	119.70
25	1H	2234	G	C5-C6-O6	-6.05	124.97	128.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
55	1L	48	C	C5-C6-N1	6.05	124.02	121.00
25	14	1641	A	C6-N1-C2	-6.05	114.97	118.60
25	1H	2318	G	O4'-C1'-N9	6.05	113.04	108.20
26	16	40	U	C5-C6-N1	6.05	125.72	122.70
54	1G	1158	C	C2-N1-C1'	6.05	125.45	118.80
25	14	694	U	O5'-P-OP2	-6.05	100.26	105.70
25	14	2256	G	O5'-P-OP2	-6.05	100.26	105.70
25	1H	640	C	OP1-P-O3'	6.04	118.50	105.20
25	1H	853	G	O5'-P-OP1	6.04	117.95	110.70
25	1H	796	C	O5'-P-OP2	-6.04	100.26	105.70
25	1H	1310	G	N1-C6-O6	6.04	123.53	119.90
25	14	774	A	C8-N9-C1'	6.04	138.57	127.70
25	14	2689	U	N3-C4-O4	-6.04	115.17	119.40
1	13	1433	A	O5'-P-OP1	-6.04	100.26	105.70
25	1H	1930	G	C2-N3-C4	6.04	114.92	111.90
54	1G	218	C	C6-N1-C2	-6.04	117.88	120.30
25	14	1856	G	C4-N9-C1'	6.04	134.35	126.50
25	14	2346	A	C6-C5-N7	-6.04	128.07	132.30
25	14	799	G	C5-C6-N1	-6.04	108.48	111.50
25	1H	1957	C	N1-C2-O2	-6.04	115.28	118.90
25	1H	2011	U	N3-C2-O2	6.04	126.43	122.20
25	1H	948	G	N3-C2-N2	-6.04	115.68	119.90
25	14	827	U	O5'-P-OP2	-6.04	100.27	105.70
25	14	2042	A	O5'-P-OP2	-6.04	100.27	105.70
25	14	2361	A	C2-N3-C4	-6.04	107.58	110.60
1	13	449	C	N1-C2-O2	6.03	122.52	118.90
1	13	858	G	C8-N9-C4	-6.03	103.99	106.40
25	1H	77	C	C5-C4-N4	-6.03	115.98	120.20
54	1G	953	G	N3-C4-C5	-6.03	125.58	128.60
25	14	2435	A	C2-N3-C4	6.03	113.62	110.60
25	1H	816	C	O5'-P-OP1	6.03	117.94	110.70
25	14	569	U	C5-C6-N1	-6.03	119.69	122.70
25	14	1304	C	N3-C4-N4	-6.03	113.78	118.00
25	14	1605	C	N3-C4-C5	-6.03	119.49	121.90
25	1H	648	G	C4-C5-N7	-6.03	108.39	110.80
25	1H	2070	G	O5'-P-OP1	6.03	117.93	110.70
25	14	982	C	C6-N1-C2	-6.03	117.89	120.30
25	14	1450	C	N3-C4-C5	-6.03	119.49	121.90
25	14	1459	G	C4-N9-C1'	-6.03	118.67	126.50
25	1H	265	A	C8-N9-C4	-6.03	103.39	105.80
25	1H	621	A	N3-C4-C5	6.03	131.02	126.80
25	1H	1695	G	N3-C4-C5	-6.03	125.59	128.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
25	1H	2350	C	N3-C2-O2	-6.03	117.68	121.90
25	1H	2376	A	N1-C6-N6	-6.03	114.98	118.60
25	1H	2465	C	C5-C6-N1	-6.03	117.99	121.00
1	13	580	U	N3-C2-O2	-6.02	117.98	122.20
26	16	7	G	N7-C8-N9	6.02	116.11	113.10
54	1G	495	A	N1-C6-N6	-6.02	114.99	118.60
25	1H	128	C	C6-N1-C2	6.02	122.71	120.30
25	1H	975	G	N3-C2-N2	-6.02	115.68	119.90
25	1H	1373	A	O5'-P-OP1	6.02	117.93	110.70
54	1G	817	C	C2-N1-C1'	-6.02	112.17	118.80
26	1J	61	G	O5'-P-OP1	-6.02	100.28	105.70
26	16	60	C	C5-C6-N1	6.02	124.01	121.00
25	14	1394	U	OP1-P-OP2	-6.02	110.57	119.60
22	3K	36	U	C5-C6-N1	6.02	125.71	122.70
36	88	10	ARG	NE-CZ-NH1	6.02	123.31	120.30
25	14	569	U	C2-N3-C4	-6.02	123.39	127.00
25	14	2319	G	N3-C4-C5	-6.02	125.59	128.60
22	3K	19	C	C6-N1-C2	-6.02	117.89	120.30
25	1H	2072	G	OP1-P-O3'	6.02	118.44	105.20
25	14	1761	C	C6-N1-C2	6.02	122.71	120.30
23	2K	11	A	C8-N9-C4	-6.01	103.39	105.80
25	1H	666	G	N3-C2-N2	-6.01	115.69	119.90
25	1H	2447	G	N3-C4-C5	-6.01	125.59	128.60
25	1H	2778	A	O5'-P-OP2	-6.01	100.29	105.70
25	14	1856	G	N3-C4-C5	-6.01	125.59	128.60
25	14	2624	G	N3-C4-N9	6.01	129.61	126.00
25	1H	788	A	C6-N1-C2	6.01	122.21	118.60
25	14	2278	A	N9-C4-C5	6.01	108.20	105.80
25	1H	1349	A	N9-C4-C5	-6.01	103.39	105.80
25	1H	1900	A	N7-C8-N9	6.01	116.81	113.80
54	1G	296	U	N3-C2-O2	-6.01	117.99	122.20
25	14	777	A	N1-C2-N3	6.01	132.31	129.30
25	14	2731	G	C8-N9-C4	-6.01	104.00	106.40
25	1H	77	C	N3-C4-N4	6.01	122.21	118.00
25	1H	2084	C	C5-C6-N1	-6.01	118.00	121.00
25	1H	594	U	C6-N1-C2	6.01	124.60	121.00
25	1H	1293	C	C2-N1-C1'	6.01	125.41	118.80
25	14	848	G	N1-C6-O6	-6.01	116.30	119.90
25	14	1313	U	C5-C6-N1	6.01	125.70	122.70
25	14	1804	C	OP1-P-OP2	-6.01	110.59	119.60
54	1G	1071	C	C6-N1-C2	-6.00	117.90	120.30
54	1G	687	A	P-O3'-C3'	6.00	126.90	119.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
25	14	2518	A	N3-C4-N9	-6.00	122.60	127.40
1	13	575	G	C5-C6-O6	6.00	132.20	128.60
25	1H	982	C	O5'-P-OP2	-6.00	100.30	105.70
25	1H	2082	A	N1-C2-N3	6.00	132.30	129.30
25	14	2272	U	N1-C2-N3	6.00	118.50	114.90
25	1H	265	A	O4'-C1'-N9	6.00	113.00	108.20
1	13	766	A	N9-C4-C5	-6.00	103.40	105.80
25	1H	728	G	N1-C2-N2	-6.00	110.80	116.20
25	1H	1776	G	O5'-P-OP1	6.00	117.90	110.70
25	1H	2530	A	N1-C6-N6	6.00	122.20	118.60
25	14	1882	C	C2-N1-C1'	6.00	125.40	118.80
25	1H	757	U	C5-C4-O4	6.00	129.50	125.90
54	1G	266	G	C8-N9-C4	-6.00	104.00	106.40
25	14	1302	A	N1-C6-N6	-6.00	115.00	118.60
25	14	2071	A	C6-N1-C2	-6.00	115.00	118.60
25	1H	1969	A	O5'-P-OP2	6.00	117.89	110.70
25	1H	736	C	O5'-P-OP1	-5.99	100.31	105.70
25	1H	1161	C	C5-C6-N1	5.99	124.00	121.00
1	13	1299	A	C4-N9-C1'	5.99	137.09	126.30
25	1H	185	U	C2-N3-C4	-5.99	123.41	127.00
25	1H	1307	A	C4-C5-N7	5.99	113.70	110.70
25	14	2612	C	O5'-P-OP2	-5.99	100.31	105.70
25	1H	445	C	N3-C2-O2	-5.99	117.71	121.90
25	1H	690	G	N1-C6-O6	5.99	123.49	119.90
25	14	84	A	C8-N9-C4	5.99	108.20	105.80
1	13	1329	A	O5'-P-OP1	-5.99	100.31	105.70
25	1H	138	G	O4'-C1'-N9	5.99	112.99	108.20
25	1H	2329	G	OP1-P-OP2	5.99	128.58	119.60
25	1H	270(L)	U	N1-C2-O2	5.99	126.99	122.80
25	1H	326	G	N7-C8-N9	5.99	116.09	113.10
26	1J	40	U	N3-C4-O4	-5.99	115.21	119.40
25	1H	74	A	O4'-C1'-N9	-5.99	103.41	108.20
25	1H	442	G	N3-C4-N9	5.98	129.59	126.00
25	14	464	U	C2-N3-C4	-5.98	123.41	127.00
25	14	1305	C	O5'-P-OP2	5.98	117.88	110.70
25	14	1974	C	C5-C4-N4	-5.98	116.01	120.20
25	14	1805	U	N1-C2-N3	5.98	118.49	114.90
25	14	1950	G	C2-N3-C4	5.98	114.89	111.90
25	1H	247	G	N3-C2-N2	5.98	124.08	119.90
25	1H	2440	C	C2-N3-C4	5.98	122.89	119.90
25	1H	2593	U	N3-C4-C5	5.98	118.19	114.60
1	13	802	A	N1-C6-N6	5.98	122.19	118.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	13	971	G	N1-C6-O6	5.98	123.49	119.90
25	1H	1789	A	N9-C4-C5	5.98	108.19	105.80
1	13	578	C	N3-C4-C5	-5.98	119.51	121.90
25	14	723	G	N3-C4-N9	-5.98	122.42	126.00
25	14	1314	C	C6-N1-C1'	-5.98	113.63	120.80
25	1H	52	A	C2-N3-C4	5.97	113.59	110.60
25	1H	606	U	C5-C4-O4	5.97	129.49	125.90
25	1H	1293	C	N3-C4-N4	5.97	122.18	118.00
25	14	1820	U	C2-N1-C1'	-5.97	110.53	117.70
25	14	2211	G	C6-C5-N7	-5.97	126.82	130.40
25	1H	127	A	N1-C6-N6	5.97	122.18	118.60
25	1H	681	G	N1-C2-N2	-5.97	110.82	116.20
25	1H	788	A	OP2-P-O3'	5.97	118.34	105.20
25	14	1594	G	N1-C6-O6	5.97	123.48	119.90
25	14	1981	A	C6-C5-N7	5.97	136.48	132.30
1	13	720	C	N3-C2-O2	-5.97	117.72	121.90
1	13	953	G	N1-C6-O6	-5.97	116.32	119.90
25	1H	74	A	N3-C4-C5	5.97	130.98	126.80
54	1G	320	C	N3-C2-O2	5.97	126.08	121.90
54	1G	769	G	C4-N9-C1'	5.97	134.26	126.50
25	1H	1142(A)	A	C5-C6-N1	-5.97	114.72	117.70
54	1G	966	G	N1-C6-O6	-5.97	116.32	119.90
25	14	1379	A	C6-C5-N7	-5.97	128.12	132.30
25	14	2823	A	C2-N3-C4	-5.97	107.61	110.60
25	1H	324	A	O5'-P-OP1	-5.97	100.33	105.70
1	13	566	G	N3-C4-C5	-5.97	125.62	128.60
25	1H	107	C	C6-N1-C2	5.97	122.69	120.30
25	1H	1202	C	C4-C5-C6	5.97	120.38	117.40
25	14	1496	A	C6-C5-N7	-5.97	128.12	132.30
25	1H	869	G	C5-C6-O6	5.96	132.18	128.60
25	1H	989	G	C8-N9-C4	-5.96	104.01	106.40
25	1H	1204	A	N3-C4-C5	5.96	130.97	126.80
25	1H	2360	A	N1-C2-N3	5.96	132.28	129.30
54	1G	18	C	C5-C6-N1	5.96	123.98	121.00
25	1H	1271	G	N3-C2-N2	5.96	124.07	119.90
25	1H	2004	G	OP1-P-OP2	5.96	128.54	119.60
25	1H	2856	C	N1-C2-O2	5.96	122.47	118.90
54	1G	180	U	C5-C6-N1	5.96	125.68	122.70
54	1G	227	G	C8-N9-C4	5.96	108.78	106.40
25	14	56	A	C5-C6-N6	5.96	128.47	123.70
25	14	1449(A)	G	C4-N9-C1'	5.96	134.25	126.50
25	14	2355	C	C2-N1-C1'	5.96	125.35	118.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
25	14	2840	C	C4-C5-C6	5.96	120.38	117.40
25	1H	1752	C	C6-N1-C2	5.96	122.68	120.30
25	14	141	A	C5-N7-C8	-5.96	100.92	103.90
25	1H	2435	A	C5-C6-N6	5.96	128.46	123.70
55	3L	55	U	C2-N1-C1'	5.96	124.85	117.70
25	1H	212	G	OP2-P-O3'	5.95	118.30	105.20
25	1H	1837	C	C5-C4-N4	-5.95	116.03	120.20
25	14	1496	A	C4-C5-N7	5.95	113.68	110.70
25	1H	49	A	C5-N7-C8	5.95	106.88	103.90
25	1H	500	G	O5'-P-OP1	-5.95	100.34	105.70
25	1H	508	G	C4-N9-C1'	5.95	134.24	126.50
25	1H	786	C	C2-N1-C1'	-5.95	112.25	118.80
54	1G	1260	C	C5-C6-N1	5.95	123.97	121.00
25	14	436	C	C6-N1-C2	5.95	122.68	120.30
25	14	2287	A	C5-N7-C8	-5.95	100.92	103.90
1	13	304	U	N3-C4-C5	-5.95	111.03	114.60
25	1H	70	G	C8-N9-C4	-5.95	104.02	106.40
25	1H	655	A	C5-N7-C8	-5.95	100.93	103.90
25	1H	1707	G	C4-C5-N7	5.95	113.18	110.80
25	1H	2544	G	N3-C2-N2	-5.95	115.74	119.90
25	1H	2557	G	C5-C6-O6	-5.95	125.03	128.60
25	1H	2861	G	C4-N9-C1'	5.95	134.23	126.50
25	1H	1344	G	C5-C6-O6	-5.95	125.03	128.60
25	1H	1244	G	N1-C6-O6	5.95	123.47	119.90
55	3L	36	U	O5'-P-OP2	-5.95	100.35	105.70
25	14	79	G	N1-C6-O6	-5.95	116.33	119.90
25	14	245	G	C4-N9-C1'	5.95	134.23	126.50
25	14	470	A	O5'-P-OP1	-5.95	100.35	105.70
25	14	660	G	C5-C6-N1	-5.95	108.53	111.50
25	14	681	G	N9-C4-C5	-5.95	103.02	105.40
25	14	1022	G	C4-C5-N7	-5.95	108.42	110.80
1	13	733	A	O4'-C1'-N9	5.94	112.95	108.20
25	14	2645	G	C5-C6-O6	5.94	132.17	128.60
25	1H	586	A	OP1-P-O3'	5.94	118.27	105.20
25	1H	797	C	C5-C6-N1	-5.94	118.03	121.00
25	1H	1275	A	O5'-P-OP1	-5.94	100.35	105.70
25	1H	2449	U	N1-C2-N3	5.94	118.47	114.90
25	1H	2484	G	C8-N9-C1'	-5.94	119.27	127.00
57	4L	21	C	C5-C6-N1	5.94	123.97	121.00
25	14	396	G	C5-C6-N1	-5.94	108.53	111.50
25	14	613	U	C5-C4-O4	5.94	129.47	125.90
25	14	2250	G	O5'-P-OP2	-5.94	100.35	105.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
25	1H	328	U	C6-N1-C2	-5.94	117.44	121.00
25	1H	719	C	C6-N1-C2	-5.94	117.92	120.30
25	1H	2012	G	N9-C4-C5	-5.94	103.03	105.40
25	1H	2017	U	N3-C4-C5	-5.94	111.04	114.60
25	14	1349	A	N7-C8-N9	5.94	116.77	113.80
1	13	810	C	N3-C4-N4	5.94	122.16	118.00
25	1H	996	A	N7-C8-N9	-5.94	110.83	113.80
25	1H	2330	G	N9-C4-C5	-5.93	103.03	105.40
25	1H	2378	A	C8-N9-C4	5.93	108.17	105.80
25	1H	2478	A	OP2-P-O3'	5.93	118.25	105.20
25	1H	2567	G	O5'-P-OP1	-5.93	100.36	105.70
1	13	280	C	C6-N1-C2	5.93	122.67	120.30
25	1H	2287	A	N3-C4-C5	5.93	130.95	126.80
25	14	1313	U	C2-N1-C1'	5.93	124.82	117.70
25	14	1341	U	N1-C2-O2	-5.93	118.65	122.80
25	14	2198	A	C8-N9-C4	-5.93	103.43	105.80
23	2K	9	G	C8-N9-C4	-5.93	104.03	106.40
25	1H	1314	C	O5'-P-OP2	-5.93	100.36	105.70
25	14	1286	A	N1-C6-N6	-5.93	115.04	118.60
25	14	1816	G	O5'-P-OP2	5.93	117.82	110.70
25	1H	943	U	N1-C2-O2	-5.93	118.65	122.80
25	1H	1399	C	C6-N1-C2	-5.93	117.93	120.30
25	14	1253	A	C2-N3-C4	5.93	113.56	110.60
25	14	2504	U	N3-C2-O2	-5.93	118.05	122.20
25	1H	429	A	O5'-P-OP1	-5.93	100.37	105.70
25	1H	772	C	O5'-P-OP1	-5.93	100.37	105.70
25	14	788	A	N7-C8-N9	5.93	116.76	113.80
25	14	2346	A	N1-C6-N6	5.93	122.16	118.60
25	14	456	C	N3-C2-O2	5.92	126.05	121.90
25	14	1992	G	P-O3'-C3'	5.92	126.81	119.70
1	13	115	G	P-O3'-C3'	5.92	126.81	119.70
25	1H	662	G	N1-C6-O6	-5.92	116.35	119.90
25	14	528	A	N1-C6-N6	5.92	122.15	118.60
25	1H	2698	U	O5'-P-OP2	-5.92	100.37	105.70
1	13	555	C	C6-N1-C2	-5.92	117.93	120.30
1	13	776	G	O5'-P-OP1	-5.92	100.37	105.70
25	1H	724	U	C5-C6-N1	-5.92	119.74	122.70
25	1H	1330	C	C5-C6-N1	5.92	123.96	121.00
25	1H	2009	G	C5-C6-O6	-5.92	125.05	128.60
54	1G	1260	C	C6-N1-C2	-5.92	117.93	120.30
25	14	1280	G	O5'-P-OP1	5.92	117.80	110.70
25	1H	2286	A	N7-C8-N9	5.92	116.76	113.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
25	1H	2518	A	C4-C5-N7	5.92	113.66	110.70
25	1H	141(A)	C	OP2-P-O3'	5.91	118.21	105.20
25	1H	271(B)	G	N3-C4-N9	5.91	129.55	126.00
25	1H	1842	G	N9-C4-C5	5.91	107.77	105.40
25	14	329	G	C5-C6-N1	5.91	114.46	111.50
25	14	796	C	N3-C4-C5	5.91	124.27	121.90
25	1H	1141	U	O4'-C1'-N1	5.91	112.93	108.20
25	1H	543	C	C6-N1-C2	5.91	122.66	120.30
25	1H	728	G	N7-C8-N9	-5.91	110.15	113.10
25	1H	929	G	N1-C6-O6	5.91	123.44	119.90
25	1H	726	G	C8-N9-C4	5.91	108.76	106.40
25	1H	1316	U	N3-C4-O4	-5.91	115.27	119.40
25	1H	2773	C	C6-N1-C2	5.91	122.66	120.30
25	14	2779	U	N3-C2-O2	-5.91	118.07	122.20
25	14	2830	G	N3-C4-C5	5.91	131.55	128.60
26	1J	12	C	C6-N1-C2	-5.91	117.94	120.30
23	2K	15	G	C5-C6-N1	-5.90	108.55	111.50
42	E8	90	ARG	NE-CZ-NH1	-5.90	117.35	120.30
25	14	695	G	C4-C5-N7	5.90	113.16	110.80
25	1H	528	A	C6-N1-C2	5.90	122.14	118.60
25	1H	966	G	OP1-P-OP2	5.90	128.45	119.60
25	1H	1427	A	C6-N1-C2	-5.90	115.06	118.60
25	1H	1518	C	C6-N1-C2	-5.90	117.94	120.30
25	14	329	G	N1-C6-O6	-5.90	116.36	119.90
25	14	1142	U	N1-C2-O2	5.90	126.93	122.80
1	13	988	G	N3-C4-C5	-5.90	125.65	128.60
25	1H	2557	G	C5-C6-N1	5.90	114.45	111.50
54	1G	553	A	C8-N9-C4	-5.90	103.44	105.80
25	14	388	G	N3-C2-N2	-5.90	115.77	119.90
25	1H	776	G	N3-C2-N2	-5.90	115.77	119.90
25	1H	1313	U	C5-C6-N1	5.90	125.65	122.70
25	1H	1564	C	N3-C4-N4	-5.90	113.87	118.00
25	14	966	G	N1-C6-O6	-5.90	116.36	119.90
25	14	1633	G	N9-C4-C5	5.90	107.76	105.40
25	14	2253	G	C6-C5-N7	-5.90	126.86	130.40
1	13	529	G	C4-C5-N7	5.90	113.16	110.80
25	1H	19	C	C6-N1-C2	5.90	122.66	120.30
25	1H	401	A	N1-C2-N3	5.90	132.25	129.30
25	1H	67	U	C6-N1-C2	-5.89	117.46	121.00
25	1H	1993	U	N1-C2-O2	-5.89	118.67	122.80
28	21	65	GLY	N-CA-C	-5.89	98.36	113.10
25	14	2068	U	OP1-P-O3'	5.89	118.17	105.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
25	1H	248	G	O5'-P-OP2	-5.89	100.40	105.70
54	1G	645	C	C6-N1-C2	-5.89	117.94	120.30
54	1G	1529	G	N3-C4-C5	-5.89	125.65	128.60
25	1H	1784	A	N1-C6-N6	-5.89	115.06	118.60
25	1H	1200	C	OP1-P-OP2	-5.89	110.77	119.60
25	1H	209	C	C5-C6-N1	-5.89	118.06	121.00
25	1H	559	G	C5-C6-N1	-5.89	108.56	111.50
25	1H	589	C	N1-C2-O2	-5.89	115.37	118.90
25	1H	1382	G	N9-C4-C5	-5.89	103.05	105.40
25	1H	1632	A	C6-C5-N7	-5.89	128.18	132.30
25	14	2681	C	N1-C2-O2	5.89	122.43	118.90
1	13	907	A	N1-C2-N3	-5.88	126.36	129.30
25	1H	930	U	C5-C6-N1	-5.88	119.76	122.70
25	1H	1681	G	N1-C6-O6	5.88	123.43	119.90
1	13	805	C	OP2-P-O3'	5.88	118.14	105.20
25	1H	233	A	C5-C6-N6	5.88	128.41	123.70
25	1H	459	U	O5'-P-OP2	-5.88	100.41	105.70
25	1H	770	G	C4-C5-N7	5.88	113.15	110.80
25	1H	1500	G	O5'-P-OP2	-5.88	100.41	105.70
25	1H	1843	C	C5-C6-N1	-5.88	118.06	121.00
25	1H	148	C	C5-C6-N1	-5.88	118.06	121.00
25	1H	501	A	N1-C2-N3	5.88	132.24	129.30
25	1H	530	G	N9-C4-C5	5.88	107.75	105.40
25	1H	2253	G	OP1-P-O3'	5.88	118.14	105.20
26	16	100	G	N9-C4-C5	-5.88	103.05	105.40
54	1G	913	A	C8-N9-C4	-5.88	103.45	105.80
54	1G	1390	U	C5-C4-O4	5.88	129.43	125.90
25	14	1898	U	C5-C4-O4	5.88	129.43	125.90
25	14	1963	U	N3-C2-O2	-5.88	118.08	122.20
25	14	1969	A	OP1-P-OP2	-5.88	110.78	119.60
25	14	2405	G	N1-C6-O6	5.88	123.43	119.90
25	1H	2267	A	C2-N3-C4	5.88	113.54	110.60
25	14	2319	G	N3-C4-N9	5.88	129.53	126.00
25	1H	263	C	N1-C2-O2	5.88	122.43	118.90
42	E8	19	LEU	CA-CB-CG	-5.88	101.78	115.30
25	14	2001	A	N3-C4-C5	-5.88	122.69	126.80
25	14	2258	C	C5-C4-N4	-5.88	116.08	120.20
1	13	989	C	C5-C6-N1	5.88	123.94	121.00
25	1H	1427	A	N1-C2-N3	5.88	132.24	129.30
25	1H	1613	G	N3-C4-N9	5.88	129.53	126.00
25	1H	1496	A	N1-C6-N6	5.88	122.12	118.60
1	13	1266	G	C4-N9-C1'	-5.87	118.86	126.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
25	1H	443	A	N9-C4-C5	-5.87	103.45	105.80
25	1H	627	A	C8-N9-C4	5.87	108.15	105.80
25	1H	1511	A	N1-C6-N6	-5.87	115.08	118.60
25	1H	1625	C	N3-C4-N4	-5.87	113.89	118.00
25	14	34	C	C2-N3-C4	5.87	122.84	119.90
25	14	2428	G	N9-C4-C5	5.87	107.75	105.40
22	1K	83	C	C5-C6-N1	5.87	123.94	121.00
25	1H	809	G	N7-C8-N9	-5.87	110.16	113.10
25	1H	1311	G	N1-C6-O6	5.87	123.42	119.90
25	1H	2373	G	C8-N9-C4	5.87	108.75	106.40
26	16	72	G	C8-N9-C1'	-5.87	119.37	127.00
25	14	810	U	N3-C4-O4	5.87	123.51	119.40
25	14	2688	U	C5-C6-N1	-5.87	119.77	122.70
25	1H	626	U	N3-C2-O2	-5.87	118.09	122.20
26	16	7	G	N1-C6-O6	5.87	123.42	119.90
25	14	1616	A	C8-N9-C4	-5.87	103.45	105.80
25	1H	816	C	OP1-P-OP2	-5.87	110.80	119.60
25	14	729	G	C2-N3-C4	5.87	114.83	111.90
25	14	2036	C	O5'-P-OP2	-5.87	100.42	105.70
25	1H	779	U	OP1-P-OP2	-5.87	110.80	119.60
25	1H	2029	G	C8-N9-C4	-5.87	104.05	106.40
1	13	1354	C	N3-C2-O2	-5.86	117.80	121.90
54	1G	332	G	N9-C4-C5	-5.86	103.06	105.40
25	1H	2054	A	N7-C8-N9	5.86	116.73	113.80
25	1H	2311	A	N7-C8-N9	5.86	116.73	113.80
25	1H	2361	A	OP1-P-OP2	5.86	128.39	119.60
25	1H	2695	C	N1-C2-O2	-5.86	115.38	118.90
25	14	1674	G	C8-N9-C1'	-5.86	119.38	127.00
25	1H	593	G	OP2-P-O3'	5.86	118.09	105.20
25	1H	117	G	C5-C6-N1	5.86	114.43	111.50
25	1H	2587	A	C5-C6-N6	5.86	128.38	123.70
25	14	2848	G	O4'-C1'-N9	5.86	112.89	108.20
25	1H	793	A	C6-N1-C2	-5.86	115.09	118.60
25	1H	1400	G	C5-C6-O6	5.86	132.11	128.60
25	1H	1648	C	N1-C2-O2	-5.86	115.39	118.90
25	1H	1698	A	C4-C5-N7	5.86	113.63	110.70
25	1H	2236	C	N3-C4-C5	-5.85	119.56	121.90
54	1G	320	C	C2-N1-C1'	-5.85	112.36	118.80
25	14	2084	C	C5-C6-N1	-5.85	118.07	121.00
25	1H	1835	G	N7-C8-N9	5.85	116.03	113.10
54	1G	748	C	P-O3'-C3'	5.85	126.72	119.70
25	1H	755	C	C6-N1-C2	-5.85	117.96	120.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
25	1H	2007	C	C2-N3-C4	-5.85	116.97	119.90
25	14	2542	A	C8-N9-C4	5.85	108.14	105.80
1	13	112	G	C8-N9-C4	-5.85	104.06	106.40
25	1H	738	G	N1-C2-N2	-5.85	110.94	116.20
25	1H	1193	G	C8-N9-C4	5.85	108.74	106.40
25	1H	2816	C	O5'-P-OP1	-5.85	100.44	105.70
25	14	53	A	N1-C2-N3	5.85	132.22	129.30
25	1H	812	C	N3-C2-O2	5.85	125.99	121.90
25	1H	1287	A	N7-C8-N9	5.85	116.72	113.80
25	1H	1391	U	C2-N1-C1'	5.85	124.72	117.70
25	1H	2856	C	C2-N1-C1'	5.85	125.23	118.80
25	14	940	G	C2-N3-C4	5.85	114.82	111.90
25	1H	1204	A	C4-C5-N7	5.85	113.62	110.70
25	1H	1966	A	N1-C6-N6	-5.84	115.09	118.60
25	1H	1990	C	N1-C2-O2	-5.84	115.39	118.90
25	1H	2757	A	O5'-P-OP2	-5.84	100.44	105.70
25	14	530	G	C2-N3-C4	-5.84	108.98	111.90
25	1H	1648	C	C2-N3-C4	-5.84	116.98	119.90
54	1G	1498	U	C2-N1-C1'	5.84	124.71	117.70
1	13	810	C	C4-C5-C6	5.84	120.32	117.40
1	13	1064	G	C4-N9-C1'	-5.84	118.91	126.50
25	1H	342	G	O5'-P-OP2	-5.84	100.44	105.70
25	1H	1681	G	C5-N7-C8	-5.84	101.38	104.30
25	14	2688	U	N1-C2-N3	5.84	118.40	114.90
1	13	304	U	C5-C4-O4	5.84	129.40	125.90
25	1H	828	U	C2-N1-C1'	5.84	124.71	117.70
25	1H	2544	G	C4-C5-N7	5.84	113.14	110.80
25	14	790	C	N3-C4-N4	-5.84	113.91	118.00
25	14	1382	G	N3-C4-C5	5.84	131.52	128.60
25	14	1616	A	O4'-C1'-N9	5.84	112.87	108.20
25	14	2623	G	N1-C2-N2	-5.84	110.94	116.20
1	13	563	A	O4'-C1'-N9	5.84	112.87	108.20
1	13	1469	G	C4-N9-C1'	5.84	134.09	126.50
25	1H	140	A	OP2-P-O3'	5.84	118.04	105.20
25	14	245	G	C8-N9-C1'	-5.84	119.41	127.00
25	14	1142(A)	A	N1-C2-N3	5.84	132.22	129.30
1	13	579	G	N1-C6-O6	5.84	123.40	119.90
25	1H	454	A	OP2-P-O3'	5.84	118.04	105.20
25	1H	640	C	C6-N1-C2	-5.84	117.97	120.30
25	1H	1210	A	C8-N9-C4	-5.84	103.47	105.80
25	1H	1499	C	C4-C5-C6	5.84	120.32	117.40
25	1H	1982	C	C2-N3-C4	5.84	122.82	119.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
25	14	1914	C	C2-N1-C1'	5.84	125.22	118.80
26	16	89	G	O5'-P-OP2	5.83	117.70	110.70
25	1H	85	G	O5'-P-OP1	5.83	117.70	110.70
25	1H	691	C	C2-N3-C4	-5.83	116.98	119.90
25	14	193	U	C6-N1-C2	5.83	124.50	121.00
1	13	266	G	C4-C5-N7	5.83	113.13	110.80
25	14	569	U	N1-C2-N3	5.83	118.40	114.90
25	14	2443	C	C2-N3-C4	-5.83	116.98	119.90
25	1H	198	C	C2-N3-C4	-5.83	116.98	119.90
25	1H	1833	U	O5'-P-OP2	-5.83	100.45	105.70
25	1H	2606	C	OP1-P-O3'	5.83	118.02	105.20
25	14	1353	A	N9-C4-C5	5.83	108.13	105.80
25	14	1527	G	N3-C4-C5	5.83	131.51	128.60
25	14	1574	C	OP2-P-O3'	5.83	118.02	105.20
25	1H	319	C	C6-N1-C2	-5.83	117.97	120.30
25	1H	1927	A	C8-N9-C4	-5.83	103.47	105.80
25	14	1187	G	C8-N9-C4	-5.83	104.07	106.40
25	1H	693	C	OP2-P-O3'	5.83	118.02	105.20
25	14	141	A	C2-N3-C4	-5.83	107.69	110.60
25	1H	591	C	C4-C5-C6	5.82	120.31	117.40
25	1H	1269	A	C8-N9-C4	-5.82	103.47	105.80
25	1H	1326	U	N3-C2-O2	-5.82	118.12	122.20
25	1H	1489	U	C6-N1-C2	-5.82	117.51	121.00
25	1H	1973	G	O5'-P-OP2	-5.82	100.46	105.70
25	14	595	C	C5-C6-N1	5.82	123.91	121.00
25	14	1446	C	C6-N1-C2	-5.82	117.97	120.30
25	14	1695	G	N9-C4-C5	-5.82	103.07	105.40
25	1H	74	A	N3-C4-N9	-5.82	122.74	127.40
25	1H	140	A	C5-C6-N6	-5.82	119.04	123.70
25	14	1830	C	C5-C4-N4	-5.82	116.12	120.20
25	14	1908	C	C6-N1-C2	-5.82	117.97	120.30
25	1H	691	C	N3-C2-O2	5.82	125.97	121.90
25	1H	745	G	C6-C5-N7	-5.82	126.91	130.40
25	1H	1893	C	C5-C4-N4	5.82	124.28	120.20
25	1H	2587	A	N1-C6-N6	-5.82	115.11	118.60
26	16	79	C	C6-N1-C2	-5.82	117.97	120.30
25	14	2068	U	O5'-P-OP1	-5.82	100.46	105.70
1	13	623	C	C5-C6-N1	5.82	123.91	121.00
25	1H	326	G	C8-N9-C4	-5.82	104.07	106.40
25	1H	2622	C	O5'-P-OP2	-5.82	100.46	105.70
25	14	672	C	O5'-P-OP1	5.82	117.68	110.70
25	14	789	A	O5'-P-OP1	-5.82	100.46	105.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
25	14	1022	G	C8-N9-C4	-5.82	104.07	106.40
1	13	23	C	C5-C6-N1	5.82	123.91	121.00
25	1H	446	G	N1-C6-O6	5.82	123.39	119.90
25	1H	593	G	C2-N3-C4	-5.82	108.99	111.90
25	1H	2053	G	N1-C2-N2	5.82	121.44	116.20
25	1H	2276	G	N3-C2-N2	-5.82	115.83	119.90
25	1H	2389	G	OP1-P-O3'	5.82	117.99	105.20
25	1H	2455	G	N1-C2-N2	-5.82	110.97	116.20
25	14	1603	A	C5-N7-C8	-5.82	100.99	103.90
25	14	2823	A	C5-N7-C8	-5.82	100.99	103.90
25	1H	2298	A	O5'-P-OP2	-5.81	100.47	105.70
54	1G	1405	G	C8-N9-C4	5.81	108.73	106.40
25	14	123	G	N1-C6-O6	5.81	123.39	119.90
25	14	2689	U	OP2-P-O3'	5.81	117.99	105.20
25	14	2776	A	N7-C8-N9	5.81	116.71	113.80
1	13	419	C	C6-N1-C2	-5.81	117.97	120.30
25	14	2859	G	P-O3'-C3'	5.81	126.67	119.70
25	1H	103	A	N7-C8-N9	-5.81	110.89	113.80
25	14	2314	C	N3-C2-O2	-5.81	117.83	121.90
26	1J	102	G	N9-C4-C5	5.81	107.72	105.40
1	13	1289	A	N1-C6-N6	-5.81	115.12	118.60
25	1H	188	G	N9-C4-C5	-5.81	103.08	105.40
25	1H	782	A	C6-N1-C2	-5.81	115.12	118.60
25	1H	2437	U	C5-C4-O4	5.81	129.38	125.90
1	13	1199	U	N1-C2-N3	5.80	118.38	114.90
25	1H	99	U	C6-N1-C2	-5.80	117.52	121.00
25	1H	1554	A	N1-C2-N3	5.80	132.20	129.30
25	1H	1984	G	N1-C6-O6	-5.80	116.42	119.90
25	1H	2368	C	O5'-P-OP1	-5.80	100.48	105.70
25	1H	2508	G	C6-C5-N7	5.80	133.88	130.40
25	14	2457	U	OP2-P-O3'	5.80	117.97	105.20
25	1H	480	A	N1-C6-N6	5.80	122.08	118.60
25	1H	2352	A	O5'-P-OP1	-5.80	100.48	105.70
25	1H	2566	A	P-O3'-C3'	5.80	126.66	119.70
25	1H	2210	G	C4-N9-C1'	5.80	134.04	126.50
25	1H	2363	C	C6-N1-C2	5.80	122.62	120.30
25	1H	2616	C	C2-N3-C4	-5.80	117.00	119.90
25	1H	626	U	N1-C2-N3	5.80	118.38	114.90
25	1H	1244	G	N3-C2-N2	-5.80	115.84	119.90
54	1G	65	U	C2-N1-C1'	-5.80	110.74	117.70
25	14	470	A	C6-C5-N7	-5.80	128.24	132.30
25	1H	94	G	C4-C5-N7	5.80	113.12	110.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
25	1H	756	C	N1-C2-O2	-5.80	115.42	118.90
25	1H	1669	A	C6-N1-C2	-5.80	115.12	118.60
1	13	519	C	C5-C6-N1	-5.80	118.10	121.00
25	1H	987	G	N3-C4-N9	-5.80	122.52	126.00
25	1H	1695	G	N3-C4-N9	5.80	129.48	126.00
25	1H	2312	U	O5'-P-OP1	-5.80	100.48	105.70
25	1H	2512	C	N1-C2-O2	-5.80	115.42	118.90
1	13	881	G	O5'-P-OP1	5.79	117.65	110.70
25	1H	1634	A	C6-N1-C2	-5.79	115.12	118.60
25	14	2246	G	N3-C2-N2	-5.79	115.84	119.90
1	13	767	A	C5-C6-N6	5.79	128.34	123.70
23	2K	25	U	N3-C2-O2	-5.79	118.14	122.20
25	1H	528	A	C2-N3-C4	-5.79	107.70	110.60
25	1H	736	C	C5-C4-N4	-5.79	116.14	120.20
25	1H	2311	A	C5-C6-N1	-5.79	114.80	117.70
25	1H	2467	C	C6-N1-C2	5.79	122.62	120.30
25	14	819	A	C8-N9-C4	-5.79	103.48	105.80
25	14	1410	G	O5'-P-OP2	-5.79	100.49	105.70
25	14	2575	C	N3-C4-C5	-5.79	119.58	121.90
1	13	693	G	C5-C6-O6	5.79	132.07	128.60
25	14	330	A	N1-C6-N6	5.79	122.07	118.60
25	14	2253	G	O5'-P-OP2	-5.79	100.49	105.70
1	13	895	G	O5'-P-OP2	-5.79	100.49	105.70
25	1H	71	A	C6-C5-N7	-5.79	128.25	132.30
25	1H	1998	G	N3-C2-N2	5.79	123.95	119.90
25	1H	1604	C	O5'-P-OP1	-5.79	100.49	105.70
25	14	181	A	C2-N3-C4	-5.79	107.70	110.60
25	14	1321	A	OP2-P-O3'	5.79	117.94	105.20
25	14	1639	U	N3-C4-O4	-5.79	115.35	119.40
25	1H	2390	U	N3-C4-O4	5.79	123.45	119.40
54	1G	897	C	C2-N1-C1'	-5.79	112.44	118.80
25	14	242	G	C8-N9-C4	5.79	108.71	106.40
25	1H	177	G	N1-C6-O6	-5.78	116.43	119.90
25	1H	445	C	N1-C2-O2	5.78	122.37	118.90
25	1H	913	U	OP1-P-OP2	5.78	128.28	119.60
25	1H	1162	G	N7-C8-N9	5.78	115.99	113.10
25	1H	1782	C	C5-C6-N1	-5.78	118.11	121.00
25	1H	63	U	C5-C4-O4	5.78	129.37	125.90
25	14	688	U	O5'-P-OP2	-5.78	100.50	105.70
25	1H	732	C	N1-C2-O2	-5.78	115.43	118.90
25	1H	1116	C	N1-C2-O2	5.78	122.37	118.90
27	19	235	GLY	N-CA-C	5.78	127.55	113.10

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
25	1H	929	G	N3-C4-C5	5.78	131.49	128.60
25	14	792	G	N3-C4-C5	-5.78	125.71	128.60
25	14	1651	G	N1-C6-O6	-5.78	116.43	119.90
25	1H	271(B)	G	C4-N9-C1'	5.78	134.01	126.50
25	14	382	G	O5'-P-OP1	-5.78	100.50	105.70
25	14	786	C	C2-N1-C1'	-5.78	112.45	118.80
24	4K	12	A	C8-N9-C4	-5.77	103.49	105.80
1	13	501	C	OP2-P-O3'	5.77	117.90	105.20
25	1H	1606	G	N3-C4-N9	5.77	129.46	126.00
54	1G	919	A	N1-C6-N6	-5.77	115.14	118.60
1	13	703	G	N3-C4-N9	5.77	129.46	126.00
25	1H	1271	G	N9-C4-C5	-5.77	103.09	105.40
25	1H	1667	G	C5-N7-C8	-5.77	101.42	104.30
25	1H	2232	U	N1-C2-O2	-5.77	118.76	122.80
54	1G	326	G	N3-C4-C5	-5.77	125.71	128.60
54	1G	1470	G	O5'-P-OP1	-5.77	100.51	105.70
1	13	413	G	N3-C4-C5	-5.77	125.72	128.60
1	13	1516	G	C8-N9-C1'	5.77	134.50	127.00
25	1H	2247	A	C5-C6-N1	-5.77	114.81	117.70
25	1H	626	U	C5-C4-O4	5.77	129.36	125.90
25	1H	828	U	N1-C2-O2	5.77	126.84	122.80
25	1H	1781	C	N3-C2-O2	-5.77	117.86	121.90
25	14	489	G	C6-C5-N7	-5.77	126.94	130.40
25	14	512	G	O4'-C1'-N9	5.77	112.81	108.20
25	1H	124	G	N3-C4-C5	5.77	131.48	128.60
25	1H	207	A	C5-C6-N6	-5.77	119.09	123.70
25	1H	752	A	N1-C2-N3	5.77	132.18	129.30
25	1H	1601	G	OP1-P-OP2	-5.77	110.95	119.60
25	1H	2059	A	OP2-P-O3'	5.77	117.89	105.20
25	1H	1425	G	N1-C6-O6	-5.76	116.44	119.90
54	1G	911	U	C5-C4-O4	5.76	129.36	125.90
25	14	1303	G	N1-C6-O6	-5.76	116.44	119.90
26	1J	40	U	C5-C6-N1	-5.76	119.82	122.70
25	1H	1235	G	N1-C6-O6	5.76	123.36	119.90
25	14	1665	A	OP2-P-O3'	5.76	117.88	105.20
1	13	805	C	C5-C6-N1	5.76	123.88	121.00
25	14	2048	G	C5-C6-O6	5.76	132.06	128.60
26	1J	114	G	N7-C8-N9	-5.76	110.22	113.10
25	1H	1544	C	C6-N1-C2	5.76	122.60	120.30
25	1H	2316	C	O5'-P-OP2	5.76	117.61	110.70
25	14	1276	A	O5'-P-OP1	-5.76	100.52	105.70
25	14	2264	C	O5'-P-OP1	-5.76	100.52	105.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
25	1H	2590	A	C2-N3-C4	-5.76	107.72	110.60
56	2L	17	C	N1-C2-O2	5.76	122.36	118.90
25	14	1627	G	N3-C4-N9	5.76	129.46	126.00
25	14	2360	A	N1-C6-N6	5.76	122.06	118.60
25	1H	1535	U	N3-C2-O2	-5.76	118.17	122.20
25	14	1653	G	N3-C4-C5	-5.76	125.72	128.60
25	1H	834	C	C6-N1-C2	-5.75	118.00	120.30
25	1H	1313	U	N3-C4-O4	5.75	123.43	119.40
25	14	40	C	C2-N1-C1'	5.75	125.13	118.80
25	14	458	G	O4'-C1'-N9	5.75	112.80	108.20
26	1J	22	U	C6-N1-C2	-5.75	117.55	121.00
25	1H	989	G	C2-N3-C4	5.75	114.78	111.90
54	1G	110	C	C6-N1-C2	5.75	122.60	120.30
54	1G	244	U	C5-C4-O4	-5.75	122.45	125.90
25	14	133	C	C5-C6-N1	-5.75	118.12	121.00
25	14	980	A	N1-C6-N6	-5.75	115.15	118.60
25	14	1324	G	O5'-P-OP1	-5.75	100.52	105.70
25	14	2232	U	OP2-P-O3'	5.75	117.86	105.20
25	1H	2608	G	N1-C2-N2	5.75	121.38	116.20
25	1H	668	G	OP1-P-O3'	5.75	117.85	105.20
25	1H	672	C	C5-C6-N1	-5.75	118.12	121.00
25	1H	1634	A	N1-C2-N3	5.75	132.18	129.30
25	14	2063	C	OP2-P-O3'	5.75	117.85	105.20
1	13	1227	A	C2-N3-C4	-5.75	107.73	110.60
25	1H	1239	G	OP2-P-O3'	5.75	117.85	105.20
25	1H	2280	G	C5-C6-O6	5.75	132.05	128.60
25	1H	2439	A	C2'-C3'-O3'	5.75	122.90	113.70
25	14	200	U	N3-C2-O2	-5.75	118.18	122.20
25	14	789	A	O5'-P-OP2	5.75	117.60	110.70
25	14	917	A	O5'-P-OP1	-5.75	100.53	105.70
1	13	963	G	N3-C4-C5	-5.75	125.73	128.60
25	1H	1362	C	N3-C4-C5	-5.75	119.60	121.90
25	1H	2066	C	OP1-P-O3'	5.75	117.84	105.20
31	51	80	SER	N-CA-C	-5.75	95.49	111.00
25	1H	116	C	N3-C4-C5	-5.74	119.60	121.90
25	1H	247	G	N7-C8-N9	-5.74	110.23	113.10
25	1H	908	C	OP2-P-O3'	5.74	117.84	105.20
25	1H	2374	C	C6-N1-C2	5.74	122.60	120.30
54	1G	197	A	C4-C5-C6	5.74	119.87	117.00
25	14	74	A	N3-C4-C5	5.74	130.82	126.80
25	14	2099	U	C2-N1-C1'	5.74	124.59	117.70
1	13	120	A	O5'-P-OP1	-5.74	100.53	105.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
25	1H	124	G	N7-C8-N9	-5.74	110.23	113.10
25	1H	912	C	C2-N1-C1'	5.74	125.11	118.80
25	1H	2043	C	C2-N1-C1'	5.74	125.12	118.80
25	1H	2464	C	C5-C4-N4	-5.74	116.18	120.20
25	14	783	A	C5-C6-N6	-5.74	119.11	123.70
1	13	335	C	C2-N1-C1'	-5.74	112.49	118.80
1	13	582	U	C5-C6-N1	-5.74	119.83	122.70
25	1H	32	C	O4'-C1'-N1	5.74	112.79	108.20
25	1H	26	G	C4-N9-C1'	5.74	133.96	126.50
25	1H	462	C	C6-N1-C2	-5.74	118.00	120.30
25	1H	2332	U	O5'-P-OP1	5.74	117.58	110.70
25	14	245	G	C6-C5-N7	-5.74	126.96	130.40
25	14	2261	C	N3-C4-C5	5.74	124.19	121.90
1	13	280	C	O5'-P-OP1	-5.74	100.54	105.70
1	13	580	U	C5-C6-N1	-5.74	119.83	122.70
25	1H	138	G	C5-C6-N1	5.74	114.37	111.50
25	1H	863	A	N1-C6-N6	-5.74	115.16	118.60
25	1H	2496	C	O5'-P-OP1	5.74	117.58	110.70
25	1H	2623	G	C8-N9-C4	-5.74	104.11	106.40
25	1H	1227	A	N9-C4-C5	-5.73	103.51	105.80
25	14	1812	A	N1-C6-N6	-5.73	115.16	118.60
1	13	1057	G	C8-N9-C4	-5.73	104.11	106.40
25	1H	232	G	C8-N9-C1'	-5.73	119.55	127.00
25	1H	630	G	N1-C6-O6	5.73	123.34	119.90
25	1H	785	G	C6-N1-C2	-5.73	121.66	125.10
25	14	147	U	C5-C4-O4	5.73	129.34	125.90
1	13	267	C	O5'-P-OP1	-5.73	100.54	105.70
1	13	405	U	C5-C6-N1	5.73	125.56	122.70
23	2K	9	G	N9-C4-C5	5.73	107.69	105.40
25	1H	690	G	C8-N9-C4	5.73	108.69	106.40
25	1H	842	G	C5-C6-O6	-5.73	125.16	128.60
25	14	2211	G	C8-N9-C1'	-5.73	119.55	127.00
25	14	2287	A	N1-C6-N6	5.73	122.04	118.60
25	14	2755	C	C5-C6-N1	5.73	123.86	121.00
26	16	49	C	N3-C4-N4	5.73	122.01	118.00
54	1G	890	G	O5'-P-OP1	5.73	117.57	110.70
25	1H	585	G	N7-C8-N9	5.73	115.96	113.10
25	1H	588	U	N3-C4-O4	-5.73	115.39	119.40
25	1H	694	U	O5'-P-OP1	5.73	117.57	110.70
25	1H	928	G	C5-N7-C8	-5.73	101.44	104.30
25	1H	1831	G	N3-C4-N9	-5.73	122.56	126.00
25	1H	2713	A	C8-N9-C4	-5.73	103.51	105.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
25	14	1322	A	OP2-P-O3'	5.73	117.80	105.20
1	13	806	C	O5'-P-OP2	-5.73	100.55	105.70
25	1H	308	G	N3-C4-C5	-5.73	125.74	128.60
25	1H	1269	A	C5-N7-C8	-5.72	101.04	103.90
25	1H	2042	A	O5'-P-OP2	-5.72	100.55	105.70
25	14	1805	U	C5-C6-N1	-5.72	119.84	122.70
25	14	2301	C	C6-N1-C2	-5.72	118.01	120.30
25	14	2313	C	C6-N1-C2	-5.72	118.01	120.30
1	13	750	G	C4-N9-C1'	5.72	133.94	126.50
25	1H	144	C	C6-N1-C2	5.72	122.59	120.30
25	1H	428	A	OP1-P-O3'	5.72	117.79	105.20
25	1H	2299	G	N1-C6-O6	5.72	123.33	119.90
25	1H	674	G	OP1-P-OP2	-5.72	111.02	119.60
25	1H	1489	U	N3-C4-C5	-5.72	111.17	114.60
25	1H	1803	A	N1-C6-N6	5.72	122.03	118.60
25	1H	2546	U	N1-C2-O2	-5.72	118.80	122.80
25	14	560	C	N3-C4-C5	5.72	124.19	121.90
25	14	1258	C	OP2-P-O3'	5.72	117.78	105.20
25	14	2871	C	N3-C2-O2	-5.72	117.90	121.90
1	13	1486	G	N3-C2-N2	-5.72	115.90	119.90
25	1H	1225	C	C6-N1-C2	5.72	122.59	120.30
25	1H	2347	C	OP2-P-O3'	5.72	117.78	105.20
25	1H	617	G	N1-C6-O6	-5.72	116.47	119.90
25	1H	2508	G	N3-C4-N9	-5.72	122.57	126.00
25	14	1348	G	O5'-P-OP1	-5.72	100.56	105.70
25	14	2094	G	O5'-P-OP2	-5.72	100.56	105.70
25	1H	651	G	C2-N3-C4	5.71	114.76	111.90
25	1H	2581	G	N1-C6-O6	-5.71	116.47	119.90
25	1H	2715	C	N1-C2-O2	5.71	122.33	118.90
25	1H	2741	A	N7-C8-N9	-5.71	110.94	113.80
54	1G	117	G	C5-C6-O6	-5.71	125.17	128.60
25	14	1930	G	C4-C5-N7	-5.71	108.52	110.80
1	13	564	C	N3-C4-C5	-5.71	119.61	121.90
25	1H	667	U	OP2-P-O3'	5.71	117.77	105.20
25	1H	1184	G	N3-C4-N9	-5.71	122.57	126.00
25	1H	2704	C	C6-N1-C2	5.71	122.58	120.30
25	14	2256	G	C4-C5-N7	5.71	113.08	110.80
25	14	2762	G	C4-C5-N7	5.71	113.08	110.80
25	1H	1356	G	N3-C4-C5	5.71	131.46	128.60
25	1H	1570	A	N7-C8-N9	-5.71	110.95	113.80
25	1H	2271	G	N3-C4-N9	5.71	129.43	126.00
54	1G	554	C	C6-N1-C2	-5.71	118.02	120.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
54	1G	1199	U	C5-C4-O4	5.71	129.32	125.90
25	14	450	G	C4-C5-N7	5.71	113.08	110.80
25	14	805	G	O5'-P-OP1	-5.71	100.56	105.70
25	14	1661	G	N7-C8-N9	-5.71	110.25	113.10
25	1H	411	G	N3-C4-C5	-5.71	125.75	128.60
25	1H	867	C	N1-C2-O2	-5.71	115.48	118.90
25	1H	1598	C	C4-C5-C6	5.71	120.25	117.40
25	1H	1637	A	N9-C4-C5	5.71	108.08	105.80
25	14	687	C	OP2-P-O3'	5.71	117.75	105.20
25	1H	1672	C	O5'-P-OP1	-5.70	100.57	105.70
25	1H	1975	G	N9-C4-C5	-5.70	103.12	105.40
25	14	1629	U	N3-C4-O4	5.70	123.39	119.40
25	1H	741	G	N1-C6-O6	5.70	123.32	119.90
25	14	736	C	N1-C2-O2	-5.70	115.48	118.90
25	14	796	C	N3-C4-N4	-5.70	114.01	118.00
1	13	1494	G	C2-N3-C4	5.70	114.75	111.90
25	1H	839	U	C4-C5-C6	5.70	123.12	119.70
25	1H	1152	C	N3-C2-O2	5.70	125.89	121.90
25	1H	2447	G	P-O3'-C3'	5.70	126.54	119.70
25	1H	2514	U	C4-C5-C6	5.70	123.12	119.70
25	14	1600	C	C6-N1-C2	5.70	122.58	120.30
1	13	893	C	N3-C2-O2	-5.70	117.91	121.90
1	13	1290	G	C4-N9-C1'	5.70	133.91	126.50
25	1H	728	G	C6-C5-N7	-5.70	126.98	130.40
25	1H	775	G	N3-C4-N9	5.70	129.42	126.00
25	1H	834	C	N3-C2-O2	-5.70	117.91	121.90
25	1H	2690	C	N3-C4-C5	-5.70	119.62	121.90
25	14	613	U	N3-C4-O4	-5.70	115.41	119.40
1	13	1200	C	N1-C2-O2	5.70	122.32	118.90
54	1G	769	G	C8-N9-C1'	-5.70	119.59	127.00
25	1H	428	A	C4-C5-C6	5.70	119.85	117.00
25	1H	463	G	C8-N9-C4	5.70	108.68	106.40
25	1H	832	G	N7-C8-N9	5.70	115.95	113.10
25	1H	1363	C	C5-C6-N1	-5.70	118.15	121.00
25	1H	1678	G	C8-N9-C4	-5.70	104.12	106.40
54	1G	1322	C	C5-C4-N4	5.70	124.19	120.20
25	1H	1879	C	C6-N1-C2	-5.69	118.02	120.30
25	14	127	A	C8-N9-C4	5.69	108.08	105.80
25	14	2417	C	O5'-P-OP2	-5.69	100.58	105.70
25	1H	253	C	O5'-P-OP1	-5.69	100.58	105.70
25	1H	1428	C	C5-C6-N1	-5.69	118.15	121.00
25	1H	2053	G	C5-C6-N1	5.69	114.35	111.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
25	1H	2821	A	C5-C6-N6	-5.69	119.15	123.70
54	1G	266	G	O4'-C1'-N9	-5.69	103.65	108.20
25	14	528	A	C5-N7-C8	-5.69	101.05	103.90
25	14	1349	A	N1-C6-N6	5.69	122.02	118.60
1	13	57	G	N3-C4-C5	-5.69	125.75	128.60
25	1H	110	G	O5'-P-OP2	-5.69	100.58	105.70
25	1H	2057	A	O5'-P-OP1	-5.69	100.58	105.70
25	1H	2688	U	N3-C4-O4	-5.69	115.42	119.40
25	14	2499	C	N1-C2-O2	-5.69	115.48	118.90
25	1H	1012	U	C6-N1-C2	5.69	124.41	121.00
25	1H	591	C	O5'-P-OP1	-5.69	100.58	105.70
25	1H	621	A	O4'-C1'-N9	5.69	112.75	108.20
25	1H	2457	U	N1-C2-O2	-5.69	118.82	122.80
25	14	1831	G	C8-N9-C1'	-5.69	119.61	127.00
25	1H	658	C	N3-C4-C5	-5.69	119.62	121.90
25	1H	860	U	O5'-P-OP1	5.69	117.52	110.70
25	1H	1256	G	C5-C6-N1	-5.69	108.66	111.50
25	1H	1773	A	OP2-P-O3'	5.69	117.71	105.20
25	14	932	G	N3-C4-C5	5.69	131.44	128.60
1	13	365	U	C2-N1-C1'	5.68	124.52	117.70
25	1H	772	C	C4-C5-C6	5.68	120.24	117.40
25	1H	1566	A	O5'-P-OP2	-5.68	100.58	105.70
25	1H	2433	A	C2-N3-C4	-5.68	107.76	110.60
54	1G	1280	A	C8-N9-C4	5.68	108.07	105.80
25	1H	686	G	N1-C2-N2	-5.68	111.09	116.20
25	1H	961	C	C5-C4-N4	-5.68	116.22	120.20
25	1H	1344	G	N1-C6-O6	5.68	123.31	119.90
25	1H	2029	G	O5'-P-OP1	-5.68	100.58	105.70
25	1H	2465	C	C6-N1-C2	5.68	122.57	120.30
25	14	278	A	P-O3'-C3'	5.68	126.52	119.70
25	14	1817	G	C5-C6-N1	-5.68	108.66	111.50
25	14	2389	G	C4-C5-N7	5.68	113.07	110.80
25	1H	1356	G	O5'-P-OP1	-5.68	100.59	105.70
25	14	2679	A	C8-N9-C4	5.68	108.07	105.80
25	1H	232	G	C6-C5-N7	-5.68	126.99	130.40
25	1H	2058	A	O5'-P-OP2	-5.68	100.59	105.70
25	14	1346	G	C5-N7-C8	5.68	107.14	104.30
25	14	1769	G	N3-C4-N9	5.68	129.41	126.00
25	14	2235	G	N3-C4-N9	5.68	129.41	126.00
25	1H	1673	U	C6-N1-C2	5.68	124.41	121.00
44	G8	81	LYS	C-N-CA	5.68	145.84	122.00
22	3K	51	C	C6-N1-C2	-5.67	118.03	120.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
25	1H	124	G	C4-N9-C1'	-5.67	119.12	126.50
25	1H	1124	C	C5-C6-N1	-5.67	118.16	121.00
25	1H	1670	C	N1-C2-O2	-5.67	115.50	118.90
25	1H	2491	U	N3-C2-O2	5.67	126.17	122.20
25	1H	2496	C	OP1-P-O3'	5.67	117.68	105.20
54	1G	1305	G	N3-C4-N9	-5.67	122.59	126.00
25	14	1998	G	C2-N3-C4	-5.67	109.06	111.90
1	13	35	G	C5-C6-N1	-5.67	108.66	111.50
1	13	1486	G	N3-C4-N9	-5.67	122.60	126.00
1	13	644	G	C8-N9-C4	5.67	108.67	106.40
25	1H	55	G	C4-C5-N7	5.67	113.07	110.80
25	1H	1606	G	N3-C2-N2	5.67	123.87	119.90
25	1H	1825	A	C6-N1-C2	-5.67	115.20	118.60
54	1G	587	G	C6-C5-N7	-5.67	127.00	130.40
25	14	768	G	N1-C2-N2	-5.67	111.09	116.20
25	14	1466	G	O5'-P-OP1	-5.67	100.59	105.70
25	14	1988	C	N3-C4-N4	5.67	121.97	118.00
25	14	2586	C	N3-C2-O2	5.67	125.87	121.90
25	14	1558	A	C2-N3-C4	-5.67	107.77	110.60
25	14	1812	A	OP1-P-OP2	5.67	128.10	119.60
1	13	953	G	C5-C6-O6	5.67	132.00	128.60
25	1H	383	U	O5'-P-OP2	5.67	117.50	110.70
25	1H	1567	A	C5-C6-N6	-5.67	119.17	123.70
25	1H	2348	U	OP2-P-O3'	5.67	117.67	105.20
25	14	2326	C	O5'-P-OP1	-5.67	100.60	105.70
1	13	1177	G	O5'-P-OP1	5.67	117.50	110.70
23	2K	24	C	C2-N1-C1'	-5.67	112.57	118.80
54	1G	503	C	N3-C4-N4	5.67	121.97	118.00
25	14	2287	A	N1-C2-N3	5.67	132.13	129.30
25	14	825	C	N3-C4-N4	5.67	121.97	118.00
25	14	1210	A	C2-N3-C4	-5.67	107.77	110.60
25	14	1612	C	N3-C2-O2	5.67	125.87	121.90
1	13	690	G	C4-N9-C1'	5.66	133.86	126.50
25	1H	972	G	N1-C6-O6	-5.66	116.50	119.90
25	1H	2565	A	C8-N9-C4	5.66	108.06	105.80
25	14	1609	A	C5-C6-N1	5.66	120.53	117.70
25	1H	1184	G	N1-C2-N2	5.66	121.30	116.20
25	1H	2331	G	C2-N3-C4	-5.66	109.07	111.90
25	14	205	G	N3-C2-N2	5.66	123.86	119.90
25	14	661	C	N1-C2-O2	-5.66	115.50	118.90
56	2L	46	G	N3-C4-N9	-5.66	122.60	126.00
25	14	1991	U	N3-C2-O2	-5.66	118.24	122.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	13	812	C	C5-C6-N1	-5.66	118.17	121.00
1	13	1064	G	C4-C5-N7	-5.66	108.54	110.80
25	1H	679	C	C2-N3-C4	-5.66	117.07	119.90
25	1H	2527	C	C5-C6-N1	5.66	123.83	121.00
54	1G	328	C	P-O3'-C3'	5.66	126.49	119.70
54	1G	587	G	N3-C4-N9	5.66	129.40	126.00
25	14	460	A	N9-C4-C5	-5.66	103.54	105.80
25	14	2061	G	OP1-P-O3'	5.66	117.65	105.20
1	13	792	A	N3-C4-C5	5.66	130.76	126.80
54	1G	1437	C	C6-N1-C2	5.66	122.56	120.30
25	14	2584	U	C5-C4-O4	-5.66	122.51	125.90
25	1H	250	G	C5-C6-N1	-5.66	108.67	111.50
25	1H	541	C	N3-C4-C5	-5.66	119.64	121.90
25	1H	742	G	N3-C4-N9	-5.66	122.61	126.00
25	1H	964	C	O5'-P-OP1	-5.66	100.61	105.70
25	14	733	G	C5-C6-O6	5.66	131.99	128.60
25	14	1297	C	C2-N1-C1'	-5.66	112.58	118.80
25	14	2497	A	O5'-P-OP1	-5.66	100.61	105.70
25	1H	2567	G	C6-C5-N7	-5.65	127.01	130.40
25	14	2573	C	C5-C6-N1	5.65	123.83	121.00
1	13	318	G	C6-C5-N7	-5.65	127.01	130.40
1	13	1496	C	C2-N1-C1'	-5.65	112.58	118.80
25	1H	1332	G	N1-C2-N3	5.65	127.29	123.90
25	1H	1826	G	OP1-P-O3'	5.65	117.64	105.20
25	1H	1967	C	C4-C5-C6	5.65	120.23	117.40
25	1H	2236	C	O5'-P-OP1	-5.65	100.61	105.70
25	1H	2586	C	C5-C4-N4	-5.65	116.24	120.20
54	1G	332	G	C8-N9-C4	5.65	108.66	106.40
25	14	1338	G	N3-C4-C5	-5.65	125.77	128.60
1	13	542	G	O5'-P-OP1	-5.65	100.61	105.70
1	13	761	G	N1-C2-N3	5.65	127.29	123.90
25	1H	591	C	O5'-P-OP2	5.65	117.48	110.70
56	2L	77	A	C8-N9-C4	5.65	108.06	105.80
25	14	1281	G	N7-C8-N9	5.65	115.92	113.10
1	13	1528	U	C6-N1-C2	5.65	124.39	121.00
25	1H	2419	U	N3-C4-O4	5.65	123.35	119.40
54	1G	1519	A	C8-N9-C4	-5.65	103.54	105.80
25	14	608	A	N1-C2-N3	5.65	132.12	129.30
25	1H	1280	G	O5'-P-OP2	5.64	117.47	110.70
25	1H	1698	A	C5-C6-N1	-5.64	114.88	117.70
25	1H	2325	G	C8-N9-C4	-5.64	104.14	106.40
25	1H	251	A	O5'-P-OP1	-5.64	100.62	105.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
25	1H	784	A	C5-C6-N6	5.64	128.21	123.70
25	1H	1161	C	O5'-P-OP2	5.64	117.47	110.70
25	1H	2297	C	OP1-P-OP2	5.64	128.06	119.60
25	14	1337	G	OP1-P-O3'	5.64	117.61	105.20
25	1H	321	G	N1-C6-O6	5.64	123.28	119.90
25	1H	1192	G	N9-C4-C5	-5.64	103.14	105.40
26	16	99	A	O5'-P-OP2	-5.64	100.62	105.70
25	14	664	C	N3-C2-O2	-5.64	117.95	121.90
25	14	1827	C	C5-C6-N1	-5.64	118.18	121.00
1	13	913	A	P-O3'-C3'	5.64	126.47	119.70
25	1H	197	A	C2-N3-C4	-5.64	107.78	110.60
34	25	8	LEU	CA-CB-CG	5.64	128.27	115.30
25	1H	194	G	C8-N9-C4	5.64	108.65	106.40
25	1H	2297	C	O5'-P-OP1	-5.64	100.63	105.70
25	14	2507	C	N3-C4-C5	-5.64	119.65	121.90
1	13	973	G	O5'-P-OP1	-5.63	100.63	105.70
25	1H	630	G	N9-C4-C5	-5.63	103.15	105.40
25	1H	1955	U	O4'-C1'-N1	5.63	112.71	108.20
25	1H	1984	G	O5'-P-OP2	-5.63	100.63	105.70
25	1H	2364	C	OP2-P-O3'	5.63	117.60	105.20
25	14	1674	G	N3-C4-C5	-5.63	125.78	128.60
25	14	1785	A	C4-C5-C6	5.63	119.82	117.00
25	14	2051	A	C8-N9-C4	-5.63	103.55	105.80
23	2K	5	G	C8-N9-C4	5.63	108.65	106.40
25	1H	376	C	C6-N1-C2	-5.63	118.05	120.30
25	1H	1269	A	N7-C8-N9	5.63	116.62	113.80
25	14	698	C	OP1-P-OP2	5.63	128.05	119.60
25	14	2290	G	O5'-P-OP1	-5.63	100.63	105.70
25	14	2297	C	O5'-P-OP2	-5.63	100.63	105.70
25	1H	129	C	C6-N1-C2	5.63	122.55	120.30
25	1H	1967	C	N1-C2-N3	5.63	123.14	119.20
25	1H	1794	U	N1-C2-N3	5.63	118.28	114.90
25	1H	1185	C	N3-C2-O2	-5.63	117.96	121.90
25	1H	2550	G	N3-C4-C5	-5.63	125.79	128.60
25	14	754	C	N3-C4-N4	5.63	121.94	118.00
25	14	2295	C	C2-N1-C1'	5.63	124.99	118.80
25	1H	793	A	N3-C4-C5	-5.62	122.86	126.80
54	1G	901	A	N1-C6-N6	-5.62	115.22	118.60
55	3L	41	C	C6-N1-C2	-5.62	118.05	120.30
25	14	1471	A	C8-N9-C4	-5.62	103.55	105.80
25	14	1695	G	N1-C6-O6	5.62	123.28	119.90
1	13	575	G	O4'-C1'-N9	-5.62	103.70	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
25	1H	253	C	C6-N1-C2	5.62	122.55	120.30
25	1H	1296	G	N1-C6-O6	-5.62	116.53	119.90
25	1H	2252	G	C5-N7-C8	5.62	107.11	104.30
25	14	1974	C	N3-C4-C5	5.62	124.15	121.90
25	14	2011	U	O5'-P-OP1	-5.62	100.64	105.70
25	14	2836	U	N1-C2-O2	5.62	126.74	122.80
25	1H	1786	A	C5-C6-N1	-5.62	114.89	117.70
25	1H	2439	A	C6-C5-N7	-5.62	128.37	132.30
54	1G	909	A	N1-C6-N6	5.62	121.97	118.60
25	14	1606	G	N1-C6-O6	-5.62	116.53	119.90
1	13	550	G	C8-N9-C4	5.62	108.65	106.40
25	1H	67	U	C5-C6-N1	5.62	125.51	122.70
25	1H	1202	C	N1-C2-O2	-5.62	115.53	118.90
25	1H	2028	U	C5-C6-N1	5.62	125.51	122.70
25	1H	752	A	C2-N3-C4	-5.62	107.79	110.60
25	1H	2244	U	O5'-P-OP1	5.62	117.44	110.70
25	14	2328	A	C6-N1-C2	-5.62	115.23	118.60
25	14	2346	A	O4'-C1'-N9	5.62	112.69	108.20
25	1H	808	G	N1-C2-N3	5.62	127.27	123.90
25	1H	26	G	C6-C5-N7	-5.62	127.03	130.40
25	1H	848	G	O5'-P-OP1	5.62	117.44	110.70
25	1H	1320	C	N1-C2-O2	-5.62	115.53	118.90
25	1H	2686	G	N3-C4-N9	5.62	129.37	126.00
54	1G	180	U	C2-N1-C1'	5.62	124.44	117.70
25	14	459	U	N1-C2-O2	5.62	126.73	122.80
25	14	2293	C	N3-C4-N4	-5.62	114.07	118.00
25	1H	179	G	N1-C2-N3	5.61	127.27	123.90
25	1H	1948	G	C5-C6-O6	5.61	131.97	128.60
25	1H	2298	A	C5-C6-N1	5.61	120.51	117.70
25	1H	2618	G	N3-C4-C5	-5.61	125.79	128.60
25	14	2502	G	N3-C4-C5	-5.61	125.79	128.60
26	1J	29	A	C5-C6-N6	-5.61	119.21	123.70
1	13	1374	A	C2-N3-C4	-5.61	107.79	110.60
25	14	1801	G	C5-C6-O6	-5.61	125.23	128.60
25	14	2565	A	N9-C4-C5	-5.61	103.56	105.80
25	1H	982	C	OP1-P-O3'	5.61	117.54	105.20
25	14	1598	C	C2-N1-C1'	5.61	124.97	118.80
25	1H	1387	C	N3-C2-O2	-5.61	117.97	121.90
25	14	192	C	C6-N1-C2	5.61	122.54	120.30
25	14	1527	G	N3-C4-N9	-5.61	122.63	126.00
1	13	1057	G	N3-C4-C5	-5.61	125.80	128.60
1	13	1321	C	C6-N1-C2	-5.61	118.06	120.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
25	1H	208	C	OP2-P-O3'	5.61	117.54	105.20
25	1H	2782	G	C6-C5-N7	-5.61	127.04	130.40
25	14	1021	A	C2-N3-C4	-5.61	107.80	110.60
22	1K	83	C	C2-N1-C1'	5.61	124.97	118.80
25	1H	389	G	C6-C5-N7	-5.61	127.04	130.40
25	1H	2415	G	C6-C5-N7	-5.60	127.04	130.40
25	1H	2450	A	C5-C6-N6	5.60	128.18	123.70
54	1G	1119	C	C6-N1-C2	-5.60	118.06	120.30
25	14	330	A	C6-C5-N7	-5.60	128.38	132.30
1	13	1199	U	N3-C2-O2	-5.60	118.28	122.20
25	1H	673	C	N3-C4-C5	5.60	124.14	121.90
25	1H	1576	U	N3-C2-O2	-5.60	118.28	122.20
25	14	1189	A	OP1-P-OP2	-5.60	111.20	119.60
23	2K	32	G	C8-N9-C4	-5.60	104.16	106.40
25	1H	699	A	C2-N3-C4	5.60	113.40	110.60
54	1G	1354	C	C6-N1-C2	-5.60	118.06	120.30
25	14	493	G	N1-C6-O6	5.60	123.26	119.90
25	1H	742	G	C6-C5-N7	5.60	133.76	130.40
25	1H	1025	G	C4-C5-N7	-5.60	108.56	110.80
25	1H	2434	A	C5-C6-N6	5.60	128.18	123.70
54	1G	1356	G	C8-N9-C4	-5.60	104.16	106.40
25	14	70	G	N3-C4-C5	-5.60	125.80	128.60
25	14	693	C	C2-N3-C4	-5.60	117.10	119.90
25	14	777	A	C6-N1-C2	-5.60	115.24	118.60
25	14	1142	U	C6-N1-C1'	-5.60	113.36	121.20
25	14	2253	G	O5'-P-OP1	5.60	117.42	110.70
25	1H	1763	G	C8-N9-C4	5.60	108.64	106.40
25	1H	1935	G	C5-C6-O6	5.60	131.96	128.60
29	31	74	ARG	NE-CZ-NH1	5.60	123.10	120.30
25	14	920	G	C8-N9-C4	-5.60	104.16	106.40
25	14	2702	U	C5-C6-N1	-5.60	119.90	122.70
25	1H	726	G	C2-N3-C4	-5.59	109.10	111.90
25	14	1779	U	C2-N1-C1'	5.59	124.41	117.70
25	1H	508	G	O5'-P-OP2	-5.59	100.67	105.70
25	1H	1857	G	N1-C6-O6	5.59	123.26	119.90
25	1H	1992	G	N3-C4-N9	5.59	129.36	126.00
25	1H	108	U	O5'-P-OP1	-5.59	100.67	105.70
25	1H	1022	G	P-O3'-C3'	5.59	126.41	119.70
25	1H	1649	G	N3-C4-C5	-5.59	125.80	128.60
25	1H	1839	G	O4'-C1'-N9	-5.59	103.73	108.20
1	13	575	G	O5'-P-OP2	-5.59	100.67	105.70
1	13	1187	G	N3-C4-C5	-5.59	125.81	128.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	13	1512	U	N1-C2-O2	5.59	126.71	122.80
25	1H	124	G	C5-C6-N1	5.59	114.30	111.50
25	1H	628	G	OP1-P-OP2	5.59	127.99	119.60
25	1H	2083	G	N1-C6-O6	5.59	123.25	119.90
25	14	767	U	C5-C4-O4	5.59	129.25	125.90
25	14	2453	A	N1-C6-N6	5.59	121.95	118.60
25	14	2854	G	C8-N9-C4	-5.59	104.16	106.40
25	1H	2525	G	N3-C4-N9	5.59	129.35	126.00
1	13	732	C	C2-N1-C1'	5.59	124.94	118.80
1	13	1469	G	N1-C2-N3	5.59	127.25	123.90
25	1H	258	G	C8-N9-C4	5.59	108.64	106.40
25	1H	800	A	N1-C6-N6	-5.59	115.25	118.60
25	14	621	A	C8-N9-C4	-5.59	103.57	105.80
25	14	1186	G	OP2-P-O3'	5.59	117.49	105.20
25	14	1389	G	N1-C6-O6	-5.59	116.55	119.90
25	14	1520	U	C5-C4-O4	5.59	129.25	125.90
25	1H	629	G	N1-C2-N2	-5.58	111.17	116.20
25	1H	2618	G	N7-C8-N9	5.58	115.89	113.10
25	14	74	A	C8-N9-C4	-5.58	103.57	105.80
23	2K	10	G	N1-C6-O6	5.58	123.25	119.90
25	1H	1349	A	O5'-P-OP1	-5.58	100.67	105.70
25	1H	1833	U	N3-C4-O4	-5.58	115.49	119.40
25	1H	1823	G	C8-N9-C4	-5.58	104.17	106.40
25	14	1726	G	N3-C4-C5	-5.58	125.81	128.60
25	14	2015	A	OP2-P-O3'	5.58	117.48	105.20
25	1H	1602	U	O5'-P-OP2	5.58	117.40	110.70
25	1H	931	G	N3-C4-N9	5.58	129.35	126.00
25	1H	2059	A	N7-C8-N9	-5.58	111.01	113.80
25	14	788	A	C4-C5-N7	5.58	113.49	110.70
25	14	856	C	O5'-P-OP1	-5.58	100.68	105.70
25	14	953	A	N1-C6-N6	5.58	121.95	118.60
25	14	1470	G	N1-C6-O6	5.58	123.25	119.90
25	14	2255	G	N1-C6-O6	-5.58	116.55	119.90
25	14	2428	G	P-O3'-C3'	5.58	126.39	119.70
54	1G	326	G	C4-N9-C1'	5.58	133.75	126.50
1	13	287	U	N3-C2-O2	-5.58	118.30	122.20
25	1H	77	C	N1-C2-O2	-5.58	115.56	118.90
25	1H	1586	A	N1-C6-N6	5.58	121.94	118.60
25	1H	2329	G	C8-N9-C1'	-5.58	119.75	127.00
25	1H	2435	A	N1-C6-N6	-5.58	115.25	118.60
25	1H	2698	U	C5-C4-O4	5.58	129.25	125.90
54	1G	180	U	N3-C4-O4	5.58	123.30	119.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
54	1G	449	C	C6-N1-C2	-5.58	118.07	120.30
54	1G	953	G	N3-C4-N9	5.58	129.34	126.00
25	14	723	G	N3-C4-C5	5.58	131.39	128.60
25	1H	796	C	O5'-P-OP1	5.57	117.39	110.70
25	14	252	G	C4-C5-N7	-5.57	108.57	110.80
25	14	635	C	C6-N1-C2	-5.57	118.07	120.30
25	14	947	G	C5-C6-N1	-5.57	108.71	111.50
25	14	2724	C	OP2-P-O3'	5.57	117.46	105.20
1	13	771	G	C5-C6-O6	5.57	131.94	128.60
25	1H	123	G	N1-C2-N3	5.57	127.24	123.90
25	1H	783	A	O4'-C1'-N9	5.57	112.66	108.20
25	1H	1821	A	N9-C4-C5	5.57	108.03	105.80
25	1H	2401	U	C2-N1-C1'	5.57	124.39	117.70
25	1H	2692	C	N3-C2-O2	-5.57	118.00	121.90
54	1G	966	G	C5-C6-O6	5.57	131.94	128.60
25	1H	1340	U	C5-C4-O4	-5.57	122.56	125.90
25	14	1324	G	OP1-P-O3'	5.57	117.46	105.20
25	14	2353	G	C5-C6-N1	5.57	114.28	111.50
25	14	2556	C	OP2-P-O3'	5.57	117.45	105.20
25	1H	590	A	O5'-P-OP1	-5.57	100.69	105.70
25	1H	827	U	C5-C6-N1	-5.57	119.92	122.70
55	3L	2	G	C4-N9-C1'	-5.57	119.26	126.50
25	14	2515	C	C5-C6-N1	-5.57	118.22	121.00
1	13	970	C	OP2-P-O3'	5.57	117.45	105.20
25	1H	1416	G	C4-N9-C1'	-5.57	119.26	126.50
54	1G	578	C	N3-C4-N4	-5.57	114.10	118.00
25	14	70	G	N3-C4-N9	5.57	129.34	126.00
25	14	396	G	C8-N9-C1'	-5.57	119.76	127.00
25	14	752	A	P-O3'-C3'	5.57	126.38	119.70
25	14	828	U	OP1-P-OP2	5.57	127.95	119.60
25	14	1396	U	N3-C2-O2	-5.57	118.30	122.20
25	14	1658	C	N3-C4-C5	-5.57	119.67	121.90
25	14	2388	A	O5'-P-OP1	5.57	117.38	110.70
1	13	690	G	N1-C2-N3	5.57	127.24	123.90
1	13	730	G	N1-C6-O6	-5.57	116.56	119.90
25	1H	510	C	C6-N1-C2	5.57	122.53	120.30
25	1H	659	C	N3-C4-C5	5.57	124.13	121.90
25	1H	1637	A	N7-C8-N9	5.57	116.58	113.80
25	1H	2269	A	N1-C6-N6	5.57	121.94	118.60
25	14	197	A	OP2-P-O3'	5.57	117.44	105.20
25	14	1650	G	N1-C6-O6	-5.57	116.56	119.90
1	13	1525	G	C8-N9-C4	5.56	108.63	106.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
25	1H	589	C	C6-N1-C2	-5.56	118.08	120.30
25	1H	690	G	N7-C8-N9	-5.56	110.32	113.10
25	1H	1967	C	OP1-P-OP2	5.56	127.94	119.60
25	14	1856	G	C4-C5-C6	5.56	122.14	118.80
1	13	914	A	O5'-P-OP1	-5.56	100.69	105.70
1	13	1113	C	C6-N1-C2	-5.56	118.08	120.30
25	1H	818	G	C5-C6-O6	5.56	131.94	128.60
25	1H	1704	G	O5'-P-OP1	5.56	117.38	110.70
25	1H	2349	G	N1-C6-O6	-5.56	116.56	119.90
25	1H	2418	A	C2-N3-C4	5.56	113.38	110.60
25	1H	2606	C	N3-C4-C5	5.56	124.12	121.90
55	3L	71	C	C6-N1-C2	-5.56	118.08	120.30
25	14	205	G	O5'-P-OP1	5.56	117.38	110.70
25	14	694	U	N3-C2-O2	-5.56	118.31	122.20
25	14	2473	U	C2-N1-C1'	5.56	124.37	117.70
25	1H	139	G	N3-C4-C5	-5.56	125.82	128.60
25	1H	1328	G	N3-C4-C5	-5.56	125.82	128.60
25	1H	1394	U	C6-N1-C2	-5.56	117.66	121.00
26	16	78	A	O5'-P-OP1	5.56	117.37	110.70
25	14	1812	A	O5'-P-OP2	-5.56	100.69	105.70
25	14	2062	A	C8-N9-C4	5.56	108.02	105.80
25	14	2428	G	C4-C5-N7	-5.56	108.58	110.80
25	1H	70	G	N3-C4-C5	-5.56	125.82	128.60
25	1H	181	A	C5-C6-N6	5.56	128.15	123.70
25	1H	1667	G	C8-N9-C4	-5.56	104.18	106.40
1	13	651	C	N3-C2-O2	-5.56	118.01	121.90
1	13	813	U	O5'-P-OP2	-5.56	100.70	105.70
25	1H	242	G	O4'-C1'-N9	5.56	112.65	108.20
25	14	2609	U	C2-N3-C4	-5.56	123.67	127.00
56	2L	28	U	C5-C6-N1	5.56	125.48	122.70
25	14	2053	G	N3-C4-N9	5.56	129.33	126.00
25	14	2364	C	C2-N3-C4	-5.56	117.12	119.90
1	13	185	A	C8-N9-C4	-5.55	103.58	105.80
23	2K	25	U	C5-C4-O4	5.55	129.23	125.90
25	1H	528	A	C8-N9-C1'	5.55	137.70	127.70
25	1H	2422	A	C2-N3-C4	-5.55	107.82	110.60
1	13	320	C	C2-N1-C1'	-5.55	112.69	118.80
25	1H	527	C	C4-C5-C6	5.55	120.17	117.40
25	1H	1759	A	OP1-P-OP2	5.55	127.93	119.60
25	1H	2028	U	N3-C4-C5	-5.55	111.27	114.60
25	14	1373	A	N7-C8-N9	-5.55	111.02	113.80
25	14	1982	C	C2-N1-C1'	5.55	124.91	118.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	13	244	U	C5-C6-N1	5.55	125.47	122.70
1	13	1236	A	N1-C6-N6	5.55	121.93	118.60
25	1H	1274	A	N7-C8-N9	5.55	116.57	113.80
25	1H	1610	A	N1-C6-N6	5.55	121.93	118.60
25	14	2625	G	C5-C6-O6	-5.55	125.27	128.60
54	1G	1331	G	P-O3'-C3'	5.55	126.36	119.70
25	1H	56	A	C6-C5-N7	-5.55	128.42	132.30
25	1H	463	G	N9-C4-C5	-5.55	103.18	105.40
25	1H	954	G	OP2-P-O3'	5.55	117.40	105.20
25	1H	1567	A	OP1-P-O3'	5.55	117.40	105.20
25	1H	2518	A	C6-C5-N7	-5.55	128.42	132.30
54	1G	245	C	C6-N1-C2	-5.55	118.08	120.30
25	1H	2031	A	OP1-P-OP2	-5.54	111.28	119.60
25	1H	2226	C	N3-C4-C5	5.54	124.12	121.90
25	14	464	U	C5-C6-N1	-5.54	119.93	122.70
1	13	605	U	C5-C4-O4	5.54	129.23	125.90
25	1H	2306	C	C6-N1-C2	5.54	122.52	120.30
25	1H	2712(A)	A	C6-C5-N7	-5.54	128.42	132.30
25	14	261	G	C8-N9-C4	5.54	108.62	106.40
25	14	340	A	N1-C6-N6	-5.54	115.27	118.60
25	14	575	A	C5-C6-N6	-5.54	119.27	123.70
25	1H	37	C	N3-C2-O2	-5.54	118.02	121.90
25	1H	208	C	C6-N1-C2	5.54	122.52	120.30
25	1H	1189	A	C6-C5-N7	-5.54	128.42	132.30
25	14	1726	G	C8-N9-C4	-5.54	104.18	106.40
25	14	1288	U	C2-N1-C1'	5.54	124.35	117.70
1	13	1246	C	C6-N1-C2	-5.54	118.08	120.30
1	13	1504	G	P-O3'-C3'	5.54	126.35	119.70
25	1H	871	U	N3-C4-O4	5.54	123.28	119.40
25	1H	1561	G	C8-N9-C4	-5.54	104.19	106.40
25	1H	1630	G	N1-C6-O6	-5.54	116.58	119.90
25	1H	1939	U	C4-C5-C6	-5.54	116.38	119.70
25	1H	482	A	C2-N3-C4	5.54	113.37	110.60
25	1H	2247	A	N1-C2-N3	5.54	132.07	129.30
25	1H	2508	G	C4-C5-N7	-5.54	108.58	110.80
25	1H	2574	G	C6-N1-C2	-5.54	121.78	125.10
25	1H	731	C	OP2-P-O3'	-5.54	93.02	105.20
25	1H	1787	A	OP1-P-O3'	5.54	117.38	105.20
25	1H	1939	U	C5-C4-O4	-5.54	122.58	125.90
25	1H	729	G	OP2-P-O3'	5.53	117.38	105.20
25	1H	1499	C	C6-N1-C1'	5.53	127.44	120.80
25	1H	2000	G	N7-C8-N9	-5.53	110.33	113.10

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
25	14	1603	A	C8-N9-C4	-5.53	103.59	105.80
25	14	68	G	N1-C6-O6	5.53	123.22	119.90
25	14	559	G	N3-C2-N2	-5.53	116.03	119.90
25	14	1885	A	C8-N9-C4	5.53	108.01	105.80
25	1H	197	A	O5'-P-OP2	-5.53	100.72	105.70
25	1H	602	G	N1-C2-N2	-5.53	111.22	116.20
25	1H	2415	G	N1-C6-O6	5.53	123.22	119.90
25	1H	2502	G	N3-C4-C5	-5.53	125.83	128.60
25	14	1674	G	C4-N9-C1'	5.53	133.69	126.50
25	1H	311	A	O5'-P-OP2	5.53	117.33	110.70
25	14	1779	U	C5-C4-O4	-5.53	122.58	125.90
1	13	974	A	C5-N7-C8	-5.53	101.14	103.90
25	1H	670	A	N1-C2-N3	-5.53	126.54	129.30
25	1H	1355	G	C5-C6-O6	5.53	131.92	128.60
25	14	1788	C	N1-C2-O2	5.53	122.22	118.90
25	14	2062	A	N1-C6-N6	5.53	121.92	118.60
25	14	2070	G	N1-C2-N3	5.53	127.22	123.90
1	13	1505	G	OP1-P-OP2	-5.53	111.31	119.60
25	1H	1382	G	OP2-P-O3'	5.53	117.36	105.20
25	1H	1573	G	OP1-P-O3'	-5.53	93.04	105.20
25	1H	1955	U	C5-C6-N1	-5.53	119.94	122.70
26	16	7	G	O5'-P-OP2	-5.53	100.73	105.70
25	14	738	G	N1-C6-O6	-5.53	116.58	119.90
1	13	317	G	N3-C4-C5	-5.52	125.84	128.60
25	1H	834	C	N1-C2-N3	5.52	123.07	119.20
25	14	126	A	OP2-P-O3'	5.52	117.35	105.20
25	14	799	G	N1-C6-O6	5.52	123.21	119.90
25	14	963	U	O5'-P-OP2	5.52	117.33	110.70
25	1H	1453	A	C8-N9-C4	5.52	108.01	105.80
25	1H	1955	U	N1-C2-O2	-5.52	118.94	122.80
25	14	833	U	C4-C5-C6	5.52	123.01	119.70
25	14	1989	G	N1-C6-O6	5.52	123.21	119.90
25	14	2433	A	O5'-P-OP2	5.52	117.33	110.70
25	1H	252	G	C5-C6-N1	5.52	114.26	111.50
25	1H	1998	G	N1-C2-N2	-5.52	111.23	116.20
25	1H	2713	A	N3-C4-C5	5.52	130.66	126.80
54	1G	1285	A	P-O3'-C3'	5.52	126.33	119.70
25	14	1258	C	N3-C4-C5	5.52	124.11	121.90
25	1H	2065	C	C5-C4-N4	-5.52	116.34	120.20
25	1H	2689	U	C2-N3-C4	-5.52	123.69	127.00
54	1G	105	G	N3-C4-C5	-5.52	125.84	128.60
54	1G	598	U	N1-C2-O2	-5.52	118.94	122.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
54	1G	1523	G	N9-C4-C5	5.52	107.61	105.40
25	14	1807	G	N1-C6-O6	5.52	123.21	119.90
25	14	2056	G	N9-C4-C5	-5.52	103.19	105.40
25	1H	1554	A	OP1-P-O3'	5.52	117.34	105.20
25	1H	1569	A	C8-N9-C4	-5.52	103.59	105.80
25	1H	2252	G	OP1-P-OP2	5.52	127.88	119.60
25	1H	2525	G	N1-C6-O6	5.52	123.21	119.90
25	14	2606	C	OP2-P-O3'	5.52	117.34	105.20
25	14	2875	C	N1-C2-O2	5.52	122.21	118.90
25	14	755	C	N3-C2-O2	5.52	125.76	121.90
1	13	864	A	C8-N9-C4	-5.51	103.59	105.80
22	1K	55	U	C2-N1-C1'	5.51	124.32	117.70
25	1H	194	G	N7-C8-N9	-5.51	110.34	113.10
25	1H	797	C	C6-N1-C2	5.51	122.51	120.30
25	1H	867	C	N3-C2-O2	5.51	125.76	121.90
25	1H	1691	C	C6-N1-C2	-5.51	118.09	120.30
53	Q8	45	GLY	N-CA-C	5.51	126.88	113.10
25	14	1332	G	C5-C6-N1	-5.51	108.74	111.50
25	14	17	G	C8-N9-C4	-5.51	104.19	106.40
26	16	100	G	N3-C4-N9	5.51	129.31	126.00
25	14	2333	A	C5-N7-C8	5.51	106.66	103.90
1	13	524	G	OP2-P-O3'	5.51	117.32	105.20
1	13	975	A	C5-C6-N6	-5.51	119.29	123.70
25	1H	394	A	OP2-P-O3'	5.51	117.32	105.20
25	1H	824	A	O5'-P-OP1	-5.51	100.74	105.70
25	1H	956	G	N3-C4-N9	5.51	129.31	126.00
25	1H	2031	A	C2-N3-C4	5.51	113.36	110.60
25	1H	632	A	C5-N7-C8	-5.51	101.15	103.90
25	1H	1599	C	C2-N3-C4	-5.51	117.15	119.90
54	1G	1469	G	C5-C6-N1	-5.51	108.75	111.50
26	1J	22	U	C5-C6-N1	5.51	125.45	122.70
25	1H	1313	U	C6-N1-C1'	-5.51	113.49	121.20
25	1H	1618	A	O5'-P-OP1	-5.51	100.74	105.70
25	1H	2502	G	O5'-P-OP1	-5.51	100.74	105.70
25	1H	2518	A	C8-N9-C4	-5.51	103.60	105.80
25	1H	2688	U	C5-C6-N1	-5.51	119.95	122.70
25	1H	585	G	C6-C5-N7	-5.50	127.10	130.40
25	1H	601	C	C6-N1-C2	5.50	122.50	120.30
1	13	394	G	C5-C6-N1	-5.50	108.75	111.50
25	1H	138	G	OP1-P-O3'	5.50	117.31	105.20
25	14	2287	A	N3-C4-N9	-5.50	123.00	127.40
25	14	2358	G	N3-C2-N2	-5.50	116.05	119.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	13	1529	G	N7-C8-N9	5.50	115.85	113.10
25	1H	574	C	O5'-P-OP2	-5.50	100.75	105.70
25	1H	1421	G	N1-C6-O6	5.50	123.20	119.90
25	1H	2362	G	N9-C4-C5	-5.50	103.20	105.40
25	14	459	U	N3-C2-O2	-5.50	118.35	122.20
25	14	1325	G	N1-C6-O6	-5.50	116.60	119.90
25	14	1496	A	O4'-C1'-N9	5.50	112.60	108.20
25	14	2496	C	N3-C4-N4	5.50	121.85	118.00
27	19	272	ALA	N-CA-CB	-5.50	102.40	110.10
1	13	246	A	N1-C6-N6	5.50	121.90	118.60
25	1H	140	A	N9-C4-C5	-5.50	103.60	105.80
25	1H	401	A	C2-N3-C4	-5.50	107.85	110.60
25	14	1769	G	N3-C4-C5	-5.50	125.85	128.60
1	13	584	G	C6-N1-C2	-5.50	121.80	125.10
25	1H	209	C	N3-C2-O2	-5.50	118.05	121.90
25	1H	802	A	O5'-P-OP2	5.50	117.30	110.70
25	1H	2553	G	C5-C6-O6	5.50	131.90	128.60
25	1H	2581	G	N3-C2-N2	5.50	123.75	119.90
25	14	786	C	C5-C4-N4	5.50	124.05	120.20
25	14	1367	A	C5-N7-C8	-5.50	101.15	103.90
1	13	731	G	N3-C4-C5	-5.50	125.85	128.60
25	1H	785	G	C8-N9-C4	-5.50	104.20	106.40
25	1H	1489	U	C6-N1-C1'	5.50	128.89	121.20
25	14	1675	C	N1-C2-O2	-5.50	115.60	118.90
26	1J	54	G	N7-C8-N9	5.50	115.85	113.10
29	39	24	LEU	CA-CB-CG	5.50	127.94	115.30
25	1H	1012	U	C5-C6-N1	-5.50	119.95	122.70
1	13	1321	C	N3-C4-C5	-5.49	119.70	121.90
25	1H	784	A	P-O3'-C3'	5.49	126.29	119.70
25	1H	1899	G	C5-C6-O6	5.49	131.90	128.60
25	1H	2535	G	N1-C6-O6	-5.49	116.60	119.90
54	1G	481	G	C8-N9-C1'	-5.49	119.86	127.00
25	14	672	C	C5-C6-N1	-5.49	118.25	121.00
25	1H	2619	C	N1-C2-O2	5.49	122.19	118.90
1	13	108	G	C5-N7-C8	-5.49	101.56	104.30
1	13	884	U	O5'-P-OP2	-5.49	100.76	105.70
25	1H	560	C	C2-N3-C4	-5.49	117.16	119.90
25	1H	1698	A	C4-C5-C6	5.49	119.75	117.00
25	1H	2493	U	O5'-P-OP1	-5.49	100.76	105.70
25	1H	2509	G	N3-C4-N9	5.49	129.29	126.00
25	14	113	G	N9-C4-C5	-5.49	103.20	105.40
1	13	326	G	C4-C5-N7	-5.49	108.61	110.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
45	H8	117	LEU	CA-CB-CG	5.49	127.92	115.30
25	14	2243	U	O5'-P-OP1	-5.49	100.76	105.70
25	14	2359	C	C5-C4-N4	5.49	124.04	120.20
25	1H	124	G	O5'-P-OP1	5.49	117.28	110.70
25	1H	684	G	N3-C4-C5	-5.49	125.86	128.60
25	14	1703	G	N9-C4-C5	-5.49	103.20	105.40
25	14	2581	G	N3-C4-C5	-5.49	125.86	128.60
26	1J	54	G	C8-N9-C4	-5.49	104.20	106.40
1	13	1472	U	N3-C2-O2	-5.49	118.36	122.20
25	1H	1421	G	C6-C5-N7	-5.49	127.11	130.40
25	1H	2020	A	N7-C8-N9	5.49	116.54	113.80
25	1H	2458	G	N1-C2-N2	5.48	121.14	116.20
25	14	806	C	C6-N1-C2	-5.48	118.11	120.30
25	14	2356	C	C6-N1-C2	5.48	122.49	120.30
25	1H	1835	G	C4-N9-C1'	5.48	133.63	126.50
25	14	213	A	N3-C4-C5	5.48	130.64	126.80
25	14	323	G	OP1-P-O3'	5.48	117.26	105.20
25	14	1278	A	C2-N3-C4	-5.48	107.86	110.60
25	14	2069	G	C5-C6-O6	-5.48	125.31	128.60
25	1H	1659	U	O5'-P-OP2	-5.48	100.77	105.70
25	1H	2029	G	C5-N7-C8	-5.48	101.56	104.30
1	13	795	C	C4-C5-C6	5.48	120.14	117.40
25	1H	767	U	O5'-P-OP2	-5.48	100.77	105.70
25	1H	1673	U	C2-N1-C1'	-5.48	111.12	117.70
25	1H	83	G	C4-C5-N7	5.48	112.99	110.80
25	1H	686	G	N3-C2-N2	5.48	123.73	119.90
25	1H	868	U	N3-C2-O2	-5.48	118.36	122.20
25	1H	1152	C	C6-N1-C2	5.48	122.49	120.30
25	1H	1826	G	C4-C5-C6	5.48	122.09	118.80
25	1H	2327	A	N9-C4-C5	5.48	107.99	105.80
25	14	300	A	N1-C6-N6	5.48	121.89	118.60
25	14	2068	U	N1-C2-N3	-5.48	111.61	114.90
25	14	939	G	C6-C5-N7	-5.48	127.11	130.40
1	13	317	G	C4-N9-C1'	5.47	133.62	126.50
23	2K	13	C	C6-N1-C2	-5.47	118.11	120.30
25	1H	2861	G	N3-C4-N9	5.47	129.28	126.00
25	14	731	C	C5-C4-N4	-5.47	116.37	120.20
25	14	1342	A	C6-C5-N7	-5.47	128.47	132.30
25	14	1417	C	C6-N1-C2	-5.47	118.11	120.30
25	1H	2234	G	C4-C5-N7	5.47	112.99	110.80
25	1H	2424	C	O5'-P-OP1	-5.47	100.77	105.70
25	1H	2449	U	OP2-P-O3'	5.47	117.24	105.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
25	1H	2761	G	C8-N9-C4	5.47	108.59	106.40
54	1G	911	U	C4-C5-C6	5.47	122.98	119.70
54	1G	1305	G	O5'-P-OP1	-5.47	100.78	105.70
25	14	792	G	C5-C6-O6	5.47	131.88	128.60
25	1H	230	U	O5'-P-OP2	-5.47	100.78	105.70
25	1H	2280	G	C4-C5-N7	-5.47	108.61	110.80
55	1L	75	C	P-O3'-C3'	5.47	126.26	119.70
25	14	2598	A	N9-C4-C5	-5.47	103.61	105.80
1	13	977	A	C8-N9-C4	-5.47	103.61	105.80
25	1H	975	G	N1-C2-N2	5.47	121.12	116.20
25	14	1343	G	C4-N9-C1'	5.47	133.61	126.50
25	14	2754	U	C5-C6-N1	5.47	125.43	122.70
25	1H	86	C	C6-N1-C2	5.47	122.49	120.30
25	1H	826	U	OP1-P-O3'	-5.47	93.17	105.20
25	1H	1203	G	N3-C4-C5	-5.47	125.87	128.60
25	14	14	A	C4-C5-N7	5.47	113.43	110.70
25	14	307	G	N1-C6-O6	5.47	123.18	119.90
25	14	2595	G	C5-N7-C8	-5.47	101.57	104.30
25	1H	631	A	C8-N9-C4	5.46	107.99	105.80
25	1H	719	C	C2-N1-C1'	5.46	124.81	118.80
25	1H	913	U	N3-C4-C5	5.46	117.88	114.60
25	1H	1213	A	O5'-P-OP2	5.46	117.26	110.70
25	1H	1440	G	C5-C6-O6	5.46	131.88	128.60
25	14	467	G	N1-C6-O6	-5.46	116.62	119.90
25	1H	121	G	C4-C5-N7	5.46	112.98	110.80
54	1G	121	C	C6-N1-C1'	-5.46	114.24	120.80
25	14	19	C	N3-C2-O2	5.46	125.72	121.90
25	14	1612	C	N1-C2-O2	-5.46	115.62	118.90
1	13	1187	G	C8-N9-C1'	-5.46	119.90	127.00
22	3K	85	A	C8-N9-C4	-5.46	103.61	105.80
25	1H	115	C	N3-C4-N4	5.46	121.82	118.00
25	1H	762	U	N3-C4-C5	5.46	117.88	114.60
25	1H	768	G	C5-C6-O6	-5.46	125.32	128.60
25	1H	1366	A	N7-C8-N9	-5.46	111.07	113.80
25	1H	1795	C	N1-C2-O2	5.46	122.18	118.90
54	1G	1512	U	N3-C2-O2	-5.46	118.38	122.20
25	14	792	G	C8-N9-C4	-5.46	104.22	106.40
25	14	1972	A	C2-N3-C4	5.46	113.33	110.60
25	14	2589	A	OP1-P-OP2	-5.46	111.41	119.60
32	69	131	LYS	C-N-CA	5.46	144.94	122.00
1	13	1370	G	N1-C6-O6	5.46	123.18	119.90
25	1H	502	A	C5-C6-N6	5.46	128.07	123.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
25	1H	1391	U	N3-C2-O2	-5.46	118.38	122.20
25	1H	1675	C	C6-N1-C2	-5.46	118.12	120.30
25	14	1989	G	N3-C2-N2	-5.46	116.08	119.90
25	14	2092	U	N1-C2-N3	5.46	118.17	114.90
1	13	1479	C	C5-C4-N4	-5.46	116.38	120.20
1	13	1518	A	C8-N9-C4	5.46	107.98	105.80
25	1H	187	G	C6-C5-N7	-5.46	127.13	130.40
25	1H	719	C	N3-C2-O2	-5.46	118.08	121.90
1	13	57	G	N1-C2-N2	-5.46	111.29	116.20
25	14	1459	G	C8-N9-C1'	5.46	134.09	127.00
1	13	760	G	C4-C5-N7	5.45	112.98	110.80
25	1H	1148	A	C4-C5-N7	-5.45	107.97	110.70
40	C8	74	LEU	CA-CB-CG	5.45	127.84	115.30
54	1G	172	A	C8-N9-C4	-5.45	103.62	105.80
54	1G	764	C	C6-N1-C2	-5.45	118.12	120.30
1	13	1080	A	N1-C6-N6	5.45	121.87	118.60
1	13	1304	G	N3-C4-C5	-5.45	125.87	128.60
25	14	36	G	OP2-P-O3'	5.45	117.19	105.20
25	14	1643	G	OP2-P-O3'	5.45	117.19	105.20
1	13	328	C	N3-C2-O2	-5.45	118.08	121.90
1	13	802	A	C5-C6-N6	-5.45	119.34	123.70
25	1H	63	U	C2-N1-C1'	-5.45	111.16	117.70
25	1H	1773	A	C5-C6-N1	-5.45	114.97	117.70
25	1H	1806	C	O5'-P-OP2	-5.45	100.79	105.70
55	1L	20	C	N3-C2-O2	-5.45	118.08	121.90
25	14	672	C	N1-C2-O2	-5.45	115.63	118.90
25	14	1400	G	O5'-P-OP1	5.45	117.24	110.70
25	14	1761	C	N3-C2-O2	5.45	125.72	121.90
25	14	2754	U	C5-C4-O4	-5.45	122.63	125.90
1	13	532	A	C2-N3-C4	-5.45	107.88	110.60
25	14	830	G	N9-C4-C5	-5.45	103.22	105.40
25	14	1254	A	N1-C6-N6	5.45	121.87	118.60
25	14	2217	G	C4-C5-N7	5.45	112.98	110.80
25	14	2440	C	C2-N3-C4	5.45	122.62	119.90
25	14	1600	C	C5-C6-N1	-5.45	118.28	121.00
25	14	1627	G	C4-C5-N7	5.45	112.98	110.80
25	1H	689	A	O5'-P-OP2	-5.45	100.80	105.70
25	1H	2569	G	O5'-P-OP2	-5.45	100.80	105.70
25	14	155	C	N1-C2-O2	5.45	122.17	118.90
25	14	773	U	C2-N3-C4	-5.45	123.73	127.00
25	14	1663	C	N1-C2-O2	-5.45	115.63	118.90
25	14	2679	A	N7-C8-N9	-5.45	111.08	113.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
25	1H	1262	A	O4'-C1'-N9	-5.44	103.84	108.20
25	14	692	C	C6-N1-C2	5.44	122.48	120.30
25	14	1767	C	C6-N1-C2	-5.44	118.12	120.30
25	14	1902	C	C5-C4-N4	5.44	124.01	120.20
1	13	818	G	C4-C5-N7	-5.44	108.62	110.80
25	1H	115	C	C6-N1-C2	5.44	122.48	120.30
25	1H	686	G	C6-C5-N7	-5.44	127.14	130.40
25	1H	2380	C	C5-C6-N1	-5.44	118.28	121.00
25	1H	2394	C	N3-C4-N4	-5.44	114.19	118.00
54	1G	267	C	N3-C2-O2	-5.44	118.09	121.90
25	14	1831	G	C4-C5-C6	5.44	122.06	118.80
25	14	2053	G	C5-C6-O6	-5.44	125.33	128.60
1	13	1149	C	C6-N1-C2	-5.44	118.12	120.30
25	1H	123	G	N3-C4-C5	-5.44	125.88	128.60
25	1H	2070	G	N7-C8-N9	-5.44	110.38	113.10
54	1G	1059	C	C6-N1-C2	-5.44	118.12	120.30
25	14	1903	G	C4-C5-N7	-5.44	108.62	110.80
25	1H	853	G	C8-N9-C4	5.44	108.58	106.40
25	1H	2295	C	O5'-P-OP2	5.44	117.23	110.70
25	14	2461	C	N1-C2-O2	5.44	122.16	118.90
25	14	1459	G	N3-C4-C5	5.44	131.32	128.60
25	1H	1021	A	N3-C4-C5	5.43	130.60	126.80
25	1H	1339	G	N3-C4-N9	5.43	129.26	126.00
25	1H	1349	A	N1-C6-N6	5.43	121.86	118.60
25	1H	2252	G	C6-C5-N7	5.43	133.66	130.40
26	16	79	C	OP2-P-O3'	5.43	117.15	105.20
27	11	60	ARG	NE-CZ-NH2	-5.43	117.58	120.30
25	14	1349	A	C8-N9-C4	-5.43	103.63	105.80
25	14	1379	A	P-O3'-C3'	5.43	126.22	119.70
1	13	331	G	N1-C6-O6	5.43	123.16	119.90
1	13	1406	U	O5'-P-OP1	5.43	117.22	110.70
1	13	1433	A	N1-C2-N3	5.43	132.02	129.30
25	1H	1217	C	O5'-P-OP1	-5.43	100.81	105.70
25	1H	2406	U	O4'-C1'-N1	-5.43	103.85	108.20
25	1H	2585	U	N3-C4-C5	5.43	117.86	114.60
25	1H	789	A	C2-N3-C4	-5.43	107.88	110.60
25	1H	1470	G	OP2-P-O3'	5.43	117.15	105.20
25	14	1943	U	N1-C2-O2	-5.43	119.00	122.80
25	1H	681	G	N1-C6-O6	-5.43	116.64	119.90
25	1H	785	G	N3-C4-C5	-5.43	125.89	128.60
25	1H	1673	U	C5-C6-N1	-5.43	119.98	122.70
25	1H	1678	G	C8-N9-C1'	5.43	134.06	127.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
26	16	47	C	O5'-P-OP2	-5.43	100.81	105.70
54	1G	55	A	C8-N9-C4	-5.43	103.63	105.80
25	14	1695	G	N3-C4-N9	5.43	129.26	126.00
1	13	807	A	C8-N9-C4	-5.43	103.63	105.80
25	1H	197	A	N1-C6-N6	-5.43	115.34	118.60
25	1H	806	C	N3-C4-N4	-5.43	114.20	118.00
25	1H	930	U	O5'-P-OP2	-5.43	100.81	105.70
1	13	1213	A	O4'-C1'-N9	5.43	112.54	108.20
25	14	250	G	OP1-P-OP2	5.43	127.74	119.60
25	14	1742	C	C6-N1-C2	-5.43	118.13	120.30
1	13	975	A	O4'-C1'-N9	-5.42	103.86	108.20
25	1H	516	C	C6-N1-C2	-5.42	118.13	120.30
25	1H	834	C	OP2-P-O3'	5.42	117.14	105.20
25	1H	1613	G	C6-C5-N7	-5.42	127.15	130.40
25	1H	1654	A	N9-C4-C5	5.42	107.97	105.80
25	14	35	G	N3-C4-N9	-5.42	122.75	126.00
25	14	1659	U	N1-C2-N3	5.42	118.16	114.90
25	14	2281	C	C5-C4-N4	-5.42	116.40	120.20
25	14	2302	G	C8-N9-C4	-5.42	104.23	106.40
25	14	2333	A	C4-C5-N7	-5.42	107.99	110.70
1	13	1199	U	N3-C4-C5	-5.42	111.35	114.60
25	1H	21	A	OP2-P-O3'	5.42	117.13	105.20
25	1H	1799	G	P-O3'-C3'	5.42	126.21	119.70
25	1H	2606	C	C2-N3-C4	-5.42	117.19	119.90
25	1H	2712(A)	A	C5-C6-N6	-5.42	119.36	123.70
25	14	781	A	N1-C6-N6	5.42	121.85	118.60
1	13	955	U	OP1-P-O3'	5.42	117.13	105.20
25	1H	917	A	C6-C5-N7	-5.42	128.50	132.30
25	1H	979	G	N1-C6-O6	5.42	123.15	119.90
25	1H	1197	G	OP1-P-OP2	5.42	127.73	119.60
25	1H	2060	A	OP1-P-O3'	5.42	117.13	105.20
54	1G	898	G	C8-N9-C4	5.42	108.57	106.40
25	1H	379	G	N1-C6-O6	-5.42	116.65	119.90
25	1H	663	G	C6-C5-N7	-5.42	127.15	130.40
25	1H	1006	C	C4-C5-C6	5.42	120.11	117.40
25	1H	98	G	OP1-P-OP2	5.42	127.73	119.60
25	1H	1021	A	C5-C6-N1	-5.42	114.99	117.70
25	1H	1975	G	C5-C6-O6	-5.42	125.35	128.60
54	1G	180	U	C6-N1-C2	-5.42	117.75	121.00
54	1G	1427	U	N1-C2-O2	-5.42	119.01	122.80
25	14	675	A	N9-C4-C5	-5.42	103.63	105.80
25	14	2429	G	O5'-P-OP1	5.42	117.20	110.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
25	1H	811	U	C5-C6-N1	-5.42	119.99	122.70
25	14	398	G	O5'-P-OP1	-5.42	100.83	105.70
25	14	514	A	O5'-P-OP2	-5.42	100.83	105.70
25	14	1210	A	C5-N7-C8	-5.42	101.19	103.90
25	1H	1310	G	O5'-P-OP1	-5.42	100.83	105.70
25	14	1517	G	OP1-P-O3'	5.42	117.11	105.20
25	1H	1401	G	C5-N7-C8	-5.41	101.59	104.30
25	1H	2346	A	P-O3'-C3'	5.41	126.20	119.70
25	1H	2362	G	C8-N9-C4	5.41	108.56	106.40
54	1G	913	A	OP2-P-O3'	5.41	117.11	105.20
25	14	2249	U	N3-C4-C5	-5.41	111.35	114.60
26	1J	30	C	N3-C4-C5	-5.41	119.73	121.90
1	13	1227	A	N7-C8-N9	5.41	116.51	113.80
25	1H	2583	G	N1-C2-N3	5.41	127.15	123.90
25	1H	102	G	OP1-P-O3'	5.41	117.10	105.20
25	1H	1941	C	N3-C4-C5	-5.41	119.74	121.90
25	1H	2674	G	C6-N1-C2	-5.41	121.85	125.10
25	1H	611	C	N3-C2-O2	-5.41	118.11	121.90
25	1H	727	A	OP2-P-O3'	5.41	117.10	105.20
25	1H	2244	U	OP1-P-OP2	-5.41	111.49	119.60
25	1H	2551	C	C2-N3-C4	-5.41	117.19	119.90
25	1H	2634	G	C6-C5-N7	-5.41	127.16	130.40
25	14	571	A	OP2-P-O3'	5.41	117.10	105.20
25	14	1449(A)	G	C8-N9-C1'	-5.41	119.97	127.00
25	14	1557	C	N3-C4-C5	5.41	124.06	121.90
25	1H	1688	U	N1-C2-O2	-5.41	119.02	122.80
25	14	2876	G	C8-N9-C4	5.41	108.56	106.40
25	1H	736	C	N1-C2-O2	-5.41	115.66	118.90
25	1H	1669	A	C5-N7-C8	-5.41	101.20	103.90
25	1H	1783	A	N1-C6-N6	5.41	121.84	118.60
25	1H	2891	G	N1-C6-O6	5.41	123.14	119.90
25	14	1346	G	N1-C6-O6	-5.41	116.66	119.90
25	14	2335	A	O5'-P-OP1	-5.41	100.83	105.70
25	14	2688	U	C5-C4-O4	5.41	129.14	125.90
25	1H	1764	G	C5-C6-O6	5.40	131.84	128.60
25	14	1241	A	C2-N3-C4	-5.40	107.90	110.60
25	14	1627	G	C8-N9-C4	5.40	108.56	106.40
1	13	345	C	C2-N1-C1'	5.40	124.74	118.80
1	13	431	A	O5'-P-OP1	-5.40	100.84	105.70
25	1H	63	U	C6-N1-C1'	5.40	128.76	121.20
25	1H	513	A	N9-C4-C5	5.40	107.96	105.80
25	1H	528	A	C5-C6-N1	-5.40	115.00	117.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
25	14	93	C	C6-N1-C2	-5.40	118.14	120.30
25	14	1807	G	OP1-P-O3'	5.40	117.09	105.20
25	1H	391	G	C2-N3-C4	-5.40	109.20	111.90
25	1H	659	C	OP2-P-O3'	5.40	117.08	105.20
25	1H	941	A	C4-C5-N7	5.40	113.40	110.70
25	1H	1201	C	N1-C2-O2	-5.40	115.66	118.90
25	1H	2287	A	C5-N7-C8	-5.40	101.20	103.90
25	1H	2434	A	N1-C6-N6	-5.40	115.36	118.60
26	16	81	G	OP2-P-O3'	5.40	117.08	105.20
25	14	1826	G	C5-N7-C8	5.40	107.00	104.30
25	14	2347	C	N3-C2-O2	-5.40	118.12	121.90
25	1H	480	A	C6-C5-N7	-5.40	128.52	132.30
25	1H	2365	G	N9-C4-C5	-5.40	103.24	105.40
25	14	2607	G	O5'-P-OP2	-5.40	100.84	105.70
25	1H	681	G	OP2-P-O3'	5.40	117.08	105.20
25	1H	1624	G	C6-C5-N7	5.40	133.64	130.40
25	1H	1838	C	C6-N1-C2	5.40	122.46	120.30
25	1H	2060	A	C8-N9-C4	5.40	107.96	105.80
25	1H	2491	U	C5-C6-N1	5.40	125.40	122.70
25	14	565	C	C5-C6-N1	-5.40	118.30	121.00
25	14	2038	G	OP1-P-OP2	-5.40	111.50	119.60
23	2K	32	G	N7-C8-N9	5.40	115.80	113.10
25	14	2277	G	C4-C5-N7	-5.40	108.64	110.80
25	1H	1633	G	C8-N9-C4	-5.39	104.24	106.40
54	1G	236	G	C5-C6-O6	5.39	131.84	128.60
54	1G	639	G	C8-N9-C4	5.39	108.56	106.40
25	14	1671	U	O5'-P-OP1	-5.39	100.84	105.70
25	14	1678	G	N7-C8-N9	5.39	115.80	113.10
36	45	78	PRO	N-CA-C	5.39	126.13	112.10
25	1H	471	A	C5-N7-C8	-5.39	101.20	103.90
25	1H	1390	U	OP1-P-O3'	5.39	117.06	105.20
25	1H	1569	A	C5-C6-N1	-5.39	115.00	117.70
25	14	1228	G	C8-N9-C1'	-5.39	119.99	127.00
25	14	1618	A	N7-C8-N9	5.39	116.50	113.80
25	14	1762	A	C4-N9-C1'	5.39	136.01	126.30
26	1J	29	A	C4-C5-N7	5.39	113.40	110.70
1	13	1516	G	N3-C4-N9	-5.39	122.77	126.00
25	1H	828	U	OP1-P-OP2	5.39	127.69	119.60
25	1H	2563	U	C5-C4-O4	5.39	129.13	125.90
5	42	91	LEU	CA-CB-CG	5.39	127.70	115.30
25	1H	383	U	O4'-C1'-N1	5.39	112.51	108.20
25	1H	700	G	C5-C6-O6	-5.39	125.37	128.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
25	1H	2064	C	C4-C5-C6	5.39	120.09	117.40
25	1H	2567	G	C4-N9-C1'	5.39	133.51	126.50
54	1G	1502	A	C5-N7-C8	-5.39	101.20	103.90
25	14	1594	G	N3-C2-N2	-5.39	116.13	119.90
25	14	2870	C	C6-N1-C2	-5.39	118.14	120.30
1	13	827	U	N3-C4-O4	-5.39	115.63	119.40
25	1H	989	G	C5-C6-N1	5.39	114.19	111.50
25	1H	1348	G	C2-N3-C4	5.39	114.59	111.90
25	14	270(Y)	G	C5-C6-N1	-5.39	108.81	111.50
25	14	982	C	C5-C6-N1	5.39	123.69	121.00
25	1H	2612	C	N1-C2-O2	5.38	122.13	118.90
25	14	912	C	N3-C4-C5	-5.38	119.75	121.90
25	14	1359	A	C4-N9-C1'	-5.38	116.61	126.30
25	14	2500	U	C2-N3-C4	-5.38	123.77	127.00
25	14	714	U	C5-C4-O4	5.38	129.13	125.90
25	1H	442	G	N3-C4-C5	-5.38	125.91	128.60
25	1H	535	C	O5'-P-OP2	-5.38	100.86	105.70
25	1H	2048	G	N1-C2-N2	5.38	121.04	116.20
25	1H	2782	G	C4-C5-N7	5.38	112.95	110.80
54	1G	353	A	OP2-P-O3'	5.38	117.04	105.20
25	1H	1426	G	N3-C4-C5	-5.38	125.91	128.60
25	1H	2246	G	N3-C4-C5	-5.38	125.91	128.60
25	14	140	A	C6-C5-N7	-5.38	128.53	132.30
25	14	2352	A	O5'-P-OP1	-5.38	100.86	105.70
25	1H	2727	G	N1-C6-O6	5.38	123.13	119.90
25	14	1786	A	C4-N9-C1'	5.38	135.98	126.30
1	13	766	A	C4-C5-N7	5.38	113.39	110.70
25	1H	1984	G	N7-C8-N9	-5.38	110.41	113.10
25	14	792	G	O4'-C1'-N9	-5.38	103.90	108.20
25	14	1475	G	C8-N9-C4	-5.38	104.25	106.40
25	14	1960	A	O4'-C1'-N9	5.38	112.50	108.20
25	1H	726	G	N3-C4-C5	5.38	131.29	128.60
25	1H	2229	C	C2-N3-C4	-5.38	117.21	119.90
54	1G	1158	C	C6-N1-C2	-5.38	118.15	120.30
1	13	438	G	O5'-P-OP2	-5.37	100.86	105.70
1	13	1222	G	C8-N9-C4	-5.37	104.25	106.40
25	1H	768	G	N3-C2-N2	-5.37	116.14	119.90
25	1H	1344	G	C4-C5-N7	5.37	112.95	110.80
25	1H	1695	G	C4-N9-C1'	5.37	133.49	126.50
25	1H	2743	C	C2-N1-C1'	-5.37	112.89	118.80
54	1G	518	C	N1-C2-O2	5.37	122.12	118.90
25	14	921	G	N9-C4-C5	5.37	107.55	105.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
25	14	1200	C	O5'-P-OP1	-5.37	100.86	105.70
1	13	356	A	O4'-C1'-N9	5.37	112.50	108.20
25	1H	700	G	N3-C2-N2	-5.37	116.14	119.90
13	4I	108	ARG	NE-CZ-NH1	5.37	122.98	120.30
26	1J	55	U	C6-N1-C2	-5.37	117.78	121.00
54	1G	953	G	N1-C6-O6	-5.37	116.68	119.90
55	3L	74	C	C6-N1-C2	-5.37	118.15	120.30
25	14	774	A	C6-N1-C2	5.37	121.82	118.60
25	14	1664	A	C4-N9-C1'	5.37	135.96	126.30
25	14	1816	G	C5-C6-N1	5.37	114.18	111.50
25	14	2442	C	N3-C2-O2	-5.37	118.14	121.90
25	1H	434	U	N1-C2-O2	-5.37	119.04	122.80
25	1H	2302	G	C4-C5-N7	-5.37	108.65	110.80
25	1H	2700	C	C2-N3-C4	-5.37	117.22	119.90
25	14	2542	A	N7-C8-N9	-5.37	111.12	113.80
25	1H	1187	G	N1-C6-O6	5.37	123.12	119.90
25	1H	2377	A	N9-C4-C5	-5.37	103.65	105.80
25	1H	2491	U	C5-C4-O4	-5.37	122.68	125.90
25	1H	2642	G	C8-N9-C4	5.37	108.55	106.40
25	14	307	G	C5-C6-O6	-5.37	125.38	128.60
25	14	966	G	OP1-P-O3'	5.37	117.00	105.20
25	14	1474	C	N3-C4-C5	-5.37	119.75	121.90
1	13	652	U	O4'-C1'-N1	5.36	112.49	108.20
25	1H	121	G	C6-C5-N7	-5.36	127.18	130.40
25	1H	2286	A	N9-C1'-C2'	5.36	120.97	114.00
25	1H	2294	C	C6-N1-C2	-5.36	118.15	120.30
25	1H	2447	G	OP1-P-O3'	5.36	117.00	105.20
25	1H	2597	G	C4-C5-N7	5.36	112.94	110.80
25	1H	2727	G	C6-C5-N7	-5.36	127.18	130.40
26	16	7	G	C6-C5-N7	-5.36	127.18	130.40
54	1G	135	C	N1-C2-O2	-5.36	115.68	118.90
25	14	759	G	OP1-P-OP2	-5.36	111.56	119.60
25	1H	748	G	N9-C4-C5	5.36	107.55	105.40
25	1H	972	G	N3-C2-N2	5.36	123.65	119.90
25	1H	1669	A	O4'-C1'-N9	5.36	112.49	108.20
54	1G	943	U	N1-C2-O2	5.36	126.55	122.80
25	14	1136	G	C8-N9-C4	5.36	108.55	106.40
25	14	1249	U	C6-N1-C1'	-5.36	113.69	121.20
25	14	1728	G	N3-C4-C5	-5.36	125.92	128.60
25	14	1774	C	O5'-P-OP2	5.36	117.14	110.70
25	14	2351	G	N3-C4-N9	5.36	129.22	126.00
1	13	778	G	OP2-P-O3'	5.36	116.99	105.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
25	1H	2464	C	N3-C4-N4	5.36	121.75	118.00
25	14	2644	G	C2-N3-C4	-5.36	109.22	111.90
25	1H	2336	A	C2-N3-C4	5.36	113.28	110.60
25	1H	2395	C	C5-C4-N4	-5.36	116.45	120.20
54	1G	449	C	N1-C2-O2	5.36	122.11	118.90
25	14	582	G	N1-C6-O6	5.36	123.11	119.90
22	1K	20	C	N3-C2-O2	-5.36	118.15	121.90
25	1H	1284	A	C6-C5-N7	-5.36	128.55	132.30
25	1H	1567	A	N1-C6-N6	5.36	121.81	118.60
25	14	115	C	C5-C6-N1	-5.36	118.32	121.00
25	1H	655	A	C2-N3-C4	-5.36	107.92	110.60
25	1H	2168	G	C2-N3-C4	5.36	114.58	111.90
26	16	41	U	C5-C6-N1	-5.36	120.02	122.70
54	1G	1498	U	C6-N1-C2	-5.36	117.79	121.00
25	14	1285	G	OP2-P-O3'	5.36	116.98	105.20
25	14	1698	A	N1-C2-N3	5.36	131.98	129.30
25	1H	1948	G	OP2-P-O3'	5.35	116.98	105.20
25	1H	2071	A	OP2-P-O3'	5.35	116.98	105.20
25	1H	2433	A	N1-C2-N3	5.35	131.98	129.30
54	1G	115	G	P-O3'-C3'	5.35	126.12	119.70
54	1G	1502	A	C6-C5-N7	-5.35	128.55	132.30
25	14	120	U	O5'-P-OP2	5.35	117.12	110.70
25	14	2315	G	C2-N3-C4	5.35	114.58	111.90
25	1H	452	G	N9-C4-C5	5.35	107.54	105.40
25	1H	689	A	N1-C2-N3	5.35	131.98	129.30
25	1H	1023	U	O5'-P-OP1	-5.35	100.88	105.70
25	1H	1193	G	O5'-P-OP2	-5.35	100.88	105.70
25	1H	1308	A	N9-C4-C5	5.35	107.94	105.80
25	1H	1778	U	P-O3'-C3'	5.35	126.12	119.70
25	14	1823	G	N3-C2-N2	-5.35	116.15	119.90
25	14	2307	G	C8-N9-C1'	-5.35	120.04	127.00
25	1H	216	A	N7-C8-N9	-5.35	111.12	113.80
25	1H	943	U	C4-C5-C6	5.35	122.91	119.70
25	1H	974(A)	C	C6-N1-C1'	-5.35	114.38	120.80
25	1H	1520	U	C5-C4-O4	5.35	129.11	125.90
25	1H	2869	G	N7-C8-N9	5.35	115.78	113.10
1	13	310	G	C8-N9-C4	-5.35	104.26	106.40
1	13	807	A	N9-C4-C5	5.35	107.94	105.80
23	2K	17	C	C5-C6-N1	5.35	123.67	121.00
25	1H	55	G	OP1-P-O3'	5.35	116.97	105.20
25	1H	113	G	OP1-P-O3'	5.35	116.97	105.20
25	1H	1778	U	C5-C6-N1	-5.35	120.03	122.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
25	1H	2544	G	C2-N3-C4	-5.35	109.22	111.90
25	14	43	G	O5'-P-OP1	-5.35	100.89	105.70
25	14	777	A	O5'-P-OP2	-5.35	100.89	105.70
25	14	862	G	C5-C6-O6	5.35	131.81	128.60
1	13	428	G	C4-N9-C1'	-5.35	119.55	126.50
25	1H	518	G	N3-C4-C5	-5.35	125.93	128.60
25	1H	601	C	N1-C2-O2	5.35	122.11	118.90
25	1H	730	C	N3-C4-N4	-5.35	114.26	118.00
25	1H	1601	G	N7-C8-N9	5.35	115.77	113.10
25	1H	2248	C	N3-C4-C5	5.35	124.04	121.90
54	1G	1226	C	N3-C2-O2	-5.35	118.16	121.90
25	14	298	G	C5-C6-O6	-5.35	125.39	128.60
25	14	1332	G	N9-C4-C5	5.35	107.54	105.40
25	1H	786	C	C5-C6-N1	-5.35	118.33	121.00
25	1H	2030	A	C6-N1-C2	-5.35	115.39	118.60
25	1H	2069	G	C5-C6-O6	-5.35	125.39	128.60
25	14	1189	A	C5-C6-N6	5.35	127.98	123.70
25	1H	583	G	O5'-P-OP2	-5.34	100.89	105.70
25	1H	1588	C	N3-C2-O2	-5.34	118.16	121.90
25	1H	2469	A	N9-C4-C5	-5.34	103.66	105.80
25	1H	2513	G	N1-C6-O6	5.34	123.11	119.90
25	14	1471	A	N7-C8-N9	5.34	116.47	113.80
25	14	1619	G	C5-C6-N1	5.34	114.17	111.50
25	14	1664	A	N1-C2-N3	5.34	131.97	129.30
1	13	579	G	C6-C5-N7	-5.34	127.19	130.40
25	1H	1824	G	C5-C6-O6	-5.34	125.39	128.60
25	1H	1906	G	O5'-P-OP2	-5.34	100.89	105.70
54	1G	354	G	C4-C5-N7	5.34	112.94	110.80
56	2L	46	G	N3-C4-C5	5.34	131.27	128.60
54	1G	293	G	N1-C6-O6	5.34	123.11	119.90
55	1L	55	U	N3-C2-O2	-5.34	118.46	122.20
25	14	388	G	N3-C4-N9	-5.34	122.80	126.00
25	14	1377	G	O5'-P-OP2	-5.34	100.89	105.70
25	14	2731	G	N7-C8-N9	5.34	115.77	113.10
23	2K	17	C	C2-N3-C4	5.34	122.57	119.90
25	1H	568	U	O5'-P-OP1	-5.34	100.89	105.70
25	1H	1653	G	C4-N9-C1'	5.34	133.44	126.50
25	1H	2022	U	N3-C2-O2	5.34	125.94	122.20
25	1H	2689	U	N1-C2-N3	5.34	118.10	114.90
23	2K	38	A	C5-C6-N6	-5.34	119.43	123.70
25	1H	305	U	N3-C4-C5	-5.34	111.40	114.60
25	1H	2032	G	N3-C4-C5	5.34	131.27	128.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
54	1G	1072	G	C8-N9-C4	5.34	108.53	106.40
25	14	127	A	C5-C6-N1	5.34	120.37	117.70
1	13	186	C	C6-N1-C2	-5.34	118.17	120.30
25	1H	837	C	C5-C6-N1	5.34	123.67	121.00
25	1H	1942	C	N3-C4-C5	5.34	124.03	121.90
25	1H	1835	G	N3-C2-N2	5.33	123.63	119.90
25	14	110	G	C8-N9-C4	5.33	108.53	106.40
23	2K	17	C	C6-N1-C1'	-5.33	114.40	120.80
25	1H	464	U	C4-C5-C6	5.33	122.90	119.70
25	1H	1632	A	N7-C8-N9	5.33	116.47	113.80
25	1H	1765	C	N3-C4-N4	-5.33	114.27	118.00
25	1H	1826	G	C5-N7-C8	5.33	106.97	104.30
25	1H	2586	C	C5-C6-N1	5.33	123.67	121.00
54	1G	1301	U	C2-N1-C1'	5.33	124.10	117.70
25	14	2073	C	N1-C2-O2	-5.33	115.70	118.90
22	1K	77	C	C6-N1-C2	-5.33	118.17	120.30
25	1H	1222	C	N3-C4-C5	5.33	124.03	121.90
25	1H	1967	C	C6-N1-C2	-5.33	118.17	120.30
25	1H	2050	C	C6-N1-C2	-5.33	118.17	120.30
25	1H	2070	G	N1-C2-N3	5.33	127.10	123.90
25	14	2389	G	N7-C8-N9	5.33	115.77	113.10
25	1H	583	G	C8-N9-C4	-5.33	104.27	106.40
25	1H	629	G	C5-C6-O6	5.33	131.80	128.60
25	1H	1767	C	N3-C2-O2	-5.33	118.17	121.90
25	1H	2857	G	O5'-P-OP1	-5.33	100.90	105.70
23	2K	15	G	C5-C6-O6	5.33	131.80	128.60
25	1H	195	A	N1-C6-N6	5.33	121.80	118.60
25	1H	306	U	C6-N1-C2	-5.33	117.80	121.00
25	1H	1992	G	C5-C6-N1	5.33	114.16	111.50
25	1H	2258	C	C2-N1-C1'	5.33	124.66	118.80
25	1H	2328	A	C6-N1-C2	-5.33	115.40	118.60
54	1G	1503	A	O4'-C1'-N9	5.33	112.46	108.20
25	14	462	C	O5'-P-OP2	-5.33	100.90	105.70
25	14	1559	G	C8-N9-C4	5.33	108.53	106.40
25	1H	2111	C	C6-N1-C2	-5.33	118.17	120.30
25	1H	1651	G	N7-C8-N9	5.33	115.76	113.10
25	1H	2060	A	C4-C5-C6	-5.33	114.34	117.00
25	14	252	G	N3-C4-C5	-5.33	125.94	128.60
25	14	1614	A	C8-N9-C4	-5.33	103.67	105.80
25	1H	866	A	O4'-C1'-N9	-5.32	103.94	108.20
25	1H	2022	U	C5-C4-O4	-5.32	122.71	125.90
41	D8	18	LEU	CA-CB-CG	5.32	127.54	115.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
54	1G	1496	C	O5'-P-OP2	-5.32	100.91	105.70
55	1L	33	C	C6-N1-C2	-5.32	118.17	120.30
25	14	467	G	N7-C8-N9	-5.32	110.44	113.10
25	14	1933	G	C8-N9-C4	5.32	108.53	106.40
25	14	2053	G	N9-C4-C5	-5.32	103.27	105.40
25	1H	1445	C	C2-N3-C4	5.32	122.56	119.90
25	1H	2022	U	C6-N1-C2	5.32	124.19	121.00
25	14	2708	G	C8-N9-C4	5.32	108.53	106.40
25	1H	465	G	O5'-P-OP1	-5.32	100.91	105.70
25	1H	731	C	C5-C6-N1	5.32	123.66	121.00
25	1H	1310	G	O5'-P-OP2	5.32	117.09	110.70
25	1H	2580	U	C6-N1-C2	-5.32	117.81	121.00
25	14	308	G	N1-C6-O6	5.32	123.09	119.90
25	14	406	G	N1-C6-O6	5.32	123.09	119.90
25	14	945	A	N3-C4-C5	5.32	130.53	126.80
1	13	41	G	C8-N9-C4	5.32	108.53	106.40
55	1L	78	C	P-O3'-C3'	5.32	126.08	119.70
25	14	270(C)	C	C6-N1-C2	-5.32	118.17	120.30
25	1H	49	A	N3-C4-N9	5.32	131.65	127.40
25	1H	1332	G	C8-N9-C4	-5.32	104.27	106.40
25	1H	2602	A	C2-N3-C4	5.32	113.26	110.60
25	14	460	A	C5-C6-N6	-5.32	119.45	123.70
25	14	1827	C	N3-C4-N4	-5.32	114.28	118.00
25	14	2374	C	C2-N3-C4	-5.32	117.24	119.90
1	13	527	G	N3-C4-N9	-5.32	122.81	126.00
25	1H	2444	G	N9-C4-C5	5.32	107.53	105.40
54	1G	660	G	O5'-P-OP2	-5.32	100.92	105.70
27	19	43	ARG	NE-CZ-NH2	-5.32	117.64	120.30
25	1H	1157	G	N1-C2-N3	5.31	127.09	123.90
25	1H	1407	C	OP1-P-O3'	5.31	116.89	105.20
25	1H	2068	U	OP1-P-O3'	5.31	116.89	105.20
55	1L	78	C	OP1-P-O3'	5.31	116.89	105.20
25	14	530	G	C4-C5-N7	5.31	112.93	110.80
25	14	778	G	N3-C2-N2	5.31	123.62	119.90
1	13	419	C	C5-C6-N1	5.31	123.66	121.00
25	1H	2017	U	C6-N1-C2	-5.31	117.81	121.00
25	1H	2325	G	O5'-P-OP1	-5.31	100.92	105.70
25	1H	2446	G	N1-C6-O6	5.31	123.09	119.90
54	1G	360	A	C8-N9-C4	5.31	107.92	105.80
25	14	992	C	C6-N1-C2	-5.31	118.17	120.30
25	14	1241	A	C6-C5-N7	-5.31	128.58	132.30
25	14	1762	A	OP2-P-O3'	5.31	116.89	105.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
25	14	2078	C	N3-C4-C5	-5.31	119.78	121.90
1	13	1224	G	OP1-P-OP2	-5.31	111.64	119.60
25	1H	127	A	C8-N9-C4	5.31	107.92	105.80
25	1H	1308	A	C4-C5-C6	5.31	119.65	117.00
25	14	556	G	N3-C4-N9	5.31	129.19	126.00
25	14	1357	U	N3-C4-C5	-5.31	111.41	114.60
25	14	2607	G	C6-C5-N7	-5.31	127.22	130.40
25	1H	141(A)	C	N3-C4-C5	5.31	124.02	121.90
54	1G	969	A	O5'-P-OP2	-5.31	100.92	105.70
25	14	2426	A	C8-N9-C4	-5.31	103.68	105.80
25	1H	197	A	C5-C6-N6	5.31	127.94	123.70
25	1H	631	A	C5-N7-C8	5.31	106.55	103.90
25	14	208	C	OP2-P-O3'	5.31	116.87	105.20
25	1H	1990	C	C6-N1-C2	-5.30	118.18	120.30
25	1H	2494	G	C4-C5-N7	-5.30	108.68	110.80
25	14	102	G	O4'-C1'-N9	5.30	112.44	108.20
25	14	862	G	C8-N9-C4	-5.30	104.28	106.40
1	13	812	C	C2-N1-C1'	-5.30	112.97	118.80
25	1H	212	G	O5'-P-OP1	5.30	117.06	110.70
25	1H	1587	A	N9-C4-C5	5.30	107.92	105.80
25	1H	2051	A	O5'-P-OP2	-5.30	100.93	105.70
25	14	1831	G	N1-C2-N3	5.30	127.08	123.90
25	14	2277	G	C5-C6-O6	5.30	131.78	128.60
1	13	231	G	C8-N9-C4	-5.30	104.28	106.40
1	13	1469	G	C5-N7-C8	-5.30	101.65	104.30
25	1H	97	C	O5'-P-OP1	-5.30	100.93	105.70
25	1H	121	G	C5-C6-O6	-5.30	125.42	128.60
25	1H	194	G	N1-C6-O6	5.30	123.08	119.90
25	1H	948	G	O5'-P-OP2	5.30	117.06	110.70
25	1H	122	G	OP1-P-OP2	5.30	127.55	119.60
25	1H	445	C	C5-C6-N1	5.30	123.65	121.00
25	1H	955	C	C4-C5-C6	5.30	120.05	117.40
25	14	1349	A	C4-C5-N7	5.30	113.35	110.70
25	14	1558	A	P-O3'-C3'	5.30	126.06	119.70
25	14	2237	G	O5'-P-OP2	-5.30	100.93	105.70
25	1H	576	U	N3-C2-O2	5.30	125.91	122.20
25	1H	974	G	C2-N3-C4	-5.30	109.25	111.90
25	1H	1789	A	C5-C6-N1	5.30	120.35	117.70
1	13	892	A	N1-C2-N3	5.30	131.95	129.30
25	1H	528	A	C8-N9-C4	-5.30	103.68	105.80
25	1H	1634	A	C4-C5-C6	5.30	119.65	117.00
25	1H	2069	G	C4-C5-C6	5.30	121.98	118.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
25	14	1528	A	O4'-C1'-N9	5.30	112.44	108.20
25	14	1656	C	OP2-P-O3'	5.30	116.85	105.20
25	14	2489	G	N1-C6-O6	5.30	123.08	119.90
25	1H	932	G	N3-C4-C5	-5.29	125.95	128.60
25	1H	1328	G	C5-C6-O6	-5.29	125.42	128.60
25	1H	2298	A	C6-N1-C2	-5.29	115.42	118.60
1	13	1299	A	C8-N9-C1'	-5.29	118.17	127.70
25	1H	676	A	N1-C2-N3	5.29	131.95	129.30
25	1H	1127	A	N1-C6-N6	5.29	121.78	118.60
25	1H	1158	C	C2-N3-C4	-5.29	117.25	119.90
25	1H	2067	G	N3-C4-N9	-5.29	122.82	126.00
25	1H	2327	A	C4-C5-N7	-5.29	108.05	110.70
25	1H	2459	A	N7-C8-N9	5.29	116.45	113.80
25	14	2072	G	OP1-P-O3'	5.29	116.84	105.20
1	13	320	C	N3-C2-O2	5.29	125.60	121.90
1	13	703	G	C8-N9-C1'	-5.29	120.12	127.00
1	13	1335	C	C5-C6-N1	-5.29	118.36	121.00
22	3K	55	U	C2-N1-C1'	5.29	124.05	117.70
25	1H	26	G	N3-C4-N9	5.29	129.18	126.00
25	1H	813	U	N1-C2-N3	5.29	118.08	114.90
25	1H	814	C	C5-C6-N1	-5.29	118.36	121.00
25	1H	859	G	OP1-P-OP2	-5.29	111.66	119.60
25	1H	2234	G	N1-C6-O6	5.29	123.08	119.90
26	16	30	C	O5'-P-OP1	-5.29	100.94	105.70
54	1G	581	G	N3-C4-C5	5.29	131.25	128.60
54	1G	1053	G	P-O3'-C3'	5.29	126.05	119.70
25	1H	411	G	C4-C5-N7	-5.29	108.68	110.80
25	1H	816	C	C2-N3-C4	5.29	122.55	119.90
25	1H	2513	G	C5-C6-O6	-5.29	125.43	128.60
25	1H	2598	A	OP2-P-O3'	5.29	116.84	105.20
25	14	2074	U	C6-N1-C2	-5.29	117.83	121.00
25	1H	889	C	C2-N1-C1'	5.29	124.62	118.80
25	1H	1151	G	N1-C2-N2	5.29	120.96	116.20
25	1H	1779	U	O4'-C1'-N1	5.29	112.43	108.20
25	1H	2442	C	OP1-P-OP2	-5.29	111.67	119.60
25	14	401	A	N1-C6-N6	-5.29	115.43	118.60
25	14	1249	U	C2-N1-C1'	5.29	124.05	117.70
25	14	2060	A	N7-C8-N9	5.29	116.44	113.80
25	14	2688	U	N1-C2-O2	5.29	126.50	122.80
1	13	762	C	C6-N1-C2	5.29	122.41	120.30
22	1K	85	A	C4-N9-C1'	5.29	135.81	126.30
25	1H	49	A	N7-C8-N9	-5.29	111.16	113.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
25	1H	741	G	C6-C5-N7	-5.29	127.23	130.40
25	1H	2374	C	C2-N3-C4	-5.29	117.26	119.90
54	1G	232	G	C6-C5-N7	-5.29	127.23	130.40
25	14	14	A	N7-C8-N9	5.29	116.44	113.80
25	14	19	C	N1-C2-O2	-5.29	115.73	118.90
25	14	402	A	N1-C6-N6	-5.29	115.43	118.60
25	14	704	G	N1-C2-N2	5.29	120.96	116.20
25	14	739	G	O5'-P-OP1	-5.29	100.94	105.70
25	14	1888	G	N7-C8-N9	5.29	115.74	113.10
25	14	2544	G	C5-C6-O6	-5.29	125.43	128.60
25	14	2576	G	C2-N3-C4	5.29	114.54	111.90
1	13	991	U	C2-N1-C1'	5.28	124.04	117.70
25	1H	1253	A	C8-N9-C4	5.28	107.91	105.80
25	14	268	C	C5-C6-N1	5.28	123.64	121.00
25	14	2056	G	C4-C5-N7	5.28	112.91	110.80
1	13	8	A	O4'-C1'-N9	5.28	112.42	108.20
25	1H	194	G	C5-C6-O6	-5.28	125.43	128.60
25	1H	1831	G	C5-C6-N1	-5.28	108.86	111.50
55	1L	55	U	N1-C2-O2	5.28	126.50	122.80
25	1H	1670	C	C6-N1-C2	5.28	122.41	120.30
25	1H	1689	A	N1-C6-N6	-5.28	115.43	118.60
25	1H	946	G	N3-C2-N2	-5.28	116.20	119.90
25	1H	1007	C	C6-N1-C2	-5.28	118.19	120.30
25	14	955	C	C6-N1-C2	-5.28	118.19	120.30
25	14	2003	G	O5'-P-OP1	-5.28	100.95	105.70
25	1H	1281	G	N1-C6-O6	5.28	123.06	119.90
25	1H	1969	A	C4-C5-N7	-5.28	108.06	110.70
1	13	1058	G	N9-C4-C5	-5.27	103.29	105.40
25	1H	1029	A	N1-C6-N6	5.27	121.77	118.60
25	1H	1315	C	N3-C4-N4	-5.27	114.31	118.00
25	1H	2567	G	N3-C4-N9	5.27	129.16	126.00
25	14	730	C	N3-C4-C5	5.27	124.01	121.90
25	14	733	G	C4-N9-C1'	5.27	133.36	126.50
25	1H	442	G	C6-C5-N7	-5.27	127.24	130.40
25	1H	1368	G	N3-C2-N2	-5.27	116.21	119.90
25	1H	2845	G	C5-C6-N1	-5.27	108.86	111.50
25	14	2329	G	C5-C6-N1	5.27	114.14	111.50
25	1H	232	G	C4-C5-N7	5.27	112.91	110.80
25	1H	917	A	N9-C4-C5	-5.27	103.69	105.80
25	1H	941	A	C5-N7-C8	-5.27	101.26	103.90
25	1H	990	A	N7-C8-N9	5.27	116.44	113.80
25	14	124	G	N1-C2-N2	-5.27	111.46	116.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
25	14	2685	G	N3-C4-N9	-5.27	122.84	126.00
1	13	690	G	C8-N9-C4	-5.27	104.29	106.40
1	13	1178	G	C8-N9-C4	-5.27	104.29	106.40
23	2K	29	C	OP2-P-O3'	5.27	116.80	105.20
25	1H	244	A	C5-C6-N1	5.27	120.33	117.70
25	1H	647	G	N3-C4-N9	5.27	129.16	126.00
25	1H	1284	A	N7-C8-N9	5.27	116.44	113.80
25	1H	1971	A	OP1-P-OP2	-5.27	111.70	119.60
25	1H	2713	A	C4-C5-C6	5.27	119.64	117.00
25	14	1758	G	N9-C4-C5	5.27	107.51	105.40
25	14	2389	G	C8-N9-C4	-5.27	104.29	106.40
25	1H	2062	A	N7-C8-N9	-5.27	111.17	113.80
25	1H	2290	G	N3-C4-C5	5.27	131.23	128.60
25	1H	2508	G	N1-C6-O6	-5.27	116.74	119.90
26	16	92	G	OP2-P-O3'	5.27	116.79	105.20
25	14	525	U	N1-C2-O2	-5.27	119.11	122.80
25	1H	593	G	O5'-P-OP2	-5.27	100.96	105.70
25	1H	1616	A	C4-N9-C1'	5.27	135.78	126.30
25	1H	1672	C	N3-C2-O2	5.27	125.59	121.90
25	1H	2302	G	N1-C6-O6	-5.27	116.74	119.90
25	14	1308	A	C8-N9-C4	-5.27	103.69	105.80
1	13	328	C	C6-N1-C1'	-5.26	114.48	120.80
25	1H	629	G	N3-C2-N2	5.26	123.58	119.90
25	1H	818	G	N3-C4-N9	-5.26	122.84	126.00
25	1H	818	G	N9-C4-C5	5.26	107.51	105.40
25	1H	2380	C	C6-N1-C2	5.26	122.41	120.30
54	1G	1322	C	N3-C4-N4	-5.26	114.31	118.00
25	14	2081	C	O5'-P-OP2	-5.26	100.96	105.70
25	14	2549	G	N3-C4-C5	-5.26	125.97	128.60
1	13	738	C	C6-N1-C2	-5.26	118.19	120.30
25	1H	2199	A	N1-C6-N6	-5.26	115.44	118.60
25	14	2281	C	N3-C4-N4	5.26	121.68	118.00
1	13	1094	G	C4-N9-C1'	5.26	133.34	126.50
25	1H	690	G	C5-N7-C8	5.26	106.93	104.30
25	1H	741	G	C5-N7-C8	-5.26	101.67	104.30
25	1H	1021	A	C4-C5-N7	5.26	113.33	110.70
25	1H	1668	A	O5'-P-OP1	5.26	117.01	110.70
25	1H	2048	G	C5-N7-C8	5.26	106.93	104.30
54	1G	1498	U	P-O3'-C3'	5.26	126.01	119.70
55	3L	9	U	C2-N1-C1'	5.26	124.01	117.70
25	14	840	C	N3-C2-O2	5.26	125.58	121.90
1	13	1354	C	C5-C6-N1	5.26	123.63	121.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
25	1H	729	G	C4-N9-C1'	5.26	133.34	126.50
25	1H	808	G	OP1-P-OP2	5.26	127.49	119.60
25	1H	868	U	C5-C6-N1	-5.26	120.07	122.70
25	1H	1293	C	C5-C6-N1	5.26	123.63	121.00
25	1H	1381	G	C5-C6-N1	-5.26	108.87	111.50
25	1H	1798	U	C4-C5-C6	-5.26	116.55	119.70
25	1H	2041	U	C5-C6-N1	-5.26	120.07	122.70
25	1H	785	G	N9-C4-C5	5.26	107.50	105.40
25	1H	1036	G	C8-N9-C4	5.26	108.50	106.40
25	1H	1123	C	C4-C5-C6	5.26	120.03	117.40
25	14	1136	G	N9-C4-C5	-5.26	103.30	105.40
25	14	2032	G	N7-C8-N9	-5.26	110.47	113.10
25	14	2599	G	C4-C5-N7	-5.26	108.70	110.80
1	13	1266	G	C8-N9-C1'	5.26	133.83	127.00
25	1H	278	A	O4'-C1'-N9	-5.26	103.99	108.20
25	1H	449	A	N1-C2-N3	-5.26	126.67	129.30
25	1H	649	G	OP2-P-O3'	5.26	116.76	105.20
25	1H	2012	G	C8-N9-C4	5.26	108.50	106.40
25	1H	2530	A	C5-C6-N6	-5.26	119.50	123.70
25	14	1802	A	C2-N3-C4	5.26	113.23	110.60
25	14	1968	G	C8-N9-C4	-5.26	104.30	106.40
25	14	2067	G	OP1-P-O3'	5.26	116.77	105.20
25	1H	629	G	C5-N7-C8	5.25	106.93	104.30
25	1H	1368	G	OP1-P-OP2	5.25	127.48	119.60
25	1H	988	A	N7-C8-N9	5.25	116.43	113.80
54	1G	484	G	C4-N9-C1'	-5.25	119.67	126.50
25	1H	116	C	N1-C2-N3	5.25	122.88	119.20
25	1H	1333	C	C5-C4-N4	-5.25	116.52	120.20
25	1H	1687	G	N3-C2-N2	5.25	123.58	119.90
25	1H	1823	G	N1-C2-N3	5.25	127.05	123.90
54	1G	1478	C	O5'-P-OP2	-5.25	100.97	105.70
1	13	1502	A	N7-C8-N9	5.25	116.42	113.80
25	1H	1336	A	C5-C6-N1	5.25	120.33	117.70
25	1H	2324	C	N3-C4-C5	5.25	124.00	121.90
12	3A	26	ALA	C-N-CA	5.25	134.82	121.70
1	13	1058	G	C8-N9-C4	5.25	108.50	106.40
25	1H	51	G	N1-C2-N2	-5.25	111.48	116.20
25	1H	470	A	C4-C5-N7	5.25	113.32	110.70
25	1H	2057	A	N1-C2-N3	5.25	131.93	129.30
55	3L	54	C	N3-C2-O2	-5.25	118.23	121.90
25	14	1725	G	C8-N9-C1'	-5.25	120.18	127.00
25	1H	1257	C	N1-C2-N3	5.25	122.87	119.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
25	1H	1271	G	C8-N9-C1'	-5.25	120.18	127.00
25	1H	2287	A	N1-C6-N6	5.25	121.75	118.60
54	1G	31	G	N3-C4-C5	5.25	131.22	128.60
55	1L	59	A	N7-C8-N9	5.25	116.42	113.80
25	14	1277	G	N9-C4-C5	-5.25	103.30	105.40
25	14	2262	U	OP1-P-OP2	-5.25	111.73	119.60
1	13	331	G	C5-C6-O6	-5.25	125.45	128.60
25	1H	202	U	N1-C2-N3	-5.25	111.75	114.90
25	1H	247	G	N3-C4-N9	5.25	129.15	126.00
25	1H	694	U	N3-C4-O4	-5.25	115.73	119.40
25	1H	867	C	O5'-P-OP1	-5.25	100.98	105.70
25	14	1355	G	C5-C6-O6	5.25	131.75	128.60
1	13	1094	G	N3-C4-N9	5.24	129.15	126.00
25	1H	2699	C	C2-N1-C1'	-5.24	113.03	118.80
54	1G	1449	C	C2-N1-C1'	5.24	124.57	118.80
25	14	74	A	C6-C5-N7	-5.24	128.63	132.30
25	14	1696	G	C2-N3-C4	5.24	114.52	111.90
25	14	2032	G	O4'-C1'-N9	-5.24	104.00	108.20
1	13	761	G	N3-C4-N9	5.24	129.15	126.00
1	13	1440	C	C6-N1-C2	5.24	122.40	120.30
54	1G	1511	G	C8-N9-C4	-5.24	104.30	106.40
25	14	676	A	C5-C6-N1	-5.24	115.08	117.70
1	13	268	C	O5'-P-OP2	5.24	116.99	110.70
25	1H	1694	C	OP2-P-O3'	5.24	116.73	105.20
25	1H	2649	U	C5-C6-N1	-5.24	120.08	122.70
25	14	782	A	C5-C6-N1	5.24	120.32	117.70
25	14	1623	G	O5'-P-OP1	-5.24	100.98	105.70
25	14	1992	G	C2'-C3'-O3'	5.24	122.09	113.70
25	14	2432	A	N1-C6-N6	5.24	121.75	118.60
25	1H	305	U	C6-N1-C2	-5.24	117.86	121.00
25	1H	531	C	O5'-P-OP1	-5.24	100.98	105.70
25	1H	746	A	O4'-C1'-N9	5.24	112.39	108.20
25	1H	1673	U	OP1-P-O3'	5.24	116.72	105.20
54	1G	873	A	N9-C4-C5	5.24	107.89	105.80
54	1G	911	U	C2-N1-C1'	-5.24	111.41	117.70
55	1L	55	U	C2-N1-C1'	5.24	123.99	117.70
25	14	152	G	N3-C4-C5	5.24	131.22	128.60
25	14	838	C	C6-N1-C2	5.24	122.40	120.30
25	14	2217	G	C6-C5-N7	-5.24	127.26	130.40
25	14	2329	G	N3-C2-N2	5.24	123.57	119.90
1	13	766	A	C8-N9-C4	5.24	107.89	105.80
25	1H	768	G	O5'-P-OP2	-5.24	100.99	105.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
25	1H	1381	G	N3-C2-N2	-5.24	116.23	119.90
25	1H	2358	G	N1-C6-O6	-5.24	116.76	119.90
1	13	863	U	N1-C2-N3	5.24	118.04	114.90
25	1H	443	A	N1-C6-N6	5.24	121.74	118.60
25	1H	505	A	C8-N9-C4	-5.24	103.71	105.80
25	1H	703	U	C2-N1-C1'	-5.24	111.42	117.70
25	1H	1839	G	C4-C5-N7	5.24	112.89	110.80
25	1H	1975	G	N1-C6-O6	5.24	123.04	119.90
25	1H	2360	A	C5-C6-N1	-5.24	115.08	117.70
54	1G	1228	C	N3-C2-O2	-5.24	118.24	121.90
25	14	862	G	N1-C6-O6	-5.24	116.76	119.90
25	14	1695	G	C4-N9-C1'	5.24	133.31	126.50
25	14	1924	C	N3-C2-O2	5.24	125.56	121.90
26	1J	102	G	N3-C4-N9	-5.24	122.86	126.00
26	16	51	G	OP2-P-O3'	5.23	116.71	105.20
54	1G	576	G	N1-C2-N2	-5.23	111.49	116.20
25	14	1728	G	N3-C4-N9	5.23	129.14	126.00
22	3K	33	C	C5-C6-N1	5.23	123.62	121.00
25	1H	123	G	C5-C6-O6	-5.23	125.46	128.60
25	1H	949	C	C6-N1-C2	5.23	122.39	120.30
25	1H	1698	A	O4'-C1'-N9	5.23	112.39	108.20
25	1H	1707	G	N1-C6-O6	5.23	123.04	119.90
25	14	1770	G	N7-C8-N9	5.23	115.72	113.10
23	2K	9	G	C5-C6-O6	5.23	131.74	128.60
25	1H	590	A	C6-N1-C2	-5.23	115.46	118.60
25	1H	1931	U	C6-N1-C2	-5.23	117.86	121.00
25	1H	1957	C	N1-C2-N3	5.23	122.86	119.20
25	1H	2019	A	OP1-P-OP2	-5.23	111.75	119.60
25	14	2439	A	C4-C5-C6	5.23	119.62	117.00
25	1H	1776	G	C8-N9-C4	5.23	108.49	106.40
25	14	2062	A	C4-C5-N7	5.23	113.31	110.70
1	13	1371	G	O5'-P-OP2	5.23	116.97	110.70
25	1H	488	G	O5'-P-OP2	-5.23	100.99	105.70
25	1H	848	G	N1-C6-O6	-5.23	116.76	119.90
25	14	1404	C	O5'-P-OP1	-5.23	101.00	105.70
25	1H	638	G	O5'-P-OP1	-5.23	101.00	105.70
1	13	366	C	C2-N1-C1'	-5.22	113.05	118.80
25	1H	1312	U	O5'-P-OP2	5.22	116.97	110.70
25	1H	1770	G	N3-C2-N2	5.22	123.56	119.90
25	1H	2542	A	C6-N1-C2	-5.22	115.47	118.60
25	14	138	G	C2-N3-C4	5.22	114.51	111.90
25	14	1627	G	N1-C2-N2	-5.22	111.50	116.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	13	690	G	C4-C5-C6	5.22	121.93	118.80
1	13	1526	G	C8-N9-C4	-5.22	104.31	106.40
25	1H	237	C	C6-N1-C2	5.22	122.39	120.30
25	1H	2330	G	N7-C8-N9	-5.22	110.49	113.10
54	1G	1219	U	C5-C6-N1	5.22	125.31	122.70
25	1H	2040	C	C6-N1-C2	5.22	122.39	120.30
25	1H	2096	U	C6-N1-C2	-5.22	117.87	121.00
25	14	562	U	C6-N1-C2	-5.22	117.87	121.00
1	13	1218	C	N3-C2-O2	-5.22	118.25	121.90
25	1H	70	G	OP1-P-OP2	-5.22	111.77	119.60
25	1H	755	C	N3-C4-C5	-5.22	119.81	121.90
25	1H	2373	G	N1-C2-N3	5.22	127.03	123.90
26	16	60	C	N3-C4-N4	5.22	121.65	118.00
55	1L	20	C	C6-N1-C2	-5.22	118.21	120.30
25	14	950	G	N1-C6-O6	-5.22	116.77	119.90
25	14	1805	U	OP2-P-O3'	5.22	116.68	105.20
25	14	2428	G	C8-N9-C4	-5.22	104.31	106.40
25	1H	639	U	N3-C2-O2	-5.22	118.55	122.20
25	1H	2588	G	O5'-P-OP2	-5.22	101.00	105.70
1	13	713	G	O5'-P-OP1	-5.22	101.00	105.70
25	1H	328	U	OP2-P-O3'	5.22	116.68	105.20
25	1H	458	G	N3-C4-N9	-5.22	122.87	126.00
25	1H	818	G	C4-C5-N7	-5.22	108.71	110.80
25	1H	839	U	C5-C4-O4	5.22	129.03	125.90
25	1H	1379	A	C6-C5-N7	-5.22	128.65	132.30
25	1H	1489	U	O4'-C1'-N1	5.22	112.37	108.20
25	14	668	G	C2-N3-C4	-5.22	109.29	111.90
25	14	990	A	C8-N9-C4	-5.22	103.71	105.80
25	14	1463	C	C6-N1-C2	-5.22	118.21	120.30
25	14	2259	G	N3-C2-N2	-5.22	116.25	119.90
25	14	2261	C	OP2-P-O3'	5.22	116.68	105.20
25	14	2305	A	C8-N9-C4	5.22	107.89	105.80
25	1H	684	G	N3-C2-N2	-5.21	116.25	119.90
25	1H	1729	A	O4'-C1'-N9	5.21	112.37	108.20
25	1H	2241	A	N1-C6-N6	-5.21	115.47	118.60
25	1H	2267	A	P-O3'-C3'	5.21	125.96	119.70
25	1H	2395	C	C6-N1-C1'	-5.21	114.54	120.80
25	1H	2705	A	N1-C6-N6	5.21	121.73	118.60
26	16	47	C	C5-C6-N1	-5.21	118.39	121.00
25	14	632	A	O5'-P-OP2	5.21	116.96	110.70
25	14	2707	G	C6-N1-C2	-5.21	121.97	125.10
25	14	2724	C	C5-C6-N1	-5.21	118.39	121.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	13	1498	U	OP2-P-O3'	5.21	116.67	105.20
25	1H	2252	G	C4-C5-N7	-5.21	108.72	110.80
25	14	941	A	C8-N9-C4	-5.21	103.72	105.80
25	1H	464	U	N1-C2-N3	5.21	118.03	114.90
25	1H	848	G	N3-C4-C5	-5.21	125.99	128.60
25	14	1514	U	C5-C4-O4	5.21	129.03	125.90
25	14	2390	U	C6-N1-C2	-5.21	117.87	121.00
25	1H	1328	G	N9-C4-C5	-5.21	103.32	105.40
1	13	833	U	C2-N1-C1'	-5.21	111.45	117.70
25	14	2267	A	C2-N3-C4	5.21	113.20	110.60
25	14	2334	G	C8-N9-C4	5.21	108.48	106.40
25	1H	55	G	C5-C6-O6	-5.21	125.48	128.60
25	1H	1470	G	N1-C6-O6	5.21	123.02	119.90
25	1H	1594	G	N3-C2-N2	-5.21	116.25	119.90
25	1H	2293	C	N3-C2-O2	-5.21	118.26	121.90
25	14	829	A	O5'-P-OP2	-5.21	101.01	105.70
25	14	2591	C	C6-N1-C2	-5.21	118.22	120.30
1	13	523	A	C5-C6-N1	-5.21	115.10	117.70
25	1H	848	G	C8-N9-C1'	-5.21	120.23	127.00
25	14	1283	G	O5'-P-OP2	-5.21	101.02	105.70
1	13	768	A	C6-N1-C2	-5.20	115.48	118.60
25	1H	503	A	N1-C6-N6	-5.20	115.48	118.60
25	1H	983	A	OP2-P-O3'	5.20	116.65	105.20
22	1K	83	C	C2-N3-C4	5.20	122.50	119.90
25	1H	569	U	C5-C6-N1	-5.20	120.10	122.70
26	16	55	U	O5'-P-OP1	-5.20	101.02	105.70
25	14	791	C	N3-C2-O2	5.20	125.54	121.90
25	14	972	G	C8-N9-C4	-5.20	104.32	106.40
25	14	2024	G	C6-C5-N7	-5.20	127.28	130.40
25	14	2428	G	C5-C6-O6	5.20	131.72	128.60
25	1H	109	G	N1-C2-N3	5.20	127.02	123.90
25	1H	1254	A	C2-N3-C4	-5.20	108.00	110.60
25	14	262	A	N1-C6-N6	-5.20	115.48	118.60
25	1H	174	C	N1-C2-O2	-5.20	115.78	118.90
25	1H	663	G	C8-N9-C1'	-5.20	120.24	127.00
25	1H	773	U	N1-C2-N3	5.20	118.02	114.90
25	1H	1431	U	C5-C6-N1	5.20	125.30	122.70
25	1H	1900	A	C2-N3-C4	5.20	113.20	110.60
25	1H	2019	A	P-O3'-C3'	5.20	125.94	119.70
25	14	34	C	N3-C2-O2	-5.20	118.26	121.90
25	1H	45	G	OP2-P-O3'	5.20	116.63	105.20
25	1H	1273	U	OP2-P-O3'	5.20	116.63	105.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
25	1H	1614	A	N9-C4-C5	-5.20	103.72	105.80
25	1H	1825	A	N9-C4-C5	5.20	107.88	105.80
25	1H	1998	G	N7-C8-N9	-5.20	110.50	113.10
25	1H	2018	G	N7-C8-N9	5.20	115.70	113.10
25	14	427	U	C2-N3-C4	5.20	130.12	127.00
25	14	2286	A	O5'-P-OP2	-5.20	101.02	105.70
25	14	2624	G	N3-C4-C5	-5.20	126.00	128.60
25	1H	2081	C	OP2-P-O3'	5.19	116.63	105.20
25	1H	2439	A	N1-C2-N3	5.19	131.90	129.30
56	2L	40	C	N3-C4-C5	-5.19	119.82	121.90
1	13	891	U	OP2-P-O3'	5.19	116.62	105.20
25	1H	574	C	C6-N1-C2	5.19	122.38	120.30
25	1H	613	U	N1-C2-N3	5.19	118.02	114.90
25	1H	801	G	N1-C6-O6	-5.19	116.78	119.90
25	1H	1834	U	N3-C2-O2	-5.19	118.57	122.20
25	1H	2609	U	C5-C6-N1	-5.19	120.10	122.70
25	1H	213	A	C8-N9-C4	5.19	107.88	105.80
25	1H	768	G	N1-C6-O6	5.19	123.01	119.90
25	1H	1241	A	N7-C8-N9	5.19	116.40	113.80
25	1H	1669	A	C6-C5-N7	-5.19	128.67	132.30
25	14	830	G	OP1-P-O3'	5.19	116.62	105.20
25	14	1193	G	C5-C6-O6	-5.19	125.48	128.60
25	14	1480	G	C5-C6-N1	-5.19	108.91	111.50
25	14	1836	C	OP1-P-O3'	5.19	116.62	105.20
1	13	729	A	N1-C6-N6	5.19	121.71	118.60
23	2K	62	C	N1-C2-O2	5.19	122.01	118.90
25	1H	655	A	C8-N9-C4	-5.19	103.72	105.80
25	1H	761	A	C8-N9-C4	5.19	107.88	105.80
25	14	1695	G	C8-N9-C1'	-5.19	120.25	127.00
25	14	2053	G	C5-C6-N1	5.19	114.09	111.50
25	14	2347	C	C6-N1-C2	-5.19	118.22	120.30
25	14	2357	U	O5'-P-OP1	5.19	116.93	110.70
1	13	113	G	OP2-P-O3'	5.19	116.61	105.20
25	1H	1340	U	N3-C4-O4	5.19	123.03	119.40
25	1H	2412	A	N1-C2-N3	5.19	131.89	129.30
25	1H	2508	G	C5-C6-O6	5.19	131.71	128.60
29	31	176	LEU	CB-CG-CD2	-5.19	102.18	111.00
31	51	166	GLY	N-CA-C	-5.19	100.13	113.10
25	14	1085	A	OP1-P-O3'	5.19	116.61	105.20
25	1H	209	C	OP2-P-O3'	5.18	116.61	105.20
25	1H	404	C	P-O3'-C3'	5.18	125.92	119.70
25	1H	830	G	N1-C6-O6	-5.18	116.79	119.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
25	1H	1379	A	O4'-C1'-N9	5.18	112.35	108.20
25	1H	1513	C	C6-N1-C2	-5.18	118.23	120.30
25	1H	2282	G	N1-C6-O6	-5.18	116.79	119.90
25	14	456	C	OP2-P-O3'	5.18	116.60	105.20
25	14	556	G	N3-C4-C5	-5.18	126.01	128.60
25	14	1288	U	C6-N1-C1'	-5.18	113.94	121.20
25	14	1602	U	C5-C6-N1	-5.18	120.11	122.70
1	13	963	G	N1-C6-O6	-5.18	116.79	119.90
25	1H	202	U	C5-C4-O4	-5.18	122.79	125.90
25	1H	699	A	C5-C6-N6	-5.18	119.56	123.70
54	1G	942	G	N3-C4-N9	5.18	129.11	126.00
54	1G	1225	A	N1-C2-N3	5.18	131.89	129.30
25	14	1826	G	C8-N9-C4	5.18	108.47	106.40
25	14	2227	A	C6-N1-C2	-5.18	115.49	118.60
25	1H	461	C	C4-C5-C6	5.18	119.99	117.40
25	1H	769	G	OP1-P-O3'	5.18	116.60	105.20
25	1H	2295	C	C6-N1-C2	-5.18	118.23	120.30
25	1H	2500	U	O4'-C1'-N1	5.18	112.34	108.20
25	14	531	C	O5'-P-OP1	-5.18	101.04	105.70
25	14	1613	G	P-O3'-C3'	5.18	125.92	119.70
25	14	1695	G	C5-N7-C8	-5.18	101.71	104.30
25	14	2060	A	O5'-P-OP2	-5.18	101.04	105.70
25	1H	733	G	C8-N9-C1'	-5.18	120.27	127.00
54	1G	386	C	C2-N1-C1'	-5.18	113.10	118.80
25	1H	51	G	N3-C4-N9	5.18	129.11	126.00
25	1H	651	G	O5'-P-OP1	5.18	116.91	110.70
25	1H	915	C	N1-C2-O2	5.18	122.01	118.90
25	14	1402	C	N3-C4-N4	5.18	121.62	118.00
25	14	1636	C	O5'-P-OP2	5.18	116.91	110.70
1	13	980	C	C6-N1-C2	5.17	122.37	120.30
25	1H	676	A	OP1-P-OP2	5.17	127.36	119.60
25	1H	1005	C	N3-C4-C5	5.17	123.97	121.90
25	1H	1791	A	N1-C6-N6	-5.17	115.50	118.60
25	1H	2338	G	C5-C6-O6	-5.17	125.50	128.60
26	16	60	C	C5-C4-N4	-5.17	116.58	120.20
54	1G	1414	U	C5-C4-O4	5.17	129.00	125.90
54	1G	1529	G	N3-C4-N9	5.17	129.10	126.00
25	14	466	A	C5-C6-N1	5.17	120.29	117.70
25	14	641	C	C6-N1-C2	5.17	122.37	120.30
25	14	1766	U	C5-C6-N1	-5.17	120.11	122.70
25	1H	1601	G	C5-N7-C8	-5.17	101.71	104.30
25	1H	1938	A	N9-C4-C5	-5.17	103.73	105.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
25	1H	2038	G	N3-C2-N2	5.17	123.52	119.90
56	2L	19	G	N3-C4-C5	5.17	131.19	128.60
25	14	70	G	N3-C2-N2	5.17	123.52	119.90
25	14	687	C	C6-N1-C2	-5.17	118.23	120.30
25	14	911	A	OP2-P-O3'	-5.17	93.82	105.20
25	14	2889	C	C6-N1-C2	-5.17	118.23	120.30
22	1K	83	C	N1-C2-O2	5.17	122.00	118.90
25	1H	2600	A	C6-N1-C2	-5.17	115.50	118.60
54	1G	266	G	N3-C4-N9	5.17	129.10	126.00
25	14	1346	G	N7-C8-N9	-5.17	110.51	113.10
25	14	1608	A	C5-C6-N6	5.17	127.84	123.70
25	14	1659	U	N1-C2-O2	-5.17	119.18	122.80
25	1H	54	G	N3-C2-N2	5.17	123.52	119.90
25	1H	271(B)	G	C6-N1-C2	-5.17	122.00	125.10
25	1H	686	G	N3-C4-N9	5.17	129.10	126.00
25	1H	1839	G	N9-C4-C5	-5.17	103.33	105.40
25	1H	2042	A	O5'-P-OP1	5.17	116.90	110.70
25	14	826	U	N3-C4-C5	-5.17	111.50	114.60
1	13	878	G	C8-N9-C1'	-5.17	120.28	127.00
25	1H	54	G	N1-C2-N2	-5.17	111.55	116.20
25	1H	239	U	C2-N1-C1'	-5.17	111.50	117.70
25	1H	634	C	N3-C4-N4	-5.17	114.38	118.00
25	1H	1915	U	N3-C2-O2	-5.17	118.58	122.20
25	1H	2712(A)	A	N9-C4-C5	-5.17	103.73	105.80
25	14	514	A	OP1-P-OP2	5.17	127.35	119.60
25	1H	271(B)	G	C5-C6-N1	5.17	114.08	111.50
25	1H	384	U	N1-C2-N3	5.17	118.00	114.90
25	1H	659	C	C5-C6-N1	-5.17	118.42	121.00
25	1H	2501	C	C5-C6-N1	-5.17	118.42	121.00
25	14	784	A	P-O3'-C3'	5.17	125.90	119.70
25	1H	1338	G	C2-N3-C4	5.17	114.48	111.90
25	1H	1970	A	C2-N3-C4	5.17	113.18	110.60
26	16	25	A	O5'-P-OP2	-5.17	101.05	105.70
27	11	46	GLN	C-N-CA	-5.17	111.45	122.30
54	1G	666	G	C6-C5-N7	-5.17	127.30	130.40
1	13	775	G	N1-C6-O6	5.16	123.00	119.90
25	1H	2444	G	N1-C6-O6	-5.16	116.80	119.90
54	1G	906	G	C6-C5-N7	-5.16	127.30	130.40
25	14	1954	G	C8-N9-C4	-5.16	104.33	106.40
25	14	2001	A	C2-N3-C4	5.16	113.18	110.60
25	14	2598	A	C5-C6-N6	-5.16	119.57	123.70
26	1J	55	U	O5'-P-OP1	-5.16	101.05	105.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	13	352	C	C2-N3-C4	5.16	122.48	119.90
2	1E	111	ARG	NE-CZ-NH1	5.16	122.88	120.30
25	1H	59	U	N3-C4-C5	-5.16	111.50	114.60
25	1H	793	A	C5-C6-N6	-5.16	119.57	123.70
25	1H	1430	C	N3-C4-C5	-5.16	119.84	121.90
25	14	1897	G	C8-N9-C4	5.16	108.46	106.40
25	14	2617	C	C5-C6-N1	-5.16	118.42	121.00
1	13	584	G	N3-C4-N9	5.16	129.09	126.00
1	13	971	G	O5'-P-OP2	-5.16	101.06	105.70
25	1H	598	G	N3-C4-C5	-5.16	126.02	128.60
25	1H	1040	C	C6-N1-C2	5.16	122.36	120.30
25	14	980	A	C5-C6-N6	5.16	127.83	123.70
25	14	1342	A	N1-C6-N6	5.16	121.69	118.60
1	13	1422	G	C8-N9-C4	5.16	108.46	106.40
25	1H	1235	G	C6-C5-N7	-5.16	127.31	130.40
1	13	992	U	P-O3'-C3'	5.16	125.89	119.70
25	1H	1676	A	C8-N9-C4	5.16	107.86	105.80
25	1H	2330	G	C6-C5-N7	-5.16	127.31	130.40
54	1G	18	C	C6-N1-C2	-5.16	118.24	120.30
25	14	1768	U	C2-N3-C4	5.16	130.09	127.00
26	1J	11	C	N1-C2-O2	5.16	121.99	118.90
1	13	107	G	C8-N9-C4	5.15	108.46	106.40
25	14	1204	A	N3-C4-C5	5.15	130.41	126.80
26	1J	103	U	C6-N1-C2	5.15	124.09	121.00
1	13	129	U	C5-C4-O4	5.15	128.99	125.90
1	13	954	G	C5-C6-O6	-5.15	125.51	128.60
25	1H	182	A	N1-C6-N6	5.15	121.69	118.60
25	1H	780	G	O4'-C1'-N9	-5.15	104.08	108.20
25	1H	1228	G	C2-N3-C4	-5.15	109.32	111.90
25	1H	2428	G	O4'-C1'-N9	5.15	112.32	108.20
54	1G	904	C	O5'-P-OP2	5.15	116.88	110.70
54	1G	1086	U	C5-C6-N1	5.15	125.28	122.70
25	14	2490	G	N1-C6-O6	-5.15	116.81	119.90
1	13	428	G	N3-C4-C5	5.15	131.18	128.60
23	2K	40	C	C2-N3-C4	5.15	122.48	119.90
25	1H	67	U	OP1-P-O3'	5.15	116.53	105.20
25	1H	513	A	C5-N7-C8	-5.15	101.32	103.90
25	1H	1304	C	N1-C2-O2	5.15	121.99	118.90
25	1H	1500	G	O5'-P-OP1	5.15	116.88	110.70
25	1H	1813	G	O5'-P-OP1	-5.15	101.06	105.70
25	1H	2331	G	N1-C2-N2	-5.15	111.56	116.20
25	1H	2574	G	N3-C4-N9	5.15	129.09	126.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
26	16	35	U	N3-C2-O2	-5.15	118.59	122.20
25	14	455	C	C6-N1-C2	5.15	122.36	120.30
25	14	1938	A	N1-C6-N6	5.15	121.69	118.60
25	14	2085	C	C5-C6-N1	-5.15	118.42	121.00
1	13	774	G	C5-C6-O6	-5.15	125.51	128.60
25	1H	848	G	N1-C2-N2	-5.15	111.57	116.20
25	1H	2012	G	C8-N9-C1'	-5.15	120.31	127.00
25	14	127	A	O5'-P-OP2	-5.15	101.07	105.70
25	14	802	A	C6-N1-C2	-5.15	115.51	118.60
1	13	878	G	C8-N9-C4	5.15	108.46	106.40
25	1H	514	A	OP1-P-O3'	5.15	116.52	105.20
25	1H	870	A	C5-C6-N1	5.15	120.27	117.70
25	1H	1797	C	N3-C4-N4	5.15	121.60	118.00
25	1H	1831	G	N7-C8-N9	5.15	115.67	113.10
25	14	129	C	C6-N1-C2	5.15	122.36	120.30
25	14	1263	U	C6-N1-C2	-5.15	117.91	121.00
25	14	2251	G	C4-C5-N7	-5.15	108.74	110.80
25	1H	1784	A	OP1-P-OP2	-5.15	111.88	119.60
25	1H	2410	G	N1-C6-O6	-5.15	116.81	119.90
54	1G	99	C	C6-N1-C2	-5.15	118.24	120.30
1	13	1082	G	N9-C4-C5	-5.14	103.34	105.40
25	1H	37	C	C6-N1-C2	-5.14	118.24	120.30
25	1H	371	A	O5'-P-OP2	-5.14	101.07	105.70
25	1H	671	C	OP1-P-OP2	5.14	127.32	119.60
25	1H	1626	G	N3-C4-N9	-5.14	122.91	126.00
54	1G	954	G	C8-N9-C4	5.14	108.46	106.40
54	1G	1479	C	N1-C2-O2	5.14	121.99	118.90
25	14	672	C	C2-N3-C4	-5.14	117.33	119.90
25	14	698	C	N3-C4-C5	-5.14	119.84	121.90
25	14	733	G	N3-C4-C5	-5.14	126.03	128.60
25	1H	116	C	C4-C5-C6	5.14	119.97	117.40
25	1H	1346	G	N3-C2-N2	5.14	123.50	119.90
25	1H	1996	C	C6-N1-C2	5.14	122.36	120.30
25	14	1251	C	OP1-P-OP2	5.14	127.31	119.60
25	14	1836	C	O5'-P-OP2	-5.14	101.07	105.70
26	1J	53	A	C8-N9-C4	-5.14	103.74	105.80
25	1H	1350	C	O5'-P-OP2	5.14	116.87	110.70
41	D8	49	THR	C-N-CD	5.14	139.20	128.40
25	1H	606	U	N1-C2-N3	5.14	117.98	114.90
25	1H	651	G	OP1-P-OP2	-5.14	111.89	119.60
25	14	1310	G	N1-C6-O6	5.14	122.98	119.90
25	14	2285	C	N3-C4-C5	5.14	123.96	121.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
25	1H	786	C	N3-C4-C5	5.14	123.95	121.90
25	1H	2488	A	C4-C5-C6	5.14	119.57	117.00
25	1H	270(L)	U	N3-C2-O2	-5.14	118.61	122.20
25	1H	1281	G	OP1-P-OP2	-5.14	111.89	119.60
25	14	1653	G	C5-C6-N1	5.14	114.07	111.50
25	14	2430	A	C4-C5-C6	5.14	119.57	117.00
25	14	2700	C	O5'-P-OP1	5.14	116.86	110.70
1	13	1290	G	N7-C8-N9	5.13	115.67	113.10
25	1H	739	G	C5-C6-O6	-5.13	125.52	128.60
25	1H	1123	C	C2-N3-C4	-5.13	117.33	119.90
25	1H	1249	U	C2-N3-C4	-5.13	123.92	127.00
25	1H	1327	C	C6-N1-C2	-5.13	118.25	120.30
25	14	728	G	C8-N9-C4	5.13	108.45	106.40
25	14	1187	G	N7-C8-N9	5.13	115.67	113.10
25	14	2401	U	C2-N1-C1'	5.13	123.86	117.70
25	14	2825	C	N3-C4-C5	-5.13	119.85	121.90
1	13	1273	G	C8-N9-C4	5.13	108.45	106.40
25	1H	433	C	OP2-P-O3'	5.13	116.49	105.20
25	1H	703	U	C6-N1-C1'	5.13	128.39	121.20
25	14	24	G	C5-N7-C8	-5.13	101.73	104.30
25	14	372	G	O4'-C1'-N9	5.13	112.31	108.20
25	1H	1356	G	N3-C4-N9	-5.13	122.92	126.00
25	14	127	A	OP1-P-O3'	5.13	116.49	105.20
25	14	756	C	N3-C4-C5	-5.13	119.85	121.90
25	14	788	A	C5-N7-C8	-5.13	101.33	103.90
25	14	1797	C	N1-C2-O2	-5.13	115.82	118.90
1	13	422	C	C6-N1-C2	-5.13	118.25	120.30
1	13	1522	U	C5-C6-N1	-5.13	120.14	122.70
25	1H	1657	C	C6-N1-C2	-5.13	118.25	120.30
25	14	1522	G	N1-C6-O6	5.13	122.98	119.90
25	1H	1469	A	C5-N7-C8	-5.13	101.33	103.90
25	1H	1803	A	C5-C6-N6	-5.13	119.60	123.70
25	1H	2469	A	C6-C5-N7	-5.13	128.71	132.30
25	1H	2702	U	C5'-C4'-C3'	-5.13	107.80	116.00
26	16	23	G	N3-C2-N2	-5.13	116.31	119.90
25	14	1624	G	N3-C4-C5	5.13	131.16	128.60
25	14	1690	A	N1-C6-N6	5.13	121.68	118.60
35	35	62	LEU	CA-CB-CG	-5.13	103.50	115.30
25	1H	59	U	N3-C2-O2	-5.13	118.61	122.20
25	1H	2699	C	N1-C2-O2	-5.13	115.83	118.90
25	14	2641	G	N1-C6-O6	-5.13	116.82	119.90
25	1H	705	A	N1-C6-N6	5.12	121.67	118.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
25	1H	913	U	C6-N1-C1'	-5.12	114.03	121.20
25	1H	1052	C	C6-N1-C2	-5.12	118.25	120.30
25	1H	2456	C	N3-C2-O2	5.12	125.49	121.90
25	14	2355	C	N1-C2-O2	5.12	121.97	118.90
25	1H	821	A	N1-C2-N3	5.12	131.86	129.30
25	1H	1400	G	N9-C4-C5	5.12	107.45	105.40
25	1H	1432	C	C6-N1-C2	5.12	122.35	120.30
25	1H	1900	A	C5'-C4'-O4'	-5.12	102.95	109.10
25	1H	2073	C	C5-C4-N4	-5.12	116.61	120.20
25	14	24	G	C6-C5-N7	-5.12	127.33	130.40
25	14	137	C	C6-N1-C2	-5.12	118.25	120.30
25	14	1085	A	P-O3'-C3'	5.12	125.85	119.70
25	1H	422	A	C2-N3-C4	-5.12	108.04	110.60
25	1H	536	A	C5-C6-N1	5.12	120.26	117.70
25	1H	705	A	C5-C6-N6	-5.12	119.60	123.70
26	16	28	C	O5'-P-OP1	5.12	116.85	110.70
54	1G	366	C	C5-C6-N1	-5.12	118.44	121.00
54	1G	944	G	N3-C4-C5	-5.12	126.04	128.60
25	14	493	G	C5-N7-C8	-5.12	101.74	104.30
25	14	1257	C	N1-C2-O2	-5.12	115.83	118.90
25	14	1280	G	N9-C1'-C2'	-5.12	106.37	112.00
25	14	1598	C	C6-N1-C2	-5.12	118.25	120.30
25	14	1623	G	OP2-P-O3'	5.12	116.47	105.20
25	14	1626	G	N3-C2-N2	-5.12	116.31	119.90
25	14	1822	G	C8-N9-C4	-5.12	104.35	106.40
25	14	1905	C	O5'-P-OP2	-5.12	101.09	105.70
25	14	2498	C	C5-C6-N1	-5.12	118.44	121.00
25	1H	56	A	C5-C6-N6	-5.12	119.60	123.70
25	1H	1241	A	P-O3'-C3'	5.12	125.84	119.70
25	1H	1562	A	N1-C6-N6	5.12	121.67	118.60
25	14	832	G	C2-N3-C4	5.12	114.46	111.90
1	13	718	G	O5'-P-OP2	5.12	116.84	110.70
1	13	974	A	N7-C8-N9	5.12	116.36	113.80
23	2K	6	G	N7-C8-N9	-5.12	110.54	113.10
25	1H	1142(A)	A	C5-N7-C8	-5.12	101.34	103.90
25	1H	1955	U	C4-C5-C6	5.12	122.77	119.70
25	1H	2761	G	C2-N3-C4	-5.12	109.34	111.90
25	1H	2825	C	OP2-P-O3'	5.12	116.46	105.20
54	1G	1487	G	N1-C6-O6	5.12	122.97	119.90
25	14	198	C	C6-N1-C2	-5.12	118.25	120.30
25	14	2258	C	N3-C4-N4	5.12	121.58	118.00
1	13	900	A	OP1-P-OP2	-5.12	111.92	119.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
23	2K	77	A	C5-N7-C8	-5.12	101.34	103.90
1	13	566	G	N3-C4-N9	5.12	129.07	126.00
1	13	1502	A	N9-C1'-C2'	5.12	120.65	114.00
1	13	1516	G	C4-N9-C1'	-5.12	119.85	126.50
25	1H	444	C	OP1-P-OP2	-5.12	111.93	119.60
25	1H	2600	A	C2-N3-C4	5.12	113.16	110.60
25	14	669	G	N9-C4-C5	5.12	107.45	105.40
25	14	992	C	OP1-P-O3'	5.12	116.45	105.20
25	14	1407	C	C5-C4-N4	-5.12	116.62	120.20
25	14	2040	C	O5'-P-OP1	-5.12	101.10	105.70
25	14	2232	U	O5'-P-OP2	-5.12	101.09	105.70
25	14	2501	C	C6-N1-C1'	5.12	126.94	120.80
25	14	2594	C	N3-C4-N4	5.12	121.58	118.00
1	13	792	A	N9-C1'-C2'	5.11	120.65	114.00
1	13	1082	G	C4-C5-N7	5.11	112.84	110.80
25	1H	740	U	OP2-P-O3'	5.11	116.45	105.20
25	1H	776	G	C8-N9-C4	-5.11	104.35	106.40
25	1H	1422	G	N7-C8-N9	5.11	115.66	113.10
25	14	189	G	C5-C6-N1	5.11	114.06	111.50
25	14	1381	G	OP2-P-O3'	5.11	116.45	105.20
25	14	1698	A	C5-C6-N1	-5.11	115.14	117.70
25	14	2198	A	N9-C4-C5	5.11	107.84	105.80
25	1H	2446	G	N7-C8-N9	5.11	115.66	113.10
25	14	735	A	OP1-P-O3'	5.11	116.45	105.20
25	14	1710	C	N1-C2-O2	5.11	121.97	118.90
1	13	317	G	C8-N9-C1'	-5.11	120.36	127.00
22	3K	2	G	N3-C4-C5	5.11	131.16	128.60
25	1H	1249	U	C6-N1-C2	5.11	124.07	121.00
25	1H	2469	A	C2-N3-C4	-5.11	108.05	110.60
25	1H	2689	U	C5-C6-N1	-5.11	120.14	122.70
25	14	2087	G	C6-C5-N7	-5.11	127.33	130.40
25	1H	923	C	N3-C4-C5	-5.11	119.86	121.90
25	14	2391	G	OP1-P-O3'	5.11	116.44	105.20
1	13	803	G	C5-C6-O6	5.11	131.66	128.60
25	1H	1632	A	N9-C4-C5	-5.11	103.76	105.80
54	1G	754	C	C2-N1-C1'	5.11	124.42	118.80
15	6A	23	GLY	N-CA-C	5.11	125.87	113.10
25	14	932	G	C4-N9-C1'	-5.11	119.86	126.50
25	14	2492	U	O5'-P-OP2	5.11	116.83	110.70
1	13	894	G	C4-N9-C1'	-5.11	119.86	126.50
25	1H	284	U	O5'-P-OP1	-5.11	101.10	105.70
25	1H	1776	G	N3-C4-N9	5.11	129.06	126.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
25	1H	2373	G	N1-C6-O6	5.11	122.96	119.90
25	1H	2427	C	O5'-P-OP2	5.11	116.83	110.70
25	14	191	A	N1-C6-N6	5.11	121.66	118.60
25	14	2231	C	OP2-P-O3'	5.11	116.43	105.20
25	1H	1992	G	C2'-C3'-O3'	5.10	121.87	113.70
25	14	669	G	N7-C8-N9	5.10	115.65	113.10
25	14	1617	C	N1-C2-O2	-5.10	115.84	118.90
1	13	580	U	C5-C4-O4	5.10	128.96	125.90
1	13	584	G	C4-N9-C1'	5.10	133.13	126.50
25	1H	608	A	C8-N9-C4	-5.10	103.76	105.80
25	1H	951	C	N3-C4-N4	-5.10	114.43	118.00
25	1H	1569	A	OP1-P-OP2	5.10	127.25	119.60
25	1H	1649	G	O5'-P-OP1	-5.10	101.11	105.70
25	1H	2490	G	C6-C5-N7	-5.10	127.34	130.40
25	14	964	C	OP1-P-O3'	5.10	116.43	105.20
25	14	1604	C	N1-C2-O2	-5.10	115.84	118.90
25	14	1795	C	C2-N3-C4	-5.10	117.35	119.90
25	1H	701	G	N3-C2-N2	-5.10	116.33	119.90
54	1G	1482	G	O5'-P-OP1	-5.10	101.11	105.70
25	14	802	A	N1-C2-N3	5.10	131.85	129.30
25	1H	426	C	OP1-P-O3'	5.10	116.42	105.20
25	1H	801	G	OP1-P-OP2	5.10	127.25	119.60
25	1H	835	A	C4-C5-N7	-5.10	108.15	110.70
25	1H	842	G	N3-C4-C5	5.10	131.15	128.60
25	1H	1661	G	C8-N9-C4	5.10	108.44	106.40
25	1H	2567	G	C5-C6-O6	-5.10	125.54	128.60
25	1H	2743	C	C6-N1-C1'	5.10	126.92	120.80
25	14	252	G	O5'-P-OP1	5.10	116.82	110.70
25	14	2444	G	N1-C6-O6	-5.10	116.84	119.90
25	14	2591	C	N3-C2-O2	5.10	125.47	121.90
1	13	1064	G	C8-N9-C1'	5.10	133.63	127.00
25	1H	414	C	C4-C5-C6	5.10	119.95	117.40
25	1H	1597	A	O5'-P-OP2	-5.10	101.11	105.70
25	14	189	G	C8-N9-C4	5.10	108.44	106.40
25	1H	1489	U	N3-C2-O2	-5.10	118.63	122.20
25	14	460	A	C4-C5-N7	5.10	113.25	110.70
25	14	2256	G	C5-C6-O6	-5.10	125.54	128.60
1	13	477	G	N3-C4-C5	5.09	131.15	128.60
1	13	767	A	N9-C4-C5	5.09	107.84	105.80
1	13	975	A	N7-C8-N9	5.09	116.35	113.80
25	1H	1774	C	N1-C2-O2	-5.09	115.84	118.90
25	1H	1855	G	N3-C4-N9	5.09	129.06	126.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
25	1H	2509	G	O5'-P-OP1	-5.09	101.11	105.70
25	14	693	C	C2-N1-C1'	-5.09	113.20	118.80
25	14	2010	G	C5-N7-C8	5.09	106.85	104.30
25	1H	607	U	C5-C4-O4	5.09	128.96	125.90
25	1H	1520	U	C6-N1-C2	-5.09	117.94	121.00
25	1H	2354	G	OP1-P-O3'	5.09	116.41	105.20
25	1H	2609	U	C5-C4-O4	5.09	128.96	125.90
25	14	1694	C	N3-C4-C5	5.09	123.94	121.90
25	14	2254	C	C2-N1-C1'	-5.09	113.20	118.80
1	13	1052	U	N3-C2-O2	-5.09	118.64	122.20
25	1H	947	G	C5-C6-N1	-5.09	108.95	111.50
25	1H	2513	G	N7-C8-N9	5.09	115.65	113.10
54	1G	1145	C	C6-N1-C1'	-5.09	114.69	120.80
54	1G	1215	G	C4-N9-C1'	5.09	133.12	126.50
54	1G	1322	C	C2-N1-C1'	5.09	124.40	118.80
25	14	50	U	N1-C2-N3	-5.09	111.84	114.90
25	14	955	C	O5'-P-OP2	-5.09	101.12	105.70
25	14	1346	G	N3-C4-N9	5.09	129.06	126.00
25	14	1500	G	C6-C5-N7	-5.09	127.34	130.40
25	14	1638	C	OP2-P-O3'	5.09	116.40	105.20
25	1H	1309	G	O5'-P-OP1	5.09	116.81	110.70
25	1H	2459	A	N9-C4-C5	5.09	107.84	105.80
25	1H	2502	G	OP2-P-O3'	5.09	116.40	105.20
25	14	731	C	C6-N1-C2	5.09	122.34	120.30
25	14	2593	U	O5'-P-OP1	5.09	116.81	110.70
25	1H	2062	A	C5-N7-C8	5.09	106.44	103.90
25	14	2267	A	OP1-P-OP2	5.09	127.23	119.60
1	13	892	A	N1-C6-N6	5.09	121.65	118.60
1	13	1403	C	N3-C2-O2	5.09	125.46	121.90
1	13	1501	C	O5'-P-OP2	5.09	116.81	110.70
25	1H	728	G	C4-N9-C1'	5.09	133.11	126.50
25	1H	1136	G	N3-C2-N2	-5.09	116.34	119.90
25	1H	1362	C	C4-C5-C6	5.09	119.94	117.40
25	1H	1647	G	C5-C6-O6	5.09	131.65	128.60
25	1H	1943	U	O5'-P-OP2	-5.09	101.12	105.70
25	14	489	G	C4-N9-C1'	5.09	133.11	126.50
25	14	2589	A	C8-N9-C4	5.09	107.83	105.80
26	1J	18	G	N3-C4-N9	-5.09	122.95	126.00
1	13	827	U	C5-C4-O4	5.08	128.95	125.90
25	1H	55	G	N7-C8-N9	5.08	115.64	113.10
25	1H	1554	A	C4-C5-C6	5.08	119.54	117.00
25	14	1994	C	O5'-P-OP2	-5.08	101.12	105.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	13	894	G	C5-C6-O6	-5.08	125.55	128.60
25	1H	1011	G	C6-C5-N7	-5.08	127.35	130.40
25	1H	1026	U	P-O3'-C3'	5.08	125.80	119.70
25	1H	1610	A	C4-C5-N7	5.08	113.24	110.70
25	1H	2490	G	O4'-C1'-N9	5.08	112.27	108.20
25	1H	2583	G	C5-C6-O6	5.08	131.65	128.60
25	1H	2712	U	C5-C6-N1	-5.08	120.16	122.70
25	14	206	U	OP1-P-OP2	5.08	127.22	119.60
25	14	528	A	O4'-C1'-N9	-5.08	104.13	108.20
25	14	990	A	N7-C8-N9	5.08	116.34	113.80
25	14	2233	U	N3-C2-O2	5.08	125.76	122.20
1	13	714	G	P-O3'-C3'	5.08	125.80	119.70
14	5I	3	ARG	NE-CZ-NH1	5.08	122.84	120.30
25	1H	128	C	C5-C6-N1	-5.08	118.46	121.00
25	1H	604	G	O5'-P-OP1	-5.08	101.13	105.70
25	1H	980	A	OP1-P-O3'	5.08	116.38	105.20
25	1H	1060	U	P-O3'-C3'	5.08	125.80	119.70
25	1H	1949	G	C4-C5-N7	-5.08	108.77	110.80
25	1H	2555	U	O5'-P-OP1	-5.08	101.13	105.70
25	14	823	G	N3-C2-N2	5.08	123.46	119.90
25	14	1375	C	O5'-P-OP1	-5.08	101.13	105.70
25	14	1614	A	N7-C8-N9	5.08	116.34	113.80
25	14	1642	G	O5'-P-OP1	-5.08	101.13	105.70
1	13	191(F)	U	C6-N1-C2	-5.08	117.95	121.00
25	1H	381	G	C8-N9-C4	5.08	108.43	106.40
26	16	100	G	C8-N9-C4	5.08	108.43	106.40
25	1H	1587	A	N1-C6-N6	-5.08	115.55	118.60
54	1G	245	C	N3-C4-C5	-5.08	119.87	121.90
54	1G	1405	G	N7-C8-N9	-5.08	110.56	113.10
25	14	2623	G	C6-N1-C2	-5.08	122.05	125.10
25	14	130	C	C2-N3-C4	-5.08	117.36	119.90
25	14	733	G	N1-C6-O6	-5.08	116.85	119.90
25	14	2516	G	OP2-P-O3'	5.08	116.37	105.20
25	1H	72	U	N1-C2-N3	5.08	117.94	114.90
25	1H	1446	C	C5-C6-N1	5.08	123.54	121.00
56	2L	3	C	C6-N1-C2	5.08	122.33	120.30
25	14	1597	A	O5'-P-OP2	-5.08	101.13	105.70
25	14	2315	G	N3-C2-N2	5.08	123.45	119.90
25	14	2839	G	C8-N9-C4	-5.08	104.37	106.40
1	13	731	G	C4-N9-C1'	5.07	133.09	126.50
25	1H	247	G	N1-C2-N2	-5.07	111.63	116.20
25	1H	628	G	O5'-P-OP1	-5.07	101.13	105.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
25	1H	1026	U	C2-N1-C1'	-5.07	111.61	117.70
25	1H	1973	G	N1-C6-O6	-5.07	116.86	119.90
54	1G	506	G	O5'-P-OP2	-5.07	101.13	105.70
54	1G	509	A	P-O3'-C3'	5.07	125.79	119.70
25	14	546	C	C6-N1-C2	-5.07	118.27	120.30
25	14	1856	G	C8-N9-C1'	-5.07	120.41	127.00
25	14	1906	G	C6-C5-N7	-5.07	127.36	130.40
25	14	1950	G	C5-C6-O6	5.07	131.65	128.60
1	13	1494	G	C5-C6-N1	5.07	114.04	111.50
25	1H	440	G	C5-C6-O6	-5.07	125.56	128.60
25	1H	444	C	O5'-P-OP1	5.07	116.79	110.70
25	14	2575	C	OP2-P-O3'	5.07	116.36	105.20
1	13	779	C	OP2-P-O3'	5.07	116.35	105.20
1	13	792	A	O5'-P-OP2	5.07	116.78	110.70
1	13	1094	G	C8-N9-C1'	-5.07	120.41	127.00
1	13	1415	G	C8-N9-C1'	-5.07	120.41	127.00
25	1H	246	C	C4-C5-C6	5.07	119.94	117.40
25	1H	780	G	N9-C4-C5	-5.07	103.37	105.40
25	1H	1156	A	N1-C6-N6	5.07	121.64	118.60
25	1H	1899	G	OP2-P-O3'	5.07	116.36	105.20
25	1H	2273	A	OP2-P-O3'	5.07	116.36	105.20
25	14	265	A	N7-C8-N9	5.07	116.33	113.80
25	14	574	C	C5-C4-N4	5.07	123.75	120.20
25	14	1497	U	O4'-C1'-N1	5.07	112.26	108.20
25	14	1647	G	O4'-C1'-N9	-5.07	104.14	108.20
25	14	2544	G	C6-C5-N7	-5.07	127.36	130.40
38	65	32	LEU	CA-CB-CG	5.07	126.96	115.30
25	1H	627	A	O5'-P-OP2	-5.07	101.14	105.70
25	1H	2644	G	N9-C4-C5	5.07	107.43	105.40
25	14	817	C	C5-C6-N1	5.07	123.53	121.00
25	14	1309	G	C8-N9-C4	5.07	108.43	106.40
25	1H	585	G	C8-N9-C4	-5.07	104.37	106.40
25	1H	1470	G	N7-C8-N9	5.07	115.63	113.10
25	1H	1528	A	C5-N7-C8	-5.07	101.37	103.90
25	1H	1800	C	C4-C5-C6	5.07	119.93	117.40
55	1L	3	U	OP1-P-O3'	5.07	116.35	105.20
25	14	583	G	C8-N9-C4	-5.07	104.37	106.40
25	14	1624	G	C8-N9-C4	5.07	108.43	106.40
25	14	2413	G	N1-C6-O6	5.07	122.94	119.90
25	14	2575	C	C2-N1-C1'	-5.07	113.22	118.80
27	19	95	LEU	CA-CB-CG	5.07	126.95	115.30
1	13	454	C	N1-C2-O2	5.07	121.94	118.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
25	1H	196	A	C6-N1-C2	5.07	121.64	118.60
25	1H	1298	C	OP1-P-O3'	5.07	116.34	105.20
25	14	762	U	C2-N1-C1'	5.07	123.78	117.70
25	14	1497	U	C2-N1-C1'	-5.07	111.62	117.70
25	14	1798	U	C2-N3-C4	-5.07	123.96	127.00
25	14	2460	U	O5'-P-OP1	-5.07	101.14	105.70
1	13	1486	G	N3-C4-C5	5.06	131.13	128.60
25	1H	1136	G	N9-C4-C5	5.06	107.42	105.40
54	1G	897	C	C5-C6-N1	-5.06	118.47	121.00
55	1L	37	A	N1-C6-N6	-5.06	115.56	118.60
25	14	835	A	O5'-P-OP2	-5.06	101.14	105.70
1	13	1481	U	C6-N1-C2	-5.06	117.96	121.00
1	13	1522	U	C4-C5-C6	5.06	122.74	119.70
25	1H	661	C	N3-C4-C5	5.06	123.92	121.90
25	1H	2041	U	O5'-P-OP1	-5.06	101.15	105.70
25	1H	2604	U	C4-C5-C6	5.06	122.74	119.70
25	1H	2656	U	C2-N1-C1'	5.06	123.77	117.70
54	1G	1378	C	C6-N1-C2	-5.06	118.28	120.30
25	14	1204	A	N1-C6-N6	5.06	121.64	118.60
25	14	1260	G	OP2-P-O3'	5.06	116.33	105.20
25	14	2512	C	C5-C6-N1	-5.06	118.47	121.00
25	1H	121	G	N3-C4-N9	5.06	129.03	126.00
25	1H	1327	C	N1-C2-O2	-5.06	115.87	118.90
25	14	397	G	C4-C5-N7	5.06	112.82	110.80
25	14	2224	G	C5-C6-O6	-5.06	125.57	128.60
25	14	2461	C	OP1-P-OP2	5.06	127.19	119.60
25	1H	795	C	N3-C4-N4	-5.06	114.46	118.00
25	1H	1791	A	N9-C4-C5	5.06	107.82	105.80
55	3L	2	G	N3-C4-C5	5.06	131.13	128.60
25	14	950	G	C5-C6-O6	5.06	131.63	128.60
25	14	2617	C	N3-C4-C5	5.06	123.92	121.90
1	13	245	C	O5'-P-OP2	5.05	116.77	110.70
1	13	751	U	C2-N1-C1'	5.05	123.77	117.70
1	13	1203	C	N1-C2-O2	5.05	121.93	118.90
25	1H	782	A	N1-C2-N3	5.05	131.83	129.30
25	1H	966	G	C4-C5-N7	-5.05	108.78	110.80
25	1H	1564	C	N3-C4-C5	5.05	123.92	121.90
25	1H	1752	C	N3-C2-O2	5.05	125.44	121.90
25	1H	2280	G	C5-N7-C8	5.05	106.83	104.30
25	14	117	G	C5-C6-O6	-5.05	125.57	128.60
25	14	948	G	O5'-P-OP2	5.05	116.76	110.70
25	1H	1574	C	C5-C4-N4	-5.05	116.66	120.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
54	1G	1527	C	N3-C4-N4	-5.05	114.46	118.00
25	14	1807	G	C8-N9-C4	5.05	108.42	106.40
1	13	822	C	C2-N3-C4	-5.05	117.37	119.90
1	13	1410	G	N1-C6-O6	5.05	122.93	119.90
25	1H	751	A	C5-C6-N1	5.05	120.23	117.70
25	1H	1626	G	N1-C2-N2	5.05	120.75	116.20
1	13	293	G	N3-C2-N2	-5.05	116.37	119.90
1	13	783	C	C6-N1-C2	5.05	122.32	120.30
25	1H	206	U	N3-C4-O4	-5.05	115.86	119.40
25	1H	513	A	N1-C6-N6	-5.05	115.57	118.60
25	1H	639	U	N3-C4-C5	-5.05	111.57	114.60
25	1H	1604	C	OP2-P-O3'	5.05	116.31	105.20
25	1H	1734	C	C6-N1-C1'	5.05	126.86	120.80
25	1H	2378	A	N9-C4-C5	-5.05	103.78	105.80
25	1H	2737	G	N9-C4-C5	-5.05	103.38	105.40
54	1G	293	G	O5'-P-OP1	5.05	116.76	110.70
25	14	93	C	C2-N1-C1'	5.05	124.35	118.80
25	14	409	C	C5-C4-N4	-5.05	116.67	120.20
25	14	2071	A	C8-N9-C4	-5.05	103.78	105.80
25	14	2093	G	C6-C5-N7	-5.05	127.37	130.40
1	13	452	A	N7-C8-N9	-5.05	111.28	113.80
25	1H	1445	C	N1-C2-O2	5.05	121.93	118.90
25	1H	2249	U	N3-C4-C5	-5.05	111.57	114.60
25	14	2060	A	N9-C4-C5	5.05	107.82	105.80
25	14	2235	G	N3-C4-C5	-5.05	126.08	128.60
25	1H	2319	G	N3-C4-C5	-5.05	126.08	128.60
54	1G	695	A	N1-C6-N6	5.05	121.63	118.60
25	14	35	G	C6-C5-N7	5.05	133.43	130.40
25	14	2526	G	N3-C2-N2	-5.05	116.37	119.90
26	1J	12	C	N3-C2-O2	-5.05	118.37	121.90
1	13	264	U	C2-N1-C1'	5.04	123.75	117.70
1	13	792	A	C1'-O4'-C4'	-5.04	105.86	109.90
1	13	833	U	C5-C4-O4	5.04	128.93	125.90
1	13	1158	C	C6-N1-C1'	-5.04	114.75	120.80
25	1H	842	G	C4-C5-N7	5.04	112.82	110.80
25	1H	1632	A	C5-C6-N6	-5.04	119.66	123.70
25	14	2337	G	N7-C8-N9	5.04	115.62	113.10
25	14	2590	A	N7-C8-N9	-5.04	111.28	113.80
1	13	973	G	N3-C4-N9	5.04	129.03	126.00
25	1H	211	A	C5-C6-N6	-5.04	119.67	123.70
25	1H	594	U	OP2-P-O3'	5.04	116.29	105.20
25	1H	787	U	N3-C4-O4	-5.04	115.87	119.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
25	1H	835	A	C6-N1-C2	-5.04	115.57	118.60
25	1H	2516	G	C5-C6-N1	5.04	114.02	111.50
54	1G	527	G	C4-C5-N7	-5.04	108.78	110.80
25	14	2597	G	C4-C5-N7	5.04	112.82	110.80
28	29	80	GLU	N-CA-C	5.04	124.62	111.00
25	1H	1271	G	C8-N9-C4	5.04	108.42	106.40
25	1H	2286	A	OP1-P-O3'	5.04	116.29	105.20
25	14	53	A	C6-N1-C2	-5.04	115.58	118.60
25	14	1329	U	N1-C2-O2	-5.04	119.27	122.80
25	14	2623	G	N1-C6-O6	-5.04	116.88	119.90
25	1H	781	A	C5-N7-C8	5.04	106.42	103.90
25	1H	851	U	N1-C2-O2	-5.04	119.27	122.80
25	1H	1475	G	N3-C4-N9	-5.04	122.98	126.00
25	1H	777	A	C4-C5-C6	5.04	119.52	117.00
25	1H	1426	G	N3-C4-N9	5.04	129.02	126.00
25	1H	1469	A	N7-C8-N9	5.04	116.32	113.80
25	1H	2497	A	N1-C2-N3	5.04	131.82	129.30
25	1H	2655	G	O4'-C1'-N9	5.04	112.23	108.20
25	14	1964	G	N3-C2-N2	5.04	123.43	119.90
25	14	2677	G	C8-N9-C4	5.04	108.42	106.40
1	13	791	G	C4-C5-N7	-5.04	108.78	110.80
25	1H	1434	A	C8-N9-C4	5.04	107.81	105.80
55	1L	20	C	O4'-C1'-N1	-5.04	104.17	108.20
25	14	1882	C	N1-C2-O2	5.04	121.92	118.90
1	13	496	A	C8-N9-C4	-5.04	103.79	105.80
25	1H	863	A	N7-C8-N9	-5.04	111.28	113.80
25	1H	1398	C	OP2-P-O3'	5.04	116.28	105.20
54	1G	117	G	N3-C4-N9	5.04	129.02	126.00
54	1G	1523	G	N3-C2-N2	-5.04	116.38	119.90
55	1L	2	G	N3-C4-C5	5.04	131.12	128.60
26	1J	107	U	O4'-C1'-N1	5.04	112.23	108.20
23	2K	24	C	C5-C4-N4	5.03	123.72	120.20
25	1H	1569	A	O5'-P-OP1	-5.03	101.17	105.70
54	1G	356	A	C8-N9-C4	-5.03	103.79	105.80
25	14	1947	C	C6-N1-C2	-5.03	118.29	120.30
25	1H	253	C	C2-N1-C1'	-5.03	113.27	118.80
25	14	1022	G	OP2-P-O3'	5.03	116.27	105.20
25	14	2498	C	C6-N1-C2	5.03	122.31	120.30
25	1H	344	G	N3-C4-C5	-5.03	126.08	128.60
25	1H	569	U	C2-N3-C4	-5.03	123.98	127.00
25	1H	611	C	C5-C6-N1	-5.03	118.48	121.00
25	1H	1762	A	N1-C2-N3	-5.03	126.78	129.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
54	1G	617	G	N3-C4-C5	5.03	131.12	128.60
25	14	268	C	C6-N1-C2	-5.03	118.29	120.30
25	14	1782	C	OP2-P-O3'	-5.03	94.13	105.20
1	13	910	C	C6-N1-C2	5.03	122.31	120.30
25	1H	1300	U	C6-N1-C2	-5.03	117.98	121.00
1	13	280	C	O5'-P-OP2	5.03	116.73	110.70
1	13	693	G	C6-C5-N7	5.03	133.42	130.40
25	1H	863	A	O5'-P-OP1	5.03	116.73	110.70
25	1H	2583	G	N3-C4-C5	-5.03	126.09	128.60
25	1H	2708	G	N7-C8-N9	-5.03	110.59	113.10
54	1G	250	A	P-O3'-C3'	5.03	125.73	119.70
25	14	332	A	N1-C6-N6	-5.03	115.58	118.60
25	14	818	G	O5'-P-OP1	-5.03	101.18	105.70
1	13	112	G	N7-C8-N9	5.03	115.61	113.10
25	1H	56	A	C4-C5-N7	5.03	113.21	110.70
54	1G	484	G	N3-C4-C5	5.03	131.11	128.60
25	14	2391	G	C8-N9-C1'	5.03	133.53	127.00
1	13	598	U	C5-C6-N1	5.02	125.21	122.70
25	1H	2351	G	OP1-P-OP2	5.02	127.14	119.60
25	1H	2711	A	OP1-P-O3'	5.02	116.25	105.20
25	14	2012	G	N3-C4-N9	5.02	129.01	126.00
1	13	266	G	O4'-C1'-N9	-5.02	104.18	108.20
1	13	584	G	C8-N9-C1'	-5.02	120.47	127.00
1	13	1381	U	C2-N1-C1'	5.02	123.73	117.70
25	1H	647	G	N3-C4-C5	-5.02	126.09	128.60
54	1G	114	U	C5-C6-N1	-5.02	120.19	122.70
25	14	133	C	C2-N3-C4	-5.02	117.39	119.90
25	14	576	U	OP2-P-O3'	5.02	116.25	105.20
25	14	636	G	N3-C4-C5	-5.02	126.09	128.60
25	14	1454	U	N3-C2-O2	-5.02	118.69	122.20
25	14	2380	C	C2-N3-C4	-5.02	117.39	119.90
25	14	2595	G	C5-C6-O6	-5.02	125.59	128.60
22	1K	20	C	C6-N1-C2	-5.02	118.29	120.30
25	1H	259	G	C8-N9-C4	5.02	108.41	106.40
25	1H	1997	G	N3-C2-N2	-5.02	116.39	119.90
25	14	187	G	C8-N9-C1'	-5.02	120.47	127.00
23	2K	10	G	O5'-P-OP1	-5.02	101.18	105.70
25	1H	386	G	C8-N9-C4	-5.02	104.39	106.40
25	1H	716	A	N7-C8-N9	5.02	116.31	113.80
25	1H	1457	A	N1-C6-N6	5.02	121.61	118.60
25	1H	1472	A	N1-C6-N6	-5.02	115.59	118.60
25	1H	1661	G	C5-C6-N1	5.02	114.01	111.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
25	1H	1957	C	C6-N1-C1'	5.02	126.82	120.80
25	14	1272	A	O5'-P-OP2	-5.02	101.18	105.70
25	14	1408	C	N3-C2-O2	5.02	125.41	121.90
1	13	108	G	O4'-C1'-N9	5.02	112.21	108.20
1	13	304	U	C6-N1-C2	-5.02	117.99	121.00
25	1H	768	G	OP1-P-OP2	5.02	127.13	119.60
25	1H	793	A	N3-C4-N9	5.02	131.41	127.40
25	1H	1344	G	C5-N7-C8	-5.02	101.79	104.30
25	1H	1368	G	N9-C4-C5	5.02	107.41	105.40
25	1H	1424	G	C6-N1-C2	-5.02	122.09	125.10
54	1G	1054	C	N3-C4-C5	5.02	123.91	121.90
25	14	698	C	O5'-P-OP1	-5.02	101.18	105.70
25	14	1558	A	C4-C5-C6	5.02	119.51	117.00
25	14	1782	C	OP1-P-O3'	5.02	116.24	105.20
25	14	2419	U	OP1-P-O3'	5.02	116.24	105.20
25	14	2588	G	N3-C4-C5	-5.02	126.09	128.60
1	13	758	G	C5-N7-C8	-5.02	101.79	104.30
25	1H	2608	G	N3-C2-N2	-5.02	116.39	119.90
25	14	2517	C	O4'-C1'-N1	5.02	112.21	108.20
38	65	110	LEU	CB-CG-CD2	5.02	119.53	111.00
25	1H	138	G	C2-N3-C4	5.01	114.41	111.90
25	1H	512	G	OP1-P-O3'	5.01	116.23	105.20
25	1H	965	C	C6-N1-C2	-5.01	118.29	120.30
25	1H	1974	C	C5-C6-N1	5.01	123.51	121.00
25	1H	2211	G	O5'-P-OP1	-5.01	101.19	105.70
54	1G	32	A	C8-N9-C4	-5.01	103.80	105.80
25	14	205	G	C8-N9-C4	5.01	108.41	106.40
25	14	450	G	N3-C4-N9	5.01	129.01	126.00
25	1H	499	U	O5'-P-OP1	-5.01	101.19	105.70
54	1G	780	A	N1-C6-N6	5.01	121.61	118.60
25	14	2389	G	C5-N7-C8	-5.01	101.79	104.30
1	13	858	G	C4-N9-C1'	5.01	133.02	126.50
25	1H	950	G	N3-C4-N9	-5.01	122.99	126.00
25	1H	2566	A	N9-C4-C5	5.01	107.81	105.80
26	16	32	C	N1-C2-O2	5.01	121.91	118.90
26	16	35	U	O4'-C1'-N1	5.01	112.21	108.20
25	14	2340	G	N1-C6-O6	-5.01	116.89	119.90
25	14	2453	A	C5-C6-N6	-5.01	119.69	123.70
1	13	115	G	N7-C8-N9	5.01	115.61	113.10
1	13	1108	G	C4-C5-N7	-5.01	108.80	110.80
25	1H	1379	A	N7-C8-N9	5.01	116.31	113.80
25	1H	1835	G	O5'-P-OP1	-5.01	101.19	105.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
25	1H	1987	G	C8-N9-C4	-5.01	104.40	106.40
25	1H	2456	C	C2-N3-C4	5.01	122.41	119.90
25	1H	2645	G	C5-N7-C8	-5.01	101.80	104.30
25	1H	2845	G	N1-C6-O6	5.01	122.91	119.90
54	1G	32	A	N1-C2-N3	5.01	131.81	129.30
25	14	562	U	N1-C2-N3	5.01	117.91	114.90
25	14	954	G	O5'-P-OP2	5.01	116.71	110.70
25	1H	667	U	N3-C4-C5	-5.01	111.59	114.60
25	1H	2234	G	C8-N9-C4	5.01	108.40	106.40
25	1H	2609	U	C4-C5-C6	5.01	122.70	119.70
44	G8	95	LYS	N-CA-C	-5.01	97.48	111.00
1	13	984	C	OP1-P-O3'	5.01	116.22	105.20
25	1H	989	G	C5-C6-O6	-5.01	125.60	128.60
25	1H	1324	G	O4'-C1'-N9	5.01	112.20	108.20
25	1H	1394	U	OP1-P-OP2	-5.01	112.09	119.60
25	1H	1651	G	C8-N9-C4	-5.01	104.40	106.40
25	14	262	A	N9-C4-C5	5.01	107.80	105.80
25	14	1446	C	N3-C2-O2	-5.01	118.40	121.90
25	14	2000	G	OP2-P-O3'	5.01	116.21	105.20
25	14	2700	C	N3-C4-N4	5.01	121.50	118.00
25	1H	590	A	N1-C2-N3	5.00	131.80	129.30
25	1H	2331	G	N1-C2-N3	5.00	126.90	123.90
25	1H	2461	C	C5-C4-N4	5.00	123.70	120.20
25	14	1676	A	OP2-P-O3'	5.00	116.21	105.20
25	14	1930	G	C5-N7-C8	5.00	106.80	104.30
25	14	2027	G	C8-N9-C4	-5.00	104.40	106.40
1	13	573	A	N1-C6-N6	-5.00	115.60	118.60
25	1H	557	U	C2-N3-C4	-5.00	124.00	127.00
25	1H	2419	U	N3-C4-C5	-5.00	111.60	114.60
54	1G	1380	U	C6-N1-C2	5.00	124.00	121.00
25	14	2644	G	N1-C6-O6	5.00	122.90	119.90
1	13	111	G	C8-N9-C4	5.00	108.40	106.40
1	13	306	G	N1-C6-O6	-5.00	116.90	119.90
1	13	310	G	OP2-P-O3'	5.00	116.20	105.20
25	1H	602	G	C6-C5-N7	-5.00	127.40	130.40
25	1H	1571	A	N1-C6-N6	-5.00	115.60	118.60
25	1H	1602	U	C4-C5-C6	5.00	122.70	119.70
25	1H	2217	G	N3-C4-C5	-5.00	126.10	128.60
54	1G	65	U	C5-C6-N1	-5.00	120.20	122.70
25	14	203	C	N1-C2-O2	-5.00	115.90	118.90
25	14	1387	C	C6-N1-C2	-5.00	118.30	120.30
25	14	2235	G	O5'-P-OP2	5.00	116.70	110.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
25	14	2732	G	C8-N9-C4	-5.00	104.40	106.40

There are no chirality outliers.

All (95) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
27	11	239	ARG	Mainchain,Peptide
27	11	28	GLU	Peptide
27	11	32	SER	Peptide
27	11	47	GLY	Peptide
27	19	197	GLY	Peptide
27	19	237	GLU	Peptide
27	19	271	ILE	Peptide
27	19	32	SER	Peptide
27	19	37	LEU	Peptide
2	1E	15	VAL	Peptide
2	1E	71	VAL	Peptide
28	21	54	GLN	Peptide
28	21	56	PRO	Peptide
28	21	78	LEU	Peptide
28	29	186	GLY	Peptide
28	29	201	THR	Peptide
28	29	26	ILE	Peptide
28	29	61	ARG	Peptide
11	2A	100	ALA	Peptide
3	2E	166	GLU	Peptide
35	35	14	LYS	Peptide
35	35	63	PRO	Peptide
29	39	127	GLU	Peptide
29	39	20	LEU	Peptide
4	3E	29	PRO	Peptide
4	3E	85	LYS	Peptide
12	3I	87	GLY	Peptide
30	41	95	ARG	Peptide
36	45	117	ALA	Peptide
36	45	134	ARG	Peptide
36	45	137	TYR	Peptide
36	45	24	GLY	Peptide
36	45	25	ASP	Peptide
13	4I	107	ALA	Peptide
31	51	80	SER	Peptide
33	58	77	GLY	Peptide

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Mol	Chain	Res	Type	Group
31	59	171	LEU	Peptide
14	5A	27	CYS	Peptide
6	5E	81	ILE	Peptide
14	5I	13	THR	Peptide
32	61	11	ASN	Peptide
32	61	114	LEU	Peptide
32	61	134	PRO	Peptide
32	61	82	ARG	Peptide
32	69	112	LYS	Peptide
39	75	9	LEU	Peptide
35	78	11	GLY	Peptide
35	78	115	LEU	Peptide
35	78	20	GLY	Peptide
35	78	65	ARG	Peptide
35	78	70	GLN	Peptide
40	85	95	LEU	Peptide
40	85	98	LEU	Peptide
36	88	21	THR	Peptide
36	88	78	PRO	Peptide
36	88	79	LEU	Peptide
36	88	81	VAL	Peptide
17	8I	13	ASP	Peptide
41	95	86	GLY	Peptide
41	95	90	PRO	Peptide
19	AI	4	SER	Peptide
43	B5	24	GLY	Peptide
43	B5	61	GLY	Peptide
39	B8	58	ASN	Peptide
20	BA	11	SER	Peptide
20	BI	73	HIS	Peptide
44	C5	81	LYS	Peptide
44	C5	82	PRO	Peptide
40	C8	92	ARG	Peptide
45	D5	61	LEU	Peptide
41	D8	44	LYS	Peptide
47	F5	29	GLY	Peptide
47	F5	85	LEU	Peptide
48	G5	15	LYS	Peptide
48	G5	17	SER	Peptide
48	G5	43	GLN	Peptide
44	G8	53	PRO	Peptide
44	G8	54	LYS	Peptide

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Mol	Chain	Res	Type	Group
44	G8	80	GLY	Peptide
44	G8	84	ARG	Peptide
44	G8	94	LYS	Peptide
45	H8	158	PRO	Peptide
45	H8	59	LEU	Peptide
45	H8	63	ASP	Peptide
47	J8	84	GLY	Peptide
47	J8	86	SER	Peptide
53	M5	30	ARG	Peptide
53	M5	40	GLU	Peptide
53	M5	52	LYS	Peptide
50	M8	40	HIS	Peptide
53	Q8	38	GLY	Peptide
53	Q8	54	GLU	Peptide
53	Q8	7	HIS	Peptide
53	Q8	9	GLY	Peptide

5.2 Too-close contacts

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

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	13	32207	0	16254	795	0
2	12	1924	0	1975	105	0
2	1E	1924	0	1975	91	0
3	22	1612	0	1677	104	0
3	2E	1605	0	1668	46	0
4	32	1702	0	1763	103	0
4	3E	1702	0	1763	79	0
5	42	1155	0	1213	75	0
5	4E	1155	0	1213	37	0
6	52	842	0	857	28	0
6	5E	842	0	857	44	0
7	62	1256	0	1296	57	0
7	6E	1256	0	1296	60	0
8	72	1115	0	1177	46	0
8	7E	1115	0	1177	56	0
9	82	1009	0	1037	65	0
9	8E	1009	0	1037	63	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
10	1A	801	0	849	52	0
10	1I	801	0	849	52	0
11	2A	884	0	904	39	0
11	2I	864	0	881	35	0
12	3A	975	0	1062	57	0
12	3I	975	0	1062	37	0
13	4A	933	0	992	61	0
13	4I	928	0	987	56	0
14	5A	475	0	511	31	0
14	5I	498	0	537	38	0
15	6A	733	0	771	28	0
15	6I	733	0	771	30	0
16	7A	705	0	725	15	0
16	7I	705	0	725	46	0
17	8A	834	0	904	35	0
17	8I	834	0	904	54	0
18	9A	564	0	631	21	0
18	9I	590	0	662	33	0
19	AA	640	0	633	37	0
19	AI	665	0	686	41	0
20	BA	762	0	861	36	0
20	BI	762	0	861	38	0
21	1B	217	0	234	20	0
21	1F	188	0	195	9	0
22	1K	1825	0	946	59	0
22	3K	1825	0	946	49	0
23	2K	1646	0	847	33	0
24	4K	349	0	176	13	0
25	14	62605	0	31561	1396	0
25	1H	62707	0	31610	1456	1
26	16	2617	0	1328	68	0
26	1J	2617	0	1328	93	0
27	11	2115	0	2195	124	0
27	19	2120	0	2197	103	0
28	21	1568	0	1634	94	0
28	29	1568	0	1634	108	0
29	31	1585	0	1632	81	0
29	39	1627	0	1680	101	0
30	41	1473	0	1535	86	0
30	49	1473	0	1535	74	0
31	51	1336	0	1418	82	0
31	59	1316	0	1395	79	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
32	61	1136	0	1223	61	0
32	69	1136	0	1223	62	0
33	15	1104	0	1180	50	0
33	58	1104	0	1180	66	0
34	25	932	0	996	54	0
34	68	932	0	996	26	0
35	35	1144	0	1228	108	0
35	78	1144	0	1228	99	0
36	45	1098	0	1160	66	0
36	88	1121	0	1179	56	0
37	55	959	0	1021	44	0
37	98	967	0	1033	55	0
38	65	881	0	943	67	0
38	A8	881	0	943	47	0
39	75	1141	0	1202	64	0
39	B8	1133	0	1190	64	0
40	85	963	0	1022	55	0
40	C8	963	0	1022	65	0
41	95	778	0	852	60	0
41	D8	778	0	852	34	0
42	A5	899	0	964	40	0
42	E8	899	0	964	27	0
43	B5	725	0	778	29	0
43	F8	742	0	803	44	0
44	C5	794	0	883	64	0
44	G8	778	0	863	61	0
45	D5	1428	0	1454	82	0
45	H8	1397	0	1430	57	0
46	E5	612	0	633	35	0
46	I8	612	0	633	31	0
47	F5	762	0	848	42	0
47	J8	729	0	802	23	0
48	G5	558	0	610	24	0
48	K8	558	0	610	33	0
49	H5	468	0	518	16	0
49	L8	468	0	518	20	0
50	I5	515	0	514	30	0
50	M8	533	0	526	34	0
51	J5	453	0	475	18	0
51	N8	374	0	393	22	0
52	L5	391	0	432	22	0
52	P8	391	0	432	15	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
53	M5	480	0	549	44	0
53	Q8	448	0	463	60	0
54	1G	32204	0	16256	845	1
55	1L	1807	0	920	33	0
55	3L	1807	0	920	54	0
56	2L	1645	0	843	44	0
57	4L	349	0	176	10	0
58	11	1	0	0	0	0
58	13	138	0	0	0	0
58	14	398	0	0	0	0
58	16	13	0	0	0	0
58	1G	90	0	0	0	0
58	1H	475	0	0	0	0
58	1J	6	0	0	0	0
58	1K	1	0	0	0	0
58	1L	1	0	0	0	0
58	21	2	0	0	0	0
58	25	1	0	0	0	0
58	29	3	0	0	0	0
58	2K	6	0	0	0	0
58	2L	3	0	0	0	0
58	31	4	0	0	0	0
58	39	1	0	0	0	0
58	3E	1	0	0	0	0
58	3I	1	0	0	0	0
58	3L	1	0	0	0	0
58	45	1	0	0	0	0
58	4E	1	0	0	0	0
58	78	1	0	0	0	0
58	85	1	0	0	0	0
58	8E	1	0	0	0	0
58	98	2	0	0	0	0
58	C5	1	0	0	0	0
58	I8	2	0	0	0	0
58	L5	1	0	0	0	0
58	L8	2	0	0	0	0
58	P8	1	0	0	0	0
59	32	1	0	0	0	0
59	3E	1	0	0	0	0
59	5A	1	0	0	0	0
59	5I	1	0	0	0	0
59	C5	1	0	0	0	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
59	G8	1	0	0	0	0
60	11	4	0	0	0	0
60	13	100	0	0	20	0
60	14	409	0	0	100	0
60	16	11	0	0	1	0
60	19	7	0	0	1	0
60	1G	51	0	0	14	0
60	1H	538	0	0	157	0
60	1K	1	0	0	0	0
60	21	2	0	0	0	0
60	29	2	0	0	1	0
60	2K	6	0	0	0	0
60	31	4	0	0	0	0
60	32	1	0	0	0	0
60	35	1	0	0	0	0
60	39	4	0	0	0	0
60	3E	2	0	0	0	0
60	3I	2	0	0	1	0
60	4K	2	0	0	0	0
60	4L	1	0	0	0	0
60	55	1	0	0	2	0
60	5I	1	0	0	0	0
60	75	1	0	0	0	0
60	78	4	0	0	2	0
60	7I	1	0	0	0	0
60	85	1	0	0	0	0
60	BA	1	0	0	0	0
60	D8	1	0	0	0	0
60	F8	1	0	0	0	0
60	L8	3	0	0	0	0
All	All	299318	0	199912	8796	1

The all-atom clashscore is defined as the number of clashes found per 1000 atoms (including hydrogen atoms). The all-atom clashscore for this structure is 18.

All (8796) 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)
22:1K:35:QUO:N3	22:1K:35:QUO:C4	1.70	1.51
22:3K:35:QUO:C4	22:3K:35:QUO:N3	1.72	1.48
25:14:2057:A:OP2	60:14:3437:HOH:O	1.73	1.07

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:14:2032:G:N7	60:14:3594:HOH:O	1.91	1.04
25:14:2711:A:OP2	60:14:3464:HOH:O	1.72	1.04
25:14:1783:A:OP2	60:14:3404:HOH:O	1.77	1.03
25:1H:249:C:OP1	60:1H:3550:HOH:O	1.76	1.01
25:14:1774:C:OP1	60:14:3487:HOH:O	1.78	1.01
25:1H:620:G:H4'	25:1H:621:A:H5"	1.39	1.00
25:1H:2308:G:H1	25:1H:2311:A:H2	1.04	1.00
28:21:77:ILE:HB	28:21:79:ARG:HE	1.21	1.00
25:1H:882:G:H22	25:1H:894:C:H42	1.06	0.99
25:14:1658:C:OP1	60:14:3527:HOH:O	1.77	0.99
25:14:1970:A:OP1	60:14:3504:HOH:O	1.80	0.99
25:14:801:G:OP2	60:14:3714:HOH:O	1.81	0.98
26:1J:18:G:H1	26:1J:65:C:H42	1.10	0.98
40:85:92:ARG:HD3	40:85:94:ASN:HB3	1.47	0.97
54:1G:1223:C:H5"	54:1G:1224:G:H5"	1.46	0.97
25:1H:2576:G:OP1	60:1H:3632:HOH:O	1.83	0.97
25:14:2598:A:OP1	60:14:3518:HOH:O	1.81	0.96
53:Q8:50:LEU:O	53:Q8:52:LYS:N	1.97	0.96
25:1H:607:U:H3	25:1H:621:A:H2	1.14	0.96
25:1H:1359:A:N1	25:1H:1372:U:N3	2.14	0.96
25:14:1332:G:N2	25:14:1609:A:O2'	2.00	0.95
54:1G:1298:C:OP2	7:62:114:ARG:NH2	1.99	0.95
7:6E:15:ASP:HB3	7:6E:20:ASP:H	1.32	0.95
25:1H:1780:A:OP1	60:1H:3521:HOH:O	1.84	0.94
25:1H:862:G:OP2	60:1H:3775:HOH:O	1.85	0.94
25:14:274:G:H2'	25:14:275:G:H4'	1.48	0.94
27:19:49:ILE:HD11	27:19:52:ARG:HA	1.49	0.94
25:14:1639:U:OP1	60:14:3469:HOH:O	1.85	0.94
35:78:138:LEU:HD12	35:78:144:GLU:HG3	1.47	0.93
25:1H:1774:C:OP1	60:1H:3622:HOH:O	1.85	0.93
25:1H:2062:A:OP2	60:1H:3647:HOH:O	1.85	0.93
25:14:1664:A:OP2	60:14:3530:HOH:O	1.87	0.93
2:12:75:LYS:HA	2:12:78:GLN:HB2	1.50	0.93
25:1H:1676:A:OP2	60:1H:3573:HOH:O	1.86	0.93
2:1E:111:ARG:HG2	2:1E:111:ARG:HH11	1.31	0.92
26:1J:18:G:N2	26:1J:65:C:N3	2.17	0.92
25:1H:567:A:OP1	60:1H:3504:HOH:O	1.85	0.92
25:14:323:G:HO2'	25:14:1205:U:H3	0.97	0.92
25:14:2056:G:OP2	60:14:3441:HOH:O	1.89	0.91
25:1H:751:A:OP1	60:1H:3710:HOH:O	1.87	0.91
25:14:2135:A:N7	25:14:2156:G:N2	2.18	0.91

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:32:23:GLY:H	4:32:26:CYS:HB2	1.36	0.91
45:D5:110:GLY:HA2	45:D5:144:LEU:H	1.34	0.90
54:1G:1127:G:H22	54:1G:1144:G:H22	1.18	0.90
25:14:1496:A:H8	25:14:1577:C:HO2'	1.00	0.90
25:1H:741:G:OP1	60:1H:3729:HOH:O	1.87	0.90
25:14:2714:G:OP2	60:14:3464:HOH:O	1.89	0.90
25:14:450:G:O6	60:14:3616:HOH:O	1.88	0.90
25:14:1270:C:H5"	25:14:1271:G:H5'	1.52	0.90
25:1H:2053:G:OP2	60:1H:3631:HOH:O	1.90	0.90
25:1H:192:C:N3	60:1H:3536:HOH:O	2.05	0.90
25:14:2357:U:OP1	46:E5:20:ARG:NH1	2.03	0.89
41:95:37:VAL:HG21	41:95:57:VAL:HG12	1.55	0.89
54:1G:1221:G:OP1	54:1G:1321:C:N4	2.03	0.89
25:1H:450:G:OP2	60:1H:3694:HOH:O	1.88	0.89
1:13:509:A:OP2	60:13:1818:HOH:O	1.89	0.89
25:1H:2593:U:O4	60:1H:3561:HOH:O	1.88	0.89
2:1E:185:ILE:HG22	2:1E:199:TYR:HB2	1.52	0.89
25:1H:974(A):C:OP1	60:1H:3910:HOH:O	1.90	0.89
1:13:153:C:H42	1:13:168:G:H1	1.18	0.88
25:1H:574:C:OP2	60:1H:3785:HOH:O	1.91	0.88
25:14:751:A:OP1	60:14:3421:HOH:O	1.90	0.88
25:1H:1614:A:OP1	60:1H:3708:HOH:O	1.90	0.88
25:1H:1265:A:OP2	60:1H:3507:HOH:O	1.91	0.88
25:1H:945:A:OP1	60:1H:3872:HOH:O	1.90	0.88
22:3K:38:MIA:H8	22:3K:38:MIA:H5"	1.54	0.88
3:22:152:ILE:HB	3:22:199:LYS:HB2	1.55	0.88
25:1H:2312:U:H5'	30:41:88:ILE:HD12	1.55	0.88
5:4E:153:LYS:HD3	5:4E:154:GLY:H	1.39	0.88
25:1H:2048:G:N7	60:1H:3815:HOH:O	2.06	0.88
26:1J:38:C:H42	26:1J:44:G:H1	1.19	0.88
25:1H:805:G:OP1	60:1H:3639:HOH:O	1.91	0.88
5:42:50:GLU:HB3	5:42:53:LEU:HD13	1.53	0.88
31:51:4:ILE:O	31:51:6:ARG:NH1	2.07	0.88
25:1H:142:G:H1'	43:F8:37:THR:HG21	1.53	0.87
25:14:2377:A:H4'	38:65:111:GLU:HG2	1.56	0.87
8:7E:41:ARG:NH2	8:7E:123:GLU:OE1	2.08	0.87
25:1H:376:C:OP1	60:1H:3602:HOH:O	1.93	0.87
25:14:1782:C:OP1	60:14:3406:HOH:O	1.92	0.87
25:14:1786:A:OP1	60:14:3490:HOH:O	1.92	0.87
54:1G:1133:G:N2	54:1G:1141:C:O2	2.08	0.87
39:75:64:ARG:HB2	39:75:73:GLU:HG2	1.53	0.86

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:BI:57:ARG:HH11	20:BI:102:GLY:HA2	1.40	0.86
25:1H:617:G:OP1	29:31:40:GLN:NE2	2.08	0.86
1:13:812:C:O2	60:13:1804:HOH:O	1.92	0.86
1:13:1422:G:H5"	34:68:48:PRO:HB3	1.57	0.86
54:1G:559:A:H4'	54:1G:560:U:H5"	1.57	0.86
38:A8:35:ILE:HG22	38:A8:97:ARG:HH21	1.40	0.86
19:AA:41:VAL:HG12	19:AA:43:GLU:H	1.39	0.86
3:22:182:ILE:HG22	3:22:203:PHE:HA	1.58	0.85
1:13:453:A:H4'	16:7I:72:ARG:HB2	1.56	0.85
1:13:1348:U:H2'	1:13:1349:A:H8	1.42	0.85
35:78:47:ASP:OD2	35:78:50:ARG:NH2	2.10	0.85
1:13:186(E):C:N3	1:13:191(B):G:N2	2.24	0.85
1:13:352:C:OP1	60:13:1847:HOH:O	1.93	0.85
25:1H:1782:C:OP1	60:1H:3522:HOH:O	1.94	0.85
28:29:111:ARG:HA	37:55:2:ARG:HH12	1.40	0.85
25:1H:1857:G:O2'	25:1H:1885:A:N6	2.08	0.85
4:3E:84:LYS:H	4:3E:85:LYS:HD3	1.42	0.85
26:1J:80:U:H2'	26:1J:81:G:H21	1.41	0.85
25:1H:2701:C:H3'	25:1H:2702:U:C5'	2.06	0.85
25:14:2499:C:OP2	60:14:3446:HOH:O	1.94	0.85
54:1G:330:C:O2	60:1G:1726:HOH:O	1.94	0.85
25:14:273(D):C:N4	25:14:363(B):G:O6	2.07	0.85
25:14:1022:G:H22	25:14:1142(A):A:H2	1.24	0.85
25:14:958:U:OP2	36:45:14:ARG:NH1	2.07	0.85
1:13:1182:G:H4'	1:13:1183:A:H5'	1.58	0.85
30:49:47:LYS:HD3	30:49:81:LYS:HG3	1.58	0.84
25:1H:2334:G:O6	46:I8:74:ARG:NH2	2.09	0.84
25:1H:907:U:O2'	36:88:101:ARG:NH2	2.11	0.84
25:14:517:C:OP1	51:J5:16:ARG:NH2	2.10	0.84
25:1H:2127:G:H22	25:1H:2162:G:H1'	1.42	0.84
5:4E:8:GLU:OE1	5:4E:63:ARG:NH2	2.11	0.84
25:14:780:G:H21	25:14:783:A:H62	1.22	0.84
44:C5:19:LYS:HG3	44:C5:20:TYR:H	1.41	0.84
1:13:664:G:H22	1:13:741:G:H1	1.24	0.83
25:1H:761:A:N7	60:1H:3828:HOH:O	2.11	0.83
25:1H:1843:C:H5'	27:11:253:GLN:OE1	1.78	0.83
25:1H:1425:G:N7	60:1H:4028:HOH:O	2.10	0.83
9:8E:3:GLN:OE1	9:8E:20:ARG:NH1	2.12	0.83
25:1H:450:G:O6	60:1H:3698:HOH:O	1.94	0.83
12:3A:47:LYS:HG3	12:3A:48:PRO:HD2	1.58	0.83
1:13:766:A:OP2	60:13:1803:HOH:O	1.95	0.83

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
55:3L:24:G:H2'	55:3L:25:G:H8	1.41	0.83
28:21:50:GLY:HA2	28:21:77:ILE:HA	1.59	0.83
25:14:676:A:H8	25:14:2069:G:H21	1.26	0.83
25:14:2624:G:N7	60:14:3605:HOH:O	2.11	0.83
25:14:2448:A:OP2	60:14:3442:HOH:O	1.95	0.83
25:1H:674:G:H1'	29:31:74:ARG:HD3	1.61	0.83
27:11:26:LYS:HE3	27:11:84:TYR:H	1.44	0.83
25:14:2632:A:HO2'	25:14:2811:G:HO2'	1.14	0.83
54:1G:588:G:H1	54:1G:651:C:H42	1.26	0.83
25:1H:1525:G:H2'	25:1H:1526:G:H8	1.43	0.82
25:1H:973:A:OP2	60:1H:3678:HOH:O	1.96	0.82
54:1G:1503:A:O2'	57:4L:13:A:N1	2.13	0.82
25:14:2597:G:O3'	60:14:3517:HOH:O	1.96	0.82
27:11:182:LEU:H	27:11:272:ALA:HB3	1.44	0.82
25:14:1780:A:OP1	60:14:3402:HOH:O	1.97	0.82
38:A8:34:HIS:HB2	38:A8:36:TYR:HE1	1.44	0.82
36:45:81:VAL:O	36:45:82:ARG:NE	2.11	0.82
1:13:504:C:OP1	60:13:1837:HOH:O	1.97	0.82
28:21:78:LEU:HA	28:21:79:ARG:HD2	1.60	0.82
8:7E:106:GLY:HA2	8:7E:122:ARG:HH22	1.44	0.82
25:1H:943:U:OP2	35:78:36:LYS:NZ	2.11	0.82
15:6I:26:GLU:OE2	15:6I:77:ARG:NH1	2.13	0.82
25:14:631:A:OP2	53:M5:47:LYS:NZ	2.11	0.82
25:14:1899:G:N2	25:14:1902:C:H41	1.76	0.82
39:B8:50:ILE:HD11	39:B8:102:ILE:HD11	1.59	0.82
1:13:974:A:OP2	14:5I:41:ARG:NH1	2.11	0.82
46:I8:53:MET:HB2	46:I8:59:LEU:HD23	1.62	0.82
1:13:1160:G:H1	1:13:1177:G:H22	1.24	0.82
48:K8:22:GLU:OE2	48:K8:68:ARG:NH2	2.13	0.82
25:14:1048:A:N6	25:14:1112:G:O2'	2.09	0.81
29:31:46:ARG:HG2	29:31:46:ARG:HH11	1.45	0.81
54:1G:838:G:N2	54:1G:848:C:N3	2.28	0.81
1:13:963:G:N3	10:1I:55:LYS:NZ	2.28	0.81
26:1J:3:C:N3	26:1J:117:G:N2	2.28	0.81
9:82:112:LYS:HA	9:82:119:ALA:HB2	1.60	0.81
5:42:102:ALA:HB1	5:42:106:PRO:HG2	1.62	0.81
33:58:132:ALA:O	33:58:134:ARG:NH2	2.13	0.81
53:Q8:49:VAL:HA	53:Q8:50:LEU:O	1.81	0.81
26:16:12:C:O2	46:I8:74:ARG:NH1	2.13	0.81
35:35:97:PRO:HG3	35:35:112:LEU:HD12	1.63	0.81
25:1H:2502:G:OP2	60:1H:3528:HOH:O	1.97	0.81

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:13:606:G:H1	1:13:631:G:H5"	1.46	0.81
25:14:833:U:O2	35:35:55:ARG:NH1	2.13	0.81
35:78:114:ILE:HD11	35:78:130:PHE:HD2	1.46	0.81
25:14:2393:A:H4'	35:35:62:LEU:H	1.44	0.81
55:1L:61:G:H22	55:1L:72:U:H3	1.24	0.81
25:1H:1676:A:OP2	60:1H:3577:HOH:O	1.98	0.81
25:14:1828:G:OP1	60:14:3497:HOH:O	1.98	0.81
2:1E:178:ARG:NH1	2:1E:196:LEU:O	2.13	0.81
8:7E:10:LEU:HD22	8:7E:83:ILE:HD11	1.61	0.81
54:1G:957:U:O2'	54:1G:959:A:N7	2.13	0.81
25:1H:2168:G:H22	25:1H:2170:A:H62	1.26	0.81
13:4A:66:LEU:HA	13:4A:70:LEU:HB2	1.62	0.81
10:1I:48:THR:HA	10:1I:62:HIS:HB3	1.63	0.81
25:14:1757:U:H3	25:14:1762:A:H2	1.26	0.81
25:1H:2789:C:O2	25:1H:2894:G:N2	2.14	0.81
1:13:1348:U:H3	1:13:1374:A:H2	1.29	0.81
41:D8:24:LYS:HA	41:D8:92:THR:HG23	1.63	0.81
34:25:13:ASN:HD21	34:25:97:ARG:H	1.23	0.80
1:13:186(E):C:H42	1:13:191(B):G:H1	1.30	0.80
27:11:26:LYS:HD2	27:11:83:GLU:HA	1.62	0.80
25:14:1210:A:H5"	25:14:1211:U:H3'	1.63	0.80
25:14:86:C:HO2'	25:14:104:U:HO2'	1.26	0.80
1:13:1125:U:OP2	1:13:1145:C:N4	2.14	0.80
25:1H:946:G:OP2	60:1H:3865:HOH:O	1.97	0.80
44:G8:100:ALA:HB1	44:G8:101:LYS:HB2	1.63	0.80
1:13:438:G:O2'	1:13:494:U:O4	2.00	0.80
54:1G:1368:G:H5'	9:82:112:LYS:HB3	1.62	0.80
13:4I:13:LYS:O	13:4I:44:ARG:NH1	2.14	0.80
25:14:741:G:OP1	60:14:3484:HOH:O	1.99	0.80
25:1H:1187:G:OP2	60:1H:3685:HOH:O	1.98	0.80
25:14:593:G:H4'	53:M5:61:LEU:HD22	1.61	0.80
25:14:453:C:OP1	60:14:3617:HOH:O	1.98	0.80
27:19:242:ARG:H	27:19:242:ARG:HH11	1.27	0.80
25:1H:2820:A:OP1	37:98:2:ARG:NH1	2.14	0.80
25:14:1614:A:OP1	60:14:3419:HOH:O	1.98	0.80
25:14:1899:G:H22	25:14:1902:C:H41	1.27	0.80
25:14:1856:G:N2	25:14:1886:C:N3	2.28	0.80
11:2A:29:ILE:HG22	11:2A:44:SER:HB2	1.62	0.80
25:1H:2056:G:OP2	60:1H:3516:HOH:O	2.00	0.80
25:14:2681:C:H5	25:14:2725:A:H62	1.29	0.80
25:14:957:A:H5'	36:45:76:LYS:HD3	1.62	0.80

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:1G:993:G:O6	54:1G:1045:C:N4	2.14	0.80
25:1H:1899:G:H22	25:1H:1902:C:N4	1.80	0.80
26:1J:4:C:H42	26:1J:116:G:H1	1.29	0.80
25:1H:1997:G:OP2	60:1H:3782:HOH:O	1.98	0.80
22:1K:85:A:H8	25:1H:2583:G:H21	1.29	0.80
34:25:8:LEU:HD13	34:25:82:ASN:HB3	1.61	0.80
8:72:86:ILE:HG12	8:72:135:CYS:HA	1.64	0.80
25:1H:1434:A:H61	25:1H:1558:A:N6	1.79	0.80
25:1H:770:G:OP2	60:1H:3993:HOH:O	2.00	0.80
29:31:185:ASP:HA	29:31:188:ARG:HD3	1.64	0.80
8:72:17:THR:O	8:72:78:GLN:NE2	2.15	0.79
5:42:60:TYR:HB3	5:42:64:ARG:HH21	1.46	0.79
15:6A:82:ILE:HD11	15:6A:88:ARG:HB2	1.61	0.79
1:13:1128:C:H1'	1:13:1146:A:H61	1.46	0.79
25:1H:1022:G:N2	25:1H:1023:U:O4	2.15	0.79
54:1G:768:A:OP2	60:1G:1705:HOH:O	1.99	0.79
40:C8:8:VAL:HG23	40:C8:11:ARG:HH21	1.48	0.79
35:78:50:ARG:HD3	53:Q8:58:ILE:HD11	1.62	0.79
25:14:2415:G:H4'	35:35:67:MET:H	1.46	0.79
54:1G:1507:A:N6	54:1G:1528:U:O4	2.14	0.79
25:14:1776:G:OP2	60:14:3454:HOH:O	2.00	0.79
10:1I:77:PRO:HB2	10:1I:79:ARG:HH12	1.47	0.79
2:1E:178:ARG:HG3	8:7E:72:PRO:HA	1.62	0.79
25:1H:563:G:OP2	60:1H:3534:HOH:O	1.99	0.79
7:6E:62:PHE:HD1	7:6E:124:LEU:HD11	1.48	0.79
33:58:43:THR:HB	33:58:46:VAL:HG12	1.63	0.79
17:8I:18:THR:OG1	17:8I:69:LYS:NZ	2.16	0.79
25:1H:1386:C:H2'	25:1H:1387:C:H6	1.47	0.79
1:13:975:A:H4'	1:13:976:G:H5"	1.65	0.79
25:1H:2701:C:H3'	25:1H:2702:U:H5"	1.63	0.79
25:14:1327:C:OP2	60:14:3558:HOH:O	1.99	0.79
54:1G:1321:C:N4	54:1G:1322:C:H41	1.79	0.79
9:8E:16:ARG:HB2	9:8E:64:THR:HB	1.63	0.79
37:55:97:VAL:HG12	37:55:114:VAL:HG22	1.65	0.79
54:1G:683:G:N2	54:1G:707:C:O2	2.16	0.79
25:14:84:A:N6	25:14:102:G:O2'	2.12	0.79
25:1H:913:U:O4	60:1H:3766:HOH:O	2.00	0.79
25:1H:1858:G:H2'	25:1H:1883:G:H22	1.48	0.79
54:1G:1056:U:H5'	3:22:163:ALA:HB2	1.64	0.78
1:13:838:G:OP2	1:13:842:C:N4	2.16	0.78
20:BI:69:GLY:O	20:BI:73:HIS:NE2	2.17	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:12:47:THR:HG23	2:12:202:PRO:HG2	1.64	0.78
25:1H:446:G:OP2	60:1H:3570:HOH:O	2.01	0.78
54:1G:411:A:H62	54:1G:413:G:H21	1.29	0.78
11:2A:41:THR:OG1	11:2A:42:TRP:N	2.13	0.78
16:7I:74:LEU:HA	16:7I:77:ALA:HB2	1.63	0.78
40:85:27:LEU:HD22	40:85:31:SER:HB3	1.63	0.78
2:12:91:PRO:HG3	2:12:154:LEU:HB2	1.63	0.78
38:A8:88:ASP:OD1	38:A8:90:GLY:N	2.17	0.78
39:B8:108:ARG:HA	39:B8:111:ARG:HE	1.49	0.78
25:14:1856:G:H1	25:14:1886:C:H42	1.31	0.78
1:13:74:C:H42	1:13:96:G:H1	1.27	0.78
25:1H:1381:G:N7	60:1H:3790:HOH:O	2.15	0.78
35:78:59:LEU:HD22	35:78:60:MET:H	1.48	0.78
32:61:7:GLU:HA	32:61:15:VAL:HG22	1.64	0.78
25:1H:2468:G:H5"	36:88:120:ILE:HD12	1.66	0.78
35:78:56:SER:HB2	35:78:61:ARG:HD2	1.63	0.78
25:14:2139:C:N4	25:14:2152:G:O6	2.16	0.78
1:13:158:G:N1	1:13:163:C:O2	2.17	0.78
30:41:112:PRO:HB3	50:M8:37:SER:H	1.48	0.78
13:4I:23:TYR:HD1	13:4I:67:GLU:HA	1.48	0.78
56:2L:50:G:H1	56:2L:66:C:H42	1.31	0.78
25:1H:2867:G:OP2	39:B8:119:LYS:NZ	2.12	0.78
25:1H:409:C:OP1	60:1H:3597:HOH:O	2.01	0.78
25:14:279:C:H42	25:14:361:G:H1	1.30	0.78
54:1G:533:A:OP1	60:1G:1739:HOH:O	2.02	0.78
25:1H:944:G:O3'	60:1H:3866:HOH:O	2.01	0.78
25:1H:1171:G:N2	25:1H:1178:C:N3	2.31	0.78
31:51:23:ARG:HH12	31:51:25:LYS:HE3	1.48	0.78
29:31:66:PRO:O	29:31:67:GLN:HB3	1.82	0.78
54:1G:1321:C:H41	54:1G:1322:C:H41	1.30	0.78
25:1H:993:G:OP1	40:C8:50:ARG:NH2	2.17	0.78
25:1H:459:U:H5"	52:P8:40:TRP:CD2	2.19	0.78
25:14:1359:A:H62	25:14:1372:U:H3	1.31	0.78
26:1J:19:G:N2	26:1J:64:C:O2	2.15	0.77
25:14:567:A:OP1	60:14:3565:HOH:O	2.02	0.77
25:14:2379:G:O2'	38:65:17:ARG:NH1	2.16	0.77
25:14:1899:G:H22	25:14:1902:C:N4	1.81	0.77
43:B5:57:LEU:HD21	43:B5:78:LYS:HD2	1.66	0.77
5:42:144:THR:HG23	5:42:147:ASP:H	1.49	0.77
35:78:2:LYS:HG2	35:78:4:SER:H	1.47	0.77
25:1H:1782:C:H3'	60:1H:3522:HOH:O	1.84	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:1G:377:G:H1	54:1G:386:C:H42	1.29	0.77
4:32:26:CYS:HA	4:32:31:CYS:HA	1.64	0.77
54:1G:1129:C:N4	54:1G:1142:G:O6	2.15	0.77
25:14:1019:U:H2'	25:14:1020:A:C8	2.19	0.77
29:31:185:ASP:OD1	29:31:188:ARG:NH1	2.18	0.77
53:Q8:30:ARG:HG3	53:Q8:30:ARG:HH11	1.48	0.77
25:1H:1243:G:O2'	35:78:7:ARG:NH2	2.17	0.77
26:16:7:G:H4'	38:A8:29:PHE:CD2	2.20	0.77
25:1H:1900:A:H5'	25:1H:1900:A:H8	1.48	0.77
25:14:2002:G:N7	60:14:3760:HOH:O	2.18	0.77
54:1G:976:G:N2	54:1G:1362(A):C:OP2	2.17	0.77
4:32:15:GLU:OE1	4:32:59:ARG:NH2	2.16	0.77
54:1G:458:C:N3	54:1G:474:G:N2	2.33	0.77
1:13:507:C:OP2	60:13:1815:HOH:O	2.02	0.77
45:D5:60:GLU:HA	45:D5:67:LEU:H	1.49	0.77
32:61:3:VAL:HG12	32:61:38:LEU:HA	1.66	0.77
25:14:2652:C:H42	25:14:2668:G:H1	1.33	0.77
25:14:2035:G:OP1	60:14:3597:HOH:O	2.02	0.77
25:14:654(E):C:H42	25:14:654(P):G:H1	1.33	0.77
32:61:110:ASP:HB2	32:61:112:LYS:HG2	1.66	0.77
54:1G:452:A:N6	54:1G:480:U:O2	2.17	0.77
3:22:152:ILE:HG12	3:22:167:TRP:HB2	1.66	0.77
25:1H:2588:G:OP2	60:1H:3555:HOH:O	2.02	0.77
31:51:83:TYR:HB3	31:51:135:GLY:H	1.49	0.77
25:14:1403:C:OP1	25:14:1522:G:N2	2.13	0.77
25:1H:1026:U:H1'	25:1H:1027:A:O5'	1.84	0.77
33:58:96:GLU:C	33:58:98:VAL:H	1.88	0.77
25:1H:1509:C:H2'	25:1H:1511:A:C8	2.20	0.77
25:1H:2844:G:O6	60:1H:3844:HOH:O	2.03	0.77
39:75:54:ARG:HA	39:75:59:THR:HB	1.66	0.77
30:41:72:ARG:HH21	30:41:87:PRO:HG3	1.48	0.77
25:14:1141:U:OP2	33:15:63:THR:OG1	2.02	0.77
26:1J:40:U:O2	26:1J:45:A:N6	2.18	0.76
25:1H:2502:G:OP2	60:1H:3529:HOH:O	2.03	0.76
40:C8:92:ARG:NE	40:C8:96:ALA:H	1.83	0.76
36:88:72:LYS:HB3	36:88:94:VAL:HG23	1.68	0.76
25:1H:543:C:H42	25:1H:550:G:H1	1.30	0.76
25:1H:287:C:H2'	25:1H:288:C:H6	1.50	0.76
25:1H:1410:G:O6	25:1H:1592:C:N4	2.14	0.76
31:51:10:PRO:HB2	31:51:50:VAL:HG13	1.66	0.76
55:3L:14:A:H3'	55:3L:15:G:H5"	1.67	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:14:531:C:OP1	25:14:561:G:N2	2.18	0.76
25:1H:1778:U:H2'	25:1H:1784:A:N6	2.00	0.76
29:39:167:ALA:HB1	29:39:173:VAL:HG11	1.67	0.76
54:1G:749:C:H2'	54:1G:750:G:H8	1.50	0.76
47:F5:92:LYS:O	47:F5:94:LEU:N	2.18	0.76
54:1G:971:G:N2	54:1G:1363:A:OP2	2.19	0.76
1:13:875:C:O2'	8:7E:14:ARG:NH1	2.18	0.76
28:29:9:VAL:HG21	28:29:25:VAL:HB	1.67	0.76
25:14:622:G:OP2	35:35:108:LYS:NZ	2.14	0.76
25:14:2316:C:O2'	30:49:128:ARG:NH1	2.17	0.76
54:1G:1502:A:H2	54:1G:1505:G:H1	1.30	0.76
25:14:2074:U:OP1	60:14:3410:HOH:O	2.02	0.76
5:42:122:GLU:O	5:42:126:ARG:NH1	2.19	0.76
1:13:963:G:H1	1:13:972:C:H42	1.33	0.76
54:1G:922:G:H4'	5:42:20:GLN:HA	1.68	0.76
28:29:171:GLU:OE2	28:29:185:LYS:NZ	2.18	0.76
1:13:272:C:H2'	1:13:273:A:H8	1.48	0.76
25:14:1614:A:OP1	60:14:3422:HOH:O	2.02	0.76
25:14:1416:G:H1	25:14:1582:C:H42	1.34	0.76
25:1H:1783:A:OP2	60:1H:3522:HOH:O	2.02	0.76
25:14:1780:A:OP1	60:14:3403:HOH:O	2.04	0.76
22:1K:12:C:O2	22:1K:25:G:N2	2.18	0.76
2:1E:189:ASP:HB2	2:1E:205:ASP:HB3	1.68	0.76
25:1H:2452:C:OP1	60:1H:4008:HOH:O	2.03	0.76
25:1H:2635:C:H5"	28:21:79:ARG:HD3	1.68	0.76
54:1G:571:U:O4	54:1G:864:A:N6	2.19	0.76
25:14:1689:A:H62	25:14:1698:A:H2	1.34	0.76
6:5E:36:ARG:NH2	6:5E:38:GLU:OE2	2.19	0.76
9:82:28:VAL:HG22	9:82:63:ILE:HB	1.68	0.75
25:1H:800:A:OP1	60:1H:3537:HOH:O	2.03	0.75
25:14:1485:G:H1	25:14:1504:C:H42	1.34	0.75
25:1H:732:C:H3'	60:1H:3827:HOH:O	1.86	0.75
25:14:1676:A:OP2	60:14:3462:HOH:O	2.05	0.75
18:9I:47:THR:HA	18:9I:83:GLU:HB2	1.68	0.75
19:AA:50:ALA:HB1	19:AA:57:HIS:HB3	1.69	0.75
31:59:66:GLY:O	31:59:70:THR:OG1	2.04	0.75
25:14:617:G:OP1	29:39:40:GLN:NE2	2.19	0.75
4:32:157:LEU:O	4:32:161:ASN:ND2	2.19	0.75
25:14:1639:U:OP2	60:14:3431:HOH:O	2.03	0.75
25:1H:2592:G:OP1	60:1H:3763:HOH:O	2.05	0.75
25:14:2499:C:N3	60:14:3592:HOH:O	2.19	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:D5:10:ARG:HB3	45:D5:36:LYS:HG3	1.68	0.75
22:3K:24:G:H2'	22:3K:25:G:H8	1.49	0.75
25:1H:1210:A:H8	25:1H:1210:A:H5'	1.52	0.75
23:2K:9:G:N2	23:2K:47:7MG:OP2	2.20	0.75
33:58:34:LEU:HD21	33:58:120:LEU:HB2	1.67	0.75
25:14:587:C:OP2	35:35:21:ARG:NH2	2.19	0.75
25:14:2324:C:H5"	25:14:2325:G:H5'	1.69	0.75
25:1H:71:A:H2	43:F8:31:HIS:HE2	1.32	0.75
25:1H:155:C:H42	25:1H:171:G:H1	1.34	0.75
1:13:953:G:N7	13:4I:104:ARG:NH2	2.34	0.75
54:1G:578:C:OP1	60:1G:1717:HOH:O	2.05	0.75
25:1H:2154:G:HO2'	25:1H:2155:G:H8	1.35	0.75
32:69:69:LYS:NZ	32:69:73:GLU:OE2	2.19	0.75
19:AI:9:VAL:HG21	50:M8:63:TYR:HB2	1.66	0.75
4:32:60:GLU:OE2	4:32:199:ASN:N	2.20	0.75
55:3L:61:G:H1	55:3L:71:C:H42	1.34	0.75
31:59:159:GLU:O	31:59:163:TYR:OH	2.04	0.75
25:1H:2099:U:H3	25:1H:2190:G:H1	1.33	0.75
31:51:54:ARG:HD3	31:51:65:HIS:ND1	2.02	0.75
25:1H:2502:G:N7	60:1H:3651:HOH:O	2.19	0.75
54:1G:827:U:H3	54:1G:872:A:H62	1.32	0.75
25:14:67:U:H3	25:14:74:A:H2	1.32	0.75
19:AI:5:LEU:HD13	19:AI:10:PHE:H	1.52	0.75
35:78:115:LEU:HA	35:78:134:ALA:HB2	1.68	0.75
1:13:1321:C:H3'	1:13:1322:C:H5"	1.69	0.75
38:65:106:ARG:O	38:65:106:ARG:NH1	2.20	0.75
1:13:1026:G:O6	1:13:1035:A:N6	2.20	0.75
8:7E:4:ASP:OD2	8:7E:85:ARG:NH1	2.20	0.75
41:D8:44:LYS:O	41:D8:46:VAL:N	2.20	0.75
2:1E:67:THR:HG21	2:1E:155:LEU:HG	1.69	0.74
27:11:60:ARG:HD3	27:11:86:PRO:HB2	1.69	0.74
15:6A:87:ILE:HG22	15:6A:88:ARG:H	1.50	0.74
13:4I:108:ARG:HH11	13:4I:108:ARG:HG3	1.51	0.74
25:1H:2001:A:H2'	25:1H:2002:G:C8	2.22	0.74
25:14:399:G:OP2	60:14:3690:HOH:O	2.05	0.74
2:12:131:PRO:HG2	2:12:134:GLU:HB2	1.67	0.74
47:J8:86:SER:O	47:J8:88:LYS:N	2.20	0.74
9:8E:13:ALA:HB2	9:8E:68:GLY:HA3	1.68	0.74
35:78:95:VAL:HA	35:78:99:LEU:HD23	1.69	0.74
25:1H:3:U:O4	25:1H:2900:A:N6	2.18	0.74
25:1H:884:C:O2	25:1H:892:G:N2	2.20	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:12:77:ALA:HB2	2:12:211:ILE:HD13	1.69	0.74
13:4I:39:ILE:HD12	13:4I:56:LEU:HD23	1.69	0.74
47:J8:49:VAL:HG11	47:J8:70:VAL:HG11	1.69	0.74
54:1G:888:G:HO2'	54:1G:1488:G:HO2'	1.30	0.74
3:22:50:ALA:HB1	3:22:76:VAL:HG12	1.68	0.74
25:1H:1113:U:H5'	31:51:2:SER:HB2	1.69	0.74
45:H8:163:LEU:HB3	45:H8:165:VAL:H	1.52	0.74
1:13:157:G:H2'	1:13:158:G:H8	1.51	0.74
5:42:43:LEU:HD22	5:42:136:MET:HG3	1.69	0.74
1:13:1256:A:OP2	3:2E:26:LYS:NZ	2.20	0.74
54:1G:975:A:H4'	54:1G:976:G:H5"	1.69	0.74
25:14:2239:G:OP2	60:14:3407:HOH:O	2.05	0.74
44:C5:99:CYS:SG	44:C5:100:ALA:N	2.61	0.74
2:1E:236:TYR:HA	2:1E:239:VAL:HG21	1.68	0.74
54:1G:619:U:O2	4:32:135:LEU:HD22	1.87	0.74
43:B5:8:ILE:O	48:G5:36:ARG:NH2	2.20	0.74
22:1K:3:U:O2'	22:1K:4:G:O5'	2.03	0.74
25:14:761:A:N7	60:14:3415:HOH:O	2.21	0.74
4:3E:98:GLU:O	4:3E:103:ASN:ND2	2.20	0.74
25:1H:49:A:N7	25:1H:120:U:H5	1.86	0.74
20:BI:35:THR:HA	20:BI:38:LYS:HD3	1.70	0.74
25:14:2415:G:H4'	35:35:67:MET:N	2.03	0.74
25:14:1417:C:OP2	60:14:3682:HOH:O	2.05	0.74
25:14:2138:C:O2	25:14:2154:G:N2	2.21	0.74
1:13:1305:G:N2	1:13:1331:G:H2'	2.02	0.74
25:1H:739:G:OP1	60:1H:3739:HOH:O	2.04	0.74
25:14:1312:U:H3'	43:B5:63:LYS:HE3	1.70	0.74
33:58:47:ALA:HB2	33:58:112:LEU:HD11	1.70	0.74
35:35:47:ASP:OD1	35:35:50:ARG:NH1	2.21	0.74
34:68:104:ARG:HD3	39:B8:36:GLU:HG2	1.68	0.73
25:14:1678:G:H22	25:14:1989:G:H22	1.32	0.73
36:45:25:ASP:HB3	36:45:102:VAL:HB	1.70	0.73
25:14:1225:C:O3'	41:95:85:LYS:HA	1.87	0.73
40:C8:92:ARG:HH21	40:C8:98:LEU:HB2	1.52	0.73
25:14:2777:G:H5"	25:14:2778:A:H5'	1.71	0.73
25:14:2331:G:O3'	46:E5:43:THR:HG22	1.87	0.73
54:1G:591:U:OP2	8:72:30:ARG:NH1	2.21	0.73
25:1H:1495:A:OP2	60:1H:4000:HOH:O	2.03	0.73
28:29:55:ASN:O	28:29:57:LYS:NZ	2.20	0.73
54:1G:353:A:H8	54:1G:353:A:H5'	1.54	0.73
25:14:2498:C:OP2	60:14:3442:HOH:O	2.06	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:G8:87:LYS:H	44:G8:94:LYS:HG2	1.52	0.73
25:14:571:A:OP2	60:14:3579:HOH:O	2.04	0.73
25:1H:2695:C:H2'	25:1H:2696:U:H6	1.52	0.73
25:1H:1486:A:H2'	25:1H:1487:G:H8	1.53	0.73
54:1G:1258:G:H2'	54:1G:1259:C:H6	1.52	0.73
44:G8:76:CYS:HB3	44:G8:79:CYS:HB2	1.71	0.73
25:1H:1899:G:H22	25:1H:1902:C:H41	1.35	0.73
25:1H:2656:U:H3	25:1H:2665:A:H2	1.34	0.73
30:41:131:TYR:O	30:41:159:VAL:HG22	1.89	0.73
1:13:1077:G:N2	1:13:1080:A:OP2	2.22	0.73
25:14:2294:C:P	38:65:89:ARG:HH22	2.11	0.73
53:Q8:40:GLU:HG3	53:Q8:41:ILE:HD13	1.71	0.73
29:39:160:ASN:HB3	29:39:163:VAL:HB	1.69	0.73
19:AA:20:LEU:O	19:AA:23:ASN:ND2	2.19	0.73
28:21:78:LEU:HD12	28:21:79:ARG:NH2	2.04	0.73
25:1H:1510:A:O2'	25:1H:1512:G:N7	2.21	0.73
5:42:11:ILE:HD12	5:42:31:LEU:HD12	1.69	0.73
1:13:67:C:H2'	1:13:68:G:H8	1.53	0.73
25:1H:363(B):G:H2'	25:1H:363(C):G:H8	1.52	0.73
25:14:2425:A:H4'	25:14:2426:A:H5"	1.70	0.73
32:61:29:TYR:HD2	32:61:30:LEU:HD23	1.51	0.73
1:13:677:U:H3	1:13:713:G:H22	1.35	0.73
25:1H:1899:G:N2	25:1H:1902:C:H41	1.87	0.73
40:85:28:ARG:NH1	40:85:38:THR:OG1	2.20	0.73
25:14:2114:A:N6	25:14:2119:A:N7	2.37	0.73
1:13:601:C:H2'	1:13:602:A:H8	1.51	0.73
25:1H:676:A:H8	25:1H:2069:G:H21	1.36	0.73
53:Q8:9:GLY:HA2	53:Q8:12:LYS:HB2	1.70	0.73
25:1H:751:A:OP1	60:1H:3709:HOH:O	2.05	0.73
25:1H:780:G:H21	25:1H:783:A:H62	1.34	0.73
33:15:104:LYS:HA	33:15:107:LEU:HD12	1.70	0.73
25:1H:2035:G:OP1	60:1H:3616:HOH:O	2.06	0.73
25:1H:2165:G:N7	25:1H:2166:G:N2	2.37	0.73
35:78:96:THR:HG22	35:78:97:PRO:HD2	1.70	0.73
1:13:1009:G:N1	1:13:1020:U:O2	2.19	0.73
1:13:1502:A:H2	1:13:1505:G:H1	1.35	0.73
25:1H:848:G:H2'	25:1H:849:A:C8	2.22	0.73
25:1H:2503:A:OP1	60:1H:3899:HOH:O	2.06	0.73
1:13:36:C:OP1	12:3I:123:LYS:NZ	2.18	0.73
25:1H:2271:G:N7	60:1H:3946:HOH:O	2.20	0.73
25:1H:453:C:OP1	60:1H:3698:HOH:O	2.07	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:1H:1542:G:OP2	25:1H:1543:A:O2'	2.06	0.73
2:12:137:ARG:HH22	2:12:141:GLU:HB2	1.54	0.73
25:14:945:A:OP1	60:14:3650:HOH:O	2.07	0.73
31:59:6:ARG:NH1	31:59:62:LYS:O	2.17	0.73
25:14:2420:C:H41	53:M5:31:HIS:HB3	1.54	0.72
48:G5:47:ASN:O	48:G5:49:LYS:N	2.22	0.72
1:13:591:U:H2'	1:13:592:G:H8	1.54	0.72
25:1H:817:C:OP2	60:1H:3687:HOH:O	2.07	0.72
4:3E:9:CYS:HB3	4:3E:32:ALA:HB2	1.71	0.72
11:2A:57:THR:HG22	11:2A:59:TYR:H	1.54	0.72
1:13:1452:C:O2'	1:13:1453:G:OP2	2.05	0.72
25:14:486:C:O2'	42:A5:60:ASN:OD1	2.07	0.72
4:32:8:VAL:O	4:32:11:LEU:N	2.22	0.72
14:5I:24:CYS:SG	14:5I:40:CYS:HB3	2.28	0.72
25:1H:330:A:HO2'	25:1H:331:A:H8	1.35	0.72
7:6E:133:GLY:HA2	7:6E:136:LYS:HG3	1.70	0.72
25:14:2392:A:H2	25:14:2424:C:H42	1.38	0.72
25:1H:1557:C:OP2	25:1H:1558:A:O2'	2.06	0.72
33:58:96:GLU:O	33:58:98:VAL:N	2.21	0.72
25:1H:639:U:O2'	25:1H:640:C:H5'	1.89	0.72
25:1H:416:C:N4	25:1H:2407:G:O6	2.20	0.72
25:1H:1664:A:OP2	60:1H:3839:HOH:O	2.07	0.72
25:1H:1313:U:OP1	60:1H:3725:HOH:O	2.07	0.72
1:13:1194:U:H2'	1:13:1195:C:C6	2.24	0.72
25:1H:1021:A:H62	25:1H:1141:U:H3	1.38	0.72
25:1H:2392:A:OP2	53:Q8:30:ARG:NH2	2.20	0.72
25:1H:583:G:N7	60:1H:3605:HOH:O	2.22	0.72
54:1G:539:A:OP2	12:3A:115:LYS:NZ	2.21	0.72
1:13:330:C:O2	60:13:1848:HOH:O	2.06	0.72
31:51:77:LYS:HE2	31:51:138:LYS:HD2	1.69	0.72
25:1H:2577:A:OP1	60:1H:3632:HOH:O	2.07	0.72
37:98:2:ARG:HA	37:98:5:LYS:HE3	1.72	0.72
6:5E:82:ARG:HG3	6:5E:83:ASP:HA	1.69	0.72
54:1G:631:G:O2'	54:1G:632:A:O4'	2.08	0.72
38:A8:62:LYS:HA	38:A8:65:VAL:HB	1.72	0.72
35:78:75:ILE:HD13	35:78:75:ILE:H	1.53	0.72
53:Q8:9:GLY:H	53:Q8:12:LYS:H	1.38	0.72
29:39:101:LEU:O	29:39:106:ARG:NH1	2.23	0.72
54:1G:920:U:H2'	54:1G:921:U:C6	2.24	0.72
11:2A:22:HIS:HB3	11:2A:29:ILE:HG12	1.71	0.72
5:42:101:ILE:HD11	5:42:119:LEU:HD23	1.71	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:1H:801:G:OP2	60:1H:3906:HOH:O	2.08	0.72
25:1H:270(I):G:H1	25:1H:270(Q):C:H42	1.36	0.72
40:C8:69:CYS:HG	40:C8:79:PHE:HD2	1.38	0.72
25:14:2404:C:O3'	35:35:77:ARG:NH2	2.22	0.72
22:3K:17:OMG:N2	22:3K:67:A:OP2	2.22	0.72
25:14:990:A:H5'	25:14:990:A:H8	1.55	0.72
39:75:112:ARG:HD2	39:75:113:LYS:HD2	1.72	0.72
8:7E:95:VAL:HG12	8:7E:99:GLU:HB2	1.72	0.72
25:1H:2308:G:N1	25:1H:2311:A:H2	1.84	0.71
54:1G:458:C:H2'	54:1G:464:G:H8	1.53	0.71
44:G8:87:LYS:N	44:G8:94:LYS:HG2	2.05	0.71
55:3L:61:G:N2	55:3L:71:C:N3	2.31	0.71
32:61:144:VAL:HG13	32:61:145:VAL:HG22	1.70	0.71
39:B8:24:PRO:HD3	39:B8:52:ILE:HD12	1.71	0.71
1:13:160:A:H1'	1:13:344:A:C8	2.24	0.71
2:12:18:GLY:O	2:12:204:ASN:ND2	2.22	0.71
56:2L:24:C:H2'	56:2L:25:U:H6	1.55	0.71
25:14:1364:G:OP2	47:F5:2:SER:N	2.23	0.71
32:61:73:GLU:HG3	32:61:136:VAL:HG23	1.72	0.71
25:14:1019:U:H2'	25:14:1020:A:H8	1.54	0.71
54:1G:673:G:H2'	54:1G:674:G:C8	2.25	0.71
25:1H:1782:C:OP1	60:1H:3523:HOH:O	2.08	0.71
25:1H:945:A:OP2	60:1H:3863:HOH:O	2.06	0.71
2:12:42:ILE:HD11	2:12:202:PRO:HB2	1.72	0.71
25:14:1013:C:H42	25:14:1149:G:H1	1.36	0.71
25:14:2393:A:H5'	35:35:62:LEU:HD13	1.72	0.71
27:19:242:ARG:O	60:19:307:HOH:O	2.06	0.71
35:35:101:VAL:HA	35:35:105:LEU:O	1.90	0.71
25:1H:1728:G:H3'	25:1H:1729:A:H5"	1.72	0.71
25:14:141:A:H8	25:14:1595:G:H21	1.38	0.71
25:14:1019:U:H3	25:14:1142(A):A:H62	1.36	0.71
25:14:2074:U:OP1	60:14:3408:HOH:O	2.07	0.71
3:22:114:PRO:O	3:22:118:GLN:NE2	2.23	0.71
13:4A:94:ARG:HH22	19:AA:78:ARG:HH21	1.38	0.71
33:58:58:ASP:OD1	33:58:58:ASP:N	2.13	0.71
26:1J:66:A:N6	26:1J:108:C:OP2	2.24	0.71
45:H8:165:VAL:HB	45:H8:167:PRO:HD3	1.70	0.71
39:75:24:PRO:HD3	39:75:52:ILE:HD12	1.73	0.71
25:1H:2123:G:H22	25:1H:2175:C:H42	1.38	0.71
27:11:108:PRO:HG3	27:11:143:HIS:CE1	2.26	0.71
14:5I:3:ARG:HD3	14:5I:6:LEU:HD12	1.72	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:13:272:C:H2'	1:13:273:A:C8	2.26	0.71
1:13:1368:G:H5"	9:8E:112:LYS:HB3	1.73	0.71
25:1H:1063:G:N2	25:1H:1076:C:O2	2.23	0.71
25:14:1378:A:O2'	25:14:1380:G:N7	2.19	0.71
25:1H:1405:U:H2'	25:1H:1406:U:C6	2.25	0.71
25:14:900:A:H3'	25:14:901:A:H8	1.55	0.71
4:32:60:GLU:HG2	4:32:202:LEU:HB2	1.72	0.71
22:1K:47:U:H3	22:1K:53:A:H61	1.37	0.71
54:1G:1311:G:N2	54:1G:1326:C:O2	2.20	0.71
51:J5:49:CYS:SG	51:J5:50:GLY:N	2.63	0.71
4:32:111:ALA:HB1	4:32:116:GLN:HG2	1.72	0.71
28:21:36:ARG:NH2	28:21:88:GLY:O	2.23	0.71
12:3I:60:LEU:HB2	12:3I:64:TYR:HB2	1.72	0.71
33:58:15:LEU:HB2	33:58:134:ARG:HB3	1.73	0.70
50:M8:37:SER:OG	50:M8:42:PHE:O	2.08	0.70
2:12:208:ILE:HA	2:12:211:ILE:HD12	1.73	0.70
25:14:1298:C:OP2	60:14:3434:HOH:O	2.08	0.70
9:8E:121:ARG:NH1	9:8E:122:ALA:O	2.24	0.70
23:2K:54:G:H2'	23:2K:55:5MU:H6	1.56	0.70
25:14:1639:U:OP2	60:14:3432:HOH:O	2.09	0.70
9:8E:112:LYS:HA	9:8E:119:ALA:HB2	1.73	0.70
25:14:1839:G:OP2	60:14:3700:HOH:O	2.08	0.70
25:14:882:G:N2	25:14:894:C:N3	2.34	0.70
18:9I:53:ARG:HA	18:9I:56:THR:HG23	1.73	0.70
2:12:8:LYS:HB2	2:12:217:ARG:HH21	1.56	0.70
54:1G:803:G:OP1	60:1G:1710:HOH:O	2.08	0.70
25:1H:1479:G:N7	25:1H:1510:A:N6	2.39	0.70
47:F5:92:LYS:C	47:F5:94:LEU:H	1.95	0.70
29:39:40:GLN:HE22	29:39:182:ASN:HB2	1.55	0.70
32:69:130:TYR:HB3	32:69:136:VAL:HG13	1.72	0.70
28:29:55:ASN:O	28:29:57:LYS:N	2.24	0.70
37:55:33:ARG:HG3	37:55:115:GLU:HG2	1.73	0.70
30:41:25:TYR:CD2	30:41:31:VAL:HG12	2.26	0.70
25:14:1022:G:O2'	25:14:1023:U:OP2	2.07	0.70
25:1H:900:A:H3'	25:1H:901:A:H8	1.54	0.70
42:E8:88:ARG:HB3	42:E8:92:ARG:HB3	1.72	0.70
25:1H:1800:C:OP2	27:11:183:ARG:NH2	2.24	0.70
54:1G:1157:A:N6	54:1G:1178:G:H21	1.88	0.70
43:B5:32:PRO:HA	43:B5:77:LYS:HB2	1.73	0.70
54:1G:1127:G:H1	54:1G:1144:G:H1	1.38	0.70
25:1H:452:G:OP2	60:1H:3692:HOH:O	2.08	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:62:113:GLU:HB2	7:62:119:ARG:HG2	1.73	0.70
54:1G:750:G:N3	15:6A:23:GLY:HA3	2.07	0.70
25:1H:357:A:H2'	25:1H:358:U:H6	1.57	0.70
38:A8:26:LEU:HD12	38:A8:39:ILE:HD11	1.72	0.70
54:1G:1239:A:H4'	54:1G:1240:U:H5"	1.73	0.70
27:11:26:LYS:NZ	27:11:84:TYR:HB3	2.07	0.70
38:65:3:ARG:HH21	38:65:4:LEU:HD12	1.56	0.70
1:13:1497:G:H2'	1:13:1498:U:H5'	1.72	0.70
25:14:61:G:OP2	48:G5:54:LYS:NZ	2.24	0.70
54:1G:516:U:O4	60:1G:1739:HOH:O	2.09	0.70
25:1H:2655:G:O2'	25:1H:2664:G:O6	2.09	0.70
33:15:136:GLU:O	33:15:137:LYS:NZ	2.23	0.70
54:1G:1227:A:OP1	19:AA:80:TYR:OH	2.10	0.70
2:1E:63:MET:HB3	2:1E:225:ALA:HB1	1.74	0.70
25:1H:2439:A:O2'	25:1H:2440:C:OP2	2.10	0.70
25:1H:1828:G:OP1	60:1H:3742:HOH:O	2.10	0.70
46:I8:38:VAL:HG12	46:I8:40:GLN:HG2	1.72	0.70
10:1A:34:VAL:HG22	10:1A:74:ILE:HG22	1.73	0.70
55:3L:2:G:N2	55:3L:81:C:O2	2.24	0.70
28:29:4:ILE:HD11	28:29:28:ALA:HB1	1.74	0.70
54:1G:352:C:OP2	60:1G:1727:HOH:O	2.09	0.70
25:1H:945:A:OP1	60:1H:3869:HOH:O	2.10	0.70
1:13:157:G:H1	1:13:164:U:H3	1.40	0.70
47:J8:85:LEU:N	47:J8:86:SER:HB2	2.07	0.70
51:J5:41:PRO:O	51:J5:44:THR:OG1	2.08	0.70
40:85:88:ILE:HG22	41:95:49:THR:HA	1.74	0.70
1:13:437:U:H5'	4:3E:155:LEU:HD11	1.73	0.70
2:1E:21:ARG:HB2	2:1E:39:ILE:HA	1.74	0.70
28:29:8:LYS:HG2	28:29:192:ASN:HA	1.74	0.70
25:14:1934:C:N4	25:14:1964:G:O6	2.19	0.69
1:13:1062:U:H2'	1:13:1063:C:C6	2.27	0.69
42:A5:65:LEU:HD13	42:A5:68:ARG:HD3	1.74	0.69
25:1H:2592:G:OP1	60:1H:3759:HOH:O	2.10	0.69
25:1H:1828:G:OP1	60:1H:3745:HOH:O	2.10	0.69
4:32:49:ARG:HH21	4:32:50:ARG:HG3	1.57	0.69
25:14:2787:C:H1'	28:29:62:PRO:HB3	1.73	0.69
2:1E:115:LEU:HD13	2:1E:145:LEU:HB3	1.73	0.69
1:13:1510:U:H2'	1:13:1511:G:C8	2.27	0.69
7:62:15:ASP:OD1	7:62:44:TYR:OH	2.10	0.69
25:14:987:G:O2'	25:14:1000:A:N3	2.25	0.69
30:41:35:GLU:HG3	30:41:36:LYS:HB2	1.74	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:1G:1288:A:O3'	21:1B:10:ARG:NH2	2.25	0.69
54:1G:564:C:O2'	8:72:91:ARG:NH2	2.21	0.69
45:D5:53:ILE:HG22	45:D5:71:VAL:HG13	1.74	0.69
1:13:1435:G:H2'	1:13:1436:U:C6	2.27	0.69
5:42:145:LYS:O	5:42:149:GLU:N	2.24	0.69
27:11:85:ASP:HB2	27:11:92:ILE:HG12	1.73	0.69
25:14:1048:A:H2	25:14:1112:G:H21	1.40	0.69
36:45:21:THR:HG22	36:45:23:GLY:HA3	1.74	0.69
35:35:30:THR:HG21	35:35:35:HIS:N	2.07	0.69
54:1G:963:G:H21	10:1A:55:LYS:NZ	1.90	0.69
2:12:178:ARG:NH1	2:12:196:LEU:O	2.22	0.69
2:12:103:THR:HG23	2:12:176:GLU:HB3	1.74	0.69
35:78:60:MET:HA	53:Q8:13:ARG:NH1	2.08	0.69
25:14:1252:G:N1	40:85:37:GLU:OE2	2.25	0.69
35:35:14:LYS:O	35:35:16:ARG:N	2.25	0.69
25:1H:2495:G:H4'	36:88:81:VAL:HB	1.74	0.69
26:16:44:G:H1'	26:16:47:C:H42	1.56	0.69
22:1K:27:A:N6	22:1K:45:C:O2	2.20	0.69
29:39:7:TYR:HE2	29:39:10:PRO:HG3	1.57	0.69
54:1G:979:C:H3'	54:1G:980:C:H5"	1.74	0.69
33:15:96:GLU:OE1	33:15:96:GLU:N	2.21	0.69
25:1H:2257:U:O2'	25:1H:2258:C:H5'	1.93	0.69
1:13:1263:C:H2'	1:13:1264:C:H6	1.58	0.69
1:13:838:G:H1	1:13:848:C:N4	1.91	0.69
54:1G:1352:C:H42	54:1G:1370:G:H1	1.40	0.69
19:AI:40:ILE:HG12	19:AI:41:VAL:HG13	1.75	0.69
54:1G:738:C:OP1	6:52:92:LYS:NZ	2.24	0.69
1:13:262:A:H2'	1:13:263:A:C8	2.28	0.69
54:1G:1226:C:H2'	13:4A:103:THR:HB	1.75	0.69
54:1G:664:G:H22	54:1G:741:G:H1	1.41	0.69
25:14:1579:A:H2'	25:14:1580:A:C8	2.28	0.69
41:95:21:ARG:HB3	41:95:91:TYR:HE1	1.57	0.69
25:1H:1520:U:H2'	25:1H:1521:G:O4'	1.93	0.69
25:1H:1780:A:OP1	60:1H:3523:HOH:O	2.10	0.69
25:1H:1784:A:H5"	60:1H:3731:HOH:O	1.92	0.69
1:13:1455:G:OP1	20:BI:35:THR:OG1	2.07	0.69
35:35:47:ASP:OD2	35:35:49:ARG:NE	2.25	0.69
22:3K:7:G:N2	22:3K:76:C:O2	2.25	0.69
43:B5:65:ARG:HB3	43:B5:70:LEU:HA	1.75	0.69
9:82:43:ALA:HA	9:82:74:ILE:HD13	1.75	0.69
25:14:2150:U:H2'	25:14:2151:G:H8	1.57	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:8I:67:LYS:HA	17:8I:70:ARG:HH12	1.56	0.69
54:1G:1095:U:OP1	54:1G:1108:G:N1	2.25	0.69
2:1E:19:HIS:NE2	2:1E:206:ASP:OD2	2.26	0.69
37:98:51:LEU:HD22	37:98:66:VAL:HG13	1.74	0.69
25:1H:517:C:OP1	51:N8:16:ARG:NH2	2.26	0.69
26:1J:18:G:H1	26:1J:65:C:N4	1.89	0.69
25:1H:1509:C:H2'	25:1H:1511:A:H8	1.55	0.69
54:1G:539:A:H2'	54:1G:540:G:C8	2.28	0.69
25:14:739:G:OP1	60:14:3630:HOH:O	2.11	0.69
48:K8:48:HIS:H	48:K8:50:ILE:HD11	1.56	0.69
25:1H:1464:C:H2'	25:1H:1465:G:H8	1.56	0.69
44:C5:85:VAL:HG22	44:C5:98:VAL:HB	1.74	0.69
1:13:1525:G:OP1	11:2I:120:ARG:NH2	2.26	0.69
25:1H:1871:A:H2'	25:1H:1872:A:C8	2.27	0.69
4:3E:84:LYS:N	4:3E:85:LYS:HB3	2.07	0.69
21:1B:6:ARG:HG2	21:1B:15:ARG:HH21	1.57	0.69
16:7I:1:MET:N	16:7I:1:MET:SD	2.64	0.69
54:1G:1449:C:H3'	54:1G:1450:U:H4'	1.74	0.69
54:1G:1238:A:H62	54:1G:1301:U:H3	1.41	0.68
42:A5:88:ARG:NH1	42:A5:94:ASP:OD1	2.25	0.68
1:13:664:G:N2	1:13:741:G:H1	1.90	0.68
1:13:1145:C:H4'	1:13:1146:A:H8	1.57	0.68
25:14:1582:C:HO2'	25:14:1586:A:H8	1.40	0.68
25:14:2264:C:N4	46:E5:15:ASP:OD2	2.23	0.68
4:32:119:GLN:O	4:32:123:HIS:ND1	2.23	0.68
25:14:2343:C:HO2'	25:14:2373:G:HO2'	1.39	0.68
25:1H:84:A:OP2	44:G8:8:LYS:NZ	2.23	0.68
25:14:1614:A:H61	42:A5:88:ARG:H	1.39	0.68
43:F8:2:LYS:HD3	48:K8:26:ARG:HH21	1.58	0.68
27:11:93:ALA:HB3	27:11:105:ILE:HG22	1.75	0.68
25:1H:1357:U:OP2	60:1H:3803:HOH:O	2.11	0.68
1:13:376:G:O3'	16:7I:5:ARG:NH1	2.27	0.68
1:13:1292:U:H2'	1:13:1293:G:C8	2.27	0.68
54:1G:1401:G:OP1	57:4L:18:G:O2'	2.10	0.68
22:1K:85:A:H1'	25:1H:2583:G:H21	1.59	0.68
40:85:83:LEU:HD12	40:85:88:ILE:HD11	1.74	0.68
6:5E:50:TYR:OH	18:9I:74:ARG:O	2.04	0.68
25:1H:1968:G:OP1	60:1H:3762:HOH:O	2.11	0.68
46:E5:12:ASN:HA	46:E5:14:ARG:HH21	1.57	0.68
25:14:2468:G:N2	25:14:2481:G:O2'	2.25	0.68
8:72:97:VAL:HA	8:72:100:ILE:HD11	1.75	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:52:23:LYS:HA	6:52:26:ILE:HD12	1.74	0.68
54:1G:1206:G:O4'	3:22:194:GLY:HA2	1.93	0.68
25:14:1599:C:H2'	25:14:1600:C:H6	1.58	0.68
1:13:327:A:HO2'	1:13:329:A:H8	1.39	0.68
36:88:14:ARG:HG2	36:88:41:TRP:HH2	1.58	0.68
25:1H:1057:A:O2'	25:1H:1058:U:O4'	2.11	0.68
55:3L:24:G:H2'	55:3L:25:G:C8	2.27	0.68
26:16:7:G:H4'	38:A8:29:PHE:HD2	1.55	0.68
25:1H:2096:U:H3	25:1H:2193:G:H1	1.42	0.68
55:1L:11:C:H2'	55:1L:12:C:H6	1.59	0.68
2:12:97:TRP:HZ3	2:12:99:GLY:HA2	1.58	0.68
2:12:32:ILE:HD11	2:12:40:HIS:HB3	1.74	0.68
54:1G:957:U:H2'	54:1G:959:A:OP2	1.94	0.68
25:14:2649:U:H3	25:14:2671:A:H61	1.41	0.68
51:N8:42:PRO:O	51:N8:44:THR:OG1	2.09	0.68
30:41:67:LYS:HE2	50:M8:6:HIS:CE1	2.28	0.68
25:1H:2795:G:N2	25:1H:2799:A:OP2	2.26	0.68
1:13:674:G:H2'	1:13:675:A:H8	1.58	0.68
25:14:2032:G:H21	28:29:146:THR:HG23	1.58	0.68
54:1G:538:G:H5"	12:3A:114:LYS:HB2	1.76	0.68
2:12:6:THR:OG1	2:12:7:VAL:N	2.27	0.68
1:13:611:A:H61	1:13:629:G:H1	1.41	0.68
3:22:95:THR:HG22	3:22:97:LYS:HG2	1.74	0.68
10:1I:34:VAL:HG12	10:1I:74:ILE:HG23	1.74	0.68
25:1H:458:G:C8	52:P8:37:LYS:HD2	2.29	0.68
5:4E:81:GLU:HG2	5:4E:90:VAL:HG23	1.76	0.68
29:39:181:LEU:HD21	29:39:186:ILE:HD11	1.76	0.68
4:32:173:TRP:CD1	4:32:174:LEU:HG	2.29	0.68
6:52:74:ASP:N	6:52:74:ASP:OD1	2.23	0.68
49:L8:26:LEU:HB2	49:L8:28:LEU:HD12	1.75	0.68
25:1H:1339:G:H21	25:1H:1603:A:H1'	1.58	0.68
42:E8:92:ARG:NH1	42:E8:94:ASP:OD1	2.27	0.68
25:1H:1464:C:H2'	25:1H:1465:G:C8	2.29	0.68
1:13:559:A:H4'	1:13:560:U:H5"	1.75	0.68
55:1L:31:G:H1	55:1L:41:C:H42	1.42	0.68
25:14:154:G:O6	25:14:172:C:N4	2.25	0.68
35:78:144:GLU:N	35:78:144:GLU:OE2	2.27	0.68
26:1J:44:G:H5"	26:1J:45:A:OP1	1.94	0.68
44:C5:42:VAL:O	44:C5:65:ALA:N	2.26	0.68
10:1I:48:THR:HG23	10:1I:62:HIS:CD2	2.28	0.68
1:13:1129:C:H4'	1:13:1130:A:H5'	1.76	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:M5:22:VAL:HG12	53:M5:50:LEU:HD23	1.76	0.68
25:1H:446:G:OP2	60:1H:3572:HOH:O	2.11	0.68
22:3K:51:C:H3'	22:3K:52:G:O4'	1.94	0.68
1:13:1396:A:H4'	1:13:1397:C:H5"	1.75	0.68
29:31:6:VAL:HG21	29:31:119:ARG:HB2	1.76	0.68
16:7A:11:SER:HB2	16:7A:14:ASN:HB3	1.75	0.68
34:25:24:VAL:HA	34:25:39:ILE:HG22	1.76	0.68
47:J8:83:GLU:HG2	47:J8:84:GLY:O	1.93	0.68
7:62:143:ARG:NH1	55:3L:42:U:O3'	2.27	0.68
9:82:118:LYS:HB2	9:82:121:ARG:HB3	1.76	0.68
10:1I:38:ILE:HG23	10:1I:71:LEU:HB3	1.75	0.68
45:D5:4:ARG:HA	45:D5:58:VAL:HB	1.75	0.68
4:32:20:TYR:HA	4:32:26:CYS:HB3	1.74	0.67
25:1H:2392:A:H2	25:1H:2424:C:H42	1.43	0.67
1:13:1448:C:H42	1:13:1455:G:H1	1.41	0.67
32:61:78:THR:HB	32:61:141:LYS:HD2	1.75	0.67
1:13:1149:C:H2'	1:13:1150:U:H6	1.59	0.67
46:E5:49:LYS:HG3	46:E5:80:HIS:HB3	1.74	0.67
54:1G:407:G:O6	54:1G:435:C:N4	2.27	0.67
1:13:637:G:H2'	1:13:638:G:H8	1.59	0.67
29:31:32:LEU:HD21	29:31:105:VAL:HG13	1.76	0.67
25:14:1024:G:H3'	25:14:1025:G:H5"	1.76	0.67
25:1H:2212:A:H1'	25:1H:2215:G:C5	2.29	0.67
30:49:111:LEU:HD11	30:49:120:LEU:HD21	1.75	0.67
25:1H:1055:G:H1	25:1H:1104:C:H42	1.42	0.67
19:AA:11:VAL:HG22	19:AA:12:ASP:H	1.60	0.67
1:13:352:C:O2'	1:13:354:G:OP1	2.08	0.67
25:1H:469:G:O6	52:P8:37:LYS:NZ	2.28	0.67
1:13:517:G:N1	1:13:533:A:OP2	2.27	0.67
1:13:486:U:H2'	1:13:487:A:C8	2.30	0.67
25:1H:270(L):U:C2	32:61:50:ARG:HG3	2.29	0.67
16:7I:47:ASP:N	16:7I:47:ASP:OD1	2.27	0.67
25:14:1537:C:H2'	25:14:1538:G:C8	2.29	0.67
25:1H:1525:G:H2'	25:1H:1526:G:C8	2.28	0.67
54:1G:261:U:OP2	20:BA:79:ARG:NH2	2.28	0.67
51:N8:40:LYS:HG2	51:N8:47:PRO:HD2	1.76	0.67
25:1H:2849:U:H4'	25:1H:2868:A:C2	2.29	0.67
41:D8:3:ALA:HB1	41:D8:38:LEU:HD11	1.75	0.67
45:D5:174:VAL:HG13	45:D5:177:PRO:HG2	1.77	0.67
25:1H:1997:G:OP2	60:1H:3781:HOH:O	2.13	0.67
16:7I:53:VAL:HG13	16:7I:79:VAL:HG22	1.77	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:I8:23:VAL:HA	46:I8:38:VAL:HG22	1.75	0.67
23:2K:62:C:H2'	23:2K:63:C:H6	1.58	0.67
12:3A:27:LEU:HB2	12:3A:33:ARG:HB2	1.77	0.67
25:1H:176:G:O2'	25:1H:177:G:H5'	1.94	0.67
47:J8:18:ILE:HG12	47:J8:37:ILE:HG12	1.77	0.67
32:69:113:ARG:HB3	32:69:131:LYS:HB2	1.75	0.67
54:1G:1435:G:H2'	54:1G:1436:U:C6	2.29	0.67
22:1K:35:QUO:O14	24:4K:19[A]:A:N1	2.27	0.67
25:1H:2577:A:H5"	25:1H:2578:G:H5'	1.77	0.67
25:14:1900:A:OP2	60:14:3507:HOH:O	2.11	0.67
5:42:31:LEU:HD22	5:42:45:PHE:HB2	1.76	0.67
26:16:15:A:H5'	26:16:16:G:C8	2.29	0.67
25:1H:1533:C:H2'	25:1H:1534:G:C2	2.30	0.67
5:4E:45:PHE:CE2	5:4E:47:LYS:HD2	2.30	0.67
1:13:1003:G:N2	1:13:1037:C:O2	2.27	0.67
25:14:2439:A:C8	25:14:2439:A:H5'	2.30	0.67
31:59:4:ILE:HG21	31:59:54:ARG:HH12	1.59	0.67
25:1H:2406:U:OP1	60:1H:3594:HOH:O	2.11	0.67
8:72:10:LEU:HD22	8:72:83:ILE:HD11	1.77	0.67
2:1E:166:ASP:HB3	2:1E:169:LYS:HB2	1.77	0.67
38:65:102:ALA:HA	38:65:105:ALA:HB3	1.76	0.67
25:14:178:G:N7	60:14:3799:HOH:O	2.28	0.67
41:95:35:LEU:O	41:95:37:VAL:HG22	1.95	0.67
27:11:33:LEU:H	27:11:33:LEU:HD12	1.59	0.67
25:1H:1509:C:H3'	25:1H:1510:A:H5"	1.77	0.67
32:61:69:LYS:HA	32:61:136:VAL:HB	1.76	0.67
26:1J:14:U:HO2'	26:1J:107:U:HO2'	1.42	0.67
54:1G:1157:A:H61	54:1G:1178:G:H21	1.43	0.67
1:13:1004:A:O5'	1:13:1025:U:N3	2.25	0.67
25:14:2134:A:OP2	25:14:2157:G:N2	2.25	0.67
25:1H:277:C:H3'	25:1H:278:A:O4'	1.94	0.67
54:1G:940:C:H2'	54:1G:941:G:H8	1.60	0.67
27:11:17:THR:HG22	27:11:204:ILE:HA	1.76	0.67
45:H8:7:ALA:HB2	45:H8:59:LEU:HD22	1.76	0.67
4:32:18:LYS:NZ	4:32:27:TYR:O	2.27	0.67
9:82:9:ARG:HG2	9:82:14:VAL:HG22	1.76	0.67
25:1H:2452:C:OP1	60:1H:4006:HOH:O	2.12	0.67
25:1H:2147:G:H2'	25:1H:2148:G:H4'	1.77	0.67
25:14:140:A:H8	25:14:1408:C:HO2'	1.41	0.67
21:1B:9:ARG:HG3	21:1B:10:ARG:N	2.08	0.67
5:4E:12:LEU:HB3	5:4E:31:LEU:HB2	1.77	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:1H:2287:A:N6	25:1H:2344:U:H3	1.92	0.67
25:14:540:G:H1	25:14:553:U:H3	1.41	0.67
54:1G:1300:G:O2'	54:1G:1301:U:O5'	2.12	0.67
1:13:354:G:N7	60:13:1850:HOH:O	2.27	0.67
44:G8:94:LYS:HA	44:G8:94:LYS:HZ3	1.58	0.67
25:1H:994:C:OP2	40:C8:54:LYS:NZ	2.28	0.67
25:14:2647:U:H3	25:14:2673:G:H1	1.42	0.67
25:1H:1265:A:H3'	51:N8:19:ARG:NH1	2.10	0.67
31:59:27:LYS:HA	31:59:32:GLU:HB3	1.76	0.67
26:16:25:A:OP2	60:16:301:HOH:O	2.13	0.67
19:AA:60:VAL:HG21	19:AA:74:PHE:HB3	1.77	0.67
27:19:255:LYS:CE	27:19:255:LYS:H	2.08	0.67
19:AA:18:LYS:HA	19:AA:21:GLU:HG2	1.77	0.67
33:58:12:ARG:HH21	33:58:14:VAL:HG22	1.60	0.67
53:Q8:53:PRO:HA	53:Q8:56:GLU:HB2	1.75	0.66
1:13:1160:G:H1	1:13:1177:G:N2	1.93	0.66
25:14:607:U:OP1	29:39:102:PRO:HA	1.94	0.66
35:35:50:ARG:HB3	35:35:50:ARG:HH11	1.58	0.66
43:F8:9:LEU:O	48:K8:36:ARG:HD2	1.94	0.66
25:1H:32:C:O2'	25:1H:33:U:H5'	1.95	0.66
29:39:79:GLY:HA2	29:39:86:GLY:HA2	1.75	0.66
28:29:91:VAL:HB	28:29:95:ILE:HD11	1.77	0.66
25:1H:2314:C:H2'	25:1H:2315:G:H8	1.60	0.66
18:9I:59:SER:OG	18:9I:60:ALA:N	2.27	0.66
13:4I:3:ARG:HG2	13:4I:9:ILE:HG12	1.77	0.66
45:D5:17:ALA:HA	45:D5:20:ARG:HD2	1.75	0.66
32:69:14:ASP:OD1	32:69:15:VAL:N	2.29	0.66
25:14:2287:A:H62	25:14:2344:U:H3	1.43	0.66
25:14:974:G:O2'	25:14:975:G:N7	2.24	0.66
56:2L:41:C:H2'	56:2L:42:C:H6	1.60	0.66
27:11:112:GLN:N	27:11:115:GLN:OE1	2.25	0.66
26:1J:40:U:O4	50:I5:1:MET:N	2.28	0.66
1:13:1348:U:H4'	9:8E:120:ARG:HD2	1.77	0.66
25:14:1972:A:OP2	60:14:3448:HOH:O	2.13	0.66
26:16:7:G:O5'	38:A8:29:PHE:HE2	1.79	0.66
25:1H:1900:A:C8	25:1H:1900:A:H5'	2.30	0.66
25:14:1111:A:H4'	31:59:3:ARG:HD3	1.77	0.66
35:35:80:TYR:HA	35:35:111:ARG:HB2	1.78	0.66
1:13:859:A:H2'	1:13:860:A:H8	1.59	0.66
31:59:121:ILE:HG23	31:59:133:VAL:HG13	1.77	0.66
54:1G:1224:G:N2	54:1G:1322:C:H4'	2.10	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:1H:1425:G:O6	60:1H:3930:HOH:O	2.08	0.66
1:13:674:G:H2'	1:13:675:A:C8	2.30	0.66
25:14:2287:A:N6	25:14:2344:U:H3	1.94	0.66
10:1A:3:LYS:HD2	10:1A:77:PRO:HG3	1.78	0.66
25:1H:2843:G:N7	60:1H:3848:HOH:O	2.26	0.66
8:72:102:ARG:O	8:72:102:ARG:NE	2.29	0.66
54:1G:576:G:N2	54:1G:759:A:OP1	2.25	0.66
6:5E:18:GLN:HA	6:5E:21:LEU:HB2	1.77	0.66
25:14:321:G:OP1	29:39:135:LYS:NZ	2.22	0.66
1:13:352:C:OP2	60:13:1849:HOH:O	2.13	0.66
14:5I:6:LEU:HB3	14:5I:23:ARG:NH2	2.11	0.66
48:K8:50:ILE:HD12	48:K8:51:ARG:H	1.60	0.66
12:3A:58:VAL:O	12:3A:65:GLU:HA	1.95	0.66
25:14:2037:G:H2'	25:14:2038:G:C8	2.31	0.66
25:1H:1189:A:OP2	60:1H:3680:HOH:O	2.13	0.66
35:78:15:ARG:HA	35:78:16:ARG:HB2	1.78	0.66
44:C5:43:ASN:HB3	44:C5:64:GLU:HA	1.77	0.66
1:13:422:C:O2	1:13:423:G:N2	2.28	0.66
25:1H:796:C:H2'	25:1H:797:C:C6	2.29	0.66
35:35:30:THR:HG21	35:35:35:HIS:H	1.60	0.66
6:52:2:ARG:HD2	6:52:92:LYS:HZ1	1.60	0.66
25:14:39:C:H2'	25:14:40:C:C6	2.30	0.66
39:B8:21:GLU:OE1	39:B8:91:ARG:NH2	2.29	0.66
18:9A:22:VAL:HG22	18:9A:23:LYS:H	1.61	0.66
25:14:446:G:OP2	60:14:3686:HOH:O	2.12	0.66
3:22:11:ARG:NH2	3:22:177:THR:O	2.26	0.66
25:1H:882:G:O2'	25:1H:883:G:N7	2.28	0.66
55:3L:8:U:H3	55:3L:14:A:H62	1.44	0.66
39:75:26:ASP:O	39:75:49:VAL:HG22	1.95	0.66
54:1G:1326:C:H2'	54:1G:1327:C:H6	1.60	0.66
54:1G:587:G:N2	54:1G:754:C:OP2	2.29	0.66
2:1E:219:VAL:HA	2:1E:222:ILE:HD12	1.78	0.66
34:25:2:ILE:HD12	34:25:6:THR:HG21	1.78	0.66
25:14:1796:U:H2'	25:14:1797:C:C6	2.31	0.66
29:39:188:ARG:HA	35:35:3:LEU:HD11	1.78	0.66
40:C8:88:ILE:HD13	41:D8:48:GLY:HA2	1.76	0.66
35:35:85:LEU:HA	35:35:88:LEU:HB3	1.78	0.66
25:1H:2270:G:OP2	60:1H:3948:HOH:O	2.14	0.66
27:19:69:ARG:NH2	27:19:128:GLY:O	2.28	0.66
25:1H:882:G:N2	25:1H:895:U:O4	2.29	0.66
1:13:1118:C:H1'	1:13:1179:A:C4	2.31	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:1J:7:G:H1	26:1J:113:C:H42	1.43	0.66
1:13:1240:U:OP2	7:6E:116:ALA:N	2.29	0.66
31:51:79:VAL:O	31:51:80:SER:OG	2.13	0.66
53:M5:54:GLU:OE2	53:M5:54:GLU:HA	1.95	0.66
54:1G:157:G:H1	54:1G:164:U:H3	1.42	0.66
25:14:972:G:OP2	25:14:974:G:H5"	1.96	0.66
1:13:318:G:H1	1:13:335:C:H42	1.42	0.66
25:1H:2504:U:OP2	60:1H:3903:HOH:O	2.12	0.66
4:3E:199:ASN:HB3	4:3E:202:LEU:HD12	1.76	0.66
25:14:2712(A):A:OP2	60:14:3467:HOH:O	2.14	0.66
39:B8:77:PRO:HG2	39:B8:80:SER:HB2	1.78	0.66
25:1H:2635:C:H5"	28:21:79:ARG:CD	2.26	0.65
25:1H:1264:G:OP1	51:N8:19:ARG:NH2	2.19	0.65
25:14:1782:C:OP1	60:14:3402:HOH:O	2.14	0.65
55:3L:12:C:H3'	55:3L:13:G:C8	2.31	0.65
25:14:330:A:H2	25:14:1210:A:HO2'	1.44	0.65
54:1G:536:C:OP2	60:1G:1743:HOH:O	2.14	0.65
25:14:1416:G:O2'	25:14:1417:C:O5'	2.14	0.65
56:2L:10:G:N2	56:2L:27:G:H1'	2.12	0.65
25:1H:1059:G:O6	25:1H:1079:C:N4	2.29	0.65
54:1G:728:A:H2'	54:1G:729:A:C8	2.31	0.65
25:14:21:A:H61	25:14:519:U:H3	1.43	0.65
25:14:1942:C:OP2	25:14:1943:U:O2'	2.11	0.65
25:1H:1257:C:H4'	29:31:83:PHE:CD1	2.31	0.65
20:BA:67:ALA:HA	20:BA:73:HIS:H	1.60	0.65
27:19:12:SER:HB2	27:19:208:LYS:HB3	1.78	0.65
25:14:1188:U:O2'	25:14:1189:A:H5'	1.95	0.65
25:1H:2820:A:O2'	25:1H:2821:A:OP1	2.14	0.65
54:1G:452:A:H1'	16:7A:72:ARG:HH22	1.61	0.65
5:42:91:LEU:HD12	5:42:120:THR:HG22	1.76	0.65
2:1E:51:LEU:HG	2:1E:201:ILE:HD12	1.78	0.65
55:3L:49:A:H1'	55:3L:52:G:H22	1.61	0.65
29:39:123:LEU:O	29:39:125:LEU:N	2.29	0.65
25:14:857:C:H4'	46:E5:23:VAL:HG21	1.78	0.65
25:14:1665:A:N7	60:14:3534:HOH:O	2.29	0.65
1:13:67:C:H2'	1:13:68:G:C8	2.31	0.65
29:31:6:VAL:N	29:31:24:LEU:O	2.29	0.65
36:88:37:LEU:HD11	36:88:130:LYS:HG3	1.77	0.65
13:4A:37:THR:HG21	13:4A:56:LEU:HD23	1.77	0.65
25:1H:2168:G:N2	25:1H:2170:A:H62	1.95	0.65
8:7E:11:THR:O	8:7E:15:ASN:ND2	2.27	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:1K:25:G:H2'	22:1K:26:G:H8	1.61	0.65
25:14:2343:C:O2'	25:14:2373:G:O2'	2.12	0.65
28:21:128:SER:OG	28:21:129:HIS:N	2.27	0.65
1:13:411:A:H62	1:13:413:G:H21	1.44	0.65
48:G5:17:SER:N	48:G5:20:GLU:OE1	2.24	0.65
3:22:134:ILE:HG23	3:22:151:VAL:HB	1.77	0.65
25:1H:1590:U:H2'	25:1H:1591:G:C8	2.30	0.65
35:78:88:LEU:HD12	35:78:95:VAL:HG11	1.77	0.65
25:1H:654(B):C:H2'	25:1H:654(C):G:H8	1.60	0.65
54:1G:60:A:N6	54:1G:110:C:N3	2.45	0.65
45:H8:143:GLY:HA2	45:H8:144:LEU:HB2	1.76	0.65
56:2L:21:H2U:O2	56:2L:21:H2U:H2'	1.96	0.65
25:1H:567:A:OP1	60:1H:3502:HOH:O	2.14	0.65
46:E5:18:ALA:HB3	46:E5:20:ARG:HE	1.62	0.65
25:1H:822:U:OP2	60:1H:3865:HOH:O	2.14	0.65
39:B8:110:ILE:HG13	39:B8:111:ARG:HD3	1.78	0.65
30:41:64:THR:HG23	30:41:94:LEU:HD13	1.77	0.65
1:13:446:G:O6	60:13:1891:HOH:O	2.10	0.65
54:1G:1305:G:H22	54:1G:1331:G:C2'	2.09	0.65
28:29:197:ILE:HD11	28:29:199:ARG:HE	1.62	0.65
37:98:42:LYS:HA	37:98:45:ARG:HD2	1.77	0.65
1:13:450:G:OP1	16:7I:43:LYS:NZ	2.30	0.65
37:98:53:HIS:ND1	37:98:94:TYR:OH	2.28	0.65
25:1H:568:U:O4	60:1H:3678:HOH:O	2.13	0.65
25:14:1537:C:O2'	25:14:1538:G:O4'	2.13	0.65
54:1G:371:G:H1	54:1G:390:C:H42	1.43	0.65
27:11:31:LYS:HE2	27:11:94:LEU:HD11	1.79	0.65
2:1E:87:ARG:NH2	2:1E:220:ASP:OD1	2.30	0.65
25:14:1680:U:N3	25:14:1764:G:OP2	2.26	0.65
54:1G:437:U:H5'	4:32:155:LEU:HD21	1.77	0.65
33:15:15:LEU:HB2	33:15:134:ARG:HG2	1.77	0.65
6:5E:97:PHE:HD2	18:9I:31:LEU:HD21	1.62	0.65
25:1H:950:G:H2'	25:1H:951:C:C6	2.32	0.65
44:G8:40:GLU:OE2	44:G8:40:GLU:N	2.30	0.65
19:AI:36:ARG:NH1	19:AI:52:TYR:O	2.29	0.65
41:95:85:LYS:CG	41:95:87:HIS:H	2.10	0.65
34:25:63:VAL:HG11	34:25:85:VAL:HG23	1.79	0.65
8:7E:49:GLU:HG2	8:7E:62:TYR:HE1	1.61	0.65
1:13:510:A:OP2	60:13:1816:HOH:O	2.15	0.65
54:1G:297:G:N2	54:1G:300:A:OP2	2.26	0.65
25:1H:1156:A:C8	40:C8:51:LYS:HD2	2.32	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:1A:49:VAL:O	10:1A:60:ARG:HB2	1.97	0.65
36:88:138:ASP:OD1	45:H8:81:ARG:NH2	2.29	0.65
29:31:157:VAL:HB	29:31:194:MET:HG2	1.78	0.65
25:1H:2327:A:H2'	25:1H:2328:A:C8	2.32	0.65
13:4A:37:THR:O	13:4A:55:ARG:NE	2.30	0.65
25:1H:1786:A:H2	25:1H:2606:C:H1'	1.61	0.65
54:1G:1387:G:H2'	54:1G:1388:C:H6	1.62	0.65
25:1H:646:A:H2'	25:1H:647:G:O4'	1.97	0.65
43:F8:26:TYR:O	43:F8:81:VAL:HG12	1.96	0.65
28:21:105:THR:OG1	28:21:199:ARG:NH2	2.28	0.65
25:14:1532:C:H42	25:14:1539:G:H1	1.43	0.65
25:14:1614:A:N1	42:A5:91:GLY:HA2	2.12	0.65
25:14:1614:A:H62	42:A5:93:ALA:HB2	1.62	0.65
25:1H:1024:G:H3'	25:1H:1025:G:H5"	1.78	0.65
25:1H:2305:A:O2'	30:41:136:ARG:NH1	2.30	0.65
35:35:65:ARG:HB2	35:35:65:ARG:NH1	2.12	0.65
33:15:18:ALA:HA	33:15:21:LYS:HD2	1.79	0.65
11:2I:108:ILE:HG22	18:9I:87:ARG:HA	1.79	0.65
54:1G:1115:C:N4	54:1G:1185:G:O6	2.19	0.64
22:1K:85:A:H1'	25:1H:2583:G:N2	2.12	0.64
45:H8:165:VAL:HB	45:H8:166:SER:HA	1.78	0.64
54:1G:438:G:H4'	4:32:123:HIS:CD2	2.33	0.64
39:B8:26:ASP:O	39:B8:49:VAL:HG12	1.96	0.64
34:25:19:ILE:HG22	34:25:43:VAL:HA	1.79	0.64
28:29:116:VAL:HG23	28:29:120:TRP:HB2	1.80	0.64
25:14:2880:C:H1'	37:55:92:GLY:HA3	1.80	0.64
25:14:2340:G:O2'	25:14:2341:G:H5'	1.97	0.64
25:1H:688:U:O4	60:1H:3892:HOH:O	2.08	0.64
25:14:336:C:H5"	44:C5:6:HIS:HD2	1.60	0.64
54:1G:187:C:H2'	54:1G:188:U:O4'	1.96	0.64
25:1H:2781:A:H5"	25:1H:2782:G:H5'	1.80	0.64
54:1G:15:G:H2'	54:1G:16:A:H8	1.62	0.64
8:7E:83:ILE:HB	8:7E:137:VAL:HG13	1.80	0.64
26:16:8:U:N3	26:16:112:G:O6	2.18	0.64
3:22:70:VAL:HG12	3:22:72:LYS:H	1.62	0.64
6:5E:80:ARG:HG3	6:5E:82:ARG:HH11	1.62	0.64
12:3A:26:ALA:HB1	12:3A:27:LEU:HG	1.79	0.64
31:59:10:PRO:HD2	31:59:50:VAL:HG13	1.78	0.64
25:14:1007:C:OP1	33:15:37:LYS:NZ	2.25	0.64
50:M8:12:ALA:HB3	50:M8:24:THR:HB	1.79	0.64
42:E8:19:LEU:HB3	51:N8:25:LEU:HD11	1.78	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:L8:12:PRO:HB2	49:L8:20:LYS:HG2	1.80	0.64
7:62:94:ARG:H	7:62:94:ARG:HD3	1.63	0.64
25:14:1416:G:N2	25:14:1582:C:N3	2.39	0.64
25:1H:1968:G:P	60:1H:3762:HOH:O	2.54	0.64
54:1G:1235:U:O2'	54:1G:1305:G:O5'	2.15	0.64
25:1H:443:A:H1'	25:1H:1201:C:O4'	1.97	0.64
3:2E:71:ALA:HB2	3:2E:109:PRO:HB3	1.80	0.64
33:58:73:THR:HG22	33:58:84:LYS:HG2	1.79	0.64
25:1H:2058:A:N6	60:1H:3514:HOH:O	2.27	0.64
25:1H:2232:U:P	47:J8:40:ARG:HH12	2.20	0.64
25:1H:1359:A:H2'	25:1H:1360:A:H5'	1.80	0.64
54:1G:474:G:H2'	54:1G:475:G:C8	2.31	0.64
54:1G:1387:G:H2'	54:1G:1388:C:C6	2.32	0.64
50:I5:16:CYS:HA	50:I5:33:VAL:HG13	1.80	0.64
34:68:21:CYS:HB2	34:68:39:ILE:HD12	1.79	0.64
25:1H:729:G:OP2	27:11:13:ARG:NH1	2.30	0.64
25:14:1945:G:H2'	25:14:1946:U:C6	2.32	0.64
2:12:70:PHE:O	2:12:93:VAL:N	2.29	0.64
28:29:174:ASP:HB3	28:29:183:LEU:HD13	1.80	0.64
30:41:57:ALA:HB2	30:41:90:LEU:HG	1.78	0.64
40:85:92:ARG:HD2	40:85:95:LEU:HD12	1.79	0.64
2:1E:189:ASP:HB3	2:1E:191:ASP:HB2	1.79	0.64
4:3E:110:PHE:HE1	4:3E:148:VAL:HG23	1.61	0.64
10:1A:53:PRO:HA	14:5A:42:ILE:HD12	1.79	0.64
1:13:1029:G:O2'	1:13:1032(A):G:N2	2.31	0.64
40:85:106:PHE:HA	40:85:109:LEU:HD12	1.78	0.64
34:25:35:VAL:HG11	34:25:103:ALA:HB3	1.80	0.64
25:14:1754:C:OP1	39:75:96:ARG:NH1	2.30	0.64
22:3K:18:G:H1'	22:3K:19:C:OP2	1.98	0.64
33:15:61:ARG:HA	33:15:61:ARG:NE	2.13	0.64
40:C8:87:GLY:C	40:C8:89:GLU:H	2.00	0.64
2:12:54:THR:HG23	2:12:199:TYR:HB3	1.79	0.64
54:1G:1295:G:O2'	13:4A:14:ARG:NH1	2.30	0.64
25:1H:2593:U:H2'	25:1H:2594:C:C6	2.33	0.64
12:3A:26:ALA:HA	12:3A:27:LEU:HD23	1.79	0.64
35:78:86:LYS:HB3	35:78:118:GLY:HA3	1.80	0.64
1:13:624:C:O3'	16:7I:10:GLY:HA2	1.98	0.64
39:B8:29:ARG:NH1	39:B8:46:GLU:OE2	2.30	0.64
31:59:137:ASP:HB3	31:59:140:LYS:HB2	1.80	0.64
7:6E:69:VAL:HG22	7:6E:135:VAL:HG22	1.80	0.64
43:B5:55:ASN:HB2	43:B5:80:ILE:HG12	1.78	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:14:1342:A:H2	25:14:1602:U:H3	1.46	0.64
11:2I:34:ASP:HB3	11:2I:40:ILE:HD11	1.79	0.64
27:19:143:HIS:NE2	27:19:192:THR:OG1	2.30	0.64
25:1H:2611:U:H6	25:1H:2611:U:H5'	1.62	0.64
25:1H:1316:U:H2'	25:1H:1317:A:H8	1.63	0.64
18:9A:31:LEU:H	18:9A:31:LEU:HD23	1.63	0.64
1:13:1124:G:H5'	10:1I:35:SER:HB2	1.78	0.64
54:1G:411:A:C5	54:1G:413:G:H1'	2.32	0.64
7:62:149:ARG:HD3	11:2A:59:TYR:CE1	2.33	0.64
54:1G:1089:G:H1	54:1G:1096:C:H42	1.44	0.64
1:13:625:G:H4'	16:7I:16:HIS:CG	2.33	0.64
22:1K:13:G:H2'	22:1K:14:A:H8	1.61	0.64
45:H8:111:VAL:HG11	45:H8:146:ILE:HG12	1.78	0.64
54:1G:600:C:H2'	54:1G:601:C:H6	1.62	0.64
42:E8:18:ARG:HD3	42:E8:76:VAL:HG13	1.78	0.64
1:13:342:C:H2'	1:13:343:U:O4'	1.97	0.64
25:1H:1593:G:H2'	25:1H:1594:G:C8	2.32	0.64
26:1J:39:A:N1	50:I5:1:MET:N	2.44	0.64
31:51:4:ILE:HD12	31:51:6:ARG:HD3	1.80	0.64
54:1G:1368:G:OP1	9:82:111:ARG:NH2	2.31	0.64
44:G8:39:VAL:HB	44:G8:42:VAL:HG21	1.80	0.64
45:H8:116:VAL:H	45:H8:174:VAL:HG13	1.61	0.64
54:1G:359:U:H2'	54:1G:360:A:C8	2.33	0.64
46:E5:26:TYR:HB2	46:E5:29:GLN:OE1	1.97	0.64
2:12:84:GLU:OE1	2:12:87:ARG:NH2	2.30	0.64
25:1H:2593:U:H2'	25:1H:2594:C:H6	1.61	0.64
25:14:780:G:H21	25:14:783:A:N6	1.92	0.64
45:H8:28:MET:HB2	45:H8:37:VAL:HG11	1.80	0.64
15:6I:39:LEU:HB3	15:6I:56:LEU:HD12	1.80	0.64
25:14:662:G:OP1	35:35:15:ARG:NH2	2.30	0.64
39:75:4:GLY:O	39:75:6:LEU:N	2.31	0.64
30:41:73:ALA:HB3	30:41:85:GLY:H	1.63	0.64
25:14:2656:U:H3	25:14:2665:A:H2	1.44	0.64
25:14:996:A:H4'	40:85:92:ARG:CZ	2.28	0.64
1:13:186(F):C:N3	1:13:191(B):G:N2	2.46	0.64
25:14:259:G:H21	25:14:621:A:H8	1.45	0.64
54:1G:539:A:H2'	54:1G:540:G:H8	1.62	0.64
54:1G:15:G:H2'	54:1G:16:A:C8	2.33	0.64
25:14:125:G:H5"	52:L5:19:ARG:HD3	1.79	0.64
47:F5:79:GLY:O	47:F5:80:LEU:HD13	1.98	0.64
54:1G:458:C:H2'	54:1G:464:G:C8	2.34	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:78:64:LYS:HB3	53:Q8:13:ARG:HB3	1.79	0.63
47:J8:85:LEU:HD12	47:J8:88:LYS:HB2	1.79	0.63
22:1K:48:C:H42	22:1K:52:G:H1	1.45	0.63
27:11:223:GLY:HA3	27:11:231:HIS:ND1	2.13	0.63
22:3K:62:G:H1	22:3K:70:C:H42	1.46	0.63
52:L5:12:ARG:NH2	52:L5:44:PRO:HB3	2.13	0.63
25:1H:1159:U:OP1	49:L8:30:ARG:NH2	2.30	0.63
24:4K:25:A:H5"	24:4K:26:A:H5"	1.79	0.63
25:1H:575:A:OP2	25:1H:2055:C:N4	2.31	0.63
1:13:1295:G:O3'	13:4I:14:ARG:NH1	2.31	0.63
25:1H:1179:C:H2'	25:1H:1180:C:C6	2.33	0.63
25:1H:958:U:OP2	36:88:14:ARG:NH1	2.30	0.63
31:59:9:ILE:HG22	31:59:51:ARG:HA	1.81	0.63
54:1G:20:U:H2'	54:1G:21:G:O4'	1.98	0.63
25:1H:1164:G:H2'	25:1H:1165:U:C6	2.33	0.63
45:D5:45:ASP:OD1	45:D5:49:ARG:NH1	2.31	0.63
43:F8:55:ASN:HB2	43:F8:80:ILE:HG13	1.80	0.63
9:82:4:TYR:HB2	9:82:19:LEU:HB2	1.80	0.63
25:1H:2210:G:H3'	25:1H:2211:G:C8	2.33	0.63
15:6I:6:GLU:HA	15:6I:9:GLN:HB2	1.80	0.63
25:1H:860:U:H5	25:1H:917:A:C2	2.15	0.63
4:32:14:ARG:HH11	4:32:14:ARG:HG3	1.63	0.63
45:D5:155:LEU:HB2	45:D5:157:LEU:HD13	1.79	0.63
25:1H:138:G:N2	43:F8:44:GLU:OE2	2.20	0.63
5:4E:148:VAL:O	5:4E:151:LEU:HB2	1.99	0.63
25:14:1577:C:OP2	60:14:3683:HOH:O	2.15	0.63
54:1G:410:G:H21	54:1G:432:A:H62	1.46	0.63
25:14:910:A:C5	36:45:13:GLN:HG3	2.32	0.63
8:72:99:GLU:OE2	8:72:100:ILE:N	2.25	0.63
25:14:162:U:H4'	25:14:171:G:C4	2.34	0.63
37:98:67:LEU:HD22	37:98:76:VAL:HG21	1.81	0.63
25:14:528:A:C2	25:14:2042:A:H2'	2.34	0.63
10:1I:26:ALA:O	10:1I:84:GLN:NE2	2.31	0.63
39:B8:57:PHE:O	39:B8:58:ASN:ND2	2.31	0.63
41:95:48:GLY:HA3	41:95:51:VAL:C	2.18	0.63
1:13:642:A:N3	8:7E:113:SER:OG	2.32	0.63
28:21:144:ARG:HG3	28:21:144:ARG:HH11	1.63	0.63
55:3L:22:A:H1'	55:3L:68:A:C6	2.34	0.63
4:3E:173:TRP:CD1	4:3E:174:LEU:HG	2.34	0.63
25:14:5:A:H2'	25:14:6:A:C8	2.32	0.63
25:14:1257:C:H4'	29:39:83:PHE:CE1	2.33	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
55:3L:75:C:H2'	55:3L:76:C:C6	2.34	0.63
25:1H:2788:C:O2'	25:1H:2809:A:N3	2.30	0.63
25:14:602:G:O2'	25:14:604:G:O2'	2.16	0.63
4:32:98:GLU:OE2	4:32:103:ASN:ND2	2.30	0.63
11:2A:48:ILE:HG13	11:2A:63:LEU:HB3	1.79	0.63
28:21:77:ILE:HD12	28:21:79:ARG:HH11	1.64	0.63
25:14:2250:G:C5	36:45:82:ARG:HD2	2.33	0.63
25:1H:1279:G:H4'	37:98:31:HIS:CD2	2.33	0.63
25:1H:2580:U:H4'	28:21:130:GLY:HA3	1.79	0.63
54:1G:1243:C:H5"	21:1B:8:THR:HG23	1.79	0.63
42:E8:95:ILE:HG13	42:E8:95:ILE:O	1.98	0.63
25:1H:1794:U:H2'	25:1H:1795:C:H6	1.62	0.63
43:F8:36:LYS:HG2	43:F8:54:VAL:HB	1.81	0.63
25:1H:620:G:H4'	25:1H:621:A:C5'	2.23	0.63
2:1E:111:ARG:NH1	2:1E:111:ARG:HG2	2.09	0.63
25:1H:1188:U:H4'	41:D8:79:VAL:HG22	1.80	0.63
25:14:1828:G:OP2	60:14:3448:HOH:O	2.16	0.63
34:25:13:ASN:ND2	34:25:97:ARG:H	1.96	0.63
40:C8:95:LEU:O	40:C8:97:ASP:N	2.31	0.63
54:1G:189:U:O2'	17:8A:63:ARG:NH2	2.32	0.63
25:14:2689:U:P	25:14:2719:G:H22	2.20	0.63
54:1G:199:G:H2'	54:1G:200:G:H8	1.64	0.63
1:13:177:C:OP1	20:BI:65:LYS:NZ	2.28	0.63
25:1H:2690:C:H5"	25:1H:2872:G:H21	1.64	0.63
3:2E:130:VAL:O	3:2E:134:ILE:HG12	1.98	0.63
11:2I:86:GLY:N	11:2I:112:THR:OG1	2.26	0.63
37:98:56:LYS:NZ	37:98:90:ARG:O	2.29	0.63
42:E8:68:ARG:O	42:E8:110:LYS:N	2.27	0.63
25:1H:2467:C:C2'	25:1H:2468:G:H5'	2.29	0.63
25:14:654(E):C:N3	25:14:654(P):G:N2	2.47	0.63
54:1G:363:A:OP2	12:3A:34:ARG:NH2	2.24	0.63
25:1H:1594:G:OP1	60:1H:3501:HOH:O	2.15	0.63
54:1G:114:U:H2'	54:1G:115:G:C8	2.33	0.63
1:13:1503:A:O2'	24:4K:13:A:N1	2.32	0.63
25:1H:1678:G:H22	25:1H:1989:G:H22	1.47	0.63
25:1H:1055:G:O2'	25:1H:1086:A:N6	2.32	0.63
25:1H:1992:G:OP2	60:1H:3838:HOH:O	2.15	0.63
32:69:75:LEU:CD2	32:69:76:THR:H	2.11	0.63
2:12:236:TYR:HB2	2:12:239:VAL:HB	1.80	0.63
3:22:131:ARG:HH21	3:22:166:GLU:HG2	1.64	0.63
25:14:998:C:H42	25:14:1157:G:H1	1.45	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:1H:574:C:O2	28:21:145:LYS:NZ	2.30	0.63
40:C8:92:ARG:HD3	40:C8:95:LEU:HB2	1.81	0.63
40:C8:92:ARG:CZ	40:C8:96:ALA:H	2.12	0.63
25:1H:330:A:O2'	25:1H:331:A:H8	1.82	0.63
7:62:116:ALA:HA	7:62:119:ARG:HE	1.63	0.63
54:1G:661:G:H1	54:1G:744:C:H42	1.47	0.63
3:22:121:ALA:HB2	3:22:198:VAL:HG21	1.81	0.63
35:78:114:ILE:HD11	35:78:130:PHE:CD2	2.31	0.62
25:1H:392:C:OP1	60:1H:3597:HOH:O	2.16	0.62
25:1H:2151:G:H2'	25:1H:2152:G:H8	1.61	0.62
45:H8:152:ALA:HB3	45:H8:167:PRO:HA	1.81	0.62
25:1H:1496:A:H8	25:1H:1577:C:HO2'	1.46	0.62
2:12:5:ILE:HG12	2:12:6:THR:HG22	1.80	0.62
38:65:101:LEU:O	38:65:105:ALA:N	2.29	0.62
25:14:662:G:H5'	35:35:15:ARG:HA	1.81	0.62
25:14:2375:G:N2	25:14:2378:A:OP2	2.28	0.62
20:BI:89:ARG:HH21	20:BI:104:LEU:HD11	1.64	0.62
36:88:39:PRO:HA	36:88:97:VAL:O	1.99	0.62
1:13:1097:C:O2'	1:13:1169:A:N3	2.26	0.62
25:1H:2543:G:H2'	25:1H:2544:G:C8	2.34	0.62
25:1H:1434:A:H61	25:1H:1558:A:H62	1.44	0.62
25:1H:1970:A:OP1	60:1H:3751:HOH:O	2.15	0.62
3:22:91:LEU:HD11	3:22:101:LEU:HD12	1.80	0.62
53:Q8:41:ILE:HA	53:Q8:43:GLN:N	2.13	0.62
1:13:446:G:H1	1:13:488:C:H42	1.45	0.62
35:78:18:ARG:O	35:78:18:ARG:HG3	2.00	0.62
13:4I:99:ARG:O	13:4I:101:GLN:NE2	2.31	0.62
27:11:147:LEU:HD22	27:11:155:LEU:HD11	1.81	0.62
25:1H:2688:U:H5	25:1H:2720:U:OP2	1.82	0.62
53:Q8:62:LEU:HB3	53:Q8:63:PRO:HD2	1.80	0.62
25:1H:2635:C:H5"	28:21:79:ARG:CZ	2.29	0.62
54:1G:1241:G:OP1	7:62:35:LYS:NZ	2.33	0.62
25:1H:193:U:H5	60:1H:3581:HOH:O	1.82	0.62
35:78:50:ARG:HD2	53:Q8:7:HIS:NE2	2.14	0.62
40:C8:95:LEU:C	40:C8:97:ASP:H	2.03	0.62
3:22:47:LEU:HG	3:22:50:ALA:HB3	1.81	0.62
36:45:36:ALA:HB2	36:45:103:MET:SD	2.39	0.62
1:13:667:G:H4'	15:6I:51:HIS:CE1	2.34	0.62
50:M8:36:CYS:SG	50:M8:38:LYS:HB2	2.39	0.62
54:1G:983:A:H2	54:1G:984:C:C6	2.18	0.62
41:95:35:LEU:HB3	41:95:37:VAL:CG1	2.29	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:95:65:GLY:H	41:95:91:TYR:HB3	1.65	0.62
25:1H:654(B):C:H2'	25:1H:654(C):G:C8	2.35	0.62
54:1G:1305:G:N2	54:1G:1331:G:O2'	2.32	0.62
25:1H:1316:U:H2'	25:1H:1317:A:C8	2.34	0.62
4:32:150:GLU:HA	4:32:153:ARG:HG2	1.80	0.62
44:C5:47:LYS:HA	44:C5:60:PHE:HD2	1.64	0.62
25:14:107:C:H2'	25:14:108:U:H6	1.64	0.62
27:11:164:GLN:NE2	27:11:166:GLN:OE1	2.29	0.62
25:1H:2776:A:H4'	25:1H:2777:G:H5"	1.81	0.62
17:8I:29:HIS:CD2	17:8I:30:PRO:HD2	2.34	0.62
21:1F:10:ARG:HG3	21:1F:13:ILE:HD12	1.80	0.62
34:25:115:VAL:HG13	34:25:121:VAL:HG21	1.80	0.62
25:1H:2632:A:HO2'	25:1H:2811:G:HO2'	1.37	0.62
25:14:780:G:N2	25:14:783:A:H62	1.96	0.62
1:13:974:A:OP2	14:5I:29:ARG:NH2	2.32	0.62
47:F5:86:SER:N	47:F5:87:PRO:HD2	2.14	0.62
56:2L:24:C:H2'	56:2L:25:U:C6	2.33	0.62
13:4A:95:GLY:HA2	13:4A:110:ARG:HH21	1.64	0.62
25:1H:1967:C:O3'	60:1H:3762:HOH:O	2.16	0.62
35:35:65:ARG:HB2	35:35:65:ARG:HH11	1.65	0.62
1:13:1120:G:H2'	1:13:1121:U:C6	2.35	0.62
43:B5:24:GLY:HA3	43:B5:82:GLN:NE2	2.14	0.62
11:2I:22:HIS:HB3	11:2I:29:ILE:HG23	1.79	0.62
25:1H:931:G:O2'	49:L8:24:LYS:NZ	2.30	0.62
54:1G:589:C:H42	54:1G:650:G:H1	1.47	0.62
30:49:104:GLU:HG2	50:I5:23:GLU:HG2	1.81	0.62
25:1H:2296:U:OP2	38:A8:9:ARG:NH2	2.24	0.62
28:29:37:ARG:HE	28:29:42:ASP:CG	2.02	0.62
2:1E:120:ALA:O	2:1E:124:SER:OG	2.11	0.62
45:D5:77:ASP:OD1	45:D5:80:ARG:NH1	2.30	0.62
2:1E:184:VAL:H	2:1E:198:ASP:HB2	1.65	0.62
17:8A:66:SER:O	17:8A:70:ARG:NH1	2.33	0.62
25:1H:2564:A:C2	25:1H:2647:U:H4'	2.35	0.62
25:1H:1512:G:H2'	25:1H:1513:C:C6	2.35	0.62
25:1H:1466:G:N3	25:1H:1547:C:N4	2.48	0.62
1:13:737:A:H2'	1:13:738:C:C6	2.35	0.62
31:59:168:PRO:HB2	31:59:170:ARG:HD3	1.80	0.62
28:29:76:ARG:HG3	28:29:195:LEU:HD22	1.80	0.62
25:1H:46:C:O2	25:1H:179:G:N2	2.26	0.62
41:95:44:LYS:O	41:95:46:VAL:HG12	2.00	0.62
54:1G:1330:U:H5'	13:4A:24:GLY:H	1.65	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:62:69:VAL:HG21	7:62:104:LEU:HD11	1.80	0.62
35:35:23:PRO:HB3	41:95:80:GLN:HG3	1.81	0.62
56:2L:44:A:H2'	56:2L:45:A:H8	1.64	0.62
12:3A:52:LEU:O	12:3A:54:LYS:NZ	2.32	0.62
54:1G:1443:G:H3'	54:1G:1446:A:H5"	1.82	0.62
31:51:4:ILE:HG13	31:51:6:ARG:NH1	2.15	0.62
53:M5:30:ARG:O	53:M5:32:LEU:N	2.33	0.62
25:1H:1386:C:H2'	25:1H:1387:C:C6	2.33	0.62
54:1G:411:A:H62	54:1G:413:G:N2	1.96	0.62
22:3K:24:G:H2'	22:3K:25:G:C8	2.32	0.62
25:1H:71:A:H4'	25:1H:72:U:H5"	1.81	0.62
25:14:882:G:H1	25:14:894:C:N4	1.98	0.62
54:1G:1400:C:N4	56:2L:35:C:H1'	2.15	0.62
10:1A:4:ILE:HG12	10:1A:100:THR:HG22	1.81	0.62
50:I5:14:ILE:HD11	50:I5:33:VAL:HG21	1.80	0.62
25:14:2689:U:H5"	25:14:2713:A:C2	2.34	0.62
25:1H:1449:A:H5'	25:1H:1449(A):G:OP2	1.99	0.62
30:49:40:ASN:HB2	30:49:91:ARG:HG3	1.82	0.62
32:61:67:ARG:O	32:61:71:ILE:HG22	2.00	0.62
25:14:2245:U:H5"	25:14:2246:G:H5'	1.80	0.62
33:15:47:ALA:HB2	33:15:112:LEU:HD21	1.80	0.62
34:25:68:GLU:OE2	34:25:78:ARG:NH1	2.32	0.62
41:95:70:ILE:N	41:95:86:GLY:O	2.19	0.62
25:1H:2101:G:H1	25:1H:2188:C:H42	1.45	0.62
3:2E:24:ALA:HB1	3:2E:28:GLN:HB2	1.80	0.62
25:1H:2334:G:H5'	38:A8:9:ARG:HG2	1.80	0.62
25:14:1021:A:H62	25:14:1141:U:H3	1.46	0.62
25:14:39:C:H2'	25:14:40:C:H6	1.65	0.62
25:1H:528:A:OP2	33:58:114:ARG:NH1	2.33	0.62
25:14:823:G:H2'	25:14:824:A:C8	2.34	0.62
11:2A:18:ARG:HD2	11:2A:83:ILE:HD11	1.80	0.62
54:1G:690:G:H22	11:2A:55:LYS:HE2	1.65	0.62
25:14:895:U:H4'	25:14:896:A:C5	2.35	0.62
45:D5:30:ASN:HA	45:D5:89:PHE:HE1	1.64	0.62
25:14:574:C:N3	28:29:145:LYS:NZ	2.40	0.62
25:1H:573:G:O2'	25:1H:574:C:H3'	2.00	0.62
38:65:36:TYR:HA	38:65:52:SER:HB3	1.82	0.62
7:6E:62:PHE:CD1	7:6E:124:LEU:HD11	2.34	0.62
54:1G:410:G:N1	54:1G:431:A:OP2	2.27	0.62
25:1H:1437:C:HO2'	25:1H:1518:C:HO2'	1.42	0.62
2:12:137:ARG:NH2	2:12:141:GLU:HB2	2.15	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:1G:921:U:O2	5:42:19:MET:HB3	2.00	0.62
25:14:706:A:OP1	27:19:7:LYS:NZ	2.33	0.62
1:13:445:G:H1	1:13:489:C:H42	1.48	0.62
25:1H:2698:U:H2'	25:1H:2699:C:C6	2.35	0.62
25:1H:259:G:HO2'	25:1H:621:A:HO2'	1.43	0.61
54:1G:1126:U:H5'	54:1G:1127:G:C8	2.34	0.61
25:1H:2125:G:N2	25:1H:2172:U:OP1	2.32	0.61
25:1H:2392:A:P	53:Q8:30:ARG:HH22	2.23	0.61
1:13:157:G:H2'	1:13:158:G:C8	2.34	0.61
10:1A:6:ILE:HG22	10:1A:98:ILE:HG12	1.80	0.61
7:6E:16:LEU:HD12	9:8E:42:ARG:HA	1.82	0.61
25:14:2693:A:H2'	25:14:2694:G:H8	1.64	0.61
16:7I:26:ARG:HE	16:7I:31:LYS:HB3	1.65	0.61
39:B8:54:ARG:HA	39:B8:59:THR:HB	1.82	0.61
54:1G:490:G:OP2	4:32:132:ARG:NH2	2.26	0.61
44:G8:83:THR:HG22	44:G8:84:ARG:H	1.65	0.61
25:14:2115:G:N2	25:14:2172:U:H3	1.98	0.61
54:1G:1054:C:O2'	54:1G:1055:A:O5'	2.16	0.61
1:13:1182:G:C4'	1:13:1183:A:H5'	2.29	0.61
39:75:56:GLY:O	39:75:59:THR:HG23	1.99	0.61
45:D5:10:ARG:NH2	45:D5:26:GLY:O	2.33	0.61
49:L8:6:VAL:HG12	49:L8:54:VAL:HG21	1.79	0.61
9:82:53:VAL:HG23	9:82:55:ALA:H	1.65	0.61
13:4I:82:MET:O	13:4I:84:ILE:N	2.33	0.61
25:14:1784:A:H4'	25:14:1785:A:O5'	2.00	0.61
25:1H:2321:G:H5"	25:1H:2322:A:OP2	2.00	0.61
53:Q8:21:LYS:CG	53:Q8:22:VAL:H	2.13	0.61
45:H8:73:GLN:HB2	45:H8:87:ASP:HB2	1.82	0.61
15:6I:16:ALA:HB1	15:6I:21:ASP:HB3	1.80	0.61
27:11:112:GLN:O	27:11:115:GLN:HG3	2.00	0.61
20:BA:75:ASN:N	20:BA:75:ASN:OD1	2.33	0.61
1:13:412:A:H4'	1:13:413:G:O5'	2.00	0.61
31:59:119:GLU:O	31:59:140:LYS:NZ	2.23	0.61
11:2A:27:ASN:OD1	11:2A:28:THR:N	2.32	0.61
25:1H:918:A:N3	26:16:80:U:O2'	2.32	0.61
25:14:566:U:H5"	35:35:29:LYS:HE3	1.82	0.61
25:1H:2313:C:H4'	30:41:91:ARG:HG3	1.81	0.61
54:1G:1004:A:OP1	54:1G:1024:G:N1	2.32	0.61
5:42:79:GLU:HB3	5:42:92:LYS:HG3	1.81	0.61
54:1G:888:G:O2'	54:1G:1488:G:O2'	2.07	0.61
1:13:738:C:OP1	6:5E:2:ARG:NH1	2.33	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:19:16:MET:HE1	27:19:208:LYS:HE2	1.81	0.61
4:32:153:ARG:NH1	4:32:181:MET:SD	2.72	0.61
12:3I:117:ARG:HB3	12:3I:122:THR:HB	1.81	0.61
25:14:1297:C:H3'	60:14:3433:HOH:O	2.01	0.61
6:52:11:ASN:HB3	6:52:14:LEU:HD13	1.82	0.61
11:2I:33:THR:HA	11:2I:39:PRO:HA	1.81	0.61
54:1G:209:U:H1'	54:1G:210:U:OP1	2.00	0.61
25:14:1971:A:OP1	60:14:3501:HOH:O	2.16	0.61
5:4E:126:ARG:HG3	5:4E:126:ARG:HH11	1.65	0.61
25:1H:2115:G:H1'	25:1H:2171:A:N1	2.14	0.61
25:1H:2151:G:H2'	25:1H:2152:G:C8	2.35	0.61
31:51:137:ASP:OD1	31:51:138:LYS:N	2.32	0.61
25:14:848:G:H2'	25:14:849:A:C8	2.35	0.61
33:15:41:ASP:HB3	33:15:48:MET:HE1	1.80	0.61
22:3K:18:G:O6	22:3K:65:C:N4	2.27	0.61
3:2E:177:THR:HB	3:2E:180:ALA:HB2	1.83	0.61
29:39:116:ASP:OD2	35:35:1:MET:HB2	2.00	0.61
20:BA:64:ASP:OD1	20:BA:81:LYS:HD2	2.01	0.61
25:14:2185:C:H2'	25:14:2186:G:H8	1.65	0.61
26:1J:13:A:N1	26:1J:69:G:O2'	2.28	0.61
54:1G:1298:C:H4'	54:1G:1299:A:C8	2.36	0.61
44:G8:82:PRO:HB3	44:G8:99:CYS:HB3	1.82	0.61
13:4I:23:TYR:CD1	13:4I:67:GLU:HA	2.35	0.61
25:14:2292:C:OP1	38:65:17:ARG:NH2	2.34	0.61
5:42:101:ILE:O	5:42:120:THR:OG1	2.18	0.61
1:13:276:G:O3'	17:8I:68:ARG:NH1	2.33	0.61
45:H8:69:THR:HG22	45:H8:90:VAL:HG22	1.82	0.61
25:1H:1165:U:H2'	25:1H:1166:C:C6	2.35	0.61
43:F8:1:MET:C	43:F8:3:THR:H	2.03	0.61
1:13:474:G:H2'	1:13:475:G:C8	2.35	0.61
25:14:830:G:H4'	25:14:831:G:OP2	1.99	0.61
28:29:81:ILE:HG21	28:29:84:PHE:HD2	1.65	0.61
17:8I:22:LEU:HD11	17:8I:39:SER:HB3	1.82	0.61
20:BA:51:GLU:HA	20:BA:54:LYS:HB3	1.83	0.61
40:85:90:VAL:HG22	41:95:39:LEU:HB3	1.82	0.61
36:45:31:ASP:HA	36:45:134:ARG:HE	1.64	0.61
39:75:92:GLY:HA2	39:75:117:ASP:H	1.65	0.61
47:J8:7:ILE:HD12	47:J8:62:VAL:HG11	1.83	0.61
25:14:2420:C:N4	53:M5:31:HIS:HB3	2.15	0.61
35:78:59:LEU:HD22	35:78:60:MET:N	2.16	0.61
25:1H:1178:C:H4'	25:1H:1179:C:OP1	2.01	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:AI:50:ALA:HB1	19:AI:57:HIS:HB3	1.81	0.61
1:13:1453:G:H2'	20:BI:39:LYS:HE2	1.81	0.61
25:1H:1728:G:H8	25:1H:1732:A:H62	1.46	0.61
25:14:882:G:H1	25:14:894:C:H42	1.49	0.61
1:13:1292:U:H2'	1:13:1293:G:H8	1.65	0.61
45:H8:57:ILE:HG22	45:H8:59:LEU:H	1.66	0.61
27:19:10:THR:OG1	27:19:13:ARG:HB2	2.01	0.61
2:12:185:ILE:HG23	2:12:199:TYR:HB2	1.82	0.61
35:35:128:HIS:HA	35:35:147:LEU:HA	1.82	0.61
39:75:62:THR:HG22	39:75:75:ILE:HG12	1.82	0.61
25:1H:297:C:OP1	44:G8:86:ARG:NH2	2.31	0.61
42:E8:13:SER:HB3	42:E8:16:LYS:HG3	1.81	0.61
25:1H:1332:G:H21	25:1H:1610:A:H8	1.49	0.61
1:13:542:G:H5'	4:3E:41:GLY:HA3	1.83	0.61
27:19:210:GLY:O	27:19:213:ARG:N	2.34	0.61
25:14:2785:C:O2'	28:29:64:LYS:HE2	2.01	0.61
41:95:85:LYS:HG3	41:95:87:HIS:H	1.65	0.61
53:Q8:34:TRP:HE3	53:Q8:35:GLN:H	1.48	0.61
35:35:85:LEU:HA	35:35:88:LEU:HD23	1.82	0.61
25:14:1666:G:OP1	34:25:66:LYS:HD3	2.01	0.61
38:A8:25:ARG:NH1	38:A8:42:ASP:OD2	2.33	0.61
25:1H:833:U:O2	35:78:55:ARG:NH2	2.30	0.61
27:19:37:LEU:HA	27:19:38:LYS:CG	2.30	0.61
36:45:27:VAL:HG13	45:D5:81:ARG:HH22	1.65	0.61
25:1H:1221:C:H2'	25:1H:1222:C:H6	1.65	0.61
27:11:37:LEU:HD22	27:11:62:TYR:HB2	1.82	0.61
25:14:1443:G:H1	25:14:1548:C:H42	1.49	0.61
4:32:24:GLU:OE2	4:32:24:GLU:N	2.34	0.61
25:1H:2168:G:H3'	25:1H:2168:G:N3	2.15	0.61
54:1G:991:U:O2	54:1G:993:G:H8	1.83	0.61
35:78:60:MET:H	53:Q8:13:ARG:HD2	1.65	0.61
22:1K:27:A:H3'	22:1K:28:G:H8	1.65	0.61
35:35:146:VAL:HG13	35:35:147:LEU:HD22	1.82	0.61
25:1H:1805:U:O2	27:11:50:THR:HB	2.01	0.61
25:14:289:A:H3'	25:14:290:G:H8	1.65	0.61
15:6A:33:THR:HG21	15:6A:85:LEU:HD22	1.81	0.61
1:13:1376:U:OP1	7:6E:98:SER:OG	2.19	0.61
20:BA:33:ILE:O	20:BA:37:SER:OG	2.18	0.61
25:14:403:U:H4'	25:14:404:C:H5'	1.82	0.61
10:1I:6:ILE:HG22	10:1I:98:ILE:HG13	1.82	0.61
4:32:82:ALA:HB1	4:32:89:THR:HA	1.82	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:13:748:C:H6	1:13:748:C:O5'	1.83	0.61
11:2A:101:SER:OG	11:2A:102:GLY:N	2.31	0.61
1:13:141:A:H1'	1:13:182:U:O2	2.01	0.61
28:21:176:ILE:HB	28:21:181:LEU:HB2	1.82	0.61
54:1G:559:A:H4'	54:1G:560:U:C5'	2.29	0.61
26:1J:94:C:H2'	26:1J:95:U:C6	2.36	0.61
4:3E:30:LYS:HB3	4:3E:32:ALA:H	1.66	0.61
27:19:93:ALA:HB3	27:19:105:ILE:HG22	1.83	0.61
52:L5:35:ARG:HG3	52:L5:42:LEU:HD11	1.82	0.61
35:35:39:LYS:HA	35:35:45:LEU:HD13	1.83	0.61
45:H8:33:LEU:HD11	45:H8:35:ARG:HG3	1.82	0.61
25:14:213:A:OP2	60:14:3798:HOH:O	2.16	0.61
25:14:2537:U:H2'	25:14:2538:C:C6	2.36	0.61
34:68:113:LYS:O	34:68:117:LEU:HG	2.01	0.61
25:14:132:G:H1	25:14:147:U:H3	1.47	0.61
30:49:11:TYR:O	30:49:16:ARG:N	2.32	0.61
54:1G:998(A):C:O2	54:1G:1042:G:N2	2.22	0.61
20:BI:57:ARG:NH1	20:BI:102:GLY:HA2	2.13	0.60
22:1K:85:A:H8	25:1H:2583:G:N2	1.98	0.60
1:13:872:A:C5	1:13:874:G:C8	2.89	0.60
25:14:1417:C:H42	25:14:1581:G:H1	1.48	0.60
25:1H:70:G:H21	25:1H:71:A:H62	1.49	0.60
25:14:739:G:OP1	60:14:3628:HOH:O	2.16	0.60
29:39:155:LEU:HD23	29:39:186:ILE:HD13	1.82	0.60
31:51:152:ARG:HG3	31:51:161:GLY:HA2	1.82	0.60
25:14:2557:G:H2'	25:14:2558:C:H6	1.65	0.60
29:31:39:TRP:O	29:31:43:LYS:HG2	2.00	0.60
25:1H:270:A:OP2	25:1H:270(Y):G:N2	2.30	0.60
30:49:125:PHE:CZ	30:49:170:ARG:HD3	2.36	0.60
25:1H:1799:G:H5'	25:1H:1819:A:H61	1.66	0.60
27:11:71:ASP:HB2	27:11:103:ARG:HH22	1.64	0.60
7:6E:5:ARG:HB2	7:6E:7:ALA:H	1.65	0.60
25:14:2057:A:H2'	25:14:2058:A:O4'	2.01	0.60
54:1G:983:A:N1	54:1G:1222:G:N2	2.49	0.60
12:3A:46:LYS:HD2	12:3A:94:PRO:HD3	1.83	0.60
54:1G:827:U:H2'	54:1G:859:A:H61	1.66	0.60
4:32:73:ARG:O	4:32:77:ASN:ND2	2.31	0.60
22:1K:1:G:H2'	22:1K:2:G:H8	1.66	0.60
1:13:757:U:H5"	1:13:822:C:O2	2.00	0.60
31:51:20:ALA:HB1	31:51:21:PRO:HD2	1.82	0.60
25:1H:270(K):C:C4	25:1H:270(M):U:H5"	2.35	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:13:1014:A:C2	1:13:1219:U:H1'	2.36	0.60
41:95:22:VAL:HG22	41:95:23:GLU:H	1.66	0.60
10:1I:61:GLU:OE2	14:5I:45:ARG:NH1	2.33	0.60
28:29:12:THR:HG21	39:75:11:GLU:OE2	2.01	0.60
1:13:1178:G:H5"	9:8E:93:ARG:HH21	1.66	0.60
35:35:55:ARG:HG2	35:35:56:SER:H	1.66	0.60
40:C8:50:ARG:HH12	41:D8:72:VAL:HG23	1.66	0.60
25:14:259:G:N2	25:14:621:A:H8	1.99	0.60
53:Q8:26:LYS:HG3	53:Q8:41:ILE:HG23	1.83	0.60
54:1G:407:G:OP1	4:32:115:ARG:NE	2.34	0.60
33:15:15:LEU:HD23	33:15:134:ARG:HD2	1.83	0.60
32:69:76:THR:HG21	32:69:140:LEU:HA	1.84	0.60
22:1K:49:A:H2'	22:1K:50:U:H5"	1.84	0.60
54:1G:1111:A:H2'	54:1G:1112:C:C6	2.35	0.60
10:1I:40:LEU:HB2	10:1I:69:ASN:HB2	1.82	0.60
19:AI:25:LYS:HD3	19:AI:27:GLU:HB2	1.83	0.60
32:69:93:THR:O	32:69:97:ILE:HG13	2.01	0.60
2:1E:31:TYR:O	2:1E:42:ILE:HD12	2.01	0.60
5:4E:153:LYS:HD3	5:4E:154:GLY:N	2.13	0.60
1:13:1346:A:H5"	9:8E:120:ARG:NH1	2.16	0.60
29:31:67:GLN:HG3	29:31:67:GLN:O	2.00	0.60
47:F5:85:LEU:HA	47:F5:87:PRO:HD2	1.83	0.60
7:62:15:ASP:HB3	7:62:19:GLY:H	1.66	0.60
54:1G:1095:U:P	54:1G:1108:G:H1	2.24	0.60
1:13:637:G:H2'	1:13:638:G:C8	2.34	0.60
45:D5:97:GLU:HB3	45:D5:125:LEU:HD11	1.82	0.60
25:14:796:C:H2'	25:14:797:C:C6	2.37	0.60
25:1H:2427:C:H5"	25:1H:2428:G:OP1	2.02	0.60
25:14:1064:C:O2	25:14:1074:G:N2	2.34	0.60
4:3E:150:GLU:HG3	4:3E:153:ARG:HD2	1.83	0.60
56:2L:22:A:N6	56:2L:47:G:H2'	2.15	0.60
25:1H:2635:C:OP1	28:21:79:ARG:NH2	2.34	0.60
53:Q8:7:HIS:O	53:Q8:7:HIS:CG	2.54	0.60
44:C5:19:LYS:CG	44:C5:20:TYR:H	2.13	0.60
25:14:2331:G:H4'	46:E5:43:THR:H	1.66	0.60
1:13:591:U:H2'	1:13:592:G:C8	2.36	0.60
1:13:464:G:C6	1:13:466:C:H5'	2.37	0.60
25:1H:1332:G:C8	25:1H:1332:G:H5'	2.37	0.60
27:19:37:LEU:HA	27:19:38:LYS:HG2	1.83	0.60
25:1H:265:A:C8	25:1H:266:G:H1'	2.36	0.60
29:31:64:ILE:HG23	29:31:65:TRP:CD1	2.36	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:13:1044:A:C5	1:13:1045:C:H1'	2.36	0.60
4:32:71:SER:HB3	4:32:74:GLN:HG3	1.82	0.60
46:E5:53:MET:HG3	46:E5:59:LEU:CD2	2.32	0.60
25:1H:1111:A:H5'	31:51:3:ARG:HD2	1.82	0.60
25:14:1568:G:H5"	27:19:61:LEU:HD22	1.83	0.60
25:1H:1607:C:H4'	25:1H:1608:A:O5'	2.01	0.60
40:C8:92:ARG:CZ	40:C8:96:ALA:HA	2.32	0.60
40:C8:108:GLU:HG3	41:D8:44:LYS:HE3	1.84	0.60
36:45:25:ASP:HB3	36:45:102:VAL:H	1.65	0.60
25:14:2748:A:H2'	25:14:2749:A:H8	1.67	0.60
38:65:87:PHE:CE1	38:65:102:ALA:HB2	2.35	0.60
1:13:688:G:H2'	1:13:689:C:H6	1.65	0.60
25:14:1060:U:H4'	25:14:1061:U:H5"	1.84	0.60
27:19:2:ALA:HB3	27:19:20:ASP:HB2	1.84	0.60
29:31:181:LEU:HB2	29:31:205:ARG:HH12	1.66	0.60
28:21:79:ARG:HD2	28:21:79:ARG:N	2.16	0.60
25:1H:1568:G:OP1	27:11:63:ARG:NH1	2.27	0.60
38:65:36:TYR:HE2	38:65:54:LEU:HD22	1.66	0.60
54:1G:1326:C:H2'	54:1G:1327:C:C6	2.36	0.60
54:1G:1177:G:O2'	54:1G:1178:G:O4'	2.20	0.60
25:14:570:G:OP1	60:14:3577:HOH:O	2.16	0.60
8:72:31:PHE:HZ	8:72:134:ILE:HD11	1.67	0.60
54:1G:318:G:H1	54:1G:335:C:H42	1.50	0.60
47:F5:51:VAL:HG23	47:F5:58:ILE:HB	1.82	0.60
1:13:1366:C:H2'	1:13:1367:C:H6	1.66	0.60
30:41:130:ASN:HB3	30:41:160:VAL:HA	1.82	0.60
17:8I:89:LEU:O	17:8I:93:GLN:N	2.31	0.60
38:65:34:HIS:ND1	38:65:53:SER:OG	2.32	0.60
31:51:101:ARG:NH1	31:51:122:THR:OG1	2.34	0.60
40:C8:98:LEU:HD11	41:D8:4:ILE:HD11	1.83	0.60
25:14:1416:G:HO2'	25:14:1417:C:H6	1.50	0.60
2:12:9:GLU:OE1	2:12:217:ARG:NH2	2.32	0.60
22:3K:19:C:H2'	22:3K:20:C:H4'	1.83	0.60
44:G8:30:VAL:HG22	44:G8:37:VAL:HG12	1.83	0.60
25:14:1030:G:OP2	36:45:128:LYS:HE2	2.02	0.60
29:39:63:LYS:HG3	29:39:75:HIS:O	2.02	0.60
1:13:877:C:OP1	8:7E:88:LYS:NZ	2.32	0.60
8:7E:29:SER:HB3	8:7E:32:LYS:HE3	1.84	0.60
48:G5:65:ASN:HB3	48:G5:69:ARG:HH21	1.66	0.60
38:65:74:ALA:HB1	38:65:107:GLU:CB	2.32	0.60
25:14:1678:G:H22	25:14:1989:G:N2	1.99	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:62:115:ARG:HB3	7:62:118:VAL:HG13	1.83	0.60
55:1L:11:C:H2'	55:1L:12:C:C6	2.36	0.60
1:13:1074:G:O2'	1:13:1101:A:N1	2.25	0.60
54:1G:501:C:OP1	12:3A:117:ARG:NH2	2.27	0.60
25:14:1952:A:C6	34:25:22:ILE:HD11	2.37	0.60
34:25:119:PRO:HB2	39:75:68:TYR:CE2	2.36	0.60
25:14:127:A:H5"	25:14:128:C:C6	2.36	0.60
54:1G:1047:G:H1	54:1G:1210:C:H42	1.47	0.60
25:1H:1219:G:OP2	40:C8:19:LYS:NZ	2.34	0.60
53:M5:54:GLU:HG3	53:M5:57:ARG:NH1	2.17	0.60
25:1H:459:U:H2'	25:1H:460:A:H8	1.67	0.60
40:C8:91:ASP:HA	40:C8:92:ARG:HB2	1.83	0.60
25:14:67:U:H2'	25:14:68:G:H8	1.66	0.60
1:13:601:C:H2'	1:13:602:A:C8	2.36	0.60
13:4I:3:ARG:HD3	13:4I:7:VAL:HG13	1.84	0.60
25:1H:1786:A:H1'	25:1H:1938:A:N6	2.17	0.60
29:31:103:LYS:HA	29:31:106:ARG:HG3	1.84	0.60
12:3I:70:ILE:HD13	12:3I:77:LEU:HD12	1.82	0.60
22:1K:58:G:O6	22:1K:74:C:N4	2.29	0.60
25:14:588:U:H2'	25:14:589:C:C6	2.36	0.60
25:1H:2129:C:N3	25:1H:2160:G:N2	2.49	0.60
1:13:643:C:H2'	1:13:644:G:H8	1.66	0.60
56:2L:48:U:O2'	56:2L:49:C:OP2	2.17	0.60
1:13:1177:G:OP1	1:13:1177:G:H4'	2.02	0.59
1:13:963:G:N2	1:13:972:C:N3	2.37	0.59
1:13:1145:C:H4'	1:13:1146:A:C8	2.37	0.59
25:1H:2820:A:O5'	37:98:4:LEU:HD23	2.02	0.59
40:C8:69:CYS:SG	40:C8:79:PHE:HD2	2.25	0.59
55:1L:9:U:H5"	55:1L:11:C:H5	1.67	0.59
29:39:123:LEU:HA	29:39:192:LEU:O	2.00	0.59
54:1G:129(A):G:C6	54:1G:188:U:H4'	2.36	0.59
25:14:2557:G:H2'	25:14:2558:C:C6	2.37	0.59
55:1L:75:C:O2'	55:1L:76:C:OP1	2.20	0.59
1:13:1259:C:N4	1:13:1260:C:O2	2.34	0.59
25:14:329:G:OP2	44:C5:71:LYS:HE3	2.02	0.59
4:3E:91:SER:HA	4:3E:94:LEU:HD12	1.82	0.59
25:14:2611:U:H5'	25:14:2611:U:H6	1.67	0.59
25:14:1427:A:H4'	25:14:1428:C:O4'	2.02	0.59
47:F5:49:VAL:HG11	47:F5:70:VAL:HG11	1.82	0.59
1:13:730:G:C5	1:13:731:G:H1'	2.37	0.59
25:1H:2593:U:O2'	25:1H:2594:C:H5'	2.02	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:14:666:G:H5"	35:35:47:ASP:O	2.01	0.59
25:1H:818:G:H4'	25:1H:838:C:O3'	2.03	0.59
25:1H:1406:U:H2'	25:1H:1407:C:C6	2.37	0.59
21:1B:9:ARG:HG3	21:1B:10:ARG:H	1.66	0.59
1:13:277:C:P	17:8I:68:ARG:HH12	2.25	0.59
11:2I:18:ARG:NH2	11:2I:35:PRO:O	2.35	0.59
43:B5:5:TYR:CZ	48:G5:30:ARG:HG3	2.37	0.59
25:1H:1441:G:H2'	25:1H:1442:G:H8	1.67	0.59
1:13:4:U:O4	8:7E:105:ARG:HG2	2.01	0.59
25:1H:1093:G:O2'	25:1H:1099:G:N2	2.35	0.59
25:14:1482:U:H3	25:14:1512:G:H1	1.50	0.59
35:35:27:HIS:HB3	35:35:32:THR:HG23	1.84	0.59
54:1G:790:A:H2'	54:1G:791:G:C8	2.37	0.59
45:H8:128:VAL:HA	45:H8:161:VAL:HG11	1.84	0.59
25:1H:1187:G:OP2	60:1H:3688:HOH:O	2.16	0.59
25:1H:2057:A:OP2	60:1H:3517:HOH:O	2.17	0.59
25:1H:1899:G:N2	25:1H:1902:C:C5	2.70	0.59
18:9I:47:THR:O	18:9I:83:GLU:N	2.35	0.59
43:B5:8:ILE:HD12	43:B5:8:ILE:H	1.68	0.59
28:29:8:LYS:HG3	28:29:8:LYS:O	2.02	0.59
25:14:1963:U:H5"	25:14:1963:U:O2	2.03	0.59
25:1H:2406:U:OP1	60:1H:3595:HOH:O	2.16	0.59
1:13:1503:A:N1	24:4K:12:A:O2'	2.35	0.59
25:1H:2646:C:OP2	25:1H:2732:G:O2'	2.19	0.59
4:3E:164:ALA:O	4:3E:168:ARG:NH2	2.35	0.59
5:42:42:GLY:HA3	5:42:65:ASN:O	2.02	0.59
5:4E:33:VAL:HG11	5:4E:109:ILE:HA	1.84	0.59
49:L8:10:LYS:NZ	49:L8:15:TYR:OH	2.26	0.59
45:D5:163:LEU:HD23	45:D5:163:LEU:H	1.67	0.59
42:E8:58:ALA:HB1	42:E8:64:MET:HE2	1.83	0.59
25:1H:1358:G:N2	25:1H:1372:U:C5	2.71	0.59
9:82:17:VAL:HA	9:82:63:ILE:HG12	1.84	0.59
55:3L:35:G:H2'	55:3L:36:U:C6	2.37	0.59
25:1H:1021:A:H8	25:1H:1021:A:H3'	1.67	0.59
1:13:1320:C:OP2	19:AI:3:ARG:NH1	2.34	0.59
25:1H:1050:A:C8	25:1H:2751:G:C5	2.91	0.59
25:14:761:A:OP2	60:14:3412:HOH:O	2.17	0.59
25:14:2287:A:C2	25:14:2346:A:H2	2.20	0.59
25:14:2689:U:OP2	25:14:2719:G:N2	2.34	0.59
7:62:69:VAL:HG22	7:62:135:VAL:HG22	1.85	0.59
25:14:832:G:H5'	35:35:45:LEU:HD11	1.84	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:1H:1111:A:N3	25:1H:1112:G:H1'	2.18	0.59
25:14:2280:G:O2'	25:14:2388:A:N1	2.27	0.59
29:39:31:HIS:NE2	29:39:35:GLU:OE1	2.33	0.59
25:14:2103:C:H2'	25:14:2104:G:C8	2.38	0.59
38:65:106:ARG:NH1	38:65:107:GLU:OE1	2.34	0.59
5:42:30:ALA:O	5:42:45:PHE:HA	2.02	0.59
25:1H:1728:G:H2'	25:1H:1731:G:O6	2.03	0.59
22:3K:15:G:H4'	22:3K:15:G:OP1	2.02	0.59
4:3E:108:LEU:HB3	4:3E:110:PHE:HD2	1.66	0.59
48:K8:50:ILE:HD12	48:K8:51:ARG:N	2.17	0.59
25:1H:1537:C:H2'	25:1H:1538:G:O4'	2.03	0.59
28:29:116:VAL:O	28:29:117:MET:HB3	2.03	0.59
22:3K:18:G:H4'	22:3K:19:C:O5'	2.02	0.59
56:2L:44:A:H2'	56:2L:45:A:C8	2.38	0.59
1:13:1260:C:H6	1:13:1260:C:H3'	1.68	0.59
32:61:124:GLY:H	32:61:142:VAL:HG23	1.66	0.59
45:H8:5:LEU:HD23	45:H8:47:VAL:HG21	1.83	0.59
9:82:42:ARG:NH1	9:82:75:ASP:OD1	2.35	0.59
25:14:2602:A:H4'	25:14:2603:G:O5'	2.02	0.59
1:13:138:G:H1	1:13:225:C:H42	1.50	0.59
6:5E:99:ALA:O	18:9I:28:GLU:HA	2.03	0.59
25:14:2062:A:N3	25:14:2062:A:H2'	2.18	0.59
48:K8:55:ARG:O	48:K8:58:ALA:HB3	2.02	0.59
23:2K:20:G:C2	23:2K:58:A:N3	2.70	0.59
22:1K:35:QUO:C4	22:1K:35:QUO:C2	2.69	0.59
38:65:74:ALA:HB1	38:65:107:GLU:HB2	1.85	0.59
25:1H:67:U:H3	25:1H:74:A:H2	1.51	0.59
19:AI:25:LYS:HB3	19:AI:27:GLU:H	1.67	0.59
54:1G:59:A:N1	60:1G:1729:HOH:O	2.32	0.59
45:D5:103:ARG:HB3	45:D5:138:GLU:HA	1.85	0.59
35:78:59:LEU:O	35:78:61:ARG:N	2.35	0.59
25:1H:1591:G:H2'	25:1H:1592:C:C6	2.38	0.59
25:1H:1496:A:H8	25:1H:1577:C:O2'	1.86	0.59
22:3K:75:C:H2'	22:3K:76:C:C6	2.37	0.59
1:13:1291:G:O2'	9:8E:38:GLN:OE1	2.21	0.59
33:15:42:TRP:O	40:85:64:ARG:NH2	2.36	0.59
54:1G:171:A:H2'	54:1G:172:A:C8	2.37	0.59
7:6E:73:MET:HG2	7:6E:90:GLU:HA	1.84	0.59
48:K8:42:GLY:O	48:K8:44:LEU:N	2.36	0.59
50:M8:49:PHE:HD2	50:M8:50:VAL:HG12	1.67	0.59
25:14:2:G:H1	25:14:2901:C:H42	1.51	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:1H:747:U:O2	25:1H:2014:A:H1'	2.01	0.59
25:1H:1754:C:OP1	39:B8:96:ARG:NH1	2.36	0.59
42:E8:12:ILE:HG13	42:E8:42:ARG:HH11	1.67	0.59
54:1G:1228:C:H5'	13:4A:114:ARG:HB3	1.85	0.59
25:1H:2061:G:P	60:1H:3526:HOH:O	2.60	0.59
32:61:55:ALA:HA	32:61:58:LEU:HB3	1.85	0.59
36:88:66:ILE:O	36:88:104:PHE:N	2.36	0.59
10:1A:45:ARG:HB3	10:1A:65:LEU:HB3	1.84	0.59
54:1G:17:U:H2'	54:1G:18:C:C6	2.37	0.59
28:29:103:ASP:OD1	28:29:201:THR:HG23	2.02	0.59
25:1H:1140:C:OP1	33:58:23:LEU:HB3	2.02	0.59
25:14:1657:C:H2'	25:14:1658:C:C6	2.37	0.59
25:14:1331:A:HO2'	25:14:1332:G:H8	1.50	0.59
31:51:10:PRO:HD2	31:51:50:VAL:O	2.02	0.59
29:31:40:GLN:HE22	29:31:182:ASN:HB2	1.67	0.59
55:3L:8:U:H3	55:3L:14:A:N6	2.01	0.59
25:1H:1210:A:C8	25:1H:1210:A:H5'	2.36	0.59
60:14:3407:HOH:O	27:19:244:ARG:NH2	2.36	0.59
25:1H:1061:U:O2'	25:1H:1070:A:O4'	2.18	0.59
25:1H:2439:A:C8	25:1H:2439:A:H5'	2.38	0.59
54:1G:980:C:H3'	54:1G:981:U:C6	2.38	0.59
29:39:113:ALA:HB1	29:39:186:ILE:HG21	1.83	0.59
50:I5:16:CYS:SG	50:I5:20:ASN:ND2	2.72	0.59
31:59:119:GLU:HB3	31:59:140:LYS:HZ2	1.67	0.59
25:14:2111:C:H41	25:14:2147:G:N2	2.01	0.59
1:13:156:G:H1	1:13:165:C:H42	1.51	0.59
25:14:1310:G:OP2	52:L5:9:ARG:NH1	2.36	0.59
25:1H:2635:C:H5"	28:21:79:ARG:NE	2.18	0.59
54:1G:1321:C:H41	54:1G:1322:C:N4	2.00	0.59
13:4I:17:VAL:O	13:4I:20:THR:OG1	2.17	0.59
25:14:1485:G:H1	25:14:1504:C:N4	2.01	0.59
19:AI:5:LEU:HD13	19:AI:10:PHE:HD2	1.68	0.59
3:22:81:GLY:HA2	3:22:85:ARG:HD3	1.85	0.59
29:39:157:VAL:HB	29:39:194:MET:HG3	1.85	0.59
25:14:1061:U:H4'	25:14:1070:A:H1'	1.84	0.59
47:F5:18:ILE:HG13	47:F5:37:ILE:HG23	1.85	0.59
25:14:2795:G:N2	25:14:2799:A:OP2	2.36	0.59
54:1G:607:A:H2'	54:1G:608:A:O4'	2.03	0.59
25:14:1233:C:H2'	25:14:1234:U:H6	1.68	0.59
10:1A:8:LEU:HB3	10:1A:16:LEU:HD22	1.85	0.59
2:12:48:MET:O	2:12:52:GLU:N	2.34	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:8E:21:PRO:HA	9:8E:59:PHE:HA	1.84	0.59
35:35:55:ARG:HG2	35:35:56:SER:N	2.18	0.59
55:3L:22:A:H1'	55:3L:68:A:N6	2.18	0.59
54:1G:920:U:H2'	54:1G:921:U:H6	1.66	0.59
54:1G:1095:U:H5"	54:1G:1109:C:O2	2.02	0.59
9:82:127:LYS:NZ	56:2L:35:C:OP2	2.34	0.59
1:13:736:C:H2'	1:13:737:A:C8	2.38	0.59
37:55:32:GLY:HA2	37:55:116:LEU:HD12	1.85	0.59
29:39:150:GLY:HA2	29:39:172:TRP:CD2	2.38	0.59
54:1G:1478:C:H2'	54:1G:1479:C:H6	1.68	0.59
32:61:1:MET:O	32:61:20:ASP:HA	2.03	0.59
25:14:1316:U:H2'	25:14:1317:A:H8	1.68	0.59
54:1G:1213:A:N6	54:1G:1215:G:N3	2.51	0.59
4:3E:74:GLN:O	4:3E:78:LEU:HD13	2.03	0.59
25:14:2637:U:H2'	25:14:2638:G:O4'	2.03	0.59
34:68:122:LEU:HD23	39:B8:43:GLN:HE22	1.68	0.59
31:59:77:LYS:HE2	31:59:81:GLU:HB3	1.85	0.59
54:1G:1292:U:H2'	54:1G:1293:G:C8	2.38	0.59
7:6E:63:LYS:NZ	7:6E:64:GLN:OE1	2.35	0.59
19:AA:41:VAL:HB	19:AA:44:MET:HG3	1.83	0.58
26:1J:90:C:P	36:45:16:ARG:HH21	2.26	0.58
27:11:26:LYS:O	27:11:26:LYS:HG2	2.03	0.58
54:1G:1191:A:OP1	3:22:3:ASN:ND2	2.35	0.58
25:14:1252:G:N3	40:85:33:ARG:HD2	2.17	0.58
26:16:44:G:O2'	26:16:47:C:N4	2.36	0.58
19:AI:41:VAL:HB	19:AI:42:PRO:HA	1.84	0.58
1:13:411:A:N7	1:13:413:G:N3	2.51	0.58
33:15:42:TRP:HA	33:15:48:MET:SD	2.43	0.58
25:14:2875:C:OP1	39:75:3:ARG:NH2	2.36	0.58
32:69:129:THR:HA	32:69:137:PRO:HA	1.85	0.58
54:1G:1315:U:H2'	54:1G:1316:G:O4'	2.03	0.58
48:G5:8:LYS:HG2	48:G5:9:GLN:N	2.18	0.58
25:1H:2750:A:H3'	31:51:4:ILE:HG21	1.84	0.58
25:1H:1405:U:H2'	25:1H:1406:U:H6	1.65	0.58
29:39:18:ARG:HE	29:39:19:GLU:N	2.01	0.58
2:12:73:THR:HG21	2:12:97:TRP:H	1.68	0.58
27:19:255:LYS:NZ	27:19:255:LYS:O	2.27	0.58
25:14:2808:U:H2'	25:14:2809:A:H8	1.67	0.58
30:41:173:LEU:HD22	30:41:178:PHE:CE2	2.38	0.58
29:39:53:THR:HG22	29:39:56:GLU:HG3	1.86	0.58
54:1G:56:U:H2'	54:1G:57:G:C8	2.38	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:75:77:PRO:HG2	39:75:80:SER:HB2	1.85	0.58
25:14:1014:U:H3	25:14:1148:A:H61	1.51	0.58
23:2K:24:C:H2'	23:2K:25:U:C6	2.39	0.58
12:3I:47:LYS:HA	12:3I:49:ASN:H	1.67	0.58
25:1H:2023:G:H5'	25:1H:2617:C:H4'	1.84	0.58
11:2I:78:GLN:O	11:2I:103:LEU:HA	2.03	0.58
28:21:48:GLN:HG2	28:21:79:ARG:HB3	1.85	0.58
1:13:504:C:OP1	60:13:1839:HOH:O	2.17	0.58
35:35:63:PRO:HG3	53:M5:13:ARG:CZ	2.34	0.58
26:16:44:G:H1'	26:16:47:C:N4	2.18	0.58
25:1H:528:A:C2	25:1H:2043:C:H4'	2.38	0.58
13:4A:44:ARG:HB2	13:4A:46:LYS:HB3	1.86	0.58
54:1G:1443:G:H22	39:75:119:LYS:HB2	1.66	0.58
54:1G:179:A:H2'	54:1G:180:U:H6	1.67	0.58
56:2L:63:C:H2'	56:2L:64:G:C8	2.38	0.58
25:14:1292:U:H2'	25:14:1293:C:C6	2.38	0.58
42:A5:82:LEU:HD22	42:A5:84:ARG:HH22	1.69	0.58
30:49:4:ASP:OD1	30:49:9:ARG:NH2	2.35	0.58
44:G8:68:HIS:HB3	44:G8:71:LYS:HG2	1.84	0.58
25:14:2068:U:H3	25:14:2430:A:H2	1.49	0.58
37:98:12:ARG:HD3	37:98:16:HIS:CG	2.38	0.58
17:8I:57:VAL:HG12	17:8I:76:LEU:HD12	1.85	0.58
26:1J:87:G:H3'	26:1J:88:C:C5'	2.33	0.58
25:1H:674:G:C1'	29:31:74:ARG:HD3	2.32	0.58
35:78:36:LYS:HG3	35:78:37:GLY:H	1.67	0.58
35:78:2:LYS:HE3	35:78:4:SER:OG	2.04	0.58
25:1H:1590:U:H2'	25:1H:1591:G:H8	1.67	0.58
28:29:26:ILE:HG22	28:29:27:LEU:C	2.24	0.58
54:1G:980:C:H3'	54:1G:981:U:H6	1.66	0.58
1:13:859:A:H2'	1:13:860:A:C8	2.37	0.58
25:14:1665:A:H4'	34:25:67:LYS:HB2	1.85	0.58
54:1G:1305:G:HO2'	54:1G:1306:A:H8	1.51	0.58
44:C5:47:LYS:H	44:C5:60:PHE:HB3	1.68	0.58
54:1G:1007:C:O2	54:1G:1022:G:N2	2.26	0.58
25:1H:612:G:N2	25:1H:616:A:O2'	2.37	0.58
9:8E:26:VAL:HA	9:8E:61:ALA:HB3	1.85	0.58
26:16:90:C:H5'	36:88:18:LYS:HA	1.84	0.58
6:5E:20:ALA:HA	6:5E:23:LYS:HE2	1.84	0.58
29:31:37:VAL:HG21	35:78:6:LEU:HD21	1.86	0.58
53:M5:33:ASN:HA	53:M5:34:TRP:HB3	1.86	0.58
29:39:2:LYS:H	29:39:2:LYS:HD3	1.69	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:13:619:U:O2	4:3E:135:LEU:HD22	2.02	0.58
30:49:115:ARG:NH2	30:49:137:GLU:OE1	2.36	0.58
54:1G:1129:C:H4'	54:1G:1130:A:H5'	1.85	0.58
1:13:1159:U:O4'	1:13:1182:G:N2	2.36	0.58
45:H8:30:ASN:HA	45:H8:89:PHE:HE1	1.68	0.58
2:12:87:ARG:NH1	2:12:220:ASP:OD1	2.36	0.58
43:F8:3:THR:HA	43:F8:6:ASP:OD2	2.03	0.58
38:65:25:ARG:NH1	38:65:42:ASP:OD1	2.35	0.58
54:1G:765:G:N2	54:1G:813:U:OP2	2.32	0.58
40:C8:75:ASN:HB3	40:C8:78:THR:H	1.68	0.58
54:1G:1313:U:O4	19:AA:3:ARG:N	2.36	0.58
25:14:579:G:H2'	25:14:580:C:C6	2.38	0.58
25:14:2630:G:H1'	25:14:2894:G:C8	2.38	0.58
25:14:863:A:H2'	25:14:864:G:C8	2.38	0.58
9:8E:128:ARG:NH1	23:2K:34:U:OP2	2.22	0.58
42:E8:4:LYS:HB3	42:E8:106:ILE:HG12	1.85	0.58
55:3L:18:G:O6	55:3L:65:C:N4	2.35	0.58
1:13:1319:A:O2'	1:13:1323:G:N7	2.20	0.58
3:22:44:GLU:HA	3:22:52:LEU:HD13	1.85	0.58
28:29:57:LYS:NZ	28:29:57:LYS:H	2.01	0.58
26:1J:70:C:H2'	26:1J:71:C:H6	1.68	0.58
3:2E:70:VAL:HG12	3:2E:72:LYS:H	1.68	0.58
25:14:2689:U:H5"	25:14:2713:A:H2	1.67	0.58
54:1G:200:G:H1	54:1G:217:C:H42	1.51	0.58
25:14:2185:C:H2'	25:14:2186:G:C8	2.38	0.58
25:1H:1221:C:H2'	25:1H:1222:C:C6	2.37	0.58
25:14:2735:G:H2'	25:14:2736:G:H8	1.66	0.58
54:1G:657:G:N2	15:6A:22:THR:OG1	2.36	0.58
45:D5:40:ASP:HB3	45:D5:43:GLU:HG3	1.86	0.58
25:14:1639:U:H4'	25:14:2699:C:H4'	1.86	0.58
25:1H:1265:A:OP1	25:1H:1265:A:H8	1.87	0.58
55:3L:26:G:H2'	55:3L:27:A:O4'	2.04	0.58
55:3L:35:G:H2'	55:3L:36:U:H6	1.69	0.58
25:14:1210:A:H5'	25:14:1212:G:O4'	2.04	0.58
35:35:49:ARG:O	53:M5:55:ALA:HB1	2.02	0.58
25:14:900:A:H3'	25:14:901:A:C8	2.38	0.58
54:1G:1309:G:O3'	13:4A:77:ASN:ND2	2.36	0.58
39:B8:56:GLY:O	39:B8:59:THR:HG23	2.03	0.58
13:4A:54:VAL:HA	13:4A:57:ARG:HB3	1.85	0.58
45:D5:40:ASP:OD2	45:D5:43:GLU:HG2	2.04	0.58
13:4A:58:GLU:O	13:4A:62:ASN:ND2	2.34	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:14:1085:A:H5'	25:14:1105:U:H1'	1.83	0.58
4:3E:191:ARG:HH12	4:3E:196:LEU:H	1.51	0.58
34:68:19:ILE:HG22	34:68:43:VAL:HA	1.85	0.58
25:14:2016:U:O2	51:J5:7:PRO:HG2	2.02	0.58
54:1G:162:A:O5'	54:1G:162:A:H8	1.87	0.58
2:12:105:PHE:O	2:12:109:SER:N	2.25	0.58
26:1J:16:G:H2'	26:1J:17:C:C6	2.39	0.58
53:Q8:7:HIS:O	53:Q8:7:HIS:ND1	2.37	0.58
25:1H:3:U:OP1	25:1H:2790:A:N6	2.37	0.58
3:22:44:GLU:O	3:22:48:TYR:N	2.36	0.58
53:Q8:31:HIS:ND1	53:Q8:31:HIS:O	2.31	0.58
26:1J:14:U:H5'	26:1J:71:C:H1'	1.84	0.58
1:13:1263:C:H2'	1:13:1264:C:C6	2.37	0.58
25:1H:1465:G:H2'	25:1H:1466:G:H8	1.67	0.58
20:BA:68:LYS:O	20:BA:73:HIS:NE2	2.36	0.58
7:6E:65:ALA:O	7:6E:69:VAL:HG23	2.04	0.58
46:E5:53:MET:HG3	46:E5:59:LEU:HD21	1.85	0.58
25:1H:449:A:OP2	60:1H:3699:HOH:O	2.16	0.58
25:14:491:G:H2'	25:14:492:A:C8	2.39	0.58
54:1G:1014:A:H2'	54:1G:1015:A:C8	2.39	0.58
4:3E:95:GLY:O	4:3E:99:SER:OG	2.20	0.58
44:C5:88:LYS:O	44:C5:89:PHE:HB3	2.04	0.58
25:14:1794:U:H2'	25:14:1795:C:C6	2.39	0.58
44:G8:87:LYS:HD3	44:G8:88:LYS:H	1.68	0.58
25:14:1359:A:N7	25:14:1372:U:O4	2.37	0.58
1:13:1216:G:OP1	14:5I:3:ARG:NH2	2.36	0.58
29:39:5:ALA:H	29:39:19:GLU:HB3	1.69	0.58
25:14:1599:C:H2'	25:14:1600:C:C6	2.38	0.58
25:1H:1055:G:H1'	25:1H:1085:A:C2	2.39	0.58
54:1G:929:G:H1	54:1G:1388:C:H42	1.51	0.58
47:F5:80:LEU:HD12	47:F5:82:LEU:HD11	1.86	0.58
25:1H:1754:C:P	39:B8:96:ARG:HH12	2.27	0.58
25:14:918:A:O2'	26:1J:96:G:N2	2.37	0.58
25:1H:1088:A:H5'	25:1H:1089:G:H5'	1.86	0.58
54:1G:658:G:O6	54:1G:746:A:N6	2.36	0.58
8:7E:17:THR:HG21	8:7E:80:ILE:HG13	1.85	0.58
28:21:2:LYS:NZ	28:21:95:ILE:O	2.23	0.58
25:1H:1296:G:O2'	25:1H:1297:C:H5'	2.03	0.58
9:8E:70:LYS:O	9:8E:74:ILE:HG13	2.04	0.58
5:4E:102:ALA:HB1	5:4E:106:PRO:HG2	1.84	0.58
37:98:20:LEU:HD21	37:98:40:LYS:HD3	1.86	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:H5:10:LYS:NZ	49:H5:15:TYR:OH	2.30	0.58
5:42:75:THR:OG1	5:42:117:ASP:O	2.13	0.58
45:D5:141:VAL:HG11	45:D5:150:LEU:HD13	1.86	0.58
54:1G:522:C:OP2	12:3A:69:TYR:OH	2.20	0.58
54:1G:1119:C:OP2	9:82:9:ARG:NH2	2.37	0.58
28:29:37:ARG:NE	28:29:42:ASP:OD2	2.33	0.58
26:1J:52:A:H62	38:65:33:LYS:HG3	1.69	0.58
25:1H:1021:A:C8	25:1H:1021:A:H3'	2.38	0.58
25:1H:1210:A:OP1	25:1H:1211:U:O2'	2.15	0.58
41:95:85:LYS:HE3	41:95:88:ARG:H	1.68	0.58
33:15:35:ARG:HB2	33:15:42:TRP:CZ3	2.38	0.58
35:78:18:ARG:O	35:78:19:VAL:HG22	2.04	0.58
4:32:82:ALA:HA	4:32:85:LYS:HB2	1.86	0.58
2:12:114:ARG:O	2:12:118:LEU:HG	2.03	0.58
1:13:589:C:H42	1:13:650:G:H1	1.50	0.58
55:1L:28:G:H22	55:1L:45:C:H1'	1.68	0.58
25:14:1864:U:OP1	25:14:2410:G:O2'	2.21	0.58
25:14:868:U:N3	25:14:869:G:N7	2.52	0.58
25:14:1165:U:H2'	25:14:1166:C:C6	2.38	0.58
7:62:26:PHE:O	7:62:30:ILE:HG13	2.03	0.58
46:E5:36:ILE:HD13	46:E5:36:ILE:O	2.04	0.58
35:35:2:LYS:NZ	35:35:4:SER:OG	2.37	0.58
25:1H:85:G:OP2	44:G8:9:LYS:HB2	2.04	0.58
33:58:96:GLU:O	33:58:98:VAL:HG12	2.04	0.57
47:F5:92:LYS:HG3	47:F5:95:LEU:HD12	1.86	0.57
56:2L:10:G:H22	56:2L:27:G:H1'	1.68	0.57
2:1E:59:GLU:HG3	2:1E:225:ALA:HB2	1.86	0.57
23:2K:62:C:H2'	23:2K:63:C:C6	2.39	0.57
39:B8:27:THR:HG23	39:B8:90:GLN:HB3	1.86	0.57
30:41:43:LEU:HB2	30:41:89:GLY:HA2	1.86	0.57
37:98:10:LEU:O	37:98:12:ARG:N	2.36	0.57
25:14:58:G:OP1	43:B5:75:ASP:HB2	2.04	0.57
31:51:119:GLU:OE1	31:51:120:GLY:N	2.28	0.57
25:14:1338:G:N3	25:14:1393:A:H2	2.02	0.57
3:22:21:ARG:HB2	3:22:21:ARG:NH1	2.18	0.57
10:1A:32:ALA:HB2	10:1A:81:THR:HG21	1.86	0.57
25:14:2547:U:O2	34:25:23:ARG:NH2	2.36	0.57
6:5E:75:LEU:HD13	6:5E:79:LEU:HG	1.86	0.57
25:14:2756:U:H1'	25:14:2757:A:H5"	1.86	0.57
25:14:273(C):C:H42	25:14:363(C):G:H1	1.51	0.57
54:1G:617:G:H1	54:1G:623:C:H42	1.51	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:1H:1179:C:H2'	25:1H:1180:C:H6	1.69	0.57
38:65:24:LEU:HB2	38:65:85:VAL:HG12	1.86	0.57
25:14:1678:G:N2	25:14:1989:G:H22	2.02	0.57
25:1H:1728:G:H3'	25:1H:1729:A:C5'	2.33	0.57
15:6A:54:ARG:NH1	15:6A:58:MET:SD	2.77	0.57
1:13:376:G:H5"	16:7I:5:ARG:HD2	1.86	0.57
25:14:706:A:H2'	25:14:707:G:O4'	2.03	0.57
1:13:181:G:HO2'	1:13:182:U:H6	1.50	0.57
35:35:39:LYS:HG3	35:35:45:LEU:HD22	1.87	0.57
25:1H:2129:C:N4	25:1H:2159:G:O6	2.37	0.57
54:1G:1172:C:H2'	54:1G:1173:G:H8	1.69	0.57
1:13:390:C:O3'	16:7I:28:ARG:NH2	2.36	0.57
54:1G:1018:C:H2'	54:1G:1019:C:O4'	2.04	0.57
25:1H:987:G:O2'	25:1H:1000:A:N3	2.34	0.57
25:14:303:U:H2'	25:14:304:G:C8	2.39	0.57
13:4A:79:LYS:O	13:4A:82:MET:HB3	2.03	0.57
22:1K:23:A:H3'	22:1K:24:G:H5"	1.86	0.57
4:32:94:LEU:HA	4:32:97:LEU:HD12	1.85	0.57
57:4L:15:A:O5'	57:4L:15:A:H8	1.86	0.57
25:14:1717:G:H1	25:14:1742:C:H42	1.52	0.57
25:1H:2032:G:H1'	28:21:145:LYS:HE2	1.86	0.57
25:14:1771:C:O2'	25:14:1786:A:H8	1.87	0.57
53:M5:30:ARG:HD2	53:M5:31:HIS:HB2	1.85	0.57
25:1H:2820:A:C6	37:98:4:LEU:HD11	2.40	0.57
38:A8:11:LYS:HD3	38:A8:91:PRO:HD3	1.85	0.57
23:2K:16:C:H5"	23:2K:17:C:C4	2.39	0.57
29:31:42:ALA:O	29:31:45:ARG:HB2	2.04	0.57
25:1H:1250:G:N7	35:78:18:ARG:NH2	2.53	0.57
54:1G:690:G:H2'	54:1G:691:G:O4'	2.04	0.57
54:1G:999:U:H2'	54:1G:1000:A:C8	2.39	0.57
2:12:68:ILE:HG12	2:12:161:ALA:HB3	1.85	0.57
1:13:947:G:H2'	1:13:948:C:C6	2.39	0.57
25:1H:836:G:H5"	25:1H:837:C:OP2	2.03	0.57
33:15:67:LEU:O	33:15:88:GLU:HG3	2.03	0.57
46:I8:51:VAL:N	46:I8:62:LEU:HD12	2.20	0.57
53:M5:56:GLU:H	53:M5:56:GLU:CD	2.05	0.57
25:14:1225:C:O2'	41:95:85:LYS:N	2.36	0.57
25:1H:639:U:H2'	25:1H:640:C:C6	2.40	0.57
25:1H:2495:G:H5"	36:88:81:VAL:O	2.05	0.57
29:39:7:TYR:HD1	29:39:18:ARG:H	1.53	0.57
30:41:66:GLN:HA	50:M8:6:HIS:HE1	1.68	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:1H:1257:C:H4'	29:31:83:PHE:CE1	2.39	0.57
25:14:1986:A:OP1	60:14:3726:HOH:O	2.17	0.57
44:C5:17:SER:OG	44:C5:18:GLY:O	2.22	0.57
44:G8:9:LYS:HA	44:G8:27:VAL:HG22	1.85	0.57
43:B5:25:LYS:HA	43:B5:81:VAL:O	2.04	0.57
30:49:61:ALA:HB2	30:49:68:PRO:HD3	1.86	0.57
32:69:74:ASN:OD1	32:69:74:ASN:N	2.36	0.57
18:9A:36:ASN:ND2	18:9A:36:ASN:O	2.34	0.57
11:2I:17:GLY:HA3	11:2I:77:MET:SD	2.44	0.57
1:13:1346:A:OP1	9:8E:120:ARG:NH1	2.31	0.57
25:1H:252:G:OP2	35:78:50:ARG:NH1	2.37	0.57
26:1J:52:A:N6	38:65:33:LYS:HG3	2.19	0.57
25:14:71:A:C8	25:14:71:A:H5'	2.39	0.57
25:1H:654(D):G:H1	25:1H:654(Q):C:H42	1.52	0.57
43:B5:27:THR:HB	43:B5:80:ILE:HG22	1.85	0.57
35:35:127:ALA:O	35:35:147:LEU:N	2.35	0.57
25:14:973:A:OP2	60:14:3577:HOH:O	2.16	0.57
25:14:10:G:N2	25:14:2802:G:OP1	2.38	0.57
36:45:34:LEU:HB2	36:45:118:LEU:HD22	1.87	0.57
42:A5:41:LYS:HZ3	51:J5:25:LEU:HD21	1.68	0.57
25:1H:2292:C:P	38:A8:17:ARG:HH22	2.26	0.57
27:11:232:PRO:HB3	27:11:244:ARG:NH1	2.19	0.57
25:1H:773:U:C4'	27:11:47:GLY:HA3	2.34	0.57
41:D8:65:GLY:HA3	41:D8:91:TYR:CE2	2.39	0.57
17:8A:19:VAL:HG22	17:8A:44:ALA:HB3	1.87	0.57
54:1G:167:G:H2'	54:1G:168:G:H8	1.69	0.57
46:I8:53:MET:HB2	46:I8:59:LEU:CD2	2.33	0.57
1:13:633:G:OP2	1:13:633:G:H8	1.85	0.57
54:1G:828:A:H5"	54:1G:859:A:N1	2.20	0.57
41:95:67:GLY:O	41:95:88:ARG:HD2	2.05	0.57
6:5E:82:ARG:CG	6:5E:83:ASP:HA	2.34	0.57
25:1H:1534:G:H2'	25:1H:1535:U:H4'	1.86	0.57
25:1H:1771:C:O2'	25:1H:1786:A:H8	1.87	0.57
40:C8:87:GLY:C	40:C8:89:GLU:N	2.58	0.57
25:1H:1794:U:H2'	25:1H:1795:C:C6	2.39	0.57
25:14:479:A:N3	25:14:481:G:H5"	2.19	0.57
54:1G:688:G:H2'	54:1G:689:C:H6	1.69	0.57
1:13:475:G:H2'	1:13:476:G:O4'	2.04	0.57
48:K8:42:GLY:C	48:K8:44:LEU:H	2.08	0.57
25:1H:270(V):G:H2'	25:1H:270(W):G:H8	1.70	0.57
8:7E:121:ASP:HB2	8:7E:125:ARG:NH2	2.20	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:1H:2306:C:H3'	25:1H:2307:G:H5'	1.86	0.57
45:H8:140:ASP:N	45:H8:140:ASP:OD1	2.38	0.57
45:H8:108:PRO:HB2	45:H8:112:ARG:HA	1.87	0.57
30:49:124:SER:HB2	30:49:131:TYR:CE1	2.40	0.57
25:1H:234:C:H2'	25:1H:235:U:H6	1.68	0.57
27:19:73:VAL:HG13	27:19:120:GLY:HA3	1.87	0.57
54:1G:1127:G:N2	54:1G:1144:G:H22	1.95	0.57
25:1H:1970:A:P	60:1H:3751:HOH:O	2.61	0.57
25:1H:780:G:H21	25:1H:783:A:N6	2.03	0.57
4:3E:9:CYS:HB3	4:3E:32:ALA:CB	2.33	0.57
56:2L:24:C:C2	56:2L:25:U:C5	2.93	0.57
25:1H:1061:U:H4'	25:1H:1070:A:H1'	1.87	0.57
2:12:8:LYS:HE3	2:12:11:LEU:HD23	1.86	0.57
54:1G:940:C:H2'	54:1G:941:G:C8	2.38	0.57
45:D5:30:ASN:HA	45:D5:89:PHE:CE1	2.40	0.57
25:14:2572:A:N7	28:29:145:LYS:HB2	2.20	0.57
30:41:173:LEU:HB3	30:41:178:PHE:CD2	2.40	0.57
25:14:827:U:H2'	25:14:2430:A:H2	1.70	0.57
25:14:2304:G:O2'	30:49:156:ASP:OD1	2.21	0.57
25:14:2212:A:H4'	25:14:2213:U:H5	1.70	0.57
1:13:1329:A:H5'	13:4I:29:ARG:HD2	1.86	0.57
54:1G:1513:A:H2'	54:1G:1514:C:C6	2.40	0.57
1:13:321:A:H62	1:13:328:C:H1'	1.68	0.57
2:12:19:HIS:CE1	2:12:206:ASP:HB2	2.40	0.57
25:14:2176:A:H2'	25:14:2177:C:C6	2.39	0.57
54:1G:620:C:H2'	54:1G:621:A:O4'	2.04	0.57
4:3E:84:LYS:N	4:3E:85:LYS:HD3	2.17	0.57
25:1H:2001:A:H2'	25:1H:2002:G:H8	1.70	0.57
6:5E:82:ARG:CB	6:5E:83:ASP:HA	2.34	0.57
14:5I:3:ARG:HH11	14:5I:3:ARG:HG2	1.70	0.57
25:14:1252:G:O4'	40:85:33:ARG:HD3	2.04	0.57
36:45:11:LYS:NZ	36:45:86:GLY:O	2.20	0.57
43:F8:67:GLY:O	43:F8:69:TYR:N	2.36	0.57
29:39:122:LYS:HD3	29:39:191:ARG:HH21	1.70	0.57
43:F8:24:GLY:O	43:F8:83:VAL:HG22	2.05	0.57
54:1G:1490:C:H2'	54:1G:1491:G:O4'	2.05	0.57
52:L5:8:ASN:HB3	52:L5:11:LYS:HB3	1.85	0.57
54:1G:678:U:H2'	54:1G:679:C:C6	2.39	0.57
2:1E:97:TRP:HZ3	2:1E:172:ILE:HB	1.70	0.57
43:F8:11:PRO:HG2	43:F8:13:LEU:HD21	1.86	0.57
11:2I:54:ARG:O	11:2I:57:THR:HG22	2.05	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:14:2849:U:OP1	39:75:95:ARG:NH1	2.37	0.57
30:49:20:ILE:HG23	30:49:25:TYR:HB2	1.86	0.57
42:E8:61:ASN:OD1	42:E8:61:ASN:N	2.35	0.57
25:14:270(F):U:H2'	25:14:270(G):C:C6	2.39	0.57
4:32:10:ARG:HG2	4:32:11:LEU:HD23	1.87	0.57
1:13:1178:G:N2	1:13:1181:G:H8	2.03	0.57
25:1H:287:C:H2'	25:1H:288:C:C6	2.37	0.57
6:5E:3:ARG:NH1	6:5E:38:GLU:OE1	2.37	0.57
22:3K:25:G:H2'	22:3K:26:G:C8	2.39	0.57
4:3E:110:PHE:CE1	4:3E:148:VAL:HG23	2.40	0.57
13:4A:97:PRO:HA	13:4A:110:ARG:HD3	1.87	0.57
1:13:717:C:O2'	1:13:734:G:O4'	2.22	0.57
54:1G:1385:G:H2'	54:1G:1386:G:H8	1.70	0.57
33:15:56:ASN:H	33:15:125:GLY:HA3	1.70	0.57
54:1G:779:C:H2'	54:1G:780:A:O4'	2.05	0.57
34:68:112:MET:HA	34:68:115:VAL:HG22	1.87	0.57
3:2E:62:ASP:N	3:2E:62:ASP:OD1	2.38	0.57
54:1G:409:G:H2'	54:1G:410:G:O4'	2.04	0.57
53:Q8:41:ILE:HA	53:Q8:43:GLN:H	1.69	0.57
13:4A:73:GLU:O	13:4A:77:ASN:HB2	2.04	0.57
11:2I:107:SER:OG	11:2I:108:ILE:N	2.35	0.57
25:1H:529:A:H8	25:1H:530:G:C6	2.23	0.57
17:8I:76:LEU:HD21	17:8I:79:SER:HB2	1.87	0.57
25:1H:1347:G:H5"	25:1H:1348:G:OP2	2.05	0.57
31:59:82:GLY:HA3	31:59:135:GLY:O	2.04	0.57
50:I5:2:LYS:HB3	50:I5:6:HIS:HB2	1.86	0.57
25:1H:1094:U:O2'	25:1H:1096:A:OP1	2.23	0.57
25:14:1386:C:H2'	25:14:1387:C:H6	1.70	0.57
54:1G:1376:U:OP1	7:62:98:SER:OG	2.23	0.57
25:14:1164:G:H1	25:14:1185:C:H42	1.53	0.57
54:1G:503:C:OP2	12:3A:116:SER:OG	2.16	0.57
3:22:98:ASN:N	3:22:98:ASN:OD1	2.37	0.57
48:K8:63:VAL:HA	48:K8:66:GLU:HG3	1.87	0.57
25:1H:1188:U:C4'	41:D8:79:VAL:HG22	2.35	0.56
8:72:84:ARG:NH2	8:72:136:GLU:OE2	2.30	0.56
25:14:1417:C:OP2	60:14:3680:HOH:O	2.17	0.56
36:45:22:LYS:N	36:45:23:GLY:HA3	2.20	0.56
54:1G:972:C:O2	10:1A:55:LYS:HD2	2.05	0.56
1:13:1291:G:OP1	7:6E:41:ARG:NH2	2.38	0.56
51:N8:41:PRO:O	51:N8:44:THR:OG1	2.23	0.56
26:16:43:C:OP1	30:41:67:LYS:NZ	2.38	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:13:674:G:N2	1:13:717:C:O2	2.38	0.56
25:1H:630:G:N2	25:1H:633:A:OP2	2.27	0.56
5:42:152:ARG:O	8:72:64:LYS:NZ	2.33	0.56
25:14:1559:G:O2'	25:14:1560:G:H5'	2.05	0.56
17:8A:86:GLU:O	17:8A:90:ILE:HG12	2.05	0.56
25:1H:2705:A:O2'	25:1H:2852:G:OP1	2.16	0.56
33:15:28:THR:O	33:15:32:THR:OG1	2.21	0.56
54:1G:448:A:P	54:1G:485:G:H22	2.28	0.56
4:3E:82:ALA:O	4:3E:89:THR:HG23	2.05	0.56
25:1H:2233:U:H2'	25:1H:2234:G:C8	2.40	0.56
54:1G:952:U:H4'	54:1G:964:A:N1	2.19	0.56
26:1J:50:G:OP1	38:65:62:LYS:HB2	2.05	0.56
25:1H:2057:A:OP2	60:1H:3516:HOH:O	2.17	0.56
32:61:8:PRO:HG3	32:61:14:ASP:HB3	1.86	0.56
25:1H:330:A:H2	25:1H:1210:A:HO2'	1.52	0.56
3:22:47:LEU:HD23	3:22:52:LEU:HB2	1.86	0.56
1:13:735:C:H2'	1:13:736:C:H6	1.70	0.56
37:98:55:ALA:HA	37:98:80:PHE:CE1	2.40	0.56
56:2L:54:G:H2'	56:2L:55:5MU:H6	1.69	0.56
54:1G:490:G:P	4:32:132:ARG:HH22	2.28	0.56
44:C5:87:LYS:H	44:C5:94:LYS:HB3	1.70	0.56
25:1H:991:C:H2'	25:1H:992:C:H6	1.70	0.56
3:22:65:ALA:HA	3:22:100:ALA:HB3	1.87	0.56
25:14:2683:C:OP1	39:75:53:ARG:NH2	2.38	0.56
3:22:79:ARG:H	3:22:79:ARG:NE	2.03	0.56
1:13:598:U:H4'	8:7E:94:TYR:CD2	2.40	0.56
28:29:18:ASP:HB3	39:75:82:LEU:HD11	1.88	0.56
54:1G:222:U:H2'	54:1G:223:U:H6	1.68	0.56
25:1H:598:G:H5'	35:78:11:GLY:HA3	1.87	0.56
54:1G:1151:A:OP1	10:1A:42:THR:N	2.36	0.56
45:D5:132:ASN:N	45:D5:132:ASN:OD1	2.39	0.56
55:1L:57:C:O2'	55:1L:68:A:H4'	2.04	0.56
54:1G:1314:C:H42	54:1G:1323:G:H1	1.54	0.56
25:1H:1022:G:N2	25:1H:1142(A):A:N1	2.49	0.56
54:1G:517:G:N2	54:1G:530:G:OP1	2.34	0.56
25:1H:1177:A:H5"	25:1H:1178:C:C6	2.40	0.56
25:1H:1171:G:N2	25:1H:1179:C:N3	2.54	0.56
54:1G:426:G:H2'	54:1G:427:U:H6	1.71	0.56
54:1G:857:C:H2'	54:1G:858:G:O4'	2.06	0.56
8:7E:87:SER:HB2	8:7E:93:VAL:HB	1.86	0.56
25:1H:739:G:OP1	60:1H:3736:HOH:O	2.17	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:A8:39:ILE:HB	38:A8:49:VAL:HG23	1.86	0.56
1:13:1117:G:H5"	9:8E:104:ARG:NH1	2.20	0.56
1:13:10:A:OP2	5:4E:126:ARG:HD3	2.06	0.56
29:39:64:ILE:HG13	29:39:65:TRP:CD1	2.39	0.56
25:14:2388:A:C2'	25:14:2389:G:H5'	2.34	0.56
25:1H:234:C:H2'	25:1H:235:U:C6	2.39	0.56
54:1G:1203:C:H2'	54:1G:1204:A:C8	2.40	0.56
41:D8:66:ARG:NH1	41:D8:88:ARG:HD3	2.20	0.56
9:82:24:GLY:HA2	9:82:59:PHE:O	2.05	0.56
25:14:649:G:H2'	25:14:650:C:C6	2.40	0.56
25:1H:1432:C:H2'	25:1H:1433:U:O4'	2.04	0.56
1:13:143:A:H2	1:13:220:G:H22	1.51	0.56
47:J8:79:GLY:O	47:J8:80:LEU:HD13	2.05	0.56
54:1G:41:G:H2'	54:1G:42:G:C8	2.41	0.56
19:AA:53:ASN:OD1	19:AA:56:GLN:N	2.36	0.56
54:1G:1423:G:H2'	54:1G:1424:C:C6	2.40	0.56
7:62:102:ARG:O	7:62:106:GLN:HG3	2.05	0.56
31:51:98:LEU:HD22	31:51:125:VAL:HG23	1.87	0.56
26:1J:22:U:H3	26:1J:61:G:H1	1.54	0.56
25:1H:607:U:OP1	29:31:102:PRO:HA	2.05	0.56
54:1G:1129:C:N3	54:1G:1132:C:N4	2.53	0.56
25:14:958:U:O2	26:1J:89(A):A:O2'	2.22	0.56
27:11:26:LYS:HG3	27:11:83:GLU:OE1	2.05	0.56
40:C8:91:ASP:HB3	40:C8:92:ARG:C	2.26	0.56
25:1H:155:C:N4	25:1H:171:G:H1	2.03	0.56
8:7E:85:ARG:NE	8:7E:87:SER:O	2.38	0.56
54:1G:54:C:N4	54:1G:353:A:OP2	2.35	0.56
6:5E:82:ARG:HB2	6:5E:83:ASP:HA	1.88	0.56
1:13:989:C:H42	1:13:1216:G:H1	1.53	0.56
53:Q8:21:LYS:HG2	53:Q8:22:VAL:H	1.71	0.56
19:AI:15:LEU:O	19:AI:19:VAL:HG23	2.05	0.56
25:14:2306:C:H3'	25:14:2307:G:H5"	1.87	0.56
54:1G:67:C:H2'	54:1G:68:G:C8	2.40	0.56
25:1H:1665:A:N6	60:1H:3841:HOH:O	2.30	0.56
25:14:952:G:C6	25:14:966:G:C6	2.93	0.56
45:D5:108:PRO:HB2	45:D5:142:SER:HA	1.88	0.56
1:13:1153:C:OP1	10:1I:14:LYS:NZ	2.37	0.56
1:13:280:C:H3'	1:13:281:G:H5'	1.87	0.56
43:F8:34:ALA:HA	43:F8:38:GLU:OE1	2.06	0.56
54:1G:991:U:O4	54:1G:1212:U:O2'	2.16	0.56
13:4I:67:GLU:HG2	13:4I:71:ARG:HH21	1.71	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:1H:1516:U:H2'	25:1H:1517:G:H8	1.70	0.56
40:C8:92:ARG:HB3	40:C8:93:LYS:HA	1.87	0.56
47:F5:87:PRO:O	47:F5:91:LYS:N	2.36	0.56
31:59:59:ARG:O	31:59:63:SER:OG	2.21	0.56
6:5E:81:ILE:C	6:5E:82:ARG:HG2	2.26	0.56
25:14:1011:G:N2	25:14:1150:C:O2	2.38	0.56
26:1J:14:U:H5'	26:1J:71:C:C1'	2.35	0.56
10:1I:27:ALA:HB1	10:1I:34:VAL:HG11	1.87	0.56
26:16:15:A:H1'	26:16:109:G:C8	2.40	0.56
25:14:2712:U:O2'	60:14:3466:HOH:O	2.17	0.56
2:12:84:GLU:HB3	2:12:219:VAL:HG11	1.88	0.56
29:39:78:ILE:HA	29:39:83:PHE:CD2	2.41	0.56
54:1G:745:C:H2'	54:1G:746:A:C8	2.40	0.56
25:14:2176:A:H2'	25:14:2177:C:H6	1.70	0.56
45:D5:8:TYR:HD1	45:D5:62:PRO:HG3	1.71	0.56
30:49:97:ASP:HA	30:49:100:TRP:HD1	1.69	0.56
25:14:2273:A:H2'	25:14:2274:A:C8	2.40	0.56
54:1G:158:G:H1	54:1G:163:C:H42	1.54	0.56
18:9I:66:LEU:O	18:9I:70:ILE:HG13	2.06	0.56
55:1L:17:G:N2	55:1L:64:U:O2	2.31	0.56
1:13:963:G:H21	10:1I:55:LYS:CE	2.18	0.56
54:1G:959:A:H5"	54:1G:960:U:OP2	2.06	0.56
3:22:77:ILE:HG12	3:22:84:ILE:HD12	1.88	0.56
25:1H:2695:C:H2'	25:1H:2696:U:C6	2.36	0.56
13:4A:94:ARG:NH2	19:AA:78:ARG:HH21	2.03	0.56
1:13:738:C:H2'	1:13:739:C:H6	1.70	0.56
25:1H:1093:G:H1'	25:1H:1099:G:H22	1.71	0.56
30:49:17:PRO:HA	30:49:20:ILE:HG13	1.88	0.56
54:1G:1423:G:H2'	54:1G:1424:C:H6	1.70	0.56
25:14:2126:A:N6	25:14:2163:C:O2'	2.39	0.56
10:1I:15:THR:HA	10:1I:18:ALA:HB3	1.87	0.56
25:14:660:G:H21	35:35:12:ALA:HB2	1.70	0.56
25:1H:1007:C:H5"	33:58:35:ARG:HH11	1.70	0.56
25:1H:1667:G:OP2	25:1H:1667:G:H8	1.89	0.56
27:11:28:GLU:HG3	27:11:29:PRO:HD3	1.86	0.56
25:1H:1412:A:H2'	25:1H:1413:G:C8	2.41	0.56
25:14:1805:U:O2	27:19:50:THR:HB	2.05	0.56
54:1G:345:C:OP1	54:1G:345:C:H4'	2.05	0.56
40:85:92:ARG:C	40:85:94:ASN:H	2.08	0.56
25:14:2392:A:H2	25:14:2424:C:N4	2.03	0.56
25:14:330:A:H2	25:14:1210:A:O2'	1.89	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:1G:1259:C:N4	54:1G:1260:C:O2	2.39	0.56
1:13:376:G:H5"	16:7I:5:ARG:HB2	1.88	0.56
7:6E:69:VAL:HA	7:6E:135:VAL:HG13	1.87	0.56
55:1L:75:C:H2'	55:1L:76:C:C5	2.41	0.56
54:1G:1245:A:H61	54:1G:1292:U:H3	1.54	0.56
54:1G:1172:C:H2'	54:1G:1173:G:C8	2.39	0.56
25:14:270(F):U:H3	25:14:270(T):G:H1	1.52	0.56
28:21:5:LEU:HD12	28:21:51:PHE:HB2	1.88	0.56
25:14:1729:A:H2'	25:14:1731:G:N2	2.20	0.56
25:14:2674:G:H5'	34:25:26:LYS:HD2	1.88	0.56
26:16:95:U:H2'	26:16:96:G:C8	2.40	0.56
25:14:2064:C:H2'	25:14:2065:C:C6	2.41	0.56
47:F5:83:GLU:N	47:F5:83:GLU:OE1	2.39	0.56
8:72:25:ASP:OD1	8:72:25:ASP:N	2.38	0.56
25:14:1159:U:O2'	25:14:1160:G:H5'	2.06	0.56
54:1G:1238:A:N3	54:1G:1241:G:O2'	2.33	0.56
1:13:812:C:C2	60:13:1804:HOH:O	2.51	0.56
2:12:18:GLY:H	2:12:42:ILE:HG22	1.70	0.56
1:13:74:C:N4	1:13:96:G:H1	1.98	0.56
54:1G:377:G:H1	54:1G:386:C:N4	2.02	0.56
54:1G:922:G:H2'	54:1G:923:A:C8	2.40	0.56
1:13:1449:C:H42	1:13:1454:G:H1	1.54	0.56
25:1H:581:C:H2'	25:1H:582:G:H8	1.70	0.56
25:14:1379:A:H1'	25:14:1380:G:OP1	2.06	0.56
2:12:22:LYS:HA	2:12:40:HIS:NE2	2.21	0.56
23:2K:63:C:H2'	23:2K:64:G:C8	2.41	0.56
26:16:15:A:H5'	26:16:16:G:H8	1.70	0.56
35:35:3:LEU:HD12	35:35:3:LEU:H	1.71	0.56
44:G8:43:ASN:OD1	44:G8:65:ALA:HB3	2.06	0.56
25:1H:2328:A:H2'	25:1H:2329:G:C8	2.41	0.56
41:95:48:GLY:N	41:95:52:VAL:HG22	2.20	0.56
25:14:2572:A:C8	28:29:144:ARG:HD2	2.41	0.56
5:42:76:ILE:O	5:42:93:PRO:HB3	2.06	0.56
1:13:390:C:O2'	16:7I:28:ARG:NH2	2.38	0.56
25:14:2849:U:O4	39:75:23:ARG:NH2	2.38	0.56
25:14:733:G:N7	60:14:3413:HOH:O	2.39	0.56
25:1H:2562:U:O2'	34:68:23:ARG:NH1	2.38	0.56
25:1H:483:A:O4'	44:G8:48:ALA:HB1	2.05	0.56
37:55:100:LEU:HG	37:55:112:ALA:HA	1.86	0.56
54:1G:1347:G:O2'	54:1G:1373:G:O6	2.18	0.56
8:7E:69:ARG:NH2	8:7E:73:ASP:O	2.38	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:1H:1278:A:OP1	37:98:36:THR:HG22	2.05	0.56
25:14:1525:G:H2'	25:14:1526:G:C8	2.41	0.56
32:61:4:ILE:HG21	32:61:47:LEU:HD13	1.87	0.56
32:69:133:HIS:CD2	32:69:134:PRO:HD3	2.40	0.56
38:65:34:HIS:CE1	38:65:54:LEU:HD12	2.40	0.56
1:13:1296:C:H5'	13:4I:14:ARG:HD2	1.87	0.56
3:22:77:ILE:HA	3:22:84:ILE:HB	1.87	0.56
54:1G:619:U:N3	4:32:134:ASP:OD1	2.39	0.56
25:14:252:G:OP2	35:35:50:ARG:NH2	2.26	0.56
54:1G:963:G:H21	10:1A:55:LYS:HZ2	1.50	0.56
12:3A:124:LYS:HD2	12:3A:125:PRO:HD2	1.88	0.56
2:1E:97:TRP:CZ3	2:1E:172:ILE:HB	2.40	0.56
25:14:1386:C:H2'	25:14:1387:C:C6	2.40	0.56
54:1G:895:G:H1	54:1G:904:C:H42	1.54	0.56
1:13:652:U:OP2	60:13:1898:HOH:O	2.18	0.56
39:75:107:ASP:N	39:75:107:ASP:OD1	2.38	0.56
29:39:21:ALA:C	29:39:23:ASP:H	2.09	0.56
52:P8:27:GLY:HA2	52:P8:30:VAL:HG23	1.87	0.56
20:BI:30:LYS:NZ	20:BI:80:ARG:HH12	2.04	0.56
45:D5:127:LYS:O	45:D5:162:GLU:HB2	2.06	0.56
25:1H:299:A:H5'	25:1H:300:A:OP2	2.05	0.56
29:39:158:THR:HG23	29:39:164:ARG:HG3	1.87	0.56
53:Q8:6:THR:O	53:Q8:6:THR:OG1	2.23	0.56
28:21:78:LEU:CA	28:21:79:ARG:HD2	2.32	0.56
25:14:996:A:N6	25:14:1160:G:C6	2.73	0.56
25:14:2250:G:H2'	36:45:82:ARG:HG3	1.87	0.56
1:13:1124:G:H3'	1:13:1145:C:H41	1.71	0.56
4:32:13:ARG:HD2	4:32:38:TYR:O	2.06	0.56
28:29:25:VAL:O	28:29:26:ILE:HG12	2.06	0.56
1:13:1004:A:P	1:13:1025:U:H3	2.29	0.56
30:49:125:PHE:HZ	30:49:170:ARG:HD3	1.71	0.56
1:13:198:G:O6	1:13:219:C:N4	2.39	0.56
31:59:19:VAL:HG12	31:59:20:ALA:H	1.71	0.56
44:G8:49:VAL:HG21	44:G8:55:TYR:CE1	2.41	0.56
9:8E:10:ARG:HE	9:8E:105:ASP:CB	2.18	0.56
1:13:1226:C:H4'	19:AI:80:TYR:OH	2.06	0.56
1:13:693:G:H2'	1:13:694:A:C8	2.41	0.56
45:H8:117:LEU:HD13	45:H8:118:GLN:H	1.71	0.56
40:85:85:LYS:HB3	40:85:116:ALA:HB1	1.87	0.56
6:52:100:ASN:ND2	18:9A:26:LEU:O	2.38	0.56
50:I5:13:ARG:HE	50:I5:22:ILE:HG21	1.70	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:1G:1082:G:H8	54:1G:1082:G:OP2	1.88	0.56
10:1A:5:ARG:HD3	10:1A:73:ASP:OD1	2.06	0.56
25:1H:919:G:N2	25:1H:2269:A:OP2	2.39	0.56
1:13:375:U:O3'	16:7I:6:LEU:HB2	2.06	0.56
28:21:77:ILE:HB	28:21:79:ARG:NE	2.05	0.55
25:1H:1358:G:OP2	60:1H:3804:HOH:O	2.18	0.55
9:82:119:ALA:O	9:82:120:ARG:HB2	2.03	0.55
55:3L:15:G:H4'	55:3L:15:G:OP1	2.05	0.55
33:58:96:GLU:HG2	33:58:97:ARG:N	2.21	0.55
36:45:25:ASP:CB	36:45:102:VAL:H	2.19	0.55
25:14:881:G:O6	25:14:882:G:N1	2.39	0.55
1:13:323:U:H5'	20:BI:23:ARG:HB2	1.87	0.55
25:1H:994:C:OP1	40:C8:53:ARG:NH2	2.39	0.55
54:1G:186:C:H1'	20:BA:81:LYS:HE2	1.88	0.55
25:14:1443:G:N2	25:14:1548:C:N3	2.44	0.55
23:2K:19:G:N2	23:2K:58:A:H2'	2.21	0.55
25:1H:1038:C:H2'	25:1H:1039:G:O4'	2.05	0.55
25:1H:1433:U:O2	25:1H:1561:G:C2	2.59	0.55
23:2K:50:G:O6	23:2K:66:C:N4	2.34	0.55
54:1G:9:G:H1	54:1G:25:C:H42	1.54	0.55
2:1E:100:GLY:O	2:1E:104:ASN:N	2.35	0.55
54:1G:1081:G:N7	5:42:47:LYS:NZ	2.53	0.55
25:1H:1638:C:H2'	25:1H:1639:U:H5"	1.88	0.55
1:13:407:G:H2'	1:13:408:A:C8	2.40	0.55
11:2A:12:ARG:NH2	11:2A:13:GLN:O	2.38	0.55
25:14:1500:G:O2'	27:19:100:GLY:O	2.24	0.55
16:7A:57:ARG:HA	16:7A:60:LEU:HD12	1.86	0.55
25:1H:1971:A:C4	27:11:241:PRO:HD3	2.40	0.55
25:14:2745:C:O2	31:59:139:GLN:NE2	2.37	0.55
25:14:807:U:C2	25:14:808:G:C8	2.94	0.55
54:1G:1342:C:H4'	9:82:125:TYR:HB3	1.87	0.55
1:13:1000:A:H2'	1:13:1001:G:C8	2.41	0.55
33:58:15:LEU:HB3	33:58:136:GLU:HG2	1.88	0.55
25:1H:2392:A:H8	35:78:61:ARG:HG2	1.71	0.55
5:42:78:HIS:HB2	8:72:104:ARG:HG3	1.88	0.55
55:3L:19:C:H5"	55:3L:20:C:OP2	2.07	0.55
33:58:96:GLU:C	33:58:98:VAL:N	2.60	0.55
1:13:991:U:C4	1:13:1212:U:H1'	2.41	0.55
22:3K:17:OMG:N2	22:3K:64:PSU:O4	2.37	0.55
2:12:166:ASP:OD2	2:12:169:LYS:HB2	2.06	0.55
30:49:106:LEU:HA	30:49:110:ALA:HB3	1.87	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:69:14:ASP:N	32:69:17:GLN:OE1	2.28	0.55
28:29:98:PRO:HD3	28:29:175:VAL:HG13	1.88	0.55
44:C5:15:VAL:HG12	44:C5:21:LYS:HA	1.87	0.55
12:3I:49:ASN:ND2	12:3I:92:ASP:OD2	2.40	0.55
25:14:492:A:H2'	25:14:493:G:O4'	2.06	0.55
56:2L:20:G:C2	56:2L:58:A:C2	2.94	0.55
35:35:52:GLU:O	35:35:54:GLY:N	2.35	0.55
45:H8:76:LEU:HA	45:H8:83:PRO:HA	1.88	0.55
54:1G:520:A:OP2	12:3A:51:ALA:HB1	2.06	0.55
25:1H:450:G:OP2	60:1H:3690:HOH:O	2.18	0.55
35:78:47:ASP:OD1	35:78:49:ARG:HG2	2.06	0.55
25:14:1035:U:H2'	25:14:1036:G:C8	2.42	0.55
54:1G:922:G:H1	54:1G:1395:C:H42	1.54	0.55
48:K8:47:ASN:O	48:K8:48:HIS:ND1	2.39	0.55
25:14:172:C:H2'	25:14:173:G:H8	1.71	0.55
33:15:134:ARG:NH1	33:15:134:ARG:HB3	2.22	0.55
25:1H:2807:G:H3'	25:1H:2808:U:H5"	1.88	0.55
54:1G:1004:A:H2	54:1G:1024:G:C8	2.25	0.55
11:2A:98:LEU:O	11:2A:101:SER:HB3	2.06	0.55
25:14:589:C:O3'	29:39:95:ARG:NH1	2.39	0.55
25:1H:2377:A:H2'	25:1H:2378:A:C8	2.41	0.55
1:13:292:G:N7	1:13:293:G:H1'	2.21	0.55
3:22:71:ALA:HB2	3:22:109:PRO:HB3	1.89	0.55
1:13:939:G:H2'	1:13:940:C:C6	2.40	0.55
25:14:1056:G:H4'	25:14:1086:A:H1'	1.87	0.55
25:14:2191:G:O2'	25:14:2192:G:OP1	2.21	0.55
25:14:1218:C:H42	25:14:1231:G:H1	1.54	0.55
15:6I:63:ARG:O	15:6I:67:LEU:HD12	2.06	0.55
27:19:266:SER:O	27:19:269:PHE:HB2	2.06	0.55
35:78:43:GLY:N	60:78:303:HOH:O	2.35	0.55
26:16:27:C:O3'	38:A8:36:TYR:OH	2.24	0.55
25:14:140:A:H8	25:14:1408:C:O2'	1.89	0.55
4:32:49:ARG:NH2	4:32:50:ARG:HG3	2.21	0.55
1:13:738:C:H2'	1:13:739:C:C6	2.41	0.55
54:1G:973:G:OP1	10:1A:57:LYS:NZ	2.37	0.55
54:1G:501:C:H2'	54:1G:502:G:C8	2.42	0.55
1:13:280:C:C2	17:8I:38:ARG:HG3	2.42	0.55
25:14:2190:G:H2'	25:14:2191:G:O4'	2.07	0.55
25:1H:1190:G:N7	60:1H:3681:HOH:O	2.33	0.55
25:14:696:G:H2'	25:14:697:C:H6	1.72	0.55
26:1J:42:C:O2	30:49:93:THR:N	2.28	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:3A:10:LEU:HB3	17:8A:32:TYR:CE2	2.41	0.55
1:13:127:G:O2'	17:8I:2:PRO:O	2.21	0.55
54:1G:1256:A:H2'	54:1G:1278:U:O2	2.07	0.55
29:39:41:LEU:O	29:39:44:ARG:HG2	2.06	0.55
31:59:149:ARG:HA	31:59:162:ILE:HG21	1.87	0.55
45:D5:152:ALA:HB3	45:D5:167:PRO:HA	1.89	0.55
54:1G:544:G:OP1	4:32:59:ARG:NH1	2.31	0.55
25:1H:2751:G:OP2	31:51:2:SER:N	2.39	0.55
25:14:2787:C:C1'	28:29:62:PRO:HB3	2.36	0.55
54:1G:1109:C:H2'	54:1G:1110:A:O4'	2.07	0.55
1:13:610:G:H2'	1:13:611:A:O4'	2.06	0.55
31:59:4:ILE:HG13	31:59:7:LEU:HD23	1.89	0.55
25:14:2130:U:H2'	25:14:2158:A:N1	2.21	0.55
27:11:71:ASP:CB	27:11:103:ARG:HH22	2.19	0.55
45:D5:99:TYR:HB3	45:D5:123:ASP:HB3	1.88	0.55
1:13:401:C:O2'	1:13:621:A:N3	2.35	0.55
26:1J:50:G:OP1	38:65:63:THR:HG23	2.06	0.55
27:11:28:GLU:HG3	27:11:29:PRO:CD	2.36	0.55
55:1L:59:A:N1	55:1L:60:A:C4	2.75	0.55
25:1H:764:A:H2	27:11:219:PRO:HG3	1.71	0.55
2:1E:98:LEU:HB2	2:1E:101:MET:HG3	1.89	0.55
28:29:128:SER:OG	28:29:129:HIS:N	2.38	0.55
40:C8:14:HIS:O	40:C8:18:LEU:HD12	2.06	0.55
1:13:1203:C:H2'	1:13:1204:A:O4'	2.07	0.55
36:88:51:ARG:HH12	36:88:52:VAL:HG23	1.72	0.55
19:AI:63:THR:HG22	19:AI:66:MET:HE3	1.89	0.55
10:1A:12:ASP:OD1	10:1A:15:THR:N	2.37	0.55
28:21:46:ALA:HA	28:21:82:ARG:O	2.07	0.55
25:14:2143:C:H2'	25:14:2144:U:O4'	2.06	0.55
36:88:20:ALA:HB1	36:88:99:PRO:HB2	1.87	0.55
27:11:4:LYS:NZ	27:11:20:ASP:HA	2.21	0.55
39:B8:20:PRO:HG2	39:B8:86:ILE:O	2.06	0.55
28:29:49:LEU:O	28:29:78:LEU:HA	2.05	0.55
25:1H:2830:G:H8	25:1H:2830:G:H5"	1.71	0.55
34:68:13:ASN:ND2	34:68:97:ARG:HB3	2.21	0.55
25:14:747:U:O2	25:14:2014:A:H1'	2.06	0.55
54:1G:624:C:H2'	54:1G:625:G:H8	1.71	0.55
1:13:1346:A:H5"	9:8E:120:ARG:HH12	1.72	0.55
39:B8:107:ASP:O	39:B8:110:ILE:HG12	2.06	0.55
54:1G:535:A:H5"	60:1G:1743:HOH:O	2.06	0.55
40:C8:92:ARG:O	41:D8:11:GLN:NE2	2.38	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:1H:1591:G:H2'	25:1H:1592:C:H6	1.71	0.55
1:13:954:G:H2'	1:13:955:U:C6	2.42	0.55
9:8E:111:ARG:O	9:8E:113:LYS:HD2	2.07	0.55
54:1G:1352:C:N4	54:1G:1370:G:H1	2.04	0.55
54:1G:977:A:HO2'	54:1G:981:U:H3	1.55	0.55
54:1G:742:G:H5"	15:6A:58:MET:HE1	1.88	0.55
25:1H:1025:G:C4	25:1H:1135:C:H1'	2.42	0.55
9:82:49:PRO:O	9:82:53:VAL:HG22	2.07	0.55
54:1G:549:C:OP1	4:32:73:ARG:NH1	2.40	0.55
25:1H:987:G:OP2	60:1H:3779:HOH:O	2.18	0.55
25:1H:2376:A:H2'	25:1H:2377:A:O4'	2.07	0.55
39:B8:6:LEU:HA	39:B8:9:LEU:HB2	1.87	0.55
25:1H:2331:G:O3'	46:I8:43:THR:HG22	2.06	0.55
25:14:322:A:H3'	29:39:169:ASN:OD1	2.07	0.55
52:L5:5:TRP:NE1	52:L5:7:PRO:HG3	2.22	0.55
25:14:637:A:OP1	35:35:133:SER:OG	2.24	0.55
55:3L:85:A:O2'	25:14:2394:C:N3	2.40	0.55
25:14:2392:A:OP2	53:M5:32:LEU:HD12	2.07	0.55
4:32:13:ARG:C	4:32:15:GLU:H	2.10	0.55
51:N8:40:LYS:NZ	51:N8:46:CYS:HB2	2.22	0.55
31:51:80:SER:HB2	31:51:81:GLU:OE1	2.07	0.55
3:2E:52:LEU:HA	3:2E:70:VAL:HG22	1.89	0.55
5:42:139:LEU:HA	5:42:142:LEU:HG	1.89	0.55
4:3E:150:GLU:OE1	4:3E:150:GLU:N	2.39	0.55
28:29:13:ARG:NH2	39:75:77:PRO:HB3	2.22	0.55
54:1G:746:A:H2'	54:1G:747:C:C6	2.42	0.55
15:6I:12:ILE:HG23	15:6I:27:VAL:HG11	1.87	0.55
54:1G:666:G:N2	54:1G:740:U:O2	2.38	0.55
42:A5:78:GLU:OE1	42:A5:99:ARG:HD3	2.06	0.55
33:15:34:LEU:HD21	33:15:120:LEU:HD13	1.89	0.55
3:2E:7:PRO:O	3:2E:11:ARG:HG2	2.05	0.55
33:58:56:ASN:N	33:58:125:GLY:O	2.23	0.55
25:1H:132:G:H1	25:1H:147:U:H3	1.55	0.55
25:14:2651:C:H42	25:14:2669:G:H1	1.54	0.55
26:16:12:C:O2'	46:I8:74:ARG:HG2	2.06	0.55
25:1H:1021:A:H61	25:1H:1142(A):A:H61	1.54	0.55
30:41:104:GLU:CD	50:M8:23:GLU:HG3	2.28	0.55
25:1H:528:A:O2'	25:1H:529:A:H5"	2.07	0.55
25:14:271(B):G:O6	25:14:404:C:N4	2.35	0.55
25:14:309:G:H4'	44:C5:18:GLY:HA3	1.89	0.55
25:14:2801:A:C5	25:14:2802:G:H1'	2.42	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:14:2735:G:H2'	25:14:2736:G:C8	2.41	0.55
5:42:98:THR:HB	5:42:117:ASP:HB3	1.89	0.55
25:14:635:C:O2'	25:14:639:U:OP1	2.18	0.55
54:1G:191(F):U:H2'	54:1G:191:G:C8	2.42	0.55
1:13:114:U:O2'	1:13:115:G:H5'	2.07	0.55
1:13:964:A:N3	1:13:969:A:O2'	2.28	0.55
25:1H:1290:C:H2'	25:1H:1291:C:C6	2.42	0.55
25:14:343:C:H2'	25:14:344:G:C8	2.41	0.55
54:1G:853:G:H2'	54:1G:854:G:H8	1.72	0.55
25:1H:534:U:H5'	40:C8:42:ALA:HB1	1.89	0.55
10:1A:48:THR:OG1	10:1A:62:HIS:HB3	2.07	0.55
45:D5:110:GLY:N	45:D5:144:LEU:HD23	2.21	0.55
25:1H:1858:G:N2	25:1H:1883:G:H2'	2.20	0.55
31:51:83:TYR:HB2	31:51:134:SER:HA	1.87	0.55
25:1H:49:A:N7	25:1H:120:U:C5	2.71	0.55
1:13:1399:C:C2	1:13:1502:A:N6	2.74	0.55
25:14:1754:C:H2'	25:14:1755:A:C8	2.42	0.55
54:1G:600:C:H2'	54:1G:601:C:C6	2.41	0.55
25:1H:2544:G:H8	25:1H:2544:G:O5'	1.90	0.55
40:85:104:GLN:NE2	40:85:105:VAL:HG22	2.22	0.55
7:6E:16:LEU:HD11	9:8E:45:ALA:HB2	1.87	0.55
43:F8:3:THR:OG1	43:F8:4:ALA:HA	2.07	0.55
54:1G:191(F):U:O2	20:BA:105:SER:HB2	2.07	0.55
1:13:580:U:OP1	15:6I:54:ARG:NH2	2.40	0.55
30:41:97:ASP:O	30:41:100:TRP:N	2.39	0.55
8:7E:116:LYS:HG2	8:7E:129:VAL:HG11	1.89	0.55
28:21:174:ASP:HB3	28:21:183:LEU:HD13	1.89	0.55
27:19:64:ILE:HG12	27:19:64:ILE:O	2.06	0.55
1:13:359:U:H2'	1:13:360:A:C8	2.42	0.55
25:14:1545:A:H2'	25:14:1545(A):A:O4'	2.07	0.55
45:D5:145:GLU:HA	45:D5:174:VAL:O	2.06	0.55
25:1H:2054:A:H5"	25:1H:2055:C:O5'	2.06	0.55
15:6I:74:ASP:HB3	15:6I:77:ARG:HG2	1.89	0.55
1:13:963:G:H21	10:1I:55:LYS:NZ	2.05	0.55
25:1H:1516:U:H2'	25:1H:1517:G:C8	2.41	0.55
28:29:101:ARG:CZ	28:29:171:GLU:HB2	2.37	0.55
1:13:251:G:O6	1:13:271:C:N4	2.39	0.55
4:32:57:ARG:NH2	4:32:205:GLU:OE2	2.40	0.55
3:22:50:ALA:HB2	3:22:83:ARG:HH21	1.72	0.55
30:41:64:THR:HG22	30:41:66:GLN:HB2	1.87	0.55
26:16:95:U:H2'	26:16:96:G:H8	1.72	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:13:940:C:H2'	1:13:941:G:H8	1.71	0.55
9:82:50:LEU:HB3	9:82:56:LEU:HA	1.89	0.55
7:6E:122:HIS:HA	7:6E:125:MET:HE2	1.89	0.55
1:13:1007:C:N4	1:13:1022:G:H1	2.05	0.55
4:3E:4:TYR:OH	4:3E:7:PRO:O	2.18	0.55
54:1G:1410:G:H2'	54:1G:1411:C:C6	2.42	0.55
23:2K:8:4SU:H6	23:2K:8:4SU:O5'	2.07	0.55
54:1G:1320:C:H2'	54:1G:1321:C:C6	2.42	0.54
25:1H:1779:U:H3'	60:1H:3521:HOH:O	2.08	0.54
25:14:2250:G:C4	36:45:82:ARG:HG3	2.42	0.54
3:22:3:ASN:HD22	3:22:3:ASN:H	1.52	0.54
5:42:101:ILE:HD13	5:42:101:ILE:H	1.71	0.54
51:N8:40:LYS:HZ3	51:N8:46:CYS:HB2	1.70	0.54
26:16:15:A:H1'	26:16:109:G:N9	2.22	0.54
44:G8:28:LYS:NZ	44:G8:40:GLU:HG3	2.22	0.54
2:1E:162:ILE:HD11	2:1E:184:VAL:HG22	1.90	0.54
25:14:2127:G:H1	25:14:2161:C:N4	2.05	0.54
25:14:2745:C:H2'	25:14:2746:U:O4'	2.07	0.54
54:1G:1411:C:H2'	54:1G:1412:C:H6	1.72	0.54
29:39:51:THR:HG23	29:39:92:PRO:HG2	1.89	0.54
54:1G:584:G:OP1	17:8A:91:ARG:NH1	2.39	0.54
7:6E:80:VAL:HG21	7:6E:85:TYR:CE2	2.42	0.54
35:78:26:GLY:HA2	60:78:304:HOH:O	2.08	0.54
25:14:1217:C:OP1	40:85:15:LYS:NZ	2.30	0.54
30:49:76:SER:OG	30:49:84:LYS:N	2.40	0.54
1:13:1333:A:H2'	1:13:1334:G:O4'	2.07	0.54
25:14:249:C:OP1	60:14:3426:HOH:O	2.17	0.54
17:8I:100:LYS:HG2	17:8I:101:ARG:HE	1.71	0.54
38:65:28:VAL:HG11	38:65:98:VAL:HG13	1.88	0.54
3:22:14:ILE:HG12	3:22:15:THR:H	1.72	0.54
38:A8:34:HIS:HB2	38:A8:36:TYR:CE1	2.35	0.54
25:1H:1517:G:H5"	25:1H:1518:C:OP2	2.07	0.54
32:61:69:LYS:O	32:61:73:GLU:HB2	2.07	0.54
25:14:139:G:N2	25:14:141:A:N1	2.50	0.54
23:2K:54:G:H2'	23:2K:55:5MU:C6	2.40	0.54
22:3K:14:A:H3'	22:3K:15:G:H5"	1.89	0.54
54:1G:1289:A:OP1	21:1B:9:ARG:NH1	2.40	0.54
25:14:1025:G:O2'	25:14:1026:U:OP1	2.21	0.54
25:14:1187:G:O5'	25:14:1187:G:H8	1.90	0.54
25:1H:1156:A:OP2	60:1H:3633:HOH:O	2.17	0.54
41:95:48:GLY:HA3	41:95:52:VAL:N	2.22	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:95:44:LYS:C	41:95:46:VAL:H	2.09	0.54
13:4A:3:ARG:CZ	13:4A:7:VAL:HG12	2.38	0.54
25:14:2127:G:H1	25:14:2161:C:H42	1.56	0.54
42:A5:72:LYS:HB3	42:A5:106:ILE:HG13	1.89	0.54
44:G8:45:VAL:HG22	44:G8:46:LYS:H	1.72	0.54
25:1H:1635:G:H2'	25:1H:1636:C:C6	2.42	0.54
27:19:70:TRP:CH2	27:19:150:LYS:HA	2.43	0.54
51:J5:46:CYS:SG	51:J5:48:GLU:HG2	2.47	0.54
27:11:145:VAL:HG12	27:11:146:GLU:O	2.07	0.54
38:A8:106:ARG:NH2	38:A8:107:GLU:HB2	2.22	0.54
4:3E:64:LEU:HD23	4:3E:203:VAL:HG21	1.88	0.54
6:52:25:ILE:HG21	6:52:82:ARG:HD2	1.89	0.54
39:B8:51:ARG:HB2	39:B8:98:LYS:HD2	1.88	0.54
36:88:133:ARG:O	36:88:134:ARG:HB2	2.07	0.54
20:BI:97:ALA:O	20:BI:99:LEU:N	2.40	0.54
25:14:1820:U:H4'	25:14:1821:A:OP2	2.07	0.54
45:D5:175:VAL:HA	45:D5:177:PRO:HD3	1.89	0.54
25:1H:2032:G:H21	28:21:146:THR:HG23	1.72	0.54
25:1H:2057:A:P	60:1H:3517:HOH:O	2.64	0.54
5:42:57:LYS:HG2	5:42:61:TYR:HE2	1.71	0.54
31:51:83:TYR:CB	31:51:134:SER:HA	2.37	0.54
44:C5:76:CYS:HB2	44:C5:97:ARG:HD3	1.89	0.54
25:14:2293:C:H5"	38:65:89:ARG:NH1	2.22	0.54
27:19:95:LEU:HD11	27:19:105:ILE:HD12	1.89	0.54
25:1H:654(D):G:H22	25:1H:654(Q):C:H42	1.56	0.54
25:1H:527:C:H4'	25:1H:528:A:C5'	2.37	0.54
1:13:1120:G:H2'	1:13:1121:U:H6	1.73	0.54
26:1J:104:A:H2'	26:1J:105:G:O4'	2.07	0.54
25:14:271(B):G:N7	25:14:421:U:H2'	2.21	0.54
54:1G:56:U:H2'	54:1G:57:G:H8	1.73	0.54
45:D5:8:TYR:CD1	45:D5:62:PRO:HG3	2.43	0.54
13:4I:4:ILE:HG22	13:4I:5:ALA:H	1.72	0.54
50:I5:42:PHE:O	50:I5:43:TYR:HB3	2.06	0.54
12:3I:43:VAL:HG23	12:3I:93:LEU:HD22	1.89	0.54
29:31:11:VAL:HG22	29:31:125:LEU:HB2	1.89	0.54
25:14:1505:C:H2'	25:14:1506:C:C6	2.42	0.54
25:1H:2074:U:H2'	25:1H:2075:U:C6	2.43	0.54
25:14:1332:G:N2	25:14:1609:A:HO2'	2.04	0.54
25:14:1899:G:O2'	25:14:1900:A:H5"	2.07	0.54
1:13:1142:G:H3'	1:13:1143:G:H8	1.72	0.54
25:1H:1652:A:H2'	25:1H:1653:G:H5'	1.89	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:1H:1858:G:H2'	25:1H:1883:G:N2	2.19	0.54
28:29:25:VAL:HG12	28:29:26:ILE:H	1.71	0.54
25:14:908:C:OP2	36:45:22:LYS:HD3	2.07	0.54
1:13:673:G:H2'	1:13:674:G:C8	2.42	0.54
25:1H:1533:C:H3'	25:1H:1534:G:H5"	1.90	0.54
7:6E:113:GLU:HG3	7:6E:119:ARG:HA	1.89	0.54
1:13:1099:G:H2'	1:13:1100:C:C6	2.43	0.54
25:14:107:C:H2'	25:14:108:U:C6	2.42	0.54
25:1H:634:C:H2'	25:1H:635:C:C6	2.43	0.54
4:3E:150:GLU:HA	4:3E:153:ARG:HG3	1.88	0.54
25:1H:1101:U:H2'	25:1H:1102:C:C6	2.42	0.54
25:14:654(I):C:N4	25:14:654(L):G:O6	2.40	0.54
25:1H:1400:G:H2'	25:1H:1401:G:C8	2.42	0.54
3:22:19:GLU:HG2	3:22:55:VAL:O	2.07	0.54
25:14:2687:U:C4	25:14:2688:U:C5	2.96	0.54
21:1F:5:ASP:HB3	21:1F:8:THR:HG23	1.89	0.54
2:12:128:GLU:O	2:12:130:ARG:HG2	2.07	0.54
25:14:2327:A:H2'	25:14:2328:A:C8	2.42	0.54
25:14:889:C:H2'	25:14:890:A:H4'	1.89	0.54
25:1H:323:G:C8	29:31:171:PRO:HG3	2.42	0.54
54:1G:986:A:H1'	19:AA:54:GLY:O	2.07	0.54
27:11:67:PHE:HB3	27:11:153:ALA:H	1.70	0.54
27:11:26:LYS:CE	27:11:84:TYR:H	2.18	0.54
33:58:54:VAL:HB	33:58:122:VAL:HG22	1.89	0.54
33:58:130:HIS:C	33:58:134:ARG:HH12	2.10	0.54
33:58:97:ARG:HA	33:58:100:GLU:HB2	1.90	0.54
1:13:1315:U:H2'	1:13:1316:G:O4'	2.08	0.54
41:95:65:GLY:O	41:95:91:TYR:HB2	2.07	0.54
38:65:26:LEU:HD22	38:65:87:PHE:CD1	2.42	0.54
54:1G:1386:G:C2	54:1G:1387:G:N7	2.75	0.54
25:14:1062:G:H2'	25:14:1063:G:H8	1.72	0.54
54:1G:1182:G:H5'	54:1G:1183:A:H5'	1.89	0.54
41:D8:34:GLU:HG3	41:D8:56:SER:HB2	1.88	0.54
54:1G:1216:G:H5"	14:5A:5:ALA:HB3	1.88	0.54
2:1E:212:GLN:CD	2:1E:235:SER:HB3	2.28	0.54
9:8E:114:TYR:CE1	10:1I:59:SER:HA	2.42	0.54
26:16:54:G:H2'	26:16:55:U:H6	1.71	0.54
20:BA:50:GLU:N	20:BA:100:ILE:HG12	2.21	0.54
30:49:80:PHE:O	30:49:82:LEU:HB2	2.08	0.54
5:4E:101:ILE:O	5:4E:120:THR:OG1	2.23	0.54
25:1H:207:A:H2'	25:1H:208:C:O4'	2.08	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:H8:80:ARG:HG3	45:H8:82:ARG:HG2	1.89	0.54
29:39:8:GLN:HA	29:39:15:SER:HA	1.90	0.54
54:1G:1148:U:H2'	54:1G:1149:C:O4'	2.07	0.54
41:95:35:LEU:HB3	41:95:37:VAL:HG13	1.90	0.54
35:35:49:ARG:HD2	53:M5:58:ILE:HG23	1.88	0.54
25:1H:1062:G:N2	25:1H:1076:C:O2	2.32	0.54
54:1G:164:U:H2'	54:1G:165:C:C6	2.42	0.54
55:3L:42:U:H2'	55:3L:43:G:C8	2.42	0.54
4:32:150:GLU:C	4:32:152:SER:H	2.10	0.54
25:14:863:A:H2'	25:14:864:G:H8	1.72	0.54
25:14:2126:A:N1	25:14:2162:G:N2	2.56	0.54
25:14:886:C:H1'	25:14:890:A:C2	2.43	0.54
25:14:1688:U:O2	25:14:1700:A:H5'	2.08	0.54
3:22:8:ILE:HG23	3:22:16:ARG:HG2	1.87	0.54
25:14:1939:U:OP1	25:14:2604:U:O2'	2.20	0.54
25:14:1751:C:H2'	25:14:1752:C:H6	1.73	0.54
25:1H:1748:G:H2'	25:1H:1749:A:C8	2.41	0.54
17:8A:59:ILE:HD13	17:8A:73:VAL:HA	1.90	0.54
25:1H:1203:G:H3'	25:1H:1204:A:H5"	1.89	0.54
25:14:239:U:H2'	25:14:240:G:O4'	2.08	0.54
50:I5:12:ALA:HB1	50:I5:29:PRO:HB3	1.89	0.54
32:61:107:VAL:HG12	32:61:108:THR:H	1.72	0.54
54:1G:1154:G:H2'	54:1G:1155:G:C8	2.42	0.54
35:78:102:ARG:HB3	35:78:102:ARG:CZ	2.36	0.54
1:13:590:C:H42	1:13:649:G:H1	1.56	0.54
25:14:1657:C:H2'	25:14:1658:C:H6	1.73	0.54
54:1G:976:G:H5'	54:1G:1358:U:O2'	2.08	0.54
25:1H:331:A:N3	60:1H:3881:HOH:O	2.34	0.54
26:16:44:G:C2	26:16:48:A:C2	2.95	0.54
29:39:7:TYR:CE2	29:39:10:PRO:HG3	2.41	0.54
30:41:66:GLN:OE1	30:41:98:ARG:NH1	2.41	0.54
25:14:1533:C:H42	25:14:1538:G:H1	1.56	0.54
51:N8:40:LYS:HE2	51:N8:47:PRO:HG2	1.89	0.54
25:14:2645:G:H3'	25:14:2646:C:H5'	1.90	0.54
25:14:2574:G:N3	28:29:143:ASN:ND2	2.55	0.54
39:75:92:GLY:HA2	39:75:116:ALA:HA	1.90	0.54
28:21:116:VAL:O	28:21:117:MET:HB3	2.07	0.54
3:2E:74:GLY:HA2	3:2E:77:ILE:HB	1.88	0.54
25:1H:141:A:H8	25:1H:1595:G:H21	1.56	0.54
25:1H:322:A:P	29:31:168:ARG:HH21	2.31	0.54
33:58:22:THR:HB	33:58:25:ARG:HB2	1.89	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:1H:972:G:OP1	25:1H:974:G:H5'	2.08	0.54
14:5A:59:ALA:HB1	14:5A:61:TRP:HZ3	1.72	0.54
8:7E:7:ALA:HB2	8:7E:85:ARG:HG3	1.90	0.54
25:1H:1113:U:H2'	25:1H:1114:G:C8	2.43	0.54
39:75:4:GLY:O	39:75:7:ILE:N	2.33	0.54
38:A8:42:ASP:O	38:A8:43:GLU:HB2	2.08	0.54
45:D5:7:ALA:O	45:D5:8:TYR:CG	2.60	0.54
25:1H:2567:G:H2'	25:1H:2568:C:C6	2.43	0.54
54:1G:192:U:H2'	54:1G:193:C:C6	2.43	0.54
25:1H:1168:G:C2	25:1H:1182:A:C2	2.96	0.54
33:15:33:LEU:HD12	33:15:38:HIS:CD2	2.43	0.54
1:13:405:U:OP2	4:3E:3:ARG:NH2	2.41	0.54
5:4E:39:GLY:HA2	5:4E:113:ALA:HB1	1.90	0.54
25:14:27:G:O2'	25:14:28:A:OP2	2.25	0.54
53:Q8:23:VAL:HG13	53:Q8:46:ARG:H	1.72	0.54
25:1H:1430:C:H2'	25:1H:1431:U:C6	2.43	0.54
38:A8:35:ILE:HD11	38:A8:101:LEU:HD23	1.89	0.54
26:1J:3:C:H2'	26:1J:4:C:C6	2.43	0.54
1:13:838:G:H1	1:13:848:C:H42	1.53	0.54
25:1H:1478:G:H2'	25:1H:1479:G:H8	1.72	0.54
54:1G:1392:G:H21	54:1G:1502:A:H8	1.54	0.54
44:C5:75:ILE:O	44:C5:76:CYS:HB3	2.08	0.54
25:1H:363(B):G:H2'	25:1H:363(C):G:C8	2.38	0.54
45:H8:30:ASN:HD22	45:H8:90:VAL:HB	1.73	0.54
18:9I:59:SER:H	18:9I:62:GLU:HB2	1.73	0.54
50:I5:20:ASN:OD1	50:I5:36:CYS:HB2	2.07	0.54
25:1H:1799:G:O6	27:11:179:SER:HB3	2.08	0.54
45:D5:100:VAL:O	45:D5:124:ILE:HG22	2.08	0.54
37:98:10:LEU:O	37:98:12:ARG:HG2	2.08	0.54
7:62:26:PHE:CE2	7:62:30:ILE:HD11	2.43	0.54
3:22:181:ASN:HB3	3:22:205:GLY:O	2.07	0.54
25:14:2762:G:H5'	25:14:2763:G:OP2	2.08	0.54
54:1G:34:C:H2'	54:1G:35:G:C8	2.43	0.54
25:14:2836:U:H2'	25:14:2837:G:C8	2.43	0.54
7:6E:143:ARG:HD3	22:3K:43:G:OP1	2.08	0.54
42:E8:40:ASN:C	42:E8:41:LYS:HG2	2.27	0.54
16:7I:4:ILE:HD12	16:7I:66:PRO:HB3	1.90	0.54
25:14:190:A:OP2	47:F5:39:LYS:HE3	2.07	0.54
25:1H:2248:C:H2'	25:1H:2249:U:O4'	2.08	0.54
25:14:2542:A:H5"	25:14:2542:A:N3	2.22	0.54
3:22:36:ASP:OD1	3:22:57:ILE:HG21	2.08	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:1G:628:G:H2'	54:1G:629:G:C8	2.43	0.54
25:1H:1022:G:P	33:58:69:GLN:HE22	2.30	0.54
20:BI:73:HIS:HB3	20:BI:74:LYS:HD2	1.90	0.54
25:14:171:G:H2'	25:14:172:C:C6	2.43	0.54
51:N8:40:LYS:NZ	51:N8:48:GLU:H	2.05	0.54
54:1G:371:G:O2'	54:1G:373:A:N7	2.41	0.54
1:13:1028(A):C:N3	1:13:1032(A):G:N1	2.49	0.54
25:1H:860:U:C5	25:1H:917:A:C2	2.95	0.54
1:13:1170:A:H8	1:13:1170:A:O5'	1.91	0.54
20:BI:26:ASN:HB2	20:BI:71:THR:OG1	2.08	0.54
28:29:135:HIS:CD2	28:29:135:HIS:H	2.26	0.54
25:1H:1914:C:H2'	25:1H:1915:U:O4'	2.08	0.54
25:1H:2584:U:H2'	25:1H:2585:U:H2'	1.89	0.54
1:13:1123:A:H4'	10:1I:37:PRO:HD2	1.89	0.54
22:1K:10:C:H2'	22:1K:11:C:H6	1.73	0.54
26:16:24:G:N7	26:16:56:G:H2'	2.23	0.54
11:2I:60:ALA:HA	11:2I:63:LEU:HD12	1.89	0.54
3:2E:138:VAL:O	3:2E:141:VAL:HB	2.08	0.54
37:98:26:LYS:HE2	37:98:70:LEU:O	2.08	0.54
54:1G:757:U:H2'	54:1G:758:G:O4'	2.09	0.54
25:14:2635:C:O2'	28:29:48:GLN:NE2	2.31	0.54
54:1G:186(A):C:H2'	54:1G:186(B):C:C6	2.43	0.54
35:35:121:LYS:HG3	35:35:122:PRO:HD2	1.90	0.54
25:1H:518:G:H2'	25:1H:519:U:C6	2.42	0.54
27:11:142:VAL:HG23	27:11:193:VAL:HA	1.90	0.54
22:1K:76:C:H2'	22:1K:77:C:C6	2.43	0.54
1:13:192:U:H4'	20:BI:57:ARG:HD2	1.91	0.53
25:1H:2148:G:H2'	25:1H:2149:G:C8	2.43	0.53
4:3E:108:LEU:HB3	4:3E:110:PHE:CD2	2.43	0.53
8:7E:39:LEU:HB3	8:7E:45:ILE:HD11	1.90	0.53
23:2K:24:C:H2'	23:2K:25:U:H6	1.71	0.53
25:14:2562:U:H4'	34:25:25:LEU:HD21	1.89	0.53
42:A5:41:LYS:NZ	51:J5:25:LEU:HD21	2.23	0.53
25:14:753:C:O2'	25:14:754:C:H5'	2.08	0.53
29:39:28:ILE:HA	29:39:112:MET:HG2	1.90	0.53
25:1H:275:G:N2	25:1H:276:A:N1	2.53	0.53
25:14:943:U:OP2	35:35:36:LYS:HG3	2.07	0.53
25:14:770:G:OP2	60:14:3771:HOH:O	2.19	0.53
31:59:105:LEU:HG	31:59:113:VAL:HG13	1.89	0.53
25:14:2228:G:OP1	27:19:261:LYS:NZ	2.40	0.53
3:2E:73:PRO:O	3:2E:76:VAL:HG13	2.08	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:14:1073:A:OP2	25:14:1094:U:N3	2.41	0.53
25:1H:2758:A:C4	31:51:67:LEU:HD21	2.43	0.53
43:F8:18:TYR:O	43:F8:20:GLY:N	2.41	0.53
6:5E:62:TRP:CH2	6:5E:64:GLN:HB2	2.43	0.53
29:31:184:TYR:O	29:31:188:ARG:HG3	2.08	0.53
25:14:279:C:N4	25:14:361:G:H1	2.04	0.53
25:1H:459:U:H2'	25:1H:460:A:C8	2.43	0.53
47:F5:91:LYS:NZ	47:F5:92:LYS:H	2.05	0.53
1:13:1320:C:N4	19:AI:36:ARG:HG3	2.23	0.53
25:1H:1664:A:OP2	60:1H:3843:HOH:O	2.18	0.53
25:1H:1312:U:H4'	25:1H:1313:U:O5'	2.08	0.53
54:1G:540:G:H2'	54:1G:541:G:O4'	2.08	0.53
29:39:5:ALA:HB3	29:39:19:GLU:HA	1.89	0.53
5:4E:11:ILE:HG12	5:4E:31:LEU:HB3	1.90	0.53
27:19:69:ARG:NE	27:19:105:ILE:HD11	2.23	0.53
25:14:729:G:OP2	27:19:13:ARG:NH1	2.40	0.53
25:1H:1183:G:O2'	49:L8:29:ARG:NH1	2.41	0.53
25:1H:2689:U:H5"	25:1H:2713:A:H2	1.73	0.53
7:6E:5:ARG:CZ	7:6E:7:ALA:HA	2.39	0.53
1:13:1014:A:H2	1:13:1219:U:H1'	1.72	0.53
25:14:868:U:C2	25:14:869:G:C8	2.97	0.53
37:98:38:VAL:HG22	37:98:112:ALA:HB2	1.89	0.53
11:2A:21:ILE:HB	11:2A:84:VAL:HG12	1.90	0.53
2:1E:61:LEU:HA	2:1E:64:ARG:HG2	1.90	0.53
54:1G:552:U:O2'	12:3A:86:ARG:O	2.27	0.53
55:1L:47:U:H2'	55:1L:48:C:C5	2.43	0.53
25:14:2261:C:O2'	25:14:2262:U:H5'	2.08	0.53
4:3E:72:GLU:OE1	4:3E:207:TYR:OH	2.23	0.53
53:M5:8:LYS:HB3	53:M5:12:LYS:HE3	1.90	0.53
54:1G:1320:C:H2'	54:1G:1321:C:H6	1.73	0.53
55:3L:25:G:H2'	55:3L:26:G:C8	2.42	0.53
25:1H:1437:C:O2'	25:1H:1518:C:O2'	2.20	0.53
25:1H:818:G:H5'	25:1H:839:U:OP1	2.08	0.53
6:5E:80:ARG:O	6:5E:82:ARG:NE	2.42	0.53
12:3I:62:SER:HB2	12:3I:64:TYR:CD1	2.44	0.53
25:14:1889:A:N1	25:14:2234:G:H1'	2.23	0.53
25:1H:1332:G:N2	25:1H:1610:A:C8	2.76	0.53
54:1G:179:A:H2'	54:1G:180:U:C6	2.42	0.53
6:5E:86:ARG:O	6:5E:87:ARG:HG2	2.08	0.53
1:13:749:C:H2'	1:13:750:G:H8	1.74	0.53
1:13:1356:G:H2'	1:13:1357:A:C8	2.44	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:7I:20:VAL:HG21	16:7I:32:TYR:CD2	2.42	0.53
25:1H:1662:C:O2'	25:1H:2687:U:OP1	2.25	0.53
48:G5:12:GLU:HG3	48:G5:16:LEU:HD23	1.90	0.53
9:8E:50:LEU:HD23	9:8E:85:LEU:HD11	1.89	0.53
32:69:54:GLN:HA	32:69:57:ARG:HB3	1.90	0.53
5:4E:71:LEU:HD13	5:4E:114:GLY:HA3	1.90	0.53
25:1H:736:C:O5'	25:1H:736:C:H6	1.92	0.53
31:51:106:THR:OG1	31:51:106:THR:O	2.25	0.53
54:1G:1499:A:H1'	54:1G:1520:G:H5'	1.90	0.53
54:1G:749:C:H2'	54:1G:750:G:C8	2.38	0.53
3:22:91:LEU:HB2	3:22:99:VAL:HG11	1.89	0.53
25:1H:581:C:H2'	25:1H:582:G:C8	2.44	0.53
25:1H:2123:G:H22	25:1H:2175:C:N4	2.03	0.53
1:13:377:G:OP1	16:7I:3:LYS:HD2	2.07	0.53
25:1H:1533:C:H3'	25:1H:1534:G:C5'	2.38	0.53
13:4A:13:LYS:HA	13:4A:44:ARG:NH1	2.24	0.53
25:14:2659:G:N2	25:14:2662:A:OP2	2.42	0.53
29:39:65:TRP:CZ3	29:39:72:ARG:HB3	2.43	0.53
4:3E:64:LEU:HD22	4:3E:198:VAL:HG11	1.90	0.53
26:1J:78:A:H61	26:1J:98:G:H1'	1.73	0.53
25:14:1190:G:H2'	25:14:1191:G:H8	1.73	0.53
25:1H:722:A:H2'	25:1H:723:G:C8	2.43	0.53
15:6A:17:ARG:HD3	15:6A:26:GLU:HG3	1.90	0.53
25:1H:784:A:C5	27:11:229:VAL:HG21	2.43	0.53
1:13:1023:G:H3'	1:13:1024:G:H5"	1.90	0.53
31:59:76:VAL:O	31:59:80:SER:OG	2.23	0.53
25:14:1328:G:H2'	25:14:1330:C:C5	2.42	0.53
7:6E:27:ILE:HA	7:6E:30:ILE:HD12	1.89	0.53
25:14:1087:G:H2'	25:14:1089:G:H1'	1.89	0.53
30:49:105:LYS:HZ3	50:I5:26:SER:HB3	1.74	0.53
45:D5:158:PRO:HG2	45:D5:161:VAL:H	1.73	0.53
14:5I:22:THR:HB	14:5I:33:VAL:HG21	1.90	0.53
26:1J:15:A:H1'	26:1J:109:G:C5	2.44	0.53
26:1J:18:G:H2'	26:1J:19:G:C8	2.44	0.53
4:32:9:CYS:HB3	4:32:32:ALA:CB	2.39	0.53
22:3K:38:MIA:H2'	22:3K:39:A:C8	2.43	0.53
1:13:271:C:H2'	1:13:272:C:H6	1.73	0.53
54:1G:570:G:H2'	54:1G:571:U:H6	1.73	0.53
9:8E:118:LYS:O	9:8E:119:ALA:HB3	2.08	0.53
1:13:109:A:N7	1:13:326:G:H2'	2.24	0.53
25:14:1797:C:O2'	27:19:259:THR:OG1	2.23	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:41:49:ASP:OD2	30:41:52:ILE:HG12	2.08	0.53
43:F8:49:VAL:HG11	43:F8:83:VAL:HG12	1.90	0.53
37:98:38:VAL:HB	37:98:39:PRO:HD3	1.90	0.53
3:22:45:LYS:HG3	3:22:46:GLU:HG2	1.90	0.53
31:51:169:VAL:O	31:51:170:ARG:NE	2.37	0.53
9:82:99:LEU:HB3	9:82:101:PHE:CE1	2.43	0.53
25:1H:705:A:C8	25:1H:727:A:C2	2.97	0.53
37:55:78:LYS:O	37:55:83:ILE:HG13	2.08	0.53
2:1E:126:GLU:HA	2:1E:129:GLU:HG2	1.91	0.53
54:1G:1343:G:H4'	9:82:122:ALA:HB3	1.89	0.53
25:1H:910:A:C5	36:88:13:GLN:HG3	2.43	0.53
7:6E:49:ILE:O	7:6E:53:LYS:HB2	2.09	0.53
25:1H:593:G:H4'	53:Q8:60:LEU:HD12	1.91	0.53
47:F5:4:VAL:HG11	47:F5:11:ARG:NH1	2.24	0.53
25:14:1027:A:C2	25:14:2488:A:H5'	2.44	0.53
27:19:218:ARG:HB3	27:19:219:PRO:HD2	1.89	0.53
12:3A:102:ARG:HB3	12:3A:109:GLY:HA2	1.90	0.53
14:5I:39:LEU:HD11	14:5I:47:LEU:HD12	1.89	0.53
25:14:1614:A:N6	42:A5:88:ARG:H	2.05	0.53
54:1G:464:G:O6	54:1G:466:C:H5'	2.08	0.53
25:14:96:G:H4'	48:G5:48:HIS:CD2	2.44	0.53
44:G8:76:CYS:SG	44:G8:97:ARG:HG3	2.48	0.53
7:6E:62:PHE:HA	7:6E:124:LEU:HD21	1.91	0.53
1:13:600:C:OP1	8:7E:97:VAL:HG12	2.09	0.53
1:13:1004:A:C2	1:13:1025:U:H1'	2.43	0.53
27:11:3:VAL:HG12	27:11:17:THR:HG23	1.90	0.53
25:1H:443:A:N6	29:31:41:LEU:O	2.41	0.53
47:F5:80:LEU:HD12	47:F5:82:LEU:HD21	1.90	0.53
4:32:149:ALA:O	4:32:153:ARG:NE	2.42	0.53
27:19:264:LYS:HE2	27:19:266:SER:HB3	1.90	0.53
1:13:1204:A:OP2	14:5I:1:MET:HB2	2.09	0.53
10:1A:12:ASP:OD1	10:1A:14:LYS:N	2.42	0.53
33:15:38:HIS:NE2	33:15:50:ASP:OD2	2.42	0.53
25:1H:1301:A:H2	25:1H:1626:G:H21	1.55	0.53
25:1H:2298:A:H2'	25:1H:2299:G:O4'	2.09	0.53
31:51:13:LYS:O	31:51:15:VAL:N	2.40	0.53
37:55:29:LEU:HD23	37:55:70:LEU:HD11	1.90	0.53
42:E8:86:LEU:HD12	42:E8:87:PRO:HD2	1.90	0.53
25:14:1430:C:H2'	25:14:1431:U:C6	2.44	0.53
6:5E:15:ASP:O	6:5E:19:LEU:N	2.37	0.53
34:25:5:GLN:HG3	34:25:20:MET:HE1	1.91	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:1H:116:C:O2'	25:1H:117:G:H5'	2.09	0.53
31:59:74:ASN:O	31:59:78:GLY:N	2.36	0.53
54:1G:454:C:OP1	16:7A:75:ARG:NH2	2.42	0.53
41:95:38:LEU:HD22	41:95:55:ALA:HB1	1.91	0.53
29:31:23:ASP:OD1	29:31:23:ASP:N	2.39	0.53
1:13:813:U:H5"	1:13:903:G:O3'	2.09	0.53
3:22:26:LYS:HG3	3:22:27:LYS:N	2.24	0.53
2:1E:22:LYS:H	2:1E:40:HIS:CD2	2.27	0.53
25:14:2708:G:H5'	37:55:68:ARG:HG2	1.90	0.53
4:32:24:GLU:HG2	4:32:25:ARG:H	1.73	0.53
26:1J:44:G:H1'	26:1J:47:C:H42	1.73	0.53
27:11:30:GLU:CD	27:11:63:ARG:HE	2.11	0.53
27:11:85:ASP:OD2	27:11:88:ARG:HD2	2.08	0.53
1:13:271:C:H2'	1:13:272:C:C6	2.43	0.53
8:7E:7:ALA:HB2	8:7E:85:ARG:HH11	1.74	0.53
25:14:140:A:C8	25:14:1408:C:O2'	2.61	0.53
25:1H:957:A:N1	25:1H:2458:G:H4'	2.23	0.53
54:1G:198:G:H2'	54:1G:199:G:C8	2.44	0.53
27:11:141:VAL:HG12	27:11:164:GLN:HG3	1.90	0.53
9:8E:10:ARG:HE	9:8E:105:ASP:HB2	1.74	0.53
31:51:9:ILE:O	31:51:11:VAL:HG13	2.08	0.53
25:14:2123:G:H2'	25:14:2124:G:H8	1.74	0.53
1:13:136:C:H42	1:13:227:G:H1	1.54	0.53
1:13:1060:C:H5"	10:1I:51:ARG:HG2	1.91	0.53
54:1G:865:A:H8	54:1G:865:A:O5'	1.91	0.53
25:14:2744:G:N2	31:59:143:GLN:OE1	2.42	0.53
45:D5:19:ARG:NH1	45:D5:84:GLU:HB2	2.24	0.53
53:Q8:30:ARG:CG	53:Q8:30:ARG:HH11	2.20	0.53
25:14:74:A:H4'	25:14:75:G:O5'	2.08	0.53
25:1H:1063:G:H22	25:1H:1076:C:H1'	1.73	0.53
25:14:1839:G:C8	25:14:1927:A:H1'	2.44	0.53
25:14:848:G:C2	25:14:933:A:H1'	2.43	0.53
54:1G:255:G:O6	54:1G:270:A:N6	2.41	0.53
25:14:824:A:H1'	25:14:2358:G:N7	2.23	0.53
54:1G:1316:G:H4'	14:5A:18:VAL:HG11	1.91	0.53
47:J8:80:LEU:HD12	47:J8:82:LEU:HD23	1.89	0.53
28:21:51:PHE:CD2	28:21:52:LEU:HG	2.44	0.53
25:14:639:U:H2'	25:14:640:C:C6	2.43	0.53
1:13:396:G:O2'	1:13:398:C:OP1	2.15	0.53
28:21:24:THR:HG21	28:21:188:VAL:CG2	2.38	0.53
25:14:1894:C:O2'	25:14:1895:C:H5'	2.08	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:95:57:VAL:HG23	41:95:99:ILE:HG12	1.89	0.53
25:1H:2749:A:H2'	31:51:59:ARG:HH21	1.73	0.53
32:61:113:ARG:HB3	32:61:131:LYS:HD3	1.91	0.53
25:1H:70:G:H21	25:1H:71:A:N6	2.05	0.53
13:4I:108:ARG:NH1	13:4I:112:GLY:O	2.42	0.53
25:14:2150:U:H2'	25:14:2151:G:C8	2.41	0.53
25:14:910:A:N7	36:45:13:GLN:HG3	2.24	0.53
30:41:68:PRO:HB3	30:41:92:VAL:HB	1.91	0.53
34:25:78:ARG:HH21	39:75:103:ARG:NH2	2.07	0.53
54:1G:1053:G:O2'	54:1G:1054:C:OP2	2.21	0.53
54:1G:1112:C:C4	3:22:178:LEU:HD23	2.44	0.53
26:1J:88:C:H2'	26:1J:88:C:O2	2.09	0.53
25:14:864:G:C6	25:14:865:C:N4	2.77	0.53
45:D5:62:PRO:O	45:D5:63:ASP:HB3	2.09	0.53
1:13:1226:C:H2'	13:4I:103:THR:HB	1.91	0.53
25:1H:764:A:N3	27:11:213:ARG:NH1	2.56	0.53
25:14:861:A:C2	25:14:917:A:C4	2.97	0.53
25:1H:1009:A:OP1	33:58:37:LYS:HE3	2.09	0.53
25:14:2210:G:H3'	25:14:2211:G:C8	2.44	0.53
54:1G:1091:U:N3	54:1G:1094:G:OP2	2.28	0.53
54:1G:909:A:H2'	54:1G:910:C:O4'	2.09	0.53
4:32:107:ARG:HH22	4:32:196:LEU:HD21	1.72	0.53
25:14:612:G:H2'	25:14:613:U:O2	2.09	0.53
25:14:839:U:H2'	25:14:840:C:C6	2.44	0.53
27:19:267:SER:O	27:19:268:ARG:HG2	2.08	0.53
42:E8:37:ARG:HD3	42:E8:38:TYR:CE2	2.44	0.53
25:14:29:U:H2'	25:14:30:G:C8	2.44	0.53
31:51:6:ARG:HG3	31:51:6:ARG:HH11	1.72	0.53
1:13:1178:G:H5"	9:8E:93:ARG:NH2	2.23	0.53
25:1H:2171:A:O2'	25:1H:2172:U:O5'	2.26	0.53
44:G8:87:LYS:HD3	44:G8:88:LYS:N	2.24	0.53
41:95:85:LYS:CD	41:95:87:HIS:H	2.21	0.53
25:1H:1069:A:H4'	25:1H:1070:A:H5"	1.91	0.53
29:31:7:TYR:O	29:31:21:ALA:HA	2.09	0.53
54:1G:216:G:O2'	54:1G:217:C:O4'	2.27	0.53
1:13:688:G:H2'	1:13:689:C:C6	2.44	0.53
25:14:2210:G:H3'	25:14:2211:G:C5	2.44	0.53
54:1G:1084:G:C5	54:1G:1085:U:C4	2.97	0.53
49:H5:6:VAL:O	49:H5:34:GLU:HA	2.09	0.53
39:75:31:SER:HG	39:75:85:LYS:HZ2	1.54	0.53
9:8E:56:LEU:C	9:8E:58:HIS:H	2.12	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:75:5:ALA:HA	39:75:8:LYS:HG3	1.91	0.53
25:1H:1375:C:H2'	25:1H:1376:C:H6	1.73	0.53
25:1H:1138:G:H21	33:58:106:MET:HE3	1.74	0.53
29:31:132:VAL:HG12	29:31:163:VAL:HG22	1.90	0.53
16:7A:34:GLU:OE1	16:7A:55:ARG:NH1	2.42	0.53
10:1I:47:PHE:CZ	14:5I:37:PHE:HE2	2.27	0.53
1:13:881:G:OP2	12:3I:12:ARG:NH2	2.42	0.53
46:E5:27:GLU:HG3	46:E5:68:GLU:HA	1.90	0.53
1:13:524:G:H2'	1:13:525:C:C6	2.44	0.53
30:41:128:ARG:NH2	30:41:128:ARG:HB2	2.24	0.53
25:1H:1931:U:H5	25:1H:1969:A:N7	2.07	0.53
54:1G:1429:C:H2'	54:1G:1430:C:H6	1.74	0.53
1:13:191(C):G:H2'	1:13:191(D):U:C6	2.43	0.53
25:14:1366:A:H2'	25:14:1367:A:O4'	2.09	0.53
37:98:103:ARG:HD2	37:98:108:GLY:O	2.09	0.53
45:D5:11:GLU:OE2	45:D5:12:GLY:N	2.37	0.53
28:21:77:ILE:CB	28:21:79:ARG:HE	2.08	0.52
25:1H:1359:A:C2	25:1H:1372:U:O4	2.62	0.52
41:95:35:LEU:HB3	41:95:37:VAL:HG11	1.91	0.52
1:13:603:U:H2'	1:13:604:G:C8	2.44	0.52
25:1H:1386:C:OP2	25:1H:1396:U:H5	1.92	0.52
54:1G:512:U:H2'	54:1G:513:C:C6	2.44	0.52
26:1J:66:A:C2	26:1J:108:C:C4	2.97	0.52
22:1K:51:C:C5	22:1K:52:G:H1'	2.45	0.52
54:1G:664:G:OP1	18:9A:64:ARG:NH2	2.36	0.52
54:1G:448:A:H2'	54:1G:449:C:O2	2.09	0.52
25:14:150:C:H2'	25:14:151:C:C6	2.44	0.52
1:13:1007:C:H42	1:13:1022:G:H1	1.55	0.52
27:19:70:TRP:C	27:19:70:TRP:CD1	2.82	0.52
1:13:1446:A:OP1	1:13:1446:A:H4'	2.09	0.52
25:1H:2492:U:H2'	25:1H:2493:U:C6	2.43	0.52
25:14:2052:G:O4'	28:29:142:GLY:HA3	2.09	0.52
25:14:1040:C:H2'	25:14:1041:C:C6	2.43	0.52
22:3K:80:C:H4'	25:1H:1851:U:H4'	1.91	0.52
1:13:403:C:OP1	4:3E:137:SER:OG	2.24	0.52
25:14:2335:A:C8	25:14:2337:G:C5	2.96	0.52
29:31:9:ILE:HG12	29:31:10:PRO:HD2	1.91	0.52
33:58:121:LYS:HB3	33:58:123:TYR:HE1	1.75	0.52
53:M5:29:LYS:HB3	53:M5:44:LYS:HB3	1.91	0.52
2:12:165:VAL:O	2:12:167:PRO:HD3	2.09	0.52
54:1G:146:G:H2'	54:1G:147:G:H8	1.73	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:61:81:VAL:HG11	32:61:88:ILE:HD13	1.91	0.52
54:1G:1322:C:O2'	54:1G:1323:G:H5'	2.08	0.52
26:1J:116:G:H2'	26:1J:117:G:O4'	2.09	0.52
25:1H:2820:A:C5	37:98:4:LEU:HD11	2.44	0.52
25:1H:2467:C:H4'	36:88:123:HIS:CE1	2.45	0.52
25:14:567:A:P	60:14:3565:HOH:O	2.65	0.52
54:1G:426:G:OP1	4:32:38:TYR:OH	2.24	0.52
25:1H:1511:A:H2'	25:1H:1512:G:C8	2.44	0.52
47:F5:92:LYS:C	47:F5:94:LEU:N	2.62	0.52
25:14:67:U:H2'	25:14:68:G:C8	2.44	0.52
13:4I:39:ILE:HD12	13:4I:56:LEU:CD2	2.38	0.52
53:M5:56:GLU:O	53:M5:58:ILE:N	2.40	0.52
25:1H:638:G:C5	25:1H:651:G:C2	2.97	0.52
25:1H:2176:A:H2'	25:1H:2177:C:C6	2.45	0.52
44:G8:40:GLU:C	44:G8:42:VAL:H	2.11	0.52
50:I5:36:CYS:SG	50:I5:37:SER:N	2.82	0.52
39:B8:58:ASN:C	39:B8:58:ASN:HD22	2.11	0.52
54:1G:1057:G:H2'	54:1G:1058:G:C8	2.44	0.52
3:22:42:LEU:O	3:22:46:GLU:HG3	2.09	0.52
25:14:912:C:H2'	25:14:913:U:H6	1.75	0.52
38:65:64:GLU:O	38:65:68:GLN:HG3	2.10	0.52
25:14:1669:A:H5"	25:14:1670:C:OP2	2.08	0.52
1:13:609:A:H5'	16:7I:18:ARG:HH12	1.75	0.52
29:31:129:PHE:HA	29:31:142:TRP:NE1	2.24	0.52
54:1G:518:C:H5"	54:1G:519:C:C6	2.44	0.52
30:49:145:THR:OG1	30:49:148:MET:N	2.42	0.52
4:3E:129:ASN:ND2	4:3E:144:ASP:OD1	2.38	0.52
21:1F:3:LYS:HB3	21:1F:14:TRP:CD1	2.44	0.52
8:72:29:SER:HB3	8:72:32:LYS:HG3	1.92	0.52
25:1H:607:U:N3	25:1H:621:A:C2	2.70	0.52
54:1G:1127:G:H1'	54:1G:1148:U:H3	1.74	0.52
28:29:61:ARG:O	28:29:63:LEU:N	2.43	0.52
25:14:2394:C:H2'	25:14:2395:C:H6	1.75	0.52
25:1H:2115:G:N2	25:1H:2172:U:O2	2.42	0.52
25:1H:1385:G:O2'	25:1H:1396:U:C6	2.63	0.52
1:13:1316:G:H5"	14:5I:17:LYS:NZ	2.24	0.52
1:13:79:G:H2'	1:13:79:G:N3	2.24	0.52
19:AI:40:ILE:HD11	19:AI:62:ILE:HD13	1.92	0.52
1:13:324:G:N1	1:13:327:A:OP2	2.42	0.52
1:13:1149:C:H2'	1:13:1150:U:C6	2.41	0.52
18:9A:22:VAL:C	18:9A:24:ALA:H	2.11	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:1H:527:C:H4'	25:1H:528:A:H5'	1.90	0.52
56:2L:54:G:H2'	56:2L:55:5MU:C6	2.44	0.52
1:13:221:C:H2'	1:13:222:U:H6	1.73	0.52
54:1G:677:U:H2'	54:1G:678:U:C6	2.45	0.52
25:1H:1346:G:H2'	25:1H:1347:G:H8	1.74	0.52
1:13:940:C:H2'	1:13:941:G:C8	2.45	0.52
25:14:1993:U:H4'	28:29:128:SER:HB3	1.91	0.52
22:1K:77:C:O2	22:1K:78:C:N4	2.43	0.52
3:2E:33:LEU:O	3:2E:36:ASP:HB2	2.08	0.52
2:12:30:ARG:NH2	2:12:195:ASP:OD1	2.42	0.52
25:14:1849:G:H2'	25:14:1850:G:H8	1.74	0.52
7:6E:72:ARG:HG3	7:6E:142:GLU:OE1	2.09	0.52
54:1G:108:G:H5'	54:1G:109:A:H5"	1.91	0.52
25:14:1593:G:H2'	25:14:1594:G:C8	2.45	0.52
54:1G:947:G:O3'	13:4A:109:THR:OG1	2.25	0.52
36:45:17:LEU:HD21	36:45:41:TRP:HE1	1.73	0.52
28:21:78:LEU:HA	28:21:79:ARG:CD	2.36	0.52
3:22:70:VAL:O	3:22:105:GLU:HA	2.09	0.52
29:31:6:VAL:HG11	29:31:119:ARG:HA	1.92	0.52
54:1G:4:U:H3'	54:1G:5:U:H5'	1.91	0.52
39:B8:26:ASP:OD2	39:B8:120:ARG:NH1	2.36	0.52
55:3L:49:A:H2'	55:3L:49:A:N3	2.25	0.52
54:1G:1059:C:O2	10:1A:53:PRO:HG3	2.10	0.52
2:12:53:ARG:HH12	2:12:199:TYR:HA	1.73	0.52
25:1H:2688:U:H1'	25:1H:2721:A:H61	1.74	0.52
39:B8:55:ASN:N	39:B8:59:THR:HG22	2.25	0.52
2:1E:17:PHE:HB2	2:1E:42:ILE:HG23	1.91	0.52
25:14:1063:G:H1	25:14:1074:G:H22	1.57	0.52
1:13:731:G:H2'	1:13:732:C:H6	1.75	0.52
54:1G:66:G:N2	54:1G:103:C:O2	2.39	0.52
1:13:247:G:OP2	17:8I:100:LYS:N	2.38	0.52
30:41:110:ALA:HA	30:41:140:ILE:O	2.09	0.52
6:5E:98:LEU:HB3	6:5E:101:ALA:HB3	1.91	0.52
1:13:1391:U:H2'	1:13:1392:G:C8	2.44	0.52
25:14:2310:A:H5'	25:14:2311:A:OP2	2.09	0.52
25:1H:2394:C:H2'	25:1H:2395:C:H6	1.74	0.52
25:14:2720:U:H2'	25:14:2720:U:O2	2.09	0.52
7:6E:91:VAL:HG12	7:6E:95:ARG:HB3	1.90	0.52
54:1G:562:C:H1'	12:3A:15:ARG:HB3	1.91	0.52
25:1H:306:U:H2'	25:1H:307:G:O4'	2.09	0.52
25:14:2360:A:H8	25:14:2360:A:O5'	1.92	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:65:67:ARG:CZ	38:65:67:ARG:HB2	2.39	0.52
25:1H:1194:A:OP2	25:1H:1194:A:H8	1.92	0.52
22:1K:64:PSU:H6	22:1K:64:PSU:O5'	1.92	0.52
25:14:548:A:C5	25:14:549:G:H1'	2.44	0.52
27:11:35:LYS:HG3	27:11:36:PRO:HD2	1.91	0.52
25:1H:1567:A:H5"	27:11:58:HIS:ND1	2.23	0.52
54:1G:954:G:H2'	54:1G:955:U:C6	2.45	0.52
54:1G:991:U:O2	54:1G:993:G:C8	2.62	0.52
25:1H:1174:A:H2'	25:1H:1176:G:OP1	2.09	0.52
25:1H:1511:A:H2'	25:1H:1512:G:H8	1.75	0.52
3:22:70:VAL:HG21	3:22:76:VAL:HG11	1.91	0.52
37:55:101:ALA:HA	51:J5:44:THR:HG21	1.90	0.52
4:3E:155:LEU:O	4:3E:158:ILE:N	2.40	0.52
1:13:1525:G:P	11:2I:120:ARG:HH22	2.32	0.52
1:13:536:C:H2'	1:13:537:G:C8	2.45	0.52
30:49:109:VAL:HG13	50:I5:33:VAL:HG23	1.91	0.52
2:1E:174:VAL:HG13	2:1E:184:VAL:HG11	1.90	0.52
25:1H:1111:A:H5"	31:51:3:ARG:HH11	1.74	0.52
54:1G:666:G:H5'	54:1G:726:C:H1'	1.91	0.52
25:1H:1204:A:H61	25:1H:1240:U:H2'	1.74	0.52
39:B8:42:ILE:HD12	39:B8:42:ILE:H	1.75	0.52
25:1H:273(F):C:H3'	25:1H:274:G:H5"	1.90	0.52
25:14:522:G:H2'	25:14:523:C:C6	2.44	0.52
25:14:2709:G:O2'	60:14:3472:HOH:O	2.19	0.52
43:F8:12:VAL:HG13	43:F8:27:THR:O	2.09	0.52
29:31:179:GLU:OE1	29:31:179:GLU:N	2.39	0.52
7:62:84:ASN:OD1	7:62:84:ASN:N	2.43	0.52
13:4A:27:LYS:HZ2	13:4A:31:LYS:HE3	1.74	0.52
54:1G:808:C:OP1	15:6A:48:LYS:HD3	2.09	0.52
25:14:1899:G:N2	25:14:1902:C:N4	2.45	0.52
1:13:1133:G:H22	1:13:1141:C:H42	1.58	0.52
39:B8:108:ARG:HA	39:B8:111:ARG:NE	2.23	0.52
25:1H:2467:C:H4'	36:88:123:HIS:CG	2.45	0.52
25:1H:1124:C:H2'	25:1H:1125:G:O4'	2.10	0.52
44:C5:76:CYS:SG	44:C5:102:CYS:HB2	2.48	0.52
36:45:25:ASP:HB3	36:45:102:VAL:CB	2.38	0.52
54:1G:590:C:H2'	54:1G:591:U:C6	2.45	0.52
25:1H:2438:U:O3'	25:1H:2439:A:H3'	2.09	0.52
25:14:2646:C:H2'	25:14:2647:U:O4'	2.09	0.52
25:14:2320:A:N6	25:14:2333:A:H2'	2.25	0.52
22:3K:19:C:H2'	22:3K:20:C:C4'	2.40	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:14:404:C:O2'	25:14:405:U:OP2	2.21	0.52
36:88:66:ILE:HG22	36:88:67:ARG:N	2.25	0.52
39:75:106:SER:HA	39:75:110:ILE:HD11	1.90	0.52
30:49:76:SER:O	30:49:77:ILE:HG13	2.09	0.52
17:8I:100:LYS:HB3	17:8I:101:ARG:HH11	1.74	0.52
25:1H:1203:G:OP2	25:1H:1204:A:H2'	2.08	0.52
44:G8:35:TYR:CD2	44:G8:69:ALA:HB3	2.44	0.52
25:1H:2485:G:OP1	36:88:46:GLN:NE2	2.43	0.52
25:14:1434:A:H61	25:14:1558:A:N6	2.07	0.52
4:32:79:PHE:CD1	4:32:207:TYR:HD2	2.28	0.52
35:78:122:PRO:HA	35:78:142:GLY:HA3	1.91	0.52
25:1H:2815:C:H2'	25:1H:2816:C:H6	1.74	0.52
36:88:112:GLU:HA	36:88:115:MET:HB2	1.92	0.52
1:13:741:G:H2'	1:13:742:G:O4'	2.10	0.52
3:22:73:PRO:O	3:22:77:ILE:N	2.42	0.52
25:14:2294:C:OP1	38:65:89:ARG:NH2	2.43	0.52
54:1G:1286:A:C8	54:1G:1287:A:H4'	2.44	0.52
25:14:1418:G:H2'	25:14:1579:A:N6	2.24	0.52
23:2K:63:C:H2'	23:2K:64:G:H8	1.73	0.52
25:1H:2690:C:H5"	25:1H:2872:G:N2	2.24	0.52
48:K8:29:LYS:HG2	48:K8:57:ILE:HD13	1.91	0.52
25:1H:1754:C:H5	39:B8:96:ARG:NH2	2.08	0.52
25:1H:2758:A:C2	25:1H:2759:G:H1'	2.45	0.52
25:14:2052:G:C8	28:29:141:ILE:HD11	2.45	0.52
43:F8:52:VAL:HG23	43:F8:82:GLN:HB3	1.92	0.52
3:2E:32:LEU:HD13	3:2E:59:ARG:HH11	1.74	0.52
32:61:57:ARG:O	32:61:61:ARG:HG2	2.09	0.52
1:13:57:G:H2'	1:13:58:C:C6	2.45	0.52
25:14:1567:A:H5'	27:19:58:HIS:CD2	2.44	0.52
13:4A:81:LEU:HD21	13:4A:88:ARG:CZ	2.40	0.52
54:1G:123:C:H2'	54:1G:124:G:C8	2.45	0.52
2:12:12:GLU:HB3	2:12:213:LEU:HD22	1.91	0.52
25:14:1973:G:H2'	25:14:1974:C:C6	2.44	0.52
34:68:75:SER:OG	39:B8:74:ARG:NH1	2.39	0.52
25:1H:2615:U:P	60:1H:3510:HOH:O	2.66	0.52
35:78:106:LEU:O	35:78:106:LEU:HD22	2.10	0.52
1:13:1167:A:OP1	1:13:1167:A:H8	1.93	0.52
25:1H:1329:U:H5"	25:1H:1330:C:H5	1.74	0.52
36:88:110:THR:HG23	36:88:113:GLN:OE1	2.10	0.52
36:45:74:TYR:O	36:45:89:ASN:HB3	2.10	0.52
25:1H:192:C:P	60:1H:3581:HOH:O	2.68	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:11:273:ARG:HG2	27:11:273:ARG:HH21	1.73	0.52
38:A8:34:HIS:CB	38:A8:36:TYR:HE1	2.19	0.52
53:M5:16:ILE:HD11	53:M5:57:ARG:HG3	1.92	0.52
33:58:43:THR:HB	33:58:46:VAL:CG1	2.37	0.52
25:14:1225:C:H4'	41:95:85:LYS:CG	2.40	0.52
54:1G:674:G:O2'	54:1G:675:A:H5'	2.09	0.52
32:69:76:THR:HG23	32:69:77:LEU:H	1.74	0.52
32:69:97:ILE:O	32:69:100:ALA:HB3	2.09	0.52
25:14:2111:C:H5	25:14:2147:G:H21	1.57	0.52
38:65:61:ASN:OD1	38:65:62:LYS:N	2.40	0.52
25:14:654(A):A:H2	25:14:654(T):A:N1	2.07	0.52
25:14:2318:G:H5'	25:14:2319:G:OP2	2.10	0.52
1:13:1085:U:H3'	1:13:1086:U:H5	1.74	0.52
25:14:623:G:H2'	25:14:624:C:C6	2.45	0.52
45:H8:156:LYS:HE3	45:H8:158:PRO:HA	1.91	0.52
54:1G:1348:U:N3	54:1G:1374:A:H2	2.08	0.52
25:14:2012:G:H5"	42:A5:96:ILE:HD13	1.92	0.52
25:14:1817:G:OP1	27:19:88:ARG:NH2	2.35	0.52
30:41:17:PRO:HA	30:41:20:ILE:HG13	1.92	0.52
11:2I:109:VAL:HG12	18:9I:84:LYS:HB2	1.91	0.52
25:14:2698:U:H2'	25:14:2699:C:C6	2.45	0.52
28:29:41:LYS:HG3	28:29:42:ASP:H	1.75	0.52
1:13:827:U:H5	1:13:872:A:N1	2.08	0.52
25:14:607:U:H3	25:14:621:A:H2	1.50	0.52
13:4A:80:ARG:HH22	19:AA:66:MET:HG2	1.75	0.52
25:1H:2387:U:H1'	46:I8:41:ARG:NH2	2.24	0.52
41:95:48:GLY:H	41:95:52:VAL:HG22	1.74	0.52
44:C5:47:LYS:HA	44:C5:60:PHE:CD2	2.45	0.52
25:14:2388:A:H2'	25:14:2389:G:H5'	1.90	0.52
56:2L:63:C:H2'	56:2L:64:G:H8	1.75	0.52
25:14:1385:G:HO2'	25:14:1396:U:H6	1.56	0.52
25:14:343:C:H2'	25:14:344:G:H8	1.75	0.52
54:1G:1412:C:H2'	54:1G:1413:A:C8	2.45	0.52
38:A8:106:ARG:CZ	38:A8:107:GLU:HB2	2.40	0.52
12:3I:53:ARG:HB3	12:3I:69:TYR:HE1	1.74	0.52
2:12:63:MET:HG3	2:12:225:ALA:HB1	1.90	0.52
25:1H:2574:G:O2'	28:21:143:ASN:HB3	2.10	0.52
1:13:112:G:OP2	16:7I:27:LYS:HD2	2.10	0.52
25:14:392:C:H5"	25:14:409:C:H5"	1.92	0.52
25:14:1857:G:O2'	25:14:1885:A:N6	2.43	0.52
25:1H:569:U:C4	25:1H:570:G:C6	2.98	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:7A:43:LYS:HB3	16:7A:48:TRP:CD1	2.45	0.52
18:9I:22:VAL:HA	18:9I:25:THR:OG1	2.10	0.52
38:A8:93:LYS:HG2	38:A8:95:HIS:HB2	1.92	0.52
25:1H:302:C:H2'	25:1H:303:U:C6	2.45	0.52
26:1J:6:C:C2	26:1J:115:G:N2	2.78	0.52
2:1E:12:GLU:O	2:1E:16:HIS:HB2	2.10	0.52
25:1H:1213:A:H1'	25:1H:1238:G:N3	2.25	0.52
54:1G:523:A:H61	12:3A:92:ASP:HB2	1.75	0.52
37:55:104:ARG:HG3	37:55:111:LEU:HD21	1.90	0.52
22:1K:35:QUO:O5'	22:1K:35:QUO:H8	2.09	0.52
25:1H:2311:A:H1'	30:41:88:ILE:HD13	1.91	0.52
54:1G:1322:C:O2	54:1G:1322:C:H2'	2.09	0.52
54:1G:1127:G:H22	54:1G:1144:G:N2	1.97	0.52
25:1H:2592:G:P	60:1H:3763:HOH:O	2.67	0.52
25:14:782:A:H5'	25:14:783:A:C2	2.45	0.52
53:M5:60:LEU:O	53:M5:61:LEU:HD12	2.10	0.52
54:1G:411:A:C6	54:1G:413:G:H1'	2.45	0.52
3:22:88:ARG:HA	3:22:91:LEU:HG	1.91	0.52
48:G5:47:ASN:C	48:G5:49:LYS:H	2.11	0.52
25:1H:357:A:H2'	25:1H:358:U:C6	2.41	0.52
1:13:104:G:C2	1:13:105:G:C8	2.98	0.52
12:3A:36:VAL:O	12:3A:59:ARG:N	2.39	0.52
1:13:1051:C:H2'	1:13:1052:U:C6	2.45	0.52
54:1G:255:G:P	17:8A:69:LYS:HZ3	2.33	0.52
29:31:101:LEU:O	29:31:106:ARG:NH1	2.41	0.52
36:88:104:PHE:HE2	36:88:125:LEU:HD11	1.74	0.52
54:1G:32:A:C2	54:1G:33:A:C4	2.98	0.52
25:14:1654:A:H1'	25:14:2823:A:H5'	1.92	0.52
29:39:67:GLN:HG3	29:39:67:GLN:O	2.10	0.52
25:1H:54:G:N7	60:1H:3923:HOH:O	2.34	0.52
54:1G:593:G:H1	54:1G:646:U:H3	1.58	0.52
25:1H:863:A:H2'	25:1H:864:G:H8	1.75	0.52
25:1H:588:U:H2'	25:1H:589:C:C6	2.45	0.52
8:72:51:VAL:HG22	8:72:58:TYR:O	2.10	0.52
43:B5:45:THR:OG1	43:B5:46:ALA:N	2.42	0.52
43:B5:45:THR:O	43:B5:48:LYS:NZ	2.43	0.52
25:14:2155:G:H2'	25:14:2156:G:O4'	2.09	0.51
54:1G:1130:A:N6	54:1G:1131:G:O6	2.43	0.51
10:1I:79:ARG:HD3	10:1I:82:ILE:HD12	1.92	0.51
39:75:54:ARG:HG2	39:75:59:THR:HG21	1.92	0.51
38:65:85:VAL:HG22	38:65:110:LEU:HB2	1.92	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:1G:1157:A:O2'	54:1G:1158:C:O5'	2.28	0.51
25:14:61:G:H1	25:14:93:C:H42	1.58	0.51
4:32:173:TRP:CZ3	4:32:193:ASP:HB3	2.45	0.51
18:9I:31:LEU:H	18:9I:31:LEU:HD23	1.73	0.51
54:1G:1316:G:N2	54:1G:1319:A:O5'	2.42	0.51
56:2L:57:C:H2'	56:2L:58:A:C8	2.45	0.51
25:1H:141:A:C8	25:1H:1408:C:H1'	2.45	0.51
22:1K:17:OMG:HM22	22:1K:66:G:H1	1.74	0.51
25:1H:589:C:H2'	25:1H:590:A:H8	1.75	0.51
34:25:59:LYS:HB3	34:25:87:ILE:HG22	1.90	0.51
25:14:1478:G:H2'	25:14:1479:G:H8	1.75	0.51
15:6A:4:THR:HB	15:6A:7:GLU:H	1.75	0.51
11:2I:48:ILE:HD11	11:2I:64:ALA:HA	1.91	0.51
54:1G:603:U:H2'	54:1G:604:G:C8	2.44	0.51
29:39:153:SER:HB2	29:39:190:GLU:H	1.74	0.51
27:19:40:THR:OG1	27:19:41:GLY:N	2.43	0.51
2:12:21:ARG:HA	2:12:39:ILE:HA	1.93	0.51
25:1H:320:A:H2'	29:31:136:THR:HG21	1.92	0.51
22:1K:20:C:O2'	22:1K:68:A:N6	2.43	0.51
32:69:128:LEU:O	32:69:138:ILE:HG22	2.09	0.51
1:13:153:C:N4	1:13:168:G:H1	1.96	0.51
51:J5:16:ARG:HG3	51:J5:17:ASP:N	2.26	0.51
57:4L:13:A:O2'	57:4L:14:A:OP1	2.24	0.51
54:1G:1187:G:H3'	54:1G:1188:A:H8	1.75	0.51
54:1G:992:U:H5"	54:1G:992:U:H6	1.76	0.51
33:58:65:LYS:HB3	33:58:69:GLN:HG3	1.91	0.51
40:C8:91:ASP:HB3	40:C8:92:ARG:O	2.09	0.51
41:95:87:HIS:NE2	41:95:89:GLN:HB2	2.25	0.51
30:41:124:SER:HB2	30:41:131:TYR:CE1	2.45	0.51
34:25:24:VAL:HB	34:25:33:ALA:HB2	1.92	0.51
25:1H:662:G:H5'	35:78:15:ARG:H	1.76	0.51
54:1G:962:C:N4	54:1G:974:A:H61	2.08	0.51
25:14:1945:G:H2'	25:14:1946:U:H6	1.74	0.51
29:39:80:ALA:O	29:39:83:PHE:HB2	2.10	0.51
1:13:523:A:H61	12:3I:92:ASP:HB2	1.74	0.51
9:8E:25:LYS:O	9:8E:61:ALA:N	2.44	0.51
25:14:2306:C:H2'	25:14:2307:G:H21	1.74	0.51
54:1G:345:C:N4	34:25:116:SER:O	2.42	0.51
8:7E:73:ASP:OD1	8:7E:75:ARG:NE	2.43	0.51
54:1G:625:G:H2'	54:1G:626:U:H6	1.75	0.51
54:1G:1411:C:H2'	54:1G:1412:C:C6	2.46	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:1H:2756:U:H4'	25:1H:2757:A:OP1	2.08	0.51
25:14:921:G:C6	25:14:922:U:C4	2.98	0.51
25:1H:782:A:C2	27:11:226:MET:HG2	2.45	0.51
25:1H:2679:A:H4'	28:21:165:VAL:HG11	1.92	0.51
25:14:15:G:H1	25:14:525:U:H3	1.58	0.51
13:4I:88:ARG:HG2	13:4I:98:VAL:HG12	1.90	0.51
30:49:65:GLY:HA2	50:I5:7:PRO:HB2	1.92	0.51
25:1H:2224:G:H4'	25:1H:2226:C:C2	2.46	0.51
27:19:71:ASP:CG	27:19:103:ARG:HH12	2.14	0.51
54:1G:967:C:H2'	54:1G:968:A:C8	2.45	0.51
25:1H:2273:A:H2'	25:1H:2274:A:C8	2.44	0.51
25:14:1786:A:C2	25:14:2606:C:H1'	2.45	0.51
1:13:452:A:O2'	1:13:453:A:O4'	2.20	0.51
25:1H:2115:G:H5'	25:1H:2168:G:OP2	2.09	0.51
1:13:1128:C:H5	1:13:1139:G:C4	2.29	0.51
25:14:531:C:C5	25:14:2035:G:C2	2.98	0.51
25:14:2315:G:H2'	25:14:2316:C:C6	2.45	0.51
26:1J:66:A:N6	26:1J:107:U:H2'	2.25	0.51
54:1G:980:C:H5'	54:1G:981:U:C5	2.45	0.51
25:14:910:A:H62	36:45:12:GLN:HA	1.75	0.51
25:14:2346:A:H5"	25:14:2383:G:H1'	1.92	0.51
25:14:336:C:OP1	44:C5:83:THR:HG23	2.10	0.51
54:1G:235:C:C5'	17:8A:70:ARG:HG2	2.40	0.51
30:49:12:TYR:HA	30:49:16:ARG:HB3	1.92	0.51
1:13:643:C:H2'	1:13:644:G:C8	2.44	0.51
25:14:57:C:H2'	25:14:58:G:O4'	2.11	0.51
33:58:35:ARG:O	33:58:42:TRP:HZ3	1.94	0.51
3:22:15:THR:HG21	3:22:181:ASN:HA	1.92	0.51
29:39:29:ASN:HB3	29:39:112:MET:HE1	1.92	0.51
25:14:1435:G:H2'	25:14:1436:G:O4'	2.11	0.51
34:68:71:ARG:HH11	39:B8:74:ARG:HH21	1.58	0.51
25:1H:2657:A:O2'	31:51:160:LYS:NZ	2.43	0.51
1:13:1152:A:H4'	10:1I:13:HIS:CD2	2.45	0.51
25:14:341:G:H2'	25:14:342:G:O4'	2.10	0.51
25:14:774:A:H5'	25:14:778:G:H4'	1.93	0.51
1:13:37:U:O2'	1:13:500:G:H4'	2.10	0.51
25:14:1057:A:H2'	25:14:1058:U:O4'	2.10	0.51
13:4A:29:ARG:HB3	13:4A:64:TRP:CZ2	2.45	0.51
44:G8:38:ILE:HD11	44:G8:64:GLU:HG3	1.92	0.51
25:1H:1688:U:O2	25:1H:1700:A:H5"	2.10	0.51
7:6E:15:ASP:HB3	7:6E:20:ASP:N	2.14	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:22:152:ILE:HB	3:22:199:LYS:CB	2.36	0.51
25:1H:1997:G:H5"	60:1H:3782:HOH:O	2.09	0.51
25:1H:1859:A:N6	25:1H:1883:G:O2'	2.43	0.51
50:M8:39:CYS:SG	50:M8:41:PRO:HD3	2.51	0.51
40:C8:101:ARG:O	40:C8:103:PRO:HD3	2.10	0.51
7:62:149:ARG:HD3	11:2A:59:TYR:CZ	2.46	0.51
32:61:144:VAL:HG22	32:61:145:VAL:H	1.76	0.51
25:1H:176:G:C2'	25:1H:177:G:H5'	2.40	0.51
10:1A:51:ARG:HB2	10:1A:60:ARG:HA	1.91	0.51
25:1H:930:U:H4'	25:1H:931:G:O5'	2.10	0.51
1:13:223:U:H2'	1:13:224:C:H6	1.75	0.51
54:1G:1478:C:H2'	54:1G:1479:C:C6	2.44	0.51
54:1G:1372:U:H2'	54:1G:1373:G:O4'	2.09	0.51
54:1G:192:U:H2'	54:1G:193:C:H6	1.75	0.51
25:14:1041:C:H42	25:14:1114:G:H1	1.59	0.51
27:19:145:VAL:HG13	27:19:191:ALA:HB2	1.91	0.51
4:32:91:SER:OG	4:32:191:ARG:HG3	2.11	0.51
30:49:56:ALA:HA	30:49:59:GLU:HB3	1.92	0.51
38:A8:84:GLN:H	38:A8:110:LEU:H	1.57	0.51
54:1G:581:G:OP1	15:6A:61:GLY:HA3	2.09	0.51
25:14:2080:G:H5'	47:F5:35:THR:O	2.11	0.51
46:E5:51:VAL:N	46:E5:62:LEU:HD12	2.26	0.51
13:4I:10:PRO:HB2	13:4I:18:ALA:HB1	1.93	0.51
25:14:444:C:H4'	29:39:49:ALA:HB2	1.93	0.51
25:14:1266:G:O4'	42:A5:15:ARG:NH2	2.44	0.51
25:14:2058:A:N6	60:14:3438:HOH:O	2.43	0.51
1:13:1053:G:C4	1:13:1199:U:C5	2.98	0.51
54:1G:464:G:C6	54:1G:466:C:H5'	2.46	0.51
39:B8:110:ILE:O	39:B8:114:LEU:HB2	2.11	0.51
55:3L:8:U:H1'	55:3L:57:C:O2	2.10	0.51
26:16:7:G:H4'	38:A8:29:PHE:CE2	2.45	0.51
25:1H:286:C:H2'	25:1H:287:C:H6	1.76	0.51
53:Q8:37:SER:HA	53:Q8:40:GLU:HB3	1.92	0.51
2:12:8:LYS:HD3	2:12:217:ARG:HE	1.75	0.51
27:11:69:ARG:NH2	27:11:128:GLY:O	2.33	0.51
25:1H:2212:A:O2'	25:1H:2213:U:O5'	2.27	0.51
25:1H:1056:G:H4'	25:1H:1086:A:N7	2.25	0.51
54:1G:1080:A:OP1	5:42:14:ARG:NH2	2.43	0.51
54:1G:1084:G:H5'	54:1G:1102:A:OP2	2.10	0.51
1:13:928:G:C2	1:13:1390:U:O2	2.64	0.51
2:12:74:LYS:NZ	2:12:205:ASP:O	2.42	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:I8:27:GLU:HG3	46:I8:68:GLU:HA	1.91	0.51
22:3K:1:G:C2	22:3K:82:A:C2	2.99	0.51
34:68:64:ARG:O	34:68:82:ASN:HA	2.10	0.51
25:14:550:G:O2'	25:14:1220:A:N3	2.37	0.51
33:58:70:LYS:HD3	33:58:87:LEU:HD12	1.92	0.51
36:88:30:GLY:HA2	36:88:107:ALA:HB2	1.92	0.51
54:1G:1317:C:OP1	14:5A:17:LYS:HE3	2.11	0.51
25:1H:1980:G:H4'	60:1H:3545:HOH:O	2.10	0.51
18:9A:53:ARG:HA	18:9A:56:THR:OG1	2.11	0.51
54:1G:111:G:O5'	54:1G:111:G:H8	1.94	0.51
35:78:38:GLN:HG2	35:78:45:LEU:HD13	1.91	0.51
44:G8:94:LYS:HG3	44:G8:95:LYS:H	1.76	0.51
25:1H:1141:U:H6	33:58:63:THR:OG1	1.94	0.51
54:1G:429:U:H1'	54:1G:430:A:H5"	1.92	0.51
54:1G:975:A:H4'	54:1G:976:G:C5'	2.39	0.51
1:13:1306:A:H61	1:13:1331:G:H1'	1.76	0.51
42:A5:60:ASN:HD22	42:A5:60:ASN:N	2.08	0.51
54:1G:8:A:N6	4:32:209:ARG:HB2	2.26	0.51
25:1H:2123:G:N2	25:1H:2176:A:N1	2.59	0.51
7:62:113:GLU:O	7:62:119:ARG:HD3	2.09	0.51
21:1B:9:ARG:O	21:1B:13:ILE:HG13	2.10	0.51
25:1H:1448:G:H1'	25:1H:1528:A:H62	1.75	0.51
1:13:1148:U:H2'	1:13:1149:C:O4'	2.10	0.51
2:1E:74:LYS:HD2	2:1E:169:LYS:HG3	1.91	0.51
1:13:1240:U:P	7:6E:116:ALA:HB2	2.50	0.51
25:14:729:G:H2'	25:14:1775:U:H1'	1.93	0.51
25:14:1790:C:H5"	25:14:1791:A:OP1	2.10	0.51
1:13:341:C:O2'	1:13:342:C:H5'	2.11	0.51
11:2I:85:ARG:HG2	11:2I:113:PRO:HD3	1.92	0.51
1:13:1169:A:H2'	1:13:1170:A:C8	2.46	0.51
25:14:198:C:H5'	25:14:2244:U:OP1	2.10	0.51
55:1L:73:U:H2'	55:1L:74:C:C5	2.46	0.51
25:1H:910:A:N7	36:88:13:GLN:HG3	2.26	0.51
2:12:167:PRO:O	2:12:171:ALA:N	2.43	0.51
37:55:98:LEU:HB2	37:55:113:LEU:HD23	1.92	0.51
17:8A:3:LYS:HB3	17:8A:61:GLU:HB3	1.93	0.51
54:1G:1496:C:H2'	54:1G:1497:G:C8	2.46	0.51
12:3A:41:ARG:HG2	12:3A:42:THR:H	1.75	0.51
16:7I:72:ARG:HD3	16:7I:73:LEU:HG	1.93	0.51
7:6E:22:LEU:HD23	7:6E:62:PHE:HE2	1.76	0.51
17:8I:65:ILE:HD13	17:8I:69:LYS:HG2	1.93	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:32:55:ALA:O	4:32:59:ARG:HG2	2.10	0.51
25:1H:1126:A:H4'	25:1H:1127:A:O5'	2.11	0.51
40:C8:92:ARG:HA	40:C8:95:LEU:H	1.75	0.51
25:14:1581:G:H2'	25:14:1582:C:O4'	2.11	0.51
47:J8:85:LEU:HA	47:J8:86:SER:C	2.31	0.51
25:1H:1485:G:N2	25:1H:1486:A:N3	2.59	0.51
37:98:101:ALA:HB2	51:N8:44:THR:HB	1.92	0.51
54:1G:359:U:H2'	54:1G:360:A:H8	1.73	0.51
25:14:2849:U:H4'	25:14:2868:A:C2	2.44	0.51
25:14:2065:C:H1'	25:14:2449:U:H3	1.76	0.51
25:14:1525:G:H2'	25:14:1526:G:H8	1.75	0.51
25:14:1727:U:H3	25:14:1733:G:H1	1.57	0.51
35:35:138:LEU:HD12	35:35:144:GLU:HG2	1.93	0.51
54:1G:1360:A:OP1	54:1G:1360:A:H8	1.94	0.51
25:14:247:G:H4'	25:14:386:G:C5	2.45	0.51
25:1H:1228:G:OP2	40:C8:16:LYS:NZ	2.44	0.51
25:1H:270(F):U:H2'	25:1H:270(G):C:C6	2.45	0.51
25:14:116:C:H2'	25:14:117:G:O4'	2.10	0.51
25:14:768:G:H2'	25:14:769:G:H8	1.74	0.51
17:8I:31:LEU:HG	17:8I:32:TYR:CE1	2.46	0.51
25:1H:571:A:OP2	60:1H:3674:HOH:O	2.19	0.51
25:14:1871:A:H2'	25:14:1872:A:C8	2.46	0.51
54:1G:508:C:OP1	54:1G:508:C:H6	1.94	0.51
54:1G:526:C:C5	54:1G:527:G:H1'	2.46	0.51
54:1G:12:U:O2'	54:1G:526:C:H4'	2.11	0.51
1:13:509:A:H3'	60:13:1814:HOH:O	2.09	0.51
25:1H:805:G:H4'	25:1H:806:C:OP2	2.11	0.51
26:1J:80:U:H2'	26:1J:81:G:N2	2.18	0.51
16:7I:77:ALA:HB3	16:7I:79:VAL:H	1.74	0.51
25:14:279:C:N3	25:14:361:G:N2	2.55	0.51
32:61:110:ASP:HB2	32:61:112:LYS:H	1.76	0.51
10:1A:99:LYS:HD3	10:1A:100:THR:H	1.76	0.51
54:1G:751:U:H4'	15:6A:24:SER:HA	1.93	0.51
25:1H:265:A:H1'	25:1H:266:G:O4'	2.11	0.51
7:62:16:LEU:HD12	9:82:42:ARG:HA	1.91	0.51
10:1A:30:SER:OG	10:1A:81:THR:HG22	2.11	0.51
36:45:75:THR:HB	36:45:86:GLY:HA3	1.92	0.51
35:35:84:ASN:ND2	35:35:117:GLU:HB3	2.25	0.51
25:14:916:G:C2'	25:14:917:A:H5"	2.41	0.51
25:1H:853:G:O6	25:1H:924:C:N4	2.19	0.51
25:14:443:A:H5"	25:14:444:C:OP1	2.10	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:14:1652:A:OP1	37:55:8:ARG:NH1	2.44	0.51
25:14:993:G:OP1	40:85:50:ARG:NH2	2.44	0.51
25:1H:2684:U:H1'	34:68:70:LYS:HD2	1.93	0.51
1:13:1412:C:H2'	1:13:1413:A:C8	2.46	0.51
52:P8:5:TRP:NE1	52:P8:7:PRO:HG3	2.26	0.51
43:B5:11:PRO:HG2	43:B5:13:LEU:HD21	1.92	0.51
25:1H:2359:C:O2'	35:78:58:THR:HG21	2.09	0.51
5:42:50:GLU:OE2	5:42:51:VAL:HG23	2.11	0.51
25:14:1022:G:C6	25:14:1140:C:C4	2.99	0.51
53:M5:14:VAL:CG1	53:M5:22:VAL:HG13	2.40	0.51
54:1G:619:U:C2	4:32:135:LEU:HD22	2.45	0.51
25:14:2781:A:H5"	25:14:2782:G:H5'	1.91	0.51
31:59:6:ARG:NH2	31:59:62:LYS:HB2	2.25	0.51
12:3A:33:ARG:HG2	12:3A:61:THR:CG2	2.40	0.51
25:14:2320:A:C6	25:14:2333:A:C8	2.99	0.51
25:14:1186:G:H2'	25:14:1187:G:O4'	2.11	0.51
25:14:498:G:H21	44:C5:47:LYS:NZ	2.09	0.51
25:1H:932:G:H4'	25:1H:933:A:O5'	2.11	0.51
25:1H:265:A:H8	25:1H:266:G:H1'	1.74	0.51
25:1H:1110:G:O2'	25:1H:1111:A:O5'	2.29	0.51
10:1A:48:THR:HA	10:1A:62:HIS:HB3	1.93	0.51
54:1G:108:G:OP1	54:1G:326:G:N2	2.38	0.51
25:14:2208:U:H2'	25:14:2209:C:C6	2.45	0.51
25:1H:2707:G:O3'	37:98:68:ARG:HG2	2.10	0.51
22:3K:3:U:H2'	22:3K:4:G:C8	2.46	0.51
2:1E:8:LYS:HE2	2:1E:8:LYS:O	2.11	0.51
31:51:149:ARG:NH1	31:51:167:GLU:OE2	2.44	0.51
26:16:21:G:H1	26:16:62:C:H42	1.58	0.51
49:H5:59:VAL:HG12	49:H5:60:GLU:H	1.75	0.51
26:16:29:A:OP2	38:A8:32:LEU:HG	2.11	0.51
55:1L:82:A:O3'	55:1L:83:C:H4'	2.10	0.51
3:2E:150:LYS:HE2	3:2E:152:ILE:HD11	1.92	0.51
39:75:50:ILE:HG23	39:75:99:LEU:HB2	1.93	0.51
25:1H:1378:A:OP1	52:P8:10:ARG:NH2	2.44	0.51
54:1G:1208:C:H2'	54:1G:1209:C:H6	1.75	0.51
25:1H:673:C:H5"	29:31:81:PRO:HD2	1.93	0.51
25:1H:2693:A:H2'	25:1H:2694:G:H8	1.76	0.51
25:14:228:A:H2'	25:14:230:U:O4'	2.11	0.51
47:F5:34:THR:HG22	47:F5:36:GLY:H	1.76	0.51
25:1H:2324:C:H5"	25:1H:2325:G:H5'	1.93	0.51
25:1H:671:C:OP1	35:78:42:SER:O	2.29	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:4E:53:LEU:O	5:4E:56:GLN:HB2	2.11	0.51
32:61:92:VAL:HG13	32:61:120:ILE:HG23	1.92	0.51
2:1E:197:VAL:O	8:7E:68:ARG:NH2	2.34	0.51
28:21:34:VAL:HG22	28:21:48:GLN:HB3	1.93	0.51
9:82:77:ILE:O	9:82:81:ILE:HG12	2.11	0.51
25:14:1140:C:H4'	25:14:1143:A:C6	2.47	0.51
1:13:1128:C:H5'	9:8E:16:ARG:HH22	1.76	0.51
25:1H:822:U:O2'	25:1H:823:G:H5'	2.10	0.51
25:1H:1021:A:OP2	33:58:65:LYS:NZ	2.44	0.51
25:1H:1175:U:H4'	25:1H:1176:G:OP1	2.10	0.51
25:14:2777:G:OP2	25:14:2781:A:O2'	2.19	0.51
31:59:6:ARG:HH22	31:59:62:LYS:HB2	1.75	0.51
54:1G:1286:A:H3'	54:1G:1286:A:H8	1.76	0.51
25:1H:1339:G:N2	25:1H:1603:A:H1'	2.26	0.51
2:1E:165:VAL:HG23	2:1E:166:ASP:N	2.25	0.51
27:19:255:LYS:H	27:19:255:LYS:NZ	2.09	0.51
30:41:41:GLN:NE2	30:41:43:LEU:HD11	2.26	0.51
2:12:185:ILE:HG23	2:12:199:TYR:CB	2.40	0.51
1:13:1218:C:H2'	1:13:1219:U:C6	2.45	0.51
54:1G:1261:A:H61	54:1G:1274:G:H1'	1.76	0.51
56:2L:16:C:O2'	56:2L:62:C:OP1	2.22	0.51
1:13:946:A:H2'	1:13:947:G:C8	2.47	0.51
39:75:107:ASP:H	39:75:110:ILE:HG13	1.75	0.51
30:49:75:LYS:HE3	30:49:77:ILE:HD11	1.92	0.51
2:1E:212:GLN:O	2:1E:216:SER:OG	2.16	0.51
54:1G:545:C:OP2	4:32:65:ARG:NH2	2.44	0.51
25:14:2720:U:N3	25:14:2873:A:H2	2.09	0.51
40:85:52:ARG:HA	40:85:55:ARG:HG3	1.92	0.51
15:6A:8:LYS:O	15:6A:12:ILE:HG13	2.11	0.51
1:13:760:G:H2'	1:13:761:G:H5'	1.93	0.51
54:1G:382:A:H2'	54:1G:383:A:C8	2.46	0.51
25:14:582:G:H2'	25:14:583:G:C8	2.46	0.51
25:1H:1564:C:O2'	25:1H:1565:C:H5'	2.11	0.51
1:13:1504:G:H3'	1:13:1504:G:P	2.51	0.51
25:1H:661:C:O2'	35:78:14:LYS:N	2.38	0.51
1:13:419:C:H5'	1:13:420:U:OP2	2.10	0.51
42:E8:11:ARG:NH1	42:E8:98:LYS:HG2	2.26	0.51
33:15:71:ILE:HD12	33:15:71:ILE:O	2.11	0.51
27:19:200:ASP:OD1	27:19:203:ASN:ND2	2.43	0.51
1:13:936:C:O2	1:13:1382:C:N4	2.38	0.51
54:1G:1126:U:H5'	54:1G:1127:G:H8	1.74	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:14:783:A:O2'	25:14:785:G:OP1	2.15	0.50
44:C5:20:TYR:CZ	44:C5:42:VAL:HA	2.45	0.50
8:72:86:ILE:HD11	8:72:136:GLU:HG2	1.93	0.50
5:42:78:HIS:HB3	8:72:107:LEU:HD12	1.93	0.50
44:C5:76:CYS:CB	44:C5:97:ARG:HD3	2.41	0.50
1:13:1305:G:H22	1:13:1331:G:H2'	1.75	0.50
6:5E:82:ARG:CZ	6:5E:82:ARG:HB3	2.40	0.50
1:13:411:A:C5	1:13:413:G:H1'	2.46	0.50
25:14:2808:U:H5"	25:14:2891:G:O6	2.11	0.50
25:1H:654(D):G:H22	25:1H:654(Q):C:N4	2.09	0.50
25:14:654(B):C:H2'	25:14:654(C):G:C8	2.46	0.50
25:14:603:A:H8	25:14:604:G:H1'	1.75	0.50
2:1E:124:SER:HB2	2:1E:125:PRO:HD2	1.93	0.50
25:1H:2156:G:H2'	25:1H:2157:G:C4	2.46	0.50
34:25:21:CYS:SG	34:25:22:ILE:N	2.83	0.50
25:14:2355:C:H4'	46:E5:36:ILE:HD11	1.92	0.50
8:7E:121:ASP:OD1	8:7E:121:ASP:N	2.44	0.50
25:14:2212:A:H4'	25:14:2213:U:C5	2.47	0.50
25:14:270(E):G:C2	25:14:270(V):G:C2	2.99	0.50
7:6E:102:ARG:O	7:6E:106:GLN:HG3	2.10	0.50
54:1G:1154:G:H2'	54:1G:1155:G:H8	1.76	0.50
25:1H:139:G:N3	25:1H:141:A:N1	2.58	0.50
14:5A:24:CYS:HB2	14:5A:29:ARG:HD2	1.93	0.50
13:4I:50:GLU:HA	13:4I:53:VAL:HB	1.93	0.50
54:1G:278:G:OP2	17:8A:41:LYS:NZ	2.41	0.50
30:49:42:GLY:O	30:49:43:LEU:HD13	2.11	0.50
25:1H:2718:G:O2'	25:1H:2847:U:OP1	2.29	0.50
43:F8:61:GLY:N	43:F8:75:ASP:OD1	2.35	0.50
45:H8:52:SER:C	45:H8:54:HIS:H	2.15	0.50
25:1H:2404:C:H1'	35:78:67:MET:HE3	1.92	0.50
1:13:1234:C:H2'	1:13:1235:U:C6	2.46	0.50
13:4A:78:ILE:HD13	13:4A:92:HIS:ND1	2.26	0.50
26:16:3:C:H42	26:16:117:G:H1	1.58	0.50
40:85:62:ILE:HD11	40:85:93:LYS:HD3	1.93	0.50
2:12:168:THR:HG23	2:12:192:SER:HB3	1.92	0.50
25:1H:2726:U:O2'	25:1H:2727:G:H8	1.93	0.50
54:1G:1162:C:H42	54:1G:1174:G:H1	1.59	0.50
25:14:2107:C:H42	25:14:2182:G:H1	1.59	0.50
1:13:1054:C:H4'	1:13:1055:A:OP1	2.11	0.50
27:11:33:LEU:O	27:11:64:ILE:HG23	2.12	0.50
22:1K:85:A:OP2	25:1H:2602:A:N6	2.44	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:1G:570:G:H2'	54:1G:571:U:C6	2.46	0.50
55:3L:61:G:H1	55:3L:71:C:N4	2.06	0.50
36:45:22:LYS:HG2	36:45:23:GLY:HA2	1.92	0.50
40:85:83:LEU:HB3	40:85:88:ILE:HG13	1.92	0.50
1:13:717:C:H5"	1:13:717:C:H6	1.76	0.50
12:3A:59:ARG:NH2	12:3A:65:GLU:OE1	2.44	0.50
50:M8:16:CYS:SG	50:M8:36:CYS:HB3	2.51	0.50
54:1G:1443:G:N2	39:75:119:LYS:HB2	2.24	0.50
25:14:1568:G:P	27:19:63:ARG:HH12	2.34	0.50
25:14:1317:A:H2'	25:14:1318:C:H6	1.75	0.50
44:C5:87:LYS:N	44:C5:94:LYS:HB3	2.25	0.50
1:13:945:G:C2	1:13:946:A:C8	2.99	0.50
1:13:1226:C:H4'	19:AI:80:TYR:CZ	2.47	0.50
28:21:116:VAL:HG13	28:21:122:PHE:CG	2.46	0.50
39:75:5:ALA:HB2	39:75:8:LYS:HE2	1.93	0.50
3:22:60:ALA:HA	10:1A:93:GLY:HA2	1.93	0.50
8:72:20:TYR:HA	8:72:65:TYR:CE1	2.46	0.50
8:72:20:TYR:HA	8:72:65:TYR:CZ	2.46	0.50
28:29:68:ALA:C	28:29:70:ALA:H	2.14	0.50
8:7E:21:LYS:O	8:7E:63:LEU:HD23	2.11	0.50
17:8I:12:SER:HB2	17:8I:20:THR:HB	1.92	0.50
52:L5:29:LYS:O	52:L5:33:ARG:HG2	2.11	0.50
42:A5:27:LYS:O	42:A5:71:VAL:HG23	2.10	0.50
54:1G:416:G:O5'	54:1G:416:G:H8	1.95	0.50
49:L8:8:LEU:HD13	49:L8:31:LEU:HD23	1.93	0.50
39:75:12:SER:OG	39:75:13:ARG:HD3	2.12	0.50
54:1G:521:G:O5'	12:3A:73:GLU:HG2	2.10	0.50
1:13:1288:A:N1	1:13:1371:G:H1'	2.26	0.50
1:13:1530:G:H2'	1:13:1531:A:C8	2.45	0.50
25:14:1331:A:O2'	25:14:1332:G:H8	1.93	0.50
4:32:9:CYS:SG	4:32:22:LYS:HD2	2.50	0.50
41:95:5:VAL:HB	41:95:37:VAL:CG1	2.41	0.50
35:78:49:ARG:HG3	53:Q8:58:ILE:HG13	1.92	0.50
25:14:1278:A:O2'	37:55:34:ILE:HD11	2.12	0.50
26:16:111:U:H2'	26:16:112:G:H8	1.76	0.50
25:14:395:U:O2'	25:14:396:G:C8	2.60	0.50
25:14:2129:C:C2'	25:14:2130:U:H5'	2.40	0.50
25:14:536:A:OP1	40:85:53:ARG:NH1	2.44	0.50
54:1G:942:G:C2	54:1G:1342:C:C2	3.00	0.50
2:12:16:HIS:CE1	2:12:213:LEU:HD13	2.47	0.50
54:1G:1346:A:H5"	54:1G:1348:U:H1'	1.92	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:1G:1291:G:H4'	9:82:39:GLY:HA3	1.93	0.50
31:51:118:PRO:HD2	31:51:121:ILE:HG21	1.93	0.50
25:1H:2785:C:H2'	25:1H:2786:U:O4'	2.11	0.50
4:3E:106:TYR:HB2	4:3E:117:ALA:HB2	1.93	0.50
25:14:1204:A:H2	25:14:1241:A:N1	2.10	0.50
54:1G:1069:C:O2'	54:1G:1192:C:O2	2.21	0.50
25:14:1263:U:H2'	25:14:1264:G:C8	2.46	0.50
25:1H:1263:U:H2'	25:1H:1264:G:O4'	2.11	0.50
55:3L:25:G:H2'	55:3L:26:G:H8	1.77	0.50
28:29:41:LYS:HG3	28:29:42:ASP:N	2.27	0.50
25:1H:654(H):G:H2'	25:1H:654(H):G:N3	2.27	0.50
54:1G:452:A:O2'	54:1G:453:A:O5'	2.29	0.50
25:14:617:G:OP1	29:39:40:GLN:HG3	2.12	0.50
1:13:1320:C:H2'	1:13:1321:C:O4'	2.11	0.50
54:1G:438:G:H4'	4:32:123:HIS:HD2	1.76	0.50
2:12:71:VAL:HB	2:12:164:VAL:HG13	1.93	0.50
1:13:105:G:H2'	1:13:106:C:C6	2.46	0.50
36:88:35:VAL:HG13	36:88:130:LYS:HB2	1.94	0.50
60:13:1816:HOH:O	4:3E:49:ARG:NH2	2.43	0.50
32:69:75:LEU:HD23	32:69:76:THR:H	1.75	0.50
41:95:71:LEU:O	41:95:72:VAL:HG12	2.11	0.50
43:F8:3:THR:HB	43:F8:6:ASP:HB2	1.93	0.50
1:13:401:C:OP2	4:3E:73:ARG:HD3	2.12	0.50
36:88:32:TYR:CE2	36:88:133:ARG:HG3	2.45	0.50
54:1G:186(A):C:H2'	54:1G:186(B):C:H6	1.76	0.50
30:49:63:ILE:O	30:49:105:LYS:NZ	2.44	0.50
54:1G:890:G:O2'	54:1G:906:G:O6	2.26	0.50
22:3K:59:A:H2'	22:3K:60:A:C8	2.47	0.50
27:11:228:PRO:HG3	27:11:234:GLY:O	2.11	0.50
14:5A:4:LYS:O	14:5A:7:ILE:HG12	2.11	0.50
25:14:577:G:O2'	25:14:1254:A:OP1	2.25	0.50
5:42:141:GLN:O	5:42:143:ARG:HG2	2.11	0.50
25:14:2845:G:H2'	25:14:2846:G:C8	2.47	0.50
28:21:77:ILE:HD12	28:21:79:ARG:NH1	2.26	0.50
25:14:751:A:P	60:14:3418:HOH:O	2.68	0.50
25:1H:973:A:P	60:1H:3673:HOH:O	2.69	0.50
14:5I:40:CYS:O	14:5I:41:ARG:HG2	2.12	0.50
54:1G:990:C:H2'	54:1G:991:U:C6	2.47	0.50
25:14:68:G:H2'	25:14:69:C:C6	2.46	0.50
25:1H:817:C:O2'	25:1H:839:U:OP1	2.14	0.50
1:13:323:U:H4'	20:BI:22:ARG:HB3	1.93	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:1H:1337:G:H2'	25:1H:1338:G:H8	1.76	0.50
6:5E:97:PHE:O	18:9I:31:LEU:HD23	2.12	0.50
25:1H:729:G:O6	27:11:209:ALA:N	2.32	0.50
1:13:10:A:H2'	1:13:11:G:H8	1.76	0.50
25:14:289:A:H3'	25:14:290:G:C8	2.46	0.50
1:13:1366:C:H2'	1:13:1367:C:C6	2.45	0.50
25:14:2065:C:H2'	25:14:2066:C:H6	1.76	0.50
37:98:28:LEU:HD23	37:98:34:ILE:HB	1.93	0.50
11:2I:59:TYR:CE2	11:2I:63:LEU:HD11	2.47	0.50
1:13:881:G:P	12:3I:12:ARG:HH22	2.34	0.50
2:1E:8:LYS:HD3	2:1E:8:LYS:H	1.76	0.50
30:41:122:PRO:HB3	30:41:180:PHE:HD1	1.77	0.50
1:13:1171:G:H8	1:13:1171:G:O5'	1.95	0.50
1:13:864:A:H2'	1:13:865:A:C8	2.46	0.50
17:8A:10:VAL:HG23	17:8A:54:GLY:N	2.26	0.50
19:AA:35:SER:O	19:AA:71:LEU:HD12	2.12	0.50
54:1G:667:G:H4'	15:6A:51:HIS:ND1	2.26	0.50
28:29:11:MET:HE3	28:29:186:GLY:HA2	1.93	0.50
25:1H:2432:A:C8	47:J8:33:LYS:HD2	2.47	0.50
34:68:87:ILE:HD12	34:68:91:LEU:HG	1.94	0.50
44:C5:11:ASP:OD2	44:C5:95:LYS:NZ	2.45	0.50
29:39:183:VAL:O	29:39:187:VAL:HG23	2.11	0.50
25:1H:2545:G:H2'	25:1H:2546:U:O4'	2.12	0.50
25:1H:315:G:H2'	25:1H:316:C:C6	2.47	0.50
25:1H:1965:C:H3'	25:1H:1966:A:H2'	1.93	0.50
25:14:2784:C:H1'	28:29:37:ARG:HH21	1.75	0.50
1:13:1124:G:H3'	1:13:1145:C:N4	2.27	0.50
54:1G:533:A:H2'	60:1G:1736:HOH:O	2.12	0.50
40:C8:65:ILE:HG12	40:C8:92:ARG:HH12	1.77	0.50
1:13:1318:A:H1'	19:AI:37:ARG:HH21	1.77	0.50
25:14:761:A:C8	60:14:3415:HOH:O	2.63	0.50
7:62:153:HIS:CD2	11:2A:58:PRO:HG2	2.46	0.50
45:H8:30:ASN:HA	45:H8:89:PHE:CE1	2.47	0.50
14:5A:41:ARG:O	14:5A:45:ARG:HB2	2.12	0.50
54:1G:198:G:H2'	54:1G:199:G:H8	1.74	0.50
44:C5:47:LYS:N	44:C5:60:PHE:HB3	2.27	0.50
32:61:71:ILE:HG23	32:61:72:LEU:HD13	1.93	0.50
25:14:1778:U:H2'	25:14:1784:A:N6	2.27	0.50
42:A5:82:LEU:HD22	42:A5:84:ARG:NH2	2.26	0.50
27:11:146:GLU:HB2	27:11:189:CYS:HB3	1.93	0.50
54:1G:186(A):C:H5"	20:BA:86:ARG:NH2	2.26	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:13:1060:C:O2'	10:1I:56:HIS:ND1	2.39	0.50
25:14:2576:G:O2'	25:14:2579:C:OP2	2.26	0.50
30:49:55:LYS:O	30:49:58:GLN:HG3	2.12	0.50
1:13:130:A:OP2	17:8I:63:ARG:NH2	2.43	0.50
45:D5:69:THR:HG22	45:D5:90:VAL:HG22	1.93	0.50
25:14:390:A:N6	35:35:71:VAL:HG21	2.27	0.50
12:3I:9:GLN:O	12:3I:13:LYS:HG2	2.10	0.50
35:35:86:LYS:HG3	35:35:87:ASP:H	1.77	0.50
25:14:205:G:O2'	25:14:206:U:OP2	2.27	0.50
31:51:8:PRO:HG2	31:51:69:ARG:NH2	2.27	0.50
25:1H:2126:A:H8	25:1H:2127:G:N3	2.10	0.50
44:G8:97:ARG:NH2	44:G8:104:GLY:HA3	2.27	0.50
47:J8:87:PRO:HA	47:J8:90:ILE:HB	1.94	0.50
54:1G:1258:G:H2'	54:1G:1259:C:C6	2.42	0.50
53:Q8:26:LYS:CG	53:Q8:41:ILE:HG23	2.42	0.50
56:2L:8:4SU:C2	56:2L:14:A:H62	2.23	0.50
38:A8:26:LEU:HD22	38:A8:87:PHE:HD1	1.77	0.50
25:14:654(B):C:H2'	25:14:654(C):G:H8	1.76	0.50
7:6E:16:LEU:HD13	9:8E:44:VAL:HG22	1.93	0.50
28:29:47:VAL:HG21	28:29:86:PRO:HD2	1.93	0.50
34:25:49:ARG:HA	34:25:53:LYS:NZ	2.27	0.50
25:1H:1280:G:N2	25:1H:1291:C:C2	2.79	0.50
25:14:1820:U:O2	27:19:201:HIS:HB3	2.12	0.50
54:1G:192:U:H4'	20:BA:103:GLY:HA2	1.92	0.50
27:19:33:LEU:HD21	27:19:103:ARG:HA	1.93	0.50
25:1H:270(E):G:H1	25:1H:270(U):C:H42	1.59	0.50
1:13:1478:C:H2'	1:13:1479:C:C6	2.47	0.50
1:13:1013:G:N2	1:13:1016:A:OP2	2.44	0.50
25:1H:1444:G:C2	25:1H:1548:C:N3	2.80	0.50
25:1H:533:G:H5'	40:C8:24:TYR:CE1	2.47	0.50
25:14:1466:G:H5'	25:14:1467:C:OP1	2.12	0.50
25:1H:754:C:H2'	25:1H:755:C:C6	2.47	0.50
34:25:71:ARG:HH11	39:75:74:ARG:NH2	2.09	0.50
34:25:64:ARG:HG2	34:25:79:PHE:CG	2.46	0.50
2:12:179:LYS:HA	8:72:72:PRO:HG3	1.92	0.50
25:1H:1475:G:C2	25:1H:1519:G:C2	3.00	0.50
1:13:917:G:H2'	1:13:918:A:C8	2.47	0.50
53:Q8:49:VAL:HA	53:Q8:50:LEU:C	2.31	0.50
25:1H:1675:C:H5"	60:1H:3573:HOH:O	2.10	0.50
1:13:630:G:H2'	1:13:631:G:C8	2.46	0.50
1:13:1128:C:H5"	1:13:1129:C:OP2	2.12	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:1H:1517:G:H2'	25:1H:1518:C:C6	2.47	0.50
54:1G:922:G:N3	54:1G:1398:A:H2	2.10	0.50
53:Q8:41:ILE:O	53:Q8:41:ILE:HG22	2.12	0.50
42:E8:88:ARG:HB3	42:E8:92:ARG:CB	2.40	0.50
54:1G:979:C:C5	54:1G:980:C:C6	3.00	0.50
54:1G:1226:C:N4	13:4A:104:ARG:HD2	2.26	0.50
54:1G:406:G:H1	54:1G:436:C:H42	1.60	0.50
25:14:848:G:H2'	25:14:849:A:H8	1.77	0.50
37:98:53:HIS:HD1	37:98:94:TYR:HH	1.49	0.50
26:1J:72:G:O2'	26:1J:104:A:N6	2.45	0.50
25:1H:2845:G:H5"	39:B8:54:ARG:O	2.12	0.50
1:13:947:G:H4'	13:4I:109:THR:HG23	1.94	0.50
25:1H:2291:U:H2'	25:1H:2292:C:C6	2.47	0.50
25:14:176:G:O2'	25:14:177:G:H5'	2.11	0.50
20:BI:49:ALA:HB2	20:BI:99:LEU:HD23	1.94	0.50
53:M5:29:LYS:HB3	53:M5:44:LYS:HD3	1.94	0.50
11:2I:95:ILE:O	11:2I:99:GLN:HG3	2.12	0.50
28:29:52:LEU:C	28:29:74:PRO:HB3	2.32	0.50
28:21:115:GLY:O	28:21:119:ARG:HB2	2.12	0.50
28:21:73:GLU:HG3	28:21:74:PRO:HD2	1.92	0.50
12:3A:89:ARG:O	12:3A:99:HIS:HE1	1.95	0.50
17:8I:28:PRO:HA	17:8I:34:LYS:O	2.11	0.50
52:L5:25:PRO:HA	52:L5:28:ARG:HG3	1.94	0.50
30:41:109:VAL:O	30:41:113:ARG:HG3	2.11	0.50
25:14:1133:U:O2	25:14:1137:G:H5"	2.11	0.50
1:13:8:A:N7	4:3E:208:SER:HB3	2.27	0.50
31:51:105:LEU:HD23	31:51:113:VAL:O	2.11	0.50
25:14:608:A:H2'	25:14:609:A:O4'	2.12	0.50
1:13:17:U:H2'	1:13:18:C:C6	2.47	0.50
6:52:83:ASP:N	6:52:83:ASP:OD1	2.44	0.50
27:11:54:ARG:O	27:11:218:ARG:HD2	2.12	0.50
1:13:820:U:H4'	1:13:821:G:OP2	2.12	0.50
40:85:92:ARG:O	40:85:94:ASN:N	2.42	0.50
25:1H:2053:G:OP1	28:21:144:ARG:HD3	2.12	0.50
25:14:631:A:N3	25:14:2415:G:O2'	2.39	0.50
26:1J:3:C:H2'	26:1J:4:C:H6	1.77	0.50
1:13:1132:C:C2'	1:13:1133:G:H5'	2.41	0.50
44:G8:81:LYS:HB3	44:G8:82:PRO:HA	1.94	0.50
1:13:438:G:H5'	4:3E:123:HIS:ND1	2.27	0.50
19:AI:36:ARG:NH2	19:AI:75:ALA:O	2.35	0.50
25:1H:582:G:H2'	25:1H:583:G:C8	2.46	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:14:1935:G:H1'	25:14:1964:G:N2	2.26	0.50
54:1G:1310:G:P	13:4A:77:ASN:HD21	2.35	0.50
3:22:134:ILE:HD11	3:22:153:VAL:HG23	1.94	0.50
43:B5:80:ILE:HG13	43:B5:80:ILE:O	2.11	0.50
37:98:79:LEU:HA	37:98:83:ILE:HD12	1.93	0.50
25:14:570:G:H5"	60:14:3582:HOH:O	2.10	0.50
25:14:2682:U:O2'	28:29:13:ARG:HG2	2.12	0.50
54:1G:222:U:H2'	54:1G:223:U:C6	2.46	0.50
56:2L:20:G:N3	56:2L:58:A:C2	2.80	0.50
1:13:1352:C:OP1	21:1F:3:LYS:NZ	2.35	0.50
25:14:1831:G:N2	25:14:1974:C:O2	2.39	0.50
25:1H:589:C:H2'	25:1H:590:A:C8	2.46	0.50
12:3A:76:ASN:ND2	12:3A:106:ASP:O	2.45	0.50
19:AI:6:LYS:O	19:AI:7:LYS:NZ	2.42	0.50
25:1H:1418:G:OP1	25:1H:1588:C:O2'	2.29	0.50
25:1H:2391:G:O6	25:1H:2425:A:H8	1.94	0.50
5:42:74:GLY:HA3	5:42:116:THR:OG1	2.12	0.50
54:1G:149:A:H2'	54:1G:150:C:C6	2.47	0.50
54:1G:1251:A:H2'	54:1G:1252:A:C8	2.47	0.50
1:13:1054:C:H6	1:13:1054:C:H5"	1.77	0.49
26:1J:15:A:H1'	26:1J:109:G:C4	2.47	0.49
54:1G:1300:G:N1	54:1G:1335:C:O4'	2.44	0.49
25:1H:2032:G:H21	28:21:146:THR:CG2	2.24	0.49
25:14:1786:A:H1'	25:14:1938:A:N6	2.26	0.49
54:1G:651:C:H2'	54:1G:652:U:C6	2.47	0.49
25:14:654(E):C:N4	25:14:654(P):G:H1	2.07	0.49
39:75:55:ASN:N	39:75:59:THR:HG22	2.27	0.49
19:AA:50:ALA:CB	19:AA:57:HIS:HB3	2.41	0.49
19:AI:52:TYR:HD1	19:AI:57:HIS:CD2	2.29	0.49
25:14:1013:C:N3	25:14:1149:G:N2	2.45	0.49
22:3K:15:G:N2	22:3K:57:C:O2	2.40	0.49
25:14:1934:C:N3	25:14:1964:G:N1	2.49	0.49
1:13:109:A:C8	1:13:326:G:H2'	2.46	0.49
25:14:2287:A:N1	25:14:2346:A:H2	2.10	0.49
21:1B:2:GLY:O	21:1B:4:GLY:N	2.44	0.49
54:1G:1059:C:O2'	10:1A:53:PRO:HD3	2.12	0.49
25:1H:2646:C:H2'	25:1H:2647:U:O4'	2.11	0.49
25:14:579:G:H2'	25:14:580:C:H6	1.76	0.49
25:14:1794:U:H2'	25:14:1795:C:H6	1.76	0.49
55:1L:73:U:H2'	55:1L:74:C:C6	2.46	0.49
15:6A:26:GLU:OE2	15:6A:77:ARG:NH1	2.38	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:1I:51:ARG:HB2	10:1I:60:ARG:HA	1.94	0.49
4:32:107:ARG:NH2	4:32:196:LEU:HD21	2.27	0.49
26:16:18:G:H1	26:16:65:C:H42	1.58	0.49
32:61:93:THR:H	32:61:96:ASP:CG	2.15	0.49
31:59:26:VAL:HG12	31:59:33:LEU:H	1.77	0.49
25:14:1101:U:H2'	25:14:1102:C:C6	2.47	0.49
25:1H:7:G:C2	25:1H:8:A:C4	3.00	0.49
25:14:2452:C:OP2	60:14:3585:HOH:O	2.19	0.49
6:52:1:MET:HB3	6:52:67:MET:O	2.12	0.49
54:1G:321:A:N7	54:1G:328:C:C6	2.80	0.49
36:88:106:VAL:HG21	36:88:114:ALA:HB1	1.93	0.49
32:69:124:GLY:O	32:69:142:VAL:HB	2.12	0.49
54:1G:715:A:H2'	54:1G:716:A:C8	2.47	0.49
25:14:2818:G:OP2	37:55:42:LYS:NZ	2.45	0.49
25:1H:945:A:OP2	25:1H:945:A:H4'	2.12	0.49
25:14:1771:C:HO2'	25:14:1786:A:H8	1.58	0.49
54:1G:1045:C:H2'	54:1G:1046:A:O4'	2.12	0.49
54:1G:410:G:N2	54:1G:432:A:H62	2.10	0.49
29:39:182:ASN:HD21	29:39:185:ASP:CG	2.14	0.49
32:61:30:LEU:HD22	32:61:35:LEU:HD11	1.94	0.49
41:D8:5:VAL:HG12	41:D8:38:LEU:HD12	1.94	0.49
1:13:1240:U:OP1	7:6E:119:ARG:NH2	2.43	0.49
25:14:2889:C:H2'	25:14:2891:G:O4'	2.11	0.49
25:14:1716:U:H2'	25:14:1717:G:H8	1.77	0.49
25:14:1138:G:C4	25:14:1139:G:H1'	2.46	0.49
1:13:657:G:C2	1:13:658:G:C8	3.00	0.49
1:13:1234:C:H2'	1:13:1235:U:H6	1.75	0.49
42:A5:71:VAL:HA	42:A5:107:LEU:HD12	1.94	0.49
39:75:12:SER:O	39:75:15:VAL:HG13	2.12	0.49
1:13:102:G:C6	1:13:103:C:C4	3.00	0.49
25:1H:1266:G:O4'	42:E8:15:ARG:NH2	2.45	0.49
4:3E:24:GLU:O	4:3E:27:TYR:N	2.44	0.49
45:D5:23:LYS:HB3	45:D5:38:TYR:CD1	2.47	0.49
25:14:1756:G:OP2	60:14:3768:HOH:O	2.19	0.49
19:AA:63:THR:OG1	19:AA:65:ASN:O	2.29	0.49
28:21:131:ALA:HB1	28:21:135:HIS:HE1	1.77	0.49
4:32:64:LEU:HB2	4:32:198:VAL:HG11	1.94	0.49
30:41:47:LYS:HB3	30:41:86:MET:HE3	1.94	0.49
1:13:545:C:O2'	1:13:549:C:OP1	2.29	0.49
25:1H:2275:C:O2	36:88:85:LYS:HB3	2.12	0.49
28:29:105:THR:HG23	28:29:166:THR:OG1	2.12	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:14:363(F):A:OP2	25:14:363(F):A:H8	1.94	0.49
35:35:90:ARG:HG3	35:35:91:PHE:CD2	2.47	0.49
25:14:1783:A:H5'	25:14:2608:G:H4'	1.94	0.49
25:1H:1780:A:P	60:1H:3523:HOH:O	2.67	0.49
25:1H:973:A:H5'	25:1H:1188:U:H1'	1.94	0.49
14:5I:24:CYS:O	14:5I:25:VAL:HG22	2.12	0.49
54:1G:841:U:H4'	54:1G:842:C:C6	2.47	0.49
35:78:114:ILE:HD12	35:78:134:ALA:HB1	1.94	0.49
25:14:2393:A:O3'	35:35:63:PRO:HD2	2.12	0.49
1:13:1129:C:N4	1:13:1142:G:O6	2.46	0.49
13:4I:67:GLU:OE2	13:4I:68:GLY:N	2.45	0.49
1:13:77:C:H2'	1:13:78:G:H8	1.77	0.49
2:12:178:ARG:HH21	8:72:68:ARG:HH22	1.61	0.49
54:1G:977:A:O2'	54:1G:981:U:N3	2.45	0.49
39:B8:26:ASP:HB3	39:B8:120:ARG:HH22	1.76	0.49
25:1H:1771:C:H1'	25:1H:1786:A:C8	2.48	0.49
35:35:13:ASN:C	35:35:15:ARG:H	2.13	0.49
25:14:654(C):G:H2'	25:14:654(D):G:O4'	2.13	0.49
4:32:14:ARG:NH1	4:32:14:ARG:HG3	2.25	0.49
4:3E:173:TRP:HA	4:3E:187:ARG:HG2	1.93	0.49
11:2I:18:ARG:HB3	11:2I:33:THR:OG1	2.12	0.49
32:69:93:THR:H	32:69:96:ASP:HB2	1.78	0.49
1:13:223:U:H2'	1:13:224:C:C6	2.47	0.49
50:I5:34:GLU:HG2	50:I5:35:VAL:N	2.27	0.49
54:1G:1424:C:H2'	54:1G:1425:U:O4'	2.12	0.49
1:13:922:G:H1'	5:4E:19:MET:HB2	1.94	0.49
25:1H:341:G:H2'	25:1H:342:G:O4'	2.12	0.49
30:49:31:VAL:O	30:49:33:ARG:HG3	2.12	0.49
1:13:449:C:H6	16:7I:42:ARG:HH11	1.60	0.49
25:1H:2228:G:OP1	27:11:261:LYS:NZ	2.45	0.49
1:13:505:G:N7	60:13:1841:HOH:O	2.34	0.49
46:I8:50:ASN:ND2	46:I8:83:PRO:HD3	2.26	0.49
10:1I:3:LYS:N	10:1I:75:ILE:O	2.44	0.49
25:14:221:A:C4	25:14:266:G:N7	2.81	0.49
7:6E:50:ILE:HB	7:6E:58:PRO:HG3	1.95	0.49
54:1G:1071:C:H2'	54:1G:1072:G:H8	1.78	0.49
1:13:1289:A:H3'	1:13:1290:G:H8	1.77	0.49
1:13:714:G:H2'	1:13:715:A:C8	2.46	0.49
25:1H:2591:C:H2'	25:1H:2592:G:C8	2.48	0.49
25:1H:804:A:P	60:1H:3639:HOH:O	2.71	0.49
31:51:59:ARG:HA	31:51:62:LYS:HD3	1.94	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:7E:120:THR:H	8:7E:123:GLU:HB2	1.78	0.49
54:1G:848:C:H2'	54:1G:849:C:C6	2.48	0.49
25:1H:1177:A:H5"	25:1H:1178:C:H6	1.77	0.49
25:1H:543:C:N4	25:1H:550:G:H1	2.05	0.49
28:29:4:ILE:HD11	28:29:28:ALA:CB	2.42	0.49
54:1G:1206:G:C6	54:1G:1207:G:C6	3.01	0.49
41:D8:38:LEU:HG	41:D8:39:LEU:N	2.24	0.49
12:3A:26:ALA:HB1	12:3A:27:LEU:C	2.33	0.49
25:14:2439:A:H8	25:14:2439:A:H5'	1.75	0.49
27:19:255:LYS:H	27:19:255:LYS:HE3	1.77	0.49
25:14:729:G:O5'	27:19:208:LYS:NZ	2.43	0.49
54:1G:1228:C:OP1	13:4A:114:ARG:HA	2.13	0.49
26:1J:88:C:H3'	26:1J:89:G:H8	1.77	0.49
20:BA:86:ARG:HB2	20:BA:86:ARG:NH1	2.28	0.49
54:1G:667:G:O2'	15:6A:49:ASP:OD1	2.26	0.49
25:14:1826:G:H2'	25:14:1827:C:H6	1.76	0.49
54:1G:45:U:H2'	54:1G:46:G:C8	2.46	0.49
25:14:1636:C:H2'	25:14:1637:A:C8	2.47	0.49
1:13:690:G:H2'	1:13:691:G:O4'	2.11	0.49
25:1H:50:U:H3'	25:1H:51:G:H5'	1.95	0.49
11:2I:27:ASN:OD1	11:2I:28:THR:N	2.46	0.49
6:5E:22:GLU:O	6:5E:26:ILE:HG13	2.13	0.49
30:41:77:ILE:HG22	30:41:82:LEU:HD12	1.94	0.49
25:1H:81:G:O6	60:1H:3613:HOH:O	2.18	0.49
4:3E:141:ARG:HB2	4:3E:141:ARG:NH1	2.27	0.49
25:14:242:G:O5'	53:M5:3:LYS:HE3	2.11	0.49
25:14:196:A:O2'	25:14:805:G:O6	2.21	0.49
30:49:32:PRO:HB2	30:49:172:LEU:HD22	1.93	0.49
37:98:100:LEU:HD11	37:98:113:LEU:HD22	1.94	0.49
2:1E:163:PHE:CD1	2:1E:185:ILE:HG13	2.47	0.49
54:1G:588:G:H1	54:1G:651:C:N4	2.03	0.49
25:1H:1113:U:OP1	31:51:2:SER:HA	2.12	0.49
32:61:29:TYR:CD2	32:61:30:LEU:HD23	2.41	0.49
5:42:145:LYS:HG2	5:42:149:GLU:HG2	1.94	0.49
5:4E:11:ILE:HD13	5:4E:11:ILE:H	1.77	0.49
25:1H:2287:A:C2	25:1H:2289:G:C8	3.00	0.49
7:62:97:GLN:HE21	7:62:101:LEU:HD11	1.78	0.49
6:52:97:PHE:O	18:9A:31:LEU:HD23	2.12	0.49
4:3E:187:ARG:HH22	4:3E:193:ASP:CG	2.15	0.49
50:I5:23:GLU:HG3	50:I5:24:THR:N	2.28	0.49
25:1H:2683:C:OP1	39:B8:53:ARG:NH2	2.41	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:13:427:U:H3'	1:13:428:G:H2'	1.95	0.49
8:7E:27:PRO:O	8:7E:32:LYS:NZ	2.25	0.49
25:14:308:G:C8	25:14:501:A:H1'	2.47	0.49
11:2I:73:MET:HG2	11:2I:103:LEU:HD13	1.93	0.49
26:1J:88:C:N4	26:1J:89:G:C2	2.81	0.49
10:1A:78:ASN:OD1	10:1A:81:THR:HG23	2.12	0.49
30:49:130:ASN:HB3	30:49:159:VAL:O	2.12	0.49
55:1L:57:C:C2	55:1L:68:A:H1'	2.47	0.49
1:13:939:G:C6	1:13:940:C:N4	2.80	0.49
54:1G:1272:G:N3	54:1G:1273:G:H1'	2.27	0.49
1:13:1083:U:H5	1:13:1084:G:C6	2.30	0.49
12:3A:89:ARG:HG3	12:3A:97:ARG:HA	1.95	0.49
1:13:1298:C:H2'	7:6E:114:ARG:NH2	2.27	0.49
25:1H:1273:U:O2'	25:1H:1274:A:H5"	2.12	0.49
25:14:120:U:H4'	25:14:121:G:H5"	1.94	0.49
11:2I:66:LEU:HG	11:2I:97:ALA:HB1	1.95	0.49
15:6I:25:THR:HG21	15:6I:70:LEU:HD13	1.94	0.49
25:14:1999:C:H4'	25:14:2723:C:O2	2.11	0.49
40:C8:59:ARG:O	40:C8:63:VAL:HG23	2.12	0.49
52:P8:35:ARG:HG3	52:P8:42:LEU:HD11	1.93	0.49
48:K8:46:GLN:OE1	48:K8:46:GLN:HA	2.11	0.49
25:14:2747:G:O6	25:14:2754:U:H3'	2.13	0.49
25:1H:152:G:H2'	25:1H:153:C:C6	2.46	0.49
26:1J:38:C:N4	26:1J:44:G:H1	1.99	0.49
26:16:11:C:O5'	26:16:12:C:H5	1.95	0.49
54:1G:842:C:H4'	54:1G:843:U:H5	1.77	0.49
25:14:957:A:N6	25:14:2459:A:C8	2.81	0.49
8:72:84:ARG:HG2	8:72:86:ILE:HD13	1.95	0.49
11:2A:41:THR:HG21	11:2A:71:LYS:HB3	1.94	0.49
13:4I:23:TYR:HB3	13:4I:67:GLU:HB2	1.95	0.49
25:14:1357:U:H2'	25:14:1358:G:O4'	2.13	0.49
25:1H:1242:A:N1	35:78:4:SER:OG	2.45	0.49
4:32:59:ARG:O	4:32:63:LYS:N	2.35	0.49
1:13:1316:G:N2	1:13:1318:A:H3'	2.27	0.49
25:1H:1061:U:N3	25:1H:1063:G:OP1	2.45	0.49
51:J5:40:LYS:HE3	51:J5:44:THR:O	2.13	0.49
40:85:88:ILE:HA	41:95:49:THR:O	2.12	0.49
54:1G:1289:A:N6	54:1G:1371:G:O2'	2.45	0.49
1:13:323:U:H2'	1:13:324:G:O4'	2.12	0.49
25:1H:1055:G:H1	25:1H:1104:C:N4	2.08	0.49
12:3A:33:ARG:HG2	12:3A:61:THR:HG21	1.95	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:8A:63:ARG:HG2	17:8A:64:PRO:HD2	1.93	0.49
25:14:661:C:H2'	25:14:662:G:C8	2.47	0.49
54:1G:199:G:H2'	54:1G:200:G:C8	2.45	0.49
27:19:37:LEU:HA	27:19:38:LYS:CB	2.43	0.49
20:BA:33:ILE:HD11	20:BA:62:LEU:O	2.13	0.49
8:7E:36:LEU:HA	8:7E:39:LEU:HB2	1.95	0.49
54:1G:501:C:H2'	54:1G:502:G:H8	1.78	0.49
4:3E:191:ARG:HD3	4:3E:200:GLU:OE1	2.13	0.49
25:14:1542:G:O5'	25:14:1543:A:H5"	2.12	0.49
31:59:73:ALA:O	31:59:76:VAL:HB	2.13	0.49
7:6E:26:PHE:CD2	7:6E:30:ILE:HD11	2.46	0.49
25:14:2743:C:H2'	25:14:2744:G:O4'	2.13	0.49
25:14:30:G:H2'	25:14:31:C:C6	2.46	0.49
25:14:774:A:H5'	25:14:778:G:C4'	2.42	0.49
54:1G:1179:A:H2'	54:1G:1180:A:O4'	2.13	0.49
5:4E:10:MET:SD	5:4E:13:ILE:HD11	2.53	0.49
46:I8:24:LYS:O	46:I8:25:ARG:NH1	2.45	0.49
2:1E:70:PHE:HE1	2:1E:90:MET:CB	2.25	0.49
7:62:46:ALA:O	7:62:50:ILE:HG12	2.12	0.49
25:14:2516:G:C6	25:14:2517:C:N4	2.81	0.49
1:13:22:G:H2'	1:13:23:C:C6	2.48	0.49
29:31:134:GLY:H	29:31:162:LEU:HB3	1.77	0.49
2:1E:118:LEU:HB3	2:1E:142:LEU:HG	1.94	0.49
3:2E:83:ARG:O	3:2E:86:VAL:HG22	2.12	0.49
25:1H:1207:C:H2'	25:1H:1208:C:H6	1.77	0.49
55:1L:20:C:H5"	55:1L:22:A:H5'	1.95	0.49
45:D5:76:LEU:HA	45:D5:83:PRO:HA	1.94	0.49
25:1H:2614:A:OP2	60:1H:3824:HOH:O	2.20	0.49
15:6A:38:ARG:HH11	15:6A:38:ARG:HB2	1.77	0.49
7:62:22:LEU:H	7:62:22:LEU:HD12	1.78	0.49
43:B5:40:LYS:O	43:B5:44:GLU:HB2	2.13	0.49
25:1H:960:A:C8	25:1H:962:G:C8	2.99	0.49
12:3A:39:VAL:HG23	12:3A:57:LYS:NZ	2.27	0.49
29:39:47:GLY:O	29:39:94:PRO:HA	2.12	0.49
13:4I:14:ARG:HB3	13:4I:16:ASP:OD1	2.12	0.49
25:14:1287:A:C5	25:14:1288:U:C4	3.01	0.49
54:1G:426:G:H2'	54:1G:427:U:C6	2.48	0.49
28:29:9:VAL:CG2	28:29:25:VAL:HB	2.40	0.49
25:14:2113:U:C5	25:14:2114:A:H1'	2.47	0.49
25:1H:1062:G:P	25:1H:1062:G:H8	2.35	0.49
54:1G:1325:C:OP2	21:1B:15:ARG:NH1	2.46	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:1G:1158:C:O2	54:1G:1158:C:H2'	2.12	0.49
54:1G:164:U:H2'	54:1G:165:C:H6	1.75	0.49
25:14:739:G:P	60:14:3630:HOH:O	2.69	0.49
25:14:2298:A:H1'	25:14:2321:G:N2	2.28	0.49
12:3A:78:GLN:HG2	12:3A:81:SER:HB2	1.94	0.49
40:C8:88:ILE:O	40:C8:90:VAL:N	2.46	0.49
44:C5:45:VAL:HG12	44:C5:60:PHE:HB2	1.95	0.49
54:1G:589:C:N3	54:1G:650:G:N2	2.48	0.49
41:95:43:GLU:O	41:95:44:LYS:HG2	2.11	0.49
25:1H:2845:G:O2'	25:1H:2846:G:H5'	2.12	0.49
25:14:2611:U:H3'	25:14:2611:U:OP2	2.12	0.49
25:14:1316:U:H2'	25:14:1317:A:C8	2.46	0.49
25:14:1243:G:H1'	35:35:4:SER:O	2.13	0.49
42:E8:61:ASN:HB2	42:E8:62:HIS:CD2	2.48	0.49
31:59:120:GLY:O	31:59:135:GLY:HA2	2.11	0.49
37:98:24:GLN:OE1	37:98:36:THR:HG21	2.13	0.49
34:25:7:TYR:CZ	34:25:44:LYS:HG3	2.47	0.49
2:1E:22:LYS:NZ	2:1E:35:GLU:OE2	2.40	0.49
39:B8:42:ILE:HG21	39:B8:84:GLN:OE1	2.13	0.49
54:1G:123:C:H2'	54:1G:124:G:H8	1.78	0.49
29:39:66:PRO:O	29:39:67:GLN:HB3	2.13	0.49
25:14:443:A:H1'	25:14:1201:C:O4'	2.12	0.49
54:1G:1194:U:H2'	54:1G:1195:C:H6	1.77	0.49
1:13:690:G:H22	11:2I:55:LYS:HE2	1.78	0.49
1:13:626:U:C2	1:13:627:G:C8	3.01	0.49
45:H8:72:ARG:NH2	45:H8:97:GLU:O	2.33	0.49
25:1H:1443:G:C2	25:1H:1549:C:N3	2.81	0.49
38:A8:53:SER:O	38:A8:57:LYS:N	2.45	0.49
25:1H:1919:A:H5"	25:1H:1920:C:OP2	2.12	0.49
25:14:2510:C:H2'	25:14:2511:U:C6	2.48	0.49
11:2I:32:ILE:HD12	11:2I:72:ALA:HB2	1.93	0.49
54:1G:303:A:H2'	54:1G:304:U:O4'	2.12	0.49
10:1A:44:VAL:HG22	10:1A:66:ARG:HG3	1.93	0.49
33:15:13:TRP:O	33:15:135:PRO:HD2	2.13	0.49
25:1H:309:G:H4'	44:G8:18:GLY:HA2	1.93	0.49
29:31:8:GLN:CD	29:31:8:GLN:H	2.15	0.49
27:11:52:ARG:HB2	27:11:53:PHE:CD2	2.48	0.49
25:14:2820:A:O2'	25:14:2821:A:OP1	2.30	0.49
25:14:353:G:H2'	25:14:354:G:C8	2.48	0.49
12:3I:58:VAL:O	12:3I:65:GLU:HA	2.13	0.49
25:1H:2635:C:C5'	28:21:79:ARG:HD3	2.40	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:B8:99:LEU:HB3	39:B8:101:PHE:CE1	2.47	0.49
1:13:1127:G:N2	1:13:1145:C:C2	2.81	0.49
29:39:103:LYS:HA	29:39:106:ARG:HG3	1.93	0.49
25:1H:270(P):C:H5'	32:61:52:ARG:HH22	1.77	0.49
36:88:79:LEU:H	36:88:80:GLU:HB2	1.77	0.49
1:13:324:G:N2	1:13:326:G:H3'	2.27	0.49
25:14:446:G:H5"	40:85:3:ARG:HH21	1.77	0.49
1:13:1239:A:H62	1:13:1299:A:N6	2.10	0.49
33:15:134:ARG:HH11	33:15:134:ARG:HB3	1.76	0.49
25:1H:1331:A:O2'	25:1H:1332:G:H8	1.95	0.49
27:11:96:HIS:ND1	27:11:102:LYS:HE2	2.28	0.49
44:C5:87:LYS:HG2	44:C5:88:LYS:H	1.78	0.49
45:H8:105:VAL:HG13	45:H8:140:ASP:HA	1.93	0.49
25:1H:242:G:H3'	53:Q8:6:THR:HG21	1.95	0.49
25:1H:1400:G:H2'	25:1H:1401:G:H8	1.78	0.49
25:1H:1204:A:C2	25:1H:1241:A:N1	2.80	0.49
25:1H:853:G:N1	25:1H:924:C:N3	2.43	0.49
25:1H:2272:U:H5"	25:1H:2273:A:OP1	2.13	0.49
25:1H:125:G:C6	52:P8:10:ARG:HG3	2.48	0.49
17:8A:10:VAL:HG23	17:8A:54:GLY:H	1.76	0.49
22:1K:42:U:H3'	22:1K:43:G:H8	1.78	0.49
25:1H:1344:G:H4'	25:1H:1384:A:C5	2.47	0.49
25:1H:11:G:H2'	25:1H:12:U:H5'	1.94	0.49
32:61:63:ALA:HA	32:61:66:GLU:OE2	2.13	0.49
25:14:745:G:H5"	25:14:746:A:OP2	2.13	0.49
44:C5:48:ALA:HB3	44:C5:59:GLY:C	2.32	0.49
25:14:1425:G:H2'	25:14:1426:G:C8	2.48	0.49
25:1H:2801:A:H2'	25:1H:2802:G:H4'	1.95	0.49
25:1H:2528:U:O3'	25:1H:2529:G:H8	1.96	0.49
25:1H:99:U:H1'	25:1H:102:G:C6	2.47	0.49
44:C5:91:GLU:HG3	44:C5:92:ASN:N	2.27	0.49
33:58:40:PRO:HB3	40:C8:68:ALA:HB2	1.94	0.49
16:7I:71:ARG:HG2	16:7I:75:ARG:HH12	1.77	0.49
11:2I:58:PRO:HD3	11:2I:89:ALA:HB1	1.95	0.49
1:13:1184:G:H2'	1:13:1185:G:C8	2.48	0.49
36:45:110:THR:HG23	36:45:113:GLN:OE1	2.12	0.49
25:14:1451:C:H3'	25:14:1453:A:H5'	1.94	0.49
25:14:1649:G:O2'	37:55:107:ASP:OD2	2.26	0.49
54:1G:259:G:H2'	54:1G:260:G:O4'	2.13	0.49
25:14:2811:G:P	28:29:61:ARG:HG2	2.52	0.49
19:AA:33:THR:O	19:AA:57:HIS:NE2	2.46	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:12:7:VAL:HG22	2:12:8:LYS:H	1.78	0.49
25:14:93:C:H5'	25:14:94:G:OP2	2.12	0.49
19:AI:67:VAL:HB	50:M8:59:PHE:HB2	1.95	0.49
25:14:1534:G:H5'	25:14:1535:U:OP2	2.12	0.49
11:2A:101:SER:HB2	11:2A:103:LEU:H	1.78	0.49
1:13:156:G:N3	1:13:166:G:N2	2.61	0.49
25:14:827:U:H2'	25:14:2430:A:C2	2.48	0.49
42:A5:19:LEU:HB3	51:J5:25:LEU:HD11	1.94	0.49
1:13:1378:C:C5	1:13:1379:G:C8	3.01	0.49
25:1H:2404:C:O3'	35:78:77:ARG:NH2	2.44	0.49
25:14:1448:G:H1'	25:14:1528:A:H62	1.78	0.49
33:58:6:PRO:HG3	33:58:41:ASP:HB2	1.93	0.49
1:13:1113:C:H2'	1:13:1114:C:H6	1.77	0.49
55:1L:42:U:H2'	55:1L:43:G:C8	2.47	0.49
27:19:30:GLU:O	27:19:30:GLU:HG3	2.12	0.49
30:49:36:LYS:HD2	30:49:95:ARG:HH12	1.77	0.49
54:1G:867:G:H2'	54:1G:868:C:H6	1.77	0.49
28:29:1:MET:HG3	28:29:200:GLU:OE2	2.13	0.49
25:1H:222:A:N1	25:1H:233:A:H5"	2.28	0.49
25:1H:971:C:O2'	25:1H:983:A:N3	2.37	0.49
25:14:1036:G:H2'	25:14:1037:G:O4'	2.13	0.49
27:11:26:LYS:HZ1	27:11:84:TYR:HB3	1.78	0.49
25:1H:972:G:OP1	25:1H:974:G:H3'	2.13	0.49
39:B8:50:ILE:O	39:B8:99:LEU:HD12	2.12	0.49
25:1H:1494:A:C2'	25:1H:1495:A:H5'	2.42	0.49
53:Q8:31:HIS:HB2	53:Q8:34:TRP:HD1	1.78	0.49
25:1H:1727:U:H2'	25:1H:1728:G:O4'	2.12	0.49
2:12:217:ARG:HB2	2:12:217:ARG:HH11	1.77	0.49
32:69:113:ARG:O	32:69:131:LYS:HD3	2.13	0.49
1:13:429:U:H1'	1:13:430:A:H5"	1.95	0.49
1:13:687:A:O2'	1:13:701:C:N4	2.43	0.49
25:14:270(G):C:H2'	25:14:270(H):C:H6	1.77	0.49
25:14:2126:A:H61	25:14:2163:C:H1'	1.78	0.49
25:14:941:A:H2'	25:14:942:G:C8	2.48	0.49
7:6E:45:ASP:O	7:6E:49:ILE:HG12	2.12	0.49
49:H5:3:ARG:HD2	49:H5:60:GLU:C	2.33	0.49
45:H8:45:ASP:O	45:H8:49:ARG:HG2	2.12	0.49
29:39:133:ASN:HA	29:39:162:LEU:HD23	1.95	0.49
31:59:106:THR:HG22	31:59:112:PRO:HB3	1.94	0.49
15:6I:82:ILE:O	15:6I:86:GLY:N	2.44	0.49
25:1H:2065:C:H2'	25:1H:2066:C:C6	2.48	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:F8:15:GLU:HG3	43:F8:16:LYS:N	2.27	0.49
54:1G:1418:A:H2	25:14:1948:G:N3	2.11	0.49
18:9A:41:LYS:O	18:9A:41:LYS:HD3	2.12	0.49
7:62:65:ALA:HB1	7:62:127:ALA:HB3	1.95	0.49
25:1H:259:G:H21	25:1H:621:A:H8	1.60	0.48
53:Q8:50:LEU:C	53:Q8:52:LYS:H	2.05	0.48
25:14:1638:C:H3'	60:14:3432:HOH:O	2.12	0.48
54:1G:1143:G:H2'	54:1G:1144:G:C8	2.48	0.48
25:14:1786:A:H2	25:14:2606:C:H1'	1.78	0.48
25:1H:2702:U:H1'	25:1H:2703:C:C5	2.47	0.48
38:A8:34:HIS:CE1	38:A8:54:LEU:HD23	2.48	0.48
1:13:1157:A:H1'	1:13:1158:C:C4	2.47	0.48
44:G8:94:LYS:HZ2	44:G8:95:LYS:H	1.61	0.48
25:14:1856:G:H1	25:14:1886:C:N4	2.04	0.48
25:1H:1899:G:N2	25:1H:1902:C:H5	2.11	0.48
25:1H:2392:A:C8	35:78:61:ARG:HG2	2.48	0.48
56:2L:65:G:H2'	56:2L:66:C:C6	2.48	0.48
3:22:84:ILE:O	3:22:88:ARG:NH2	2.39	0.48
1:13:600:C:H2'	1:13:601:C:C6	2.47	0.48
54:1G:1327:C:H2'	54:1G:1328:C:C6	2.48	0.48
25:14:1024:G:C3'	25:14:1025:G:H5"	2.43	0.48
25:1H:2058:A:H5"	25:1H:2059:A:OP2	2.13	0.48
21:1B:5:ASP:O	21:1B:11:GLY:HA3	2.14	0.48
35:78:27:HIS:HD2	35:78:32:THR:HG21	1.78	0.48
54:1G:1274:G:N2	54:1G:1275:A:H62	2.11	0.48
25:14:2615:U:C2	51:J5:7:PRO:HA	2.48	0.48
25:1H:1346:G:C4	25:1H:1347:G:C8	3.01	0.48
55:1L:59:A:H2'	55:1L:60:A:H5'	1.95	0.48
25:14:634:C:H2'	25:14:635:C:C6	2.48	0.48
12:3I:53:ARG:HG3	12:3I:93:LEU:HD21	1.95	0.48
5:4E:41:VAL:HG13	5:4E:113:ALA:HB2	1.95	0.48
25:14:2837:G:H1	25:14:2881:C:H42	1.61	0.48
1:13:191(D):U:H2'	1:13:191(E):G:C8	2.48	0.48
25:14:1434:A:H61	25:14:1558:A:H62	1.60	0.48
25:1H:2280:G:C2'	25:1H:2281:C:H5'	2.43	0.48
37:98:104:ARG:HG3	37:98:111:LEU:HD21	1.95	0.48
47:J8:8:SER:HB3	47:J8:66:HIS:CD2	2.47	0.48
27:19:179:SER:OG	27:19:181:GLU:HB3	2.13	0.48
45:H8:130:PRO:HA	45:H8:133:ILE:HD11	1.95	0.48
27:19:126:GLN:HB2	27:19:129:ASN:HD22	1.78	0.48
9:82:27:THR:OG1	9:82:31:GLN:O	2.22	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:1H:191:A:H2'	25:1H:192:C:C6	2.48	0.48
25:14:2493:U:H2'	25:14:2494:G:O4'	2.14	0.48
25:1H:1653:G:H4'	25:1H:1654:A:O5'	2.13	0.48
33:58:46:VAL:CG1	33:58:48:MET:HG3	2.43	0.48
47:J8:87:PRO:O	47:J8:91:LYS:HB2	2.13	0.48
25:14:141:A:H1'	25:14:1408:C:O4'	2.13	0.48
54:1G:979:C:H5	54:1G:980:C:C6	2.31	0.48
43:F8:5:TYR:O	48:K8:36:ARG:NH2	2.46	0.48
55:3L:76:C:H2'	55:3L:77:C:C6	2.48	0.48
53:Q8:62:LEU:CB	53:Q8:63:PRO:HD2	2.43	0.48
28:29:33:VAL:HG23	28:29:47:VAL:HG13	1.95	0.48
1:13:703:G:H4'	1:13:704:A:O5'	2.13	0.48
8:72:64:LYS:O	8:72:79:VAL:HB	2.14	0.48
4:3E:89:THR:H	4:3E:92:VAL:HG23	1.77	0.48
25:14:26:G:C6	25:14:27:G:N1	2.81	0.48
27:19:71:ASP:OD1	27:19:103:ARG:NH1	2.37	0.48
54:1G:176:C:H2'	54:1G:177:C:H6	1.77	0.48
25:1H:1692:U:O2'	25:1H:1693:U:H2'	2.13	0.48
54:1G:1118:C:OP1	9:82:104:ARG:NH1	2.45	0.48
44:C5:52:SER:HA	44:C5:55:TYR:O	2.12	0.48
32:69:29:TYR:O	32:69:32:PRO:HD2	2.13	0.48
2:1E:5:ILE:HG23	2:1E:224:GLN:NE2	2.27	0.48
1:13:417:C:H2'	1:13:418:C:H6	1.77	0.48
1:13:417:C:H2'	1:13:418:C:C6	2.48	0.48
16:7I:50:LYS:HD3	16:7I:51:VAL:H	1.78	0.48
1:13:1423:G:OP1	34:68:49:ARG:NH2	2.43	0.48
31:51:87:LEU:HB2	31:51:131:VAL:HG12	1.96	0.48
37:98:91:GLN:N	37:98:91:GLN:OE1	2.42	0.48
30:49:171:ALA:O	30:49:175:LEU:N	2.40	0.48
32:69:92:VAL:HB	32:69:120:ILE:HG13	1.95	0.48
14:5I:24:CYS:HB2	14:5I:40:CYS:HB3	1.95	0.48
25:14:2394:C:H2'	25:14:2395:C:C6	2.47	0.48
35:78:59:LEU:HD22	53:Q8:13:ARG:HD2	1.94	0.48
25:1H:459:U:H5"	52:P8:40:TRP:CE2	2.48	0.48
19:AI:51:VAL:O	19:AI:58:VAL:HG12	2.13	0.48
1:13:991:U:O2'	1:13:992:U:O5'	2.29	0.48
25:14:2295:C:OP2	38:65:10:ARG:HD3	2.12	0.48
12:3A:37:CYS:HA	12:3A:58:VAL:HA	1.94	0.48
25:14:445:C:O2'	25:14:446:G:H5'	2.14	0.48
31:59:9:ILE:HG21	31:59:51:ARG:HG2	1.95	0.48
1:13:1207:G:H2'	1:13:1208:C:C6	2.48	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:3K:62:G:H1	22:3K:70:C:N4	2.11	0.48
43:F8:3:THR:CB	43:F8:4:ALA:HA	2.44	0.48
25:1H:2061:G:OP1	60:1H:3526:HOH:O	2.20	0.48
25:14:380:U:H5'	47:F5:18:ILE:CD1	2.43	0.48
25:14:1291:C:H2'	25:14:1292:U:C6	2.48	0.48
54:1G:503:C:O5'	54:1G:503:C:H6	1.96	0.48
1:13:939:G:H5"	7:6E:102:ARG:NH2	2.28	0.48
25:1H:910:A:H62	36:88:12:GLN:HA	1.78	0.48
6:5E:16:GLN:HA	6:5E:19:LEU:HB2	1.95	0.48
22:1K:17:OMG:N2	22:1K:64:PSU:O4	2.45	0.48
32:69:138:ILE:HG12	32:69:139:GLN:N	2.28	0.48
1:13:1171:G:O2'	1:13:1172:C:H5'	2.13	0.48
9:8E:32:ASP:HB3	9:8E:35:GLU:HB3	1.94	0.48
14:5I:42:ILE:O	14:5I:46:GLU:HG3	2.14	0.48
25:14:610:C:H2'	25:14:611:C:C6	2.48	0.48
14:5I:4:LYS:HA	14:5I:7:ILE:HG12	1.96	0.48
3:22:9:GLY:HA3	14:5A:49:HIS:HA	1.96	0.48
25:1H:1796:U:H2'	25:1H:1797:C:C6	2.48	0.48
54:1G:860:A:N6	54:1G:861:G:C2	2.82	0.48
25:14:1502:C:OP1	27:19:78:LYS:NZ	2.46	0.48
25:14:17:G:H4'	40:85:25:TRP:CZ3	2.49	0.48
36:45:43:THR:O	36:45:46:GLN:HB2	2.13	0.48
29:39:151:SER:O	29:39:151:SER:OG	2.24	0.48
9:8E:106:ALA:O	9:8E:108:VAL:HG22	2.13	0.48
24:4K:23:A:H3'	24:4K:24:A:C8	2.47	0.48
25:1H:2629:A:O2'	25:1H:2630:G:H5"	2.12	0.48
10:1A:79:ARG:HA	10:1A:82:ILE:HB	1.94	0.48
42:A5:75:TYR:CZ	42:A5:104:THR:HG21	2.48	0.48
1:13:1285:A:H8	1:13:1285:A:O5'	1.95	0.48
25:14:2707:G:H5'	37:55:68:ARG:NH2	2.28	0.48
1:13:453:A:C4'	16:7I:72:ARG:HB2	2.36	0.48
33:58:16:ILE:HB	33:58:54:VAL:HG22	1.95	0.48
25:1H:733:G:OP2	60:1H:3827:HOH:O	2.20	0.48
19:AI:5:LEU:CD1	19:AI:10:PHE:H	2.25	0.48
3:22:88:ARG:HH11	3:22:101:LEU:HD13	1.78	0.48
25:14:2748:A:H2'	25:14:2749:A:C8	2.48	0.48
25:1H:515:A:H1'	25:1H:581:C:H1'	1.95	0.48
2:12:22:LYS:HG2	2:12:40:HIS:NE2	2.28	0.48
10:1A:33:GLN:HB3	10:1A:75:ILE:HG12	1.94	0.48
54:1G:728:A:H2'	54:1G:729:A:H8	1.78	0.48
55:3L:53:A:H2'	55:3L:54:C:O4'	2.12	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:1H:2261:C:O2'	25:1H:2262:U:H5'	2.13	0.48
11:2I:107:SER:HB2	18:9I:87:ARG:HG2	1.95	0.48
6:52:97:PHE:HD1	18:9A:31:LEU:HD21	1.78	0.48
5:42:70:PRO:HD2	5:42:142:LEU:HB2	1.96	0.48
44:C5:14:LEU:HD12	44:C5:15:VAL:H	1.77	0.48
25:14:273(C):C:N4	25:14:363(C):G:H1	2.12	0.48
17:8I:100:LYS:HB3	17:8I:101:ARG:NH1	2.29	0.48
36:45:89:ASN:OD1	36:45:89:ASN:N	2.46	0.48
25:1H:864:G:O2'	25:1H:865:C:H5'	2.13	0.48
2:1E:8:LYS:HE3	2:1E:11:LEU:HD13	1.94	0.48
35:35:86:LYS:HB3	35:35:118:GLY:HA3	1.95	0.48
19:AA:65:ASN:OD1	19:AA:65:ASN:N	2.46	0.48
19:AI:31:ILE:HG23	19:AI:49:ILE:HG23	1.94	0.48
2:12:107:THR:O	2:12:110:GLN:HB3	2.13	0.48
7:62:72:ARG:HB2	7:62:142:GLU:OE2	2.14	0.48
31:51:33:LEU:HD21	31:51:136:ILE:HG22	1.95	0.48
1:13:983:A:H1'	1:13:1049:U:O2	2.13	0.48
1:13:1164:G:C6	1:13:1165:C:C4	3.01	0.48
50:I5:53:GLU:O	50:I5:53:GLU:HG3	2.13	0.48
26:1J:12:C:H6	26:1J:12:C:OP2	1.96	0.48
54:1G:748:C:O5'	54:1G:748:C:H6	1.95	0.48
48:G5:53:LEU:HA	48:G5:56:GLN:HG3	1.95	0.48
25:14:1332:G:N2	25:14:1610:A:C8	2.81	0.48
2:1E:69:LEU:HD22	2:1E:91:PRO:HG2	1.95	0.48
25:1H:2750:A:H3'	31:51:4:ILE:CG2	2.43	0.48
27:11:60:ARG:CD	27:11:86:PRO:HB2	2.40	0.48
44:G8:87:LYS:HB2	44:G8:96:ILE:HD11	1.95	0.48
55:3L:57:C:H4'	55:3L:58:G:O5'	2.13	0.48
26:16:8:U:OP1	38:A8:11:LYS:NZ	2.47	0.48
25:1H:1510:A:OP1	25:1H:1511:A:H5'	2.13	0.48
25:1H:286:C:H2'	25:1H:287:C:C6	2.48	0.48
28:29:171:GLU:HB3	28:29:185:LYS:HG3	1.96	0.48
25:1H:1209:G:N2	25:1H:1210:A:H62	2.12	0.48
4:32:203:VAL:O	4:32:206:PHE:HB3	2.14	0.48
25:14:71:A:H4'	25:14:72:U:H5"	1.96	0.48
19:AI:50:ALA:HA	19:AI:58:VAL:O	2.13	0.48
25:14:251:A:C5	25:14:252:G:H1'	2.48	0.48
2:12:71:VAL:HG11	2:12:97:TRP:HD1	1.79	0.48
54:1G:1189:C:OP1	10:1A:51:ARG:NH1	2.43	0.48
30:41:41:GLN:O	30:41:89:GLY:HA3	2.13	0.48
40:85:100:VAL:C	40:85:102:GLU:H	2.17	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:61:68:LEU:HA	32:61:71:ILE:HG22	1.94	0.48
25:14:2556:C:H2'	25:14:2557:G:O4'	2.13	0.48
1:13:758:G:O2'	1:13:759:A:H5'	2.14	0.48
54:1G:1275:A:H2'	54:1G:1276:G:O4'	2.13	0.48
54:1G:1293:G:H2'	54:1G:1294:G:C8	2.49	0.48
25:14:1104:C:H2'	25:14:1105:U:C5	2.49	0.48
30:49:7:LEU:HD13	30:49:100:TRP:HE3	1.79	0.48
25:14:696:G:H2'	25:14:697:C:C6	2.49	0.48
12:3I:43:VAL:CG2	12:3I:93:LEU:HD22	2.43	0.48
22:1K:76:C:H2'	22:1K:77:C:C5	2.48	0.48
45:H8:52:SER:O	45:H8:54:HIS:N	2.46	0.48
25:14:1655:A:H1'	28:29:113:PHE:CD1	2.48	0.48
25:1H:29:U:H2'	25:1H:30:G:C8	2.48	0.48
25:14:65:C:H4'	43:B5:69:TYR:CD1	2.48	0.48
2:1E:136:VAL:O	2:1E:140:HIS:N	2.42	0.48
21:1B:7:ARG:HB3	21:1B:21:TYR:CE2	2.47	0.48
45:D5:120:ILE:HG22	45:D5:121:HIS:HB2	1.95	0.48
54:1G:244:U:H6	54:1G:244:U:H5'	1.79	0.48
54:1G:266:G:H5'	54:1G:266:G:N3	2.28	0.48
54:1G:1249:C:O2'	9:82:73:GLN:OE1	2.32	0.48
10:1I:32:ALA:N	10:1I:78:ASN:OD1	2.35	0.48
54:1G:949:A:C2	54:1G:1233:G:N3	2.82	0.48
28:21:77:ILE:O	28:21:79:ARG:HG3	2.13	0.48
5:4E:63:ARG:HA	5:4E:66:MET:HE2	1.95	0.48
54:1G:957:U:H1'	54:1G:960:U:C5	2.47	0.48
31:51:122:THR:HG22	31:51:134:SER:HB2	1.96	0.48
4:32:157:LEU:HD12	4:32:161:ASN:HD21	1.79	0.48
47:J8:91:LYS:O	47:J8:93:GLU:N	2.47	0.48
25:1H:1485:G:C2	25:1H:1486:A:C4	3.01	0.48
25:1H:66:C:H2'	25:1H:67:U:H6	1.77	0.48
39:B8:92:GLY:HA2	39:B8:116:ALA:HA	1.95	0.48
9:8E:42:ARG:HH11	9:8E:71:SER:HB3	1.79	0.48
11:2A:101:SER:HB2	11:2A:103:LEU:HB2	1.96	0.48
54:1G:392:G:O2'	54:1G:483:C:O2'	2.31	0.48
32:61:1:MET:N	32:61:21:VAL:H	2.11	0.48
45:D5:5:LEU:HD12	45:D5:47:VAL:HG21	1.95	0.48
20:BI:71:THR:HG22	20:BI:72:LEU:H	1.79	0.48
25:14:2745:C:H4'	31:59:142:GLY:O	2.13	0.48
1:13:581:G:N2	1:13:582:U:O4	2.47	0.48
7:6E:80:VAL:HG21	7:6E:85:TYR:CD2	2.49	0.48
12:3I:69:TYR:HB2	12:3I:90:VAL:HG21	1.94	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:14:2753:A:H2'	25:14:2754:U:O4'	2.14	0.48
25:14:2850:A:C2	25:14:2851:A:C4	3.01	0.48
25:14:2876:G:O5'	39:75:2:ASN:HA	2.13	0.48
25:1H:2029:G:H2'	25:1H:2031:A:OP1	2.13	0.48
53:Q8:14:VAL:O	53:Q8:15:LYS:HD3	2.14	0.48
1:13:501:C:H2'	1:13:502:G:C8	2.48	0.48
1:13:791:G:C6	1:13:792:A:C2	3.02	0.48
26:16:71:C:C4	26:16:72:G:N7	2.81	0.48
3:2E:88:ARG:HA	3:2E:91:LEU:HD12	1.96	0.48
25:1H:1503:U:H2'	25:1H:1504:C:H6	1.76	0.48
18:9A:29:PHE:CD1	18:9A:29:PHE:N	2.82	0.48
47:F5:29:GLY:O	47:F5:30:VAL:HG22	2.13	0.48
1:13:539:A:H2'	1:13:540:G:C8	2.49	0.48
40:85:92:ARG:HH22	41:95:10:LYS:HA	1.79	0.48
54:1G:1320:C:OP1	19:AA:70:LYS:HE3	2.13	0.48
25:1H:1437:C:C2	25:1H:1438:U:C5	3.02	0.48
54:1G:1392:G:N2	54:1G:1502:A:H8	2.11	0.48
54:1G:1028(A):C:N4	54:1G:1028(B):C:H41	2.12	0.48
11:2A:57:THR:HG22	11:2A:59:TYR:N	2.25	0.48
56:2L:26:C:H2'	56:2L:27:G:O4'	2.13	0.48
25:1H:2314:C:H2'	25:1H:2315:G:C8	2.47	0.48
54:1G:235:C:H5'	17:8A:70:ARG:HG2	1.94	0.48
1:13:474:G:H5"	16:7I:81:ARG:CZ	2.43	0.48
13:4A:3:ARG:HG3	13:4A:9:ILE:HD11	1.96	0.48
26:1J:9:G:H5'	38:65:25:ARG:HH22	1.78	0.48
4:3E:93:PHE:HA	4:3E:96:LEU:HD22	1.96	0.48
1:13:1226:C:O2'	13:4I:111:LYS:NZ	2.25	0.48
29:39:51:THR:HB	29:39:88:VAL:HG11	1.95	0.48
54:1G:583:A:H2'	54:1G:584:G:O4'	2.14	0.48
25:1H:1969:A:H1'	25:1H:1973:G:O4'	2.13	0.48
54:1G:107:G:C2	54:1G:108:G:H1'	2.48	0.48
30:41:11:TYR:OH	30:41:16:ARG:NH1	2.45	0.48
55:1L:20:C:H2'	55:1L:20:C:O2	2.13	0.48
25:1H:1288:U:H4'	25:1H:1289:C:OP2	2.14	0.48
25:14:286:C:H42	25:14:355:G:H1	1.61	0.48
45:H8:16:SER:O	45:H8:20:ARG:HD2	2.14	0.48
25:14:1197:G:H2'	25:14:1198:U:H6	1.79	0.48
54:1G:302:G:O2'	54:1G:556:C:H5"	2.14	0.48
54:1G:755:G:H2'	54:1G:756:C:H6	1.78	0.48
45:H8:113:ALA:N	45:H8:114:GLY:HA2	2.29	0.48
4:3E:70:ILE:HG23	4:3E:75:PHE:HB2	1.95	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:1E:157:ARG:HG2	2:1E:158:LEU:N	2.28	0.48
31:59:98:LEU:HD22	31:59:126:PRO:HB3	1.96	0.48
18:9I:34:TYR:HB3	18:9I:69:THR:HG23	1.96	0.48
1:13:1342:C:O2'	9:8E:124:GLN:HG3	2.14	0.48
17:8I:21:VAL:HG21	17:8I:59:ILE:HG21	1.95	0.48
25:1H:2895:U:H6	25:1H:2895:U:O5'	1.96	0.48
1:13:814:A:N7	1:13:816:A:C4	2.82	0.48
25:14:2563:U:N3	25:14:2566:A:OP2	2.40	0.48
1:13:804:U:H5"	1:13:805:C:OP2	2.12	0.48
40:85:92:ARG:CZ	41:95:11:GLN:H	2.27	0.48
25:1H:1359:A:N1	25:1H:1372:U:C4	2.79	0.48
1:13:167:G:H2'	1:13:168:G:O4'	2.13	0.48
28:29:63:LEU:HG	28:29:64:LYS:H	1.78	0.48
25:14:2419:U:H2'	25:14:2420:C:C6	2.49	0.48
40:C8:103:PRO:O	40:C8:106:PHE:HB3	2.14	0.48
25:1H:1778:U:P	60:1H:3740:HOH:O	2.71	0.48
47:F5:91:LYS:HE2	47:F5:91:LYS:HB2	1.65	0.48
25:14:399:G:OP2	60:14:3692:HOH:O	2.19	0.48
13:4A:96:LEU:O	13:4A:110:ARG:NE	2.47	0.48
25:1H:1337:G:H2'	25:1H:1338:G:C8	2.49	0.48
25:14:2439:A:C5'	25:14:2439:A:H8	2.26	0.48
25:14:819:A:N3	25:14:1189:A:C2	2.82	0.48
25:14:2809:A:OP2	25:14:2891:G:N1	2.30	0.48
1:13:1206:G:C6	1:13:1207:G:C5	3.02	0.48
30:41:41:GLN:HE21	30:41:43:LEU:HD11	1.79	0.48
17:8A:66:SER:H	17:8A:69:LYS:HB2	1.78	0.48
1:13:756:C:H2'	1:13:757:U:O4'	2.14	0.48
1:13:701:C:O2	1:13:703:G:N1	2.47	0.48
2:12:105:PHE:HA	2:12:108:ILE:HB	1.95	0.48
25:1H:2345:G:H1'	25:1H:2382:G:H5'	1.96	0.48
30:49:131:TYR:O	30:49:159:VAL:HG22	2.13	0.48
17:8A:31:LEU:HG	17:8A:32:TYR:CE1	2.49	0.48
25:1H:1636:C:H2'	25:1H:1637:A:C8	2.49	0.48
54:1G:35:G:H2'	54:1G:36:C:C6	2.48	0.48
54:1G:1428:A:H2'	54:1G:1429:C:C6	2.49	0.48
8:72:49:GLU:O	8:72:51:VAL:HG13	2.13	0.48
35:35:138:LEU:HD22	35:35:138:LEU:HA	1.74	0.48
25:14:1448:G:H2'	25:14:1449:A:C8	2.49	0.48
30:49:96:ARG:HA	30:49:99:MET:HG2	1.95	0.48
2:12:197:VAL:HG12	2:12:200:ILE:HG13	1.95	0.48
25:14:2869:G:H2'	25:14:2870:C:O4'	2.13	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:14:654(H):G:N7	25:14:654(N):G:N1	2.62	0.48
25:14:1054:A:H3'	25:14:1055:G:H8	1.78	0.48
25:14:842:G:H1	25:14:936:C:H42	1.62	0.48
38:65:11:LYS:HG3	38:65:91:PRO:HD3	1.96	0.48
55:3L:59:A:H2'	55:3L:60:A:O4'	2.14	0.48
25:14:1115:G:H2'	25:14:1116:C:H6	1.78	0.48
25:1H:2864:G:H2'	25:1H:2865:U:O4'	2.13	0.48
54:1G:668:G:O2'	15:6A:46:HIS:HB3	2.14	0.48
31:59:61:HIS:O	31:59:64:LEU:N	2.46	0.48
1:13:883:C:C2'	1:13:884:U:H5'	2.44	0.48
18:9I:26:LEU:HB3	18:9I:42:ARG:HH22	1.79	0.48
42:A5:43:GLY:O	42:A5:47:VAL:HG23	2.14	0.48
54:1G:693:G:H2'	54:1G:694:A:C8	2.49	0.48
25:14:592:G:H5"	25:14:592:G:H8	1.78	0.48
29:31:177:ALA:HB1	29:31:178:PRO:HD2	1.95	0.48
2:12:98:LEU:O	2:12:101:MET:HG2	2.13	0.48
1:13:352:C:H6	1:13:352:C:H5"	1.78	0.48
25:14:1042:G:H22	25:14:1113:U:H3	1.62	0.48
13:4I:13:LYS:O	13:4I:44:ARG:HD2	2.14	0.48
25:1H:1021:A:H3'	25:1H:1022:G:H5"	1.95	0.48
25:1H:1438:U:O2'	25:1H:1439:A:H5'	2.14	0.48
25:14:1839:G:H2'	25:14:1839:G:N3	2.27	0.48
37:55:33:ARG:CG	37:55:115:GLU:HG2	2.43	0.48
54:1G:1286:A:H3'	54:1G:1286:A:C8	2.49	0.48
17:8I:67:LYS:O	17:8I:68:ARG:HB2	2.14	0.48
54:1G:1088:G:H2'	54:1G:1089:G:O4'	2.14	0.48
1:13:108:G:P	1:13:326:G:H22	2.37	0.48
25:14:1796:U:H2'	25:14:1797:C:H6	1.79	0.48
25:14:1188:U:HO2'	25:14:1189:A:H5'	1.79	0.48
54:1G:371:G:H1	54:1G:390:C:N4	2.12	0.48
7:62:94:ARG:CD	7:62:94:ARG:H	2.25	0.48
2:12:57:PHE:HD2	2:12:58:ILE:HD13	1.79	0.48
25:1H:2721:A:H2'	25:1H:2722:G:O4'	2.14	0.48
25:14:404:C:HO2'	25:14:405:U:P	2.36	0.48
25:14:380:U:H5'	47:F5:18:ILE:HD12	1.95	0.48
17:8I:74:LEU:HD12	17:8I:75:ARG:HG2	1.94	0.48
43:F8:49:VAL:HG22	43:F8:87:GLN:HG2	1.95	0.48
25:1H:1903:G:OP1	27:11:241:PRO:HB2	2.14	0.48
25:14:1819:A:H4'	25:14:1820:U:H5"	1.96	0.48
9:82:99:LEU:HB3	9:82:101:PHE:CD1	2.48	0.48
18:9A:53:ARG:NH2	18:9A:58:LEU:O	2.45	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:14:2108:C:O2	25:14:2181:G:N2	2.36	0.48
1:13:21:G:H2'	1:13:22:G:C8	2.48	0.48
1:13:22:G:C6	1:13:23:C:C4	3.02	0.48
25:1H:1340:U:H4'	25:1H:1341:U:OP2	2.12	0.48
3:2E:15:THR:CG2	3:2E:181:ASN:HA	2.43	0.48
54:1G:730:G:C5	54:1G:731:G:H1'	2.49	0.48
14:5I:53:LEU:HB3	14:5I:56:VAL:HG21	1.95	0.48
27:11:149:PRO:O	27:11:150:LYS:HB2	2.13	0.48
27:11:6:PHE:HE1	27:11:18:VAL:HG23	1.77	0.48
25:1H:855:G:H5"	25:1H:856:C:OP2	2.14	0.48
40:85:76:TYR:CZ	40:85:80:ILE:HG13	2.49	0.48
25:1H:2356:C:H2'	25:1H:2357:U:O4'	2.13	0.48
3:2E:42:LEU:HA	3:2E:42:LEU:HD12	1.63	0.48
36:45:93:TYR:CD1	36:45:93:TYR:N	2.81	0.48
4:32:33:MET:C	4:32:35:ARG:H	2.17	0.48
4:32:8:VAL:HG23	4:32:22:LYS:HE2	1.95	0.48
25:1H:2055:C:H1'	28:21:145:LYS:HZ2	1.79	0.48
19:AA:40:ILE:HA	19:AA:44:MET:SD	2.54	0.48
1:13:632:A:H3'	1:13:633:G:C8	2.48	0.48
56:2L:50:G:H1	56:2L:66:C:N4	2.07	0.48
40:C8:92:ARG:C	40:C8:94:ASN:H	2.17	0.48
35:35:19:VAL:HG13	35:35:21:ARG:H	1.79	0.48
20:BI:35:THR:O	20:BI:38:LYS:HB2	2.13	0.48
27:11:105:ILE:HA	27:11:105:ILE:HD12	1.63	0.48
46:E5:12:ASN:HA	46:E5:14:ARG:NH2	2.26	0.48
27:11:111:LEU:HD22	27:11:115:GLN:NE2	2.29	0.48
54:1G:4:U:O4	8:72:102:ARG:HD3	2.14	0.48
40:C8:87:GLY:O	40:C8:89:GLU:N	2.47	0.48
35:78:84:ASN:HB3	35:78:86:LYS:HG2	1.96	0.48
25:14:483:A:H1'	44:C5:60:PHE:HE2	1.79	0.48
25:14:108:U:H2'	25:14:109:G:C8	2.49	0.48
44:C5:17:SER:HB2	44:C5:71:LYS:HE2	1.95	0.48
54:1G:1255:G:OP1	10:1A:45:ARG:NH2	2.47	0.48
54:1G:1048:G:O4'	54:1G:1215:G:H4'	2.14	0.48
25:14:2638:G:P	28:29:82:ARG:HH21	2.37	0.48
7:6E:48:LYS:HD2	7:6E:49:ILE:HD13	1.95	0.48
1:13:1085:U:H3'	1:13:1086:U:C5	2.49	0.48
37:55:98:LEU:HB2	37:55:113:LEU:CD2	2.44	0.48
25:1H:2801:A:C5	25:1H:2802:G:H1'	2.48	0.48
25:14:2485:G:H5"	36:45:46:GLN:HE21	1.79	0.48
9:8E:11:LYS:HG2	9:8E:108:VAL:HG12	1.95	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:4A:15:VAL:O	13:4A:19:LEU:HG	2.14	0.48
5:4E:72:GLN:O	5:4E:75:THR:HG22	2.13	0.48
2:1E:53:ARG:HH12	2:1E:200:ILE:HD12	1.79	0.48
2:12:80:ILE:HD13	2:12:212:GLN:HG2	1.95	0.48
25:14:1432:C:H2'	25:14:1433:U:O4'	2.14	0.48
25:1H:1436:G:H1	25:1H:1556:C:H42	1.62	0.48
1:13:265:G:H5'	17:8I:64:PRO:O	2.13	0.48
25:1H:466:A:N3	25:1H:683:C:H1'	2.29	0.48
13:4I:81:LEU:O	13:4I:86:CYS:HB3	2.13	0.48
25:1H:953:A:OP2	36:88:16:ARG:HD3	2.13	0.48
54:1G:1510:U:H2'	54:1G:1511:G:C8	2.49	0.48
7:62:20:ASP:HB3	7:62:23:VAL:HG23	1.96	0.48
25:14:2252:G:H2'	25:14:2253:G:O4'	2.14	0.48
17:8A:23:VAL:HG23	17:8A:40:LYS:O	2.14	0.48
5:4E:51:VAL:O	5:4E:55:VAL:HG23	2.14	0.48
34:25:122:LEU:HD23	39:75:43:GLN:NE2	2.29	0.48
54:1G:1125:U:H4'	54:1G:1125:U:OP2	2.14	0.48
54:1G:160:A:H1'	54:1G:344:A:C5	2.49	0.48
23:2K:57:C:O2'	30:41:78:SER:HB2	2.14	0.48
2:1E:67:THR:CG2	2:1E:155:LEU:HG	2.40	0.47
29:31:46:ARG:HH11	29:31:46:ARG:CG	2.23	0.47
25:1H:2056:G:C2	25:1H:2057:A:C8	3.02	0.47
5:42:144:THR:O	5:42:148:VAL:HG23	2.14	0.47
25:1H:1900:A:N1	25:1H:1970:A:C6	2.82	0.47
25:1H:71:A:H2	43:F8:31:HIS:NE2	2.06	0.47
28:29:57:LYS:HD3	28:29:57:LYS:HA	1.69	0.47
25:1H:1534:G:N2	25:1H:1538:G:H22	2.11	0.47
27:19:253:GLN:HB3	27:19:255:LYS:NZ	2.29	0.47
54:1G:1306:A:C6	54:1G:1307:U:C2	3.02	0.47
25:14:654(C):G:N2	25:14:654(R):C:O2	2.41	0.47
25:1H:2689:U:H4'	25:1H:2690:C:H5'	1.94	0.47
54:1G:255:G:OP1	17:8A:69:LYS:NZ	2.46	0.47
25:1H:2156:G:H2'	25:1H:2157:G:N3	2.29	0.47
43:F8:1:MET:N	48:K8:29:LYS:HE3	2.29	0.47
11:2A:98:LEU:C	11:2A:101:SER:HB3	2.35	0.47
44:C5:17:SER:HB2	44:C5:71:LYS:CE	2.43	0.47
25:1H:2306:C:H3'	25:1H:2307:G:C5'	2.44	0.47
25:1H:1091:G:H2'	25:1H:1092:C:C6	2.49	0.47
36:45:17:LEU:HD21	36:45:41:TRP:NE1	2.29	0.47
34:68:75:SER:OG	34:68:76:ALA:N	2.47	0.47
25:14:2317:C:H2'	25:14:2318:G:O4'	2.14	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:14:51:G:N3	25:14:119:A:C2	2.82	0.47
25:1H:11:G:C2'	25:1H:12:U:H5'	2.44	0.47
7:6E:115:ARG:HB2	7:6E:118:VAL:HG12	1.94	0.47
7:62:90:GLU:HG2	7:62:90:GLU:H	1.41	0.47
22:3K:5:G:H1	22:3K:77:C:H42	1.61	0.47
25:1H:1467:C:O2'	25:1H:1468:C:H5'	2.14	0.47
46:E5:37:LEU:HG	46:E5:60:PHE:HA	1.96	0.47
1:13:91:C:H2'	1:13:92:G:C8	2.49	0.47
25:14:698:C:O2'	25:14:734:A:N6	2.47	0.47
1:13:245:C:C2	1:13:284:G:C2	3.02	0.47
25:14:243:U:OP1	53:M5:6:THR:OG1	2.26	0.47
26:16:87:G:N2	26:16:89(A):A:OP2	2.36	0.47
32:69:43:ASN:OD1	32:69:43:ASN:N	2.47	0.47
43:F8:41:ASN:O	43:F8:45:THR:HG23	2.14	0.47
29:31:183:VAL:O	29:31:187:VAL:HG23	2.14	0.47
2:1E:33:TYR:HB2	2:1E:43:ASP:HB2	1.94	0.47
25:1H:944:G:H5"	25:1H:945:A:H5'	1.97	0.47
44:C5:42:VAL:HG13	44:C5:65:ALA:HB3	1.95	0.47
16:7I:77:ALA:HB1	16:7I:79:VAL:HG23	1.97	0.47
25:14:617:G:P	29:39:40:GLN:HE21	2.34	0.47
25:1H:1542:G:H8	25:1H:1543:A:H2'	1.79	0.47
48:K8:47:ASN:C	48:K8:49:LYS:H	2.17	0.47
54:1G:1400:C:H5'	57:4L:18:G:O6	2.13	0.47
1:13:324:G:O2'	1:13:326:G:N7	2.38	0.47
14:5A:41:ARG:HG3	14:5A:42:ILE:HD13	1.96	0.47
36:88:138:ASP:CG	45:H8:81:ARG:HH22	2.17	0.47
25:1H:2210:G:H4'	25:1H:2211:G:OP2	2.13	0.47
35:78:21:ARG:HE	35:78:21:ARG:H	1.61	0.47
1:13:619:U:C2	4:3E:135:LEU:HD22	2.49	0.47
45:D5:43:GLU:O	45:D5:47:VAL:HG23	2.13	0.47
43:F8:67:GLY:C	43:F8:69:TYR:H	2.18	0.47
12:3A:7:ILE:HA	12:3A:10:LEU:HD12	1.96	0.47
45:D5:152:ALA:HB2	45:D5:169:GLU:HB3	1.96	0.47
36:88:32:TYR:OH	36:88:111:GLU:OE1	2.21	0.47
54:1G:994:A:C2	14:5A:5:ALA:HB2	2.48	0.47
32:69:126:TYR:O	32:69:139:GLN:HA	2.14	0.47
25:14:117:G:C6	25:14:119:A:C6	3.02	0.47
25:1H:2692:C:H2'	25:1H:2693:A:H8	1.78	0.47
25:1H:962:G:H2'	25:1H:963:U:C6	2.49	0.47
3:2E:162:GLN:HG2	24:4K:24:A:C2	2.49	0.47
49:H5:46:ASN:O	49:H5:50:VAL:HG22	2.14	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:1G:29:G:H5'	54:1G:296:U:OP1	2.14	0.47
50:M8:40:HIS:ND1	50:M8:44:THR:O	2.47	0.47
2:12:182:ILE:HD12	2:12:182:ILE:H	1.78	0.47
25:1H:1268:A:H2'	25:1H:1269:A:O4'	2.14	0.47
9:8E:4:TYR:CE2	9:8E:88:TYR:HB2	2.49	0.47
28:21:125:GLY:HA3	28:21:134:ILE:HD13	1.95	0.47
45:D5:39:VAL:HG21	45:D5:44:PHE:HD1	1.78	0.47
52:P8:8:ASN:C	52:P8:8:ASN:OD1	2.53	0.47
46:E5:72:ARG:HB3	46:E5:75:LEU:HB2	1.96	0.47
54:1G:1340:A:C2	54:1G:1341:U:C2	3.01	0.47
25:1H:239:U:H2'	25:1H:240:G:C8	2.50	0.47
28:21:77:ILE:H	28:21:79:ARG:HH11	1.61	0.47
4:32:18:LYS:HB3	4:32:33:MET:HG3	1.96	0.47
27:11:33:LEU:HD13	27:11:104:TYR:CE2	2.49	0.47
38:65:33:LYS:HB3	38:65:34:HIS:HD2	1.79	0.47
32:61:110:ASP:OD1	32:61:130:TYR:HE1	1.97	0.47
8:7E:87:SER:OG	8:7E:93:VAL:N	2.30	0.47
3:22:72:LYS:HG3	3:22:75:VAL:HG23	1.95	0.47
25:14:1226:G:H5'	41:95:85:LYS:H	1.79	0.47
25:14:2119:A:C2	25:14:2171:A:H1'	2.50	0.47
1:13:739:C:C4	1:13:740:U:C5	3.03	0.47
1:13:61:G:H2'	1:13:62:U:O4'	2.14	0.47
25:14:933:A:C5	25:14:934:G:C8	3.02	0.47
25:14:2037:G:H2'	25:14:2038:G:H8	1.79	0.47
25:1H:2261:C:H1'	25:1H:2388:A:N3	2.29	0.47
25:1H:558:G:P	33:58:111:PRO:HD2	2.55	0.47
17:8A:67:LYS:HA	17:8A:70:ARG:HH12	1.79	0.47
31:59:81:GLU:HG3	31:59:83:TYR:H	1.77	0.47
10:1A:32:ALA:HA	10:1A:76:ASN:HB2	1.96	0.47
25:1H:773:U:H4'	27:11:47:GLY:HA3	1.95	0.47
54:1G:1080:A:H5'	5:42:14:ARG:NH2	2.29	0.47
30:41:96:ARG:O	30:41:97:ASP:HB2	2.14	0.47
25:1H:784:A:H5'	25:1H:785:G:OP1	2.14	0.47
45:D5:19:ARG:HH11	45:D5:84:GLU:HB2	1.79	0.47
25:1H:304:G:H2'	25:1H:305:U:H6	1.79	0.47
22:1K:16:C:H2'	22:1K:18:G:OP1	2.14	0.47
25:14:524:U:H2'	25:14:525:U:C6	2.50	0.47
25:1H:270(G):C:H2'	25:1H:270(H):C:O4'	2.14	0.47
1:13:130:A:O2'	1:13:131:C:O5'	2.26	0.47
54:1G:1072:G:C6	54:1G:1073:U:C4	3.02	0.47
25:14:2820:A:C5	37:55:4:LEU:HD11	2.48	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:1H:1364:G:N7	47:J8:2:SER:HB3	2.29	0.47
25:1H:1925:C:C2'	25:1H:1926:U:H5'	2.44	0.47
25:14:1992:G:N2	25:14:1996:C:O2	2.41	0.47
5:42:67:VAL:HB	5:42:140:ARG:HH21	1.79	0.47
11:2A:32:ILE:HD11	11:2A:68:ALA:HB1	1.95	0.47
26:1J:53:A:H2'	26:1J:54:G:O4'	2.15	0.47
41:95:60:GLU:OE2	41:95:97:LYS:NZ	2.47	0.47
31:51:95:ARG:HB2	31:51:128:PRO:HB2	1.97	0.47
25:1H:2814:C:O2'	51:N8:29:THR:HG21	2.14	0.47
25:1H:1371:G:H2'	25:1H:1372:U:H5	1.79	0.47
4:32:9:CYS:HB3	4:32:32:ALA:HB2	1.96	0.47
33:58:62:VAL:HG22	33:58:63:THR:N	2.29	0.47
32:61:98:ALA:HB2	32:61:111:PRO:HB3	1.96	0.47
32:61:131:LYS:HB3	32:61:132:PRO:HA	1.94	0.47
40:C8:92:ARG:C	40:C8:94:ASN:N	2.66	0.47
22:1K:25:G:OP2	22:1K:25:G:H8	1.98	0.47
25:1H:2148:G:H2'	25:1H:2149:G:H8	1.79	0.47
35:78:85:LEU:HD12	35:78:85:LEU:HA	1.77	0.47
1:13:1305:G:H21	1:13:1331:G:H2'	1.76	0.47
25:1H:2035:G:P	60:1H:3616:HOH:O	2.71	0.47
54:1G:1327:C:H2'	54:1G:1328:C:H6	1.79	0.47
54:1G:1176:A:C2'	54:1G:1177:G:H5'	2.45	0.47
25:1H:2439:A:P	25:1H:2439:A:H3'	2.55	0.47
19:AI:40:ILE:HG23	19:AI:41:VAL:HG13	1.96	0.47
31:59:121:ILE:HA	31:59:134:SER:O	2.14	0.47
34:25:10:VAL:HG22	34:25:19:ILE:HG12	1.96	0.47
31:59:137:ASP:HB3	31:59:140:LYS:CB	2.43	0.47
50:M8:16:CYS:SG	50:M8:17:GLY:N	2.86	0.47
39:B8:55:ASN:H	39:B8:59:THR:HG22	1.78	0.47
6:52:11:ASN:O	6:52:14:LEU:HD22	2.14	0.47
28:29:84:PHE:CZ	28:29:86:PRO:HB3	2.49	0.47
1:13:595:G:H1'	1:13:596:C:H5	1.80	0.47
25:14:2789:C:H2'	25:14:2790:A:O4'	2.15	0.47
33:15:67:LEU:HD23	33:15:88:GLU:HG2	1.96	0.47
25:1H:270(V):G:H2'	25:1H:270(W):G:C8	2.48	0.47
54:1G:1512:U:H2'	54:1G:1513:A:C8	2.49	0.47
17:8A:31:LEU:HG	17:8A:32:TYR:CD1	2.49	0.47
1:13:659:U:H2'	1:13:660:G:C8	2.50	0.47
25:1H:863:A:H2'	25:1H:864:G:C8	2.50	0.47
17:8A:60:ILE:HG23	17:8A:61:GLU:O	2.14	0.47
26:16:29:A:H2'	26:16:30:C:C6	2.49	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:5I:46:GLU:O	14:5I:50:LYS:HG3	2.14	0.47
18:9A:29:PHE:HD1	18:9A:29:PHE:N	2.13	0.47
1:13:539:A:OP1	12:3I:114:LYS:HE2	2.13	0.47
25:14:2780:G:OP2	33:15:118:LYS:HD3	2.14	0.47
25:1H:922:U:H1'	46:I8:26:TYR:HD2	1.80	0.47
3:22:122:GLU:HA	3:22:125:GLU:CD	2.35	0.47
25:1H:2784:C:H1'	28:21:37:ARG:NH1	2.30	0.47
25:1H:2400:G:H1	25:1H:2416:C:H42	1.62	0.47
29:39:11:VAL:HG23	29:39:12:LEU:H	1.79	0.47
15:6I:3:ILE:HG13	15:6I:3:ILE:O	2.14	0.47
25:1H:859:G:H5'	25:1H:2268:A:O2'	2.14	0.47
31:59:152:ARG:HD2	31:59:153:LYS:HG3	1.96	0.47
9:82:33:PHE:HE1	9:82:37:PHE:HD2	1.62	0.47
36:45:117:ALA:HA	36:45:120:ILE:HB	1.96	0.47
13:4I:49:THR:HG22	13:4I:51:ALA:H	1.79	0.47
1:13:1348:U:H2'	1:13:1349:A:C8	2.34	0.47
1:13:1374:A:O2'	7:6E:28:ASN:HB3	2.13	0.47
12:3A:46:LYS:HG2	12:3A:47:LYS:N	2.29	0.47
25:1H:1566:A:O2'	25:1H:1567:A:H5'	2.14	0.47
25:1H:654(E):C:H42	25:1H:654(P):G:H22	1.62	0.47
1:13:976:G:H5'	1:13:1358:U:O2'	2.15	0.47
45:D5:67:LEU:HA	45:D5:68:PRO:HD3	1.62	0.47
32:69:73:GLU:HG3	32:69:136:VAL:HG23	1.96	0.47
4:32:53:ASP:O	4:32:57:ARG:HD2	2.13	0.47
25:1H:739:G:P	60:1H:3736:HOH:O	2.72	0.47
9:8E:118:LYS:HB3	9:8E:118:LYS:HE2	1.40	0.47
21:1B:6:ARG:HG2	21:1B:15:ARG:NH2	2.28	0.47
54:1G:1352:C:OP1	21:1B:3:LYS:HE2	2.14	0.47
6:52:91:VAL:HG12	6:52:92:LYS:O	2.13	0.47
25:1H:2287:A:H62	25:1H:2344:U:H3	1.59	0.47
55:3L:51:C:H3'	55:3L:52:G:O4'	2.14	0.47
29:39:196:LEU:HD22	29:39:196:LEU:HA	1.79	0.47
1:13:1032(B):G:H2'	1:13:1033:G:O4'	2.15	0.47
54:1G:1200:C:H5'	54:1G:1201:A:H5'	1.96	0.47
29:39:53:THR:HG23	29:39:55:GLY:H	1.79	0.47
25:14:533:G:H2'	25:14:534:U:O4'	2.14	0.47
39:B8:16:ARG:NH1	39:B8:19:LEU:HD21	2.29	0.47
32:61:53:ALA:O	32:61:57:ARG:HG2	2.15	0.47
36:88:109:VAL:HG13	36:88:113:GLN:HB3	1.97	0.47
11:2I:109:VAL:HA	18:9I:85:LEU:O	2.14	0.47
34:25:87:ILE:HA	34:25:87:ILE:HD12	1.63	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:5A:24:CYS:HB3	14:5A:27:CYS:O	2.14	0.47
37:98:100:LEU:CD1	37:98:113:LEU:HB2	2.44	0.47
25:14:1115:G:H2'	25:14:1116:C:C6	2.49	0.47
5:42:34:VAL:O	5:42:41:VAL:HG12	2.14	0.47
20:BA:16:HIS:O	20:BA:19:SER:N	2.47	0.47
56:2L:9:G:H21	56:2L:46:G:H3'	1.79	0.47
25:1H:2104:G:H1	25:1H:2185:C:H42	1.63	0.47
36:45:98:LYS:HB3	36:45:99:PRO:HD2	1.96	0.47
1:13:110:C:H2'	1:13:111:G:O4'	2.14	0.47
5:4E:29:GLY:HA2	5:4E:46:GLY:O	2.14	0.47
25:1H:2309:A:C6	25:1H:2310:A:N7	2.82	0.47
54:1G:1036:G:C8	54:1G:1037:C:C4	3.02	0.47
32:61:40:THR:O	32:61:44:LEU:HD22	2.15	0.47
19:AI:30:LEU:HD22	19:AI:30:LEU:H	1.80	0.47
35:35:59:LEU:HD22	35:35:59:LEU:O	2.14	0.47
19:AA:28:LYS:HA	19:AA:29:ARG:NH1	2.29	0.47
54:1G:720:C:H6	54:1G:720:C:O5'	1.97	0.47
25:1H:1271:G:N2	25:1H:1617:C:O4'	2.47	0.47
45:D5:175:VAL:CA	45:D5:177:PRO:HD3	2.44	0.47
54:1G:1147:C:O2	9:82:16:ARG:NH1	2.47	0.47
25:14:1358:G:N1	25:14:1372:U:OP2	2.29	0.47
55:3L:14:A:H3'	55:3L:15:G:C5'	2.39	0.47
26:16:7:G:O5'	38:A8:29:PHE:CE2	2.65	0.47
25:1H:1900:A:C8	25:1H:1900:A:C5'	2.96	0.47
31:51:135:GLY:HA3	31:51:141:VAL:HG22	1.97	0.47
1:13:1319:A:OP2	19:AI:5:LEU:HD21	2.15	0.47
25:1H:2142:C:H2'	25:1H:2143:C:C6	2.49	0.47
42:A5:59:VAL:HG12	42:A5:60:ASN:HD22	1.79	0.47
2:12:217:ARG:HB2	2:12:217:ARG:NH1	2.29	0.47
1:13:510:A:P	60:13:1816:HOH:O	2.72	0.47
35:78:86:LYS:HD2	35:78:117:GLU:HB3	1.95	0.47
45:D5:30:ASN:OD1	45:D5:33:LEU:HB3	2.15	0.47
39:B8:53:ARG:O	39:B8:59:THR:HB	2.14	0.47
22:1K:1:G:H2'	22:1K:2:G:C8	2.47	0.47
54:1G:660:G:H1	54:1G:745:C:H42	1.62	0.47
52:L5:11:LYS:HE3	52:L5:15:THR:OG1	2.15	0.47
31:59:20:ALA:HB3	31:59:23:ARG:O	2.14	0.47
54:1G:626:U:C2	54:1G:627:G:C8	3.03	0.47
54:1G:1410:G:H2'	54:1G:1411:C:H6	1.80	0.47
54:1G:192:U:C4'	20:BA:103:GLY:HA2	2.45	0.47
5:4E:37:ARG:HA	5:4E:114:GLY:H	1.80	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:14:2210:G:H5'	25:14:2211:G:C6	2.49	0.47
34:68:73:ASP:OD1	34:68:75:SER:HB3	2.15	0.47
46:I8:50:ASN:HD22	46:I8:83:PRO:HD3	1.80	0.47
7:62:74:GLU:N	7:62:89:MET:O	2.44	0.47
11:2A:87:THR:HA	11:2A:91:ARG:HD3	1.96	0.47
25:1H:1454:U:H5	37:98:73:VAL:HG13	1.79	0.47
50:M8:56:VAL:O	50:M8:60:GLN:HG2	2.15	0.47
1:13:683:G:N7	60:13:1809:HOH:O	2.35	0.47
25:1H:470:A:H2'	25:1H:471:A:C8	2.49	0.47
54:1G:1034:G:H2'	54:1G:1035:A:C8	2.50	0.47
42:A5:45:TYR:CZ	42:A5:49:LYS:HE3	2.50	0.47
33:58:127:ASP:OD1	33:58:127:ASP:N	2.48	0.47
33:15:91:LEU:HD23	33:15:91:LEU:HA	1.65	0.47
25:14:2839:G:H5'	37:55:46:GLY:HA2	1.97	0.47
25:1H:1225:C:O2'	41:D8:85:LYS:HA	2.14	0.47
12:3A:6:THR:OG1	12:3A:9:GLN:N	2.45	0.47
25:14:2057:A:C2'	25:14:2058:A:H5'	2.45	0.47
25:14:1638:C:H1'	25:14:2698:U:O2'	2.14	0.47
2:1E:69:LEU:O	2:1E:163:PHE:N	2.41	0.47
26:16:12:C:C2	46:I8:74:ARG:NH1	2.81	0.47
27:11:85:ASP:OD1	27:11:86:PRO:HD2	2.14	0.47
3:22:3:ASN:H	3:22:3:ASN:ND2	2.12	0.47
5:42:103:GLY:O	5:42:106:PRO:HD2	2.14	0.47
25:14:2392:A:C8	35:35:61:ARG:HD2	2.49	0.47
25:14:2459:A:C4	25:14:2460:U:C5	3.03	0.47
25:1H:1514:U:H2'	25:1H:1515:C:C6	2.49	0.47
25:1H:1126:A:H8	25:1H:1126:A:O5'	1.97	0.47
25:14:2074:U:H2'	25:14:2075:U:C6	2.49	0.47
54:1G:619:U:H3	4:32:135:LEU:HD13	1.79	0.47
1:13:1212:U:H6	1:13:1212:U:OP2	1.98	0.47
25:14:1047:G:H2'	25:14:1110:G:H1	1.80	0.47
25:14:944:G:H5"	25:14:945:A:O5'	2.15	0.47
42:A5:64:MET:HE2	42:A5:109:GLU:OE1	2.14	0.47
22:3K:6:G:C6	22:3K:7:G:C6	3.03	0.47
54:1G:1287:A:H2'	54:1G:1288:A:C8	2.49	0.47
19:AI:42:PRO:O	19:AI:45:VAL:HG22	2.15	0.47
2:12:73:THR:HG21	2:12:97:TRP:N	2.30	0.47
25:14:2439:A:C5'	25:14:2439:A:C8	2.97	0.47
25:14:38:A:H2'	25:14:39:C:C6	2.50	0.47
9:8E:9:ARG:HB3	9:8E:14:VAL:HG13	1.97	0.47
25:14:1791:A:H5'	27:19:206:LEU:HD12	1.95	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:1G:1064:G:OP1	54:1G:1386:G:H4'	2.14	0.47
25:1H:529:A:H4'	25:1H:530:G:H5'	1.96	0.47
6:52:97:PHE:CD1	18:9A:31:LEU:HD21	2.49	0.47
2:12:87:ARG:HH21	2:12:233:SER:HB3	1.79	0.47
37:98:63:ARG:HG2	37:98:67:LEU:HD23	1.97	0.47
25:14:2572:A:OP1	25:14:2574:G:O2'	2.29	0.47
25:14:2536:G:C6	25:14:2537:U:C4	3.02	0.47
1:13:645:C:H2'	1:13:646:U:O4'	2.15	0.47
25:1H:616:A:C4	29:31:180:GLY:HA2	2.49	0.47
25:14:869:G:H5'	36:45:6:ARG:NH1	2.30	0.47
25:14:2212:A:O2'	25:14:2213:U:O5'	2.32	0.47
33:15:28:THR:HG22	33:15:106:MET:HE1	1.96	0.47
38:65:62:LYS:HB3	38:65:97:ARG:HD2	1.96	0.47
32:61:47:LEU:O	32:61:51:ILE:HG13	2.14	0.47
1:13:652:U:C4	1:13:752:G:N3	2.83	0.47
36:88:51:ARG:NH1	36:88:52:VAL:HG23	2.29	0.47
25:14:1530:G:O6	25:14:1542:G:N2	2.43	0.47
3:22:39:ILE:O	3:22:43:LEU:HB2	2.15	0.47
25:14:2051:A:H4'	28:29:141:ILE:HG23	1.97	0.47
1:13:112:G:P	16:7I:27:LYS:HD2	2.55	0.47
25:14:13:A:N1	25:14:525:U:H2'	2.30	0.47
46:I8:68:GLU:HG3	46:I8:80:HIS:HB2	1.97	0.47
1:13:1413:A:H2'	1:13:1414:U:O4'	2.15	0.47
25:14:582:G:H2'	25:14:583:G:H8	1.80	0.47
25:14:2107:C:H2'	25:14:2108:C:O4'	2.14	0.47
25:14:805:G:O5'	35:35:41:ARG:HG2	2.14	0.47
25:14:2567:G:H2'	25:14:2568:C:C6	2.49	0.47
9:82:33:PHE:HE2	9:82:47:LEU:HD23	1.80	0.47
56:2L:9:G:N3	56:2L:46:G:H2'	2.30	0.47
25:1H:2104:G:H2'	25:1H:2105:C:C6	2.50	0.47
36:88:118:LEU:HD12	36:88:131:ILE:HG23	1.97	0.47
30:49:2:PRO:HB2	30:49:5:VAL:HG22	1.96	0.47
25:1H:2110:G:C6	25:1H:2120:G:C8	3.03	0.47
3:2E:101:LEU:HD23	3:2E:102:ASN:N	2.30	0.47
25:14:1858:G:H1'	25:14:1884:A:N6	2.30	0.47
25:1H:1472:A:H2'	25:1H:1473:G:O4'	2.15	0.47
25:1H:484:C:H2'	25:1H:485:C:C6	2.49	0.47
25:14:1693:U:O2'	27:19:14:ARG:NH2	2.48	0.47
25:14:2353:G:H2'	25:14:2354:G:O4'	2.14	0.47
25:1H:2246:G:H2'	25:1H:2247:A:C8	2.49	0.47
25:1H:183:C:N4	25:1H:213:A:H61	2.12	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:3I:38:THR:O	12:3I:79:GLU:HG3	2.15	0.47
29:39:204:ASN:OD1	29:39:204:ASN:N	2.47	0.47
25:1H:2793:G:H8	25:1H:2793:G:OP2	1.97	0.47
25:14:2569:G:C2	25:14:2570:G:C8	3.03	0.47
25:1H:15:G:C2	25:1H:16:G:C8	3.02	0.47
12:3I:126:LYS:HG3	12:3I:128:ALA:H	1.79	0.47
25:1H:1354:A:H2'	25:1H:1355:G:O4'	2.15	0.47
40:85:26:GLY:O	40:85:30:LYS:HG3	2.14	0.47
55:3L:79:A:H2'	55:3L:80:C:O4'	2.15	0.47
9:8E:8:GLY:HA3	9:8E:79:LEU:HB3	1.97	0.47
25:1H:1658:C:H2'	25:1H:1659:U:C6	2.49	0.47
25:1H:64:A:C5	43:F8:66:LEU:HD22	2.50	0.47
28:21:111:ARG:HD2	28:21:160:TYR:CD2	2.49	0.47
55:1L:34:U:O2'	55:1L:36:U:H5	1.98	0.47
22:1K:37:A:H62	22:1K:38:MIA:H122	1.79	0.47
26:1J:15:A:H1'	26:1J:109:G:C8	2.50	0.47
14:5I:29:ARG:HD3	14:5I:40:CYS:HB2	1.97	0.47
25:1H:654(O):G:H2'	25:1H:654(P):G:O4'	2.13	0.47
9:82:113:LYS:H	9:82:119:ALA:HB2	1.79	0.47
25:1H:1022:G:O6	33:58:66:LYS:NZ	2.47	0.47
25:1H:2114:A:N3	25:1H:2114:A:H2'	2.30	0.47
1:13:992:U:O2	1:13:993:G:N2	2.47	0.47
30:41:131:TYR:HE2	30:41:133:LEU:HD23	1.80	0.47
54:1G:1028:C:H2'	54:1G:1028(A):C:O4'	2.14	0.47
6:5E:82:ARG:HB2	6:5E:83:ASP:CA	2.44	0.47
3:22:113:ALA:HB3	3:22:114:PRO:HD3	1.97	0.47
12:3I:60:LEU:HD13	12:3I:60:LEU:HA	1.56	0.47
4:32:49:ARG:HE	4:32:50:ARG:H	1.61	0.47
22:3K:52:G:H2'	22:3K:53:A:C8	2.49	0.47
27:19:11:PRO:C	27:19:13:ARG:H	2.17	0.47
2:1E:47:THR:HG23	2:1E:202:PRO:HG2	1.96	0.47
44:G8:28:LYS:HZ2	44:G8:40:GLU:HG3	1.80	0.47
54:1G:601:C:H2'	54:1G:602:A:C8	2.49	0.47
39:B8:58:ASN:O	39:B8:58:ASN:ND2	2.42	0.47
30:49:125:PHE:HB3	30:49:166:ASP:OD2	2.14	0.47
27:19:34:VAL:CG1	27:19:61:LEU:HG	2.45	0.47
8:7E:29:SER:O	8:7E:33:GLU:HG3	2.14	0.47
54:1G:791:G:C6	54:1G:792:A:N7	2.83	0.47
25:14:994:C:OP1	40:85:53:ARG:NH2	2.48	0.47
15:6I:27:VAL:O	15:6I:31:LEU:HB2	2.15	0.47
20:BA:50:GLU:H	20:BA:100:ILE:HG12	1.79	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:14:2228:G:C6	25:14:2229:C:C4	3.02	0.47
44:G8:63:LYS:HG3	44:G8:64:GLU:H	1.80	0.47
54:1G:396:G:O2'	54:1G:398:C:OP1	2.16	0.47
25:14:374:A:C2	25:14:401:A:C4	3.02	0.47
28:21:101:ARG:HB3	28:21:201:THR:OG1	2.14	0.47
13:4A:102:ARG:HH11	13:4A:105:THR:HG23	1.80	0.47
26:16:40:U:C5	50:M8:2:LYS:HD3	2.49	0.47
34:25:47:ILE:HG13	34:25:48:PRO:HD2	1.96	0.47
17:8A:12:SER:HB3	17:8A:20:THR:OG1	2.15	0.47
26:16:73:A:C4	26:16:104:A:C2	3.02	0.47
1:13:134:A:H1'	1:13:325:A:C5	2.49	0.47
37:55:15:SER:HB3	60:55:201:HOH:O	2.14	0.47
32:69:102:SER:OG	32:69:103:ARG:N	2.48	0.47
39:B8:125:ARG:HA	39:B8:128:GLU:OE1	2.14	0.47
15:6I:81:LEU:O	15:6I:85:LEU:HB2	2.15	0.47
25:14:2817:G:OP1	37:55:99:LYS:NZ	2.47	0.47
1:13:345:C:H4'	1:13:346:G:C2	2.49	0.47
25:1H:2068:U:H3	25:1H:2430:A:H2	1.57	0.47
25:1H:1131:G:C8	25:1H:2025:C:H4'	2.50	0.47
12:3I:97:ARG:HB2	12:3I:98:TYR:CE1	2.50	0.47
25:14:2714:G:P	60:14:3464:HOH:O	2.66	0.47
25:14:2697:G:H2'	25:14:2698:U:O4'	2.15	0.47
25:1H:1265:A:C8	25:1H:1267:U:C2	3.03	0.47
28:29:38:THR:HG23	28:29:41:LYS:HG2	1.96	0.47
4:32:13:ARG:NH1	4:32:38:TYR:O	2.37	0.47
1:13:507:C:OP2	1:13:508:C:O2'	2.27	0.47
40:C8:92:ARG:HD3	40:C8:92:ARG:HA	1.64	0.47
29:39:102:PRO:O	29:39:105:VAL:N	2.47	0.47
54:1G:577:G:O2'	54:1G:578:C:H5'	2.15	0.47
25:1H:1540:G:H2'	25:1H:1541:U:O4'	2.15	0.47
39:75:113:LYS:O	39:75:114:LEU:HD23	2.15	0.47
54:1G:1095:U:H2'	54:1G:1096:C:O4'	2.15	0.47
25:1H:1163:G:C2	25:1H:1164:G:C8	3.02	0.47
43:B5:53:LYS:HB3	43:B5:82:GLN:HB3	1.97	0.47
54:1G:1329:A:H2'	54:1G:1330:U:O4'	2.15	0.47
25:14:823:G:H2'	25:14:824:A:H8	1.80	0.47
29:31:101:LEU:HA	29:31:101:LEU:HD23	1.70	0.47
1:13:644:G:H2'	1:13:645:C:O4'	2.15	0.47
4:3E:135:LEU:HA	4:3E:136:PRO:HD2	1.71	0.47
54:1G:1084:G:H2'	54:1G:1085:U:C6	2.50	0.47
54:1G:146:G:H2'	54:1G:147:G:C8	2.49	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
55:1L:81:C:H2'	55:1L:82:A:H5"	1.97	0.47
30:41:109:VAL:HG13	50:M8:33:VAL:HG22	1.96	0.47
27:19:26:LYS:HZ3	27:19:94:LEU:HD11	1.79	0.47
31:59:98:LEU:HD13	31:59:125:VAL:HG21	1.96	0.47
25:14:2467:C:H4'	36:45:123:HIS:CG	2.50	0.47
30:49:39:ILE:HD12	30:49:94:LEU:HD21	1.96	0.47
25:1H:2480:C:H5'	25:1H:2481:G:OP2	2.15	0.47
5:4E:76:ILE:HG13	5:4E:93:PRO:HB3	1.97	0.47
25:14:1405:U:H2'	25:14:1406:U:C6	2.50	0.47
1:13:314:C:H2'	1:13:315:A:C8	2.50	0.47
41:D8:29:PRO:HG3	41:D8:63:GLY:HA2	1.97	0.47
25:1H:1014:U:H3	25:1H:1148:A:H61	1.62	0.47
25:1H:381:G:C4	25:1H:394:A:C2	3.03	0.47
25:14:877:U:O4	25:14:899:A:N6	2.48	0.47
27:19:44:ASN:ND2	27:19:46:GLN:HG3	2.30	0.47
48:K8:31:GLU:HB3	48:K8:53:LEU:HD11	1.96	0.47
32:61:102:SER:O	32:61:106:GLY:HA2	2.15	0.47
27:11:217:ARG:HH11	27:11:217:ARG:CG	2.28	0.47
20:BI:53:LEU:H	20:BI:53:LEU:HD22	1.80	0.47
26:1J:101:A:OP2	26:1J:101:A:H8	1.98	0.47
25:1H:1705:G:C2'	25:1H:1706:U:H5'	2.44	0.47
25:1H:1772:G:N2	60:1H:3622:HOH:O	2.45	0.47
4:32:25:ARG:CZ	4:32:30:LYS:HG3	2.44	0.47
54:1G:1279:A:O2'	54:1G:1282:C:N4	2.48	0.47
27:11:61:LEU:HA	27:11:61:LEU:HD13	1.58	0.47
25:1H:1568:G:H5"	27:11:61:LEU:HD22	1.97	0.47
10:1I:49:VAL:HG23	14:5I:41:ARG:HD2	1.97	0.47
1:13:1157:A:N6	1:13:1178:G:H21	2.13	0.47
54:1G:960:U:O2	54:1G:960:U:O2'	2.27	0.47
25:14:1359:A:N6	25:14:1372:U:H3	2.05	0.47
19:AA:33:THR:HG22	19:AA:50:ALA:O	2.14	0.47
54:1G:353:A:H5'	54:1G:353:A:C8	2.40	0.47
25:14:568:U:N3	60:14:3579:HOH:O	2.19	0.47
22:1K:48:C:N4	22:1K:52:G:H1	2.11	0.47
4:3E:148:VAL:HG21	4:3E:158:ILE:HG21	1.96	0.47
1:13:734:G:C2	1:13:735:C:C2	3.03	0.47
1:13:1239:A:H4'	1:13:1240:U:H5"	1.97	0.47
25:14:2889:C:H3'	25:14:2891:G:C8	2.50	0.47
44:G8:20:TYR:CE2	44:G8:43:ASN:HA	2.50	0.47
54:1G:1189:C:P	10:1A:51:ARG:HH22	2.38	0.47
25:1H:528:A:N1	25:1H:2042:A:H2'	2.29	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:4A:13:LYS:HG2	13:4A:14:ARG:H	1.80	0.47
25:14:2655:G:N2	25:14:2665:A:OP2	2.47	0.47
25:14:108:U:H2'	25:14:109:G:H8	1.80	0.47
28:29:76:ARG:CG	28:29:195:LEU:HD22	2.45	0.47
54:1G:998(A):C:H2'	54:1G:999:U:C6	2.49	0.47
1:13:757:U:H2'	1:13:758:G:O4'	2.15	0.47
54:1G:223:U:H2'	54:1G:224:C:C6	2.50	0.47
25:14:2720:U:N3	25:14:2873:A:C2	2.83	0.47
8:72:51:VAL:HG23	8:72:52:ASP:N	2.30	0.47
44:G8:29:GLU:HB3	44:G8:38:ILE:CG2	2.46	0.47
1:13:564:C:C6	17:8I:31:LEU:HD11	2.49	0.47
25:1H:30:G:H2'	25:1H:31:C:C6	2.50	0.47
25:14:2467:C:H4'	36:45:123:HIS:CD2	2.50	0.47
36:88:2:LEU:HD23	36:88:69:PHE:CD1	2.50	0.47
3:2E:57:ILE:HG12	3:2E:66:VAL:HG22	1.97	0.47
25:14:305:U:H2'	25:14:306:U:C6	2.50	0.47
4:3E:62:GLN:O	4:3E:66:ARG:HB2	2.15	0.47
30:49:114:ILE:HD13	30:49:140:ILE:HG21	1.96	0.47
25:14:2364:C:H2'	25:14:2365:G:O4'	2.14	0.47
14:5A:15:LYS:HZ3	14:5A:15:LYS:HA	1.79	0.47
48:K8:5:GLU:HG3	48:K8:5:GLU:H	1.36	0.47
35:78:82:GLY:HA2	35:78:113:LYS:O	2.14	0.47
9:8E:27:THR:O	9:8E:63:ILE:N	2.45	0.47
25:14:722:A:H5'	25:14:723:G:OP2	2.15	0.47
54:1G:542:G:OP1	4:32:10:ARG:NH2	2.48	0.46
46:E5:18:ALA:CB	46:E5:20:ARG:HE	2.26	0.46
9:82:112:LYS:HD2	9:82:113:LYS:N	2.30	0.46
35:35:101:VAL:HG23	35:35:107:LYS:N	2.30	0.46
44:C5:100:ALA:O	44:C5:102:CYS:SG	2.72	0.46
25:1H:581:C:O5'	25:1H:581:C:H6	1.98	0.46
7:62:116:ALA:O	7:62:120:ILE:HG12	2.15	0.46
25:1H:2095:C:H2'	25:1H:2096:U:O4'	2.15	0.46
2:1E:165:VAL:HG23	2:1E:166:ASP:H	1.79	0.46
54:1G:1386:G:C2	54:1G:1387:G:C8	3.02	0.46
40:85:100:VAL:HG12	40:85:101:ARG:HD3	1.96	0.46
40:85:102:GLU:HB3	40:85:105:VAL:HG21	1.96	0.46
41:95:70:ILE:O	41:95:72:VAL:N	2.48	0.46
26:1J:103:U:O2'	45:D5:29:TYR:OH	2.21	0.46
3:22:156:ARG:HB3	3:22:160:ALA:O	2.15	0.46
52:L5:34:ARG:NH1	52:L5:39:ARG:HG3	2.31	0.46
32:69:93:THR:HG22	32:69:119:PRO:HG3	1.97	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:31:65:TRP:CZ3	29:31:72:ARG:HB3	2.51	0.46
25:14:1952:A:C5	34:25:22:ILE:HD11	2.50	0.46
23:2K:20:G:C6	23:2K:58:A:C2	3.03	0.46
29:39:122:LYS:HB3	29:39:191:ARG:HB2	1.97	0.46
29:39:41:LEU:HD21	29:39:184:TYR:CD1	2.50	0.46
1:13:1333:A:H3'	1:13:1334:G:H8	1.80	0.46
25:14:2360:A:H2'	25:14:2361:A:O4'	2.15	0.46
1:13:919:A:O2'	1:13:920:U:H5'	2.15	0.46
25:1H:99:U:H1'	25:1H:102:G:C5	2.50	0.46
54:1G:719:C:C5	54:1G:720:C:C4	3.03	0.46
56:2L:52:C:H2'	56:2L:53:G:C8	2.50	0.46
54:1G:641:U:O3'	54:1G:642:A:H8	1.98	0.46
25:1H:2019:A:N7	51:N8:9:LYS:HE3	2.31	0.46
33:15:45:ASN:OD1	33:15:46:VAL:HG23	2.15	0.46
25:1H:18:C:H4'	40:C8:23:GLY:O	2.15	0.46
54:1G:1086:U:H3	54:1G:1099:G:H22	1.63	0.46
25:1H:657:U:H2'	25:1H:658:C:C6	2.49	0.46
38:A8:70:GLY:O	38:A8:105:ALA:HA	2.15	0.46
25:1H:1053:C:N3	25:1H:1107:G:N2	2.63	0.46
28:29:32:PRO:HG3	28:29:90:THR:HG22	1.97	0.46
26:1J:13:A:O2'	26:1J:15:A:O5'	2.33	0.46
27:19:43:ARG:HD2	27:19:43:ARG:N	2.30	0.46
2:1E:91:PRO:HG3	2:1E:155:LEU:HB2	1.96	0.46
28:29:111:ARG:HA	37:55:2:ARG:NH1	2.20	0.46
25:1H:2117:A:H2'	25:1H:2118:U:C6	2.51	0.46
25:1H:1141:U:H6	33:58:63:THR:HG1	1.63	0.46
47:F5:91:LYS:HZ3	47:F5:91:LYS:HA	1.80	0.46
29:39:102:PRO:HB2	29:39:105:VAL:HG23	1.96	0.46
45:D5:10:ARG:HH21	45:D5:26:GLY:H	1.62	0.46
25:1H:331:A:H1'	60:1H:3881:HOH:O	2.15	0.46
19:AI:51:VAL:O	19:AI:57:HIS:HA	2.16	0.46
1:13:735:C:H2'	1:13:736:C:C6	2.48	0.46
1:13:486:U:H2'	1:13:487:A:H8	1.79	0.46
25:14:2647:U:O2	25:14:2673:G:N2	2.39	0.46
19:AA:66:MET:N	19:AA:67:VAL:HB	2.30	0.46
29:39:125:LEU:HD12	29:39:125:LEU:O	2.15	0.46
8:7E:49:GLU:HG2	8:7E:62:TYR:CE1	2.47	0.46
44:C5:6:HIS:ND1	44:C5:7:VAL:HG13	2.30	0.46
2:12:235:SER:HG	2:12:236:TYR:HD1	1.63	0.46
56:2L:56:PSU:N3	56:2L:59:A:OP2	2.34	0.46
25:14:1784:A:H5"	60:14:3485:HOH:O	2.15	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:14:1317:A:H2'	25:14:1318:C:C6	2.49	0.46
25:14:2068:U:N3	25:14:2430:A:H2	2.12	0.46
36:45:34:LEU:HD11	36:45:129:THR:HB	1.97	0.46
1:13:321:A:C2	1:13:333:G:C2	3.04	0.46
1:13:280:C:H4'	1:13:281:G:OP2	2.16	0.46
29:39:21:ALA:HB3	29:39:23:ASP:OD2	2.15	0.46
54:1G:281:G:H8	54:1G:281:G:OP2	1.98	0.46
28:21:84:PHE:CZ	28:21:86:PRO:HB3	2.51	0.46
1:13:187:C:O2	1:13:191(A):G:C2	2.68	0.46
25:14:2079:U:H2'	25:14:2080:G:O4'	2.15	0.46
1:13:131:C:H2'	1:13:132:C:C6	2.51	0.46
25:14:1100:C:H2'	25:14:1101:U:C6	2.50	0.46
54:1G:868:C:H2'	54:1G:869:G:O4'	2.14	0.46
2:12:180:LEU:HB2	2:12:182:ILE:CD1	2.45	0.46
27:11:217:ARG:HH11	27:11:217:ARG:HG2	1.80	0.46
4:3E:11:LEU:HD13	4:3E:66:ARG:HG3	1.98	0.46
13:4I:102:ARG:HH21	13:4I:105:THR:CG2	2.29	0.46
3:2E:35:GLU:OE1	3:2E:95:THR:HG23	2.15	0.46
25:1H:532:A:N7	25:1H:2021:C:O2'	2.36	0.46
30:41:34:LEU:HD13	30:41:99:MET:HE1	1.97	0.46
25:14:429:A:H2'	25:14:430:G:C8	2.50	0.46
36:88:116:GLU:OE2	36:88:119:ARG:NH2	2.47	0.46
54:1G:983:A:N3	54:1G:983:A:H3'	2.30	0.46
25:1H:1567:A:H5"	27:11:58:HIS:CG	2.50	0.46
25:14:2784:C:H2'	25:14:2785:C:C6	2.51	0.46
25:14:95:G:O2'	48:G5:48:HIS:HB3	2.15	0.46
1:13:1133:G:H22	1:13:1141:C:N4	2.14	0.46
44:G8:97:ARG:HB2	44:G8:99:CYS:SG	2.56	0.46
25:1H:1174:A:H5"	25:1H:1175:U:OP2	2.15	0.46
40:C8:95:LEU:HD22	41:D8:4:ILE:CD1	2.45	0.46
1:13:874:G:C4	1:13:875:C:C5	3.03	0.46
45:D5:26:GLY:HA2	45:D5:86:VAL:H	1.80	0.46
19:AI:32:LYS:HG2	19:AI:50:ALA:HB3	1.96	0.46
25:1H:2001:A:OP1	37:98:9:LYS:NZ	2.49	0.46
3:22:50:ALA:HB2	3:22:83:ARG:NH2	2.30	0.46
25:1H:2303:G:C2'	25:1H:2304:G:H5'	2.44	0.46
42:A5:62:HIS:HB2	42:A5:64:MET:HG3	1.96	0.46
14:5I:6:LEU:HA	14:5I:6:LEU:HD23	1.76	0.46
46:I8:38:VAL:CG1	46:I8:40:GLN:HG2	2.42	0.46
35:35:79:ARG:O	35:35:111:ARG:HB2	2.16	0.46
39:B8:26:ASP:HB2	39:B8:91:ARG:HA	1.98	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:6E:111:ARG:NH1	7:6E:113:GLU:OE2	2.49	0.46
50:M8:23:GLU:OE1	50:M8:24:THR:N	2.48	0.46
1:13:11:G:C6	1:13:12:U:C4	3.03	0.46
54:1G:1111:A:O5'	54:1G:1111:A:H8	1.99	0.46
1:13:971:G:N2	1:13:1363:A:OP2	2.34	0.46
1:13:1260:C:H3'	1:13:1260:C:C6	2.49	0.46
25:14:2065:C:H2'	25:14:2066:C:C6	2.50	0.46
54:1G:854:G:C2	54:1G:855:G:C8	3.03	0.46
55:1L:47:U:H2'	55:1L:48:C:H5	1.80	0.46
3:22:42:LEU:HD12	3:22:42:LEU:HA	1.76	0.46
1:13:190:G:HO2'	1:13:191(A):G:P	2.39	0.46
25:14:189:G:H1	25:14:205:G:HO2'	1.62	0.46
25:1H:1693:U:H1'	27:11:14:ARG:NH2	2.31	0.46
5:42:34:VAL:HB	5:42:62:ALA:HB1	1.97	0.46
54:1G:881:G:OP2	12:3A:9:GLN:NE2	2.48	0.46
13:4I:102:ARG:HH21	13:4I:105:THR:HG21	1.80	0.46
25:1H:226:G:H21	25:1H:228:A:H2	1.64	0.46
50:M8:43:TYR:HA	50:M8:46:GLN:HG3	1.98	0.46
1:13:654:G:C2	1:13:753:A:C4	3.03	0.46
4:3E:22:LYS:HB2	4:3E:26:CYS:SG	2.55	0.46
25:14:2408:U:H2'	25:14:2409:G:C8	2.51	0.46
4:3E:31:CYS:HB3	4:3E:33:MET:HB2	1.98	0.46
1:13:1489:G:H2'	1:13:1490:C:O4'	2.15	0.46
45:H8:40:ASP:OD2	45:H8:43:GLU:HB2	2.15	0.46
29:39:177:ALA:HB1	29:39:178:PRO:HD2	1.96	0.46
25:14:1788:C:C2	25:14:1789:A:C8	3.03	0.46
42:A5:29:LEU:HD21	42:A5:33:ARG:HH21	1.80	0.46
54:1G:1137:C:H4'	54:1G:1138:G:C4	2.49	0.46
5:4E:100:VAL:HG22	5:4E:118:ILE:HG22	1.96	0.46
2:12:102:LEU:HD12	2:12:102:LEU:H	1.80	0.46
50:I5:9:LEU:H	50:I5:9:LEU:HD22	1.79	0.46
25:1H:1983:C:O2'	25:1H:1984:G:H5'	2.15	0.46
26:1J:16:G:H2'	26:1J:17:C:H6	1.78	0.46
54:1G:457:C:H2'	54:1G:458:C:C6	2.50	0.46
16:7I:54:GLU:O	16:7I:57:ARG:HB2	2.15	0.46
26:16:112:G:H2'	26:16:113:C:C6	2.50	0.46
54:1G:452:A:O2'	54:1G:453:A:O4'	2.16	0.46
25:1H:1209:G:H21	25:1H:1210:A:H62	1.62	0.46
45:H8:163:LEU:HB3	45:H8:165:VAL:N	2.27	0.46
25:14:1678:G:N2	25:14:1989:G:N2	2.61	0.46
31:59:6:ARG:H	31:59:6:ARG:HD3	1.81	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:1H:1728:G:H5'	25:1H:1729:A:OP2	2.15	0.46
25:1H:1731:G:H8	25:1H:1731:G:OP2	1.99	0.46
25:1H:1061:U:H3'	25:1H:1062:G:C5'	2.45	0.46
54:1G:1288:A:N3	54:1G:1352:C:O2'	2.42	0.46
1:13:377:G:H5'	16:7I:5:ARG:HH12	1.81	0.46
26:16:42:C:O2	30:41:92:VAL:HA	2.16	0.46
29:31:119:ARG:HB3	29:31:119:ARG:CZ	2.45	0.46
54:1G:974:A:OP2	14:5A:41:ARG:NH1	2.48	0.46
30:41:46:ALA:HB1	30:41:49:ASP:O	2.15	0.46
2:12:54:THR:O	2:12:57:PHE:HB3	2.16	0.46
25:14:528:A:H2	25:14:2043:C:C5'	2.28	0.46
25:14:5:A:H2'	25:14:6:A:H8	1.76	0.46
25:1H:2135:A:N6	25:1H:2156:G:O2'	2.48	0.46
39:75:11:GLU:O	39:75:14:TYR:N	2.42	0.46
1:13:142:G:H1	1:13:221:C:H42	1.62	0.46
22:1K:22:A:HO2'	22:1K:23:A:H8	1.64	0.46
54:1G:42:G:H2'	54:1G:43:C:O4'	2.16	0.46
20:BI:26:ASN:O	20:BI:30:LYS:HB2	2.16	0.46
25:1H:1635:G:H2'	25:1H:1636:C:H6	1.81	0.46
53:Q8:60:LEU:CD2	53:Q8:60:LEU:N	2.79	0.46
25:14:363(F):A:H1'	25:14:364:C:H5	1.81	0.46
25:1H:340:A:H2'	25:1H:341:G:O4'	2.15	0.46
25:1H:1797:C:O2'	27:11:259:THR:CG2	2.63	0.46
27:11:18:VAL:HG12	27:11:19:ALA:N	2.31	0.46
25:1H:2098:U:H3	25:1H:2191:G:H1	1.63	0.46
55:1L:84:C:H2'	55:1L:85:A:C8	2.50	0.46
25:14:844:C:N4	25:14:845:G:C2	2.83	0.46
8:7E:81:HIS:HB2	8:7E:138:TRP:CE3	2.50	0.46
10:1A:25:GLU:O	10:1A:29:ARG:HB2	2.14	0.46
54:1G:575:G:O2'	60:1G:1718:HOH:O	2.07	0.46
25:14:2257:U:H2'	25:14:2258:C:C6	2.51	0.46
25:14:134:C:H2'	25:14:135:G:O4'	2.16	0.46
25:14:234:C:H2'	25:14:235:U:H6	1.79	0.46
29:39:136:THR:HG23	29:39:166:ALA:O	2.15	0.46
25:1H:2634:G:H5"	25:1H:2634:G:H8	1.80	0.46
29:39:137:LYS:HB3	29:39:137:LYS:HE2	1.77	0.46
9:8E:17:VAL:HG21	9:8E:80:GLY:HA3	1.96	0.46
1:13:38:G:C2	1:13:397:A:C2	3.04	0.46
24:4K:19[A]:A:N3	24:4K:19[A]:A:H2'	2.30	0.46
25:14:273(F):C:H3'	25:14:274:G:H5"	1.96	0.46
4:32:24:GLU:O	4:32:27:TYR:HB2	2.15	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:D5:144:LEU:HG	45:D5:174:VAL:HB	1.97	0.46
54:1G:1126:U:H2'	54:1G:1281:U:H5'	1.96	0.46
25:14:1782:C:H5"	60:14:3406:HOH:O	2.15	0.46
25:1H:832:G:H5'	35:78:45:LEU:HD11	1.96	0.46
1:13:963:G:C2	10:1I:55:LYS:NZ	2.80	0.46
35:35:97:PRO:HD3	35:35:126:VAL:O	2.15	0.46
53:M5:50:LEU:O	53:M5:51:ALA:HB2	2.15	0.46
31:51:25:LYS:HG2	31:51:34:GLU:HG2	1.97	0.46
55:3L:18:G:H4'	55:3L:19:C:O5'	2.16	0.46
55:3L:63:U:H3	55:3L:67:A:N6	2.13	0.46
1:13:955:U:H1'	1:13:1227:A:H61	1.79	0.46
44:C5:104:GLY:HA2	44:C5:105:ALA:HA	1.68	0.46
25:1H:149:A:C6	25:1H:150:C:C4	3.04	0.46
25:14:2153:G:O2'	25:14:2154:G:O4'	2.28	0.46
4:3E:30:LYS:C	4:3E:32:ALA:N	2.69	0.46
54:1G:1227:A:H8	54:1G:1227:A:H3'	1.81	0.46
2:12:4:GLU:O	2:12:221:LEU:HD11	2.15	0.46
7:62:115:ARG:O	7:62:119:ARG:HG3	2.16	0.46
54:1G:664:G:P	18:9A:64:ARG:HH21	2.37	0.46
55:1L:31:G:H1	55:1L:41:C:N4	2.12	0.46
10:1A:99:LYS:HD3	10:1A:100:THR:N	2.30	0.46
31:59:10:PRO:HD2	31:59:50:VAL:O	2.15	0.46
2:12:70:PHE:HB2	2:12:92:TYR:HB2	1.97	0.46
25:1H:2808:U:H2'	25:1H:2809:A:H8	1.80	0.46
27:11:59:LYS:HD2	27:11:59:LYS:HA	1.45	0.46
25:14:1069:A:H4'	25:14:1070:A:H5"	1.98	0.46
13:4A:57:ARG:HD3	13:4A:61:GLU:OE2	2.16	0.46
25:14:363(C):G:H2'	25:14:363(D):G:H8	1.80	0.46
30:49:67:LYS:H	50:I5:6:HIS:CE1	2.33	0.46
54:1G:485:G:H1'	54:1G:486:U:H5	1.79	0.46
28:21:52:LEU:O	28:21:75:VAL:HG23	2.16	0.46
21:1F:5:ASP:O	21:1F:11:GLY:HA3	2.15	0.46
47:F5:4:VAL:HG11	47:F5:11:ARG:HH12	1.81	0.46
25:14:2210:G:H3'	25:14:2211:G:N7	2.30	0.46
25:14:2051:A:H5'	25:14:2578:G:O4'	2.15	0.46
25:1H:1980:G:O2'	25:1H:1982:C:OP2	2.27	0.46
54:1G:12:U:H4'	54:1G:526:C:O2'	2.16	0.46
1:13:1423:G:H2'	1:13:1424:C:O4'	2.15	0.46
31:51:32:GLU:O	31:51:33:LEU:HD23	2.14	0.46
44:C5:67:LEU:HD12	44:C5:67:LEU:HA	1.67	0.46
25:1H:1011:G:P	40:C8:77:SER:HG	2.38	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
56:2L:73:A:C6	56:2L:74:A:C6	3.04	0.46
25:14:2695:C:H2'	25:14:2696:U:H6	1.79	0.46
25:14:663:G:H2'	25:14:664:C:O4'	2.15	0.46
25:1H:2645:G:N2	25:1H:2767:C:OP2	2.49	0.46
32:69:51:ILE:HG22	32:69:52:ARG:N	2.31	0.46
1:13:1064:G:H4'	1:13:1065:U:OP1	2.14	0.46
54:1G:1404:C:H2'	54:1G:1405:G:C8	2.50	0.46
42:E8:70:TYR:CD1	42:E8:70:TYR:C	2.89	0.46
6:5E:61:LEU:HD23	6:5E:63:TYR:HE1	1.80	0.46
2:12:189:ASP:OD2	2:12:191:ASP:HB2	2.15	0.46
25:14:441:U:H2'	25:14:442:G:C8	2.50	0.46
25:1H:492:A:H2'	25:1H:493:G:O4'	2.15	0.46
25:14:850:C:O3'	49:H5:49:LYS:HE2	2.15	0.46
19:AA:25:LYS:HG3	19:AA:26:GLY:H	1.80	0.46
9:82:27:THR:HG1	9:82:28:VAL:H	1.64	0.46
25:1H:879:G:H8	25:1H:879:G:OP2	1.97	0.46
1:13:605:U:H2'	1:13:606:G:O4'	2.15	0.46
25:1H:2789:C:H1'	25:1H:2892:A:H2	1.80	0.46
55:3L:8:U:H5"	55:3L:9:U:OP2	2.15	0.46
45:D5:59:LEU:HB3	45:D5:60:GLU:H	1.42	0.46
1:13:955:U:H1'	1:13:1227:A:N6	2.29	0.46
3:22:83:ARG:HG3	3:22:84:ILE:N	2.30	0.46
44:C5:75:ILE:HA	44:C5:75:ILE:HD12	1.81	0.46
25:1H:638:G:N2	25:1H:651:G:H1'	2.31	0.46
5:42:19:MET:HE2	5:42:24:ARG:HB3	1.98	0.46
54:1G:438:G:N1	54:1G:495:A:OP2	2.47	0.46
5:4E:80:ILE:HG12	5:4E:81:GLU:N	2.31	0.46
25:14:2438:U:O3'	25:14:2439:A:H3'	2.16	0.46
25:14:2600:A:H2'	25:14:2601:C:C6	2.50	0.46
25:14:2129:C:H2'	25:14:2130:U:H5'	1.98	0.46
25:1H:2287:A:N1	25:1H:2346:A:H2	2.13	0.46
3:22:138:VAL:HG23	3:22:151:VAL:HG23	1.96	0.46
7:62:94:ARG:O	7:62:97:GLN:HB3	2.16	0.46
46:E5:25:ARG:HD2	46:E5:29:GLN:NE2	2.31	0.46
3:22:164:ARG:NH1	3:22:165:THR:O	2.49	0.46
25:14:2693:A:H2'	25:14:2694:G:C8	2.48	0.46
6:52:14:LEU:O	6:52:14:LEU:HD23	2.15	0.46
31:51:152:ARG:HA	31:51:152:ARG:HD3	1.58	0.46
54:1G:392:G:OP1	16:7A:8:ARG:NH2	2.48	0.46
25:14:2283:C:C2	25:14:2389:G:C2	3.04	0.46
37:98:24:GLN:O	37:98:28:LEU:N	2.47	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:14:1542:G:N7	25:14:1543:A:C6	2.84	0.46
20:BI:97:ALA:O	20:BI:99:LEU:HD13	2.16	0.46
28:29:135:HIS:CE1	60:29:402:HOH:O	2.68	0.46
42:A5:27:LYS:HB2	42:A5:32:ALA:HB2	1.97	0.46
16:7I:71:ARG:HE	16:7I:71:ARG:HB2	1.55	0.46
45:D5:44:PHE:CE2	45:D5:48:PHE:HB2	2.50	0.46
25:14:1992:G:O6	60:14:3532:HOH:O	2.20	0.46
36:45:20:ALA:HA	36:45:99:PRO:HG2	1.98	0.46
54:1G:575:G:H4'	54:1G:575:G:OP1	2.15	0.46
25:1H:250:G:H2'	25:1H:251:A:C8	2.51	0.46
13:4A:40:ASN:O	13:4A:43:THR:OG1	2.32	0.46
49:H5:5:LYS:HA	49:H5:35:ARG:O	2.15	0.46
40:85:10:ARG:HG2	40:85:14:HIS:CD2	2.50	0.46
25:1H:1690:A:H3'	25:1H:1691:C:H6	1.81	0.46
5:42:33:VAL:HG21	5:42:109:ILE:HG12	1.96	0.46
1:13:779:C:H2'	1:13:780:A:O4'	2.16	0.46
1:13:1249:C:O2'	9:8E:73:GLN:OE1	2.31	0.46
28:21:9:VAL:HB	28:21:25:VAL:HG22	1.97	0.46
25:14:1399:C:O2'	25:14:1400:G:H5'	2.16	0.46
30:41:151:ALA:HB3	30:41:153:ARG:NH1	2.31	0.46
25:1H:600:G:N2	25:1H:605:C:O3'	2.49	0.46
17:8I:56:VAL:HB	17:8I:78:GLU:HB3	1.97	0.46
25:1H:1781:C:H3'	60:1H:3523:HOH:O	2.15	0.46
25:1H:2170:A:H3'	25:1H:2171:A:H8	1.80	0.46
1:13:506:G:H2'	1:13:507:C:O4'	2.16	0.46
1:13:1305:G:N2	1:13:1331:G:C4	2.84	0.46
6:5E:81:ILE:O	6:5E:82:ARG:HG2	2.16	0.46
2:12:100:GLY:O	2:12:104:ASN:N	2.47	0.46
9:82:70:LYS:O	9:82:74:ILE:HG13	2.16	0.46
8:72:124:ALA:O	8:72:128:GLY:N	2.48	0.46
1:13:332:G:OP2	20:BI:10:LEU:HB3	2.16	0.46
25:1H:2688:U:H1'	25:1H:2721:A:N6	2.30	0.46
2:1E:121:LEU:HA	2:1E:124:SER:OG	2.16	0.46
45:D5:77:ASP:N	45:D5:82:ARG:O	2.40	0.46
13:4I:82:MET:C	13:4I:84:ILE:H	2.19	0.46
15:6I:16:ALA:CB	15:6I:21:ASP:HB3	2.46	0.46
25:1H:1816:G:H8	27:11:62:TYR:CZ	2.34	0.46
25:14:1542:G:N7	25:14:1543:A:C5	2.84	0.46
29:31:175:THR:C	29:31:176:LEU:HD12	2.36	0.46
54:1G:186(A):C:H5"	20:BA:86:ARG:HH22	1.81	0.46
54:1G:1429:C:H2'	54:1G:1430:C:C6	2.50	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:1G:1208:C:H2'	54:1G:1209:C:C6	2.50	0.46
25:1H:2529:G:H5"	25:1H:2530:A:H5"	1.97	0.46
27:11:6:PHE:CE1	27:11:18:VAL:HG23	2.50	0.46
25:14:708:C:H42	25:14:723:G:H1	1.64	0.46
25:14:875:G:H4'	45:D5:170:THR:HG21	1.98	0.46
17:8I:56:VAL:CG2	17:8I:81:ARG:HG3	2.46	0.46
25:1H:1712:C:H2'	25:1H:1716:U:H6	1.81	0.46
27:11:44:ASN:O	27:11:46:GLN:O	2.32	0.46
44:C5:50:ARG:HB3	44:C5:53:PRO:HG3	1.96	0.46
25:1H:1550:C:O2'	25:1H:1551:C:H5'	2.16	0.46
1:13:201:C:H42	1:13:216:G:H1	1.64	0.46
4:32:104:VAL:O	4:32:108:LEU:N	2.49	0.46
25:14:1120:G:H2'	25:14:1121:C:O4'	2.16	0.46
26:16:78:A:H2'	26:16:79:C:O4'	2.16	0.46
22:3K:10:C:H2'	22:3K:11:C:C6	2.51	0.46
30:41:152:LEU:HD23	30:41:152:LEU:H	1.79	0.46
25:1H:2341:G:H2'	25:1H:2342:C:C6	2.51	0.46
2:1E:75:LYS:HE3	2:1E:75:LYS:HB3	1.71	0.46
25:1H:929:G:H8	25:1H:929:G:O5'	1.99	0.46
25:1H:1999:C:H5"	25:1H:2723:C:O2'	2.16	0.46
35:78:112:LEU:O	35:78:128:HIS:HB2	2.16	0.46
54:1G:1240:U:H4'	54:1G:1241:G:OP2	2.15	0.46
28:29:63:LEU:HD23	28:29:63:LEU:H	1.80	0.46
26:16:26:A:H2'	26:16:27:C:C6	2.51	0.46
14:5I:24:CYS:CB	14:5I:40:CYS:HB3	2.46	0.46
50:M8:37:SER:HA	50:M8:41:PRO:HD2	1.98	0.46
54:1G:529:G:HO2'	54:1G:533:A:N6	2.14	0.46
35:35:18:ARG:O	35:35:19:VAL:HG23	2.16	0.46
25:1H:71:A:OP1	25:1H:72:U:H2'	2.16	0.46
25:14:1225:C:H4'	41:95:85:LYS:HG2	1.96	0.46
27:11:108:PRO:HG3	27:11:143:HIS:NE2	2.31	0.46
25:14:1001:A:H2'	25:14:1002:G:O4'	2.14	0.46
5:42:145:LYS:O	5:42:149:GLU:HG2	2.16	0.46
25:14:1024:G:H8	25:14:1024:G:O5'	1.98	0.46
25:1H:1055:G:H1'	25:1H:1085:A:H2	1.79	0.46
54:1G:1307:U:H2'	54:1G:1308:U:C6	2.51	0.46
54:1G:373:A:C2	54:1G:374:A:C8	3.03	0.46
25:1H:950:G:C5	25:1H:951:C:C4	3.04	0.46
50:M8:12:ALA:O	50:M8:24:THR:HG21	2.16	0.46
33:15:61:ARG:HE	33:15:61:ARG:HA	1.81	0.46
25:14:602:G:OP2	25:14:602:G:H8	1.99	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:14:469:G:C6	52:L5:39:ARG:NH1	2.84	0.46
29:31:39:TRP:CZ3	29:31:106:ARG:HD2	2.50	0.46
30:49:166:ASP:N	30:49:166:ASP:OD1	2.33	0.46
54:1G:57:G:C6	54:1G:58:C:C4	3.04	0.46
25:14:1336:A:H2'	25:14:1337:G:C8	2.51	0.46
25:14:534:U:OP1	40:85:24:TYR:OH	2.23	0.46
55:1L:60:A:H2	55:1L:73:U:O2	1.98	0.46
20:BA:89:ARG:NH1	20:BA:105:SER:O	2.44	0.46
35:35:36:LYS:HB3	35:35:37:GLY:H	1.33	0.46
12:3A:109:GLY:HA3	12:3A:121:GLY:O	2.15	0.46
25:14:548:A:C4	25:14:549:G:H1'	2.51	0.46
35:78:122:PRO:HA	35:78:142:GLY:CA	2.46	0.46
39:B8:74:ARG:HD3	39:B8:76:PHE:CZ	2.51	0.46
54:1G:523:A:H61	12:3A:53:ARG:NH1	2.14	0.46
35:35:144:GLU:HA	35:35:145:PRO:HD3	1.74	0.46
25:1H:270(E):G:C6	25:1H:270(F):U:C4	3.04	0.46
25:1H:2275:C:H5'	25:1H:2275:C:H6	1.79	0.46
25:14:1425:G:N2	25:14:1573:G:N7	2.63	0.46
25:1H:2801:A:C8	25:1H:2802:G:H1'	2.51	0.46
25:14:2197:U:H1'	25:14:2198:A:C8	2.51	0.46
1:13:540:G:H2'	1:13:541:G:O4'	2.16	0.46
18:9I:26:LEU:HD11	18:9I:29:PHE:CG	2.51	0.46
37:55:15:SER:CB	60:55:201:HOH:O	2.63	0.46
25:1H:606:U:H4'	25:1H:658:C:H4'	1.98	0.46
9:8E:46:ALA:HB3	9:8E:47:LEU:HD13	1.97	0.46
25:14:2461:C:H2'	25:14:2462:U:C6	2.51	0.46
25:1H:552:G:H2'	25:1H:553:U:O4'	2.16	0.46
1:13:1325:C:O3'	21:1F:17:THR:HG21	2.16	0.46
12:3I:91:LYS:HG3	12:3I:91:LYS:O	2.15	0.46
53:Q8:51:ALA:O	53:Q8:54:GLU:O	2.34	0.46
25:14:2275:C:H6	25:14:2275:C:H5'	1.81	0.46
20:BI:14:LYS:HA	20:BI:17:ARG:HB3	1.97	0.46
24:4K:19[B]:A:H5'	24:4K:19[B]:A:N3	2.31	0.46
7:6E:15:ASP:OD2	7:6E:18:TYR:N	2.45	0.46
4:32:31:CYS:C	4:32:33:MET:H	2.18	0.46
25:1H:2054:A:OP1	25:1H:2055:C:O2'	2.29	0.46
25:1H:2048:G:C2	25:1H:2621:A:C2	3.04	0.46
55:3L:13:G:O2'	55:3L:23:A:N6	2.49	0.46
27:11:182:LEU:HA	27:11:182:LEU:HD23	1.66	0.46
54:1G:849:C:H2'	54:1G:850:U:O4'	2.16	0.46
25:14:1485:G:H2'	25:14:1486:A:C8	2.51	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:1K:52:G:H2'	22:1K:53:A:C8	2.51	0.46
23:2K:62:C:O2'	23:2K:63:C:H5'	2.16	0.46
25:14:2340:G:H2'	25:14:2341:G:H8	1.81	0.46
1:13:1051:C:O2'	1:13:1052:U:H5'	2.16	0.46
27:11:10:THR:OG1	27:11:13:ARG:HB2	2.15	0.46
33:58:111:PRO:HA	33:58:114:ARG:NH1	2.31	0.46
34:25:35:VAL:HA	34:25:62:VAL:O	2.16	0.46
27:11:231:HIS:CD2	27:11:249:PRO:HG3	2.50	0.46
25:1H:2712:U:O2'	25:1H:2713:A:H5'	2.16	0.46
25:14:290:G:H2'	25:14:291:C:O4'	2.15	0.46
28:21:92:THR:O	28:21:95:ILE:HG12	2.16	0.46
25:14:1337:G:H2'	25:14:1338:G:H8	1.80	0.46
26:1J:22:U:H5'	26:1J:23:G:OP2	2.15	0.46
1:13:1226:C:OP1	19:AI:78:ARG:NH1	2.49	0.46
25:14:1309:G:H4'	52:L5:7:PRO:HB2	1.98	0.46
28:21:114:ALA:O	28:21:157:ALA:HB1	2.16	0.46
25:14:1651:G:H4'	37:55:39:PRO:HG2	1.97	0.46
54:1G:1069:C:H42	54:1G:1106:G:H1	1.64	0.46
25:14:1826:G:H2'	25:14:1827:C:C6	2.50	0.46
25:14:1572:A:H2'	25:14:1573:G:O4'	2.16	0.46
1:13:243:A:H4'	1:13:244:U:H3'	1.98	0.46
25:1H:353:G:H2'	25:1H:354:G:H8	1.81	0.46
25:14:82:G:H5'	25:14:296:C:H5"	1.98	0.46
31:59:41:MET:HB3	31:59:42:ARG:H	1.61	0.46
25:14:1494:A:H2'	25:14:1495:A:C8	2.51	0.46
54:1G:105:G:C6	54:1G:106:C:C4	3.04	0.46
25:14:1412:A:H2'	25:14:1413:G:C8	2.51	0.46
54:1G:1498:U:H6	54:1G:1498:U:O5'	1.99	0.46
25:1H:1860:G:O5'	25:1H:1860:G:H8	1.98	0.46
32:61:76:THR:HG23	32:61:139:GLN:O	2.16	0.46
25:1H:232:G:N2	25:1H:420:C:OP1	2.38	0.46
25:1H:516:C:OP1	51:N8:13:LYS:NZ	2.42	0.46
54:1G:442:C:H2'	54:1G:443:C:C6	2.51	0.46
31:51:8:PRO:HG2	31:51:69:ARG:NE	2.31	0.46
26:1J:94:C:H2'	26:1J:95:U:H6	1.79	0.46
15:6I:26:GLU:H	15:6I:26:GLU:HG2	1.40	0.46
1:13:1129:C:N4	1:13:1143:G:N3	2.62	0.46
16:7I:74:LEU:HD22	16:7I:79:VAL:HG21	1.98	0.46
35:78:63:PRO:O	53:Q8:13:ARG:HB2	2.16	0.46
38:65:74:ALA:HB1	38:65:107:GLU:HB3	1.98	0.46
25:14:1110:G:O2'	31:59:3:ARG:NH1	2.49	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:14:990:A:C8	25:14:990:A:H5'	2.43	0.46
2:12:6:THR:H	2:12:221:LEU:HD13	1.80	0.46
1:13:1263:C:O2'	1:13:1264:C:H5'	2.16	0.46
44:G8:20:TYR:CG	44:G8:42:VAL:O	2.69	0.46
25:14:1532:C:N4	25:14:1539:G:H1	2.13	0.46
25:1H:2712:U:H1'	25:1H:2712(A):A:C8	2.51	0.46
25:1H:811:U:H2'	35:78:21:ARG:HA	1.98	0.46
27:11:37:LEU:HB3	27:11:59:LYS:NZ	2.31	0.46
26:1J:88:C:H3'	26:1J:89:G:C8	2.50	0.46
54:1G:1077:G:N1	54:1G:1081:G:C6	2.84	0.46
54:1G:625:G:C4	54:1G:626:U:C5	3.04	0.46
25:14:2228:G:C5	25:14:2229:C:C4	3.04	0.46
1:13:902:G:H2'	1:13:903:G:H8	1.80	0.46
1:13:1060:C:HO2'	10:1I:56:HIS:CE1	2.31	0.46
45:D5:14:LYS:HA	45:D5:15:PRO:HD2	1.64	0.46
54:1G:1071:C:H42	54:1G:1104:G:H1	1.64	0.46
14:5I:50:LYS:HB2	14:5I:52:GLN:HG3	1.98	0.46
25:1H:16:G:H2'	25:1H:17:G:H8	1.81	0.46
18:9I:73:ALA:HB3	18:9I:79:LEU:HD12	1.98	0.46
1:13:484:G:O2'	1:13:485:G:OP2	2.30	0.46
8:7E:64:LYS:HG2	8:7E:79:VAL:HG21	1.98	0.46
29:39:114:VAL:HG21	29:39:202:PHE:CE1	2.51	0.46
1:13:1112:C:H1'	3:2E:179:ARG:HH11	1.81	0.46
25:1H:1689:A:H62	25:1H:1698:A:H2	1.63	0.46
25:1H:827:U:H5'	25:1H:828:U:O5'	2.16	0.46
28:21:33:VAL:HG12	28:21:89:ASP:HA	1.98	0.46
25:14:433:C:C4	25:14:434:U:O4	2.69	0.46
25:14:1672:C:H5"	25:14:1673:U:OP2	2.16	0.46
20:BA:45:GLN:HB2	20:BA:91:LEU:HD22	1.98	0.46
45:D5:52:SER:O	45:D5:54:HIS:N	2.48	0.46
27:19:96:HIS:CE1	27:19:102:LYS:HD3	2.50	0.46
25:1H:2666:C:H5"	25:1H:2667:C:OP2	2.15	0.46
25:14:19:C:H2'	25:14:20:C:H6	1.80	0.46
1:13:128:G:H4'	17:8I:3:LYS:HG2	1.98	0.46
25:1H:507:A:H5"	25:1H:508:G:H5'	1.97	0.46
1:13:145:G:H8	1:13:145:G:OP2	1.99	0.46
38:A8:89:ARG:O	38:A8:89:ARG:HG3	2.15	0.46
23:2K:45:A:H2'	23:2K:46:G:O4'	2.15	0.46
30:41:108:ASN:OD1	30:41:108:ASN:N	2.49	0.46
6:52:96:PRO:HB3	18:9A:30:ASP:CG	2.36	0.46
25:14:1639:U:O2'	25:14:1640:C:H5'	2.15	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:1H:2593:U:O4	60:1H:3562:HOH:O	2.21	0.45
9:82:111:ARG:O	9:82:113:LYS:HD3	2.16	0.45
53:M5:57:ARG:HA	53:M5:60:LEU:HD12	1.98	0.45
25:1H:1027:A:C2	25:1H:2488:A:H5'	2.51	0.45
25:1H:154:G:H2'	25:1H:155:C:C6	2.50	0.45
25:1H:2146:C:H4'	25:1H:2147:G:N7	2.32	0.45
1:13:1010:G:N2	1:13:1020:U:H1'	2.30	0.45
25:1H:1530:G:C5	25:1H:1531:C:C4	3.04	0.45
54:1G:630:G:N2	54:1G:631:G:H21	2.13	0.45
25:1H:1064:C:N4	25:1H:1070:A:OP1	2.49	0.45
22:3K:7:G:H5"	22:3K:8:4SU:H5	1.98	0.45
25:14:1962:C:O2'	25:14:1964:G:OP2	2.33	0.45
25:14:396:G:H8	25:14:396:G:O5'	1.99	0.45
19:AA:66:MET:HA	19:AA:67:VAL:O	2.15	0.45
44:C5:40:GLU:HA	44:C5:64:GLU:HG2	1.99	0.45
25:14:661:C:H2'	25:14:662:G:H8	1.81	0.45
5:4E:126:ARG:NH1	5:4E:126:ARG:HG3	2.30	0.45
27:11:102:LYS:C	27:11:103:ARG:HG2	2.36	0.45
10:1I:9:ARG:HG2	10:1I:69:ASN:OD1	2.16	0.45
25:1H:1110:G:O2'	25:1H:1111:A:C8	2.68	0.45
1:13:877:C:H5"	8:7E:88:LYS:HD3	1.98	0.45
36:88:66:ILE:O	36:88:67:ARG:HB2	2.16	0.45
25:14:1386:C:OP2	25:14:1396:U:H5	1.99	0.45
54:1G:1423:G:H5'	34:25:49:ARG:HH22	1.80	0.45
25:14:2306:C:H2'	25:14:2307:G:N2	2.31	0.45
25:14:1729:A:C2	25:14:1730:U:H5	2.34	0.45
25:1H:2562:U:H1'	34:68:23:ARG:HD3	1.98	0.45
25:14:320:A:H4'	25:14:322:A:C8	2.51	0.45
41:D8:34:GLU:HA	41:D8:57:VAL:O	2.15	0.45
3:22:39:ILE:HG21	3:22:57:ILE:HD11	1.97	0.45
25:1H:1378:A:O2'	25:1H:1380:G:N7	2.39	0.45
25:14:1204:A:N1	25:14:1241:A:H2	2.13	0.45
54:1G:328:C:H4'	54:1G:329:A:C5'	2.46	0.45
25:14:2754:U:H6	25:14:2754:U:H5"	1.81	0.45
2:1E:114:ARG:O	2:1E:118:LEU:HD12	2.17	0.45
25:14:138:G:N2	43:B5:44:GLU:OE2	2.25	0.45
54:1G:867:G:O2'	54:1G:868:C:H5'	2.16	0.45
1:13:501:C:H2'	1:13:502:G:H8	1.81	0.45
54:1G:1099:G:C6	54:1G:1100:C:C2	3.04	0.45
25:1H:1254:A:H5"	25:1H:1255:U:H5"	1.97	0.45
1:13:745:C:H2'	1:13:746:A:C8	2.51	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:9A:61:LYS:O	18:9A:65:ILE:HG23	2.16	0.45
25:1H:1655:A:H1'	28:21:113:PHE:CE1	2.51	0.45
9:82:26:VAL:HG22	9:82:61:ALA:N	2.31	0.45
1:13:837:G:N2	1:13:850:U:C2	2.84	0.45
29:39:118:ALA:O	29:39:121:GLY:N	2.42	0.45
25:14:675:A:N3	25:14:2443:C:O2'	2.43	0.45
4:3E:97:LEU:O	4:3E:100:ARG:HG3	2.15	0.45
6:5E:30:LEU:HB3	6:5E:35:ALA:HB3	1.98	0.45
3:2E:27:LYS:HE2	3:2E:27:LYS:HA	1.97	0.45
1:13:1266:G:N2	1:13:1270:C:N3	2.64	0.45
17:8A:45:HIS:HB3	17:8A:72:ARG:HG2	1.98	0.45
1:13:554:C:H2'	1:13:555:C:C6	2.51	0.45
25:14:2056:G:C2	25:14:2057:A:C8	3.04	0.45
28:21:77:ILE:H	28:21:79:ARG:NH1	2.14	0.45
25:1H:654(N):G:H2'	25:1H:654(O):G:C8	2.51	0.45
25:1H:2168:G:H1	25:1H:2170:A:N6	2.15	0.45
5:42:144:THR:HG22	5:42:147:ASP:OD2	2.17	0.45
25:14:71:A:H2	43:B5:31:HIS:HE2	1.62	0.45
9:8E:112:LYS:HD2	9:8E:113:LYS:N	2.31	0.45
45:D5:71:VAL:HB	45:D5:88:PHE:CE1	2.51	0.45
5:4E:80:ILE:HG12	5:4E:81:GLU:H	1.81	0.45
25:1H:2302:G:C6	25:1H:2315:G:C6	3.04	0.45
2:1E:219:VAL:O	2:1E:223:ILE:HG13	2.15	0.45
25:1H:637:A:H2'	35:78:117:GLU:OE1	2.16	0.45
25:14:662:G:H5'	35:35:15:ARG:CA	2.47	0.45
54:1G:200:G:H1	54:1G:217:C:N4	2.12	0.45
1:13:667:G:H4'	15:6I:51:HIS:ND1	2.31	0.45
54:1G:1054:C:HO2'	54:1G:1055:A:P	2.38	0.45
25:1H:1441:G:H2'	25:1H:1442:G:C8	2.48	0.45
1:13:222:U:H2'	1:13:223:U:H6	1.80	0.45
54:1G:1216:G:H5"	14:5A:5:ALA:CB	2.46	0.45
49:H5:6:VAL:HG12	49:H5:56:VAL:HB	1.98	0.45
33:58:121:LYS:HB3	33:58:123:TYR:CE1	2.52	0.45
35:35:125:VAL:HG13	35:35:144:GLU:HB3	1.98	0.45
1:13:936:C:H42	1:13:1379:G:H1	1.63	0.45
25:1H:754:C:H2'	25:1H:755:C:H6	1.81	0.45
2:12:175:ARG:O	2:12:179:LYS:HB2	2.16	0.45
25:14:2820:A:C6	37:55:4:LEU:HD11	2.51	0.45
44:G8:5:MET:HE1	44:G8:32:PRO:HB3	1.98	0.45
25:14:820:A:H2'	25:14:821:A:O4'	2.17	0.45
54:1G:376:G:H1	54:1G:387:U:H3	1.64	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:1J:29:A:H5"	26:1J:30:C:OP2	2.17	0.45
25:1H:2875:C:H2'	25:1H:2876:G:O4'	2.16	0.45
48:G5:27:GLU:O	48:G5:31:GLU:HG3	2.16	0.45
26:1J:55:U:O2'	30:49:29:TRP:HD1	2.00	0.45
25:14:2188:C:H2'	25:14:2189:U:O4'	2.16	0.45
48:G5:41:ILE:HG12	48:G5:41:ILE:H	1.52	0.45
27:19:77:ALA:O	27:19:116:GLN:HA	2.16	0.45
9:8E:29:ASN:OD1	9:8E:65:VAL:N	2.48	0.45
22:1K:37:A:N6	22:1K:38:MIA:H122	2.30	0.45
22:1K:38:MIA:H2'	22:1K:39:A:O4'	2.17	0.45
38:A8:36:TYR:N	38:A8:36:TYR:CD1	2.85	0.45
26:1J:56:G:H4'	26:1J:57:A:C8	2.52	0.45
53:M5:54:GLU:HG3	53:M5:57:ARG:CZ	2.46	0.45
32:61:6:LEU:O	32:61:7:GLU:HB3	2.15	0.45
40:C8:47:TYR:HD2	40:C8:48:ALA:N	2.15	0.45
31:51:83:TYR:O	31:51:84:SER:OG	2.32	0.45
41:D8:4:ILE:HB	41:D8:40:LEU:HB2	1.97	0.45
25:1H:330:A:H2	25:1H:1210:A:O2'	2.00	0.45
3:22:73:PRO:O	3:22:76:VAL:HG22	2.17	0.45
35:35:50:ARG:CB	35:35:50:ARG:HH11	2.26	0.45
53:Q8:43:GLN:HA	53:Q8:43:GLN:NE2	2.25	0.45
54:1G:8:A:C5	4:32:209:ARG:HA	2.51	0.45
56:2L:10:G:H8	56:2L:10:G:O5'	1.99	0.45
25:14:1364:G:N7	47:F5:2:SER:HB2	2.30	0.45
25:14:1011:G:C2	25:14:1013:C:C2	3.04	0.45
21:1B:9:ARG:CZ	21:1B:10:ARG:HH22	2.29	0.45
26:16:42:C:O2'	30:41:67:LYS:HE3	2.16	0.45
45:D5:4:ARG:CZ	45:D5:58:VAL:HG11	2.46	0.45
25:1H:1535:U:H2'	25:1H:1535:U:O2	2.15	0.45
27:11:17:THR:HG22	27:11:205:VAL:H	1.81	0.45
2:1E:51:LEU:O	2:1E:55:PHE:HB2	2.17	0.45
1:13:1032(A):G:H2'	1:13:1032(B):G:N7	2.31	0.45
46:E5:25:ARG:HA	46:E5:25:ARG:HD3	1.67	0.45
25:14:662:G:OP1	35:35:15:ARG:CZ	2.64	0.45
1:13:1098:C:C2	1:13:1099:G:C8	3.04	0.45
25:14:1480:G:C6	25:14:1482:U:C4	3.04	0.45
25:14:303:U:H2'	25:14:304:G:H8	1.79	0.45
36:45:118:LEU:HD13	36:45:131:ILE:HG23	1.98	0.45
54:1G:280:C:H3'	54:1G:281:G:H5'	1.97	0.45
25:14:239:U:H5"	25:14:239:U:H6	1.81	0.45
27:11:142:VAL:HG23	27:11:192:THR:C	2.37	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:75:31:SER:OG	39:75:85:LYS:NZ	2.39	0.45
1:13:1392:G:O2'	1:13:1393:U:H5'	2.15	0.45
25:14:2872:G:C4	25:14:2873:A:C2	3.04	0.45
25:14:1434:A:H2'	25:14:1435:G:C8	2.52	0.45
1:13:1084:G:C5	1:13:1085:U:C4	3.05	0.45
42:A5:24:ILE:HD12	42:A5:71:VAL:HG11	1.98	0.45
1:13:792:A:H4'	1:13:793:U:O5'	2.16	0.45
1:13:266:G:H8	1:13:266:G:H2'	1.63	0.45
1:13:267:C:H2'	1:13:268:C:O4'	2.17	0.45
1:13:244:U:H4'	1:13:245:C:O5'	2.17	0.45
25:14:1344:G:H4'	25:14:1384:A:C5	2.52	0.45
28:21:25:VAL:HA	28:21:182:LEU:O	2.16	0.45
1:13:447:G:H2'	1:13:485:G:N2	2.30	0.45
20:BA:14:LYS:HA	20:BA:17:ARG:CZ	2.46	0.45
25:1H:2436:G:C6	25:1H:2437:U:C4	3.05	0.45
56:2L:60:A:H2'	56:2L:61:U:H5'	1.98	0.45
25:1H:37:C:O2'	25:1H:38:A:H5'	2.16	0.45
26:16:63:G:C2	26:16:64:C:C2	3.05	0.45
52:P8:12:ARG:HH21	52:P8:44:PRO:HB3	1.80	0.45
54:1G:420:U:O2'	54:1G:423:G:O6	2.27	0.45
25:14:1799:G:O6	27:19:178:PRO:HD2	2.16	0.45
34:25:75:SER:OG	34:25:76:ALA:N	2.49	0.45
4:32:154:ASN:OD1	4:32:154:ASN:N	2.48	0.45
25:1H:886:C:H2'	25:1H:887:A:H4'	1.98	0.45
54:1G:1300:G:O2'	54:1G:1301:U:H6	1.98	0.45
5:42:51:VAL:O	5:42:55:VAL:HG23	2.17	0.45
25:1H:1389:G:C2	25:1H:1399:C:O2	2.70	0.45
25:1H:1170:G:N2	25:1H:1180:C:C2	2.85	0.45
54:1G:976:G:OP1	14:5A:31:ARG:HB3	2.16	0.45
25:1H:1051:G:OP2	25:1H:1051:G:H8	2.00	0.45
25:1H:1728:G:O6	25:1H:1730:U:H5"	2.16	0.45
21:1B:10:ARG:HB2	21:1B:10:ARG:NH1	2.32	0.45
12:3A:28:LYS:HD3	12:3A:33:ARG:NH1	2.32	0.45
8:72:83:ILE:HB	8:72:137:VAL:HG13	1.98	0.45
6:5E:14:LEU:HA	6:5E:14:LEU:HD23	1.80	0.45
55:3L:49:A:H1'	55:3L:52:G:N2	2.29	0.45
3:2E:70:VAL:HG12	3:2E:71:ALA:N	2.31	0.45
1:13:1503:A:O2'	24:4K:13:A:C6	2.70	0.45
3:22:164:ARG:NH1	3:22:166:GLU:HG3	2.30	0.45
54:1G:254:G:OP1	17:8A:67:LYS:O	2.34	0.45
9:82:48:GLU:N	9:82:49:PRO:HD2	2.31	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:42:76:ILE:HG23	5:42:142:LEU:HD13	1.98	0.45
3:22:10:PHE:CE2	3:22:178:LEU:HD13	2.52	0.45
13:4A:57:ARG:CZ	50:I5:34:GLU:HB2	2.47	0.45
25:14:2355:C:H5"	25:14:2356:C:OP2	2.17	0.45
25:14:256:A:H2'	25:14:257:A:C8	2.51	0.45
30:49:67:LYS:HD2	50:I5:5:ILE:HG22	1.98	0.45
25:1H:1094:U:HO2'	25:1H:1096:A:P	2.39	0.45
1:13:580:U:C4	1:13:581:G:C5	3.04	0.45
25:1H:784:A:C8	25:1H:792:G:C5	3.05	0.45
27:19:267:SER:HA	27:19:270:ILE:HG12	1.99	0.45
25:1H:2323:G:H2'	25:1H:2324:C:O4'	2.17	0.45
29:31:8:GLN:N	29:31:8:GLN:OE1	2.34	0.45
25:14:1991:U:H2'	25:14:1992:G:H5"	1.98	0.45
55:3L:3:U:H2'	55:3L:4:G:C8	2.50	0.45
1:13:128:G:O3'	17:8I:3:LYS:HE2	2.17	0.45
1:13:554:C:H2'	1:13:555:C:H6	1.82	0.45
31:51:157:TYR:CZ	31:51:172:LYS:HG3	2.52	0.45
54:1G:397:A:N3	54:1G:397:A:H3'	2.31	0.45
12:3A:84:LEU:HD22	12:3A:85:ILE:H	1.82	0.45
54:1G:1002:G:H2'	54:1G:1003:G:C8	2.52	0.45
9:8E:77:ILE:O	9:8E:81:ILE:HG12	2.17	0.45
25:14:1043:C:H2'	25:14:1044:G:H5'	1.98	0.45
25:1H:189:G:H2'	25:1H:205:G:N2	2.31	0.45
35:78:79:ARG:HB3	35:78:110:TYR:CD2	2.51	0.45
9:8E:92:TYR:O	9:8E:96:LEU:HB2	2.16	0.45
25:1H:127:A:H5"	25:1H:128:C:C6	2.51	0.45
15:6A:39:LEU:O	15:6A:39:LEU:HD22	2.16	0.45
25:14:2416:C:H6	25:14:2416:C:O5'	1.99	0.45
25:1H:465:G:O5'	25:1H:465:G:H8	2.00	0.45
10:1I:57:LYS:HG3	10:1I:57:LYS:O	2.16	0.45
25:14:1174:A:N1	25:14:1175:U:O2'	2.49	0.45
54:1G:250:A:H1'	54:1G:251:G:OP2	2.16	0.45
1:13:828:A:H2'	1:13:829:G:O4'	2.16	0.45
1:13:1000:A:H4'	25:14:2137:C:OP1	2.17	0.45
54:1G:1127:G:N2	54:1G:1146:A:H62	2.14	0.45
25:1H:2127:G:N2	25:1H:2162:G:H1'	2.22	0.45
25:1H:2171:A:O2'	25:1H:2172:U:O4'	2.35	0.45
15:6A:78:TYR:OH	15:6A:82:ILE:HD12	2.16	0.45
54:1G:578:C:OP1	60:1G:1714:HOH:O	2.20	0.45
47:J8:91:LYS:O	47:J8:94:LEU:N	2.30	0.45
19:AI:41:VAL:HA	19:AI:44:MET:H	1.82	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:12:164:VAL:HG11	2:12:170:GLU:HG2	1.98	0.45
25:1H:1538:G:H2'	25:1H:1539:G:H8	1.81	0.45
45:H8:59:LEU:HD12	45:H8:69:THR:HG21	1.99	0.45
25:1H:2287:A:N6	25:1H:2344:U:N3	2.64	0.45
29:39:125:LEU:HD13	29:39:196:LEU:HD21	1.98	0.45
44:G8:20:TYR:OH	44:G8:44:ILE:HG13	2.17	0.45
22:3K:18:G:N2	22:3K:66:G:H1'	2.32	0.45
25:1H:860:U:C5	25:1H:917:A:H2	2.34	0.45
1:13:891:U:H2'	1:13:892:A:H8	1.81	0.45
1:13:1363:A:H1'	1:13:1365:G:N7	2.32	0.45
1:13:138:G:H8	1:13:138:G:O5'	1.99	0.45
25:14:2303:G:C2'	25:14:2304:G:H5'	2.46	0.45
38:65:62:LYS:HB3	38:65:97:ARG:CD	2.46	0.45
26:1J:61:G:C6	26:1J:62:C:C4	3.04	0.45
33:15:34:LEU:HD21	33:15:120:LEU:CD1	2.46	0.45
54:1G:1414:U:H2'	54:1G:1415:G:C8	2.52	0.45
29:31:125:LEU:HA	29:31:125:LEU:HD23	1.73	0.45
6:5E:5:GLU:HB3	6:5E:62:TRP:HE1	1.80	0.45
34:25:7:TYR:CE1	34:25:20:MET:HB2	2.51	0.45
34:25:4:PRO:O	34:25:5:GLN:HB2	2.16	0.45
1:13:1442:G:C6	1:13:1446:A:N6	2.84	0.45
4:32:79:PHE:CE1	4:32:207:TYR:HD2	2.35	0.45
25:14:695:G:C2	25:14:768:G:C5	3.04	0.45
14:5A:29:ARG:NE	14:5A:40:CYS:SG	2.89	0.45
25:14:2695:C:H2'	25:14:2696:U:C6	2.50	0.45
1:13:448:A:P	1:13:485:G:H22	2.39	0.45
45:D5:52:SER:OG	45:D5:52:SER:O	2.28	0.45
11:2A:121:PRO:HG2	11:2A:126:ARG:HG2	1.98	0.45
25:14:651:G:H5'	53:M5:18:ALA:HB3	1.99	0.45
25:14:2885:C:N3	25:14:2886:G:H1'	2.30	0.45
1:13:868:C:H2'	1:13:869:G:O4'	2.17	0.45
34:68:2:ILE:HD12	34:68:6:THR:HG21	1.98	0.45
25:1H:2768:C:O2'	33:58:89:LYS:NZ	2.25	0.45
25:1H:1523:U:H6	25:1H:1523:U:O5'	1.99	0.45
44:G8:67:LEU:HA	44:G8:67:LEU:HD12	1.85	0.45
32:69:58:LEU:HD12	32:69:58:LEU:HA	1.75	0.45
1:13:811:C:N3	60:13:1805:HOH:O	2.36	0.45
28:21:14:ILE:HA	28:21:14:ILE:HD12	1.67	0.45
1:13:246:A:C6	1:13:279:A:C2	3.04	0.45
54:1G:1299:A:C6	54:1G:1301:U:C2	3.05	0.45
4:32:11:LEU:HD13	4:32:66:ARG:NE	2.32	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:1G:1149:C:OP1	9:82:9:ARG:HD3	2.17	0.45
25:1H:2592:G:C6	25:1H:2593:U:N3	2.85	0.45
25:1H:654(M):C:H3'	25:1H:654(N):G:C8	2.52	0.45
54:1G:1115:C:H1'	14:5A:61:TRP:HB2	1.99	0.45
25:1H:1142(A):A:C4	25:1H:1144:G:C8	3.04	0.45
25:1H:1858:G:OP2	25:1H:1858:G:H8	2.00	0.45
1:13:95:G:H3'	1:13:96:G:H8	1.82	0.45
25:14:74:A:C5'	25:14:74:A:H8	2.30	0.45
25:1H:451:C:H5'	60:1H:3692:HOH:O	2.16	0.45
13:4A:97:PRO:HB2	13:4A:101:GLN:HG3	1.98	0.45
3:22:22:TRP:HB2	3:22:59:ARG:HB2	1.98	0.45
25:14:857:C:H2'	25:14:858:U:C6	2.51	0.45
33:15:41:ASP:HB3	33:15:48:MET:CE	2.47	0.45
31:59:119:GLU:HB3	31:59:140:LYS:NZ	2.31	0.45
4:3E:188:LEU:HA	4:3E:189:PRO:HD3	1.59	0.45
36:45:97:VAL:HG21	36:45:103:MET:HE3	1.99	0.45
25:14:1063:G:H1	25:14:1074:G:N2	2.14	0.45
23:2K:19:G:C2	23:2K:59:A:C5	3.03	0.45
13:4I:65:LYS:N	50:M8:50:VAL:HG11	2.32	0.45
54:1G:1245:A:H2'	54:1G:1246:C:C6	2.51	0.45
25:14:918:A:C5	25:14:919:G:H1'	2.51	0.45
29:39:122:LYS:HD2	29:39:191:ARG:HE	1.81	0.45
44:G8:49:VAL:HG21	44:G8:55:TYR:HE1	1.80	0.45
5:42:47:LYS:HB2	5:42:47:LYS:HE2	1.69	0.45
25:1H:1639:U:C5'	25:1H:1639:U:H6	2.28	0.45
7:6E:57:GLU:HA	7:6E:58:PRO:HD2	1.83	0.45
30:49:95:ARG:HG2	30:49:96:ARG:HD3	1.97	0.45
14:5A:46:GLU:O	14:5A:49:HIS:HB2	2.16	0.45
1:13:111:G:H8	1:13:111:G:O5'	2.00	0.45
25:1H:2309:A:C4	25:1H:2310:A:C8	3.05	0.45
17:8I:54:GLY:HA3	17:8I:80:GLY:HA2	1.98	0.45
28:21:55:ASN:HD22	28:21:59:VAL:HG23	1.81	0.45
1:13:380:G:N2	1:13:384:G:C5	2.85	0.45
25:1H:2744:G:C8	25:1H:2755:C:C6	3.05	0.45
25:14:2599:G:OP2	27:19:236:GLY:N	2.49	0.45
3:2E:48:TYR:O	3:2E:51:GLY:N	2.49	0.45
25:14:297:C:N4	25:14:298:G:C2	2.84	0.45
44:C5:57:GLN:HB3	44:C5:58:GLY:H	1.52	0.45
25:1H:289:A:H61	25:1H:351:G:H1'	1.82	0.45
25:14:2512:C:H2'	25:14:2513:G:O4'	2.17	0.45
12:3I:15:ARG:O	12:3I:16:GLU:HB3	2.16	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:1A:47:PHE:O	10:1A:63:PHE:N	2.32	0.45
48:G5:25:VAL:HG12	48:G5:60:LEU:HD23	1.99	0.45
55:1L:29:C:H2'	55:1L:30:A:C8	2.52	0.45
7:6E:150:ALA:HB2	11:2I:50:TYR:OH	2.17	0.45
7:62:137:LYS:HB3	7:62:137:LYS:NZ	2.32	0.45
22:3K:48:C:C4	22:3K:49:A:H1'	2.51	0.45
2:1E:108:ILE:HD12	2:1E:111:ARG:HB2	1.98	0.45
54:1G:957:U:H1'	54:1G:960:U:H5	1.82	0.45
25:14:1757:U:N3	25:14:1762:A:H2	2.04	0.45
38:A8:15:ARG:HD2	38:A8:88:ASP:OD2	2.17	0.45
31:51:83:TYR:CG	31:51:84:SER:N	2.85	0.45
25:1H:1784:A:H4'	25:1H:1785:A:O5'	2.16	0.45
45:H8:126:VAL:HG12	45:H8:163:LEU:HD23	1.99	0.45
1:13:1455:G:O5'	1:13:1455:G:H8	2.00	0.45
22:3K:14:A:H3'	22:3K:15:G:C5'	2.47	0.45
25:1H:1464:C:O2'	25:1H:1528:A:H8	1.98	0.45
13:4A:77:ASN:O	13:4A:80:ARG:HB2	2.16	0.45
4:3E:173:TRP:CG	4:3E:189:PRO:HG3	2.51	0.45
32:69:75:LEU:HD21	32:69:141:LYS:NZ	2.32	0.45
25:14:470:A:H2'	25:14:471:A:O4'	2.16	0.45
25:14:459:U:H5"	52:L5:40:TRP:CD2	2.52	0.45
28:29:81:ILE:HG22	28:29:84:PHE:HB3	1.99	0.45
25:14:1441:G:H2'	25:14:1442:G:H8	1.81	0.45
10:1A:45:ARG:O	10:1A:65:LEU:N	2.40	0.45
1:13:686:U:O4	1:13:703:G:H1'	2.16	0.45
13:4A:57:ARG:HH12	50:I5:17:GLY:HA3	1.81	0.45
41:D8:67:GLY:O	41:D8:88:ARG:HB3	2.16	0.45
27:11:65:ILE:HD11	27:11:67:PHE:CE1	2.51	0.45
25:14:1324:G:H4'	25:14:1616:A:C2	2.51	0.45
25:14:817:C:C2	25:14:818:G:C8	3.05	0.45
30:41:16:ARG:N	30:41:17:PRO:HD2	2.32	0.45
42:A5:27:LYS:HD2	42:A5:31:GLU:OE2	2.17	0.45
19:AI:6:LYS:HD2	19:AI:6:LYS:N	2.32	0.45
48:K8:4:SER:OG	48:K8:5:GLU:OE2	2.21	0.45
17:8I:19:VAL:HG23	17:8I:44:ALA:HB3	1.98	0.45
25:1H:1001:A:H2'	25:1H:1002:G:O4'	2.16	0.45
33:58:77:GLY:H	33:58:78:TYR:HD1	1.64	0.45
1:13:240:C:H2'	1:13:241:C:H6	1.82	0.45
25:1H:2070:G:C2	25:1H:2442:C:C2	3.05	0.45
18:9I:40:LEU:HA	18:9I:40:LEU:HD23	1.77	0.45
40:C8:32:PHE:O	40:C8:32:PHE:CG	2.69	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:61:5:LEU:HA	32:61:5:LEU:HD23	1.69	0.45
49:H5:40:THR:HG23	49:H5:43:ILE:HG13	1.99	0.45
15:6I:18:PHE:HD1	15:6I:19:PRO:O	2.00	0.45
54:1G:446:G:H2'	54:1G:447:G:O4'	2.17	0.45
54:1G:1239:A:H4'	54:1G:1240:U:C5'	2.45	0.45
25:1H:2053:G:H5'	28:21:144:ARG:O	2.17	0.45
25:1H:1263:U:H2'	25:1H:1264:G:C8	2.52	0.45
55:3L:26:G:C2	55:3L:27:A:H1'	2.51	0.45
54:1G:848:C:H2'	54:1G:849:C:H6	1.82	0.45
25:14:2420:C:N4	53:M5:31:HIS:O	2.50	0.45
53:M5:60:LEU:C	53:M5:61:LEU:HG	2.35	0.45
22:3K:25:G:H2'	22:3K:26:G:H8	1.82	0.45
3:22:51:GLY:O	3:22:70:VAL:HG13	2.16	0.45
31:59:59:ARG:HG2	31:59:62:LYS:HE2	1.98	0.45
54:1G:1244:C:OP2	21:1B:9:ARG:HG2	2.17	0.45
16:7I:3:LYS:HG3	16:7I:24:ALA:HB2	1.98	0.45
26:16:42:C:O2	30:41:93:THR:N	2.44	0.45
25:14:2287:A:C2	25:14:2346:A:C2	3.03	0.45
6:5E:96:PRO:HB3	18:9I:30:ASP:OD2	2.16	0.45
30:41:43:LEU:HD12	30:41:90:LEU:HD22	1.98	0.45
25:14:527:C:H4'	25:14:528:A:O5'	2.17	0.45
25:14:481:G:OP2	44:C5:47:LYS:HB2	2.17	0.45
40:85:104:GLN:HE21	41:95:44:LYS:HD2	1.82	0.45
25:14:470:A:H8	25:14:470:A:C5'	2.30	0.45
1:13:1364:U:O2'	1:13:1365:G:H5'	2.16	0.45
25:1H:1230:C:H2'	25:1H:1231:G:C8	2.52	0.45
17:8I:57:VAL:HG23	17:8I:58:GLU:N	2.31	0.45
54:1G:1171:G:H2'	54:1G:1172:C:C6	2.52	0.45
54:1G:193:C:H2'	54:1G:194:C:H6	1.82	0.45
25:14:26:G:OP1	42:A5:80:PRO:HB3	2.17	0.45
25:1H:722:A:C2	25:1H:723:G:C4	3.05	0.45
1:13:1352:C:H2'	1:13:1353:G:C8	2.52	0.45
25:1H:7:G:N2	25:1H:8:A:N3	2.65	0.45
29:39:132:VAL:HG22	29:39:133:ASN:H	1.80	0.45
25:14:1199:U:H1'	40:85:4:ALA:HB2	1.99	0.45
1:13:762:C:H2'	1:13:763:G:H8	1.82	0.45
25:1H:2473:U:C2'	25:1H:2474:C:H5'	2.47	0.45
54:1G:272:C:H2'	54:1G:273:A:C8	2.52	0.45
25:1H:877:U:H3	25:1H:899:A:H2	1.64	0.45
35:35:113:LYS:HD3	35:35:115:LEU:HD21	1.99	0.45
16:7I:19:ILE:HB	16:7I:36:ILE:O	2.17	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:72:120:THR:OG1	8:72:121:ASP:N	2.49	0.45
32:69:11:ASN:O	32:69:12:LEU:HD12	2.16	0.45
1:13:116:A:H61	1:13:313:A:H1'	1.82	0.45
17:8A:6:LEU:HA	17:8A:6:LEU:HD23	1.81	0.45
7:6E:104:LEU:HD13	7:6E:104:LEU:HA	1.83	0.45
29:31:122:LYS:HA	29:31:122:LYS:HD3	1.53	0.45
25:14:1628:G:H2'	25:14:1629:U:C6	2.51	0.45
25:1H:2728:U:H2'	25:1H:2729:G:C8	2.51	0.45
25:1H:200:U:O2	25:1H:386:G:N2	2.50	0.45
36:45:69:PHE:CD1	36:45:70:PRO:HD2	2.51	0.45
25:14:275:G:O6	25:14:362:U:N3	2.50	0.45
31:51:6:ARG:O	31:51:69:ARG:HB2	2.15	0.45
25:14:1019:U:OP1	25:14:1035:U:O2'	2.23	0.45
15:6I:17:ARG:HD3	15:6I:26:GLU:HG3	1.99	0.45
1:13:973:G:H3'	1:13:974:A:H5"	1.99	0.45
25:1H:1899:G:N2	25:1H:1902:C:N4	2.52	0.45
25:1H:1387:C:C2	25:1H:1388:G:C8	3.05	0.45
25:14:1288:U:O4	37:55:106:GLY:HA3	2.17	0.45
4:32:199:ASN:HB3	4:32:202:LEU:HG	1.99	0.45
38:65:13:ARG:HG2	38:65:14:VAL:N	2.31	0.45
4:32:106:TYR:HE1	4:32:112:VAL:O	2.00	0.45
25:14:2233:U:H2'	25:14:2234:G:C8	2.52	0.45
25:14:445:C:OP1	40:85:2:PRO:HA	2.17	0.45
29:39:192:LEU:HD13	29:39:194:MET:HE1	1.99	0.45
48:G5:17:SER:O	48:G5:20:GLU:HG3	2.17	0.45
28:29:116:VAL:HG21	28:29:122:PHE:CE2	2.52	0.45
22:3K:20:C:H5"	22:3K:68:A:H62	1.82	0.45
35:35:15:ARG:NH2	35:35:17:LYS:HE3	2.31	0.45
54:1G:1442:G:O2'	54:1G:1443:G:OP1	2.30	0.45
43:F8:1:MET:C	43:F8:3:THR:N	2.70	0.45
34:68:43:VAL:HG12	34:68:54:GLU:HA	1.99	0.45
25:1H:1087:G:C5	25:1H:1089:G:H1'	2.52	0.45
25:1H:1060:U:O2	25:1H:1088:A:H8	2.00	0.45
3:22:79:ARG:NH2	3:22:82:GLU:HB2	2.32	0.45
26:16:94:C:N4	26:16:95:U:O4	2.50	0.45
55:1L:58:G:H1	55:1L:74:C:H42	1.63	0.45
25:14:755:C:H2'	25:14:756:C:C6	2.52	0.45
29:31:175:THR:O	29:31:176:LEU:HD12	2.17	0.45
39:75:31:SER:HB3	39:75:42:ILE:CG2	2.47	0.45
31:51:121:ILE:HD13	31:51:121:ILE:HA	1.71	0.45
1:13:22:G:H4'	1:13:885:G:C8	2.51	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:41:108:ASN:HD22	50:M8:21:VAL:HG11	1.82	0.45
25:1H:2743:C:H2'	25:1H:2744:G:O4'	2.17	0.45
3:22:162:GLN:NE2	57:4L:23:A:N7	2.53	0.45
25:14:1684:C:C2	25:14:1705:G:N2	2.85	0.45
25:1H:724:U:H2'	25:1H:725:G:O4'	2.17	0.45
1:13:834:C:C2	1:13:853:G:C2	3.05	0.45
22:1K:8:4SU:H5'	22:1K:9:U:OP2	2.17	0.45
25:1H:468:G:N7	52:P8:39:ARG:NH2	2.64	0.45
1:13:406:G:N7	1:13:495:A:O2'	2.35	0.45
25:1H:57:C:H2'	25:1H:58:G:O4'	2.17	0.45
28:29:112:GLY:O	28:29:159:HIS:HA	2.17	0.45
34:68:63:VAL:HG12	34:68:106:LEU:HD11	1.98	0.45
16:7A:40:ASP:HA	16:7A:41:PRO:HD2	1.80	0.45
2:1E:112:VAL:HG22	2:1E:149:LEU:HD13	1.99	0.45
25:1H:2235:G:H2'	25:1H:2236:C:C6	2.52	0.45
25:1H:1492:G:N2	25:1H:1499:C:O2	2.50	0.45
38:A8:30:ARG:HH21	38:A8:92:TYR:HD1	1.65	0.45
25:14:1421:G:C2	25:14:1422:G:C8	3.04	0.45
8:7E:9:MET:O	8:7E:12:ARG:N	2.49	0.45
39:75:29:ARG:CZ	39:75:29:ARG:HB2	2.45	0.45
11:2I:114:VAL:HA	11:2I:115:PRO:HD2	1.80	0.45
25:14:1812:A:H2'	25:14:1813:G:C8	2.51	0.45
25:14:2758:A:C2	25:14:2759:G:H1'	2.51	0.45
25:1H:2749:A:H5"	31:51:4:ILE:HD12	1.99	0.45
1:13:1142:G:H3'	1:13:1143:G:C8	2.52	0.45
29:31:188:ARG:HG3	29:31:188:ARG:H	1.60	0.45
39:B8:107:ASP:OD1	39:B8:107:ASP:N	2.31	0.45
25:1H:699:A:H2'	25:1H:700:G:O4'	2.17	0.45
47:J8:83:GLU:O	47:J8:86:SER:OG	2.29	0.45
25:14:1677:A:H2'	25:14:1678:G:O4'	2.17	0.45
36:45:101:ARG:HG3	36:45:102:VAL:N	2.32	0.45
54:1G:1260:C:H6	54:1G:1260:C:H3'	1.81	0.45
54:1G:1326:C:OP1	21:1B:17:THR:OG1	2.21	0.45
1:13:1434:A:H2'	1:13:1435:G:O4'	2.17	0.45
36:88:79:LEU:O	36:88:81:VAL:HG22	2.17	0.45
54:1G:1248:A:N3	9:82:70:LYS:NZ	2.39	0.45
17:8I:68:ARG:H	17:8I:70:ARG:NH1	2.15	0.45
54:1G:1108:G:H5'	3:22:176:HIS:ND1	2.32	0.45
23:2K:17:C:OP2	23:2K:18:C:O2'	2.22	0.45
39:B8:21:GLU:H	39:B8:21:GLU:HG3	1.56	0.45
29:39:123:LEU:HB2	29:39:192:LEU:HB2	1.99	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:29:98:PRO:HG3	28:29:174:ASP:HA	1.99	0.45
35:35:146:VAL:HG22	35:35:147:LEU:HD13	1.99	0.45
25:1H:1045:A:H2	25:1H:1111:A:N7	2.15	0.45
17:8I:75:ARG:NH1	17:8I:76:LEU:O	2.50	0.45
25:14:686:G:OP1	52:L5:11:LYS:NZ	2.49	0.45
31:51:125:VAL:HG12	31:51:127:GLU:O	2.16	0.45
30:49:97:ASP:HA	30:49:100:TRP:CD1	2.52	0.45
25:14:246:C:N4	53:M5:8:LYS:HG3	2.32	0.45
6:5E:55:ASP:HB2	6:5E:86:ARG:HH12	1.80	0.45
13:4A:31:LYS:HA	13:4A:34:LEU:HD12	1.98	0.45
25:1H:1329:U:H5"	25:1H:1330:C:C5	2.52	0.45
43:F8:61:GLY:HA3	43:F8:73:ARG:O	2.17	0.45
1:13:265:G:N2	1:13:267:C:H5'	2.32	0.45
25:1H:858:U:O2	25:1H:2268:A:H2'	2.17	0.45
25:1H:2104:G:O6	25:1H:2185:C:N4	2.47	0.45
25:14:1858:G:H1'	25:14:1884:A:H62	1.81	0.45
37:55:67:LEU:HD13	37:55:76:VAL:HG21	1.97	0.45
31:59:35:VAL:HG22	31:59:71:LEU:HD12	1.97	0.45
46:I8:32:ARG:HB3	46:I8:32:ARG:HE	1.56	0.45
54:1G:201:C:H4'	54:1G:208:U:OP1	2.17	0.45
4:3E:112:VAL:HG12	4:3E:116:GLN:OE1	2.17	0.45
54:1G:987:G:O5'	54:1G:987:G:H8	2.00	0.45
51:J5:37:LYS:HG2	51:J5:37:LYS:O	2.16	0.45
4:32:78:LEU:HA	4:32:78:LEU:HD23	1.86	0.45
10:1I:4:ILE:HG23	10:1I:99:LYS:O	2.17	0.45
25:14:451:C:N4	25:14:454:A:H5'	2.31	0.45
25:14:996:A:H2'	25:14:997:G:H8	1.82	0.44
25:1H:1265:A:OP1	25:1H:1265:A:C8	2.68	0.44
28:29:37:ARG:HD3	28:29:44:TYR:CZ	2.52	0.44
54:1G:842:C:O3'	54:1G:843:U:H6	2.00	0.44
1:13:1053:G:N7	1:13:1199:U:H3'	2.33	0.44
44:G8:76:CYS:HA	44:G8:77:PRO:HD2	1.55	0.44
44:G8:82:PRO:HG3	44:G8:97:ARG:HB3	1.99	0.44
25:1H:2582:G:C2	25:1H:2583:G:C8	3.05	0.44
8:72:136:GLU:O	8:72:136:GLU:HG3	2.16	0.44
25:1H:1509:C:N4	25:1H:1511:A:H62	2.15	0.44
1:13:827:U:C5	1:13:870:U:C4	3.05	0.44
28:29:170:LEU:HD11	28:29:185:LYS:O	2.17	0.44
54:1G:571:U:O2	54:1G:918:A:H5'	2.17	0.44
25:1H:2150:U:H2'	25:1H:2151:G:C8	2.52	0.44
35:78:85:LEU:O	35:78:88:LEU:HD23	2.16	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:45:22:LYS:HG2	36:45:23:GLY:CA	2.46	0.44
1:13:78:G:C6	1:13:79:G:H1'	2.52	0.44
25:1H:1542:G:C8	25:1H:1543:A:H2'	2.51	0.44
42:A5:59:VAL:HA	42:A5:64:MET:H	1.81	0.44
54:1G:513:C:H42	54:1G:538:G:H1	1.64	0.44
4:3E:108:LEU:HD23	4:3E:110:PHE:CE2	2.52	0.44
25:1H:956:G:N2	25:1H:959:A:H3'	2.32	0.44
26:16:42:C:O2'	30:41:67:LYS:O	2.23	0.44
25:14:975:G:C5	25:14:976:C:C5	3.05	0.44
25:1H:2636:U:H3	25:1H:2782:G:H1	1.65	0.44
25:14:1007:C:H5"	33:15:35:ARG:HH11	1.83	0.44
30:41:43:LEU:C	30:41:45:GLU:N	2.71	0.44
25:14:1342:A:H2	25:14:1602:U:N3	2.11	0.44
54:1G:358:U:H2'	54:1G:359:U:H6	1.82	0.44
25:1H:1167:U:C2	25:1H:1183:G:N2	2.85	0.44
40:85:100:VAL:O	40:85:102:GLU:N	2.48	0.44
7:62:71:PRO:HD3	7:62:103:TRP:CZ3	2.51	0.44
34:25:68:GLU:OE2	34:25:78:ARG:HD3	2.17	0.44
25:1H:918:A:H8	25:1H:918:A:O5'	1.99	0.44
25:14:288:C:H2'	25:14:289:A:C8	2.52	0.44
12:3I:77:LEU:HD23	12:3I:77:LEU:HA	1.73	0.44
29:39:150:GLY:HA2	29:39:172:TRP:CE3	2.53	0.44
12:3A:69:TYR:CE2	12:3A:71:PRO:HB3	2.52	0.44
25:14:1387:C:C2	25:14:1388:G:C8	3.04	0.44
54:1G:66:G:C2	54:1G:67:C:C6	3.05	0.44
26:16:94:C:C4	26:16:95:U:C4	3.05	0.44
25:14:2359:C:H2'	25:14:2360:A:C8	2.52	0.44
39:B8:31:SER:HB2	39:B8:84:GLN:HB3	1.98	0.44
1:13:190:G:O2'	1:13:191(A):G:OP2	2.34	0.44
1:13:130:A:OP2	17:8I:63:ARG:NE	2.50	0.44
44:C5:90:LEU:HA	44:C5:91:GLU:HA	1.72	0.44
33:58:5:VAL:HA	33:58:6:PRO:HD3	1.74	0.44
25:1H:1453:A:O2'	25:1H:1454:U:H2'	2.16	0.44
28:21:201:THR:HG22	28:21:202:LYS:N	2.32	0.44
25:14:530:G:C6	25:14:2022:U:H5"	2.52	0.44
30:41:26:GLN:HG3	30:41:27:ASN:N	2.32	0.44
25:1H:874:G:H2'	25:1H:875:G:O4'	2.17	0.44
8:72:44:PHE:HD1	8:72:80:ILE:HG13	1.80	0.44
1:13:444:C:H42	1:13:490:G:H1	1.65	0.44
8:72:87:SER:HB2	8:72:93:VAL:HB	2.00	0.44
41:D8:9:GLY:O	41:D8:10:LYS:HG3	2.17	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:1H:2774:C:H2'	25:1H:2775:A:O4'	2.17	0.44
25:1H:1003:G:N2	25:1H:1004:C:C2	2.85	0.44
25:14:959:A:C6	25:14:960:A:N1	2.85	0.44
6:5E:24:GLU:HG2	6:5E:28:ARG:NE	2.32	0.44
25:14:1131:G:C2	25:14:1132:A:C4	3.05	0.44
3:22:90:GLU:HA	3:22:93:LYS:HB2	1.99	0.44
28:29:119:ARG:HG2	28:29:160:TYR:HB2	1.99	0.44
7:62:37:ASN:ND2	9:82:41:VAL:HG23	2.32	0.44
38:A8:94:TYR:CE1	38:A8:99:LYS:HG3	2.51	0.44
32:69:109:ILE:H	32:69:109:ILE:HD13	1.83	0.44
25:14:1810:A:H2'	25:14:1811:G:O4'	2.17	0.44
1:13:373:A:O2'	1:13:374:A:H5'	2.17	0.44
25:14:2465:C:O2	25:14:2486:G:C2	2.70	0.44
22:3K:38:MIA:H122	22:3K:38:MIA:H153	1.82	0.44
31:51:4:ILE:HG13	31:51:6:ARG:CZ	2.47	0.44
35:78:36:LYS:HD3	35:78:39:LYS:HB3	1.99	0.44
54:1G:841:U:H4'	54:1G:842:C:C5	2.52	0.44
26:1J:2:C:H2'	26:1J:3:C:C6	2.52	0.44
54:1G:992:U:H3	54:1G:1044:A:H62	1.65	0.44
25:14:1288:U:C2	25:14:1327:C:O2	2.71	0.44
5:42:80:ILE:HG22	8:72:104:ARG:NH1	2.33	0.44
55:3L:20:C:O2'	55:3L:22:A:O5'	2.34	0.44
54:1G:1234:C:H1'	54:1G:1364:U:O2	2.17	0.44
1:13:1256:A:H4'	1:13:1258:G:C4	2.52	0.44
1:13:1213:A:C8	1:13:1215:G:C6	3.05	0.44
1:13:992:U:O2'	1:13:993:G:OP2	2.26	0.44
38:65:14:VAL:O	38:65:18:ILE:HG13	2.17	0.44
25:1H:638:G:H2'	25:1H:639:U:O4'	2.17	0.44
1:13:1193:G:C2'	1:13:1194:U:H5'	2.47	0.44
54:1G:1324:A:C5	54:1G:1325:C:C4	3.06	0.44
25:1H:2439:A:H5'	25:1H:2439:A:H8	1.82	0.44
23:2K:63:C:O2	23:2K:64:G:C8	2.70	0.44
25:14:1790:C:H2'	25:14:1791:A:C5	2.52	0.44
54:1G:1307:U:O5'	54:1G:1307:U:H6	2.00	0.44
54:1G:197:A:OP2	54:1G:197:A:H3'	2.17	0.44
25:1H:2128:C:H2'	25:1H:2129:C:C6	2.52	0.44
1:13:730:G:C6	1:13:731:G:H1'	2.52	0.44
37:98:12:ARG:HG2	37:98:12:ARG:HH11	1.83	0.44
12:3A:55:VAL:HG23	12:3A:69:TYR:HA	1.99	0.44
25:14:270(E):G:O2'	25:14:270(F):U:H5'	2.17	0.44
25:1H:1638:C:H5"	25:1H:2710:C:O2'	2.17	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:14:2191:G:HO2'	25:14:2192:G:P	2.37	0.44
1:13:580:U:O4	1:13:581:G:C6	2.70	0.44
25:14:2687:U:O5'	25:14:2687:U:H6	2.01	0.44
45:D5:15:PRO:C	45:D5:19:ARG:HH21	2.20	0.44
25:1H:304:G:H2'	25:1H:305:U:C6	2.52	0.44
54:1G:1360:A:H2'	54:1G:1361:G:O4'	2.16	0.44
26:16:29:A:H2'	26:16:30:C:O4'	2.18	0.44
49:L8:32:GLN:N	49:L8:32:GLN:OE1	2.50	0.44
25:14:1450:C:H2'	25:14:1451:C:C6	2.52	0.44
27:19:26:LYS:NZ	27:19:30:GLU:HB2	2.32	0.44
25:1H:1355:G:O6	60:1H:3588:HOH:O	2.21	0.44
25:1H:2469:A:O2'	36:88:56:ARG:NE	2.51	0.44
25:1H:2470:G:H5'	36:88:56:ARG:NH2	2.33	0.44
44:C5:50:ARG:HG2	44:C5:53:PRO:HG3	2.00	0.44
17:8A:45:HIS:HB2	17:8A:65:ILE:HD13	1.98	0.44
25:1H:2379:G:H4'	38:A8:21:THR:HG21	1.99	0.44
1:13:7:G:H5'	1:13:298:A:O4'	2.16	0.44
4:3E:176:LEU:HD12	4:3E:182:LYS:O	2.17	0.44
25:1H:2854:G:C2	25:1H:2855:C:C2	3.05	0.44
54:1G:456:C:N4	54:1G:476:G:H1	2.14	0.44
25:1H:1559:G:O2'	25:1H:1560:G:H5'	2.16	0.44
54:1G:7:G:H5'	54:1G:298:A:O4'	2.18	0.44
25:1H:1766:U:O2'	25:1H:1767:C:H5'	2.17	0.44
1:13:1247:U:H2'	1:13:1248:A:O4'	2.17	0.44
38:65:35:ILE:CG2	38:65:69:VAL:HG11	2.48	0.44
39:75:28:VAL:HG12	39:75:88:ILE:HA	1.99	0.44
25:14:1774:C:O5'	25:14:1774:C:H6	1.99	0.44
7:6E:15:ASP:O	7:6E:19:GLY:HA2	2.16	0.44
25:1H:1782:C:P	60:1H:3523:HOH:O	2.72	0.44
1:13:186(E):C:N4	1:13:191(B):G:H1	2.07	0.44
25:1H:1567:A:C2	27:11:26:LYS:NZ	2.86	0.44
1:13:76:G:H1'	1:13:95:G:N1	2.32	0.44
25:1H:1243:G:C3'	35:78:7:ARG:HH21	2.30	0.44
38:65:39:ILE:HD12	38:65:85:VAL:HG11	1.99	0.44
45:H8:152:ALA:HB1	45:H8:163:LEU:HD11	1.98	0.44
25:14:1111:A:H4'	31:59:3:ARG:HH11	1.81	0.44
1:13:77:C:C2	1:13:78:G:N7	2.85	0.44
25:14:2749:A:H5'	31:59:6:ARG:NH1	2.33	0.44
1:13:1192:C:C5	1:13:1193:G:C8	3.05	0.44
22:1K:46:G:H2'	22:1K:47:U:O4'	2.17	0.44
19:AI:40:ILE:HG22	19:AI:67:VAL:O	2.17	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:14:2287:A:C2	25:14:2289:G:C8	3.05	0.44
54:1G:188:U:O2'	54:1G:189:U:H5'	2.17	0.44
9:82:18:PHE:O	9:82:19:LEU:HD23	2.18	0.44
3:22:131:ARG:HH21	3:22:166:GLU:CG	2.29	0.44
25:1H:812:C:H5"	25:1H:1250:G:O2'	2.17	0.44
50:I5:24:THR:HB	50:I5:25:TYR:H	1.63	0.44
5:42:93:PRO:HG3	8:72:105:ARG:HG3	1.99	0.44
28:29:33:VAL:HG12	28:29:89:ASP:HA	1.99	0.44
25:14:469:G:O6	52:L5:39:ARG:NH1	2.51	0.44
45:D5:5:LEU:HD23	45:D5:6:LYS:N	2.33	0.44
41:D8:65:GLY:N	41:D8:91:TYR:O	2.50	0.44
54:1G:167:G:H2'	54:1G:168:G:C8	2.49	0.44
42:A5:106:ILE:HG13	42:A5:106:ILE:O	2.17	0.44
28:21:24:THR:OG1	28:21:186:GLY:O	2.34	0.44
7:6E:142:GLU:O	7:6E:146:GLU:HG2	2.16	0.44
34:25:87:ILE:HG13	34:25:91:LEU:HA	1.99	0.44
15:6I:70:LEU:HA	15:6I:70:LEU:HD12	1.75	0.44
25:14:1198:U:H2'	25:14:1199:U:C6	2.52	0.44
25:14:1053:C:H2'	25:14:1054:A:O4'	2.18	0.44
17:8I:86:GLU:O	17:8I:90:ILE:HG12	2.16	0.44
5:42:15:ARG:NH2	57:4L:25:A:C8	2.85	0.44
30:41:121:ASN:HD22	30:41:181:ARG:HH12	1.65	0.44
6:52:19:LEU:HD11	6:52:59:TYR:CE1	2.52	0.44
34:68:59:LYS:NZ	34:68:89:ASN:OD1	2.50	0.44
33:15:128:HIS:HB2	33:15:129:PRO:HD2	1.99	0.44
31:59:117:PRO:HA	31:59:118:PRO:HD2	1.93	0.44
41:D8:1:MET:HG2	41:D8:43:GLU:OE1	2.16	0.44
4:3E:128:VAL:O	4:3E:131:ARG:HB2	2.17	0.44
3:22:175:LEU:H	3:22:175:LEU:HD12	1.83	0.44
25:1H:1161:C:H6	25:1H:1161:C:O5'	2.01	0.44
25:14:1156:A:O5'	25:14:1156:A:H8	2.01	0.44
54:1G:1065:U:C5	54:1G:1190:G:H1'	2.52	0.44
25:1H:311:A:C6	25:1H:328:U:C4	3.06	0.44
1:13:639:G:H2'	1:13:640:A:H8	1.82	0.44
10:1I:16:LEU:HD11	10:1I:70:ARG:HB2	2.00	0.44
32:61:79:ILE:HA	32:61:80:PRO:HD2	1.85	0.44
25:14:180:G:H5"	25:14:181:A:OP1	2.17	0.44
25:1H:2592:G:C6	25:1H:2593:U:C4	3.05	0.44
1:13:1176:A:H2'	1:13:1177:G:H4'	1.98	0.44
38:65:36:TYR:CE2	38:65:54:LEU:HD22	2.49	0.44
54:1G:468:A:C5	54:1G:474:G:H1'	2.53	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:1I:48:THR:HG23	10:1I:62:HIS:HB3	1.99	0.44
25:1H:821:A:H2'	25:1H:946:G:H5"	1.99	0.44
1:13:95:G:H3'	1:13:96:G:C8	2.53	0.44
38:65:110:LEU:HG	38:65:112:PHE:CZ	2.53	0.44
25:1H:1051:G:C6	25:1H:1052:C:N3	2.86	0.44
25:14:2776:A:OP1	25:14:2776:A:H3'	2.18	0.44
25:1H:1530:G:H22	25:1H:1542:G:H1'	1.83	0.44
7:62:153:HIS:NE2	11:2A:57:THR:HG23	2.31	0.44
25:1H:1063:G:H8	25:1H:1063:G:P	2.40	0.44
38:A8:49:VAL:HG11	38:A8:77:ALA:HA	1.98	0.44
54:1G:977:A:H2'	54:1G:978:A:H5'	1.99	0.44
7:62:143:ARG:NH2	55:3L:43:G:H5'	2.33	0.44
25:14:2346:A:H5"	25:14:2383:G:C1'	2.47	0.44
39:B8:26:ASP:HB3	39:B8:92:GLY:H	1.83	0.44
29:39:157:VAL:HA	29:39:176:LEU:O	2.18	0.44
28:21:105:THR:HG21	28:21:164:ARG:CZ	2.48	0.44
32:69:77:LEU:HB3	32:69:78:THR:H	1.62	0.44
20:BA:54:LYS:HA	20:BA:57:ARG:CZ	2.48	0.44
43:B5:5:TYR:CE1	48:G5:30:ARG:HG3	2.53	0.44
25:14:2104:G:H2'	25:14:2105:C:C6	2.53	0.44
1:13:115:G:C2	1:13:289:G:N7	2.85	0.44
42:A5:2:GLU:OE1	42:A5:72:LYS:HE3	2.17	0.44
25:1H:1006:C:H1'	33:58:106:MET:HE3	1.99	0.44
30:41:14:GLU:O	30:41:17:PRO:HG2	2.17	0.44
32:69:138:ILE:HG12	32:69:139:GLN:H	1.82	0.44
13:4A:92:HIS:NE2	13:4A:98:VAL:HG11	2.32	0.44
25:14:2846:G:H2'	25:14:2847:U:O4'	2.18	0.44
54:1G:149:A:H2'	54:1G:150:C:H6	1.82	0.44
25:14:2484:G:C2	25:14:2485:G:C8	3.05	0.44
17:8I:9:VAL:O	17:8I:21:VAL:HA	2.17	0.44
25:1H:2309:A:C5	25:1H:2310:A:N7	2.85	0.44
1:13:654:G:C4	1:13:753:A:C6	3.05	0.44
25:1H:997:G:O2'	25:1H:998:C:H5'	2.18	0.44
27:19:222:ARG:NH1	27:19:224:ALA:HB3	2.33	0.44
4:32:178:VAL:C	4:32:180:GLY:H	2.20	0.44
25:1H:2294:C:H5"	38:A8:13:ARG:HH12	1.82	0.44
45:H8:98:MET:O	45:H8:125:LEU:HA	2.17	0.44
38:65:5:THR:O	38:65:8:GLU:N	2.50	0.44
25:14:1130:U:O2	28:29:149:ARG:NH2	2.50	0.44
41:D8:19:LYS:HG2	41:D8:95:LEU:HD23	2.00	0.44
36:45:51:ARG:HG3	36:45:52:VAL:N	2.33	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:1H:390:A:C6	35:78:71:VAL:HG21	2.52	0.44
25:14:315:G:H2'	25:14:316:C:C6	2.52	0.44
25:14:145:G:H2'	25:14:146:G:O4'	2.18	0.44
13:4I:94:ARG:HD3	13:4I:94:ARG:HA	1.72	0.44
7:62:62:PHE:HD1	7:62:124:LEU:HD11	1.82	0.44
22:3K:35:QUO:H102	22:3K:35:QUO:H13	1.57	0.44
25:1H:972:G:H3'	25:1H:973:A:H2'	1.99	0.44
44:G8:96:ILE:HG22	44:G8:97:ARG:N	2.32	0.44
25:1H:382:G:H1	25:1H:392:C:H42	1.65	0.44
54:1G:533:A:OP1	60:1G:1736:HOH:O	2.21	0.44
32:61:110:ASP:OD1	32:61:111:PRO:HA	2.17	0.44
47:F5:87:PRO:O	47:F5:88:LYS:C	2.56	0.44
4:32:202:LEU:O	4:32:206:PHE:N	2.50	0.44
3:22:88:ARG:HG3	3:22:101:LEU:HD12	1.99	0.44
25:1H:2663:G:H2'	25:1H:2664:G:O4'	2.18	0.44
30:41:35:GLU:OE1	30:41:35:GLU:HA	2.17	0.44
1:13:376:G:OP2	16:7I:67:THR:HG21	2.18	0.44
25:14:2468:G:P	36:45:119:ARG:HH22	2.41	0.44
25:14:2439:A:O2'	25:14:2440:C:OP2	2.35	0.44
31:59:137:ASP:OD1	31:59:138:LYS:N	2.47	0.44
46:E5:29:GLN:O	46:E5:31:VAL:HG13	2.17	0.44
25:14:2041:U:H2'	25:14:2042:A:O4'	2.18	0.44
11:2A:27:ASN:ND2	11:2A:55:LYS:HD2	2.33	0.44
25:1H:2313:C:C5'	30:41:91:ARG:HG3	2.47	0.44
25:14:828:U:H4'	25:14:831:G:N1	2.32	0.44
25:14:1443:G:N2	25:14:1549:C:N3	2.66	0.44
25:14:2535:G:H2'	25:14:2536:G:C8	2.53	0.44
25:1H:1045:A:H2	25:1H:1111:A:C5	2.36	0.44
25:1H:1116:C:H2'	25:1H:1117:G:O4'	2.17	0.44
25:1H:234:C:C2	25:1H:235:U:C5	3.06	0.44
31:59:20:ALA:HB3	31:59:23:ARG:HG3	1.99	0.44
1:13:339:C:OP2	34:68:97:ARG:NH1	2.50	0.44
25:1H:2331:G:H4'	46:I8:42:GLY:HA3	1.99	0.44
1:13:659:U:H2'	1:13:660:G:H8	1.82	0.44
41:D8:34:GLU:HG2	41:D8:34:GLU:O	2.18	0.44
22:1K:17:OMG:CM2	22:1K:66:G:H22	2.31	0.44
25:1H:273(F):C:H3'	25:1H:274:G:C5'	2.48	0.44
54:1G:807:A:H2'	54:1G:808:C:C6	2.53	0.44
50:M8:40:HIS:CE1	50:M8:44:THR:HG22	2.52	0.44
25:1H:1053:C:H42	25:1H:1106:G:H1	1.65	0.44
25:1H:247:G:O6	53:Q8:8:LYS:HB3	2.17	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:14:1812:A:H2'	25:14:1813:G:H8	1.83	0.44
30:41:174:GLU:O	30:41:177:GLY:N	2.39	0.44
7:62:92:SER:O	7:62:95:ARG:N	2.46	0.44
1:13:491:G:H2'	1:13:492:G:C8	2.53	0.44
3:2E:119:ARG:O	3:2E:123:GLN:HG3	2.17	0.44
27:11:12:SER:O	27:11:16:MET:HB2	2.18	0.44
1:13:232:G:C5	1:13:233:C:C5	3.06	0.44
25:14:988:A:N6	49:H5:13:ILE:HG21	2.32	0.44
27:19:176:ARG:HH11	27:19:176:ARG:HG2	1.82	0.44
30:41:165:THR:OG1	30:41:168:GLU:HG3	2.17	0.44
25:1H:1360:A:H2'	25:1H:1361:G:O4'	2.17	0.44
25:14:2250:G:C2	36:45:82:ARG:HB3	2.52	0.44
25:14:2414:G:H21	35:35:67:MET:CE	2.31	0.44
1:13:1199:U:H4'	10:1I:54:PHE:CE2	2.53	0.44
15:6A:87:ILE:HG22	15:6A:88:ARG:N	2.26	0.44
25:1H:1021:A:H8	25:1H:1022:G:H5"	1.83	0.44
25:14:2001:A:H2'	25:14:2002:G:C8	2.52	0.44
35:78:95:VAL:HG12	35:78:100:LEU:HD21	2.00	0.44
25:14:2119:A:H61	25:14:2168:G:N2	2.15	0.44
11:2A:57:THR:HA	11:2A:58:PRO:HD2	1.81	0.44
25:1H:1252:G:N3	40:C8:33:ARG:HD2	2.31	0.44
54:1G:1325:C:H2'	54:1G:1326:C:C6	2.52	0.44
1:13:235:C:H5'	17:8I:70:ARG:HG2	1.99	0.44
48:K8:47:ASN:O	48:K8:48:HIS:CG	2.71	0.44
25:14:910:A:H2'	25:14:2264:C:O2'	2.18	0.44
1:13:737:A:H2'	1:13:738:C:H6	1.80	0.44
5:4E:31:LEU:HD23	5:4E:45:PHE:HD1	1.82	0.44
25:14:2320:A:H1'	25:14:2321:G:C6	2.53	0.44
55:3L:52:G:H2'	55:3L:53:A:O4'	2.18	0.44
1:13:458:C:H2'	1:13:464:G:O4'	2.18	0.44
20:BI:89:ARG:NH2	20:BI:104:LEU:HD11	2.30	0.44
41:95:22:VAL:HG22	41:95:23:GLU:N	2.32	0.44
34:25:22:ILE:HD13	34:25:22:ILE:HA	1.44	0.44
7:6E:73:MET:HA	7:6E:90:GLU:HA	1.99	0.44
25:14:2756:U:H4'	25:14:2757:A:OP1	2.17	0.44
39:75:106:SER:HA	39:75:110:ILE:CD1	2.48	0.44
8:7E:129:VAL:HG23	8:7E:130:GLY:H	1.82	0.44
53:M5:8:LYS:HD3	53:M5:8:LYS:HA	1.82	0.44
27:19:32:SER:O	27:19:33:LEU:HB2	2.17	0.44
1:13:920:U:H2'	1:13:921:U:C6	2.52	0.44
29:39:132:VAL:O	29:39:134:GLY:N	2.50	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:1H:2280:G:H2'	25:1H:2281:C:H5'	1.99	0.44
27:19:76:PRO:HA	27:19:118:VAL:HG23	2.00	0.44
48:G5:53:LEU:O	48:G5:57:ILE:HG13	2.18	0.44
25:1H:1467:C:C2'	25:1H:1468:C:H5'	2.48	0.44
12:3A:6:THR:HG23	12:3A:9:GLN:HG3	2.00	0.44
25:14:1858:G:H8	25:14:1858:G:OP2	2.00	0.44
5:4E:152:ARG:HA	8:7E:64:LYS:HE2	1.98	0.44
25:1H:346:A:H5"	25:1H:347:A:OP2	2.18	0.44
27:11:89:SER:HB2	27:11:159:ALA:CB	2.48	0.44
12:3I:8:ASN:O	12:3I:11:VAL:HG23	2.18	0.44
41:95:59:ALA:HB1	41:95:94:LEU:HB3	2.00	0.44
45:H8:102:LEU:HD23	45:H8:137:ILE:HB	1.99	0.44
54:1G:243:A:C2	54:1G:245:C:C2	3.05	0.44
27:11:206:LEU:HD23	27:11:206:LEU:HA	1.78	0.44
30:49:18:GLU:O	30:49:21:ARG:HB3	2.18	0.44
25:14:616:A:C4	29:39:180:GLY:HA2	2.53	0.44
2:12:17:PHE:CE2	2:12:44:LEU:HA	2.52	0.44
25:1H:511:U:C5	25:1H:512:G:C5	3.06	0.44
7:6E:105:VAL:O	7:6E:108:ALA:HB3	2.18	0.44
26:1J:109:G:N1	26:1J:110:G:C5	2.85	0.44
54:1G:984:C:H2'	54:1G:985:C:H6	1.83	0.44
54:1G:1321:C:H4'	13:4A:87:TYR:CZ	2.53	0.44
25:14:273(F):C:H3'	25:14:274:G:C5'	2.47	0.44
35:78:144:GLU:HA	35:78:145:PRO:HD3	1.77	0.44
54:1G:1281:U:P	54:1G:1282:C:H41	2.41	0.44
54:1G:1282:C:H6	54:1G:1282:C:O5'	2.01	0.44
25:1H:2055:C:H1'	28:21:145:LYS:NZ	2.33	0.44
3:22:199:LYS:HB3	3:22:201:TYR:HE2	1.82	0.44
27:11:92:ILE:HD12	27:11:104:TYR:CE1	2.53	0.44
40:C8:47:TYR:C	40:C8:47:TYR:CD2	2.90	0.44
25:14:621:A:H3'	25:14:622:G:H8	1.83	0.44
1:13:1305:G:C2	1:13:1331:G:C2	3.06	0.44
25:14:590:A:H2'	25:14:591:C:C6	2.53	0.44
40:85:79:PHE:CE1	40:85:83:LEU:HD21	2.52	0.44
2:12:100:GLY:HA2	2:12:103:THR:OG1	2.17	0.44
29:39:181:LEU:HD23	29:39:181:LEU:HA	1.80	0.44
54:1G:363:A:OP1	12:3A:33:ARG:HG3	2.18	0.44
25:14:2647:U:H2'	25:14:2648:C:H6	1.82	0.44
18:9I:59:SER:HB3	18:9I:62:GLU:HG3	1.99	0.44
25:1H:2627:G:O2'	25:1H:2781:A:N1	2.48	0.44
33:15:39:ARG:HD3	33:15:41:ASP:HB2	1.99	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:1H:557:U:H2'	25:1H:558:G:H8	1.83	0.44
21:1B:8:THR:HB	21:1B:11:GLY:H	1.83	0.44
6:52:15:ASP:OD1	6:52:18:GLN:N	2.39	0.44
56:2L:22:A:H61	56:2L:47:G:H2'	1.81	0.44
48:K8:44:LEU:HA	48:K8:44:LEU:HD23	1.80	0.44
25:1H:2014:A:H2'	25:1H:2015:A:C8	2.53	0.44
47:F5:18:ILE:HG22	47:F5:20:ARG:HG3	1.98	0.44
32:61:1:MET:C	32:61:20:ASP:HB2	2.38	0.44
9:8E:25:LYS:HD2	9:8E:25:LYS:HA	1.83	0.44
27:11:232:PRO:HB3	27:11:244:ARG:CZ	2.46	0.44
50:I5:2:LYS:HD2	50:I5:6:HIS:CG	2.52	0.44
31:59:149:ARG:O	31:59:154:PRO:HG3	2.18	0.44
36:88:55:VAL:HG12	36:88:64:ILE:HD12	1.99	0.44
4:32:79:PHE:CD1	4:32:207:TYR:CD2	3.06	0.44
25:14:2318:G:H1	38:65:2:ALA:HB1	1.82	0.44
25:1H:782:A:N3	27:11:226:MET:HG2	2.33	0.44
25:14:2505:G:H2'	25:14:2576:G:O6	2.17	0.44
46:E5:72:ARG:CB	46:E5:75:LEU:HB2	2.47	0.44
25:1H:1131:G:H8	25:1H:2025:C:H4'	1.82	0.44
42:A5:29:LEU:CD2	42:A5:33:ARG:HH21	2.31	0.44
25:1H:1551:C:C5	25:1H:1552:G:N7	2.85	0.44
53:M5:40:GLU:H	53:M5:43:GLN:HB2	1.83	0.44
1:13:296:U:H2'	1:13:297:G:C8	2.53	0.44
25:14:1925:C:O2'	25:14:1926:U:H5'	2.18	0.44
27:11:131:LEU:HB2	27:11:136:ILE:HD11	2.00	0.44
54:1G:450:G:N7	54:1G:481:G:C6	2.86	0.44
25:1H:937:U:H2'	25:1H:938:G:O4'	2.17	0.44
1:13:1072:G:H2'	1:13:1073:U:O4'	2.18	0.44
3:2E:34:LEU:HD22	3:2E:34:LEU:O	2.18	0.44
25:14:1122:G:N3	25:14:1122:G:H2'	2.32	0.44
1:13:799:G:C6	1:13:800:G:C4	3.05	0.44
31:59:86:GLU:H	31:59:86:GLU:CD	2.21	0.44
3:22:29:TYR:OH	14:5A:54:PRO:HD2	2.18	0.44
25:14:350:U:H2'	25:14:351:G:O4'	2.17	0.44
12:3I:113:ARG:NH2	60:3I:302:HOH:O	2.50	0.44
7:62:111:ARG:NH2	7:62:122:HIS:HB3	2.32	0.44
25:14:2136:C:N4	25:14:2137:C:N3	2.66	0.44
27:11:182:LEU:N	27:11:272:ALA:HB3	2.21	0.44
54:1G:1067:A:H4'	54:1G:1068:G:O5'	2.17	0.44
1:13:1131:G:H2'	1:13:1132:C:C6	2.53	0.44
33:58:46:VAL:HG13	33:58:48:MET:HG3	2.00	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:1H:1385:G:O2'	25:1H:1396:U:H6	2.00	0.44
19:AI:5:LEU:HD22	19:AI:10:PHE:CE2	2.52	0.44
25:14:398:G:H3'	60:14:3690:HOH:O	2.17	0.44
25:1H:1576:U:N3	25:1H:1577:C:C5	2.86	0.44
1:13:520:A:N1	1:13:536:C:H1'	2.33	0.44
25:14:519:U:H2'	25:14:520:G:C8	2.52	0.44
54:1G:129(A):G:N1	54:1G:188:U:H4'	2.33	0.44
43:B5:55:ASN:O	43:B5:79:ALA:HA	2.18	0.44
47:F5:82:LEU:HG	47:F5:82:LEU:H	1.66	0.44
55:3L:6:G:H1	55:3L:76:C:H42	1.64	0.44
35:78:19:VAL:HB	35:78:27:HIS:HB2	2.00	0.44
45:D5:99:TYR:HA	45:D5:124:ILE:O	2.18	0.44
25:14:2799:A:H2'	25:14:2801:A:C8	2.53	0.44
25:14:2757:A:C2	31:59:67:LEU:HD22	2.53	0.44
2:1E:172:ILE:O	2:1E:176:GLU:HG3	2.17	0.44
25:14:2100:G:N2	25:14:2190:G:H1'	2.33	0.44
1:13:581:G:N2	1:13:582:U:C4	2.86	0.44
25:14:28:A:C2	25:14:513:A:C8	3.05	0.44
30:49:145:THR:O	30:49:146:TYR:HB3	2.18	0.44
25:14:1849:G:H2'	25:14:1850:G:C8	2.52	0.44
2:12:213:LEU:O	2:12:213:LEU:HD23	2.18	0.44
25:1H:303:U:H2'	25:1H:304:G:H8	1.83	0.44
54:1G:581:G:N2	54:1G:760:G:N7	2.66	0.44
25:14:117:G:OP1	25:14:124:G:N1	2.39	0.44
25:14:559:G:H2'	25:14:560:C:O4'	2.18	0.44
13:4I:50:GLU:O	13:4I:54:VAL:HG23	2.17	0.44
1:13:131:C:O2	1:13:231:G:N2	2.35	0.44
28:29:52:LEU:HA	28:29:53:PRO:HD2	1.76	0.44
28:29:72:VAL:HG23	28:29:74:PRO:HD3	2.00	0.44
31:59:26:VAL:CG1	31:59:33:LEU:H	2.30	0.44
28:29:105:THR:HA	28:29:166:THR:HA	2.00	0.44
7:62:50:ILE:HG21	7:62:58:PRO:HA	2.00	0.44
25:14:353:G:H2'	25:14:354:G:H8	1.82	0.44
54:1G:418:C:H2'	54:1G:419:C:O4'	2.18	0.44
54:1G:668:G:C2'	54:1G:669:U:H5'	2.47	0.44
10:1I:65:LEU:HD13	14:5I:56:VAL:HG22	1.99	0.44
1:13:683:G:H2'	1:13:684:A:C8	2.52	0.44
1:13:784:C:H2'	1:13:785:G:O4'	2.18	0.44
2:12:117:GLU:O	2:12:120:ALA:HB3	2.18	0.44
1:13:1483:A:H2	25:1H:1959:G:N3	2.16	0.44
9:82:79:LEU:HD13	9:82:83:ARG:HG3	2.00	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:14:1015:G:C2	25:14:1016:G:C4	3.05	0.44
37:55:84:ALA:HB3	37:55:85:PRO:HD3	2.00	0.44
9:82:46:ALA:HA	9:82:78:LYS:HB2	1.99	0.44
25:1H:2861:G:C2	25:1H:2862:G:C5	3.05	0.44
25:1H:2862:G:C5	25:1H:2863:C:C5	3.06	0.44
5:42:7:GLU:O	5:42:35:GLY:N	2.39	0.44
1:13:1425:U:H2'	1:13:1426:C:C6	2.53	0.44
20:BI:83:ARG:O	20:BI:87:LYS:HB2	2.18	0.44
47:F5:40:ARG:HH12	47:F5:42:GLN:HE21	1.66	0.44
1:13:439:A:C8	1:13:440:A:C8	3.06	0.44
28:29:93:VAL:HG22	28:29:182:LEU:HD13	1.98	0.44
32:61:87:LYS:HB2	32:61:87:LYS:NZ	2.33	0.44
36:88:17:LEU:HA	36:88:17:LEU:HD23	1.55	0.44
31:59:103:LEU:HD23	31:59:103:LEU:H	1.82	0.44
25:14:22:C:H2'	25:14:23:G:O4'	2.18	0.44
25:14:997:G:O2'	25:14:998:C:H5'	2.18	0.44
25:1H:2062:A:OP2	60:1H:3644:HOH:O	2.20	0.44
54:1G:1152:A:OP1	10:1A:68:HIS:ND1	2.51	0.44
31:51:10:PRO:HD3	31:51:69:ARG:NE	2.32	0.44
54:1G:1129:C:C4	54:1G:1139:G:N1	2.86	0.44
25:14:1113:U:H5'	31:59:2:SER:N	2.33	0.44
1:13:963:G:N2	10:1I:55:LYS:NZ	2.66	0.44
25:14:956:G:H2'	25:14:957:A:H2'	2.00	0.44
32:61:8:PRO:HD3	32:61:15:VAL:HG23	1.99	0.44
54:1G:516:U:C4	54:1G:517:G:C6	3.06	0.44
56:2L:14:A:C6	56:2L:23:G:C6	3.06	0.44
56:2L:25:U:H2'	56:2L:26:C:C6	2.53	0.44
54:1G:1157:A:HO2'	54:1G:1158:C:P	2.40	0.44
33:15:136:GLU:HG3	33:15:137:LYS:N	2.31	0.44
1:13:347:G:H2'	1:13:348:G:O4'	2.18	0.44
8:7E:39:LEU:HD12	8:7E:39:LEU:HA	1.74	0.44
25:14:589:C:H5"	29:39:95:ARG:HH12	1.82	0.44
25:14:2798:C:H42	25:14:2799:A:N6	2.15	0.44
38:65:42:ASP:C	38:65:44:LYS:H	2.21	0.44
25:14:863:A:H2	25:14:914:C:H41	1.66	0.44
54:1G:1512:U:H2'	54:1G:1513:A:H8	1.82	0.44
25:14:1731:G:H2'	25:14:1732:A:O4'	2.18	0.44
25:1H:1100:C:H2'	25:1H:1101:U:C6	2.53	0.44
15:6I:8:LYS:O	15:6I:12:ILE:HG13	2.18	0.44
25:14:1751:C:H2'	25:14:1752:C:C6	2.51	0.44
25:1H:2756:U:H1'	25:1H:2757:A:H5"	2.00	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:29:11:MET:HA	28:29:24:THR:HA	2.00	0.44
22:1K:29:C:H3'	22:1K:30:A:H8	1.83	0.44
1:13:921:U:H2'	1:13:922:G:O4'	2.18	0.44
25:1H:1287:A:C5	25:1H:1288:U:C4	3.05	0.44
3:2E:84:ILE:HG12	3:2E:88:ARG:NH2	2.33	0.44
3:2E:91:LEU:HB2	3:2E:99:VAL:HG21	2.00	0.44
5:42:41:VAL:O	5:42:67:VAL:HG12	2.18	0.44
25:14:2479:G:C6	25:14:2480:C:C4	3.06	0.44
29:31:152:GLU:HA	29:31:190:GLU:OE2	2.18	0.44
25:1H:447:A:C6	25:1H:454:A:C8	3.06	0.44
50:M8:52:THR:OG1	50:M8:53:GLU:N	2.50	0.44
25:14:2370:G:H2'	25:14:2371:G:O4'	2.17	0.44
25:14:572:A:H2'	25:14:573:G:O4'	2.18	0.44
7:62:148:ASN:HB3	7:62:151:TYR:HD2	1.82	0.44
1:13:1041:A:H2'	1:13:1042:G:O4'	2.18	0.44
42:E8:45:TYR:CZ	42:E8:49:LYS:HD2	2.53	0.44
10:1I:46:ARG:NH2	10:1I:64:GLU:OE1	2.51	0.44
23:2K:26:C:H2'	23:2K:27:G:O4'	2.18	0.44
3:2E:12:LEU:HD23	3:2E:12:LEU:HA	1.71	0.44
1:13:1467:G:H8	1:13:1467:G:O5'	2.00	0.44
38:65:23:ARG:HH12	38:65:84:GLN:HB2	1.83	0.44
1:13:1225:A:H2'	1:13:1225:A:N3	2.33	0.44
49:L8:5:LYS:HD2	49:L8:34:GLU:OE1	2.17	0.44
25:1H:975:G:C2	25:1H:976:C:C6	3.06	0.44
41:D8:53:GLU:OE2	41:D8:54:GLY:N	2.51	0.44
25:1H:882:G:O2'	25:1H:883:G:C8	2.70	0.43
25:1H:883:G:H2'	25:1H:884:C:H4'	2.00	0.43
53:Q8:48:PHE:O	53:Q8:49:VAL:HG23	2.18	0.43
25:14:1614:A:H2	60:14:3421:HOH:O	2.00	0.43
1:13:5:U:O2	4:3E:85:LYS:NZ	2.51	0.43
25:14:1005:C:N3	25:14:1143:A:C4	2.86	0.43
33:58:133:GLN:OE1	33:58:133:GLN:N	2.51	0.43
25:1H:2170:A:H3'	25:1H:2171:A:C8	2.53	0.43
25:1H:563:G:OP2	60:1H:3531:HOH:O	2.21	0.43
54:1G:683:G:H2'	54:1G:684:A:C8	2.53	0.43
53:Q8:9:GLY:N	53:Q8:12:LYS:H	2.12	0.43
25:14:137(A):G:H2'	25:14:139:G:N7	2.33	0.43
4:32:106:TYR:HB2	4:32:117:ALA:HB2	2.00	0.43
44:C5:85:VAL:CG2	44:C5:98:VAL:HB	2.44	0.43
30:41:67:LYS:HZ3	50:M8:6:HIS:HE2	1.66	0.43
51:N8:40:LYS:HZ3	51:N8:48:GLU:H	1.65	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:13:1239:A:H62	1:13:1299:A:H62	1.65	0.43
37:98:94:TYR:CD1	37:98:94:TYR:N	2.84	0.43
36:88:132:VAL:HG11	45:H8:81:ARG:HD2	2.00	0.43
44:C5:47:LYS:HA	44:C5:60:PHE:HB3	2.00	0.43
41:95:44:LYS:O	41:95:46:VAL:N	2.50	0.43
2:1E:17:PHE:HB2	2:1E:44:LEU:HD21	1.99	0.43
29:31:64:ILE:HG23	29:31:65:TRP:NE1	2.33	0.43
25:14:2798:C:H42	25:14:2799:A:H62	1.65	0.43
38:65:42:ASP:O	38:65:43:GLU:HB2	2.18	0.43
54:1G:1164:G:N1	54:1G:1173:G:C6	2.86	0.43
48:K8:59:ARG:O	48:K8:63:VAL:HG23	2.18	0.43
1:13:658:G:O2'	1:13:659:U:H5'	2.18	0.43
25:14:1542:G:O6	25:14:1543:A:N6	2.51	0.43
25:14:2873:A:H8	37:55:6:SER:N	2.16	0.43
25:14:2427:C:H5"	25:14:2428:G:OP1	2.18	0.43
25:14:1651:G:H2'	25:14:1652:A:O4'	2.17	0.43
49:H5:59:VAL:HG12	49:H5:60:GLU:N	2.33	0.43
35:35:118:GLY:O	35:35:137:LYS:NZ	2.39	0.43
25:14:195:A:OP1	35:35:46:LYS:HE2	2.17	0.43
37:98:35:THR:HG21	37:98:100:LEU:HD22	1.99	0.43
45:D5:76:LEU:HD23	45:D5:76:LEU:H	1.82	0.43
25:1H:1443:G:N2	25:1H:1549:C:C2	2.87	0.43
33:15:128:HIS:NE2	33:15:130:HIS:HA	2.32	0.43
1:13:1499:A:O2'	1:13:1520:G:H5'	2.18	0.43
46:I8:18:ALA:HB3	46:I8:20:ARG:NH1	2.33	0.43
46:I8:28:GLY:N	46:I8:67:VAL:O	2.35	0.43
25:1H:2205:C:H2'	25:1H:2206:C:H6	1.83	0.43
34:68:34:THR:OG1	34:68:35:VAL:N	2.51	0.43
25:1H:1460:A:O2'	25:1H:1461:G:OP1	2.30	0.43
29:31:114:VAL:HG21	29:31:202:PHE:CE1	2.53	0.43
25:1H:1292:U:H2'	25:1H:1293:C:C6	2.53	0.43
7:62:24:THR:O	7:62:27:ILE:HG12	2.18	0.43
54:1G:685:G:N1	54:1G:686:U:O4	2.51	0.43
54:1G:786:G:H1	54:1G:796:C:H42	1.66	0.43
1:13:900:A:H8	1:13:900:A:O5'	2.01	0.43
11:2A:95:ILE:H	11:2A:95:ILE:HG12	1.36	0.43
25:1H:576:U:H6	25:1H:576:U:O5'	2.01	0.43
5:4E:68:GLU:HG3	5:4E:68:GLU:O	2.18	0.43
43:F8:35:THR:O	43:F8:39:ILE:HG13	2.17	0.43
3:2E:17:ASP:HB3	3:2E:21:ARG:NH1	2.33	0.43
38:A8:35:ILE:HD11	38:A8:101:LEU:CD2	2.49	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:14:783:A:H8	25:14:784:A:H4'	1.82	0.43
35:78:36:LYS:CG	35:78:37:GLY:H	2.27	0.43
35:35:64:LYS:HG3	53:M5:30:ARG:NH2	2.32	0.43
25:1H:1021:A:C3'	25:1H:1021:A:C8	2.99	0.43
25:1H:1142(A):A:C4	25:1H:1144:G:N7	2.85	0.43
54:1G:410:G:N1	54:1G:429:U:O2	2.51	0.43
25:1H:1515:C:H2'	25:1H:1516:U:C6	2.53	0.43
38:65:107:GLU:O	38:65:110:LEU:HD13	2.18	0.43
47:J8:49:VAL:CG1	47:J8:70:VAL:HG11	2.43	0.43
44:C5:97:ARG:HD2	44:C5:104:GLY:N	2.33	0.43
44:C5:97:ARG:HH11	44:C5:104:GLY:HA3	1.82	0.43
25:14:1225:C:H4'	41:95:85:LYS:HD3	2.00	0.43
54:1G:1028(A):C:O2	54:1G:1033:G:N2	2.51	0.43
25:1H:583:G:C5	25:1H:584:C:C5	3.06	0.43
28:29:4:ILE:CD1	28:29:28:ALA:HB1	2.45	0.43
54:1G:579:G:O3'	15:6A:54:ARG:NH2	2.51	0.43
26:16:42:C:H4'	30:41:67:LYS:HD2	2.00	0.43
35:35:85:LEU:H	35:35:85:LEU:HD22	1.82	0.43
1:13:411:A:C4	1:13:413:G:H1'	2.53	0.43
25:14:1442:G:H2'	25:14:1443:G:C8	2.53	0.43
27:19:61:LEU:HD13	27:19:61:LEU:HA	1.88	0.43
37:98:10:LEU:O	37:98:11:ASN:C	2.57	0.43
41:D8:21:ARG:HD2	41:D8:91:TYR:CE1	2.53	0.43
31:59:19:VAL:HA	31:59:24:VAL:HG12	1.99	0.43
27:19:260:ARG:NH2	27:19:264:LYS:HD3	2.32	0.43
25:14:151:C:C2	25:14:176:G:N2	2.86	0.43
39:75:85:LYS:HD2	39:75:87:ASP:OD1	2.18	0.43
53:M5:29:LYS:HB3	53:M5:44:LYS:CB	2.47	0.43
43:B5:41:ASN:O	43:B5:45:THR:HG23	2.17	0.43
2:1E:70:PHE:HE1	2:1E:90:MET:HB3	1.83	0.43
25:1H:309:G:N3	25:1H:329:G:O2'	2.50	0.43
25:14:1343:G:C2'	25:14:1344:G:H5'	2.48	0.43
25:1H:1107:G:H2'	25:1H:1108:U:C6	2.53	0.43
25:1H:2667:C:H1'	31:51:109:PHE:CD1	2.53	0.43
37:55:82:GLU:H	37:55:85:PRO:HG2	1.83	0.43
54:1G:262:A:C6	54:1G:263:A:C6	3.06	0.43
25:14:2768:C:H2'	25:14:2769:C:O4'	2.17	0.43
54:1G:186(D):C:H42	54:1G:191(C):G:H1	1.66	0.43
25:1H:172:C:H2'	25:1H:173:G:C8	2.53	0.43
27:19:235:GLY:C	27:19:237:GLU:H	2.21	0.43
54:1G:735:C:H2'	54:1G:736:C:C6	2.53	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:BI:42:GLN:NE2	20:BI:46:GLU:OE1	2.51	0.43
25:1H:272:G:H2'	25:1H:273:G:O4'	2.17	0.43
26:16:66:A:C2	26:16:108:C:C4	3.07	0.43
31:59:89:ILE:HD12	31:59:130:ARG:HG2	1.99	0.43
32:69:112:LYS:HA	32:69:114:LEU:H	1.83	0.43
32:61:128:LEU:HD23	32:61:128:LEU:HA	1.82	0.43
29:31:117:ARG:HG3	29:31:117:ARG:HH11	1.83	0.43
37:55:20:LEU:HD12	37:55:20:LEU:HA	1.76	0.43
42:A5:39:THR:HG22	42:A5:39:THR:O	2.18	0.43
25:1H:1423:G:C4	25:1H:1424:G:C8	3.06	0.43
14:5A:21:TYR:HE2	14:5A:23:ARG:HH21	1.66	0.43
54:1G:1119:C:H2'	54:1G:1120:G:C8	2.54	0.43
31:51:12:PRO:HD2	31:51:48:GLY:O	2.19	0.43
25:1H:1425:G:N2	25:1H:1573:G:N7	2.65	0.43
25:14:2784:C:O2	28:29:37:ARG:NH2	2.52	0.43
35:78:45:LEU:HD13	35:78:45:LEU:HA	1.78	0.43
1:13:1177:G:H2'	1:13:1178:G:N9	2.33	0.43
35:78:115:LEU:HA	35:78:134:ALA:CB	2.45	0.43
44:G8:97:ARG:O	44:G8:101:LYS:HD3	2.18	0.43
26:16:7:G:H1	26:16:113:C:H42	1.66	0.43
22:3K:12:C:H2'	22:3K:13:G:O4'	2.17	0.43
25:14:66:C:C4	25:14:67:U:C4	3.06	0.43
1:13:991:U:O4	1:13:1212:U:H1'	2.17	0.43
1:13:1212:U:H4'	1:13:1213:A:O4'	2.18	0.43
53:Q8:26:LYS:HE2	53:Q8:41:ILE:CG2	2.48	0.43
25:14:882:G:H8	25:14:882:G:OP2	2.01	0.43
1:13:377:G:P	16:7I:5:ARG:HH11	2.41	0.43
25:14:848:G:C4	25:14:933:A:H8	2.37	0.43
56:2L:41:C:H2'	56:2L:42:C:C6	2.47	0.43
30:41:6:ALA:HB3	30:41:104:GLU:OE2	2.18	0.43
27:19:130:ALA:HA	27:19:192:THR:HA	2.00	0.43
25:1H:2690:C:OP1	37:98:17:ARG:NH1	2.51	0.43
11:2I:112:THR:HA	11:2I:113:PRO:HD3	1.69	0.43
32:69:140:LEU:HD12	32:69:140:LEU:HA	1.68	0.43
32:69:125:GLU:CD	32:69:141:LYS:HG3	2.38	0.43
33:58:23:LEU:HA	33:58:23:LEU:HD12	1.81	0.43
42:A5:19:LEU:HA	42:A5:19:LEU:HD12	1.84	0.43
54:1G:42:G:H1	54:1G:400:C:H42	1.66	0.43
28:21:116:VAL:H	28:21:157:ALA:HB2	1.83	0.43
29:31:160:ASN:OD1	29:31:163:VAL:HG23	2.17	0.43
13:4A:74:VAL:O	13:4A:78:ILE:HG13	2.19	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:L8:31:LEU:O	49:L8:32:GLN:HB2	2.16	0.43
39:75:45:PHE:CE2	39:75:74:ARG:HG3	2.54	0.43
27:19:118:VAL:N	27:19:129:ASN:OD1	2.51	0.43
3:2E:162:GLN:HG2	24:4K:24:A:N3	2.33	0.43
31:59:58:GLU:HB2	31:59:61:HIS:CE1	2.53	0.43
34:25:122:LEU:HD23	39:75:43:GLN:HE22	1.83	0.43
5:42:34:VAL:HG21	5:42:63:ARG:HG3	2.00	0.43
25:1H:2018:G:O2'	25:1H:2019:A:H5'	2.19	0.43
25:14:903:C:H2'	25:14:904:C:C6	2.53	0.43
25:14:2852:G:H2'	25:14:2853:C:O4'	2.18	0.43
27:11:77:ALA:HB2	27:11:97:TYR:HA	2.01	0.43
29:31:198:ALA:O	29:31:201:VAL:HG12	2.18	0.43
54:1G:537:G:H5"	12:3A:113:ARG:NH1	2.34	0.43
1:13:1011:G:H2'	1:13:1012:U:O4'	2.19	0.43
2:12:215:LEU:HA	2:12:218:ALA:HB3	2.00	0.43
25:14:1107:G:N1	25:14:1108:U:O2	2.51	0.43
25:1H:1097:U:H2'	25:1H:1098:A:H5'	2.00	0.43
32:69:3:VAL:HG12	32:69:38:LEU:HA	1.99	0.43
25:1H:602:G:N2	25:1H:655:A:C8	2.74	0.43
45:D5:104:PHE:HB3	45:D5:105:VAL:H	1.57	0.43
60:1H:3693:HOH:O	29:31:85:GLY:HA2	2.19	0.43
2:1E:24:TRP:CZ3	2:1E:26:PRO:HA	2.53	0.43
44:G8:89:PHE:HD2	44:G8:90:LEU:H	1.66	0.43
6:52:61:LEU:HD23	6:52:63:TYR:OH	2.18	0.43
25:1H:2456:C:O5'	25:1H:2456:C:H6	2.01	0.43
37:98:18:LEU:HA	37:98:18:LEU:HD23	1.84	0.43
1:13:278:G:O4'	1:13:282:A:H1'	2.18	0.43
29:31:172:TRP:CE3	29:31:173:VAL:HG23	2.53	0.43
11:2I:79:SER:OG	11:2I:106:LYS:HD2	2.17	0.43
37:98:57:ARG:HB3	37:98:59:ASP:OD2	2.18	0.43
54:1G:1314:C:H41	19:AA:4:SER:CB	2.32	0.43
53:Q8:53:PRO:O	53:Q8:55:ALA:O	2.36	0.43
25:14:2271:G:H5"	46:E5:20:ARG:NE	2.33	0.43
25:14:2402:C:H5	25:14:2415:G:N2	2.16	0.43
35:35:96:THR:OG1	35:35:97:PRO:O	2.25	0.43
25:14:95:G:H4'	48:G5:46:GLN:HB2	1.99	0.43
1:13:1143:G:C2	1:13:1144:G:C5	3.06	0.43
54:1G:707:C:H2'	54:1G:708:C:C6	2.53	0.43
31:51:83:TYR:CB	31:51:135:GLY:H	2.26	0.43
25:14:1021:A:H8	25:14:1021:A:H3'	1.84	0.43
25:1H:1728:G:C2	25:1H:1730:U:OP2	2.70	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:75:24:PRO:HA	39:75:49:VAL:HG23	2.00	0.43
25:1H:1968:G:H5'	60:1H:3762:HOH:O	2.18	0.43
25:14:172:C:H2'	25:14:173:G:C8	2.51	0.43
19:AA:66:MET:SD	19:AA:66:MET:N	2.91	0.43
10:1A:3:LYS:N	10:1A:75:ILE:HA	2.33	0.43
1:13:1028:C:H42	1:13:1033:G:H1	1.66	0.43
46:E5:26:TYR:O	46:E5:29:GLN:HB2	2.18	0.43
25:14:2043:C:H2'	25:14:2044:C:H6	1.83	0.43
45:D5:29:TYR:HA	45:D5:33:LEU:O	2.18	0.43
44:G8:83:THR:HG22	44:G8:84:ARG:HG2	2.01	0.43
5:42:70:PRO:O	5:42:77:PRO:HD3	2.19	0.43
27:11:101:GLU:HG3	27:11:102:LYS:N	2.32	0.43
1:13:522:C:H2'	1:13:523:A:O4'	2.18	0.43
2:1E:97:TRP:HZ2	2:1E:102:LEU:HD13	1.83	0.43
25:14:991:C:O2	25:14:1164:G:C2	2.72	0.43
1:13:659:U:OP1	15:6I:8:LYS:HD3	2.18	0.43
54:1G:498:A:H4'	54:1G:500:G:OP1	2.18	0.43
45:D5:14:LYS:H	45:D5:14:LYS:HZ3	1.65	0.43
25:1H:2394:C:H2'	25:1H:2395:C:C6	2.53	0.43
13:4A:27:LYS:HE3	13:4A:31:LYS:NZ	2.34	0.43
54:1G:1106:G:H5"	3:22:172:ARG:HG2	2.00	0.43
35:35:86:LYS:HG3	35:35:87:ASP:N	2.33	0.43
1:13:1015:A:H2'	1:13:1016:A:C8	2.53	0.43
25:1H:7:G:H2'	25:1H:8:A:O4'	2.17	0.43
27:19:26:LYS:HZ3	27:19:30:GLU:HB2	1.83	0.43
38:65:7:TYR:O	38:65:11:LYS:HB2	2.18	0.43
1:13:683:G:C4	1:13:684:A:C8	3.06	0.43
28:21:103:ASP:OD1	28:21:201:THR:HG23	2.18	0.43
25:1H:1011:G:C2	25:1H:1151:G:C2	3.06	0.43
6:5E:61:LEU:HD23	6:5E:63:TYR:CE1	2.53	0.43
2:1E:149:LEU:HD23	2:1E:149:LEU:HA	1.79	0.43
30:41:118:ARG:O	30:41:181:ARG:HG3	2.18	0.43
1:13:1301:U:O2'	1:13:1302:U:H3'	2.18	0.43
53:M5:40:GLU:HA	53:M5:43:GLN:HB2	1.99	0.43
1:13:297:G:H4'	1:13:557:G:H4'	1.99	0.43
18:9I:76:LEU:HB3	18:9I:78:LEU:HG	2.01	0.43
32:69:123:LEU:HD22	32:69:143:SER:HB2	1.99	0.43
25:1H:280:C:C2	25:1H:361:G:C2	3.06	0.43
26:1J:10:C:C4	26:1J:11:C:C5	3.07	0.43
20:BI:55:ILE:O	20:BI:58:LYS:N	2.52	0.43
25:1H:2209:C:O2	25:1H:2216:G:C2	2.72	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:B8:3:ARG:O	39:B8:7:ILE:N	2.41	0.43
25:14:1347:G:C6	25:14:1348:G:N7	2.86	0.43
1:13:178:C:H2'	1:13:179:A:O4'	2.19	0.43
1:13:1138:G:C6	1:13:1140:C:H1'	2.53	0.43
28:29:109:LYS:HE2	28:29:191:PRO:HA	2.01	0.43
33:58:68:GLU:HG2	33:58:88:GLU:OE1	2.18	0.43
36:88:33:GLY:HA2	36:88:105:GLU:HA	2.00	0.43
26:16:83:G:OP1	49:L8:19:GLN:NE2	2.47	0.43
31:51:86:GLU:HG2	31:51:86:GLU:H	1.46	0.43
39:75:16:ARG:HB3	39:75:16:ARG:HE	1.46	0.43
47:F5:46:LEU:HD12	47:F5:46:LEU:HA	1.56	0.43
3:2E:16:ARG:HH12	3:2E:183:ASP:HA	1.84	0.43
49:L8:37:LEU:HD12	49:L8:43:ILE:HG21	1.99	0.43
25:1H:2093:G:C6	25:1H:2225:A:C8	3.07	0.43
27:19:42:GLY:N	27:19:43:ARG:HD2	2.34	0.43
2:12:75:LYS:CA	2:12:78:GLN:HB2	2.34	0.43
25:1H:574:C:H4'	25:1H:575:A:O5'	2.19	0.43
31:51:10:PRO:O	31:51:12:PRO:HD3	2.18	0.43
25:14:1780:A:P	60:14:3402:HOH:O	2.71	0.43
25:1H:2701:C:H3'	25:1H:2702:U:H5'	1.95	0.43
25:14:1142(A):A:H4'	33:15:25:ARG:HH22	1.83	0.43
25:1H:761:A:N7	60:1H:3826:HOH:O	2.52	0.43
27:11:83:GLU:HB2	27:11:92:ILE:HG13	1.99	0.43
1:13:963:G:H1	1:13:972:C:N4	2.08	0.43
26:1J:27:C:OP2	38:65:33:LYS:NZ	2.51	0.43
5:42:148:VAL:HG21	8:72:107:LEU:HD22	1.99	0.43
54:1G:971:G:C6	54:1G:1364:U:O2'	2.71	0.43
1:13:1315:U:C5	1:13:1316:G:C5	3.06	0.43
1:13:1079:G:C6	1:13:1080:A:N6	2.87	0.43
25:14:1408:C:C2	25:14:1595:G:N2	2.87	0.43
25:1H:1465:G:C4	25:1H:1466:G:C8	3.06	0.43
1:13:736:C:H2'	1:13:737:A:H8	1.83	0.43
25:14:2134:A:C2	25:14:2159:G:H1'	2.52	0.43
25:14:2158:A:H1'	25:14:2159:G:C8	2.54	0.43
45:H8:59:LEU:HD23	45:H8:59:LEU:HA	1.65	0.43
25:14:1796:U:H4'	27:19:256:GLY:N	2.33	0.43
25:1H:2262:U:H4'	25:1H:2328:A:C2	2.53	0.43
50:M8:24:THR:OG1	50:M8:25:TYR:N	2.51	0.43
25:14:2244:U:H2'	25:14:2245:U:O4'	2.18	0.43
25:14:574:C:H1'	25:14:2055:C:C6	2.53	0.43
56:2L:19:G:C4	56:2L:59:A:C2	3.06	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:1E:17:PHE:CB	2:1E:44:LEU:HD21	2.48	0.43
25:1H:826:U:H5"	25:1H:2428:G:O3'	2.19	0.43
25:14:864:G:H1'	25:14:914:C:N4	2.34	0.43
8:7E:80:ILE:H	8:7E:80:ILE:HG12	1.65	0.43
25:14:686:G:H5"	52:L5:11:LYS:NZ	2.34	0.43
3:22:57:ILE:HG12	3:22:66:VAL:HG22	2.00	0.43
25:14:1328:G:H2'	25:14:1330:C:C4	2.53	0.43
45:D5:19:ARG:HB2	45:D5:19:ARG:HE	1.43	0.43
25:1H:2395:C:H5"	25:1H:2396:G:OP2	2.18	0.43
15:6A:4:THR:N	15:6A:7:GLU:OE2	2.43	0.43
31:51:164:TYR:N	31:51:167:GLU:OE1	2.48	0.43
25:14:2408:U:H2'	25:14:2409:G:H8	1.83	0.43
54:1G:537:G:H5"	12:3A:113:ARG:HH12	1.84	0.43
25:1H:24:G:C6	25:1H:25:U:C4	3.06	0.43
25:1H:26:G:C6	25:1H:27:G:N1	2.86	0.43
25:1H:41:C:H42	25:1H:438:G:H1	1.67	0.43
25:1H:2016:U:H1'	51:N8:6:VAL:HG13	2.00	0.43
25:1H:834:C:H2'	25:1H:835:A:O4'	2.19	0.43
25:1H:2130:U:H2'	25:1H:2131:G:H5"	1.99	0.43
48:K8:14:ARG:HA	48:K8:67:LYS:NZ	2.32	0.43
39:B8:64:ARG:HB2	39:B8:73:GLU:HG2	2.00	0.43
33:58:137:LYS:HE3	33:58:138:LEU:O	2.18	0.43
17:8I:4:LYS:HG2	17:8I:6:LEU:HD21	2.00	0.43
33:15:97:ARG:HA	33:15:100:GLU:HB2	2.00	0.43
36:88:103:MET:H	36:88:103:MET:HG2	1.50	0.43
31:59:172:LYS:HE2	31:59:172:LYS:HB3	1.69	0.43
1:13:778:G:H8	1:13:778:G:O5'	2.02	0.43
9:82:95:LYS:HE2	9:82:95:LYS:HB2	1.48	0.43
33:15:121:LYS:HD2	33:15:121:LYS:N	2.33	0.43
12:3A:12:ARG:HE	12:3A:12:ARG:HB3	1.47	0.43
36:45:29:PHE:HD2	36:45:65:PHE:CE1	2.37	0.43
23:2K:2:G:H2'	23:2K:3:C:H6	1.83	0.43
54:1G:1097:C:H1'	54:1G:1169:A:H2	1.84	0.43
22:3K:38:MIA:C8	22:3K:38:MIA:H5"	2.38	0.43
1:13:452:A:O2'	1:13:453:A:O5'	2.37	0.43
54:1G:533:A:C8	54:1G:536:C:N4	2.86	0.43
54:1G:827:U:H3	54:1G:872:A:N6	2.07	0.43
25:1H:1050:A:H1'	25:1H:2751:G:C8	2.53	0.43
25:1H:120:U:H4'	25:1H:121:G:H5"	2.00	0.43
41:95:85:LYS:HD2	41:95:87:HIS:H	1.84	0.43
53:Q8:34:TRP:CE3	53:Q8:37:SER:O	2.72	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:D5:71:VAL:HB	45:D5:88:PHE:HE1	1.82	0.43
23:2K:17:C:H5'	23:2K:62:C:OP1	2.18	0.43
26:16:15:A:H3'	26:16:16:G:H5'	2.00	0.43
29:31:63:LYS:NZ	29:31:75:HIS:O	2.46	0.43
27:19:13:ARG:HA	27:19:13:ARG:HD2	1.81	0.43
28:21:166:THR:HG21	28:21:199:ARG:HH22	1.83	0.43
54:1G:115:G:H4'	54:1G:116:A:O5'	2.18	0.43
15:6A:24:SER:O	15:6A:28:GLN:HG3	2.18	0.43
50:M8:16:CYS:HB3	50:M8:18:CYS:SG	2.59	0.43
54:1G:210:U:O4'	54:1G:210:U:OP1	2.37	0.43
1:13:727:G:N2	1:13:730:G:OP2	2.34	0.43
1:13:224:C:H2'	1:13:225:C:H6	1.82	0.43
1:13:1492:A:OP1	12:3I:47:LYS:N	2.45	0.43
20:BI:67:ALA:HA	20:BI:72:LEU:O	2.18	0.43
25:14:654(L):G:H2'	25:14:654(M):C:O4'	2.19	0.43
42:A5:72:LYS:HE2	42:A5:108:GLY:HA3	2.01	0.43
25:1H:1204:A:H2	25:1H:1241:A:N1	2.16	0.43
25:14:942:G:H4'	25:14:1190:G:H5'	2.00	0.43
25:1H:2815:C:H2'	25:1H:2816:C:C6	2.52	0.43
54:1G:1075:C:O2'	2:12:175:ARG:NH1	2.48	0.43
25:14:196:A:O4'	35:35:46:LYS:HE3	2.18	0.43
25:14:2754:U:H3'	25:14:2755:C:H5"	1.99	0.43
5:42:140:ARG:CZ	5:42:140:ARG:HB2	2.49	0.43
1:13:345:C:H4'	1:13:346:G:N3	2.34	0.43
30:49:64:THR:OG1	30:49:94:LEU:HD22	2.19	0.43
4:32:108:LEU:HD21	4:32:183:GLY:HA3	2.01	0.43
4:3E:23:GLY:HA2	4:3E:112:VAL:HG22	2.00	0.43
25:14:375:C:H2'	25:14:376:C:C6	2.53	0.43
25:14:2469:A:H2'	36:45:56:ARG:HE	1.84	0.43
54:1G:927:G:C2	54:1G:1391:U:H1'	2.54	0.43
31:59:99:VAL:HG13	31:59:100:GLY:H	1.83	0.43
54:1G:308:C:H2'	54:1G:309:G:C8	2.53	0.43
18:9I:19:LYS:HA	18:9I:19:LYS:HD2	1.78	0.43
32:69:59:ALA:HA	32:69:62:LYS:HB3	2.01	0.43
31:51:102:ALA:HA	31:51:117:PRO:HD3	2.01	0.43
44:C5:62:GLU:HG3	44:C5:62:GLU:H	1.41	0.43
42:E8:59:VAL:HG21	42:E8:66:GLU:HB2	2.00	0.43
25:14:2714:G:P	60:14:3468:HOH:O	2.77	0.43
25:1H:2635:C:O3'	28:21:79:ARG:HD3	2.18	0.43
26:1J:44:G:H1'	26:1J:47:C:N4	2.34	0.43
54:1G:1131:G:H2'	54:1G:1132:C:H6	1.84	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:14:2786:U:H4'	28:29:64:LYS:C	2.39	0.43
28:29:63:LEU:HD23	28:29:63:LEU:N	2.33	0.43
26:16:27:C:H5"	38:A8:54:LEU:HD21	2.01	0.43
54:1G:992:U:H4'	54:1G:993:G:O5'	2.19	0.43
20:BI:74:LYS:HB3	20:BI:75:ASN:H	1.39	0.43
40:C8:92:ARG:CZ	40:C8:96:ALA:N	2.80	0.43
47:F5:91:LYS:HZ2	47:F5:92:LYS:H	1.66	0.43
1:13:875:C:H1'	8:7E:15:ASN:OD1	2.19	0.43
23:2K:9:G:N2	23:2K:47:7MG:H82	2.34	0.43
25:14:2167:U:H2'	25:14:2168:G:H5'	2.00	0.43
22:3K:17:OMG:H1'	22:3K:17:OMG:HM23	1.85	0.43
25:14:1011:G:C2	25:14:1151:G:C2	3.06	0.43
54:1G:1287:A:N3	54:1G:1353:G:O2'	2.44	0.43
48:K8:48:HIS:H	48:K8:50:ILE:CD1	2.30	0.43
11:2A:18:ARG:HB3	11:2A:33:THR:OG1	2.19	0.43
25:14:869:G:H5'	36:45:6:ARG:HH12	1.84	0.43
10:1A:76:ASN:HB3	10:1A:78:ASN:HD22	1.83	0.43
40:85:24:TYR:O	40:85:29:SER:HB3	2.19	0.43
4:3E:92:VAL:O	4:3E:96:LEU:HD22	2.19	0.43
27:11:240:ALA:HA	27:11:241:PRO:HD2	1.67	0.43
25:1H:1071:G:H8	25:1H:1071:G:O5'	2.01	0.43
25:14:749:C:OP2	60:14:3643:HOH:O	2.21	0.43
54:1G:757:U:O2'	54:1G:879:C:O2	2.33	0.43
1:13:57:G:C5	1:13:58:C:C4	3.05	0.43
35:35:41:ARG:HD2	35:35:41:ARG:N	2.33	0.43
25:1H:922:U:H1'	46:I8:26:TYR:CD2	2.54	0.43
25:1H:485:C:O5'	25:1H:485:C:H6	2.02	0.43
25:1H:2481:G:O2'	25:1H:2482:G:O5'	2.34	0.43
30:41:151:ALA:HB3	30:41:153:ARG:HH12	1.84	0.43
25:14:2884:U:H2'	25:14:2885:C:O4'	2.18	0.43
25:14:852:G:H2'	25:14:853:G:C8	2.53	0.43
32:69:79:ILE:O	32:69:143:SER:N	2.52	0.43
1:13:294:U:O4	1:13:295:C:N4	2.51	0.43
17:8A:82:MET:O	17:8A:85:VAL:HB	2.18	0.43
55:3L:28:G:H22	55:3L:45:C:H1'	1.84	0.43
25:1H:2633:G:H1'	28:21:62:PRO:HG2	2.00	0.43
1:13:593:G:H2'	1:13:594:G:H8	1.84	0.43
25:1H:1668:A:O4'	25:1H:1669:A:C2	2.72	0.43
25:1H:2881:C:H2'	25:1H:2882:A:C8	2.54	0.43
1:13:1338:G:H2'	1:13:1339:A:C8	2.54	0.43
5:42:111:GLU:HG2	5:42:112:LEU:HD23	2.00	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:22:150:LYS:HG3	3:22:169:ALA:HB2	2.00	0.43
54:1G:634:C:H3'	54:1G:634:C:H6	1.83	0.43
11:2A:99:GLN:HG3	11:2A:105:VAL:HG11	2.01	0.43
25:14:2291:U:OP1	25:14:2381:C:H5'	2.19	0.43
54:1G:776:G:N2	54:1G:802:A:OP2	2.52	0.43
27:19:43:ARG:HH11	27:19:43:ARG:CG	2.32	0.43
31:51:6:ARG:HB3	31:51:65:HIS:HB3	2.00	0.43
54:1G:1129:C:N4	54:1G:1133:G:O6	2.51	0.43
26:1J:80:U:C2	26:1J:81:G:N2	2.87	0.43
54:1G:843:U:C5	54:1G:848:C:H1'	2.54	0.43
33:58:133:GLN:HG2	33:58:134:ARG:H	1.83	0.43
25:1H:2392:A:H2	25:1H:2424:C:N4	2.11	0.43
25:14:2075:U:H2'	25:14:2238:G:N2	2.33	0.43
1:13:953:G:H2'	1:13:954:G:O4'	2.18	0.43
13:4I:108:ARG:NH1	13:4I:108:ARG:HG3	2.25	0.43
25:1H:2111:C:C5	25:1H:2147:G:N1	2.87	0.43
54:1G:591:U:H2'	54:1G:592:G:C8	2.54	0.43
2:1E:76:GLN:NE2	2:1E:206:ASP:HB3	2.34	0.43
30:41:67:LYS:H	30:41:67:LYS:HE2	1.84	0.43
1:13:1118:C:H1'	1:13:1179:A:C5	2.54	0.43
25:14:476:G:N1	25:14:479:A:OP2	2.52	0.43
26:1J:73:A:C4	26:1J:104:A:C2	3.07	0.43
25:14:2054:A:H5"	25:14:2055:C:O5'	2.19	0.43
25:1H:633:A:H2'	25:1H:634:C:H5'	2.01	0.43
35:35:39:LYS:HE2	35:35:45:LEU:HD22	2.01	0.43
25:14:213:A:H5"	25:14:214:G:OP2	2.19	0.43
25:14:919:G:C6	25:14:920:G:C5	3.06	0.43
25:1H:2345:G:N3	25:1H:2381:C:H2'	2.34	0.43
33:15:56:ASN:H	33:15:125:GLY:CA	2.31	0.43
29:39:21:ALA:O	29:39:23:ASP:N	2.52	0.43
3:22:43:LEU:HD11	3:22:68:VAL:HG21	1.99	0.43
25:1H:2757:A:H2'	25:1H:2758:A:H5'	2.00	0.43
25:14:1567:A:OP2	27:19:84:TYR:OH	2.26	0.43
25:14:2319:G:N1	25:14:2334:G:OP2	2.40	0.43
25:14:2579:C:H2'	25:14:2580:U:O4'	2.18	0.43
29:31:134:GLY:HA3	29:31:162:LEU:O	2.18	0.43
29:31:8:GLN:N	29:31:8:GLN:CD	2.71	0.43
1:13:1286:A:C8	1:13:1287:A:H4'	2.53	0.43
25:14:592:G:C8	25:14:592:G:H5"	2.53	0.43
14:5I:53:LEU:HA	14:5I:53:LEU:HD23	1.64	0.43
14:5I:53:LEU:HA	14:5I:54:PRO:HD3	1.84	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:1G:1137:C:H4'	54:1G:1138:G:C2	2.54	0.43
25:1H:2294:C:C4	25:1H:2295:C:C5	3.06	0.43
1:13:1380:U:O4	7:6E:2:ALA:N	2.51	0.43
1:13:1244:C:O2	1:13:1294:G:N2	2.52	0.43
25:14:1462:C:H4'	25:14:2703:C:H5'	2.00	0.43
23:2K:73:A:N6	23:2K:74:A:C6	2.87	0.43
25:14:2861:G:C2	25:14:2862:G:C4	3.06	0.43
38:65:99:LYS:HG2	38:65:103:GLU:HG3	2.00	0.43
25:14:1519:G:C6	25:14:1520:U:N3	2.87	0.43
29:39:170:LEU:HA	29:39:171:PRO:HD3	1.71	0.43
25:1H:196:A:C8	35:78:46:LYS:HD2	2.54	0.43
54:1G:937:A:C2	54:1G:1379:G:O6	2.72	0.43
15:6A:43:LEU:HD11	15:6A:53:HIS:HA	2.00	0.43
13:4I:90:LEU:HA	13:4I:93:ARG:HB2	2.00	0.43
45:D5:25:PRO:O	45:D5:85:HIS:HA	2.19	0.43
2:12:55:PHE:HA	2:12:55:PHE:HD1	1.67	0.43
54:1G:800:G:H8	54:1G:800:G:O5'	2.02	0.43
44:G8:34:LYS:O	44:G8:34:LYS:HG2	2.18	0.43
31:59:30:LYS:HD2	31:59:30:LYS:HA	1.74	0.43
30:49:51:ARG:O	30:49:51:ARG:HG2	2.19	0.43
1:13:967:C:H6	1:13:967:C:O5'	2.02	0.43
25:14:2533:A:H8	25:14:2533:A:O5'	2.01	0.43
25:1H:1981:A:OP1	60:1H:3546:HOH:O	2.21	0.43
54:1G:1321:C:O2	19:AA:77:THR:OG1	2.30	0.43
25:14:1638:C:OP1	25:14:2710:C:O2'	2.34	0.43
26:1J:46:A:H2'	26:1J:47:C:C6	2.54	0.43
1:13:1176:A:N1	1:13:1177:G:C4	2.87	0.43
25:14:1112:G:H2'	25:14:1113:U:C6	2.54	0.43
44:G8:94:LYS:NZ	44:G8:95:LYS:H	2.16	0.43
40:C8:47:TYR:HA	40:C8:50:ARG:CZ	2.49	0.43
55:3L:62:G:H2'	55:3L:63:U:C6	2.54	0.43
25:1H:2141:G:H2'	25:1H:2142:C:C6	2.54	0.43
4:32:134:ASP:OD1	4:32:135:LEU:HD13	2.18	0.43
25:14:2748:A:C4	25:14:2749:A:C8	3.06	0.43
6:5E:82:ARG:CB	6:5E:83:ASP:CA	2.96	0.43
54:1G:738:C:H6	54:1G:738:C:O5'	2.02	0.43
25:1H:66:C:H2'	25:1H:67:U:C6	2.53	0.43
29:31:6:VAL:HG12	29:31:7:TYR:H	1.84	0.43
25:1H:1055:G:N2	25:1H:1104:C:N3	2.59	0.43
6:5E:18:GLN:O	6:5E:21:LEU:HB2	2.19	0.43
25:14:1007:C:H5"	33:15:35:ARG:NH1	2.33	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:15:35:ARG:HB2	33:15:42:TRP:CH2	2.54	0.43
31:59:137:ASP:CG	31:59:138:LYS:H	2.21	0.43
25:1H:1164:G:C2	25:1H:1165:U:C2	3.06	0.43
25:1H:1991:U:H2'	25:1H:1992:G:H5"	2.00	0.43
54:1G:1054:C:OP1	54:1G:1197:G:P	2.77	0.43
9:82:48:GLU:OE1	9:82:51:ARG:NH1	2.51	0.43
25:1H:2313:C:H5"	30:41:91:ARG:HG3	2.01	0.43
45:D5:122:ARG:HG3	45:D5:123:ASP:OD1	2.19	0.43
29:31:181:LEU:HD23	29:31:181:LEU:HA	1.88	0.43
25:14:588:U:O4	25:14:670:A:H1'	2.19	0.43
56:2L:62:C:H2'	56:2L:63:C:H6	1.83	0.43
25:1H:611:C:C2'	25:1H:612:G:H5'	2.49	0.43
9:8E:26:VAL:HG13	9:8E:61:ALA:HB3	2.01	0.43
54:1G:677:U:H2'	54:1G:678:U:H6	1.81	0.43
54:1G:222:U:C2	54:1G:223:U:C5	3.07	0.43
10:1A:35:SER:HB3	10:1A:73:ASP:HB2	2.00	0.43
54:1G:1080:A:OP1	5:42:47:LYS:HE3	2.19	0.43
3:22:8:ILE:HD12	3:22:16:ARG:HG2	2.01	0.43
54:1G:34:C:H2'	54:1G:35:G:H8	1.83	0.43
30:49:41:GLN:O	30:49:43:LEU:HD22	2.18	0.43
30:49:19:LEU:HD13	30:49:32:PRO:HD2	2.01	0.43
29:39:132:VAL:HG13	29:39:133:ASN:CG	2.40	0.43
25:1H:2259:G:C2	25:1H:2282:G:N1	2.87	0.43
25:1H:2025:C:H2'	25:1H:2026:C:C6	2.54	0.43
1:13:753:A:H4'	1:13:754:C:H5"	2.01	0.43
25:14:638:G:C5	25:14:651:G:C2	3.07	0.43
5:42:7:GLU:HB3	5:42:35:GLY:O	2.19	0.43
54:1G:736:C:H2'	54:1G:737:A:C8	2.54	0.43
23:2K:73:A:C6	23:2K:74:A:C6	3.07	0.43
7:62:133:GLY:HA2	7:62:136:LYS:HB2	2.00	0.43
14:5A:37:PHE:CE1	14:5A:53:LEU:HD13	2.54	0.43
2:12:125:PRO:HA	2:12:127:ILE:HG12	2.00	0.43
25:1H:540:G:H2'	25:1H:541:C:C6	2.54	0.43
25:1H:2027:G:C5	25:1H:2028:U:C5	3.07	0.43
31:51:38:SER:HB2	31:51:64:LEU:HD22	2.00	0.43
30:49:53:LEU:HD11	30:49:70:VAL:HG12	2.01	0.43
45:H8:68:PRO:O	45:H8:91:LEU:HD22	2.18	0.43
25:1H:2413:G:C2	25:1H:2414:G:C4	3.07	0.43
32:69:7:GLU:HG3	32:69:8:PRO:N	2.34	0.43
37:55:12:ARG:HG2	37:55:16:HIS:CG	2.53	0.43
1:13:895:G:H2'	1:13:896:C:C6	2.54	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:1G:1402:C:H2'	54:1G:1403:C:O4'	2.18	0.43
54:1G:313:A:H2'	54:1G:314:C:C6	2.53	0.43
55:3L:10:C:H2'	55:3L:11:C:C6	2.54	0.43
17:8I:48:GLU:O	17:8I:50:LYS:HG2	2.19	0.43
31:59:94:TYR:N	31:59:94:TYR:CD1	2.85	0.43
14:5A:11:LYS:HD2	14:5A:11:LYS:HA	1.69	0.43
11:2A:124:LYS:HG2	11:2A:124:LYS:H	1.07	0.43
25:1H:319:C:C2	25:1H:333:G:N2	2.87	0.43
4:32:18:LYS:HE2	4:32:18:LYS:HB3	1.81	0.43
25:14:2786:U:H4'	28:29:65:GLY:N	2.34	0.43
35:78:39:LYS:HG3	35:78:45:LEU:CD2	2.48	0.43
15:6A:75:PRO:HA	15:6A:78:TYR:HB3	2.00	0.43
33:58:65:LYS:HE3	33:58:65:LYS:HB2	1.59	0.43
25:1H:1386:C:C2	25:1H:1387:C:C5	3.07	0.43
25:14:102:G:OP1	48:G5:7:ARG:NH2	2.51	0.43
54:1G:428:G:C5	54:1G:430:A:C6	3.06	0.43
39:B8:114:LEU:HA	39:B8:114:LEU:HD22	1.69	0.43
56:2L:65:G:C6	56:2L:66:C:N4	2.87	0.43
38:65:109:GLY:O	38:65:110:LEU:HD22	2.19	0.43
54:1G:8:A:H8	5:42:101:ILE:HB	1.83	0.43
26:1J:14:U:H5'	26:1J:71:C:O4'	2.18	0.43
25:14:900:A:H2'	25:14:900:A:N3	2.34	0.43
2:1E:21:ARG:C	2:1E:23:ARG:H	2.22	0.43
18:9I:68:LYS:HA	18:9I:71:LYS:HD2	2.01	0.43
25:1H:458:G:N7	52:P8:37:LYS:HD2	2.33	0.43
18:9A:22:VAL:HG12	18:9A:55:ARG:O	2.19	0.43
20:BA:73:HIS:HB3	20:BA:74:LYS:H	1.49	0.43
27:19:16:MET:HG2	27:19:206:LEU:O	2.18	0.43
25:14:819:A:OP2	25:14:1187:G:N2	2.51	0.43
25:14:2889:C:H3'	25:14:2891:G:H8	1.84	0.43
43:B5:12:VAL:HG13	43:B5:27:THR:OG1	2.18	0.43
25:1H:1678:G:H22	25:1H:1989:G:N2	2.15	0.43
34:25:111:PHE:O	34:25:115:VAL:HG23	2.19	0.43
7:62:71:PRO:HD3	7:62:103:TRP:HZ3	1.84	0.43
25:1H:2134:A:OP2	25:1H:2157:G:N2	2.52	0.43
6:52:14:LEU:HB2	6:52:18:GLN:OE1	2.18	0.43
52:L5:34:ARG:HB3	52:L5:42:LEU:HD22	1.99	0.43
54:1G:1228:C:H2'	54:1G:1229:A:H8	1.83	0.43
7:62:26:PHE:CD2	7:62:30:ILE:HD11	2.53	0.43
25:1H:773:U:H4'	27:11:47:GLY:CA	2.49	0.43
31:59:120:GLY:HA3	31:59:136:ILE:HD11	2.01	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:1G:223:U:H2'	54:1G:224:C:H6	1.83	0.43
39:B8:19:LEU:HA	39:B8:20:PRO:HD3	1.76	0.43
37:98:70:LEU:HA	37:98:70:LEU:HD23	1.82	0.43
25:1H:518:G:H2'	25:1H:519:U:H6	1.84	0.43
6:5E:5:GLU:HB3	6:5E:62:TRP:NE1	2.33	0.43
39:75:31:SER:HG	39:75:85:LYS:NZ	2.15	0.43
39:B8:74:ARG:HD3	39:B8:76:PHE:CE1	2.54	0.43
54:1G:593:G:H2'	54:1G:594:G:O4'	2.18	0.43
25:14:2208:U:H2'	25:14:2209:C:H6	1.84	0.43
26:16:28:C:O2'	26:16:29:A:H5'	2.19	0.43
25:1H:533:G:N3	40:C8:45:TYR:CE2	2.87	0.43
25:1H:1207:C:C2	25:1H:1208:C:C5	3.06	0.43
25:14:1199:U:H2'	25:14:1200:C:C6	2.54	0.43
30:49:114:ILE:HD11	30:49:140:ILE:HD13	2.00	0.43
25:14:233:A:H2'	25:14:234:C:H6	1.83	0.43
17:8I:82:MET:O	17:8I:86:GLU:HB2	2.19	0.43
25:14:1016:G:H2'	25:14:1017:G:O4'	2.19	0.43
29:31:199:TRP:O	29:31:202:PHE:HB3	2.19	0.43
54:1G:735:C:H2'	54:1G:736:C:H6	1.83	0.43
39:B8:7:ILE:O	39:B8:10:VAL:HB	2.19	0.43
37:55:12:ARG:HG2	37:55:16:HIS:CD2	2.54	0.43
25:1H:902:C:O2'	25:1H:903:C:H5'	2.18	0.43
54:1G:1001:G:H1	54:1G:1039:C:H42	1.66	0.43
17:8I:13:ASP:OD1	17:8I:53:LEU:HD13	2.19	0.43
2:1E:122:PHE:O	2:1E:127:ILE:HD12	2.19	0.43
20:BI:50:GLU:HG3	20:BI:100:ILE:HG12	2.01	0.43
25:14:1588:C:H5'	25:14:1589:C:OP2	2.18	0.43
1:13:148:G:N2	1:13:175:C:O2	2.52	0.43
25:1H:2318:G:H22	38:A8:2:ALA:N	2.17	0.43
25:14:1967:C:H2'	25:14:1968:G:O4'	2.19	0.43
14:5I:15:LYS:HG2	14:5I:16:PHE:CE2	2.54	0.43
25:1H:1957:C:H2'	25:1H:1958:C:C6	2.54	0.43
37:55:18:LEU:HD13	37:55:22:ARG:NH1	2.34	0.43
34:25:89:ASN:OD1	34:25:89:ASN:N	2.52	0.43
15:6I:38:ARG:HH11	15:6I:38:ARG:HG2	1.84	0.43
4:32:102:ASP:N	4:32:102:ASP:OD1	2.51	0.43
25:1H:2518:A:H8	25:1H:2518:A:H5'	1.83	0.43
13:4I:27:LYS:HA	13:4I:31:LYS:NZ	2.34	0.43
17:8I:62:SER:HB3	17:8I:72:ARG:HH21	1.84	0.43
25:14:873:G:N2	25:14:905:U:N3	2.67	0.43
2:12:56:ARG:O	2:12:60:ASP:HB2	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:G5:63:VAL:HA	48:G5:66:GLU:HG2	2.00	0.43
25:14:35:G:H2'	25:14:36:G:O4'	2.19	0.43
54:1G:1321:C:H4'	13:4A:87:TYR:CE1	2.53	0.42
4:32:30:LYS:HB2	4:32:32:ALA:H	1.82	0.42
25:1H:674:G:O2'	29:31:74:ARG:HD3	2.19	0.42
1:13:631:G:C5	1:13:632:A:H2	2.36	0.42
53:M5:14:VAL:HG12	53:M5:15:LYS:N	2.33	0.42
27:19:242:ARG:N	27:19:242:ARG:HH11	2.05	0.42
37:98:1:MET:O	37:98:2:ARG:HG3	2.19	0.42
25:1H:1777:U:C2'	25:1H:1778:U:H5'	2.49	0.42
25:1H:2111:C:O2'	25:1H:2119:A:OP1	2.36	0.42
13:4I:34:LEU:HD12	13:4I:39:ILE:O	2.19	0.42
41:95:84:LYS:HA	41:95:84:LYS:HD2	1.61	0.42
25:1H:639:U:H3	25:1H:649:G:H1	1.67	0.42
56:2L:23:G:C6	56:2L:24:C:C4	3.06	0.42
54:1G:673:G:O3'	6:52:87:ARG:NH2	2.52	0.42
2:12:178:ARG:HA	2:12:178:ARG:HD3	1.70	0.42
54:1G:406:G:H1'	54:1G:495:A:N1	2.33	0.42
45:D5:4:ARG:CA	45:D5:58:VAL:HB	2.45	0.42
19:AA:12:ASP:O	19:AA:16:LEU:HB2	2.19	0.42
25:14:2438:U:H5"	25:14:2600:A:OP1	2.19	0.42
25:14:1798:U:H5'	27:19:259:THR:OG1	2.19	0.42
20:BA:74:LYS:HB3	20:BA:75:ASN:H	1.59	0.42
25:1H:2611:U:C4	51:N8:3:LYS:HG2	2.53	0.42
32:69:76:THR:HG23	32:69:77:LEU:N	2.34	0.42
25:1H:587:C:OP2	35:78:21:ARG:NH2	2.52	0.42
43:B5:52:VAL:N	43:B5:82:GLN:O	2.47	0.42
54:1G:1329:A:H5"	13:4A:25:ILE:O	2.19	0.42
41:95:71:LEU:N	41:95:86:GLY:HA3	2.34	0.42
8:7E:105:ARG:HA	8:7E:105:ARG:HD3	1.53	0.42
1:13:222:U:H2'	1:13:223:U:C6	2.54	0.42
54:1G:1293:G:H2'	54:1G:1294:G:H8	1.83	0.42
1:13:401:C:H2'	1:13:402:G:C8	2.53	0.42
25:1H:2290:G:C6	25:1H:2291:U:N3	2.86	0.42
25:1H:495:G:H1'	42:E8:57:ASN:OD1	2.18	0.42
54:1G:778:G:H2'	54:1G:779:C:O4'	2.19	0.42
25:1H:1007:C:H5"	33:58:35:ARG:NH1	2.34	0.42
25:1H:1749:A:H2'	25:1H:1750:G:O4'	2.18	0.42
54:1G:1343:G:H2'	54:1G:1344:C:C6	2.53	0.42
25:14:559:G:O2'	40:85:52:ARG:NH1	2.50	0.42
54:1G:1106:G:H5"	3:22:172:ARG:CG	2.49	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:75:61:PHE:CE1	39:75:76:PHE:HB2	2.54	0.42
26:16:71:C:C2	26:16:72:G:C8	3.07	0.42
28:21:125:GLY:HA3	28:21:134:ILE:CD1	2.49	0.42
5:42:140:ARG:HB2	5:42:140:ARG:NH1	2.34	0.42
5:42:6:PHE:HB2	5:42:34:VAL:HG22	2.01	0.42
25:1H:2246:G:H2'	25:1H:2247:A:H8	1.84	0.42
25:1H:16:G:N3	25:1H:17:G:C8	2.87	0.42
25:1H:902:C:H2'	25:1H:903:C:C6	2.54	0.42
13:4I:31:LYS:H	13:4I:31:LYS:HD2	1.83	0.42
25:1H:2839:G:C6	25:1H:2840:C:C4	3.07	0.42
25:14:46:C:OP2	25:14:215:G:H2'	2.19	0.42
25:14:2774:C:H2'	25:14:2775:A:O4'	2.19	0.42
25:1H:2108:C:H2'	25:1H:2109:U:O4'	2.19	0.42
5:42:13:ILE:HA	5:42:29:GLY:O	2.19	0.42
25:14:227:A:C2	25:14:2407:G:H1'	2.54	0.42
54:1G:1078:U:H1'	5:42:130:ASN:HD21	1.84	0.42
41:D8:18:LEU:HD13	41:D8:20:LEU:HB2	2.00	0.42
25:1H:2402:C:H5	25:1H:2415:G:H22	1.67	0.42
25:14:270(L):U:O2	32:69:50:ARG:HD2	2.19	0.42
48:K8:20:GLU:O	48:K8:24:LEU:HB2	2.18	0.42
1:13:986:A:H2'	1:13:987:G:O4'	2.19	0.42
9:82:13:ALA:HB2	9:82:68:GLY:HA3	2.01	0.42
2:12:24:TRP:C	2:12:24:TRP:CD1	2.92	0.42
25:1H:888:C:H2'	25:1H:889:C:C2	2.54	0.42
1:13:34:C:H2'	1:13:35:G:C8	2.54	0.42
1:13:912:C:O2'	1:13:913:A:H5'	2.19	0.42
25:1H:1153:C:C4	25:1H:1154:G:C5	3.07	0.42
25:1H:703:U:H2'	25:1H:704:G:O4'	2.19	0.42
9:82:63:ILE:HD11	9:82:81:ILE:HD11	2.01	0.42
1:13:1374:A:C2	1:13:1375:A:N7	2.87	0.42
35:78:35:HIS:HB3	35:78:36:LYS:H	1.31	0.42
46:I8:53:MET:HA	46:I8:58:THR:O	2.19	0.42
25:1H:654(G):C:O2	25:1H:654(N):G:N2	2.37	0.42
38:65:52:SER:O	38:65:56:LEU:HG	2.19	0.42
44:G8:87:LYS:H	44:G8:94:LYS:CG	2.28	0.42
16:7I:53:VAL:O	16:7I:57:ARG:HG2	2.19	0.42
40:C8:47:TYR:CD2	40:C8:48:ALA:N	2.87	0.42
40:C8:95:LEU:C	40:C8:97:ASP:N	2.71	0.42
45:H8:163:LEU:HD13	45:H8:165:VAL:HA	2.01	0.42
28:29:57:LYS:HZ2	28:29:57:LYS:H	1.65	0.42
38:65:14:VAL:HG11	38:65:89:ARG:HE	1.83	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:A5:59:VAL:HG12	42:A5:60:ASN:ND2	2.34	0.42
25:1H:1068:G:H4'	25:1H:1070:A:N6	2.34	0.42
23:2K:54:G:C5	23:2K:55:5MU:H72	2.53	0.42
38:65:3:ARG:HE	38:65:4:LEU:HB2	1.84	0.42
52:P8:37:LYS:HG3	52:P8:37:LYS:O	2.17	0.42
25:14:171:G:H2'	25:14:172:C:H6	1.83	0.42
30:49:111:LEU:HD23	30:49:111:LEU:HA	1.83	0.42
9:8E:9:ARG:HG2	9:8E:104:ARG:CZ	2.49	0.42
25:14:2712(A):A:P	60:14:3466:HOH:O	2.77	0.42
25:1H:1786:A:C2	25:1H:2606:C:H1'	2.48	0.42
25:1H:1166:C:H2'	25:1H:1167:U:C6	2.54	0.42
25:14:1257:C:H4'	29:39:83:PHE:CD1	2.53	0.42
54:1G:1441:G:H4'	54:1G:1442:G:C4	2.54	0.42
41:95:72:VAL:HG13	41:95:72:VAL:O	2.19	0.42
39:B8:56:GLY:N	39:B8:59:THR:HG22	2.34	0.42
31:51:107:VAL:HB	31:51:152:ARG:HG2	2.01	0.42
19:AI:21:GLU:O	19:AI:25:LYS:HB2	2.18	0.42
27:19:34:VAL:HG11	27:19:61:LEU:HG	2.01	0.42
48:G5:69:ARG:HG3	48:G5:69:ARG:H	1.66	0.42
54:1G:171:A:H2'	54:1G:172:A:H8	1.83	0.42
25:14:1233:C:H2'	25:14:1234:U:C6	2.52	0.42
32:61:1:MET:H2	32:61:21:VAL:H	1.67	0.42
54:1G:1376:U:H2'	54:1G:1377:A:C8	2.54	0.42
25:1H:1401:G:H2'	25:1H:1402:C:C6	2.54	0.42
25:1H:1204:A:O2'	25:1H:1205:U:OP2	2.34	0.42
25:14:2050:C:H2'	25:14:2051:A:O4'	2.20	0.42
16:7I:9:PHE:CZ	16:7I:18:ARG:HD2	2.54	0.42
25:14:2359:C:H42	25:14:2428:G:H1	1.67	0.42
38:65:67:ARG:NH1	38:65:67:ARG:HB2	2.34	0.42
54:1G:238:G:H5"	54:1G:239:U:OP2	2.19	0.42
1:13:1152:A:O3'	10:1I:13:HIS:NE2	2.51	0.42
25:1H:571:A:O2'	41:D8:78:LYS:NZ	2.50	0.42
25:1H:2358:G:H2'	25:1H:2359:C:H6	1.83	0.42
26:16:21:G:H1	26:16:62:C:N4	2.17	0.42
52:P8:10:ARG:O	52:P8:10:ARG:HG2	2.19	0.42
39:75:74:ARG:HD3	39:75:76:PHE:CZ	2.54	0.42
30:41:47:LYS:NZ	30:41:81:LYS:HB2	2.34	0.42
17:8I:81:ARG:HD3	17:8I:84:LEU:HG	2.00	0.42
1:13:392:G:H2'	1:13:393:A:O4'	2.18	0.42
2:1E:25:ASN:HA	2:1E:26:PRO:HD3	1.87	0.42
25:1H:1669:A:H5"	25:1H:2550:G:OP1	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:14:905:U:H5"	25:14:906:G:OP2	2.19	0.42
25:14:270(L):U:O5'	25:14:270(L):U:H6	2.02	0.42
51:J5:20:ARG:HA	51:J5:23:HIS:ND1	2.33	0.42
46:E5:17:GLN:HB2	46:E5:19:LYS:HZ1	1.83	0.42
1:13:66:G:O4'	1:13:173:U:C4	2.72	0.42
36:88:3:MET:HG2	36:88:4:PRO:O	2.19	0.42
8:7E:25:ASP:OD2	8:7E:60:ARG:HG3	2.19	0.42
2:12:146:GLN:O	2:12:150:SER:OG	2.24	0.42
25:14:1213:A:N3	25:14:1238:G:O2'	2.46	0.42
40:85:110:VAL:O	40:85:114:LYS:HG2	2.18	0.42
13:4A:106:ASN:N	13:4A:106:ASN:OD1	2.52	0.42
55:1L:2:G:H1	55:1L:80:C:H42	1.67	0.42
13:4I:25:ILE:HD11	13:4I:66:LEU:HD11	2.01	0.42
25:14:2057:A:O2'	25:14:2058:A:H5'	2.19	0.42
25:1H:249:C:H5"	60:1H:3550:HOH:O	2.19	0.42
4:32:9:CYS:HA	4:32:12:CYS:HB2	2.02	0.42
4:32:23:GLY:N	4:32:26:CYS:HB2	2.19	0.42
1:13:192:U:H2'	1:13:193:C:H6	1.85	0.42
35:78:50:ARG:HD3	53:Q8:58:ILE:CD1	2.42	0.42
26:1J:90:C:OP2	36:45:16:ARG:NH2	2.52	0.42
33:58:15:LEU:HD13	33:58:16:ILE:N	2.34	0.42
1:13:1143:G:H2'	1:13:1144:G:C8	2.54	0.42
13:4I:14:ARG:HB2	13:4I:17:VAL:HG23	1.99	0.42
40:C8:97:ASP:O	40:C8:101:ARG:N	2.45	0.42
30:41:37:VAL:HG13	30:41:159:VAL:HG12	2.01	0.42
22:3K:14:A:H2'	22:3K:14:A:N3	2.33	0.42
25:1H:1464:C:C2	25:1H:1465:G:C8	3.07	0.42
16:7I:3:LYS:O	16:7I:21:VAL:HA	2.19	0.42
2:12:97:TRP:CZ3	2:12:99:GLY:HA2	2.47	0.42
25:1H:2287:A:N3	25:1H:2289:G:C8	2.87	0.42
1:13:412:A:OP2	4:3E:35:ARG:NH2	2.52	0.42
54:1G:374:A:C6	54:1G:375:U:C4	3.07	0.42
54:1G:930:C:H42	54:1G:1387:G:H1	1.67	0.42
43:F8:25:LYS:HA	43:F8:81:VAL:O	2.20	0.42
44:C5:83:THR:HG22	44:C5:84:ARG:H	1.85	0.42
27:11:13:ARG:HD2	27:11:13:ARG:HA	1.74	0.42
2:12:88:ALA:HB2	2:12:219:VAL:HG23	2.01	0.42
15:6I:39:LEU:O	15:6I:42:HIS:N	2.51	0.42
15:6I:6:GLU:HG2	15:6I:7:GLU:N	2.34	0.42
37:98:52:ILE:O	37:98:55:ALA:N	2.51	0.42
53:Q8:61:LEU:N	53:Q8:62:LEU:HA	2.34	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:8A:67:LYS:O	17:8A:68:ARG:HB2	2.19	0.42
34:25:78:ARG:HH21	39:75:103:ARG:HH21	1.67	0.42
44:G8:83:THR:HG22	44:G8:84:ARG:N	2.31	0.42
28:21:181:LEU:HD13	28:21:181:LEU:HA	1.65	0.42
25:14:2535:G:H2'	25:14:2536:G:H8	1.84	0.42
46:E5:53:MET:HG3	46:E5:59:LEU:HD23	2.02	0.42
29:39:63:LYS:HD3	29:39:65:TRP:O	2.19	0.42
25:1H:1754:C:H2'	25:1H:1755:A:O4'	2.20	0.42
54:1G:1014:A:H2'	54:1G:1015:A:N9	2.34	0.42
44:C5:88:LYS:HB2	44:C5:89:PHE:H	1.61	0.42
25:1H:987:G:P	60:1H:3778:HOH:O	2.76	0.42
1:13:947:G:H2'	1:13:948:C:H6	1.84	0.42
29:39:120:GLU:HG3	29:39:122:LYS:HG2	2.01	0.42
34:68:112:MET:HG2	34:68:112:MET:H	1.70	0.42
25:1H:1639:U:H5"	25:1H:1639:U:H6	1.84	0.42
54:1G:1181:G:H2'	54:1G:1182:G:O4'	2.19	0.42
39:75:31:SER:HB3	39:75:42:ILE:HG23	1.99	0.42
1:13:564:C:C5	17:8I:31:LEU:HD11	2.54	0.42
25:14:1869:G:N2	25:14:1872:A:C8	2.88	0.42
25:1H:2706:G:H2'	25:1H:2707:G:O4'	2.19	0.42
8:72:20:TYR:HD1	8:72:65:TYR:CD1	2.37	0.42
39:75:12:SER:OG	39:75:13:ARG:N	2.50	0.42
25:1H:1417:C:H2'	25:1H:1418:G:O4'	2.19	0.42
1:13:1284:C:H3'	1:13:1285:A:C8	2.54	0.42
5:42:40:ARG:HA	5:42:67:VAL:O	2.20	0.42
25:1H:353:G:H2'	25:1H:354:G:C8	2.53	0.42
12:3A:84:LEU:C	12:3A:85:ILE:HD12	2.40	0.42
1:13:587:G:H4'	8:7E:3:THR:O	2.19	0.42
42:E8:71:VAL:HA	42:E8:107:LEU:HD12	2.01	0.42
9:8E:78:LYS:HE3	9:8E:101:PHE:CD1	2.54	0.42
25:1H:2761:G:H1'	31:51:143:GLN:OE1	2.19	0.42
25:1H:643:A:C2	25:1H:644:A:C4	3.08	0.42
1:13:124:G:H2'	1:13:125:U:O4'	2.19	0.42
25:1H:86:C:H4'	25:1H:104:U:H1'	2.02	0.42
25:1H:579:G:H2'	25:1H:580:C:C6	2.54	0.42
1:13:1428:A:H2'	1:13:1429:C:C6	2.54	0.42
25:14:410:G:C2	25:14:418:G:C2	3.07	0.42
40:85:69:CYS:O	40:85:74:LEU:HD12	2.19	0.42
32:69:56:LYS:O	32:69:60:GLU:HB3	2.20	0.42
31:59:144:VAL:O	31:59:148:ILE:HG12	2.19	0.42
31:51:88:LEU:HG	31:51:88:LEU:H	1.62	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:14:2859:G:H3'	25:14:2859:G:C8	2.54	0.42
10:1I:89:ASP:C	10:1I:91:PRO:HD3	2.39	0.42
25:1H:317:G:C2	25:1H:318:C:C2	3.07	0.42
3:2E:30:ARG:HD2	14:5I:38:GLY:HA3	2.01	0.42
26:1J:17:C:H2'	26:1J:18:G:O4'	2.18	0.42
25:14:997:G:OP2	40:85:58:ARG:NH1	2.53	0.42
54:1G:1127:G:C6	54:1G:1145:C:C2	3.08	0.42
1:13:1141:C:H2'	1:13:1142:G:O4'	2.20	0.42
25:14:741:G:H2'	25:14:742:G:C8	2.55	0.42
10:1I:76:ASN:HA	10:1I:77:PRO:HD2	1.88	0.42
25:1H:2147:G:N7	25:1H:2148:G:H1'	2.34	0.42
13:4I:34:LEU:O	13:4I:39:ILE:N	2.44	0.42
25:14:1225:C:H1'	41:95:84:LYS:HE2	2.01	0.42
25:1H:270(P):C:H2'	25:1H:270(Q):C:C6	2.53	0.42
54:1G:1227:A:C8	54:1G:1227:A:H3'	2.54	0.42
25:14:900:A:C4	25:14:901:A:C8	3.08	0.42
25:1H:32:C:C2'	25:1H:33:U:H5'	2.49	0.42
25:14:2287:A:O2'	25:14:2288:A:H5"	2.20	0.42
31:59:9:ILE:HA	31:59:10:PRO:HD3	1.87	0.42
15:6I:39:LEU:HA	15:6I:39:LEU:HD23	1.83	0.42
10:1I:84:GLN:HB3	10:1I:84:GLN:HE21	1.63	0.42
1:13:1097:C:C4	1:13:1098:C:C5	3.08	0.42
1:13:11:G:C5	1:13:12:U:C5	3.07	0.42
27:19:120:GLY:HA2	27:19:190:TYR:OH	2.20	0.42
25:14:686:G:H5"	52:L5:11:LYS:HZ3	1.84	0.42
29:39:23:ASP:O	29:39:25:PRO:HD3	2.20	0.42
3:22:40:ARG:HA	3:22:43:LEU:HB3	2.01	0.42
26:1J:78:A:C2	26:1J:99:A:C4	3.07	0.42
34:25:7:TYR:CD1	34:25:20:MET:HB2	2.54	0.42
25:14:817:C:O2'	25:14:839:U:OP1	2.30	0.42
27:19:270:ILE:HG12	27:19:270:ILE:H	1.26	0.42
46:E5:51:VAL:HG23	46:E5:81:VAL:HG23	2.02	0.42
25:14:768:G:H2'	25:14:769:G:C8	2.53	0.42
15:6A:12:ILE:HG12	15:6A:31:LEU:HD11	2.01	0.42
25:1H:1417:C:H42	25:1H:1581:G:H1	1.66	0.42
31:51:27:LYS:HA	31:51:32:GLU:HB3	2.00	0.42
43:F8:41:ASN:OD1	43:F8:41:ASN:N	2.52	0.42
44:C5:37:VAL:O	44:C5:67:LEU:N	2.48	0.42
25:1H:493:G:H2'	25:1H:494:G:O4'	2.19	0.42
9:8E:33:PHE:CE2	9:8E:47:LEU:HD11	2.55	0.42
25:1H:247:G:H4'	25:1H:386:G:C5	2.54	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:13:622:A:H2'	1:13:623:C:O4'	2.19	0.42
19:AA:30:LEU:HD21	19:AA:32:LYS:HE2	2.00	0.42
25:14:565:C:H4'	25:14:1253:A:C6	2.54	0.42
25:1H:1545(A):A:C2'	25:1H:1546:C:H5'	2.50	0.42
25:1H:2397:G:C2	25:1H:2420:C:O2	2.72	0.42
1:13:670:G:C6	1:13:671:G:C5	3.08	0.42
25:14:1340:U:H4'	25:14:1394:U:O2'	2.19	0.42
29:39:129:PHE:HA	29:39:142:TRP:NE1	2.34	0.42
54:1G:52:G:H2'	54:1G:53:A:O4'	2.19	0.42
2:12:162:ILE:HD11	2:12:184:VAL:HG22	2.01	0.42
5:42:110:LEU:O	5:42:115:VAL:HG23	2.19	0.42
28:29:21:VAL:HA	28:29:22:PRO:HD2	1.74	0.42
35:35:57:THR:O	35:35:58:THR:C	2.58	0.42
53:Q8:32:LEU:HD13	53:Q8:33:ASN:H	1.84	0.42
55:1L:37:A:C2	57:4L:20:A:C5	3.08	0.42
40:C8:110:VAL:O	40:C8:114:LYS:HG3	2.19	0.42
17:8A:89:LEU:HD23	17:8A:89:LEU:HA	1.76	0.42
25:14:1709:U:H2'	25:14:1710:C:C6	2.54	0.42
25:1H:2364:C:H2'	25:1H:2365:G:O4'	2.19	0.42
48:G5:15:LYS:H	48:G5:67:LYS:HE2	1.84	0.42
25:1H:880:G:O6	25:1H:895:U:C4	2.73	0.42
40:85:92:ARG:NH2	41:95:10:LYS:HA	2.35	0.42
54:1G:1277:C:O2'	54:1G:1279:A:H8	2.01	0.42
25:1H:2701:C:C3'	25:1H:2702:U:H5"	2.43	0.42
33:15:25:ARG:O	33:15:29:LYS:HG2	2.19	0.42
54:1G:651:C:H2'	54:1G:652:U:O4'	2.19	0.42
39:B8:50:ILE:CD1	39:B8:102:ILE:HD11	2.39	0.42
25:1H:2423:U:H4'	25:1H:2424:C:O5'	2.20	0.42
54:1G:918:A:H2'	54:1G:919:A:O4'	2.20	0.42
25:14:70:G:H21	25:14:71:A:H62	1.66	0.42
25:14:74:A:O5'	25:14:74:A:H8	2.02	0.42
26:1J:70:C:H42	26:1J:106:G:H1	1.67	0.42
25:14:1000:A:C6	25:14:1001:A:N1	2.87	0.42
25:1H:2257:U:C2'	25:1H:2258:C:H5'	2.49	0.42
13:4A:96:LEU:HD22	13:4A:103:THR:HG21	2.00	0.42
3:22:59:ARG:HH12	3:22:97:LYS:NZ	2.18	0.42
9:82:117:HIS:HB2	9:82:121:ARG:HG3	2.01	0.42
13:4A:84:ILE:C	13:4A:86:CYS:H	2.22	0.42
25:14:2286:A:H4'	25:14:2287:A:O4'	2.19	0.42
54:1G:728:A:C2	54:1G:729:A:C5	3.07	0.42
17:8I:22:LEU:HD22	17:8I:88:TYR:CD1	2.55	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:2A:101:SER:HB2	11:2A:103:LEU:N	2.33	0.42
25:14:212:G:H2'	25:14:213:A:O4'	2.19	0.42
39:75:80:SER:HA	39:75:81:PRO:HD3	1.91	0.42
54:1G:1347:G:N2	54:1G:1373:G:H2'	2.34	0.42
1:13:359:U:H2'	1:13:360:A:H8	1.82	0.42
25:14:1324:G:C5	25:14:1328:G:O6	2.73	0.42
45:D5:14:LYS:N	45:D5:14:LYS:HZ3	2.17	0.42
7:6E:146:GLU:O	7:6E:149:ARG:HB2	2.19	0.42
54:1G:1348:U:H3	54:1G:1374:A:H2	1.65	0.42
25:1H:570:G:H2'	25:1H:2030:A:C5	2.54	0.42
43:B5:48:LYS:HD3	43:B5:48:LYS:HA	1.72	0.42
54:1G:604:G:H2'	54:1G:605:U:O4'	2.19	0.42
26:1J:43:C:O2	30:49:95:ARG:NH2	2.52	0.42
54:1G:44:G:N2	54:1G:399:G:C4	2.87	0.42
36:45:43:THR:HA	36:45:94:VAL:HG12	2.02	0.42
25:1H:183:C:H42	25:1H:213:A:H61	1.67	0.42
54:1G:1422:G:H5"	34:25:48:PRO:HB3	2.00	0.42
1:13:345:C:O2'	1:13:346:G:N2	2.52	0.42
25:1H:636:G:N7	35:78:113:LYS:HE2	2.34	0.42
25:14:2102:U:H3	25:14:2187:G:H1	1.66	0.42
43:B5:59:VAL:HG12	43:B5:76:ARG:HB2	2.02	0.42
37:98:96:ARG:NH2	37:98:117:VAL:HG23	2.34	0.42
22:3K:61:G:H1	22:3K:71:C:H42	1.68	0.42
25:14:2705:A:H2'	25:14:2706:G:O4'	2.19	0.42
25:14:2577:A:H2'	25:14:2614:A:N6	2.34	0.42
25:14:219:G:H2'	25:14:220:G:O4'	2.20	0.42
25:14:224:G:H2'	25:14:225:A:O4'	2.19	0.42
54:1G:1123:A:H4'	10:1A:37:PRO:HD2	2.01	0.42
33:58:85:ILE:HA	33:58:86:PRO:HD3	1.92	0.42
25:1H:2335:A:C8	25:1H:2337:G:C6	3.08	0.42
25:1H:1598:C:H2'	25:1H:1599:C:H6	1.85	0.42
5:4E:150:ARG:NH1	5:4E:150:ARG:HB3	2.34	0.42
10:1I:25:GLU:HG2	10:1I:25:GLU:H	1.57	0.42
45:H8:14:LYS:HA	45:H8:15:PRO:HD2	1.72	0.42
53:Q8:52:LYS:O	53:Q8:56:GLU:HG2	2.18	0.42
54:1G:1297:C:H4'	54:1G:1298:C:O5'	2.19	0.42
2:1E:68:ILE:O	2:1E:91:PRO:HD2	2.18	0.42
25:1H:805:G:O5'	35:78:41:ARG:HG2	2.20	0.42
25:14:1022:G:C5	25:14:1140:C:N4	2.87	0.42
25:1H:1388:G:H2'	25:1H:1389:G:C8	2.53	0.42
35:35:101:VAL:HG21	35:35:108:LYS:N	2.34	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:13:1316:G:H22	1:13:1319:A:H5"	1.84	0.42
19:AI:4:SER:O	19:AI:5:LEU:HG	2.20	0.42
1:13:1330:U:O4	1:13:1331:G:C2	2.72	0.42
25:14:1109:C:C4	25:14:1110:G:C6	3.08	0.42
25:1H:356:G:H2'	25:1H:357:A:H8	1.85	0.42
25:1H:2663:G:H3'	25:1H:2664:G:H8	1.84	0.42
16:7I:21:VAL:HG11	16:7I:59:TRP:CG	2.55	0.42
1:13:376:G:OP1	16:7I:5:ARG:HB2	2.20	0.42
1:13:666:G:N3	1:13:666:G:H2'	2.35	0.42
25:1H:1338:G:H2'	25:1H:1339:G:H8	1.85	0.42
54:1G:300:A:H2'	54:1G:301:G:O4'	2.20	0.42
3:2E:108:ASN:HA	3:2E:109:PRO:HD2	1.80	0.42
30:41:45:GLU:H	30:41:45:GLU:HG2	1.48	0.42
35:78:18:ARG:C	35:78:19:VAL:HG22	2.40	0.42
25:1H:1250:G:OP2	35:78:21:ARG:HD3	2.19	0.42
25:14:309:G:N3	25:14:329:G:O2'	2.52	0.42
13:4A:7:VAL:HG11	30:49:115:ARG:CZ	2.50	0.42
10:1A:30:SER:CB	10:1A:81:THR:HG22	2.50	0.42
36:45:54:MET:HE2	36:45:118:LEU:HD23	2.01	0.42
30:49:25:TYR:CD1	30:49:30:GLU:HB2	2.55	0.42
25:14:49:A:C6	25:14:177:G:C5	3.08	0.42
25:1H:2567:G:H2'	25:1H:2568:C:H6	1.83	0.42
3:22:20:SER:HB2	3:22:40:ARG:NH2	2.34	0.42
3:22:27:LYS:HG2	3:22:27:LYS:H	1.39	0.42
54:1G:562:C:H4'	54:1G:563:A:O5'	2.18	0.42
26:16:116:G:H2'	26:16:117:G:O4'	2.20	0.42
8:72:21:LYS:N	8:72:65:TYR:OH	2.51	0.42
25:1H:1206:G:C6	25:1H:1207:C:C4	3.07	0.42
30:49:96:ARG:HB2	30:49:96:ARG:HE	1.65	0.42
25:1H:2281:C:O2'	25:1H:2282:G:H5'	2.19	0.42
27:19:181:GLU:HG3	27:19:182:LEU:N	2.34	0.42
25:14:2198:A:C2	32:69:29:TYR:HB2	2.55	0.42
32:69:29:TYR:C	32:69:32:PRO:HD2	2.40	0.42
9:8E:4:TYR:CZ	9:8E:88:TYR:HB2	2.54	0.42
6:52:10:LEU:HD12	6:52:59:TYR:O	2.19	0.42
32:69:112:LYS:CA	32:69:114:LEU:H	2.32	0.42
33:15:36:GLY:HA2	33:15:49:GLY:HA2	2.02	0.42
25:14:1847:A:C3'	25:14:1848:A:H5'	2.50	0.42
27:11:245:PRO:HA	27:11:246:PRO:HD3	1.85	0.42
17:8A:29:HIS:HB3	17:8A:33:GLY:N	2.35	0.42
25:1H:775:G:C4	25:1H:794:G:C8	3.08	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:14:1423:G:C4	25:14:1424:G:C8	3.07	0.42
5:4E:69:VAL:HA	5:4E:70:PRO:HD3	1.70	0.42
25:1H:2447:G:OP2	60:1H:3649:HOH:O	2.22	0.42
1:13:1447:G:O5'	1:13:1447:G:H8	2.03	0.42
28:21:26:ILE:HG12	28:21:27:LEU:N	2.32	0.42
9:8E:95:LYS:HE2	9:8E:95:LYS:HB2	1.74	0.42
6:5E:67:MET:HB2	6:5E:68:PRO:HD2	2.02	0.42
25:1H:73:A:OP2	48:K8:54:LYS:HD2	2.20	0.42
1:13:192:U:O4'	20:BI:103:GLY:HA2	2.18	0.42
54:1G:111:G:O6	54:1G:330:C:N4	2.50	0.42
25:14:782:A:N7	27:19:221:VAL:HG21	2.34	0.42
27:11:30:GLU:HG3	27:11:83:GLU:OE1	2.20	0.42
28:29:64:LYS:HD2	28:29:64:LYS:HA	1.89	0.42
1:13:974:A:OP1	14:5I:31:ARG:HD3	2.19	0.42
1:13:604:G:C6	1:13:605:U:N3	2.88	0.42
1:13:1144:G:H21	1:13:1146:A:H62	1.67	0.42
13:4I:13:LYS:HD3	13:4I:13:LYS:HA	1.79	0.42
53:M5:14:VAL:HG11	53:M5:22:VAL:HG13	2.01	0.42
30:41:112:PRO:HB3	50:M8:37:SER:N	2.26	0.42
54:1G:529:G:O2'	54:1G:533:A:N6	2.52	0.42
29:31:67:GLN:HE21	29:31:67:GLN:HB2	1.60	0.42
25:1H:1125:G:C6	25:1H:1126:A:N6	2.88	0.42
25:14:1485:G:H2'	25:14:1486:A:H8	1.84	0.42
4:32:57:ARG:HB3	4:32:206:PHE:HB2	2.02	0.42
25:14:69:C:H2'	25:14:70:G:C8	2.55	0.42
3:22:70:VAL:HG12	3:22:72:LYS:N	2.32	0.42
54:1G:1227:A:O2'	13:4A:115:LYS:HE2	2.20	0.42
25:14:2038:G:H2'	25:14:2039:C:C6	2.54	0.42
10:1A:52:GLY:HA2	10:1A:53:PRO:HD2	1.79	0.42
22:3K:16:C:H2'	22:3K:18:G:OP2	2.19	0.42
22:3K:20:C:H2'	22:3K:68:A:N6	2.35	0.42
25:1H:1678:G:O5'	25:1H:1678:G:H8	2.03	0.42
25:14:2693:A:N1	25:14:2717:G:C6	2.88	0.42
8:72:31:PHE:CE2	8:72:35:ILE:HD11	2.55	0.42
1:13:1365:G:H2'	1:13:1366:C:H6	1.84	0.42
1:13:731:G:C4	1:13:732:C:C5	3.08	0.42
25:14:2147:G:H2'	25:14:2148:G:H4'	2.02	0.42
54:1G:1489:G:H2'	54:1G:1490:C:O4'	2.19	0.42
54:1G:938:A:H1'	54:1G:1376:U:O2'	2.19	0.42
25:1H:1666:G:C2'	25:1H:1667:G:H5'	2.49	0.42
45:H8:80:ARG:H	45:H8:80:ARG:HG2	1.45	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:B8:32:TYR:CE1	39:B8:76:PHE:HD1	2.37	0.42
25:14:2012:G:H5"	42:A5:96:ILE:CD1	2.49	0.42
1:13:102:G:O2'	1:13:151:A:N3	2.41	0.42
1:13:626:U:N3	1:13:627:G:C5	2.88	0.42
1:13:1286:A:C2	21:1F:18:TYR:OH	2.71	0.42
1:13:942:G:C2	1:13:1342:C:C2	3.07	0.42
9:8E:65:VAL:O	9:8E:66:ARG:HG3	2.20	0.42
22:1K:9:U:O2	22:1K:9:U:H2'	2.19	0.42
36:45:48:GLU:O	36:45:52:VAL:HG23	2.20	0.42
54:1G:1379:G:OP1	7:62:6:ARG:NH1	2.53	0.42
54:1G:1379:G:OP2	7:62:6:ARG:HD2	2.20	0.42
14:5A:37:PHE:HE1	14:5A:53:LEU:HD22	1.85	0.42
31:59:148:ILE:HA	31:59:148:ILE:HD13	1.88	0.42
25:14:1916:A:H2'	25:14:1917:U:O4'	2.20	0.42
25:14:455:C:N3	25:14:473:G:H5'	2.34	0.42
25:1H:2660:A:C2	25:1H:2661:G:H1'	2.54	0.42
20:BI:48:LYS:HA	20:BI:48:LYS:HD2	1.90	0.42
25:14:2507:C:H2'	25:14:2508:G:O4'	2.20	0.42
46:E5:46:LYS:HA	46:E5:47:PRO:HD3	1.88	0.42
40:85:70:ARG:NH2	40:85:75:ASN:HD22	2.18	0.42
25:14:1515:C:H2'	25:14:1516:U:H6	1.84	0.42
46:E5:74:ARG:HB2	46:E5:74:ARG:NH1	2.35	0.42
16:7A:82:GLN:HB3	16:7A:82:GLN:HE21	1.64	0.42
49:L8:22:ALA:O	49:L8:25:ALA:N	2.52	0.42
48:G5:51:ARG:O	48:G5:55:ARG:HB2	2.20	0.42
3:2E:19:GLU:O	3:2E:40:ARG:NH2	2.53	0.42
30:49:107:LEU:HD11	30:49:178:PHE:CZ	2.55	0.42
30:49:150:ASP:CG	30:49:151:ALA:H	2.23	0.42
22:1K:38:MIA:S10	24:4K:19[A]:A:H1'	2.59	0.42
24:4K:19[A]:A:C8	24:4K:19[A]:A:OP2	2.73	0.42
25:14:2056:G:H3'	60:14:3437:HOH:O	2.19	0.42
54:1G:1280:A:H5'	54:1G:1281:U:OP2	2.20	0.42
9:82:16:ARG:HH21	9:82:64:THR:HG21	1.85	0.42
25:1H:806:C:C2	25:1H:807:U:C5	3.08	0.42
38:A8:36:TYR:HB3	38:A8:52:SER:HB3	2.01	0.42
25:1H:654(M):C:H5'	25:1H:654(N):G:N7	2.35	0.42
26:1J:27:C:C2'	26:1J:28:C:H5'	2.49	0.42
38:65:53:SER:O	38:65:57:LYS:HA	2.20	0.42
55:3L:67:A:H4'	55:3L:68:A:OP1	2.20	0.42
40:C8:92:ARG:NH1	40:C8:96:ALA:HA	2.35	0.42
28:29:101:ARG:HG3	28:29:203:LYS:HD2	2.01	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:1E:236:TYR:HA	2:1E:239:VAL:CG2	2.45	0.42
1:13:1213:A:C8	1:13:1215:G:C5	3.07	0.42
25:14:2295:C:OP1	38:65:10:ARG:NH1	2.53	0.42
13:4A:94:ARG:HH21	19:AA:80:TYR:HD2	1.66	0.42
1:13:1497:G:C2'	1:13:1498:U:H5'	2.43	0.42
40:85:79:PHE:CZ	40:85:83:LEU:HD21	2.54	0.42
8:72:97:VAL:HG21	8:72:128:GLY:O	2.19	0.42
12:3A:37:CYS:SG	12:3A:81:SER:HB3	2.60	0.42
25:1H:1189:A:P	60:1H:3680:HOH:O	2.76	0.42
2:1E:87:ARG:HD2	2:1E:233:SER:OG	2.20	0.42
25:1H:527:C:H4'	25:1H:528:A:O5'	2.20	0.42
22:1K:13:G:H2'	22:1K:14:A:C8	2.48	0.42
25:1H:996:A:C6	25:1H:1160:G:C2	3.07	0.42
29:39:83:PHE:O	29:39:84:VAL:HB	2.20	0.42
1:13:1096:C:H2'	1:13:1097:C:C6	2.54	0.42
13:4I:82:MET:HG2	13:4I:89:GLY:O	2.18	0.42
25:14:832:G:OP1	35:35:39:LYS:N	2.51	0.42
28:29:82:ARG:O	28:29:83:ASP:HB2	2.19	0.42
13:4A:7:VAL:HG13	30:49:115:ARG:HB3	2.02	0.42
25:1H:270(C):C:H42	25:1H:270(W):G:H1	1.67	0.42
25:14:686:G:N3	52:L5:11:LYS:HE2	2.35	0.42
44:G8:47:LYS:HG3	44:G8:48:ALA:N	2.34	0.42
37:55:35:THR:CG2	37:55:100:LEU:HD11	2.49	0.42
25:14:1525:G:C2	25:14:1526:G:C4	3.08	0.42
25:1H:1749:A:C4	25:1H:1750:G:C8	3.07	0.42
3:22:33:LEU:O	3:22:36:ASP:N	2.53	0.42
25:14:1191:G:O2'	25:14:1192:G:H5'	2.19	0.42
28:21:167:VAL:CG1	28:21:189:PRO:HD3	2.49	0.42
25:14:817:C:O2'	25:14:839:U:H5"	2.20	0.42
14:5A:27:CYS:SG	14:5A:27:CYS:O	2.77	0.42
1:13:129(A):G:H4'	1:13:130:A:H5"	2.02	0.42
1:13:130:A:P	17:8I:63:ARG:HE	2.43	0.42
39:75:45:PHE:CE1	39:75:65:LYS:HG2	2.55	0.42
54:1G:1072:G:H2'	54:1G:1073:U:O4'	2.20	0.42
44:C5:48:ALA:HB3	44:C5:59:GLY:HA2	2.02	0.42
25:1H:1106:G:H2'	25:1H:1107:G:O4'	2.19	0.42
44:C5:37:VAL:HG22	44:C5:69:ALA:HA	2.01	0.42
49:H5:5:LYS:HB3	49:H5:5:LYS:HE3	1.61	0.42
54:1G:456:C:H42	54:1G:476:G:H1	1.68	0.42
2:12:214:ILE:O	2:12:218:ALA:HB2	2.19	0.42
13:4I:90:LEU:HG	13:4I:90:LEU:H	1.69	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:5A:53:LEU:HA	14:5A:53:LEU:HD23	1.72	0.42
10:1I:90:LEU:N	10:1I:91:PRO:HD3	2.35	0.42
53:Q8:32:LEU:HD22	53:Q8:33:ASN:HB3	2.02	0.42
25:1H:59:U:O2'	25:1H:73:A:H2'	2.20	0.42
31:59:166:GLY:O	31:59:167:GLU:HG2	2.19	0.42
41:D8:70:ILE:N	41:D8:87:HIS:O	2.40	0.42
1:13:107:G:N7	20:BI:15:ARG:NH2	2.57	0.42
54:1G:49:U:C2	54:1G:361:G:N2	2.87	0.42
6:52:12:PRO:HB3	6:52:58:GLY:HA2	2.02	0.42
1:13:303:A:H2'	1:13:304:U:O4'	2.20	0.42
25:1H:107:C:H2'	25:1H:108:U:H6	1.85	0.42
41:D8:35:LEU:HB2	41:D8:37:VAL:HG23	2.02	0.42
1:13:1075:C:H5"	2:1E:179:LYS:NZ	2.35	0.42
54:1G:596:C:H42	54:1G:644:G:H1	1.68	0.42
1:13:984:C:N4	1:13:1221:G:H1	2.18	0.42
2:12:25:ASN:HA	2:12:26:PRO:HD3	1.74	0.42
1:13:1162:C:H2'	1:13:1163:C:C6	2.55	0.42
54:1G:95:G:H2'	54:1G:96:G:O4'	2.20	0.42
28:21:171:GLU:OE1	28:21:185:LYS:HE2	2.19	0.42
25:14:714:U:O2	25:14:716:A:C8	2.73	0.42
25:14:1265:A:O4'	25:14:1267:U:C6	2.73	0.42
48:K8:21:LEU:HD13	48:K8:64:LEU:HA	2.02	0.42
25:1H:2635:C:H5"	28:21:79:ARG:NH2	2.35	0.42
27:19:43:ARG:HA	27:19:49:ILE:HA	2.01	0.42
2:1E:163:PHE:HA	2:1E:185:ILE:O	2.20	0.42
31:51:8:PRO:HG2	31:51:69:ARG:HH21	1.84	0.42
25:14:1899:G:N2	25:14:1902:C:C5	2.87	0.42
54:1G:956:U:C2	54:1G:1225:A:C2	3.08	0.42
1:13:1133:G:H2'	1:13:1134:G:H8	1.84	0.42
54:1G:409:G:N2	54:1G:434:U:C2	2.88	0.42
25:1H:1171:G:C5	25:1H:1174:A:N1	2.87	0.42
32:61:38:LEU:HD12	32:61:38:LEU:H	1.84	0.42
25:1H:2588:G:P	60:1H:3555:HOH:O	2.75	0.42
25:14:1021:A:H3'	25:14:1021:A:C8	2.55	0.42
1:13:255:G:C2	1:13:272:C:C2	3.07	0.42
25:1H:363(A):A:H2'	25:1H:363(B):G:H8	1.84	0.42
1:13:600:C:H4'	8:7E:128:GLY:O	2.20	0.42
1:13:1502:A:H2	1:13:1505:G:N1	2.12	0.42
32:61:56:LYS:O	32:61:60:GLU:HB3	2.19	0.42
4:32:112:VAL:HG12	4:32:116:GLN:OE1	2.20	0.42
4:32:119:GLN:HE21	4:32:123:HIS:CE1	2.37	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:14:2468:G:C2	25:14:2481:G:N3	2.88	0.42
2:12:166:ASP:O	2:12:170:GLU:N	2.49	0.42
26:16:42:C:C6	30:41:69:ALA:HB2	2.55	0.42
27:11:2:ALA:C	27:11:3:VAL:HG23	2.39	0.42
45:H8:7:ALA:HB3	45:H8:61:LEU:CB	2.50	0.42
10:1A:4:ILE:HG13	10:1A:77:PRO:HB3	2.02	0.42
25:1H:662:G:O2'	25:1H:663:G:H5'	2.20	0.42
25:1H:2504:U:OP1	60:1H:3900:HOH:O	2.21	0.42
25:1H:1257:C:OP1	29:31:75:HIS:HE1	2.03	0.42
25:1H:861:A:C2	25:1H:917:A:C5	3.08	0.42
4:3E:173:TRP:HA	4:3E:187:ARG:CG	2.49	0.42
25:14:822:U:H2'	25:14:823:G:H8	1.85	0.42
54:1G:689:C:H2'	54:1G:690:G:H5'	2.02	0.42
54:1G:391:G:C6	54:1G:392:G:C5	3.08	0.42
48:K8:42:GLY:C	48:K8:44:LEU:N	2.73	0.42
25:1H:1753:G:OP1	39:B8:95:ARG:NE	2.44	0.42
54:1G:1479:C:O2'	54:1G:1480:G:H5'	2.20	0.42
25:14:867:C:C6	25:14:868:U:H5	2.36	0.42
26:1J:21:G:H2'	26:1J:22:U:O4'	2.19	0.42
23:2K:65:G:H2'	23:2K:66:C:C6	2.54	0.42
54:1G:1413:A:H2'	54:1G:1414:U:O4'	2.20	0.42
25:1H:1429:G:H2'	25:1H:1430:C:C6	2.55	0.42
25:1H:924:C:H2'	25:1H:925:C:C6	2.54	0.42
4:32:72:GLU:OE1	4:32:207:TYR:OH	2.37	0.42
22:1K:16:C:H5	22:1K:68:A:H61	1.67	0.42
49:L8:31:LEU:HB3	49:L8:32:GLN:OE1	2.20	0.42
1:13:922:G:N1	1:13:923:A:C2	2.87	0.42
25:14:2396:G:H4'	47:F5:30:VAL:H	1.85	0.42
25:1H:213:A:H5"	25:1H:214:G:OP2	2.20	0.42
25:1H:494:G:OP1	42:E8:8:ARG:HD3	2.20	0.42
16:7A:17:TYR:HE2	16:7A:41:PRO:HG3	1.85	0.42
25:14:959:A:N1	25:14:960:A:C2	2.88	0.42
25:1H:1559:G:N3	25:1H:1559:G:H5'	2.35	0.42
25:1H:2659:G:O3'	31:51:175:LYS:HD2	2.20	0.42
27:19:83:GLU:HB2	27:19:92:ILE:HG13	2.02	0.42
39:B8:5:ALA:HA	39:B8:8:LYS:HG2	2.02	0.42
32:69:39:ALA:O	32:69:44:LEU:HB2	2.20	0.42
30:49:73:ALA:HB3	30:49:85:GLY:H	1.85	0.42
54:1G:142:G:H2'	54:1G:143:A:H8	1.85	0.42
54:1G:136:C:H1'	16:7A:1:MET:HE3	2.02	0.42
25:14:1333:C:H2'	25:14:1334:G:H8	1.83	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:14:1838:C:N4	25:14:1898:U:H2'	2.34	0.42
25:1H:2254:C:O5'	25:1H:2254:C:H6	2.03	0.42
53:Q8:59:LYS:HE3	53:Q8:59:LYS:HB3	1.70	0.42
45:H8:31:ARG:HE	45:H8:31:ARG:HB2	1.31	0.42
21:1F:6:ARG:H	21:1F:6:ARG:HG3	1.45	0.42
49:H5:4:LEU:O	49:H5:36:VAL:HA	2.20	0.42
19:AI:20:LEU:O	19:AI:23:ASN:HB2	2.20	0.42
25:14:1259:G:H2'	25:14:1260:G:C8	2.55	0.42
29:39:34:TRP:CZ3	35:35:8:PRO:HB3	2.54	0.42
36:45:66:ILE:O	36:45:67:ARG:HB2	2.20	0.42
25:1H:2572:A:N7	28:21:145:LYS:HB2	2.35	0.42
25:14:2392:A:H8	35:35:61:ARG:HD2	1.85	0.42
10:1I:48:THR:HG23	10:1I:62:HIS:CG	2.55	0.42
1:13:1256:A:N3	1:13:1277:C:N4	2.68	0.42
53:M5:56:GLU:C	53:M5:58:ILE:H	2.23	0.42
32:61:144:VAL:HG22	32:61:145:VAL:N	2.34	0.42
54:1G:1227:A:O2'	13:4A:115:LYS:HB2	2.19	0.42
22:3K:8:4SU:C2	22:3K:14:A:H62	2.28	0.42
25:1H:1448:G:N3	25:1H:1529:A:H2	2.17	0.42
30:49:106:LEU:O	30:49:111:LEU:HB2	2.19	0.42
25:1H:1534:G:H3'	25:1H:1534:G:N3	2.35	0.42
43:F8:5:TYR:CE1	48:K8:30:ARG:HG3	2.55	0.42
6:5E:18:GLN:HA	6:5E:21:LEU:HD23	2.02	0.42
2:1E:47:THR:O	2:1E:51:LEU:HB2	2.20	0.42
54:1G:1385:G:H2'	54:1G:1386:G:C8	2.53	0.42
25:1H:443:A:N7	29:31:45:ARG:HG3	2.35	0.42
46:E5:25:ARG:HD2	46:E5:29:GLN:HE21	1.85	0.42
54:1G:1112:C:N3	3:22:178:LEU:HD23	2.34	0.42
32:69:129:THR:HG22	32:69:137:PRO:HB3	2.02	0.42
25:1H:1088:A:N3	25:1H:1088:A:H3'	2.34	0.42
54:1G:1166:G:C2	54:1G:1171:G:O6	2.73	0.42
1:13:945:G:H2'	1:13:945:G:N3	2.35	0.42
29:39:29:ASN:HA	29:39:30:PRO:HD3	1.94	0.42
25:14:943:U:OP2	35:35:36:LYS:HE3	2.20	0.42
54:1G:934:C:O2'	54:1G:1344:C:OP2	2.24	0.42
14:5I:47:LEU:HA	14:5I:47:LEU:HD23	1.78	0.42
34:25:7:TYR:HE1	34:25:20:MET:HE3	1.85	0.42
1:13:227:G:H2'	1:13:228:A:O4'	2.20	0.42
27:19:183:ARG:HG3	27:19:270:ILE:HG23	2.01	0.42
2:1E:16:HIS:CD2	2:1E:210:SER:HA	2.55	0.42
25:14:2718:G:O2'	25:14:2847:U:OP1	2.25	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:14:1637:A:H5'	25:14:1760:A:O2'	2.20	0.42
1:13:1113:C:H2'	1:13:1114:C:C6	2.54	0.42
29:39:132:VAL:HG22	29:39:133:ASN:N	2.35	0.42
25:1H:2784:C:H1'	28:21:37:ARG:HH12	1.85	0.42
25:1H:16:G:C2	25:1H:17:G:C8	3.07	0.42
55:1L:33:C:H2'	55:1L:34:U:H5'	2.01	0.42
8:7E:77:GLU:OE2	8:7E:81:HIS:NE2	2.51	0.42
54:1G:38:G:C2	54:1G:397:A:C2	3.08	0.42
9:8E:96:LEU:HD12	9:8E:96:LEU:HA	1.63	0.42
41:D8:1:MET:CE	41:D8:43:GLU:HG2	2.49	0.42
37:55:18:LEU:HD23	37:55:18:LEU:HA	1.79	0.42
36:45:66:ILE:HG13	36:45:67:ARG:H	1.85	0.42
49:L8:3:ARG:HG2	49:L8:38:GLU:HA	2.02	0.42
25:1H:536:A:H2'	25:1H:537:C:C6	2.54	0.42
54:1G:26:A:N6	54:1G:558:G:O2'	2.52	0.42
15:6I:40:SER:O	15:6I:44:LYS:HG3	2.20	0.42
9:82:128:ARG:NH2	56:2L:34:U:OP2	2.53	0.42
25:1H:2038:G:H2'	25:1H:2039:C:H6	1.84	0.42
33:15:62:VAL:HG22	33:15:66:LYS:HD2	2.01	0.42
25:14:2193:G:C6	25:14:2194:G:C5	3.07	0.42
30:41:111:LEU:HD12	30:41:117:PHE:CE1	2.55	0.42
25:1H:2050:C:H2'	25:1H:2051:A:O4'	2.20	0.42
12:3I:24:VAL:HB	12:3I:27:LEU:HD12	2.00	0.42
25:1H:1596:A:C2'	25:1H:1597:A:H5'	2.50	0.42
55:1L:1:G:H8	55:1L:1:G:OP2	2.03	0.42
17:8A:74:LEU:HA	17:8A:74:LEU:HD22	1.73	0.42
36:88:127:ILE:H	36:88:127:ILE:HD13	1.85	0.42
27:19:45:ASN:N	27:19:45:ASN:OD1	2.52	0.42
32:61:101:LEU:HA	32:61:101:LEU:HD12	1.86	0.42
25:1H:882:G:H22	25:1H:894:C:N4	1.90	0.41
54:1G:1149:C:H2'	54:1G:1150:U:O4'	2.20	0.41
25:14:2271:G:OP1	46:E5:18:ALA:HB1	2.20	0.41
53:M5:15:LYS:HG2	53:M5:16:ILE:N	2.34	0.41
54:1G:413:G:H2'	54:1G:428:G:N2	2.34	0.41
2:12:69:LEU:HG	2:12:91:PRO:HB2	2.00	0.41
25:1H:2467:C:O2'	25:1H:2468:G:H5'	2.19	0.41
40:C8:92:ARG:NH2	40:C8:96:ALA:HA	2.35	0.41
47:F5:86:SER:O	47:F5:90:ILE:HG13	2.20	0.41
25:14:1416:G:O2'	25:14:1417:C:O4'	2.37	0.41
25:14:1110:G:O2'	25:14:1111:A:O4'	2.28	0.41
2:12:8:LYS:HB3	2:12:9:GLU:H	1.55	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:14:1889:A:O2'	25:14:2087:G:H5'	2.20	0.41
1:13:1291:G:H2'	1:13:1292:U:C6	2.55	0.41
25:1H:956:G:H2'	25:1H:957:A:H2'	2.02	0.41
3:22:95:THR:CG2	3:22:97:LYS:HG2	2.46	0.41
1:13:1150:U:O2	10:1I:39:PRO:HG2	2.20	0.41
25:1H:270(L):U:C4	32:61:50:ARG:HD2	2.55	0.41
25:14:2672:G:H2'	25:14:2673:G:H5"	2.02	0.41
31:51:79:VAL:HG23	31:51:79:VAL:O	2.20	0.41
44:G8:39:VAL:HB	44:G8:42:VAL:CG2	2.47	0.41
25:14:1785:A:H2'	25:14:1787:A:N7	2.35	0.41
43:F8:1:MET:H3	48:K8:29:LYS:HE3	1.85	0.41
1:13:474:G:C6	1:13:475:G:C6	3.08	0.41
27:11:96:HIS:CE1	27:11:102:LYS:HE2	2.55	0.41
45:D5:99:TYR:CE1	45:D5:125:LEU:HD22	2.55	0.41
54:1G:643:C:H5'	8:72:31:PHE:CD1	2.55	0.41
25:1H:1072:C:H2'	25:1H:1093:G:O6	2.20	0.41
50:M8:49:PHE:CD2	50:M8:50:VAL:HG12	2.52	0.41
25:1H:1753:G:H2'	25:1H:1755:A:OP2	2.20	0.41
25:14:2068:U:N3	25:14:2430:A:C2	2.76	0.41
6:5E:33:TYR:CD1	6:5E:75:LEU:HD23	2.54	0.41
3:22:79:ARG:HH21	3:22:82:GLU:HB2	1.85	0.41
25:14:1501:C:O4'	27:19:100:GLY:HA2	2.19	0.41
1:13:247:G:OP2	17:8I:100:LYS:HB2	2.20	0.41
20:BA:98:PRO:C	20:BA:100:ILE:H	2.22	0.41
1:13:648:A:N6	1:13:649:G:O6	2.53	0.41
29:31:155:LEU:HD11	29:31:176:LEU:HD13	2.02	0.41
25:1H:116:C:H2'	25:1H:117:G:O4'	2.19	0.41
6:5E:98:LEU:HD22	6:5E:98:LEU:HA	1.71	0.41
44:G8:35:TYR:CE2	44:G8:69:ALA:HB3	2.55	0.41
25:1H:270(T):G:C6	25:1H:270(U):C:C4	3.08	0.41
30:41:180:PHE:HB3	30:41:182:LYS:H	1.85	0.41
28:21:131:ALA:HB1	28:21:135:HIS:CE1	2.53	0.41
25:1H:2801:A:H2'	25:1H:2802:G:C4'	2.50	0.41
25:1H:2259:G:N1	25:1H:2282:G:O6	2.53	0.41
10:1I:32:ALA:HB2	10:1I:78:ASN:HD21	1.85	0.41
25:1H:64:A:O3'	43:F8:71:GLY:HA3	2.20	0.41
25:1H:2430:A:H8	25:1H:2431:U:C5	2.36	0.41
25:1H:1108:U:C2'	25:1H:1109:C:H5'	2.50	0.41
25:1H:1711:C:H2'	25:1H:1712:C:C6	2.55	0.41
25:1H:577:G:O2'	25:1H:1254:A:OP1	2.32	0.41
25:1H:2877:G:H2'	25:1H:2878:U:O4'	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:41:18:GLU:O	30:41:22:ARG:HB2	2.19	0.41
27:19:232:PRO:HD2	27:19:249:PRO:HA	2.02	0.41
1:13:769:G:H4'	1:13:1513:A:H4'	2.02	0.41
20:BA:46:GLU:HB3	20:BA:48:LYS:HG2	2.02	0.41
25:14:672:C:O2'	25:14:673:C:H5'	2.20	0.41
25:1H:2780:G:OP2	33:58:118:LYS:HD3	2.20	0.41
10:1I:63:PHE:HB3	14:5I:57:ARG:O	2.20	0.41
31:51:92:ILE:HG13	31:51:92:ILE:H	1.25	0.41
25:1H:2825:C:H6	25:1H:2825:C:O5'	2.03	0.41
35:78:91:PHE:N	35:78:91:PHE:CD1	2.88	0.41
46:I8:19:LYS:HD3	46:I8:19:LYS:HA	1.39	0.41
18:9I:21:LYS:HA	18:9I:21:LYS:HE3	2.02	0.41
38:A8:10:ARG:O	38:A8:14:VAL:HG13	2.20	0.41
25:14:2732:G:H3'	25:14:2733:A:O4'	2.19	0.41
53:Q8:50:LEU:C	53:Q8:52:LYS:N	2.66	0.41
25:14:1608:A:H1'	25:14:1610:A:OP2	2.20	0.41
45:D5:110:GLY:HA2	45:D5:144:LEU:N	2.17	0.41
19:AA:40:ILE:HD13	19:AA:62:ILE:HG13	2.01	0.41
12:3A:47:LYS:CG	12:3A:48:PRO:HD2	2.41	0.41
25:14:2494:G:H2'	25:14:2495:G:H8	1.85	0.41
10:1I:54:PHE:HB3	10:1I:55:LYS:H	1.61	0.41
2:1E:178:ARG:HD3	2:1E:178:ARG:HA	1.71	0.41
25:1H:822:U:C2'	25:1H:823:G:H5'	2.51	0.41
16:7I:53:VAL:HG13	16:7I:79:VAL:CG2	2.48	0.41
1:13:96:G:H2'	1:13:97:U:O4'	2.20	0.41
25:1H:2467:C:H4'	36:88:123:HIS:ND1	2.35	0.41
32:61:130:TYR:CG	32:61:131:LYS:N	2.83	0.41
54:1G:452:A:O2'	16:7A:72:ARG:NH1	2.53	0.41
23:2K:47:7MG:O2'	23:2K:48:U:C6	2.72	0.41
45:H8:166:SER:HA	45:H8:167:PRO:HD3	1.88	0.41
25:1H:2164:C:H5	25:1H:2165:G:C6	2.38	0.41
31:59:6:ARG:HG3	31:59:65:HIS:CG	2.55	0.41
5:42:101:ILE:HG12	5:42:101:ILE:O	2.21	0.41
27:11:69:ARG:HD3	27:11:105:ILE:HD11	2.02	0.41
25:1H:956:G:OP2	36:88:14:ARG:NH2	2.52	0.41
25:1H:270(L):U:N3	32:61:50:ARG:HG3	2.35	0.41
13:4I:3:ARG:HE	13:4I:9:ILE:HD11	1.85	0.41
6:5E:14:LEU:HD22	6:5E:18:GLN:HB3	2.02	0.41
39:B8:90:GLN:HG3	39:B8:91:ARG:N	2.35	0.41
3:22:11:ARG:HB2	3:22:11:ARG:HH11	1.85	0.41
29:39:123:LEU:HA	29:39:192:LEU:C	2.40	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:14:1680:U:H2'	25:14:1681:G:O4'	2.20	0.41
25:1H:1156:A:P	60:1H:3638:HOH:O	2.79	0.41
17:8A:63:ARG:HB3	17:8A:63:ARG:HE	1.64	0.41
33:15:41:ASP:O	40:85:64:ARG:NH2	2.53	0.41
30:41:7:LEU:N	30:41:104:GLU:OE2	2.53	0.41
25:1H:558:G:OP1	33:58:111:PRO:HD2	2.20	0.41
7:6E:65:ALA:HB2	7:6E:128:ALA:HB2	2.02	0.41
35:35:15:ARG:HH21	35:35:17:LYS:HE3	1.85	0.41
25:1H:2579:C:H2'	25:1H:2580:U:O4'	2.20	0.41
32:69:75:LEU:HD22	32:69:76:THR:H	1.85	0.41
25:1H:931:G:C4	25:1H:933:A:C8	3.08	0.41
41:95:44:LYS:C	41:95:46:VAL:N	2.74	0.41
7:62:69:VAL:HG12	7:62:103:TRP:HE3	1.85	0.41
28:29:33:VAL:HG12	28:29:89:ASP:HB3	2.02	0.41
25:14:406:G:H1	25:14:421:U:H3	1.68	0.41
1:13:428:G:O4'	1:13:430:A:C8	2.72	0.41
25:14:1060:U:H5'	25:14:1061:U:C5	2.55	0.41
54:1G:1246:C:C4	54:1G:1247:U:C4	3.08	0.41
54:1G:57:G:C5	54:1G:58:C:C4	3.08	0.41
25:14:1147:C:H2'	25:14:1148:A:O4'	2.21	0.41
25:14:863:A:O2'	25:14:864:G:H5'	2.20	0.41
25:14:1396:U:H2'	25:14:1396:U:O2	2.20	0.41
53:Q8:5:LYS:O	53:Q8:6:THR:C	2.58	0.41
25:14:637:A:H2'	35:35:117:GLU:OE2	2.21	0.41
30:41:97:ASP:H	30:41:100:TRP:HD1	1.67	0.41
28:21:116:VAL:HG13	28:21:122:PHE:CD2	2.55	0.41
54:1G:552:U:H1'	12:3A:32:PHE:CE1	2.55	0.41
28:21:188:VAL:HA	28:21:189:PRO:HD3	1.91	0.41
54:1G:1084:G:H2'	54:1G:1085:U:C5	2.55	0.41
11:2I:109:VAL:HG11	18:9I:84:LYS:HD2	2.02	0.41
25:1H:588:U:O4	25:1H:670:A:H1'	2.21	0.41
25:14:13:A:H61	25:14:525:U:H3'	1.85	0.41
25:1H:1417:C:H4'	25:1H:1587:A:H2	1.85	0.41
25:1H:2356:C:C5	25:1H:2357:U:C4	3.09	0.41
25:14:1991:U:C2'	25:14:1992:G:H5"	2.50	0.41
12:3I:66:VAL:HG21	12:3I:98:TYR:CE1	2.56	0.41
36:88:69:PHE:HA	36:88:70:PRO:HD2	1.82	0.41
25:14:2257:U:O2'	25:14:2258:C:H5'	2.19	0.41
1:13:491:G:H2'	1:13:492:G:O4'	2.18	0.41
45:D5:105:VAL:HG13	45:D5:106:GLY:H	1.85	0.41
20:BI:48:LYS:O	20:BI:51:GLU:HB2	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:49:107:LEU:HD21	30:49:178:PHE:CE2	2.54	0.41
55:3L:38:A:H2'	55:3L:39:A:O4'	2.20	0.41
35:78:147:LEU:O	35:78:148:LEU:HD23	2.21	0.41
25:14:730:C:O2'	25:14:731:C:H5'	2.20	0.41
25:1H:1081:U:H4'	25:1H:1082:U:OP1	2.20	0.41
46:I8:11:ARG:H	46:I8:11:ARG:HG3	1.50	0.41
8:72:89:PRO:HA	8:72:92:ARG:HH11	1.86	0.41
25:14:1488:G:H2'	25:14:1489:U:H5'	2.02	0.41
27:19:3:VAL:HG12	27:19:17:THR:HB	2.01	0.41
32:69:6:LEU:HD13	32:69:36:ALA:HA	2.01	0.41
25:1H:455:C:N3	25:1H:472:A:H2'	2.35	0.41
54:1G:582:U:H5"	15:6A:64:ARG:NH1	2.35	0.41
9:82:97:LYS:O	9:82:100:GLY:N	2.44	0.41
25:14:2342:C:O2	25:14:2374:C:H4'	2.20	0.41
12:3A:23:LYS:C	12:3A:25:PRO:HD3	2.40	0.41
28:21:69:LYS:HB2	28:21:69:LYS:HE2	1.75	0.41
26:1J:83:G:OP1	49:H5:19:GLN:NE2	2.50	0.41
25:1H:2094:G:C2	25:1H:2196:C:C2	3.07	0.41
25:14:1814:G:H5"	27:19:54:ARG:NH1	2.35	0.41
25:14:363:G:H2'	25:14:363(A):A:H8	1.84	0.41
1:13:1493:A:O2'	24:4K:19[B]:A:H1'	2.20	0.41
25:14:1639:U:P	60:14:3469:HOH:O	2.70	0.41
4:32:25:ARG:NH1	4:32:30:LYS:HB2	2.35	0.41
28:21:144:ARG:HB3	28:21:145:LYS:H	1.62	0.41
31:51:8:PRO:HG2	31:51:69:ARG:CZ	2.51	0.41
25:1H:375:C:H2'	25:1H:376:C:C6	2.55	0.41
27:11:36:PRO:HA	27:11:61:LEU:CD1	2.50	0.41
54:1G:464:G:N2	54:1G:467:G:C8	2.88	0.41
25:1H:2117:A:N6	25:1H:2172:U:O2	2.54	0.41
1:13:1147:C:O2	9:8E:16:ARG:NH1	2.53	0.41
1:13:76:G:H1'	1:13:95:G:H1	1.84	0.41
25:1H:2393:A:H5'	35:78:63:PRO:HB3	2.01	0.41
55:3L:8:U:H4'	55:3L:9:U:OP1	2.18	0.41
47:F5:86:SER:N	47:F5:87:PRO:CD	2.81	0.41
45:H8:165:VAL:HB	45:H8:166:SER:CA	2.48	0.41
25:1H:1486:A:H2'	25:1H:1487:G:C8	2.43	0.41
20:BA:67:ALA:O	20:BA:73:HIS:CD2	2.73	0.41
25:14:856:C:N4	25:14:857:C:N4	2.68	0.41
50:M8:38:LYS:N	50:M8:38:LYS:HD2	2.35	0.41
20:BA:51:GLU:HB3	20:BA:54:LYS:NZ	2.36	0.41
3:22:10:PHE:HA	14:5A:58:LYS:HD2	2.01	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:13:726:C:C2	1:13:727:G:C8	3.08	0.41
13:4A:3:ARG:O	50:I5:34:GLU:HG3	2.20	0.41
25:14:535:C:O2'	25:14:536:A:H5'	2.20	0.41
25:1H:1278:A:H4'	37:98:34:ILE:HD11	2.02	0.41
1:13:652:U:HO2'	1:13:653:A:P	2.43	0.41
28:21:82:ARG:HD3	28:21:82:ARG:HA	1.81	0.41
54:1G:624:C:H2'	54:1G:625:G:C8	2.52	0.41
25:14:890:A:H2'	25:14:892:G:H8	1.86	0.41
25:14:940:G:N3	25:14:1191:G:H4'	2.35	0.41
25:1H:910:A:N1	25:1H:2277:G:H1'	2.36	0.41
7:6E:48:LYS:HE2	7:6E:48:LYS:HB3	1.94	0.41
29:31:10:PRO:O	29:31:124:LEU:HD12	2.21	0.41
25:14:1478:G:O2'	25:14:1479:G:H5'	2.20	0.41
54:1G:521:G:H4'	12:3A:73:GLU:HG2	2.02	0.41
34:25:64:ARG:HG2	34:25:79:PHE:CD2	2.55	0.41
54:1G:1071:C:C2	54:1G:1072:G:C8	3.08	0.41
18:9I:26:LEU:HD11	18:9I:29:PHE:CD1	2.54	0.41
25:14:1384:A:N3	25:14:1405:U:H1'	2.34	0.41
1:13:745:C:OP1	1:13:851:G:O2'	2.37	0.41
8:72:120:THR:HG23	8:72:123:GLU:HB2	2.02	0.41
25:1H:1545(A):A:H2'	25:1H:1546:C:H5'	2.02	0.41
9:82:97:LYS:HB3	9:82:98:PRO:HD3	2.02	0.41
36:45:38:GLU:OE1	36:45:127:ILE:HG22	2.20	0.41
25:14:825:C:H2'	25:14:826:U:O4'	2.20	0.41
25:14:387:U:H4'	25:14:388:G:O5'	2.21	0.41
25:1H:1368:G:C2	25:1H:1369:G:C8	3.08	0.41
25:1H:2208:U:O2	25:1H:2217:G:C2	2.74	0.41
16:7A:19:ILE:N	16:7A:37:GLY:O	2.39	0.41
25:14:907:U:O5'	36:45:24:GLY:HA2	2.20	0.41
47:F5:45:ASN:O	47:F5:63:ALA:HA	2.20	0.41
25:1H:1471:A:H2'	25:1H:1471:A:N3	2.35	0.41
54:1G:1417:G:O5'	54:1G:1417:G:H8	2.02	0.41
22:1K:35:QUO:H102	22:1K:35:QUO:H162	1.48	0.41
25:14:2785:C:C2'	25:14:2786:U:H5'	2.50	0.41
14:5I:41:ARG:HA	14:5I:44:LEU:HB3	2.03	0.41
25:14:2394:C:H5"	35:35:63:PRO:HG2	2.02	0.41
1:13:1126:U:C4	1:13:1127:G:N3	2.89	0.41
2:12:42:ILE:HD13	2:12:43:ASP:N	2.35	0.41
54:1G:413:G:H2'	54:1G:428:G:H22	1.86	0.41
35:78:59:LEU:C	35:78:61:ARG:H	2.22	0.41
5:42:147:ASP:O	5:42:151:LEU:HG	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:16:112:G:H2'	26:16:113:C:H6	1.84	0.41
25:1H:2452:C:H5"	60:1H:4006:HOH:O	2.21	0.41
25:1H:2148:G:H2'	25:1H:2149:G:O4'	2.19	0.41
54:1G:513:C:N4	54:1G:538:G:H1	2.18	0.41
22:1K:51:C:H3'	22:1K:52:G:O4'	2.21	0.41
25:14:1963:U:H4'	25:14:1964:G:OP2	2.20	0.41
1:13:1272:G:C6	1:13:1273:G:C4	3.08	0.41
8:7E:23:SER:HB2	8:7E:62:TYR:CD2	2.56	0.41
25:1H:2773:C:OP1	28:21:164:ARG:NH1	2.48	0.41
28:29:116:VAL:O	28:29:117:MET:CB	2.68	0.41
54:1G:1055:A:N3	3:22:156:ARG:NH1	2.68	0.41
25:14:459:U:H4'	52:L5:40:TRP:CZ3	2.55	0.41
54:1G:1022:G:H2'	54:1G:1023:G:O4'	2.21	0.41
43:F8:3:THR:CB	43:F8:6:ASP:HB2	2.50	0.41
12:3I:45:PRO:HG2	12:3I:49:ASN:O	2.20	0.41
25:14:2562:U:H1'	34:25:23:ARG:NE	2.35	0.41
25:1H:2306:C:H2'	25:1H:2307:G:H21	1.85	0.41
2:1E:97:TRP:CH2	2:1E:173:ALA:HA	2.55	0.41
54:1G:894:G:C6	54:1G:895:G:C5	3.09	0.41
27:11:4:LYS:HZ1	27:11:20:ASP:HA	1.85	0.41
54:1G:1367:C:H4'	10:1A:48:THR:HG21	2.02	0.41
43:F8:12:VAL:HG22	43:F8:17:ALA:HB2	2.01	0.41
25:1H:302:C:H2'	25:1H:303:U:H6	1.83	0.41
46:E5:50:ASN:O	46:E5:62:LEU:HB2	2.20	0.41
25:1H:1824:G:OP1	27:11:52:ARG:HD3	2.21	0.41
25:1H:2259:G:N1	25:1H:2282:G:C6	2.87	0.41
17:8I:9:VAL:HG11	17:8I:85:VAL:HG23	2.02	0.41
26:16:39:A:H2'	26:16:40:U:C6	2.55	0.41
25:14:2817:G:C4	25:14:2830:G:N2	2.88	0.41
1:13:345:C:H4'	1:13:346:G:C4	2.55	0.41
1:13:447:G:N1	1:13:485:G:H1'	2.35	0.41
45:D5:52:SER:C	45:D5:54:HIS:H	2.23	0.41
4:3E:128:VAL:HG22	4:3E:146:ILE:HG23	2.02	0.41
25:1H:902:C:H2'	25:1H:903:C:H6	1.86	0.41
9:82:10:ARG:O	9:82:13:ALA:HB3	2.20	0.41
1:13:669:U:C2	1:13:670:G:C8	3.08	0.41
8:7E:58:TYR:O	8:7E:59:LEU:HD23	2.20	0.41
25:1H:547:A:H2'	25:1H:548:A:C8	2.54	0.41
9:8E:48:GLU:N	9:8E:49:PRO:HD2	2.35	0.41
51:J5:57:VAL:O	51:J5:58:LEU:HG	2.20	0.41
31:51:40:GLU:O	31:51:41:MET:HB3	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:1H:1932:A:H2'	25:1H:1933:G:O4'	2.21	0.41
25:1H:92:G:H2'	25:1H:93:C:C6	2.55	0.41
25:1H:1761:C:H42	25:1H:1762:A:H62	1.68	0.41
54:1G:236:G:H8	54:1G:236:G:O5'	2.03	0.41
1:13:159:G:O2'	1:13:161:A:N7	2.46	0.41
18:9A:39:VAL:HG23	18:9A:39:VAL:H	1.61	0.41
22:1K:63:5MU:C6	22:1K:63:5MU:H5'	2.56	0.41
25:14:2664:G:H8	25:14:2664:G:O5'	2.03	0.41
22:3K:55:U:OP1	22:3K:55:U:H4'	2.19	0.41
4:3E:179:GLU:HG3	4:3E:179:GLU:H	1.45	0.41
14:5A:47:LEU:HA	14:5A:47:LEU:HD23	1.83	0.41
6:52:3:ARG:HB3	6:52:3:ARG:CZ	2.50	0.41
25:14:2544:G:H8	25:14:2544:G:O5'	2.02	0.41
25:1H:2086:U:H2'	25:1H:2087:G:C8	2.55	0.41
50:M8:13:ARG:NH1	50:M8:22:ILE:HG23	2.35	0.41
54:1G:340:U:H2'	54:1G:341:C:C6	2.55	0.41
37:55:57:ARG:NE	37:55:59:ASP:OD2	2.44	0.41
54:1G:984:C:H2'	54:1G:985:C:C6	2.54	0.41
25:1H:2572:A:N7	28:21:144:ARG:HD2	2.35	0.41
25:1H:2592:G:C5	25:1H:2593:U:C4	3.08	0.41
54:1G:1128:C:N3	54:1G:1139:G:C6	2.88	0.41
25:1H:1525:G:N3	25:1H:1526:G:C8	2.88	0.41
26:1J:116:G:H4'	38:65:54:LEU:HD23	2.02	0.41
25:1H:821:A:N1	60:1H:3667:HOH:O	2.37	0.41
25:1H:2467:C:H2'	25:1H:2468:G:H5'	2.02	0.41
33:58:72:TYR:OH	33:58:98:VAL:HG23	2.21	0.41
5:42:121:LYS:HD2	5:42:122:GLU:H	1.85	0.41
25:1H:2304:G:H5"	30:41:124:SER:HB3	2.02	0.41
25:1H:1404:C:O2'	25:1H:1405:U:H5'	2.21	0.41
2:1E:141:GLU:O	2:1E:145:LEU:HB2	2.20	0.41
54:1G:977:A:N3	54:1G:977:A:H3'	2.36	0.41
19:AI:64:GLU:O	19:AI:67:VAL:HG13	2.20	0.41
23:2K:16:C:O2'	23:2K:62:C:OP1	2.34	0.41
32:69:77:LEU:HD22	32:69:141:LYS:HD2	2.02	0.41
25:14:1778:U:P	60:14:3627:HOH:O	2.78	0.41
25:1H:1332:G:N2	25:1H:1609:A:O2'	2.53	0.41
20:BA:37:SER:O	20:BA:41:ILE:HG12	2.21	0.41
10:1I:61:GLU:OE1	14:5I:58:LYS:NZ	2.51	0.41
1:13:221:C:H2'	1:13:222:U:C6	2.53	0.41
25:14:10:G:C6	25:14:2629:A:N7	2.88	0.41
35:78:6:LEU:HA	35:78:6:LEU:HD12	1.86	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:13:724:G:C2	1:13:725:G:C8	3.09	0.41
42:E8:57:ASN:O	42:E8:62:HIS:HD2	2.03	0.41
1:13:198:G:N7	1:13:220:G:N2	2.67	0.41
25:14:733:G:C8	60:14:3413:HOH:O	2.57	0.41
39:75:106:SER:C	39:75:107:ASP:OD1	2.59	0.41
20:BI:64:ASP:HA	20:BI:67:ALA:HB3	2.01	0.41
25:14:807:U:H2'	25:14:808:G:H8	1.85	0.41
28:21:82:ARG:O	28:21:84:PHE:N	2.54	0.41
54:1G:853:G:H2'	54:1G:854:G:C8	2.53	0.41
25:14:753:C:H2'	25:14:754:C:H6	1.86	0.41
25:14:754:C:H2'	25:14:755:C:C6	2.55	0.41
25:14:249:C:H4'	25:14:250:G:O5'	2.21	0.41
25:1H:1181:C:O2'	25:1H:1182:A:H5'	2.21	0.41
3:2E:141:VAL:O	3:2E:144:SER:HB3	2.21	0.41
25:14:839:U:H2'	25:14:840:C:H6	1.84	0.41
1:13:310:G:OP2	16:7I:27:LYS:NZ	2.35	0.41
25:1H:301:G:C2	25:1H:302:C:C2	3.08	0.41
1:13:101:A:C5	1:13:102:G:N7	2.89	0.41
35:35:90:ARG:HG3	35:35:91:PHE:H	1.85	0.41
1:13:1285:A:H4'	1:13:1286:A:O5'	2.20	0.41
25:1H:212:G:H2'	25:1H:213:A:O4'	2.20	0.41
20:BA:87:LYS:O	20:BA:91:LEU:HG	2.20	0.41
25:14:2443:C:OP1	29:39:68:LYS:HG3	2.21	0.41
49:H5:43:ILE:O	49:H5:47:VAL:HG23	2.21	0.41
44:G8:89:PHE:CD2	44:G8:90:LEU:N	2.89	0.41
25:1H:2840:C:H42	25:1H:2877:G:H1	1.68	0.41
9:8E:48:GLU:HG2	9:8E:51:ARG:HH21	1.86	0.41
25:1H:2837:G:C6	25:1H:2838:G:N7	2.88	0.41
14:5A:22:THR:HB	14:5A:33:VAL:HB	2.02	0.41
29:39:111:ALA:HB2	29:39:206:ILE:HG21	2.02	0.41
4:3E:145:GLU:HG2	4:3E:184:LYS:HG3	2.02	0.41
13:4I:74:VAL:O	13:4I:78:ILE:HG12	2.21	0.41
3:22:110:ASN:O	3:22:141:VAL:HG22	2.20	0.41
29:39:168:ARG:HG3	29:39:175:THR:HG21	2.01	0.41
25:1H:745:G:OP2	28:21:133:LYS:HE2	2.20	0.41
9:82:82:ALA:HB1	9:82:96:LEU:HD21	2.03	0.41
54:1G:943:U:H2'	54:1G:944:G:H5'	2.03	0.41
25:1H:1570:A:H2'	25:1H:1571:A:C8	2.56	0.41
54:1G:134:A:H1'	54:1G:325:A:C5	2.55	0.41
25:14:1239:G:H2'	25:14:1240:U:O4'	2.20	0.41
54:1G:1508:G:H2'	54:1G:1509:C:C6	2.55	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:1G:414:A:H2'	54:1G:415:A:O4'	2.20	0.41
31:59:131:VAL:HG22	31:59:132:ARG:H	1.86	0.41
25:1H:1414:G:C6	25:1H:1415:U:C4	3.08	0.41
39:75:9:LEU:O	39:75:9:LEU:HD23	2.20	0.41
33:15:58:ASP:N	33:15:58:ASP:OD1	2.40	0.41
41:95:24:LYS:HB3	41:95:24:LYS:NZ	2.35	0.41
25:1H:389:G:H8	25:1H:389:G:O5'	2.04	0.41
39:B8:105:LEU:HA	39:B8:105:LEU:HD12	1.81	0.41
56:2L:32:G:C5	56:2L:33:OMC:C5	3.08	0.41
1:13:1360:A:H2'	1:13:1361:G:O4'	2.20	0.41
25:14:719:C:O2'	25:14:720:C:H5'	2.21	0.41
22:1K:39:A:H5'	25:1H:1913:A:C6	2.56	0.41
22:1K:33:C:O2	22:1K:38:MIA:H131	2.20	0.41
36:45:16:ARG:HE	36:45:16:ARG:HB3	1.30	0.41
38:A8:33:LYS:HB3	38:A8:34:HIS:CD2	2.56	0.41
54:1G:1191:A:OP1	3:22:4:LYS:HG3	2.20	0.41
40:C8:106:PHE:HA	40:C8:109:LEU:HD12	2.02	0.41
35:35:105:LEU:O	35:35:106:LEU:HB3	2.20	0.41
25:14:2425:A:H4'	25:14:2426:A:C5'	2.45	0.41
25:14:1378:A:O2'	25:14:1379:A:H3'	2.19	0.41
25:14:977:G:N3	25:14:1001:A:H2	2.18	0.41
2:1E:76:GLN:NE2	2:1E:207:ALA:H	2.18	0.41
48:K8:47:ASN:HB2	48:K8:48:HIS:H	1.77	0.41
25:14:910:A:N3	25:14:2264:C:O2'	2.40	0.41
25:14:1533:C:C4	25:14:1534:G:H1'	2.55	0.41
25:14:2159:G:C6	25:14:2160:G:C2	3.09	0.41
13:4A:84:ILE:HG23	19:AA:74:PHE:CZ	2.56	0.41
54:1G:1305:G:H5"	21:1B:4:GLY:C	2.41	0.41
2:1E:87:ARG:CZ	2:1E:233:SER:HB2	2.50	0.41
25:1H:443:A:H2'	29:31:45:ARG:HH12	1.86	0.41
54:1G:197:A:C8	54:1G:198:G:H1'	2.55	0.41
32:69:77:LEU:HA	32:69:141:LYS:HB2	2.02	0.41
49:L8:21:ALA:O	49:L8:24:LYS:HB2	2.20	0.41
30:49:104:GLU:HG2	50:I5:23:GLU:CG	2.46	0.41
54:1G:1442:G:C6	54:1G:1446:A:N6	2.88	0.41
1:13:445:G:H1	1:13:489:C:N4	2.14	0.41
25:14:831:G:O3'	35:35:38:GLN:HB3	2.20	0.41
1:13:430:A:OP2	4:3E:8:VAL:HG12	2.21	0.41
32:69:91:SER:HB3	32:69:119:PRO:HB3	2.03	0.41
25:1H:2160:G:C2	25:1H:2161:C:H1'	2.55	0.41
54:1G:1229:A:OP1	13:4A:116:THR:HG23	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:1A:32:ALA:CB	10:1A:81:THR:HG21	2.49	0.41
54:1G:486:U:H2'	54:1G:487:A:H8	1.86	0.41
25:14:649:G:C5	25:14:650:C:C4	3.09	0.41
25:14:1543:A:C2	25:14:1545:A:C4	3.09	0.41
26:16:54:G:O2'	26:16:55:U:H5'	2.21	0.41
54:1G:1272:G:C2	54:1G:1273:G:H1'	2.56	0.41
2:12:15:VAL:HB	2:12:16:HIS:CE1	2.56	0.41
12:3I:10:LEU:HD23	17:8I:32:TYR:CZ	2.56	0.41
25:14:1465:G:H2'	25:14:1466:G:O4'	2.20	0.41
25:1H:1797:C:O2'	27:11:259:THR:HG23	2.19	0.41
25:1H:1268:A:C2	25:1H:2013:A:C4	3.09	0.41
25:1H:1354:A:O3'	27:11:38:LYS:HE3	2.21	0.41
26:16:40:U:C2'	26:16:45:A:H61	2.34	0.41
54:1G:1422:G:OP1	34:25:48:PRO:HA	2.21	0.41
25:1H:2068:U:N3	25:1H:2430:A:C2	2.80	0.41
7:62:13:GLN:HA	7:62:14:PRO:HD3	1.81	0.41
25:14:1488:G:C6	25:14:1489:U:N3	2.89	0.41
25:1H:433:C:H2'	25:1H:434:U:C6	2.55	0.41
32:61:95:LYS:O	32:61:99:GLU:HG3	2.21	0.41
25:14:2300:G:H2'	25:14:2301:C:C6	2.55	0.41
25:1H:442:G:C4	25:1H:444:C:C5	3.08	0.41
20:BA:26:ASN:O	20:BA:30:LYS:HB2	2.20	0.41
25:1H:35:G:H2'	25:1H:36:G:O4'	2.20	0.41
25:1H:2496:C:C2'	25:1H:2497:A:H5'	2.50	0.41
4:32:101:LEU:HD23	4:32:121:VAL:CG1	2.51	0.41
25:1H:198:C:H4'	25:1H:2243:U:O2'	2.20	0.41
20:BA:97:ALA:O	20:BA:99:LEU:HD12	2.20	0.41
25:1H:2887:U:H2'	25:1H:2888:C:C6	2.56	0.41
1:13:981:U:C6	1:13:982:U:H2'	2.56	0.41
25:1H:2338:G:H2'	25:1H:2339:G:H8	1.86	0.41
11:2A:45:GLY:O	11:2A:50:TYR:HB2	2.21	0.41
25:14:1444(A):A:N3	25:14:1444(A):A:H2'	2.36	0.41
5:4E:142:LEU:HA	5:4E:142:LEU:HD23	1.86	0.41
29:39:107:LYS:HD3	29:39:107:LYS:HA	1.64	0.41
25:14:654:A:N3	25:14:654:A:H5"	2.34	0.41
33:15:65:LYS:HB3	33:15:65:LYS:HE2	1.58	0.41
34:25:104:ARG:HB3	34:25:104:ARG:CZ	2.49	0.41
23:2K:21:H2U:H2'	23:2K:21:H2U:O2	2.20	0.41
25:14:1802:A:N1	25:14:1822:G:H1'	2.36	0.41
55:1L:5:G:H1	55:1L:78:C:H42	1.68	0.41
25:1H:2179:C:H2'	25:1H:2180:U:C6	2.56	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:85:91:ASP:O	40:85:92:ARG:HG3	2.20	0.41
4:32:30:LYS:C	4:32:32:ALA:N	2.74	0.41
9:82:5:TYR:HA	9:82:17:VAL:O	2.20	0.41
25:1H:1885:A:H2'	25:1H:1886:C:O4'	2.20	0.41
53:M5:14:VAL:HG13	53:M5:22:VAL:HG13	2.01	0.41
31:51:83:TYR:HB3	31:51:135:GLY:N	2.26	0.41
1:13:874:G:C5	1:13:875:C:C5	3.08	0.41
33:58:34:LEU:HD12	33:58:34:LEU:HA	1.89	0.41
54:1G:828:A:N6	54:1G:858:G:O2'	2.50	0.41
3:22:73:PRO:HA	3:22:76:VAL:HG13	2.03	0.41
25:1H:839:U:H2'	25:1H:840:C:C6	2.55	0.41
25:14:977:G:C2	25:14:978:G:C8	3.08	0.41
29:31:24:LEU:HA	29:31:25:PRO:HD2	1.81	0.41
54:1G:1435:G:H2'	54:1G:1436:U:C5	2.55	0.41
39:B8:26:ASP:CB	39:B8:91:ARG:HA	2.51	0.41
25:14:1665:A:H2'	25:14:1666:G:O4'	2.20	0.41
54:1G:1060:C:H5"	10:1A:51:ARG:HG2	2.01	0.41
25:1H:1771:C:HO2'	25:1H:1786:A:H8	1.68	0.41
25:1H:685:A:H1'	25:1H:688:U:O4	2.21	0.41
30:41:43:LEU:O	30:41:46:ALA:N	2.32	0.41
35:78:86:LYS:HE2	35:78:86:LYS:HB2	1.82	0.41
35:78:19:VAL:HA	35:78:20:GLY:HA3	1.60	0.41
25:14:822:U:H2'	25:14:823:G:C8	2.55	0.41
53:Q8:21:LYS:CG	53:Q8:22:VAL:N	2.82	0.41
27:19:37:LEU:CD2	27:19:62:TYR:HB2	2.51	0.41
31:59:83:TYR:HD1	31:59:84:SER:H	1.67	0.41
16:7A:57:ARG:NH2	16:7A:79:VAL:O	2.54	0.41
46:I8:42:GLY:C	46:I8:57:PHE:HD2	2.24	0.41
20:BI:49:ALA:HB1	20:BI:99:LEU:HB3	2.02	0.41
25:1H:709:U:H2'	25:1H:710:G:O4'	2.21	0.41
7:6E:26:PHE:CE2	7:6E:30:ILE:HD11	2.55	0.41
1:13:1308:U:OP1	13:4I:98:VAL:HG23	2.21	0.41
25:1H:1287:A:H5'	37:98:104:ARG:HD3	2.03	0.41
40:85:25:TRP:CD1	40:85:25:TRP:C	2.93	0.41
30:49:135:LEU:HD23	30:49:140:ILE:HD11	2.01	0.41
25:14:875:G:C2	25:14:903:C:C2	3.09	0.41
25:14:1400:G:H2'	25:14:1401:G:C8	2.56	0.41
25:1H:2768:C:HO2'	33:58:89:LYS:HZ1	1.58	0.41
25:1H:2235:G:H2'	25:1H:2236:C:H6	1.86	0.41
1:13:370:C:C2	1:13:392:G:N2	2.89	0.41
41:95:59:ALA:HA	41:95:95:LEU:O	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:9I:19:LYS:HB3	18:9I:20:ALA:H	1.54	0.41
25:14:1260:G:H2'	25:14:1261:C:C6	2.56	0.41
25:1H:2051:A:H4'	28:21:141:ILE:HG12	2.01	0.41
26:1J:83:G:H4'	49:H5:52:HIS:CG	2.56	0.41
25:1H:2652:C:H2'	25:1H:2653:U:O4'	2.20	0.41
25:14:1653:G:C6	37:55:9:LYS:HB2	2.55	0.41
7:62:91:VAL:HB	7:62:96:GLN:HG2	2.02	0.41
25:1H:1649:G:C6	25:1H:2009:G:C6	3.08	0.41
1:13:1310:G:N2	1:13:1328:C:C2	2.88	0.41
39:75:90:GLN:OE1	39:75:121:ILE:HD11	2.20	0.41
6:52:68:PRO:HG2	6:52:71:ARG:HG3	2.03	0.41
28:21:30:PRO:HD3	28:21:180:ASN:OD1	2.21	0.41
47:F5:67:ILE:N	47:F5:68:PRO:HD2	2.36	0.41
25:1H:185:U:H4'	25:1H:218:A:H4'	2.02	0.41
50:I5:18:CYS:H	50:I5:19:GLY:HA2	1.86	0.41
54:1G:79:G:H2'	54:1G:79:G:N3	2.35	0.41
44:C5:13:VAL:HG13	44:C5:27:VAL:HG23	2.03	0.41
1:13:269:C:H2'	1:13:270:A:C8	2.55	0.41
54:1G:1253:G:H2'	54:1G:1254:C:C6	2.55	0.41
27:11:202:LYS:HG3	27:11:203:ASN:OD1	2.21	0.41
1:13:1054:C:OP2	1:13:1197:G:OP2	2.39	0.41
25:1H:2308:G:N3	25:1H:2308:G:H2'	2.34	0.41
25:14:1332:G:H5'	25:14:1332:G:C8	2.56	0.41
4:32:26:CYS:HA	4:32:31:CYS:CA	2.43	0.41
25:14:2810:A:O3'	28:29:61:ARG:HG2	2.21	0.41
25:14:2495:G:O3'	36:45:81:VAL:HG12	2.21	0.41
35:35:62:LEU:HA	35:35:63:PRO:HD2	1.82	0.41
35:35:63:PRO:HB2	35:35:64:LYS:H	1.67	0.41
25:1H:1654:A:OP1	37:98:1:MET:HA	2.21	0.41
26:16:7:G:H1	26:16:113:C:N4	2.19	0.41
22:1K:25:G:N3	22:1K:26:G:C8	2.88	0.41
25:14:1674:G:H1'	25:14:1676:A:N6	2.36	0.41
13:4I:108:ARG:HH11	13:4I:108:ARG:CG	2.28	0.41
45:H8:126:VAL:HA	45:H8:164:ALA:H	1.86	0.41
25:14:2293:C:H5"	38:65:89:ARG:HH12	1.86	0.41
38:65:10:ARG:O	38:65:14:VAL:HG23	2.20	0.41
25:1H:581:C:OP1	40:C8:33:ARG:HG3	2.19	0.41
25:1H:1732:A:H2'	25:1H:1733:G:O4'	2.20	0.41
25:14:977:G:C4	25:14:978:G:C8	3.09	0.41
54:1G:1349:A:P	9:82:118:LYS:NZ	2.93	0.41
1:13:1002:G:C4	1:13:1003:G:C8	3.08	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:1E:201:ILE:HA	2:1E:202:PRO:HD2	1.86	0.41
54:1G:973:G:H3'	54:1G:974:A:H5"	2.02	0.41
22:1K:14:A:H2'	22:1K:14:A:N3	2.35	0.41
37:98:63:ARG:HB2	37:98:80:PHE:CE2	2.56	0.41
5:42:92:LYS:HE2	8:72:105:ARG:HH21	1.86	0.41
25:14:2611:U:H2'	51:J5:3:LYS:HB3	2.02	0.41
25:14:919:G:N2	25:14:2269:A:OP2	2.53	0.41
25:14:686:G:C2	52:L5:11:LYS:HE2	2.55	0.41
25:14:1138:G:O2'	33:15:106:MET:HG3	2.20	0.41
26:16:54:G:H2'	26:16:55:U:C6	2.54	0.41
25:14:2881:C:O2'	37:55:96:ARG:HA	2.20	0.41
25:1H:1138:G:H2'	25:1H:1139:G:O4'	2.21	0.41
45:H8:92:SER:O	45:H8:130:PRO:HG2	2.21	0.41
28:21:134:ILE:HD12	28:21:134:ILE:C	2.40	0.41
55:3L:3:U:H3	55:3L:79:A:H61	1.68	0.41
25:1H:2436:G:C5	25:1H:2437:U:C5	3.09	0.41
1:13:246:A:N1	1:13:279:A:C2	2.89	0.41
1:13:380:G:C2	1:13:384:G:C6	3.08	0.41
33:58:138:LEU:HA	33:58:138:LEU:HD12	1.94	0.41
25:1H:1153:C:N4	25:1H:1154:G:C6	2.89	0.41
46:I8:11:ARG:O	46:I8:14:ARG:NH2	2.54	0.41
25:14:1488:G:C2'	25:14:1489:U:H5'	2.50	0.41
26:1J:83:G:H1	26:1J:93:C:H42	1.69	0.41
37:55:59:ASP:OD1	37:55:61:HIS:HB3	2.21	0.41
38:65:41:ASP:CB	38:65:48:LEU:HD21	2.51	0.41
8:72:114:THR:OG1	8:72:115:SER:N	2.52	0.41
47:F5:89:GLU:O	47:F5:93:GLU:HB2	2.21	0.41
1:13:1486:G:H2'	1:13:1487:G:O4'	2.21	0.41
2:12:136:VAL:O	2:12:139:LYS:HB3	2.21	0.41
1:13:170:U:H2'	1:13:171:A:H8	1.85	0.41
15:6I:69:TYR:CE1	15:6I:73:GLU:HG3	2.56	0.41
41:95:2:PHE:O	41:95:42:GLY:N	2.53	0.41
4:3E:201:GLN:O	4:3E:205:GLU:HG3	2.21	0.41
12:3A:8:ASN:OD1	17:8A:34:LYS:HE2	2.20	0.41
25:14:237:C:C2'	25:14:238:C:H5'	2.50	0.41
25:1H:1956:U:H1'	25:1H:2552:U:OP1	2.21	0.41
25:14:773:U:O2'	27:19:48:ARG:HD3	2.20	0.41
47:F5:76:ARG:HG2	47:F5:76:ARG:H	1.68	0.41
35:78:3:LEU:HA	35:78:3:LEU:HD23	1.89	0.41
7:6E:20:ASP:HB3	7:6E:23:VAL:HG23	2.02	0.41
35:78:120:ALA:HB1	35:78:138:LEU:HD23	2.03	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:82:16:ARG:O	9:82:63:ILE:HG23	2.21	0.41
25:1H:806:C:H2'	25:1H:807:U:H6	1.84	0.41
26:1J:89(A):A:N7	26:1J:90:C:H1'	2.36	0.41
25:1H:1567:A:C8	27:11:84:TYR:CE2	3.09	0.41
14:5I:27:CYS:SG	14:5I:29:ARG:HB3	2.61	0.41
54:1G:1184:G:C2	54:1G:1185:G:C8	3.08	0.41
35:78:130:PHE:HE1	35:78:146:VAL:HG22	1.85	0.41
25:1H:2168:G:H22	25:1H:2170:A:N6	2.04	0.41
1:13:1131:G:H2'	1:13:1132:C:H6	1.84	0.41
1:13:1133:G:C2	1:13:1134:G:N7	2.89	0.41
25:14:2459:A:H5"	25:14:2460:U:OP2	2.21	0.41
22:1K:85:A:C1'	25:1H:2583:G:H21	2.31	0.41
54:1G:411:A:N7	54:1G:413:G:N3	2.69	0.41
55:3L:18:G:H1	55:3L:65:C:H42	1.68	0.41
25:1H:1515:C:H2'	25:1H:1516:U:H6	1.86	0.41
40:C8:92:ARG:CZ	40:C8:96:ALA:CA	2.98	0.41
25:1H:1591:G:O2'	25:1H:1592:C:H5'	2.21	0.41
38:65:106:ARG:HG3	38:65:106:ARG:H	1.50	0.41
38:65:106:ARG:HB3	38:65:112:PHE:O	2.21	0.41
2:12:134:GLU:O	2:12:138:LEU:HG	2.20	0.41
41:95:89:GLN:HA	41:95:90:PRO:HD3	1.87	0.41
25:1H:1495:A:H2'	25:1H:1496:A:N3	2.36	0.41
1:13:77:C:H2'	1:13:78:G:C8	2.55	0.41
54:1G:1028:C:H42	54:1G:1033:G:H1	1.67	0.41
25:1H:1541:U:H2'	25:1H:1542:G:O4'	2.21	0.41
32:61:52:ARG:O	32:61:56:LYS:N	2.50	0.41
37:55:33:ARG:HB2	37:55:115:GLU:HG2	2.03	0.41
1:13:767:A:O2'	1:13:1525:G:H1'	2.21	0.41
11:2I:120:ARG:HA	11:2I:121:PRO:HD3	1.84	0.41
25:1H:1466:G:H2'	25:1H:1547:C:N4	2.36	0.41
43:F8:2:LYS:HB2	43:F8:2:LYS:HE2	1.96	0.41
51:N8:41:PRO:HA	51:N8:42:PRO:HD3	1.89	0.41
49:L8:26:LEU:HD21	49:L8:46:ASN:CB	2.51	0.41
54:1G:363:A:H2'	54:1G:364:A:O4'	2.19	0.41
27:11:17:THR:CG2	27:11:204:ILE:HA	2.47	0.41
44:G8:26:LYS:O	44:G8:39:VAL:HG13	2.21	0.41
1:13:458:C:H2'	1:13:464:G:H8	1.86	0.41
25:1H:443:A:C5	29:31:45:ARG:HD2	2.56	0.41
25:1H:729:G:C4	25:1H:1775:U:O2	2.74	0.41
30:41:57:ALA:HB2	30:41:90:LEU:CG	2.49	0.41
47:F5:78:LYS:HG2	47:F5:79:GLY:N	2.35	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:1H:2787:C:H5'	25:1H:2788:C:OP2	2.20	0.41
25:1H:1992:G:C5	60:1H:3842:HOH:O	2.72	0.41
54:1G:689:C:C2'	54:1G:690:G:H5'	2.51	0.41
25:14:459:U:H4'	52:L5:40:TRP:CH2	2.56	0.41
54:1G:1023:G:H3'	54:1G:1024:G:H5"	2.03	0.41
5:42:135:THR:O	5:42:139:LEU:HG	2.21	0.41
25:1H:1319:G:C6	25:1H:1320:C:N4	2.89	0.41
4:32:82:ALA:O	4:32:89:THR:OG1	2.35	0.41
8:7E:32:LYS:O	8:7E:36:LEU:HG	2.21	0.41
44:C5:14:LEU:HD12	44:C5:15:VAL:N	2.36	0.41
25:14:1232:G:C6	25:14:1233:C:C4	3.08	0.41
54:1G:1480:G:H2'	54:1G:1481:U:C6	2.56	0.41
28:29:15:PHE:CD2	39:75:81:PRO:HD3	2.55	0.41
12:3I:47:LYS:HB2	12:3I:48:PRO:HA	2.02	0.41
13:4A:3:ARG:NH2	13:4A:7:VAL:HG12	2.36	0.41
25:14:2213:U:H5'	47:F5:52:ARG:HH12	1.86	0.41
25:14:629:G:H5"	25:14:650:C:O2'	2.21	0.41
25:14:2126:A:H4'	25:14:2127:G:OP1	2.20	0.41
25:14:2013:A:N6	25:14:2014:A:C6	2.88	0.41
41:D8:33:VAL:HG12	41:D8:34:GLU:O	2.21	0.41
25:14:2542:A:H4'	25:14:2542:A:OP1	2.20	0.41
2:1E:64:ARG:HE	2:1E:64:ARG:HB3	1.66	0.41
8:72:29:SER:O	8:72:32:LYS:HB2	2.21	0.41
25:14:2720:U:C2	25:14:2721:A:C8	3.09	0.41
25:1H:2358:G:C5	25:1H:2359:C:C5	3.09	0.41
1:13:1504:G:OP1	1:13:1507:A:H4'	2.21	0.41
25:14:1465:G:H5'	25:14:1528:A:O2'	2.21	0.41
25:14:363(E):U:H5'	25:14:363(F):A:OP2	2.20	0.41
34:68:49:ARG:N	34:68:53:LYS:HZ1	2.18	0.41
1:13:538:G:H5"	12:3I:114:LYS:HB2	2.02	0.41
54:1G:694:A:H5"	11:2A:53:SER:CB	2.51	0.41
7:62:73:MET:HG3	7:62:90:GLU:HA	2.03	0.41
25:1H:2309:A:O5'	25:1H:2309:A:H8	2.04	0.41
9:8E:7:THR:O	9:8E:79:LEU:HD12	2.21	0.41
43:F8:66:LEU:HA	43:F8:66:LEU:HD12	1.62	0.41
30:41:150:ASP:OD1	30:41:153:ARG:NH2	2.54	0.41
17:8I:54:GLY:CA	17:8I:81:ARG:H	2.33	0.41
25:14:19:C:H2'	25:14:20:C:C6	2.55	0.41
46:I8:31:VAL:HG23	46:I8:32:ARG:N	2.35	0.41
27:11:89:SER:HB2	27:11:159:ALA:HB3	2.03	0.41
25:14:2008:C:H2'	25:14:2009:G:H8	1.86	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:1I:46:ARG:HB2	10:1I:46:ARG:CZ	2.51	0.41
46:I8:29:GLN:H	46:I8:67:VAL:HG23	1.86	0.41
7:62:13:GLN:O	7:62:24:THR:HG21	2.21	0.41
39:B8:2:ASN:O	39:B8:3:ARG:HG2	2.21	0.41
11:2A:99:GLN:HG3	11:2A:105:VAL:CG1	2.50	0.41
9:8E:99:LEU:HB3	9:8E:101:PHE:CE2	2.56	0.41
25:1H:2335:A:C8	25:1H:2337:G:C5	3.09	0.41
25:14:872:A:H4'	36:45:66:ILE:HD11	2.02	0.41
27:19:5:LYS:HG2	27:19:17:THR:HG22	2.03	0.41
9:82:94:ALA:O	9:82:98:PRO:HG2	2.20	0.41
22:1K:63:5MU:H5'	22:1K:63:5MU:H6	1.86	0.41
27:19:228:PRO:HD3	27:19:234:GLY:O	2.21	0.41
25:14:2865:U:C4	25:14:2866:U:C4	3.08	0.41
25:14:480:A:H1'	44:C5:44:ILE:HD13	2.03	0.41
50:M8:54:GLY:HA2	50:M8:57:GLU:HB3	2.03	0.41
20:BI:44:ALA:O	20:BI:91:LEU:HB3	2.20	0.41
19:AA:58:VAL:HA	19:AA:59:PRO:HD2	1.97	0.41
25:14:674:G:O2'	29:39:74:ARG:HG3	2.21	0.41
31:59:92:ILE:HB	31:59:93:GLY:H	1.58	0.41
25:14:586:A:N1	25:14:809:G:O2'	2.42	0.41
25:1H:1298:C:C5'	25:1H:1299:G:OP2	2.68	0.41
31:51:47:GLU:C	31:51:49:VAL:H	2.24	0.41
25:1H:844:C:H2'	25:1H:845:G:O4'	2.20	0.41
25:1H:757:U:H2'	25:1H:758:C:O4'	2.21	0.41
11:2A:56:GLY:O	11:2A:89:ALA:HB3	2.21	0.41
11:2A:38:ASN:HA	11:2A:39:PRO:HD3	1.95	0.41
54:1G:219:C:H2'	54:1G:220:G:O4'	2.21	0.41
54:1G:137:C:C2	54:1G:227:G:N2	2.89	0.41
25:14:2094:G:OP1	32:69:22:LYS:HD2	2.20	0.41
15:6I:10:LYS:HD2	15:6I:10:LYS:HA	1.51	0.41
38:65:83:LYS:HE2	38:65:83:LYS:HB2	1.78	0.41
3:22:23:TYR:CE1	10:1A:10:GLY:HA2	2.56	0.41
28:29:6:GLY:HA2	28:29:51:PHE:CZ	2.56	0.41
25:14:2018:G:P	51:J5:9:LYS:HZ1	2.44	0.41
25:14:2116:G:H2'	25:14:2117:A:C4	2.55	0.41
1:13:300:A:H1'	1:13:565:U:O2	2.21	0.41
38:A8:48:LEU:HD23	38:A8:82:ILE:HD11	2.03	0.41
25:1H:2250:G:C4	36:88:83:MET:HB2	2.56	0.41
25:14:110:G:C2	25:14:111:A:C8	3.09	0.41
16:7A:23:ASP:OD1	16:7A:25:ARG:HG3	2.21	0.41
25:14:300:A:H1'	25:14:319:C:H1'	2.02	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:1E:226:ARG:HG3	2:1E:227:GLY:H	1.86	0.41
25:1H:2079:U:O3'	47:J8:35:THR:HB	2.21	0.41
1:13:616:G:C2	1:13:617:G:C8	3.09	0.41
25:14:2093:G:O5'	32:69:24:GLY:HA3	2.21	0.41
28:29:188:VAL:HG23	28:29:189:PRO:HD2	2.03	0.41
25:1H:2082:A:H2'	25:1H:2083:G:C8	2.56	0.41
18:9A:45:SER:OG	18:9A:46:GLU:N	2.54	0.41
1:13:195:A:C5	1:13:196:A:N1	2.89	0.41
25:14:184:C:H2'	25:14:185:U:C6	2.56	0.41
1:13:1054:C:N3	22:1K:35:QUO:H1'	2.36	0.41
54:1G:1321:C:C5	54:1G:1322:C:C5	3.09	0.41
25:1H:751:A:H5'	42:E8:90:ARG:HA	2.02	0.41
4:32:22:LYS:HB2	4:32:26:CYS:SG	2.61	0.41
54:1G:1280:A:H1'	10:1A:41:PRO:HG3	2.03	0.41
26:1J:38:C:H1'	38:65:95:HIS:CE1	2.56	0.41
19:AA:40:ILE:O	19:AA:68:GLY:N	2.53	0.41
26:1J:80:U:O2'	26:1J:81:G:H5'	2.21	0.41
25:14:676:A:H8	25:14:2069:G:N2	2.06	0.41
28:29:63:LEU:H	28:29:63:LEU:CD2	2.34	0.41
55:3L:35:G:C2	57:4L:14:A:C2	3.09	0.41
14:5I:24:CYS:C	14:5I:26:ARG:H	2.23	0.41
35:35:62:LEU:HD12	35:35:63:PRO:HD2	2.03	0.41
34:25:96:THR:OG1	34:25:97:ARG:N	2.54	0.41
1:13:1296:C:H5"	1:13:1297:C:OP2	2.21	0.41
13:4I:13:LYS:HB3	13:4I:14:ARG:H	1.61	0.41
1:13:1296:C:H5'	13:4I:14:ARG:HH11	1.86	0.41
5:42:61:TYR:HA	5:42:64:ARG:HB2	2.02	0.41
40:C8:8:VAL:HG23	40:C8:11:ARG:NH2	2.27	0.41
25:1H:2392:A:N1	25:1H:2424:C:N3	2.68	0.41
40:C8:101:ARG:C	40:C8:103:PRO:HD3	2.41	0.41
25:14:2238:G:N3	25:14:2238:G:H2'	2.36	0.41
7:62:15:ASP:HB3	7:62:19:GLY:N	2.36	0.41
25:1H:74:A:H5"	48:K8:51:ARG:NH2	2.36	0.41
1:13:736:C:OP1	18:9I:68:LYS:HD2	2.21	0.41
13:4A:80:ARG:O	13:4A:84:ILE:HB	2.21	0.41
25:14:856:C:C4	25:14:857:C:N4	2.89	0.41
8:7E:49:GLU:O	8:7E:51:VAL:HG13	2.21	0.41
10:1A:51:ARG:HG3	14:5A:45:ARG:NH1	2.36	0.41
30:41:42:GLY:O	30:41:43:LEU:HD23	2.21	0.41
30:41:43:LEU:HA	30:41:43:LEU:HD23	1.72	0.41
54:1G:21:G:N1	54:1G:22:G:C6	2.88	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:98:52:ILE:HG12	37:98:79:LEU:HD21	2.03	0.41
37:98:55:ALA:HB2	37:98:79:LEU:HD13	2.02	0.41
25:14:528:A:N1	25:14:2042:A:H2'	2.35	0.41
25:1H:2632:A:O2'	25:1H:2811:G:O2'	2.13	0.41
2:1E:162:ILE:HD13	2:1E:183:PRO:O	2.20	0.41
31:59:170:ARG:HB2	31:59:171:LEU:H	1.70	0.41
25:14:2054:A:C2	51:J5:8:LYS:HD3	2.56	0.41
20:BA:54:LYS:HE3	20:BA:54:LYS:HB3	1.80	0.41
32:69:100:ALA:O	32:69:104:GLN:HB3	2.21	0.41
25:1H:1230:C:H2'	25:1H:1231:G:H8	1.85	0.41
42:E8:4:LYS:CB	42:E8:106:ILE:HG12	2.50	0.41
29:31:168:ARG:HG3	29:31:175:THR:HG21	2.02	0.41
17:8A:10:VAL:HG21	17:8A:52:LYS:O	2.21	0.41
36:45:109:VAL:HB	36:45:113:GLN:HB3	2.03	0.41
43:F8:14:SER:O	43:F8:15:GLU:C	2.60	0.41
21:1B:7:ARG:HB3	21:1B:21:TYR:CD2	2.56	0.41
1:13:502:G:C6	1:13:503:C:C4	3.08	0.41
6:5E:100:ASN:ND2	18:9I:26:LEU:O	2.54	0.41
1:13:683:G:C6	1:13:684:A:C5	3.09	0.41
1:13:373:A:H2'	1:13:374:A:H8	1.85	0.41
1:13:233:C:H2'	1:13:234:C:H6	1.85	0.41
48:K8:14:ARG:H	48:K8:14:ARG:HG2	1.58	0.41
9:8E:99:LEU:HD12	9:8E:101:PHE:CE2	2.56	0.41
53:Q8:33:ASN:O	53:Q8:33:ASN:ND2	2.42	0.41
3:2E:188:LEU:HD22	3:2E:188:LEU:HA	1.78	0.41
25:14:1954:G:C2	25:14:2551:C:H5"	2.56	0.41
25:1H:1624:G:H2'	25:1H:1625:C:H6	1.85	0.41
25:1H:1259:G:H2'	25:1H:1260:G:H8	1.86	0.41
25:1H:2740:A:C6	25:1H:2764:A:C8	3.08	0.41
25:1H:1641:A:H2'	25:1H:1642:G:O4'	2.21	0.41
1:13:949:A:C6	1:13:950:U:C4	3.09	0.41
25:1H:373:U:H2'	25:1H:374:A:H8	1.86	0.41
2:12:67:THR:HG21	2:12:155:LEU:HG	2.03	0.41
36:45:7:MET:HG3	36:45:9:TYR:O	2.20	0.41
13:4I:11:ARG:HD3	13:4I:46:LYS:NZ	2.36	0.41
25:1H:216:A:H2'	25:1H:217:G:H8	1.85	0.41
39:75:93:ARG:HG3	39:75:115:ARG:HG3	2.03	0.41
4:3E:169:LYS:HE2	4:3E:169:LYS:HB3	1.97	0.41
12:3I:76:ASN:OD1	12:3I:76:ASN:N	2.52	0.41
3:22:132:ARG:HB3	3:22:132:ARG:CZ	2.51	0.41
25:1H:229:A:H1'	25:1H:230:U:OP2	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:51:124:GLU:O	31:51:126:PRO:HD3	2.21	0.41
11:2I:13:GLN:HG3	11:2I:75:TYR:O	2.20	0.41
25:14:815:C:OP2	41:95:82:ARG:HD3	2.21	0.41
27:11:68:LYS:HA	27:11:70:TRP:CZ3	2.56	0.41
27:11:70:TRP:CD1	27:11:70:TRP:C	2.94	0.41
1:13:44:G:C2	1:13:45:U:H1'	2.56	0.41
6:52:5:GLU:HG3	6:52:93:SER:OG	2.21	0.41
26:1J:85:G:C2	26:1J:86:G:C8	3.09	0.40
5:42:57:LYS:HG2	5:42:61:TYR:CE2	2.54	0.40
10:1I:77:PRO:HB2	10:1I:79:ARG:NH1	2.25	0.40
37:55:34:ILE:HG22	37:55:114:VAL:HB	2.03	0.40
39:B8:108:ARG:O	39:B8:111:ARG:HG2	2.21	0.40
25:1H:1439:A:C2	25:1H:1553:A:C4	3.09	0.40
25:14:2314:C:H2'	25:14:2315:G:H8	1.85	0.40
25:14:587:C:O2	35:35:33:ARG:NH1	2.54	0.40
25:1H:2137:C:H42	25:1H:2154:G:N2	2.19	0.40
25:1H:2152:G:H2'	25:1H:2153:G:O4'	2.21	0.40
3:22:47:LEU:HB3	3:22:52:LEU:HB3	2.03	0.40
25:1H:1049:C:H2'	25:1H:1050:A:H5'	2.04	0.40
53:M5:53:PRO:O	53:M5:56:GLU:OE2	2.39	0.40
30:41:131:TYR:CE2	30:41:133:LEU:HD23	2.56	0.40
31:59:6:ARG:HB2	31:59:65:HIS:CD2	2.56	0.40
14:5I:3:ARG:HH11	14:5I:3:ARG:CG	2.32	0.40
49:L8:28:LEU:HA	49:L8:33:GLN:OE1	2.20	0.40
51:N8:46:CYS:HA	51:N8:47:PRO:HD2	1.94	0.40
25:14:2296:U:H4'	25:14:2297:C:OP1	2.21	0.40
34:25:63:VAL:CG1	34:25:85:VAL:HG23	2.50	0.40
54:1G:1302:U:OP1	13:4A:13:LYS:NZ	2.54	0.40
32:61:71:ILE:HG23	32:61:72:LEU:N	2.37	0.40
27:11:71:ASP:HB2	27:11:103:ARG:NH2	2.33	0.40
8:7E:29:SER:HG	8:7E:32:LYS:H	1.60	0.40
44:C5:17:SER:O	44:C5:21:LYS:HB2	2.21	0.40
10:1A:8:LEU:HG	10:1A:96:ILE:HG23	2.03	0.40
5:4E:103:GLY:O	5:4E:106:PRO:HD2	2.21	0.40
25:14:534:U:H2'	25:14:535:C:C6	2.55	0.40
25:14:1805:U:H5"	27:19:250:TRP:CD2	2.55	0.40
54:1G:191(F):U:H2'	54:1G:191:G:H8	1.85	0.40
2:12:130:ARG:H	2:12:130:ARG:HE	1.68	0.40
2:1E:60:ASP:HB3	2:1E:64:ARG:CZ	2.51	0.40
30:49:101:ILE:O	30:49:105:LYS:HG3	2.21	0.40
29:39:153:SER:OG	29:39:190:GLU:HB2	2.21	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:1H:2405:G:OP1	35:78:77:ARG:NH2	2.47	0.40
25:14:1204:A:C2	25:14:1241:A:N1	2.88	0.40
25:1H:2228:G:H2'	25:1H:2229:C:C6	2.55	0.40
1:13:22:G:C2	1:13:23:C:C2	3.09	0.40
54:1G:555:C:H2'	54:1G:556:C:C6	2.57	0.40
35:78:113:LYS:HA	35:78:129:ALA:O	2.21	0.40
54:1G:1002:G:H2'	54:1G:1003:G:H8	1.86	0.40
5:42:15:ARG:NH2	57:4L:25:A:N7	2.69	0.40
44:G8:90:LEU:HG	44:G8:91:GLU:HA	2.01	0.40
31:51:37:VAL:HG23	31:51:38:SER:O	2.21	0.40
25:1H:1427:A:H4'	25:1H:1428:C:O4'	2.22	0.40
25:1H:34:C:H4'	25:1H:35:G:OP2	2.21	0.40
56:2L:5:G:H2'	56:2L:6:G:O4'	2.21	0.40
29:31:192:LEU:HD23	29:31:193:VAL:N	2.35	0.40
54:1G:914:A:C6	54:1G:915:A:C5	3.09	0.40
54:1G:232:G:H2'	54:1G:233:C:O4'	2.21	0.40
54:1G:384:G:H2'	54:1G:385:C:C6	2.56	0.40
54:1G:1012:U:H2'	54:1G:1013:G:O4'	2.20	0.40
25:1H:1831:G:H2'	25:1H:1832:C:C6	2.57	0.40
1:13:1409:C:H2'	1:13:1410:G:H8	1.87	0.40
28:21:93:VAL:HG21	28:21:177:PRO:HA	2.03	0.40
3:2E:121:ALA:O	3:2E:125:GLU:HG3	2.22	0.40
39:75:127:ALA:O	39:75:131:ALA:HB3	2.21	0.40
25:1H:2409:G:H2'	25:1H:2410:G:O4'	2.21	0.40
1:13:1516:G:N1	1:13:1519:A:OP2	2.50	0.40
7:6E:14:PRO:HG3	7:6E:21:VAL:HG13	2.03	0.40
13:4I:19:LEU:HA	13:4I:22:ILE:HD12	2.03	0.40
1:13:15:G:C4	1:13:16:A:C8	3.10	0.40
3:2E:18:TRP:H	3:2E:18:TRP:HE3	1.68	0.40
11:2A:82:VAL:N	11:2A:107:SER:O	2.41	0.40
33:58:18:ALA:HA	33:58:21:LYS:HG3	2.03	0.40
4:3E:151:LYS:HG3	4:3E:152:SER:N	2.36	0.40
25:14:452:G:N3	25:14:457:A:H2	2.19	0.40
25:14:453:C:OP1	60:14:3616:HOH:O	2.20	0.40
25:1H:192:C:OP2	60:1H:3581:HOH:O	2.21	0.40
25:14:631:A:O2'	35:35:67:MET:HB3	2.21	0.40
25:14:2393:A:O3'	35:35:63:PRO:CD	2.69	0.40
54:1G:960:U:H3	54:1G:1225:A:H1'	1.87	0.40
25:1H:2820:A:P	37:98:2:ARG:HH11	2.44	0.40
1:13:827:U:C5	1:13:872:A:N1	2.88	0.40
1:13:874:G:C6	1:13:875:C:C4	3.08	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:J8:85:LEU:H	47:J8:87:PRO:HD2	1.85	0.40
47:J8:90:ILE:HD13	47:J8:90:ILE:HG21	1.83	0.40
25:1H:1729:A:C8	25:1H:1731:G:C8	3.09	0.40
4:3E:158:ILE:HG22	4:3E:162:LEU:HD12	2.03	0.40
54:1G:1250:A:H2	54:1G:1353:G:H21	1.68	0.40
1:13:1273:G:C2	1:13:1274:G:H1'	2.56	0.40
1:13:254:G:OP1	17:8I:67:LYS:O	2.38	0.40
51:N8:31:VAL:HG13	51:N8:42:PRO:HG3	2.03	0.40
12:3A:60:LEU:HD12	12:3A:61:THR:H	1.87	0.40
1:13:1118:C:OP1	9:8E:9:ARG:HD3	2.21	0.40
28:29:120:TRP:CE3	28:29:155:LYS:HD3	2.56	0.40
1:13:1207:G:H2'	1:13:1208:C:H6	1.86	0.40
4:32:98:GLU:O	4:32:103:ASN:ND2	2.54	0.40
25:14:483:A:C5'	44:C5:49:VAL:HG22	2.51	0.40
50:I5:11:PRO:HB3	50:I5:25:TYR:CE2	2.56	0.40
25:1H:2564:A:OP1	25:1H:2648:C:H4'	2.21	0.40
6:52:100:ASN:HD22	18:9A:27:GLY:HA2	1.86	0.40
50:I5:21:VAL:HG22	50:I5:22:ILE:H	1.86	0.40
45:D5:152:ALA:HA	45:D5:171:ILE:HD11	2.03	0.40
37:98:25:ALA:O	37:98:26:LYS:C	2.60	0.40
32:69:54:GLN:HA	32:69:57:ARG:CB	2.50	0.40
7:6E:45:ASP:O	7:6E:48:LYS:HB3	2.21	0.40
25:14:1800:C:OP2	27:19:183:ARG:NH2	2.54	0.40
25:1H:590:A:P	29:31:95:ARG:HH11	2.45	0.40
25:14:15:G:C2	25:14:16:G:C4	3.09	0.40
25:14:774:A:H2	25:14:787:U:HO2'	1.65	0.40
40:85:47:TYR:HA	40:85:50:ARG:NH2	2.36	0.40
25:1H:315:G:C5	25:1H:316:C:C4	3.09	0.40
54:1G:1179:A:OP2	9:82:93:ARG:NH2	2.54	0.40
25:1H:2019:A:C2'	25:1H:2020:A:O5'	2.68	0.40
25:14:2187:G:C6	25:14:2188:C:N4	2.88	0.40
1:13:1238:A:N3	1:13:1241:G:O2'	2.41	0.40
1:13:1238:A:N7	1:13:1303:C:H1'	2.37	0.40
25:1H:975:G:H1'	25:1H:990:A:C2	2.56	0.40
54:1G:186(E):C:C2	54:1G:191(C):G:N2	2.90	0.40
20:BI:42:GLN:HG3	20:BI:43:LEU:HD23	2.03	0.40
8:72:38:ILE:HD12	8:72:118:VAL:HG12	2.02	0.40
7:6E:66:VAL:O	7:6E:70:LYS:HG3	2.20	0.40
1:13:751:U:H1'	15:6I:24:SER:HA	2.02	0.40
25:14:52:A:C5	25:14:118:A:C2	3.10	0.40
3:22:74:GLY:O	3:22:78:GLY:N	2.54	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:69:9:LEU:HD11	32:69:35:LEU:HB3	2.03	0.40
1:13:998:G:H1	1:13:1043:C:H42	1.69	0.40
25:14:1009:A:C4'	40:85:59:ARG:HG3	2.52	0.40
1:13:977:A:O2'	1:13:979:C:OP2	2.31	0.40
40:85:65:ILE:O	40:85:68:ALA:N	2.54	0.40
25:1H:109:G:H2'	25:1H:110:G:O4'	2.21	0.40
25:1H:2607:G:H4'	60:1H:3734:HOH:O	2.21	0.40
20:BA:76:ALA:O	20:BA:80:ARG:HG3	2.21	0.40
25:14:1003:G:N2	25:14:1153:C:C2	2.89	0.40
25:14:244:A:C2	25:14:255:A:C4	3.09	0.40
44:G8:23:ARG:HE	44:G8:23:ARG:HB3	1.45	0.40
25:14:1888:G:N3	25:14:1888:G:H5"	2.36	0.40
26:1J:15:A:H3'	26:1J:16:G:H5'	2.03	0.40
25:14:1331:A:O2'	25:14:1332:G:C8	2.71	0.40
25:14:1332:G:N2	25:14:1610:A:H8	2.19	0.40
54:1G:542:G:H5'	4:32:41:GLY:HA3	2.03	0.40
9:82:14:VAL:O	9:82:65:VAL:HG23	2.22	0.40
27:11:272:ALA:HB1	27:11:273:ARG:H	1.74	0.40
9:82:112:LYS:HD2	9:82:112:LYS:C	2.41	0.40
44:G8:81:LYS:HB3	44:G8:82:PRO:CA	2.50	0.40
25:1H:2392:A:H8	35:78:61:ARG:CG	2.32	0.40
25:14:278:A:H4'	25:14:279:C:OP1	2.21	0.40
32:61:130:TYR:HD1	32:61:130:TYR:HA	1.76	0.40
30:49:128:ARG:HD2	30:49:128:ARG:HA	1.81	0.40
25:14:69:C:H2'	25:14:70:G:H8	1.87	0.40
8:7E:4:ASP:HB2	8:7E:89:PRO:HG3	2.02	0.40
1:13:1454:G:H2'	1:13:1455:G:C8	2.56	0.40
36:45:21:THR:HG21	36:45:101:ARG:HD2	2.03	0.40
36:45:22:LYS:HG2	36:45:23:GLY:N	2.35	0.40
1:13:1179:A:H2'	1:13:1180:A:O4'	2.21	0.40
29:39:192:LEU:HD22	29:39:194:MET:HE2	2.03	0.40
46:I8:41:ARG:NE	46:I8:41:ARG:HA	2.33	0.40
25:1H:1317:A:H2'	25:1H:1318:C:C6	2.56	0.40
45:D5:79:ARG:HB2	45:D5:80:ARG:NH1	2.36	0.40
25:14:2534:A:C5	25:14:2535:G:C8	3.08	0.40
12:3A:117:ARG:NH2	12:3A:124:LYS:HA	2.35	0.40
46:E5:36:ILE:HD13	46:E5:36:ILE:C	2.41	0.40
45:H8:105:VAL:O	45:H8:140:ASP:HA	2.21	0.40
26:1J:21:G:C2	26:1J:63:G:C2	3.09	0.40
5:42:28:PHE:O	5:42:47:LYS:HA	2.20	0.40
45:H8:76:LEU:CD1	45:H8:76:LEU:H	2.35	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:1G:726:C:H2'	54:1G:727:G:C8	2.56	0.40
25:14:2488:A:H8	25:14:2488:A:O5'	2.04	0.40
25:14:390:A:C6	35:35:71:VAL:HG21	2.57	0.40
31:59:26:VAL:HG11	31:59:75:ALA:HB1	2.04	0.40
28:29:105:THR:CA	28:29:166:THR:HG23	2.51	0.40
37:98:100:LEU:HD11	37:98:113:LEU:HB2	2.03	0.40
21:1F:18:TYR:HA	21:1F:22:ARG:HB3	2.04	0.40
42:A5:47:VAL:H	42:A5:47:VAL:HG23	1.66	0.40
27:11:150:LYS:HD3	27:11:150:LYS:HA	1.95	0.40
13:4A:19:LEU:HG	13:4A:19:LEU:H	1.72	0.40
28:21:201:THR:HG22	28:21:203:LYS:H	1.85	0.40
25:14:82:G:H5'	25:14:296:C:C5'	2.51	0.40
8:7E:8:ASP:O	8:7E:12:ARG:HB2	2.21	0.40
1:13:232:G:C6	1:13:233:C:C4	3.09	0.40
49:L8:37:LEU:HD12	49:L8:43:ILE:CG2	2.51	0.40
25:14:1461:G:H2'	25:14:1462:C:C6	2.56	0.40
25:14:2329:G:H2'	25:14:2330:G:C8	2.56	0.40
31:51:40:GLU:OE1	31:51:41:MET:N	2.54	0.40
3:22:23:TYR:CD2	3:22:24:ALA:N	2.90	0.40
31:59:22:GLY:O	31:59:37:VAL:HG12	2.21	0.40
25:14:2110:G:C2	25:14:2120:G:H1'	2.57	0.40
4:3E:170:VAL:HG13	4:3E:171:GLY:O	2.22	0.40
5:42:128:PRO:O	5:42:131:ILE:HB	2.21	0.40
22:3K:83:C:H2'	22:3K:84:C:C6	2.56	0.40
25:14:216:A:H3'	25:14:217:G:H8	1.85	0.40
29:31:167:ALA:O	29:31:169:ASN:N	2.54	0.40
17:8I:26:GLN:HA	17:8I:36:ILE:O	2.21	0.40
25:1H:1392:A:C5	25:1H:1393:A:C6	3.09	0.40
54:1G:1375:A:H4'	7:62:29:LYS:HZ1	1.86	0.40
38:A8:85:VAL:O	38:A8:112:PHE:HE2	2.04	0.40
33:58:4:TYR:CE2	40:C8:100:VAL:HG11	2.57	0.40
4:32:159:ARG:HG3	4:32:159:ARG:H	1.73	0.40
33:58:107:LEU:HA	33:58:107:LEU:HD23	1.71	0.40
20:BA:84:LEU:HA	20:BA:84:LEU:HD23	1.82	0.40
1:13:29:G:O2'	1:13:30:U:H5'	2.21	0.40
50:M8:9:LEU:HD12	50:M8:26:SER:HA	2.04	0.40
1:13:1464:G:H2'	1:13:1465:C:H6	1.86	0.40
32:61:129:THR:HG22	32:61:137:PRO:HB3	2.03	0.40
25:1H:2600:A:N6	60:1H:3561:HOH:O	2.13	0.40
26:1J:44:G:O2'	26:1J:47:C:N4	2.54	0.40
26:1J:44:G:C2	26:1J:48:A:C2	3.10	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:F8:37:THR:HG22	43:F8:38:GLU:N	2.37	0.40
54:1G:1187:G:O5'	9:82:113:LYS:HE2	2.22	0.40
54:1G:474:G:C2	54:1G:475:G:C5	3.09	0.40
1:13:848:C:H2'	1:13:849:C:O4'	2.21	0.40
35:78:2:LYS:CG	35:78:4:SER:H	2.27	0.40
25:14:2000:G:C2'	25:14:2001:A:H5'	2.51	0.40
35:35:101:VAL:HB	35:35:106:LEU:HD23	2.04	0.40
45:D5:27:VAL:N	45:D5:86:VAL:O	2.52	0.40
25:1H:69:C:H2'	25:1H:70:G:C8	2.56	0.40
35:78:100:LEU:HD12	35:78:105:LEU:HD13	2.03	0.40
25:1H:1050:A:H2'	25:1H:1051:G:O4'	2.21	0.40
4:3E:102:ASP:OD1	4:3E:103:ASN:N	2.54	0.40
25:1H:120:U:C5	25:1H:149:A:N6	2.90	0.40
35:35:49:ARG:HD2	53:M5:58:ILE:CG2	2.52	0.40
25:14:2776:A:C6	25:14:2778:A:C6	3.10	0.40
54:1G:538:G:H2'	54:1G:539:A:C8	2.57	0.40
25:14:1964:G:H4'	25:14:1965:C:OP2	2.22	0.40
1:13:276:G:C6	1:13:277:C:C4	3.09	0.40
25:14:1025:G:C4	25:14:1135:C:H1'	2.56	0.40
40:C8:86:ALA:C	40:C8:88:ILE:H	2.24	0.40
7:6E:113:GLU:HG2	7:6E:113:GLU:H	1.53	0.40
36:88:130:LYS:HB2	36:88:130:LYS:HE3	1.89	0.40
6:5E:97:PHE:O	18:9I:30:ASP:HA	2.21	0.40
25:1H:1024:G:C3'	25:1H:1025:G:H5"	2.49	0.40
2:12:87:ARG:NH2	2:12:233:SER:H	2.20	0.40
41:95:51:VAL:HG23	41:95:52:VAL:O	2.20	0.40
54:1G:1441:G:O5'	54:1G:1441:G:H8	2.03	0.40
11:2A:18:ARG:NH2	11:2A:35:PRO:O	2.55	0.40
25:14:1971:A:H5"	60:14:3500:HOH:O	2.20	0.40
19:AI:25:LYS:HG2	19:AI:27:GLU:OE1	2.22	0.40
54:1G:1347:G:C8	9:82:107:ARG:HB3	2.56	0.40
1:13:651:C:H2'	1:13:652:U:C6	2.55	0.40
36:88:51:ARG:O	36:88:55:VAL:HG13	2.22	0.40
46:E5:27:GLU:HB2	46:E5:69:PHE:HD1	1.86	0.40
25:1H:2492:U:H2'	25:1H:2493:U:H6	1.87	0.40
25:14:2417:C:C4	25:14:2418:A:N7	2.89	0.40
2:12:12:GLU:HB2	2:12:16:HIS:ND1	2.37	0.40
44:G8:64:GLU:HG2	44:G8:64:GLU:H	1.63	0.40
4:3E:141:ARG:HB2	4:3E:141:ARG:CZ	2.52	0.40
3:2E:15:THR:HG23	3:2E:181:ASN:HA	2.04	0.40
1:13:266:G:H5"	1:13:267:C:H5	1.87	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:13:683:G:C6	1:13:684:A:C6	3.10	0.40
17:8I:80:GLY:O	17:8I:81:ARG:HG2	2.22	0.40
25:14:2853:C:O2'	25:14:2854:G:H5'	2.22	0.40
32:69:47:LEU:HA	32:69:50:ARG:NE	2.36	0.40
30:49:173:LEU:O	30:49:178:PHE:HD1	2.04	0.40
1:13:302:G:C6	1:13:303:A:C5	3.09	0.40
54:1G:236:G:H2'	54:1G:237:C:O4'	2.21	0.40
54:1G:236:G:C5	54:1G:237:C:C5	3.10	0.40
7:6E:13:GLN:HA	7:6E:14:PRO:HD3	1.90	0.40
20:BA:11:SER:HA	20:BA:13:LEU:H	1.86	0.40
35:35:78:PRO:HA	35:35:110:TYR:CE2	2.56	0.40
27:11:124:PRO:HG2	27:11:129:ASN:HD21	1.85	0.40
12:3I:82:VAL:HG12	12:3I:83:VAL:N	2.36	0.40
3:2E:151:VAL:HA	3:2E:199:LYS:O	2.21	0.40
54:1G:287:U:O2'	54:1G:288:A:H5'	2.21	0.40
22:1K:6:G:O2'	22:1K:7:G:OP1	2.34	0.40
26:16:35:U:H2'	26:16:36:C:C6	2.57	0.40
25:14:397:G:O2'	25:14:2231:C:H1'	2.21	0.40
29:31:28:ILE:HG21	29:31:116:ASP:HB2	2.04	0.40
4:3E:52:SER:O	4:3E:55:ALA:HB3	2.21	0.40
28:29:14:ILE:HD11	28:29:173:VAL:HG11	2.03	0.40
54:1G:92:G:H2'	54:1G:93:U:O4'	2.22	0.40
11:2A:34:ASP:N	11:2A:40:ILE:HD11	2.36	0.40
32:61:118:LYS:HA	32:61:118:LYS:HD2	1.89	0.40
53:M5:7:HIS:O	53:M5:7:HIS:ND1	2.55	0.40
16:7I:60:LEU:HD23	16:7I:60:LEU:HA	1.84	0.40
54:1G:873:A:H8	54:1G:873:A:OP1	2.05	0.40
45:H8:151:HIS:HA	45:H8:169:GLU:O	2.22	0.40
54:1G:793:U:O2	54:1G:1516:G:H4'	2.21	0.40
25:1H:1262:A:N3	51:N8:10:LYS:HE3	2.37	0.40
25:1H:608:A:C4	25:1H:621:A:C6	3.10	0.40
26:1J:16:G:H1	26:1J:68:C:H42	1.68	0.40
25:14:996:A:C2	25:14:997:G:C8	3.09	0.40
54:1G:1320:C:N3	19:AA:36:ARG:NH2	2.70	0.40
25:1H:751:A:C6	25:1H:789:A:C5	3.09	0.40
41:95:5:VAL:HG11	41:95:57:VAL:HG11	2.04	0.40
54:1G:848:C:O2'	54:1G:849:C:H5'	2.22	0.40
9:82:111:ARG:HG3	14:5A:61:TRP:CD1	2.57	0.40
25:14:1359:A:N7	25:14:1372:U:C4	2.89	0.40
1:13:872:A:C4	1:13:874:G:N7	2.90	0.40
54:1G:828:A:N6	54:1G:858:G:HO2'	2.20	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:22:85:ARG:HA	3:22:88:ARG:NH2	2.37	0.40
53:Q8:26:LYS:HE3	53:Q8:26:LYS:HB3	1.78	0.40
1:13:601:C:C2	1:13:602:A:C8	3.09	0.40
1:13:160:A:P	1:13:160:A:H8	2.44	0.40
4:3E:162:LEU:HD13	4:3E:181:MET:HG2	2.04	0.40
6:52:2:ARG:CD	6:52:92:LYS:HZ1	2.30	0.40
54:1G:741:G:H2'	54:1G:742:G:O4'	2.22	0.40
25:1H:1465:G:N3	25:1H:1466:G:C8	2.89	0.40
1:13:329:A:C5	1:13:332:G:C6	3.09	0.40
30:49:120:LEU:N	30:49:179:PRO:O	2.46	0.40
1:13:533:A:C2	1:13:536:C:C5	3.10	0.40
28:29:96:PHE:O	28:29:175:VAL:HG11	2.22	0.40
25:1H:2689:U:H5"	25:1H:2713:A:C2	2.54	0.40
25:1H:1678:G:N2	25:1H:1989:G:H22	2.16	0.40
3:22:164:ARG:CZ	3:22:166:GLU:HG3	2.52	0.40
41:95:70:ILE:O	41:95:70:ILE:HG22	2.22	0.40
12:3I:70:ILE:HD13	12:3I:70:ILE:HG21	1.84	0.40
1:13:1260:C:C6	1:13:1260:C:C3'	3.05	0.40
44:C5:17:SER:OG	44:C5:18:GLY:N	2.52	0.40
28:29:80:GLU:O	28:29:82:ARG:N	2.53	0.40
25:14:867:C:C5	25:14:868:U:H5	2.39	0.40
43:B5:26:TYR:O	43:B5:81:VAL:HG23	2.21	0.40
1:13:659:U:O2'	1:13:660:G:H5'	2.21	0.40
25:14:639:U:H2'	25:14:640:C:H6	1.84	0.40
25:14:2578:G:C5	28:29:140:SER:HB2	2.57	0.40
54:1G:646:U:H2'	54:1G:647:C:C6	2.57	0.40
25:1H:590:A:H2'	25:1H:591:C:C6	2.57	0.40
32:69:128:LEU:HA	32:69:128:LEU:HD13	1.75	0.40
25:14:1171:G:H1	25:14:1178:C:N4	2.19	0.40
30:41:44:GLY:O	30:41:47:LYS:HG3	2.21	0.40
45:H8:129:SER:HA	45:H8:130:PRO:HD3	1.81	0.40
16:7I:49:LEU:HD12	16:7I:50:LYS:N	2.36	0.40
25:1H:2104:G:N1	25:1H:2186:G:C2	2.89	0.40
34:25:47:ILE:HD12	34:25:47:ILE:HA	1.86	0.40
3:2E:95:THR:HG22	3:2E:96:GLY:H	1.85	0.40
25:14:1628:G:H2'	25:14:1629:U:H6	1.86	0.40
25:14:1419:A:N7	25:14:1421:G:C6	2.90	0.40
25:1H:346:A:H2'	25:1H:346:A:N3	2.37	0.40
9:82:79:LEU:HD21	9:82:102:LEU:HA	2.03	0.40
1:13:282:A:H2'	1:13:282:A:N3	2.35	0.40
25:14:220:G:C6	25:14:427:U:C5	3.10	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:14:236:C:H2'	25:14:237:C:H6	1.87	0.40
25:14:480:A:OP2	44:C5:46:LYS:HE3	2.21	0.40
3:2E:186:PHE:CZ	3:2E:188:LEU:HD23	2.57	0.40
27:19:137:PRO:HB2	27:19:140:THR:HG23	2.02	0.40
1:13:1228:C:H2'	1:13:1229:A:H8	1.86	0.40
25:14:438:G:H2'	25:14:439:G:C8	2.57	0.40
4:32:70:ILE:HG22	4:32:75:PHE:HB2	2.03	0.40
31:51:51:ARG:HG2	31:51:52:VAL:N	2.37	0.40
54:1G:306:G:H2'	54:1G:307:C:H6	1.86	0.40
45:D5:73:GLN:H	45:D5:87:ASP:HB2	1.86	0.40
22:3K:85:A:N6	25:1H:2422:A:O4'	2.54	0.40
26:16:88:C:H2'	26:16:89:G:O4'	2.22	0.40
1:13:901:A:O5'	1:13:901:A:H8	2.05	0.40
11:2I:71:LYS:HG2	11:2I:71:LYS:H	1.46	0.40
27:11:91:ARG:HH11	27:11:91:ARG:HD3	1.76	0.40
7:62:42:ILE:H	7:62:42:ILE:HG13	1.64	0.40
35:35:93:GLY:H	35:35:123:LEU:HD13	1.86	0.40
13:4I:15:VAL:HA	13:4I:45:VAL:HG13	2.04	0.40
54:1G:349:A:H2'	54:1G:350:G:O4'	2.22	0.40

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

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:1H:2137:C:OP1	54:1G:999:U:O2'[4_555]	2.16	0.04

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%)	21 58

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles
2	1E	235/256 (92%)	202 (86%)	31 (13%)	2 (1%)	21 58
3	22	204/239 (85%)	187 (92%)	17 (8%)	0	100 100
3	2E	203/239 (85%)	191 (94%)	12 (6%)	0	100 100
4	32	206/209 (99%)	181 (88%)	25 (12%)	0	100 100
4	3E	206/209 (99%)	191 (93%)	14 (7%)	1 (0%)	34 70
5	42	149/162 (92%)	141 (95%)	8 (5%)	0	100 100
5	4E	149/162 (92%)	145 (97%)	3 (2%)	1 (1%)	26 64
6	52	99/101 (98%)	97 (98%)	2 (2%)	0	100 100
6	5E	99/101 (98%)	94 (95%)	5 (5%)	0	100 100
7	62	153/156 (98%)	146 (95%)	7 (5%)	0	100 100
7	6E	153/156 (98%)	145 (95%)	8 (5%)	0	100 100
8	72	136/138 (99%)	127 (93%)	8 (6%)	1 (1%)	26 64
8	7E	136/138 (99%)	130 (96%)	6 (4%)	0	100 100
9	82	125/128 (98%)	116 (93%)	9 (7%)	0	100 100
9	8E	125/128 (98%)	109 (87%)	16 (13%)	0	100 100
10	1A	97/105 (92%)	90 (93%)	7 (7%)	0	100 100
10	1I	97/105 (92%)	86 (89%)	11 (11%)	0	100 100
11	2A	117/129 (91%)	106 (91%)	11 (9%)	0	100 100
11	2I	114/129 (88%)	98 (86%)	14 (12%)	2 (2%)	11 39
12	3A	123/132 (93%)	106 (86%)	14 (11%)	3 (2%)	7 31
12	3I	123/132 (93%)	106 (86%)	17 (14%)	0	100 100
13	4A	115/126 (91%)	99 (86%)	15 (13%)	1 (1%)	21 58
13	4I	114/126 (90%)	98 (86%)	16 (14%)	0	100 100
14	5A	56/61 (92%)	48 (86%)	8 (14%)	0	100 100
14	5I	59/61 (97%)	49 (83%)	9 (15%)	1 (2%)	11 41
15	6A	86/89 (97%)	78 (91%)	8 (9%)	0	100 100
15	6I	86/89 (97%)	77 (90%)	9 (10%)	0	100 100
16	7A	82/88 (93%)	73 (89%)	9 (11%)	0	100 100
16	7I	82/88 (93%)	78 (95%)	4 (5%)	0	100 100
17	8A	98/105 (93%)	91 (93%)	7 (7%)	0	100 100
17	8I	98/105 (93%)	92 (94%)	6 (6%)	0	100 100

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
18	9A	67/88 (76%)	61 (91%)	6 (9%)	0	100	100
18	9I	70/88 (80%)	63 (90%)	6 (9%)	1 (1%)	14	46
19	AA	80/93 (86%)	64 (80%)	14 (18%)	2 (2%)	7	30
19	AI	81/93 (87%)	69 (85%)	9 (11%)	3 (4%)	4	22
20	BA	97/106 (92%)	88 (91%)	9 (9%)	0	100	100
20	BI	97/106 (92%)	84 (87%)	13 (13%)	0	100	100
21	1B	23/27 (85%)	19 (83%)	4 (17%)	0	100	100
21	1F	20/27 (74%)	18 (90%)	2 (10%)	0	100	100
27	11	270/276 (98%)	249 (92%)	18 (7%)	3 (1%)	17	53
27	19	271/276 (98%)	249 (92%)	17 (6%)	5 (2%)	11	39
28	21	203/206 (98%)	175 (86%)	24 (12%)	4 (2%)	9	36
28	29	203/206 (98%)	162 (80%)	32 (16%)	9 (4%)	3	17
29	31	200/210 (95%)	178 (89%)	21 (10%)	1 (0%)	34	70
29	39	206/210 (98%)	171 (83%)	29 (14%)	6 (3%)	6	27
30	41	179/182 (98%)	158 (88%)	18 (10%)	3 (2%)	11	41
30	49	179/182 (98%)	160 (89%)	18 (10%)	1 (1%)	30	66
31	51	172/180 (96%)	139 (81%)	28 (16%)	5 (3%)	6	27
31	59	169/180 (94%)	137 (81%)	29 (17%)	3 (2%)	11	39
32	61	144/148 (97%)	117 (81%)	23 (16%)	4 (3%)	6	28
32	69	144/148 (97%)	120 (83%)	20 (14%)	4 (3%)	6	28
33	15	136/140 (97%)	122 (90%)	13 (10%)	1 (1%)	26	64
33	58	136/140 (97%)	118 (87%)	15 (11%)	3 (2%)	8	34
34	25	120/122 (98%)	113 (94%)	7 (6%)	0	100	100
34	68	120/122 (98%)	113 (94%)	7 (6%)	0	100	100
35	35	148/150 (99%)	110 (74%)	31 (21%)	7 (5%)	3	16
35	78	148/150 (99%)	119 (80%)	24 (16%)	5 (3%)	5	23
36	45	136/141 (96%)	114 (84%)	21 (15%)	1 (1%)	26	64
36	88	139/141 (99%)	113 (81%)	25 (18%)	1 (1%)	26	64
37	55	115/118 (98%)	107 (93%)	8 (7%)	0	100	100
37	98	116/118 (98%)	106 (91%)	8 (7%)	2 (2%)	11	41
38	65	109/112 (97%)	89 (82%)	19 (17%)	1 (1%)	21	58

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles
38	A8	109/112 (97%)	89 (82%)	19 (17%)	1 (1%)	21 58
39	75	135/146 (92%)	116 (86%)	17 (13%)	2 (2%)	13 44
39	B8	134/146 (92%)	122 (91%)	12 (9%)	0	100 100
40	85	115/118 (98%)	106 (92%)	8 (7%)	1 (1%)	21 58
40	C8	115/118 (98%)	105 (91%)	8 (7%)	2 (2%)	11 41
41	95	99/101 (98%)	80 (81%)	17 (17%)	2 (2%)	9 36
41	D8	99/101 (98%)	95 (96%)	2 (2%)	2 (2%)	9 36
42	A5	111/113 (98%)	103 (93%)	7 (6%)	1 (1%)	21 58
42	E8	111/113 (98%)	105 (95%)	6 (5%)	0	100 100
43	B5	90/96 (94%)	87 (97%)	3 (3%)	0	100 100
43	F8	92/96 (96%)	83 (90%)	7 (8%)	2 (2%)	8 34
44	C5	102/110 (93%)	75 (74%)	24 (24%)	3 (3%)	6 27
44	G8	100/110 (91%)	81 (81%)	14 (14%)	5 (5%)	3 15
45	D5	177/206 (86%)	138 (78%)	30 (17%)	9 (5%)	2 14
45	H8	173/206 (84%)	143 (83%)	22 (13%)	8 (5%)	3 16
46	E5	75/85 (88%)	73 (97%)	1 (1%)	1 (1%)	15 48
46	I8	75/85 (88%)	63 (84%)	11 (15%)	1 (1%)	15 48
47	F5	95/98 (97%)	87 (92%)	6 (6%)	2 (2%)	9 35
47	J8	91/98 (93%)	85 (93%)	4 (4%)	2 (2%)	8 34
48	G5	64/72 (89%)	60 (94%)	2 (3%)	2 (3%)	5 25
48	K8	64/72 (89%)	59 (92%)	4 (6%)	1 (2%)	12 42
49	H5	57/60 (95%)	55 (96%)	2 (4%)	0	100 100
49	L8	57/60 (95%)	55 (96%)	2 (4%)	0	100 100
50	I5	61/71 (86%)	35 (57%)	24 (39%)	2 (3%)	5 24
50	M8	64/71 (90%)	44 (69%)	18 (28%)	2 (3%)	5 25
51	J5	56/60 (93%)	50 (89%)	5 (9%)	1 (2%)	11 39
51	N8	47/60 (78%)	43 (92%)	4 (8%)	0	100 100
52	L5	43/49 (88%)	41 (95%)	2 (5%)	0	100 100
52	P8	43/49 (88%)	41 (95%)	2 (5%)	0	100 100
53	M5	58/65 (89%)	46 (79%)	10 (17%)	2 (3%)	5 23
53	Q8	60/65 (92%)	41 (68%)	12 (20%)	7 (12%)	0 2

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles
All	All	11230/11946 (94%)	9889 (88%)	1191 (11%)	150 (1%)	15 48

All (150) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
14	5I	25	VAL
18	9I	22	VAL
44	G8	81	LYS
45	H8	53	ILE
53	Q8	51	ALA
27	19	237	GLU
28	29	25	VAL
28	29	81	ILE
29	39	84	VAL
45	D5	53	ILE
45	D5	165	VAL
47	F5	30	VAL
27	11	240	ALA
31	51	14	GLY
35	78	21	ARG
37	98	11	ASN
41	D8	45	THR
43	F8	68	ARG
44	G8	54	LYS
44	G8	78	ALA
45	H8	60	GLU
45	H8	165	VAL
47	J8	86	SER
53	Q8	49	VAL
53	Q8	50	LEU
12	3A	18	VAL
19	AA	9	VAL
27	19	33	LEU
27	19	239	ARG
28	29	61	ARG
28	29	62	PRO
29	39	128	ALA
29	39	146	ALA
35	35	15	ARG
35	35	111	ARG
39	75	5	ALA
44	C5	29	GLU

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Mol	Chain	Res	Type
48	G5	48	HIS
50	I5	5	ILE
51	J5	57	VAL
53	M5	31	HIS
53	M5	51	ALA
28	21	118	LYS
31	51	80	SER
32	61	144	VAL
35	78	42	SER
36	88	66	ILE
38	A8	88	ASP
44	G8	53	PRO
45	H8	6	LYS
53	Q8	8	LYS
2	12	7	VAL
28	29	9	VAL
28	29	51	PHE
29	39	124	LEU
36	45	78	PRO
41	95	45	THR
47	F5	93	GLU
48	G5	47	ASN
30	41	96	ARG
30	41	97	ASP
32	61	12	LEU
32	61	145	VAL
33	58	22	THR
33	58	97	ARG
33	58	128	HIS
35	78	16	ARG
40	C8	96	ALA
43	F8	40	LYS
45	H8	59	LEU
47	J8	87	PRO
48	K8	47	ASN
50	M8	34	GLU
53	Q8	46	ARG
31	59	92	ILE
32	69	111	PRO
32	69	117	GLU
32	69	145	VAL
35	35	35	HIS

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Mol	Chain	Res	Type
35	35	63	PRO
39	75	94	ALA
40	85	93	LYS
45	D5	105	VAL
45	D5	116	VAL
45	D5	161	VAL
45	D5	171	ILE
4	3E	155	LEU
28	21	56	PRO
31	51	81	GLU
32	61	133	HIS
37	98	45	ARG
40	C8	89	GLU
41	D8	49	THR
44	G8	85	VAL
46	I8	83	PRO
53	Q8	6	THR
29	39	22	ALA
35	35	64	LYS
38	65	61	ASN
44	C5	17	SER
46	E5	44	ARG
2	1E	135	GLN
11	2I	108	ILE
19	AI	41	VAL
28	21	55	ASN
45	H8	51	ALA
28	29	82	ARG
35	35	6	LEU
11	2I	82	VAL
19	AI	67	VAL
29	31	24	LEU
30	41	5	VAL
28	29	26	ILE
30	49	5	VAL
42	A5	12	ILE
2	1E	239	VAL
5	4E	115	VAL
27	11	3	VAL
31	51	127	GLU
50	M8	5	ILE
2	12	39	ILE

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Mol	Chain	Res	Type
8	72	100	ILE
12	3A	47	LYS
27	19	3	VAL
28	29	59	VAL
50	I5	33	VAL
19	AI	9	VAL
35	78	7	ARG
35	78	95	VAL
53	Q8	41	ILE
13	4A	84	ILE
19	AA	67	VAL
27	19	240	ALA
31	59	131	VAL
31	59	169	VAL
32	69	144	VAL
35	35	34	GLY
45	D5	95	PRO
45	D5	141	VAL
28	21	72	VAL
31	51	168	PRO
45	H8	61	LEU
45	H8	141	VAL
33	15	128	HIS
41	95	99	ILE
44	C5	76	CYS
27	11	123	ALA
12	3A	96	VAL
29	39	11	VAL
45	D5	176	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%)	159 (78%)	46 (22%)	1 4
2	1E	205/220 (93%)	161 (78%)	44 (22%)	1 5

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles
3	22	160/188 (85%)	124 (78%)	36 (22%)	1 4
3	2E	159/188 (85%)	124 (78%)	35 (22%)	1 4
4	32	180/181 (99%)	150 (83%)	30 (17%)	3 10
4	3E	180/181 (99%)	148 (82%)	32 (18%)	2 9
5	42	116/123 (94%)	93 (80%)	23 (20%)	1 6
5	4E	116/123 (94%)	97 (84%)	19 (16%)	3 11
6	52	90/90 (100%)	73 (81%)	17 (19%)	2 7
6	5E	90/90 (100%)	77 (86%)	13 (14%)	4 16
7	62	126/127 (99%)	102 (81%)	24 (19%)	2 7
7	6E	126/127 (99%)	107 (85%)	19 (15%)	3 14
8	72	119/119 (100%)	106 (89%)	13 (11%)	8 29
8	7E	119/119 (100%)	97 (82%)	22 (18%)	2 8
9	82	98/99 (99%)	78 (80%)	20 (20%)	1 6
9	8E	98/99 (99%)	76 (78%)	22 (22%)	1 4
10	1A	89/92 (97%)	70 (79%)	19 (21%)	1 5
10	1I	89/92 (97%)	73 (82%)	16 (18%)	2 9
11	2A	90/99 (91%)	74 (82%)	16 (18%)	2 9
11	2I	88/99 (89%)	73 (83%)	15 (17%)	2 10
12	3A	104/109 (95%)	85 (82%)	19 (18%)	2 8
12	3I	104/109 (95%)	88 (85%)	16 (15%)	3 13
13	4A	94/101 (93%)	77 (82%)	17 (18%)	2 9
13	4I	94/101 (93%)	76 (81%)	18 (19%)	2 7
14	5A	48/50 (96%)	39 (81%)	9 (19%)	2 7
14	5I	50/50 (100%)	36 (72%)	14 (28%)	0 1
15	6A	79/80 (99%)	70 (89%)	9 (11%)	7 26
15	6I	79/80 (99%)	67 (85%)	12 (15%)	3 14
16	7A	72/74 (97%)	62 (86%)	10 (14%)	4 18
16	7I	72/74 (97%)	56 (78%)	16 (22%)	1 4
17	8A	95/97 (98%)	82 (86%)	13 (14%)	4 18
17	8I	95/97 (98%)	77 (81%)	18 (19%)	2 7
18	9A	60/77 (78%)	50 (83%)	10 (17%)	3 10

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles
18	9I	63/77 (82%)	52 (82%)	11 (18%)	2 9
19	AA	66/80 (82%)	55 (83%)	11 (17%)	3 10
19	AI	72/80 (90%)	55 (76%)	17 (24%)	1 3
20	BA	76/82 (93%)	58 (76%)	18 (24%)	1 3
20	BI	76/82 (93%)	66 (87%)	10 (13%)	5 19
21	1B	20/22 (91%)	17 (85%)	3 (15%)	3 14
21	1F	17/22 (77%)	14 (82%)	3 (18%)	2 9
27	11	214/218 (98%)	164 (77%)	50 (23%)	1 3
27	19	214/218 (98%)	170 (79%)	44 (21%)	1 6
28	21	165/166 (99%)	131 (79%)	34 (21%)	1 6
28	29	165/166 (99%)	124 (75%)	41 (25%)	1 2
29	31	161/166 (97%)	133 (83%)	28 (17%)	2 10
29	39	165/166 (99%)	129 (78%)	36 (22%)	1 5
30	41	155/156 (99%)	123 (79%)	32 (21%)	1 6
30	49	155/156 (99%)	127 (82%)	28 (18%)	2 9
31	51	145/148 (98%)	111 (77%)	34 (23%)	1 3
31	59	143/148 (97%)	114 (80%)	29 (20%)	1 6
32	61	122/124 (98%)	91 (75%)	31 (25%)	1 2
32	69	122/124 (98%)	89 (73%)	33 (27%)	0 1
33	15	117/119 (98%)	91 (78%)	26 (22%)	1 4
33	58	117/119 (98%)	96 (82%)	21 (18%)	2 9
34	25	100/100 (100%)	77 (77%)	23 (23%)	1 4
34	68	100/100 (100%)	84 (84%)	16 (16%)	3 12
35	35	116/116 (100%)	81 (70%)	35 (30%)	0 1
35	78	116/116 (100%)	73 (63%)	43 (37%)	0 0
36	45	109/111 (98%)	87 (80%)	22 (20%)	1 6
36	88	111/111 (100%)	89 (80%)	22 (20%)	1 6
37	55	100/101 (99%)	78 (78%)	22 (22%)	1 4
37	98	101/101 (100%)	78 (77%)	23 (23%)	1 4
38	65	87/88 (99%)	61 (70%)	26 (30%)	0 1
38	A8	87/88 (99%)	59 (68%)	28 (32%)	0 0

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles
39	75	120/127 (94%)	94 (78%)	26 (22%)	1 5
39	B8	119/127 (94%)	89 (75%)	30 (25%)	1 2
40	85	93/94 (99%)	81 (87%)	12 (13%)	5 20
40	C8	93/94 (99%)	78 (84%)	15 (16%)	3 12
41	95	82/82 (100%)	65 (79%)	17 (21%)	1 6
41	D8	82/82 (100%)	63 (77%)	19 (23%)	1 3
42	A5	92/92 (100%)	75 (82%)	17 (18%)	2 8
42	E8	92/92 (100%)	66 (72%)	26 (28%)	0 1
43	B5	74/78 (95%)	60 (81%)	14 (19%)	2 7
43	F8	76/78 (97%)	66 (87%)	10 (13%)	5 19
44	C5	85/91 (93%)	59 (69%)	26 (31%)	0 1
44	G8	84/91 (92%)	68 (81%)	16 (19%)	2 7
45	D5	158/179 (88%)	123 (78%)	35 (22%)	1 4
45	H8	154/179 (86%)	120 (78%)	34 (22%)	1 4
46	E5	62/67 (92%)	51 (82%)	11 (18%)	2 9
46	I8	62/67 (92%)	51 (82%)	11 (18%)	2 9
47	F5	82/83 (99%)	63 (77%)	19 (23%)	1 3
47	J8	78/83 (94%)	66 (85%)	12 (15%)	3 13
48	G5	62/67 (92%)	49 (79%)	13 (21%)	1 5
48	K8	62/67 (92%)	42 (68%)	20 (32%)	0 0
49	H5	51/52 (98%)	40 (78%)	11 (22%)	1 5
49	L8	51/52 (98%)	42 (82%)	9 (18%)	2 9
50	I5	57/63 (90%)	43 (75%)	14 (25%)	1 2
50	M8	59/63 (94%)	47 (80%)	12 (20%)	1 6
51	J5	51/52 (98%)	45 (88%)	6 (12%)	6 24
51	N8	43/52 (83%)	34 (79%)	9 (21%)	1 5
52	L5	38/42 (90%)	33 (87%)	5 (13%)	5 19
52	P8	38/42 (90%)	30 (79%)	8 (21%)	1 5
53	M5	50/55 (91%)	37 (74%)	13 (26%)	0 2
53	Q8	42/55 (76%)	22 (52%)	20 (48%)	0 0
All	All	9458/9894 (96%)	7506 (79%)	1952 (21%)	1 6

All (1952) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
2	1E	5	ILE
2	1E	8	LYS
2	1E	9	GLU
2	1E	17	PHE
2	1E	21	ARG
2	1E	24	TRP
2	1E	32	ILE
2	1E	39	ILE
2	1E	42	ILE
2	1E	48	MET
2	1E	51	LEU
2	1E	55	PHE
2	1E	69	LEU
2	1E	71	VAL
2	1E	74	LYS
2	1E	75	LYS
2	1E	81	VAL
2	1E	82	ARG
2	1E	93	VAL
2	1E	96	ARG
2	1E	104	ASN
2	1E	111	ARG
2	1E	113	HIS
2	1E	122	PHE
2	1E	144	ARG
2	1E	145	LEU
2	1E	154	LEU
2	1E	155	LEU
2	1E	162	ILE
2	1E	163	PHE
2	1E	164	VAL
2	1E	168	THR
2	1E	172	ILE
2	1E	178	ARG
2	1E	190	THR
2	1E	191	ASP
2	1E	196	LEU
2	1E	200	ILE
2	1E	209	ARG
2	1E	215	LEU
2	1E	217	ARG
2	1E	223	ILE

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Mol	Chain	Res	Type
2	1E	231	GLU
2	1E	235	SER
3	2E	3	ASN
3	2E	5	ILE
3	2E	8	ILE
3	2E	15	THR
3	2E	17	ASP
3	2E	21	ARG
3	2E	30	ARG
3	2E	31	HIS
3	2E	32	LEU
3	2E	34	LEU
3	2E	36	ASP
3	2E	45	LYS
3	2E	49	SER
3	2E	52	LEU
3	2E	54	ARG
3	2E	56	ASP
3	2E	62	ASP
3	2E	69	HIS
3	2E	76	VAL
3	2E	77	ILE
3	2E	93	LYS
3	2E	98	ASN
3	2E	104	GLN
3	2E	108	ASN
3	2E	127	ARG
3	2E	128	PHE
3	2E	131	ARG
3	2E	154	SER
3	2E	161	GLU
3	2E	164	ARG
3	2E	165	THR
3	2E	178	LEU
3	2E	196	LEU
3	2E	202	ILE
3	2E	206	GLU
4	3E	3	ARG
4	3E	5	ILE
4	3E	10	ARG
4	3E	15	GLU
4	3E	28	SER

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Mol	Chain	Res	Type
4	3E	30	LYS
4	3E	52	SER
4	3E	58	LEU
4	3E	61	LYS
4	3E	66	ARG
4	3E	85	LYS
4	3E	96	LEU
4	3E	99	SER
4	3E	104	VAL
4	3E	106	TYR
4	3E	108	LEU
4	3E	122	ARG
4	3E	127	THR
4	3E	135	LEU
4	3E	138	TYR
4	3E	141	ARG
4	3E	146	ILE
4	3E	151	LYS
4	3E	154	ASN
4	3E	155	LEU
4	3E	170	VAL
4	3E	175	SER
4	3E	179	GLU
4	3E	192	GLU
4	3E	193	ASP
4	3E	200	GLU
4	3E	201	GLN
5	4E	5	ASP
5	4E	10	MET
5	4E	11	ILE
5	4E	16	THR
5	4E	18	ARG
5	4E	31	LEU
5	4E	41	VAL
5	4E	50	GLU
5	4E	57	LYS
5	4E	65	ASN
5	4E	68	GLU
5	4E	72	GLN
5	4E	73	ASN
5	4E	79	GLU
5	4E	80	ILE

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Mol	Chain	Res	Type
5	4E	87	SER
5	4E	112	LEU
5	4E	126	ARG
5	4E	153	LYS
6	5E	21	LEU
6	5E	24	GLU
6	5E	25	ILE
6	5E	30	LEU
6	5E	32	ASN
6	5E	55	ASP
6	5E	65	VAL
6	5E	70	ASP
6	5E	75	LEU
6	5E	79	LEU
6	5E	82	ARG
6	5E	89	MET
6	5E	98	LEU
7	6E	5	ARG
7	6E	10	ARG
7	6E	21	VAL
7	6E	36	LYS
7	6E	37	ASN
7	6E	38	LEU
7	6E	54	THR
7	6E	75	VAL
7	6E	80	VAL
7	6E	89	MET
7	6E	90	GLU
7	6E	97	GLN
7	6E	98	SER
7	6E	104	LEU
7	6E	113	GLU
7	6E	135	VAL
7	6E	149	ARG
7	6E	155	ARG
7	6E	156	TRP
8	7E	6	ILE
8	7E	24	THR
8	7E	26	VAL
8	7E	29	SER
8	7E	31	PHE
8	7E	35	ILE

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Mol	Chain	Res	Type
8	7E	45	ILE
8	7E	50	ARG
8	7E	54	ASP
8	7E	63	LEU
8	7E	68	ARG
8	7E	77	GLU
8	7E	80	ILE
8	7E	85	ARG
8	7E	91	ARG
8	7E	95	VAL
8	7E	102	ARG
8	7E	105	ARG
8	7E	112	LEU
8	7E	127	LEU
8	7E	129	VAL
8	7E	137	VAL
9	8E	2	GLU
9	8E	9	ARG
9	8E	10	ARG
9	8E	20	ARG
9	8E	27	THR
9	8E	31	GLN
9	8E	38	GLN
9	8E	41	VAL
9	8E	42	ARG
9	8E	47	LEU
9	8E	56	LEU
9	8E	58	HIS
9	8E	70	LYS
9	8E	79	LEU
9	8E	81	ILE
9	8E	86	VAL
9	8E	93	ARG
9	8E	95	LYS
9	8E	112	LYS
9	8E	113	LYS
9	8E	118	LYS
9	8E	125	TYR
10	1I	5	ARG
10	1I	14	LYS
10	1I	25	GLU
10	1I	29	ARG

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Mol	Chain	Res	Type
10	1I	48	THR
10	1I	54	PHE
10	1I	59	SER
10	1I	62	HIS
10	1I	63	PHE
10	1I	70	ARG
10	1I	76	ASN
10	1I	78	ASN
10	1I	92	THR
10	1I	96	ILE
10	1I	97	GLU
10	1I	101	VAL
11	2I	13	GLN
11	2I	14	VAL
11	2I	29	ILE
11	2I	32	ILE
11	2I	36	ASP
11	2I	41	THR
11	2I	48	ILE
11	2I	63	LEU
11	2I	71	LYS
11	2I	80	VAL
11	2I	87	THR
11	2I	96	ARG
11	2I	103	LEU
11	2I	109	VAL
11	2I	111	ASP
12	3I	10	LEU
12	3I	11	VAL
12	3I	20	LYS
12	3I	36	VAL
12	3I	46	LYS
12	3I	50	SER
12	3I	57	LYS
12	3I	60	LEU
12	3I	62	SER
12	3I	65	GLU
12	3I	67	THR
12	3I	78	GLN
12	3I	83	VAL
12	3I	91	LYS
12	3I	96	VAL

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Mol	Chain	Res	Type
12	3I	124	LYS
13	4I	8	GLU
13	4I	11	ARG
13	4I	17	VAL
13	4I	19	LEU
13	4I	32	GLU
13	4I	45	VAL
13	4I	48	LEU
13	4I	56	LEU
13	4I	64	TRP
13	4I	79	LYS
13	4I	83	ASP
13	4I	90	LEU
13	4I	105	THR
13	4I	106	ASN
13	4I	108	ARG
13	4I	109	THR
13	4I	115	LYS
13	4I	117	VAL
14	5I	3	ARG
14	5I	4	LYS
14	5I	8	GLU
14	5I	17	LYS
14	5I	18	VAL
14	5I	22	THR
14	5I	23	ARG
14	5I	25	VAL
14	5I	29	ARG
14	5I	33	VAL
14	5I	41	ARG
14	5I	44	LEU
14	5I	49	HIS
14	5I	57	ARG
15	6I	10	LYS
15	6I	22	THR
15	6I	26	GLU
15	6I	39	LEU
15	6I	40	SER
15	6I	41	GLU
15	6I	47	LYS
15	6I	59	MET
15	6I	65	ARG

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Mol	Chain	Res	Type
15	6I	66	LEU
15	6I	68	ARG
15	6I	79	ARG
16	7I	1	MET
16	7I	4	ILE
16	7I	11	SER
16	7I	21	VAL
16	7I	27	LYS
16	7I	28	ARG
16	7I	36	ILE
16	7I	45	THR
16	7I	47	ASP
16	7I	58	TYR
16	7I	62	VAL
16	7I	67	THR
16	7I	69	THR
16	7I	72	ARG
16	7I	76	GLN
16	7I	81	ARG
17	8I	12	SER
17	8I	24	GLU
17	8I	35	VAL
17	8I	38	ARG
17	8I	45	HIS
17	8I	48	GLU
17	8I	50	LYS
17	8I	52	LYS
17	8I	53	LEU
17	8I	57	VAL
17	8I	60	ILE
17	8I	68	ARG
17	8I	74	LEU
17	8I	84	LEU
17	8I	87	LYS
17	8I	97	SER
17	8I	100	LYS
17	8I	101	ARG
18	9I	18	ARG
18	9I	19	LYS
18	9I	21	LYS
18	9I	25	THR
18	9I	32	ARG

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Mol	Chain	Res	Type
18	9I	41	LYS
18	9I	54	ARG
18	9I	56	THR
18	9I	65	ILE
18	9I	82	THR
18	9I	86	VAL
19	AI	3	ARG
19	AI	7	LYS
19	AI	11	VAL
19	AI	21	GLU
19	AI	22	LEU
19	AI	23	ASN
19	AI	29	ARG
19	AI	30	LEU
19	AI	37	ARG
19	AI	43	GLU
19	AI	60	VAL
19	AI	61	TYR
19	AI	65	ASN
19	AI	67	VAL
19	AI	71	LEU
19	AI	77	THR
19	AI	78	ARG
20	BI	9	ASN
20	BI	10	LEU
20	BI	20	LEU
20	BI	24	LEU
20	BI	37	SER
20	BI	46	GLU
20	BI	62	LEU
20	BI	71	THR
20	BI	72	LEU
20	BI	99	LEU
21	1F	6	ARG
21	1F	10	ARG
21	1F	15	ARG
27	11	3	VAL
27	11	4	LYS
27	11	13	ARG
27	11	14	ARG
27	11	16	MET
27	11	17	THR

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Mol	Chain	Res	Type
27	11	26	LYS
27	11	28	GLU
27	11	30	GLU
27	11	33	LEU
27	11	34	VAL
27	11	37	LEU
27	11	38	LYS
27	11	59	LYS
27	11	61	LEU
27	11	64	ILE
27	11	65	ILE
27	11	88	ARG
27	11	89	SER
27	11	94	LEU
27	11	95	LEU
27	11	99	ASP
27	11	101	GLU
27	11	103	ARG
27	11	105	ILE
27	11	106	ILE
27	11	111	LEU
27	11	112	GLN
27	11	136	ILE
27	11	141	VAL
27	11	147	LEU
27	11	155	LEU
27	11	157	ARG
27	11	162	SER
27	11	164	GLN
27	11	183	ARG
27	11	192	THR
27	11	193	VAL
27	11	212	SER
27	11	217	ARG
27	11	222	ARG
27	11	229	VAL
27	11	242	ARG
27	11	257	LEU
27	11	259	THR
27	11	260	ARG
27	11	261	LYS
27	11	262	ARG

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Mol	Chain	Res	Type
27	11	271	ILE
27	11	273	ARG
28	21	5	LEU
28	21	13	ARG
28	21	14	ILE
28	21	23	VAL
28	21	25	VAL
28	21	26	ILE
28	21	34	VAL
28	21	38	THR
28	21	54	GLN
28	21	55	ASN
28	21	59	VAL
28	21	63	LEU
28	21	64	LYS
28	21	67	PHE
28	21	72	VAL
28	21	77	ILE
28	21	79	ARG
28	21	82	ARG
28	21	87	GLU
28	21	89	ASP
28	21	92	THR
28	21	101	ARG
28	21	111	ARG
28	21	116	VAL
28	21	119	ARG
28	21	144	ARG
28	21	146	THR
28	21	164	ARG
28	21	167	VAL
28	21	174	ASP
28	21	175	VAL
28	21	179	GLU
28	21	181	LEU
28	21	201	THR
29	31	7	TYR
29	31	8	GLN
29	31	9	ILE
29	31	13	SER
29	31	18	ARG
29	31	24	LEU

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Mol	Chain	Res	Type
29	31	33	LEU
29	31	45	ARG
29	31	46	ARG
29	31	57	VAL
29	31	64	ILE
29	31	67	GLN
29	31	72	ARG
29	31	74	ARG
29	31	106	ARG
29	31	117	ARG
29	31	127	GLU
29	31	136	THR
29	31	149	ASP
29	31	158	THR
29	31	161	GLU
29	31	170	LEU
29	31	174	VAL
29	31	183	VAL
29	31	188	ARG
29	31	192	LEU
29	31	204	ASN
29	31	205	ARG
30	41	3	LEU
30	41	19	LEU
30	41	20	ILE
30	41	22	ARG
30	41	26	GLN
30	41	28	VAL
30	41	33	ARG
30	41	34	LEU
30	41	36	LYS
30	41	45	GLU
30	41	58	GLN
30	41	63	ILE
30	41	67	LYS
30	41	76	SER
30	41	80	PHE
30	41	82	LEU
30	41	83	ARG
30	41	84	LYS
30	41	90	LEU
30	41	101	ILE

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Mol	Chain	Res	Type
30	41	116	ASP
30	41	118	ARG
30	41	120	LEU
30	41	128	ARG
30	41	130	ASN
30	41	139	LEU
30	41	152	LEU
30	41	155	MET
30	41	161	THR
30	41	162	THR
30	41	165	THR
30	41	172	LEU
31	51	4	ILE
31	51	7	LEU
31	51	9	ILE
31	51	13	LYS
31	51	15	VAL
31	51	24	VAL
31	51	40	GLU
31	51	44	VAL
31	51	45	VAL
31	51	50	VAL
31	51	60	ARG
31	51	64	LEU
31	51	71	LEU
31	51	77	LYS
31	51	81	GLU
31	51	86	GLU
31	51	92	ILE
31	51	97	ARG
31	51	104	GLU
31	51	106	THR
31	51	116	GLU
31	51	121	ILE
31	51	122	THR
31	51	125	VAL
31	51	129	THR
31	51	131	VAL
31	51	132	ARG
31	51	139	GLN
31	51	140	LYS
31	51	144	VAL

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Mol	Chain	Res	Type
31	51	151	ILE
31	51	153	LYS
31	51	169	VAL
31	51	175	LYS
32	61	4	ILE
32	61	7	GLU
32	61	9	LEU
32	61	12	LEU
32	61	14	ASP
32	61	20	ASP
32	61	38	LEU
32	61	40	THR
32	61	41	GLU
32	61	44	LEU
32	61	58	LEU
32	61	60	GLU
32	61	70	GLU
32	61	74	ASN
32	61	77	LEU
32	61	78	THR
32	61	85	GLU
32	61	87	LYS
32	61	92	VAL
32	61	95	LYS
32	61	97	ILE
32	61	108	THR
32	61	110	ASP
32	61	116	LEU
32	61	117	GLU
32	61	122	GLU
32	61	130	TYR
32	61	131	LYS
32	61	135	GLU
32	61	140	LEU
32	61	142	VAL
33	58	1	MET
33	58	5	VAL
33	58	7	LYS
33	58	28	THR
33	58	29	LYS
33	58	34	LEU
33	58	37	LYS

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Mol	Chain	Res	Type
33	58	48	MET
33	58	58	ASP
33	58	61	ARG
33	58	63	THR
33	58	65	LYS
33	58	67	LEU
33	58	90	MET
33	58	96	GLU
33	58	97	ARG
33	58	99	LEU
33	58	115	ARG
33	58	118	LYS
33	58	120	LEU
33	58	127	ASP
34	68	3	GLN
34	68	23	ARG
34	68	24	VAL
34	68	25	LEU
34	68	31	LYS
34	68	32	TYR
34	68	38	VAL
34	68	47	ILE
34	68	52	VAL
34	68	53	LYS
34	68	75	SER
34	68	82	ASN
34	68	94	ARG
34	68	98	VAL
34	68	112	MET
34	68	113	LYS
35	78	1	MET
35	78	5	ASP
35	78	7	ARG
35	78	10	PRO
35	78	18	ARG
35	78	19	VAL
35	78	21	ARG
35	78	30	THR
35	78	36	LYS
35	78	40	SER
35	78	41	ARG
35	78	45	LEU

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Mol	Chain	Res	Type
35	78	46	LYS
35	78	49	ARG
35	78	55	ARG
35	78	56	SER
35	78	58	THR
35	78	59	LEU
35	78	62	LEU
35	78	64	LYS
35	78	65	ARG
35	78	74	GLU
35	78	75	ILE
35	78	76	LYS
35	78	85	LEU
35	78	86	LYS
35	78	96	THR
35	78	100	LEU
35	78	101	VAL
35	78	105	LEU
35	78	106	LEU
35	78	112	LEU
35	78	115	LEU
35	78	117	GLU
35	78	126	VAL
35	78	132	LYS
35	78	133	SER
35	78	135	LEU
35	78	138	LEU
35	78	144	GLU
35	78	147	LEU
35	78	148	LEU
35	78	149	GLU
36	88	1	MET
36	88	10	ARG
36	88	16	ARG
36	88	18	LYS
36	88	25	ASP
36	88	35	VAL
36	88	45	GLN
36	88	46	GLN
36	88	59	ARG
36	88	67	ARG
36	88	78	PRO

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Mol	Chain	Res	Type
36	88	79	LEU
36	88	81	VAL
36	88	90	VAL
36	88	91	GLU
36	88	99	PRO
36	88	103	MET
36	88	109	VAL
36	88	110	THR
36	88	127	ILE
36	88	139	GLU
36	88	141	GLN
37	98	2	ARG
37	98	6	SER
37	98	9	LYS
37	98	12	ARG
37	98	18	LEU
37	98	28	LEU
37	98	29	LEU
37	98	33	ARG
37	98	35	THR
37	98	36	THR
37	98	40	LYS
37	98	44	LEU
37	98	59	ASP
37	98	65	LEU
37	98	67	LEU
37	98	72	ASP
37	98	75	LEU
37	98	79	LEU
37	98	91	GLN
37	98	94	TYR
37	98	95	THR
37	98	104	ARG
37	98	105	ARG
38	A8	4	LEU
38	A8	8	GLU
38	A8	10	ARG
38	A8	11	LYS
38	A8	13	ARG
38	A8	15	ARG
38	A8	17	ARG
38	A8	18	ILE

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Mol	Chain	Res	Type
38	A8	20	ARG
38	A8	29	PHE
38	A8	31	SER
38	A8	32	LEU
38	A8	35	ILE
38	A8	36	TYR
38	A8	46	VAL
38	A8	49	VAL
38	A8	50	SER
38	A8	54	LEU
38	A8	56	LEU
38	A8	63	THR
38	A8	69	VAL
38	A8	73	LEU
38	A8	78	LEU
38	A8	83	LYS
38	A8	98	VAL
38	A8	101	LEU
38	A8	106	ARG
38	A8	112	PHE
39	B8	6	LEU
39	B8	7	ILE
39	B8	11	GLU
39	B8	15	VAL
39	B8	17	THR
39	B8	19	LEU
39	B8	21	GLU
39	B8	27	THR
39	B8	30	VAL
39	B8	39	ARG
39	B8	41	ARG
39	B8	42	ILE
39	B8	50	ILE
39	B8	58	ASN
39	B8	59	THR
39	B8	62	THR
39	B8	63	VAL
39	B8	64	ARG
39	B8	74	ARG
39	B8	86	ILE
39	B8	87	ASP
39	B8	88	ILE

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Mol	Chain	Res	Type
39	B8	93	ARG
39	B8	99	LEU
39	B8	105	LEU
39	B8	111	ARG
39	B8	114	LEU
39	B8	118	ARG
39	B8	129	ARG
39	B8	136	GLN
40	C8	3	ARG
40	C8	5	LYS
40	C8	16	LYS
40	C8	27	LEU
40	C8	52	ARG
40	C8	70	ARG
40	C8	74	LEU
40	C8	79	PHE
40	C8	89	GLU
40	C8	92	ARG
40	C8	94	ASN
40	C8	95	LEU
40	C8	104	GLN
40	C8	108	GLU
40	C8	111	GLU
41	D8	1	MET
41	D8	7	THR
41	D8	11	GLN
41	D8	18	LEU
41	D8	20	LEU
41	D8	22	VAL
41	D8	25	LEU
41	D8	34	GLU
41	D8	35	LEU
41	D8	37	VAL
41	D8	38	LEU
41	D8	40	LEU
41	D8	47	VAL
41	D8	49	THR
41	D8	53	GLU
41	D8	61	VAL
41	D8	62	LEU
41	D8	79	VAL
41	D8	88	ARG

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Mol	Chain	Res	Type
42	E8	1	MET
42	E8	4	LYS
42	E8	11	ARG
42	E8	15	ARG
42	E8	20	VAL
42	E8	27	LYS
42	E8	28	SER
42	E8	41	LYS
42	E8	51	LEU
42	E8	52	GLU
42	E8	59	VAL
42	E8	61	ASN
42	E8	65	LEU
42	E8	66	GLU
42	E8	67	ASP
42	E8	69	LEU
42	E8	70	TYR
42	E8	76	VAL
42	E8	78	GLU
42	E8	82	LEU
42	E8	88	ARG
42	E8	92	ARG
42	E8	96	ILE
42	E8	100	THR
42	E8	103	ILE
42	E8	107	LEU
43	F8	13	LEU
43	F8	15	GLU
43	F8	23	GLU
43	F8	27	THR
43	F8	45	THR
43	F8	54	VAL
43	F8	60	ARG
43	F8	72	LYS
43	F8	76	ARG
43	F8	80	ILE
44	G8	6	HIS
44	G8	19	LYS
44	G8	31	LEU
44	G8	33	LYS
44	G8	38	ILE
44	G8	42	VAL

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Mol	Chain	Res	Type
44	G8	44	ILE
44	G8	55	TYR
44	G8	57	GLN
44	G8	64	GLU
44	G8	67	LEU
44	G8	71	LYS
44	G8	85	VAL
44	G8	86	ARG
44	G8	90	LEU
44	G8	95	LYS
45	H8	6	LYS
45	H8	11	GLU
45	H8	16	SER
45	H8	18	LEU
45	H8	19	ARG
45	H8	20	ARG
45	H8	28	MET
45	H8	35	ARG
45	H8	37	VAL
45	H8	40	ASP
45	H8	41	LEU
45	H8	42	VAL
45	H8	43	GLU
45	H8	53	ILE
45	H8	61	LEU
45	H8	71	VAL
45	H8	72	ARG
45	H8	76	LEU
45	H8	77	ASP
45	H8	80	ARG
45	H8	81	ARG
45	H8	86	VAL
45	H8	90	VAL
45	H8	91	LEU
45	H8	94	GLU
45	H8	96	VAL
45	H8	104	PHE
45	H8	105	VAL
45	H8	117	LEU
45	H8	119	GLU
45	H8	135	GLU
45	H8	140	ASP

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Mol	Chain	Res	Type
45	H8	154	ASP
45	H8	168	GLU
46	I8	11	ARG
46	I8	14	ARG
46	I8	36	ILE
46	I8	40	GLN
46	I8	41	ARG
46	I8	53	MET
46	I8	67	VAL
46	I8	68	GLU
46	I8	74	ARG
46	I8	77	ARG
46	I8	79	VAL
47	J8	4	VAL
47	J8	19	GLN
47	J8	21	ARG
47	J8	25	LYS
47	J8	41	ARG
47	J8	65	SER
47	J8	69	LYS
47	J8	72	GLU
47	J8	78	LYS
47	J8	81	LYS
47	J8	90	ILE
47	J8	91	LYS
48	K8	5	GLU
48	K8	14	ARG
48	K8	15	LYS
48	K8	19	VAL
48	K8	20	GLU
48	K8	24	LEU
48	K8	25	VAL
48	K8	31	GLU
48	K8	41	ILE
48	K8	45	SER
48	K8	46	GLN
48	K8	47	ASN
48	K8	50	ILE
48	K8	51	ARG
48	K8	53	LEU
48	K8	54	LYS
48	K8	55	ARG

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Mol	Chain	Res	Type
48	K8	64	LEU
48	K8	65	ASN
48	K8	66	GLU
49	L8	6	VAL
49	L8	8	LEU
49	L8	11	SER
49	L8	17	LYS
49	L8	30	ARG
49	L8	31	LEU
49	L8	32	GLN
49	L8	37	LEU
49	L8	40	THR
50	M8	6	HIS
50	M8	26	SER
50	M8	27	THR
50	M8	36	CYS
50	M8	38	LYS
50	M8	42	PHE
50	M8	43	TYR
50	M8	51	ASP
50	M8	52	THR
50	M8	55	ARG
50	M8	61	ARG
50	M8	63	TYR
51	N8	6	VAL
51	N8	9	LYS
51	N8	16	ARG
51	N8	25	LEU
51	N8	26	THR
51	N8	29	THR
51	N8	35	GLU
51	N8	40	LYS
51	N8	44	THR
52	P8	1	MET
52	P8	4	THR
52	P8	8	ASN
52	P8	14	LYS
52	P8	23	ARG
52	P8	24	THR
52	P8	37	LYS
52	P8	43	THR
53	Q8	6	THR

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Mol	Chain	Res	Type
53	Q8	7	HIS
53	Q8	8	LYS
53	Q8	19	SER
53	Q8	22	VAL
53	Q8	23	VAL
53	Q8	25	MET
53	Q8	30	ARG
53	Q8	31	HIS
53	Q8	32	LEU
53	Q8	33	ASN
53	Q8	34	TRP
53	Q8	35	GLN
53	Q8	40	GLU
53	Q8	43	GLN
53	Q8	49	VAL
53	Q8	58	ILE
53	Q8	59	LYS
53	Q8	60	LEU
53	Q8	61	LEU
2	12	4	GLU
2	12	5	ILE
2	12	9	GLU
2	12	17	PHE
2	12	23	ARG
2	12	24	TRP
2	12	25	ASN
2	12	31	TYR
2	12	36	ARG
2	12	37	ASN
2	12	42	ILE
2	12	51	LEU
2	12	55	PHE
2	12	58	ILE
2	12	60	ASP
2	12	69	LEU
2	12	75	LYS
2	12	80	ILE
2	12	108	ILE
2	12	115	LEU
2	12	117	GLU
2	12	121	LEU
2	12	124	SER

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Mol	Chain	Res	Type
2	12	137	ARG
2	12	138	LEU
2	12	139	LYS
2	12	158	LEU
2	12	160	ASP
2	12	164	VAL
2	12	165	VAL
2	12	168	THR
2	12	170	GLU
2	12	172	ILE
2	12	176	GLU
2	12	178	ARG
2	12	179	LYS
2	12	180	LEU
2	12	185	ILE
2	12	192	SER
2	12	196	LEU
2	12	213	LEU
2	12	215	LEU
2	12	217	ARG
2	12	219	VAL
2	12	223	ILE
2	12	233	SER
3	22	3	ASN
3	22	4	LYS
3	22	5	ILE
3	22	17	ASP
3	22	21	ARG
3	22	26	LYS
3	22	27	LYS
3	22	29	TYR
3	22	36	ASP
3	22	43	LEU
3	22	52	LEU
3	22	64	VAL
3	22	69	HIS
3	22	76	VAL
3	22	79	ARG
3	22	83	ARG
3	22	85	ARG
3	22	94	LEU
3	22	98	ASN

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Mol	Chain	Res	Type
3	22	101	LEU
3	22	105	GLU
3	22	125	GLU
3	22	127	ARG
3	22	140	ARG
3	22	142	MET
3	22	154	SER
3	22	156	ARG
3	22	167	TRP
3	22	176	HIS
3	22	188	LEU
3	22	190	ARG
3	22	193	TYR
3	22	195	VAL
3	22	196	LEU
3	22	198	VAL
3	22	207	VAL
4	32	3	ARG
4	32	5	ILE
4	32	8	VAL
4	32	12	CYS
4	32	17	VAL
4	32	28	SER
4	32	30	LYS
4	32	36	ARG
4	32	49	ARG
4	32	58	LEU
4	32	61	LYS
4	32	73	ARG
4	32	79	PHE
4	32	81	GLU
4	32	85	LYS
4	32	96	LEU
4	32	99	SER
4	32	107	ARG
4	32	122	ARG
4	32	127	THR
4	32	134	ASP
4	32	141	ARG
4	32	145	GLU
4	32	159	ARG
4	32	170	VAL

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Mol	Chain	Res	Type
4	32	184	LYS
4	32	191	ARG
4	32	192	GLU
4	32	200	GLU
4	32	209	ARG
5	42	14	ARG
5	42	15	ARG
5	42	16	THR
5	42	31	LEU
5	42	34	VAL
5	42	41	VAL
5	42	43	LEU
5	42	47	LYS
5	42	56	GLN
5	42	60	TYR
5	42	64	ARG
5	42	68	GLU
5	42	72	GLN
5	42	78	HIS
5	42	79	GLU
5	42	83	GLU
5	42	87	SER
5	42	91	LEU
5	42	101	ILE
5	42	116	THR
5	42	126	ARG
5	42	137	GLU
5	42	140	ARG
6	52	2	ARG
6	52	3	ARG
6	52	10	LEU
6	52	14	LEU
6	52	16	GLN
6	52	17	SER
6	52	28	ARG
6	52	40	VAL
6	52	43	LEU
6	52	46	ARG
6	52	47	ARG
6	52	54	LYS
6	52	74	ASP
6	52	77	ARG

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Mol	Chain	Res	Type
6	52	83	ASP
6	52	86	ARG
6	52	93	SER
7	62	8	GLU
7	62	13	GLN
7	62	27	ILE
7	62	45	ASP
7	62	49	ILE
7	62	51	GLN
7	62	57	GLU
7	62	61	VAL
7	62	66	VAL
7	62	72	ARG
7	62	73	MET
7	62	84	ASN
7	62	87	VAL
7	62	89	MET
7	62	90	GLU
7	62	91	VAL
7	62	94	ARG
7	62	104	LEU
7	62	118	VAL
7	62	124	LEU
7	62	129	GLU
7	62	137	LYS
7	62	140	ASP
7	62	155	ARG
8	72	8	ASP
8	72	12	ARG
8	72	23	SER
8	72	25	ASP
8	72	82	HIS
8	72	95	VAL
8	72	97	VAL
8	72	99	GLU
8	72	102	ARG
8	72	104	ARG
8	72	112	LEU
8	72	114	THR
8	72	120	THR
9	82	7	THR
9	82	27	THR

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Mol	Chain	Res	Type
9	82	33	PHE
9	82	38	GLN
9	82	42	ARG
9	82	56	LEU
9	82	78	LYS
9	82	79	LEU
9	82	85	LEU
9	82	87	GLN
9	82	91	ASP
9	82	92	TYR
9	82	95	LYS
9	82	104	ARG
9	82	109	VAL
9	82	111	ARG
9	82	112	LYS
9	82	113	LYS
9	82	120	ARG
9	82	126	SER
10	1A	13	HIS
10	1A	17	ASP
10	1A	21	GLN
10	1A	22	LYS
10	1A	24	VAL
10	1A	30	SER
10	1A	35	SER
10	1A	48	THR
10	1A	62	HIS
10	1A	70	ARG
10	1A	79	ARG
10	1A	80	LYS
10	1A	86	MET
10	1A	89	ASP
10	1A	95	GLU
10	1A	96	ILE
10	1A	97	GLU
10	1A	99	LYS
10	1A	101	VAL
11	2A	31	THR
11	2A	32	ILE
11	2A	34	ASP
11	2A	40	ILE
11	2A	41	THR

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Mol	Chain	Res	Type
11	2A	48	ILE
11	2A	53	SER
11	2A	54	ARG
11	2A	83	ILE
11	2A	93	GLN
11	2A	95	ILE
11	2A	103	LEU
11	2A	105	VAL
11	2A	106	LYS
11	2A	114	VAL
11	2A	124	LYS
12	3A	19	ARG
12	3A	22	SER
12	3A	24	VAL
12	3A	27	LEU
12	3A	33	ARG
12	3A	37	CYS
12	3A	42	THR
12	3A	46	LYS
12	3A	50	SER
12	3A	54	LYS
12	3A	57	LYS
12	3A	60	LEU
12	3A	81	SER
12	3A	91	LYS
12	3A	92	ASP
12	3A	100	ILE
12	3A	111	LYS
12	3A	112	ASP
12	3A	118	SER
13	4A	4	ILE
13	4A	8	GLU
13	4A	17	VAL
13	4A	19	LEU
13	4A	35	GLU
13	4A	39	ILE
13	4A	64	TRP
13	4A	66	LEU
13	4A	91	ARG
13	4A	94	ARG
13	4A	98	VAL
13	4A	101	GLN

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Mol	Chain	Res	Type
13	4A	103	THR
13	4A	106	ASN
13	4A	108	ARG
13	4A	114	ARG
13	4A	117	VAL
14	5A	12	ARG
14	5A	15	LYS
14	5A	17	LYS
14	5A	18	VAL
14	5A	26	ARG
14	5A	27	CYS
14	5A	35	ARG
14	5A	42	ILE
14	5A	44	LEU
15	6A	3	ILE
15	6A	4	THR
15	6A	34	LEU
15	6A	38	ARG
15	6A	40	SER
15	6A	48	LYS
15	6A	66	LEU
15	6A	76	GLU
15	6A	88	ARG
16	7A	2	VAL
16	7A	27	LYS
16	7A	45	THR
16	7A	53	VAL
16	7A	55	ARG
16	7A	65	GLN
16	7A	67	THR
16	7A	72	ARG
16	7A	76	GLN
16	7A	82	GLN
17	8A	23	VAL
17	8A	25	ARG
17	8A	36	ILE
17	8A	49	GLU
17	8A	50	LYS
17	8A	52	LYS
17	8A	53	LEU
17	8A	57	VAL
17	8A	60	ILE

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Mol	Chain	Res	Type
17	8A	63	ARG
17	8A	74	LEU
17	8A	75	ARG
17	8A	100	LYS
18	9A	26	LEU
18	9A	28	GLU
18	9A	29	PHE
18	9A	32	ARG
18	9A	36	ASN
18	9A	42	ARG
18	9A	44	LEU
18	9A	58	LEU
18	9A	82	THR
18	9A	86	VAL
19	AA	15	LEU
19	AA	23	ASN
19	AA	29	ARG
19	AA	30	LEU
19	AA	32	LYS
19	AA	39	THR
19	AA	60	VAL
19	AA	63	THR
19	AA	66	MET
19	AA	78	ARG
19	AA	83	HIS
20	BA	10	LEU
20	BA	11	SER
20	BA	23	ARG
20	BA	24	LEU
20	BA	29	LYS
20	BA	33	ILE
20	BA	37	SER
20	BA	41	ILE
20	BA	45	GLN
20	BA	54	LYS
20	BA	56	MET
20	BA	58	LYS
20	BA	61	SER
20	BA	74	LYS
20	BA	75	ASN
20	BA	84	LEU
20	BA	86	ARG

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Mol	Chain	Res	Type
20	BA	100	ILE
21	1B	10	ARG
21	1B	15	ARG
21	1B	22	ARG
27	19	18	VAL
27	19	28	GLU
27	19	31	LYS
27	19	39	LYS
27	19	43	ARG
27	19	49	ILE
27	19	61	LEU
27	19	64	ILE
27	19	65	ILE
27	19	88	ARG
27	19	94	LEU
27	19	99	ASP
27	19	105	ILE
27	19	111	LEU
27	19	115	GLN
27	19	118	VAL
27	19	125	ILE
27	19	138	VAL
27	19	141	VAL
27	19	147	LEU
27	19	151	LYS
27	19	155	LEU
27	19	169	GLU
27	19	181	GLU
27	19	182	LEU
27	19	192	THR
27	19	204	ILE
27	19	208	LYS
27	19	211	ARG
27	19	212	SER
27	19	232	PRO
27	19	237	GLU
27	19	239	ARG
27	19	244	ARG
27	19	255	LYS
27	19	257	LEU
27	19	260	ARG
27	19	262	ARG

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Mol	Chain	Res	Type
27	19	263	ARG
27	19	266	SER
27	19	267	SER
27	19	268	ARG
27	19	270	ILE
27	19	271	ILE
28	29	1	MET
28	29	7	VAL
28	29	9	VAL
28	29	22	PRO
28	29	23	VAL
28	29	27	LEU
28	29	37	ARG
28	29	38	THR
28	29	42	ASP
28	29	44	TYR
28	29	60	ASN
28	29	61	ARG
28	29	63	LEU
28	29	75	VAL
28	29	77	ILE
28	29	79	ARG
28	29	87	GLU
28	29	89	ASP
28	29	91	VAL
28	29	93	VAL
28	29	105	THR
28	29	107	THR
28	29	117	MET
28	29	119	ARG
28	29	121	ASN
28	29	144	ARG
28	29	145	LYS
28	29	146	THR
28	29	151	TYR
28	29	163	GLU
28	29	166	THR
28	29	167	VAL
28	29	170	LEU
28	29	175	VAL
28	29	179	GLU
28	29	182	LEU

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Mol	Chain	Res	Type
28	29	188	VAL
28	29	197	ILE
28	29	200	GLU
28	29	201	THR
28	29	202	LYS
29	39	2	LYS
29	39	8	GLN
29	39	11	VAL
29	39	18	ARG
29	39	19	GLU
29	39	20	LEU
29	39	33	LEU
29	39	38	ARG
29	39	46	ARG
29	39	53	THR
29	39	57	VAL
29	39	62	ARG
29	39	65	TRP
29	39	66	PRO
29	39	67	GLN
29	39	72	ARG
29	39	74	ARG
29	39	83	PHE
29	39	88	VAL
29	39	96	ASP
29	39	98	SER
29	39	110	LEU
29	39	123	LEU
29	39	140	LEU
29	39	151	SER
29	39	153	SER
29	39	154	VAL
29	39	158	THR
29	39	165	ARG
29	39	181	LEU
29	39	191	ARG
29	39	194	MET
29	39	196	LEU
29	39	197	ASP
29	39	204	ASN
29	39	205	ARG
30	49	7	LEU

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Mol	Chain	Res	Type
30	49	12	TYR
30	49	19	LEU
30	49	26	GLN
30	49	28	VAL
30	49	33	ARG
30	49	40	ASN
30	49	45	GLU
30	49	53	LEU
30	49	58	GLN
30	49	64	THR
30	49	71	THR
30	49	80	PHE
30	49	82	LEU
30	49	84	LYS
30	49	94	LEU
30	49	96	ARG
30	49	99	MET
30	49	111	LEU
30	49	118	ARG
30	49	128	ARG
30	49	130	ASN
30	49	133	LEU
30	49	136	ARG
30	49	139	LEU
30	49	153	ARG
30	49	161	THR
30	49	162	THR
31	59	6	ARG
31	59	24	VAL
31	59	41	MET
31	59	45	VAL
31	59	50	VAL
31	59	71	LEU
31	59	72	ILE
31	59	83	TYR
31	59	85	LYS
31	59	86	GLU
31	59	89	ILE
31	59	92	ILE
31	59	105	LEU
31	59	113	VAL
31	59	116	GLU

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Mol	Chain	Res	Type
31	59	122	THR
31	59	123	PHE
31	59	124	GLU
31	59	125	VAL
31	59	127	GLU
31	59	129	THR
31	59	131	VAL
31	59	139	GLN
31	59	143	GLN
31	59	147	ASN
31	59	152	ARG
31	59	157	TYR
31	59	158	HIS
31	59	160	LYS
32	69	2	LYS
32	69	4	ILE
32	69	7	GLU
32	69	37	VAL
32	69	40	THR
32	69	43	ASN
32	69	44	LEU
32	69	51	ILE
32	69	52	ARG
32	69	56	LYS
32	69	74	ASN
32	69	75	LEU
32	69	76	THR
32	69	77	LEU
32	69	78	THR
32	69	86	THR
32	69	87	LYS
32	69	96	ASP
32	69	101	LEU
32	69	103	ARG
32	69	105	HIS
32	69	107	VAL
32	69	109	ILE
32	69	110	ASP
32	69	114	LEU
32	69	117	GLU
32	69	122	GLU
32	69	125	GLU

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Mol	Chain	Res	Type
32	69	128	LEU
32	69	131	LYS
32	69	138	ILE
32	69	141	LYS
32	69	142	VAL
33	15	1	MET
33	15	5	VAL
33	15	9	VAL
33	15	28	THR
33	15	29	LYS
33	15	32	THR
33	15	33	LEU
33	15	34	LEU
33	15	35	ARG
33	15	41	ASP
33	15	48	MET
33	15	63	THR
33	15	65	LYS
33	15	67	LEU
33	15	68	GLU
33	15	73	THR
33	15	76	SER
33	15	83	LYS
33	15	93	THR
33	15	94	HIS
33	15	112	LEU
33	15	114	ARG
33	15	121	LYS
33	15	130	HIS
33	15	136	GLU
33	15	138	LEU
34	25	1	MET
34	25	5	GLN
34	25	9	GLU
34	25	22	ILE
34	25	24	VAL
34	25	26	LYS
34	25	29	ASN
34	25	38	VAL
34	25	47	ILE
34	25	49	ARG
34	25	63	VAL

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Mol	Chain	Res	Type
34	25	75	SER
34	25	87	ILE
34	25	89	ASN
34	25	96	THR
34	25	98	VAL
34	25	104	ARG
34	25	105	GLU
34	25	107	ARG
34	25	108	GLU
34	25	113	LYS
34	25	114	ILE
34	25	116	SER
35	35	1	MET
35	35	2	LYS
35	35	3	LEU
35	35	4	SER
35	35	6	LEU
35	35	10	PRO
35	35	14	LYS
35	35	18	ARG
35	35	21	ARG
35	35	27	HIS
35	35	30	THR
35	35	36	LYS
35	35	40	SER
35	35	41	ARG
35	35	45	LEU
35	35	46	LYS
35	35	50	ARG
35	35	55	ARG
35	35	67	MET
35	35	74	GLU
35	35	76	LYS
35	35	85	LEU
35	35	95	VAL
35	35	96	THR
35	35	98	GLU
35	35	102	ARG
35	35	105	LEU
35	35	110	TYR
35	35	112	LEU
35	35	114	ILE

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Mol	Chain	Res	Type
35	35	123	LEU
35	35	138	LEU
35	35	144	GLU
35	35	147	LEU
35	35	149	GLU
36	45	5	ARG
36	45	10	ARG
36	45	17	LEU
36	45	18	LYS
36	45	22	LYS
36	45	45	GLN
36	45	56	ARG
36	45	59	ARG
36	45	60	ARG
36	45	77	LYS
36	45	80	GLU
36	45	81	VAL
36	45	83	MET
36	45	85	LYS
36	45	89	ASN
36	45	91	GLU
36	45	93	TYR
36	45	103	MET
36	45	106	VAL
36	45	127	ILE
36	45	133	ARG
36	45	135	ASP
37	55	6	SER
37	55	12	ARG
37	55	18	LEU
37	55	28	LEU
37	55	29	LEU
37	55	35	THR
37	55	48	VAL
37	55	51	LEU
37	55	57	ARG
37	55	59	ASP
37	55	61	HIS
37	55	63	ARG
37	55	65	LEU
37	55	67	LEU
37	55	75	LEU

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Mol	Chain	Res	Type
37	55	76	VAL
37	55	79	LEU
37	55	81	ASP
37	55	82	GLU
37	55	91	GLN
37	55	113	LEU
37	55	118	GLU
38	65	3	ARG
38	65	12	PHE
38	65	13	ARG
38	65	19	LYS
38	65	21	THR
38	65	27	SER
38	65	31	SER
38	65	32	LEU
38	65	36	TYR
38	65	41	ASP
38	65	46	VAL
38	65	48	LEU
38	65	50	SER
38	65	54	LEU
38	65	56	LEU
38	65	58	LEU
38	65	62	LYS
38	65	69	VAL
38	65	71	ARG
38	65	73	LEU
38	65	78	LEU
38	65	89	ARG
38	65	98	VAL
38	65	101	LEU
38	65	106	ARG
38	65	110	LEU
39	75	9	LEU
39	75	13	ARG
39	75	15	VAL
39	75	16	ARG
39	75	19	LEU
39	75	27	THR
39	75	38	ASN
39	75	40	THR
39	75	51	ARG

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Mol	Chain	Res	Type
39	75	54	ARG
39	75	57	PHE
39	75	59	THR
39	75	64	ARG
39	75	65	LYS
39	75	74	ARG
39	75	78	LEU
39	75	87	ASP
39	75	89	VAL
39	75	91	ARG
39	75	98	LYS
39	75	105	LEU
39	75	106	SER
39	75	107	ASP
39	75	113	LYS
39	75	132	LYS
39	75	134	GLU
40	85	8	VAL
40	85	31	SER
40	85	55	ARG
40	85	63	VAL
40	85	64	ARG
40	85	70	ARG
40	85	74	LEU
40	85	83	LEU
40	85	92	ARG
40	85	97	ASP
40	85	101	ARG
40	85	105	VAL
41	95	7	THR
41	95	19	LYS
41	95	24	LYS
41	95	40	LEU
41	95	47	VAL
41	95	49	THR
41	95	75	PHE
41	95	76	LYS
41	95	80	GLN
41	95	84	LYS
41	95	85	LYS
41	95	89	GLN
41	95	91	TYR

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Mol	Chain	Res	Type
41	95	92	THR
41	95	95	LEU
41	95	97	LYS
41	95	100	ARG
42	A5	1	MET
42	A5	11	ARG
42	A5	20	VAL
42	A5	23	LEU
42	A5	39	THR
42	A5	51	LEU
42	A5	52	GLU
42	A5	65	LEU
42	A5	67	ASP
42	A5	70	TYR
42	A5	76	VAL
42	A5	88	ARG
42	A5	92	ARG
42	A5	94	ASP
42	A5	96	ILE
42	A5	107	LEU
42	A5	110	LYS
43	B5	3	THR
43	B5	27	THR
43	B5	30	VAL
43	B5	35	THR
43	B5	43	VAL
43	B5	44	GLU
43	B5	45	THR
43	B5	48	LYS
43	B5	55	ASN
43	B5	63	LYS
43	B5	69	TYR
43	B5	75	ASP
43	B5	76	ARG
43	B5	81	VAL
44	C5	6	HIS
44	C5	13	VAL
44	C5	17	SER
44	C5	24	VAL
44	C5	29	GLU
44	C5	31	LEU
44	C5	37	VAL

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Mol	Chain	Res	Type
44	C5	45	VAL
44	C5	50	ARG
44	C5	51	VAL
44	C5	55	TYR
44	C5	60	PHE
44	C5	62	GLU
44	C5	70	SER
44	C5	72	VAL
44	C5	84	ARG
44	C5	85	VAL
44	C5	86	ARG
44	C5	87	LYS
44	C5	88	LYS
44	C5	89	PHE
44	C5	91	GLU
44	C5	94	LYS
44	C5	96	ILE
44	C5	97	ARG
44	C5	99	CYS
45	D5	4	ARG
45	D5	11	GLU
45	D5	14	LYS
45	D5	16	SER
45	D5	18	LEU
45	D5	19	ARG
45	D5	30	ASN
45	D5	53	ILE
45	D5	59	LEU
45	D5	63	ASP
45	D5	70	LEU
45	D5	71	VAL
45	D5	74	VAL
45	D5	76	LEU
45	D5	86	VAL
45	D5	89	PHE
45	D5	92	SER
45	D5	94	GLU
45	D5	96	VAL
45	D5	98	MET
45	D5	118	GLN
45	D5	120	ILE
45	D5	121	HIS

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Mol	Chain	Res	Type
45	D5	122	ARG
45	D5	123	ASP
45	D5	125	LEU
45	D5	132	ASN
45	D5	144	LEU
45	D5	150	LEU
45	D5	154	ASP
45	D5	157	LEU
45	D5	161	VAL
45	D5	165	VAL
45	D5	168	GLU
45	D5	179	ASP
46	E5	10	THR
46	E5	11	ARG
46	E5	12	ASN
46	E5	19	LYS
46	E5	36	ILE
46	E5	38	VAL
46	E5	43	THR
46	E5	53	MET
46	E5	74	ARG
46	E5	79	VAL
46	E5	84	LEU
47	F5	4	VAL
47	F5	5	CYS
47	F5	19	GLN
47	F5	25	LYS
47	F5	37	ILE
47	F5	42	GLN
47	F5	46	LEU
47	F5	51	VAL
47	F5	56	GLN
47	F5	73	LEU
47	F5	76	ARG
47	F5	78	LYS
47	F5	82	LEU
47	F5	83	GLU
47	F5	85	LEU
47	F5	88	LYS
47	F5	91	LYS
47	F5	92	LYS
47	F5	97	LEU

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Mol	Chain	Res	Type
48	G5	8	LYS
48	G5	9	GLN
48	G5	14	ARG
48	G5	24	LEU
48	G5	35	LEU
48	G5	41	ILE
48	G5	46	GLN
48	G5	48	HIS
48	G5	53	LEU
48	G5	55	ARG
48	G5	59	ARG
48	G5	65	ASN
48	G5	69	ARG
49	H5	6	VAL
49	H5	8	LEU
49	H5	18	ASP
49	H5	20	LYS
49	H5	33	GLN
49	H5	35	ARG
49	H5	36	VAL
49	H5	40	THR
49	H5	43	ILE
49	H5	48	GLU
49	H5	55	ARG
50	I5	1	MET
50	I5	6	HIS
50	I5	18	CYS
50	I5	20	ASN
50	I5	22	ILE
50	I5	24	THR
50	I5	30	GLU
50	I5	38	LYS
50	I5	49	PHE
50	I5	51	ASP
50	I5	53	GLU
50	I5	59	PHE
50	I5	61	ARG
50	I5	62	ARG
51	J5	3	LYS
51	J5	12	SER
51	J5	21	SER
51	J5	48	GLU

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Mol	Chain	Res	Type
51	J5	52	TYR
51	J5	55	ARG
52	L5	1	MET
52	L5	4	THR
52	L5	33	ARG
52	L5	39	ARG
52	L5	42	LEU
53	M5	6	THR
53	M5	11	LYS
53	M5	30	ARG
53	M5	31	HIS
53	M5	33	ASN
53	M5	34	TRP
53	M5	36	LYS
53	M5	37	SER
53	M5	50	LEU
53	M5	52	LYS
53	M5	54	GLU
53	M5	56	GLU
53	M5	61	LEU

Some sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (23) such sidechains are listed below:

Mol	Chain	Res	Type
9	8E	89	ASN
10	1I	84	GLN
20	BI	26	ASN
27	11	164	GLN
27	11	166	GLN
35	78	13	ASN
39	B8	58	ASN
3	22	3	ASN
4	32	74	GLN
4	32	119	GLN
7	62	28	ASN
9	82	23	ASN
11	2A	26	ASN
13	4A	77	ASN
16	7A	82	GLN
28	29	143	ASN
29	39	40	GLN
30	49	58	GLN

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Mol	Chain	Res	Type
32	69	104	GLN
42	A5	61	ASN
44	C5	6	HIS
46	E5	29	GLN
50	I5	20	ASN

5.3.3 RNA

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
1	13	1496/1522 (98%)	355 (23%)	31 (2%)
22	1K	82/85 (96%)	39 (47%)	4 (4%)
22	3K	82/85 (96%)	31 (37%)	3 (3%)
23	2K	76/77 (98%)	20 (26%)	3 (3%)
24	4K	13/27 (48%)	4 (30%)	0
25	14	2905/2917 (99%)	766 (26%)	39 (1%)
25	1H	2911/2917 (99%)	766 (26%)	56 (1%)
26	16	121/122 (99%)	26 (21%)	0
26	1J	121/122 (99%)	30 (24%)	2 (1%)
54	1G	1495/1522 (98%)	393 (26%)	37 (2%)
55	1L	84/85 (98%)	37 (44%)	4 (4%)
55	3L	84/85 (98%)	28 (33%)	3 (3%)
56	2L	76/77 (98%)	17 (22%)	2 (2%)
57	4L	15/27 (55%)	5 (33%)	1 (6%)
All	All	9561/9670 (98%)	2517 (26%)	185 (1%)

All (2517) RNA backbone outliers are listed below:

Mol	Chain	Res	Type
1	13	5	U
1	13	6	G
1	13	7	G
1	13	9	G
1	13	31	G
1	13	32	A
1	13	33	A
1	13	39	G
1	13	48	C
1	13	50	A
1	13	51	A
1	13	54	C
1	13	59	A

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Mol	Chain	Res	Type
1	13	60	A
1	13	61	G
1	13	65	U
1	13	66	G
1	13	76	G
1	13	90	C
1	13	91	C
1	13	95	G
1	13	101	A
1	13	116	A
1	13	121	C
1	13	129(A)	G
1	13	131	C
1	13	137	C
1	13	138	G
1	13	142	G
1	13	144	G
1	13	145	G
1	13	150	C
1	13	151	A
1	13	159	G
1	13	160	A
1	13	163	C
1	13	169	C
1	13	172	A
1	13	173	U
1	13	174	C
1	13	186(A)	C
1	13	188	U
1	13	189	U
1	13	190	G
1	13	191(A)	G
1	13	191(D)	U
1	13	195	A
1	13	197	A
1	13	199	G
1	13	201	C
1	13	208	U
1	13	209	U
1	13	210	U
1	13	217	C
1	13	222	U

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Mol	Chain	Res	Type
1	13	232	G
1	13	243	A
1	13	244	U
1	13	245	C
1	13	247	G
1	13	251	G
1	13	256	U
1	13	262	A
1	13	266	G
1	13	267	C
1	13	268	C
1	13	270	A
1	13	280	C
1	13	281	G
1	13	289	G
1	13	316	G
1	13	318	G
1	13	328	C
1	13	330	C
1	13	332	G
1	13	342	C
1	13	344	A
1	13	345	C
1	13	347	G
1	13	352	C
1	13	353	A
1	13	354	G
1	13	357	G
1	13	367	U
1	13	372	C
1	13	383	A
1	13	384	G
1	13	388	G
1	13	390	C
1	13	397	A
1	13	398	C
1	13	406	G
1	13	411	A
1	13	412	A
1	13	413	G
1	13	414	A
1	13	418	C

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Mol	Chain	Res	Type
1	13	419	C
1	13	421	U
1	13	422	C
1	13	423	G
1	13	424	G
1	13	429	U
1	13	430	A
1	13	438	G
1	13	439	A
1	13	445	G
1	13	450	G
1	13	451	A
1	13	466	C
1	13	467	G
1	13	484	G
1	13	485	G
1	13	496	A
1	13	497	U
1	13	505	G
1	13	509	A
1	13	510	A
1	13	511	C
1	13	518	C
1	13	524	G
1	13	527	G
1	13	531	U
1	13	533	A
1	13	536	C
1	13	546	G
1	13	547	A
1	13	559	A
1	13	560	U
1	13	561	U
1	13	562	C
1	13	564	C
1	13	572	A
1	13	573	A
1	13	576	G
1	13	577	G
1	13	580	U
1	13	590	C
1	13	596	C

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Mol	Chain	Res	Type
1	13	607	A
1	13	618	C
1	13	630	G
1	13	631	G
1	13	632	A
1	13	633	G
1	13	653	A
1	13	659	U
1	13	665	A
1	13	666	G
1	13	684	A
1	13	687	A
1	13	704	A
1	13	715	A
1	13	721	G
1	13	723	U
1	13	724	G
1	13	749	C
1	13	750	G
1	13	753	A
1	13	755	G
1	13	757	U
1	13	759	A
1	13	763	G
1	13	766	A
1	13	767	A
1	13	774	G
1	13	777	A
1	13	779	C
1	13	786	G
1	13	792	A
1	13	793	U
1	13	794	A
1	13	795	C
1	13	805	C
1	13	809	G
1	13	817	C
1	13	828	A
1	13	836	G
1	13	841	U
1	13	842	C
1	13	843	U

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Mol	Chain	Res	Type
1	13	848	C
1	13	858	G
1	13	859	A
1	13	870	U
1	13	872	A
1	13	873	A
1	13	884	U
1	13	889	A
1	13	902	G
1	13	914	A
1	13	916	G
1	13	926	G
1	13	927	G
1	13	931	C
1	13	934	C
1	13	935	A
1	13	936	C
1	13	940	C
1	13	948	C
1	13	960	U
1	13	968	A
1	13	969	A
1	13	971	G
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	983	A
1	13	990	C
1	13	991	U
1	13	992	U
1	13	993	G
1	13	994	A
1	13	1004	A
1	13	1007	C
1	13	1008	C
1	13	1009	G
1	13	1012	U
1	13	1021	G
1	13	1023	G

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Mol	Chain	Res	Type
1	13	1024	G
1	13	1025	U
1	13	1026	G
1	13	1028	C
1	13	1028(B)	C
1	13	1029	G
1	13	1032(A)	G
1	13	1039	C
1	13	1040	U
1	13	1042	G
1	13	1049	U
1	13	1052	U
1	13	1053	G
1	13	1054	C
1	13	1055	A
1	13	1064	G
1	13	1065	U
1	13	1081	G
1	13	1094	G
1	13	1095	U
1	13	1101	A
1	13	1103	C
1	13	1121	U
1	13	1122	U
1	13	1124	G
1	13	1125	U
1	13	1126	U
1	13	1127	G
1	13	1129	C
1	13	1130	A
1	13	1131	G
1	13	1133	G
1	13	1134	G
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	1152	A
1	13	1154	G
1	13	1157	A

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Mol	Chain	Res	Type
1	13	1158	C
1	13	1159	U
1	13	1161	C
1	13	1177	G
1	13	1178	G
1	13	1181	G
1	13	1183	A
1	13	1189	C
1	13	1194	U
1	13	1196	U
1	13	1197	G
1	13	1201	A
1	13	1212	U
1	13	1214	C
1	13	1218	C
1	13	1225	A
1	13	1227	A
1	13	1236	A
1	13	1238	A
1	13	1240	U
1	13	1241	G
1	13	1253	G
1	13	1256	A
1	13	1257	U
1	13	1258	G
1	13	1263	C
1	13	1270	C
1	13	1272	G
1	13	1273	G
1	13	1278	U
1	13	1279	A
1	13	1280	A
1	13	1286	A
1	13	1287	A
1	13	1299	A
1	13	1300	G
1	13	1301	U
1	13	1302	U
1	13	1303	C
1	13	1306	A
1	13	1307	U
1	13	1319	A

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Mol	Chain	Res	Type
1	13	1322	C
1	13	1323	G
1	13	1331	G
1	13	1335	C
1	13	1336	C
1	13	1337	G
1	13	1338	G
1	13	1340	A
1	13	1346	A
1	13	1347	G
1	13	1353	G
1	13	1362(A)	C
1	13	1363	A
1	13	1368	G
1	13	1370	G
1	13	1377	A
1	13	1378	C
1	13	1381	U
1	13	1398	A
1	13	1401	G
1	13	1406	U
1	13	1414	U
1	13	1416	G
1	13	1419	G
1	13	1424	C
1	13	1430	C
1	13	1442	G
1	13	1443	G
1	13	1446	A
1	13	1449	C
1	13	1451	A
1	13	1452	C
1	13	1453	G
1	13	1469	G
1	13	1487	G
1	13	1492	A
1	13	1494	G
1	13	1497	G
1	13	1498	U
1	13	1499	A
1	13	1503	A
1	13	1504	G

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Mol	Chain	Res	Type
1	13	1505	G
1	13	1506	U
1	13	1517	G
1	13	1529	G
1	13	1530	G
1	13	1531	A
22	1K	4	G
22	1K	6	G
22	1K	7	G
22	1K	8	4SU
22	1K	9	U
22	1K	10	C
22	1K	14	A
22	1K	16	C
22	1K	17	OMG
22	1K	18	G
22	1K	19	C
22	1K	20	C
22	1K	21	A
22	1K	22	A
22	1K	24	G
22	1K	25	G
22	1K	29	C
22	1K	40	PSU
22	1K	41	C
22	1K	42	U
22	1K	46	G
22	1K	49	A
22	1K	50	U
22	1K	52	G
22	1K	53	A
22	1K	55	U
22	1K	56	U
22	1K	63	5MU
22	1K	70	C
22	1K	72	U
22	1K	75	C
22	1K	76	C
22	1K	77	C
22	1K	78	C
22	1K	79	A
22	1K	80	C

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Mol	Chain	Res	Type
22	1K	83	C
22	1K	84	C
22	1K	85	A
23	2K	2	G
23	2K	6	G
23	2K	8	4SU
23	2K	9	G
23	2K	13	C
23	2K	16	C
23	2K	18	C
23	2K	21	H2U
23	2K	22	A
23	2K	31	G
23	2K	35	C
23	2K	44	A
23	2K	47	7MG
23	2K	48	U
23	2K	49	C
23	2K	50	G
23	2K	54	G
23	2K	62	C
23	2K	68	C
23	2K	77	A
22	3K	5	G
22	3K	6	G
22	3K	9	U
22	3K	10	C
22	3K	11	C
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	30	A
22	3K	34	U
22	3K	41	C
22	3K	43	G
22	3K	46	G
22	3K	48	C

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Mol	Chain	Res	Type
22	3K	49	A
22	3K	52	G
22	3K	55	U
22	3K	56	U
22	3K	57	C
22	3K	64	PSU
22	3K	67	A
22	3K	68	A
22	3K	69	U
22	3K	70	C
22	3K	82	A
22	3K	85	A
24	4K	13	A
24	4K	14	A
24	4K	23	A
24	4K	26	A
25	1H	2	G
25	1H	4	C
25	1H	5	A
25	1H	9	U
25	1H	10	G
25	1H	12	U
25	1H	14	A
25	1H	15	G
25	1H	27	G
25	1H	34	C
25	1H	46	C
25	1H	51	G
25	1H	55	G
25	1H	61	G
25	1H	63	U
25	1H	71	A
25	1H	72	U
25	1H	74	A
25	1H	75	G
25	1H	85	G
25	1H	93	C
25	1H	95	G
25	1H	102	G
25	1H	110	G
25	1H	118	A
25	1H	119	A

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Mol	Chain	Res	Type
25	1H	120	U
25	1H	121	G
25	1H	125	G
25	1H	135	G
25	1H	137(A)	G
25	1H	155	C
25	1H	163	U
25	1H	164	U
25	1H	171	G
25	1H	181	A
25	1H	188	G
25	1H	196	A
25	1H	199	A
25	1H	214	G
25	1H	215	G
25	1H	216	A
25	1H	222	A
25	1H	223	A
25	1H	225	A
25	1H	227	A
25	1H	228	A
25	1H	229	A
25	1H	230	U
25	1H	233	A
25	1H	248	G
25	1H	249	C
25	1H	250	G
25	1H	252	G
25	1H	269	U
25	1H	270(F)	U
25	1H	270(G)	C
25	1H	270(M)	U
25	1H	270(N)	G
25	1H	270(P)	C
25	1H	270(Y)	G
25	1H	271(C)	U
25	1H	271	G
25	1H	273(E)	U
25	1H	274	G
25	1H	275	G
25	1H	277	C
25	1H	278	A

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Mol	Chain	Res	Type
25	1H	279	C
25	1H	294	A
25	1H	299	A
25	1H	311	A
25	1H	323	G
25	1H	324	A
25	1H	327	G
25	1H	329	G
25	1H	330	A
25	1H	331	A
25	1H	342	G
25	1H	346	A
25	1H	352	G
25	1H	354	G
25	1H	360	G
25	1H	363	G
25	1H	363(E)	U
25	1H	372	G
25	1H	380	U
25	1H	386	G
25	1H	389	G
25	1H	395	U
25	1H	396	G
25	1H	405	U
25	1H	406	G
25	1H	411	G
25	1H	412	A
25	1H	428	A
25	1H	434	U
25	1H	443	A
25	1H	444	C
25	1H	447	A
25	1H	448	U
25	1H	451	C
25	1H	454	A
25	1H	455	C
25	1H	457	A
25	1H	459	U
25	1H	460	A
25	1H	463	G
25	1H	470	A
25	1H	471	A

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Mol	Chain	Res	Type
25	1H	481	G
25	1H	482	A
25	1H	505	A
25	1H	508	G
25	1H	509	C
25	1H	510	C
25	1H	529	A
25	1H	530	G
25	1H	531	C
25	1H	532	A
25	1H	533	G
25	1H	545	G
25	1H	546	C
25	1H	549	G
25	1H	556	G
25	1H	563	G
25	1H	564	C
25	1H	567	A
25	1H	571	A
25	1H	573	G
25	1H	575	A
25	1H	577	G
25	1H	583	G
25	1H	587	C
25	1H	588	U
25	1H	603	A
25	1H	607	U
25	1H	609	A
25	1H	612	G
25	1H	613	U
25	1H	614	U
25	1H	615	G
25	1H	617	G
25	1H	621	A
25	1H	622	G
25	1H	626	U
25	1H	627	A
25	1H	637	A
25	1H	640	C
25	1H	641	C
25	1H	645	C
25	1H	646	A

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Mol	Chain	Res	Type
25	1H	649	G
25	1H	654	A
25	1H	654(A)	A
25	1H	654(I)	C
25	1H	654(J)	A
25	1H	654(K)	C
25	1H	654(M)	C
25	1H	654(N)	G
25	1H	654(Q)	C
25	1H	654(T)	A
25	1H	664	C
25	1H	686	G
25	1H	690	G
25	1H	699	A
25	1H	705	A
25	1H	708	C
25	1H	715	G
25	1H	717	G
25	1H	729	G
25	1H	730	C
25	1H	745	G
25	1H	747	U
25	1H	752	A
25	1H	753	C
25	1H	762	U
25	1H	764	A
25	1H	775	G
25	1H	776	G
25	1H	777	A
25	1H	779	U
25	1H	782	A
25	1H	784	A
25	1H	785	G
25	1H	790	C
25	1H	791	C
25	1H	792	G
25	1H	793	A
25	1H	801	G
25	1H	802	A
25	1H	805	G
25	1H	812	C
25	1H	824	A

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Mol	Chain	Res	Type
25	1H	826	U
25	1H	827	U
25	1H	828	U
25	1H	829	A
25	1H	831	G
25	1H	832	G
25	1H	836	G
25	1H	845	G
25	1H	847	U
25	1H	855	G
25	1H	859	G
25	1H	860	U
25	1H	861	A
25	1H	866	A
25	1H	870	A
25	1H	880	G
25	1H	881	G
25	1H	882	G
25	1H	883	G
25	1H	884	C
25	1H	885	C
25	1H	886	C
25	1H	887	A
25	1H	888	C
25	1H	890	A
25	1H	892	G
25	1H	893	C
25	1H	894	C
25	1H	895	U
25	1H	896	A
25	1H	897	C
25	1H	898	C
25	1H	900	A
25	1H	901	A
25	1H	904	C
25	1H	907	U
25	1H	910	A
25	1H	917	A
25	1H	918	A
25	1H	919	G
25	1H	926	A
25	1H	932	G

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Mol	Chain	Res	Type
25	1H	938	G
25	1H	941	A
25	1H	945	A
25	1H	946	G
25	1H	947	G
25	1H	957	A
25	1H	958	U
25	1H	959	A
25	1H	961	C
25	1H	962	G
25	1H	968	G
25	1H	974	G
25	1H	974(A)	C
25	1H	983	A
25	1H	996	A
25	1H	1003	G
25	1H	1005	C
25	1H	1008	C
25	1H	1010	A
25	1H	1011	G
25	1H	1012	U
25	1H	1013	C
25	1H	1020	A
25	1H	1022	G
25	1H	1023	U
25	1H	1025	G
25	1H	1026	U
25	1H	1027	A
25	1H	1033	U
25	1H	1037	G
25	1H	1039	G
25	1H	1040	C
25	1H	1046	A
25	1H	1047	G
25	1H	1051	G
25	1H	1057	A
25	1H	1058	U
25	1H	1059	G
25	1H	1061	U
25	1H	1062	G
25	1H	1064	C
25	1H	1068	G

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Mol	Chain	Res	Type
25	1H	1070	A
25	1H	1071	G
25	1H	1072	C
25	1H	1073	A
25	1H	1076	C
25	1H	1078	U
25	1H	1080	A
25	1H	1082	U
25	1H	1084	A
25	1H	1085	A
25	1H	1087	G
25	1H	1088	A
25	1H	1090	U
25	1H	1095	A
25	1H	1096	A
25	1H	1097	U
25	1H	1098	A
25	1H	1106	G
25	1H	1108	U
25	1H	1109	C
25	1H	1111	A
25	1H	1112	G
25	1H	1113	U
25	1H	1122	G
25	1H	1126	A
25	1H	1127	A
25	1H	1129	A
25	1H	1130	U
25	1H	1135	C
25	1H	1136	G
25	1H	1139	G
25	1H	1142	U
25	1H	1142(A)	A
25	1H	1144	G
25	1H	1149	G
25	1H	1150	C
25	1H	1151	G
25	1H	1156	A
25	1H	1171	G
25	1H	1174	A
25	1H	1176	G
25	1H	1178	C

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Mol	Chain	Res	Type
25	1H	1179	C
25	1H	1180	C
25	1H	1183	G
25	1H	1194	A
25	1H	1195	G
25	1H	1204	A
25	1H	1205	U
25	1H	1210	A
25	1H	1218	C
25	1H	1220	A
25	1H	1228	G
25	1H	1229(A)	G
25	1H	1237	A
25	1H	1240	U
25	1H	1241	A
25	1H	1242	A
25	1H	1244	G
25	1H	1253	A
25	1H	1254	A
25	1H	1256	G
25	1H	1265	A
25	1H	1267	U
25	1H	1268	A
25	1H	1271	G
25	1H	1272	A
25	1H	1274	A
25	1H	1275	A
25	1H	1278	A
25	1H	1288	U
25	1H	1298	C
25	1H	1300	U
25	1H	1301	A
25	1H	1313	U
25	1H	1314	C
25	1H	1321	A
25	1H	1329	U
25	1H	1333	C
25	1H	1343	G
25	1H	1344	G
25	1H	1345	C
25	1H	1346	G
25	1H	1347	G

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Mol	Chain	Res	Type
25	1H	1349	A
25	1H	1352	U
25	1H	1359	A
25	1H	1360	A
25	1H	1365	A
25	1H	1368	G
25	1H	1369	G
25	1H	1370	C
25	1H	1378	A
25	1H	1380	G
25	1H	1381	G
25	1H	1383	C
25	1H	1385	G
25	1H	1388	G
25	1H	1395	A
25	1H	1397	U
25	1H	1407	C
25	1H	1416	G
25	1H	1417	C
25	1H	1420	U
25	1H	1421	G
25	1H	1427	A
25	1H	1428	C
25	1H	1429	G
25	1H	1430	C
25	1H	1437	C
25	1H	1444(A)	A
25	1H	1449	A
25	1H	1449(A)	G
25	1H	1451	C
25	1H	1453	A
25	1H	1455	G
25	1H	1456	G
25	1H	1459	G
25	1H	1460	A
25	1H	1461	G
25	1H	1467	C
25	1H	1471	A
25	1H	1493	C
25	1H	1494	A
25	1H	1495	A
25	1H	1497	U

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Mol	Chain	Res	Type
25	1H	1507	A
25	1H	1508	A
25	1H	1509	C
25	1H	1510	A
25	1H	1511	A
25	1H	1517	G
25	1H	1522	G
25	1H	1523	U
25	1H	1526	G
25	1H	1527	G
25	1H	1534	G
25	1H	1535	U
25	1H	1536	A
25	1H	1537	C
25	1H	1538	G
25	1H	1540	G
25	1H	1543	A
25	1H	1544	C
25	1H	1545	A
25	1H	1547	C
25	1H	1548	C
25	1H	1554	A
25	1H	1558	A
25	1H	1559	G
25	1H	1560	G
25	1H	1561	G
25	1H	1566	A
25	1H	1567	A
25	1H	1569	A
25	1H	1578	U
25	1H	1580	A
25	1H	1586	A
25	1H	1593	G
25	1H	1608	A
25	1H	1609	A
25	1H	1610	A
25	1H	1613	G
25	1H	1617	C
25	1H	1618	A
25	1H	1635	G
25	1H	1639	U
25	1H	1640	C

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Mol	Chain	Res	Type
25	1H	1644	C
25	1H	1646	C
25	1H	1647	G
25	1H	1648	C
25	1H	1651	G
25	1H	1654	A
25	1H	1660	C
25	1H	1667	G
25	1H	1669	A
25	1H	1672	C
25	1H	1674	G
25	1H	1675	C
25	1H	1678	G
25	1H	1684	C
25	1H	1685	C
25	1H	1694	C
25	1H	1695	G
25	1H	1699	G
25	1H	1700	A
25	1H	1701	A
25	1H	1728	G
25	1H	1729	A
25	1H	1731	G
25	1H	1733	G
25	1H	1743	G
25	1H	1756	G
25	1H	1758	G
25	1H	1763	G
25	1H	1764	G
25	1H	1773	A
25	1H	1776	G
25	1H	1780	A
25	1H	1782	C
25	1H	1791	A
25	1H	1799	G
25	1H	1800	C
25	1H	1801	G
25	1H	1808	U
25	1H	1816	G
25	1H	1826	G
25	1H	1829	A
25	1H	1835	G

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Mol	Chain	Res	Type
25	1H	1836	C
25	1H	1847	A
25	1H	1848	A
25	1H	1858	G
25	1H	1871	A
25	1H	1878	G
25	1H	1889	A
25	1H	1900	A
25	1H	1906	G
25	1H	1913	A
25	1H	1914	C
25	1H	1919	A
25	1H	1920	C
25	1H	1923	U
25	1H	1926	U
25	1H	1929	G
25	1H	1930	G
25	1H	1931	U
25	1H	1937	A
25	1H	1938	A
25	1H	1941	C
25	1H	1955	U
25	1H	1960	A
25	1H	1963	U
25	1H	1967	C
25	1H	1969	A
25	1H	1970	A
25	1H	1971	A
25	1H	1972	A
25	1H	1982	C
25	1H	1986	A
25	1H	1993	U
25	1H	1994	C
25	1H	2005	A
25	1H	2019	A
25	1H	2020	A
25	1H	2021	C
25	1H	2022	U
25	1H	2023	G
25	1H	2028	U
25	1H	2031	A
25	1H	2032	G

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Mol	Chain	Res	Type
25	1H	2033	A
25	1H	2034	U
25	1H	2039	C
25	1H	2043	C
25	1H	2051	A
25	1H	2053	G
25	1H	2055	C
25	1H	2056	G
25	1H	2058	A
25	1H	2060	A
25	1H	2061	G
25	1H	2062	A
25	1H	2069	G
25	1H	2070	G
25	1H	2078	C
25	1H	2080	G
25	1H	2093	G
25	1H	2096	U
25	1H	2099	U
25	1H	2105	C
25	1H	2111	C
25	1H	2112	G
25	1H	2113	U
25	1H	2114	A
25	1H	2115	G
25	1H	2118	U
25	1H	2120	G
25	1H	2122	U
25	1H	2124	G
25	1H	2125	G
25	1H	2126	A
25	1H	2131	G
25	1H	2132	U
25	1H	2133	G
25	1H	2135	A
25	1H	2136	C
25	1H	2139	C
25	1H	2147	G
25	1H	2148	G
25	1H	2151	G
25	1H	2154	G
25	1H	2158	A

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Mol	Chain	Res	Type
25	1H	2159	G
25	1H	2161	C
25	1H	2166	G
25	1H	2167	U
25	1H	2168	G
25	1H	2169	A
25	1H	2172	U
25	1H	2173	A
25	1H	2176	A
25	1H	2181	G
25	1H	2185	C
25	1H	2190	G
25	1H	2192	G
25	1H	2193	G
25	1H	2197	U
25	1H	2198	A
25	1H	2205	C
25	1H	2210	G
25	1H	2211	G
25	1H	2212	A
25	1H	2213	U
25	1H	2215	G
25	1H	2225	A
25	1H	2236	C
25	1H	2238	G
25	1H	2239	G
25	1H	2240	C
25	1H	2259	G
25	1H	2267	A
25	1H	2269	A
25	1H	2273	A
25	1H	2275	C
25	1H	2279	G
25	1H	2280	G
25	1H	2281	C
25	1H	2283	C
25	1H	2287	A
25	1H	2288	A
25	1H	2294	C
25	1H	2304	G
25	1H	2305	A
25	1H	2307	G

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Mol	Chain	Res	Type
25	1H	2308	G
25	1H	2310	A
25	1H	2312	U
25	1H	2314	C
25	1H	2320	A
25	1H	2321	G
25	1H	2325	G
25	1H	2326	C
25	1H	2327	A
25	1H	2334	G
25	1H	2335	A
25	1H	2336	A
25	1H	2343	C
25	1H	2346	A
25	1H	2347	C
25	1H	2348	U
25	1H	2350	C
25	1H	2352	A
25	1H	2360	A
25	1H	2376	A
25	1H	2377	A
25	1H	2379	G
25	1H	2383	G
25	1H	2385	C
25	1H	2389	G
25	1H	2392	A
25	1H	2394	C
25	1H	2395	C
25	1H	2402	C
25	1H	2403	C
25	1H	2405	G
25	1H	2406	U
25	1H	2410	G
25	1H	2414	G
25	1H	2415	G
25	1H	2418	A
25	1H	2424	C
25	1H	2425	A
25	1H	2428	G
25	1H	2429	G
25	1H	2430	A
25	1H	2435	A

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Mol	Chain	Res	Type
25	1H	2439	A
25	1H	2440	C
25	1H	2441	C
25	1H	2448	A
25	1H	2458	G
25	1H	2467	C
25	1H	2468	G
25	1H	2474	C
25	1H	2476	A
25	1H	2477	C
25	1H	2482	G
25	1H	2484	G
25	1H	2496	C
25	1H	2497	A
25	1H	2498	C
25	1H	2502	G
25	1H	2504	U
25	1H	2505	G
25	1H	2506	U
25	1H	2507	C
25	1H	2518	A
25	1H	2520	C
25	1H	2524	G
25	1H	2529	G
25	1H	2554	U
25	1H	2566	A
25	1H	2567	G
25	1H	2569	G
25	1H	2573	C
25	1H	2582	G
25	1H	2594	C
25	1H	2595	G
25	1H	2601	C
25	1H	2602	A
25	1H	2609	U
25	1H	2611	U
25	1H	2612	C
25	1H	2613	U
25	1H	2629	A
25	1H	2632	A
25	1H	2634	G
25	1H	2641	G

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Mol	Chain	Res	Type
25	1H	2654	A
25	1H	2660	A
25	1H	2665	A
25	1H	2666	C
25	1H	2673	G
25	1H	2689	U
25	1H	2690	C
25	1H	2700	C
25	1H	2702	U
25	1H	2703	C
25	1H	2704	C
25	1H	2705	A
25	1H	2707	G
25	1H	2712(A)	A
25	1H	2713	A
25	1H	2714	G
25	1H	2726	U
25	1H	2733	A
25	1H	2736	G
25	1H	2744	G
25	1H	2748	A
25	1H	2751	G
25	1H	2757	A
25	1H	2758	A
25	1H	2763	G
25	1H	2764	A
25	1H	2765	A
25	1H	2766	G
25	1H	2775	A
25	1H	2777	G
25	1H	2778	A
25	1H	2781	A
25	1H	2783	G
25	1H	2787	C
25	1H	2789	C
25	1H	2791	C
25	1H	2792	G
25	1H	2793	G
25	1H	2794	C
25	1H	2795	G
25	1H	2797	U
25	1H	2801	A

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Mol	Chain	Res	Type
25	1H	2802	G
25	1H	2807	G
25	1H	2808	U
25	1H	2812	G
25	1H	2813	A
25	1H	2817	G
25	1H	2818	G
25	1H	2820	A
25	1H	2821	A
25	1H	2826	A
25	1H	2830	G
25	1H	2832	U
25	1H	2833	G
25	1H	2834	G
25	1H	2835	A
25	1H	2847	U
25	1H	2849	U
25	1H	2872	G
25	1H	2885	C
25	1H	2891	G
25	1H	2892	A
25	1H	2893	G
25	1H	2894	G
25	1H	2895	U
25	1H	2896	C
25	1H	2899	G
26	16	0	A
26	16	7	G
26	16	12	C
26	16	13	A
26	16	15	A
26	16	16	G
26	16	24	G
26	16	31	C
26	16	33	G
26	16	35	U
26	16	40	U
26	16	41	U
26	16	44	G
26	16	45	A
26	16	56	G
26	16	58	A

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Mol	Chain	Res	Type
26	16	65	C
26	16	66	A
26	16	73	A
26	16	74	U
26	16	95	U
26	16	100	G
26	16	105	G
26	16	109	G
26	16	115	G
26	16	117	G
54	1G	5	U
54	1G	6	G
54	1G	7	G
54	1G	9	G
54	1G	21	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	54	C
54	1G	65	U
54	1G	73	G
54	1G	80	G
54	1G	90	C
54	1G	91	C
54	1G	92	G
54	1G	95	G
54	1G	101	A
54	1G	108	G
54	1G	116	A
54	1G	121	C
54	1G	131	C
54	1G	144	G
54	1G	147	G
54	1G	151	A
54	1G	159	G
54	1G	161	A
54	1G	163	C
54	1G	173	U

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Mol	Chain	Res	Type
54	1G	174	C
54	1G	182	U
54	1G	183	G
54	1G	184	G
54	1G	186(F)	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	201	C
54	1G	208	U
54	1G	209	U
54	1G	210	U
54	1G	216	G
54	1G	223	U
54	1G	231	G
54	1G	238	G
54	1G	244	U
54	1G	245	C
54	1G	247	G
54	1G	250	A
54	1G	251	G
54	1G	266	G
54	1G	267	C
54	1G	281	G
54	1G	283	C
54	1G	288	A
54	1G	289	G
54	1G	290	C
54	1G	316	G
54	1G	321	A
54	1G	328	C
54	1G	329	A
54	1G	330	C
54	1G	332	G
54	1G	345	C
54	1G	346	G
54	1G	349	A

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Mol	Chain	Res	Type
54	1G	350	G
54	1G	351	G
54	1G	352	C
54	1G	353	A
54	1G	354	G
54	1G	356	A
54	1G	363	A
54	1G	366	C
54	1G	367	U
54	1G	369	C
54	1G	372	C
54	1G	373	A
54	1G	381	C
54	1G	384	G
54	1G	388	G
54	1G	392	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	414	A
54	1G	419	C
54	1G	421	U
54	1G	422	C
54	1G	423	G
54	1G	424	G
54	1G	429	U
54	1G	430	A
54	1G	439	A
54	1G	442	C
54	1G	446	G
54	1G	452	A
54	1G	466	C
54	1G	467	G
54	1G	475	G
54	1G	478	A
54	1G	484	G
54	1G	485	G
54	1G	486	U
54	1G	496	A

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Mol	Chain	Res	Type
54	1G	497	U
54	1G	500	G
54	1G	504	C
54	1G	505	G
54	1G	506	G
54	1G	509	A
54	1G	510	A
54	1G	511	C
54	1G	513	C
54	1G	517	G
54	1G	518	C
54	1G	519	C
54	1G	521	G
54	1G	527	G
54	1G	530	G
54	1G	531	U
54	1G	532	A
54	1G	533	A
54	1G	536	C
54	1G	544	G
54	1G	547	A
54	1G	559	A
54	1G	560	U
54	1G	561	U
54	1G	564	C
54	1G	566	G
54	1G	567	G
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	601	C
54	1G	607	A
54	1G	609	A
54	1G	614	A
54	1G	615	C
54	1G	618	C
54	1G	629	G
54	1G	630	G
54	1G	631	G

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Mol	Chain	Res	Type
54	1G	646	U
54	1G	652	U
54	1G	653	A
54	1G	657	G
54	1G	665	A
54	1G	669	U
54	1G	687	A
54	1G	688	G
54	1G	700	G
54	1G	702	A
54	1G	704	A
54	1G	720	C
54	1G	723	U
54	1G	724	G
54	1G	731	G
54	1G	734	G
54	1G	735	C
54	1G	749	C
54	1G	753	A
54	1G	755	G
54	1G	759	A
54	1G	769	G
54	1G	776	G
54	1G	777	A
54	1G	787	A
54	1G	793	U
54	1G	794	A
54	1G	803	G
54	1G	810	C
54	1G	813	U
54	1G	814	A
54	1G	816	A
54	1G	817	C
54	1G	820	U
54	1G	821	G
54	1G	827	U
54	1G	828	A
54	1G	836	G
54	1G	841	U
54	1G	842	C
54	1G	843	U
54	1G	848	C

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Mol	Chain	Res	Type
54	1G	859	A
54	1G	862	C
54	1G	873	A
54	1G	885	G
54	1G	913	A
54	1G	914	A
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	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	978	A
54	1G	980	C
54	1G	981	U
54	1G	982	U
54	1G	983	A
54	1G	988	G
54	1G	991	U
54	1G	992	U
54	1G	993	G
54	1G	995	C
54	1G	1004	A
54	1G	1006	C
54	1G	1008	C
54	1G	1009	G
54	1G	1016	A
54	1G	1024	G
54	1G	1025	U
54	1G	1028	C
54	1G	1028(A)	C

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Mol	Chain	Res	Type
54	1G	1029	G
54	1G	1031	G
54	1G	1032(A)	G
54	1G	1033	G
54	1G	1036	G
54	1G	1047	G
54	1G	1050	G
54	1G	1053	G
54	1G	1054	C
54	1G	1055	A
54	1G	1056	U
54	1G	1085	U
54	1G	1086	U
54	1G	1089	G
54	1G	1092	A
54	1G	1094	G
54	1G	1095	U
54	1G	1101	A
54	1G	1118	C
54	1G	1124	G
54	1G	1125	U
54	1G	1126	U
54	1G	1127	G
54	1G	1129	C
54	1G	1130	A
54	1G	1131	G
54	1G	1135	U
54	1G	1136	U
54	1G	1137	C
54	1G	1138	G
54	1G	1139	G
54	1G	1140	C
54	1G	1144	G
54	1G	1145	C
54	1G	1146	A
54	1G	1147	C
54	1G	1154	G
54	1G	1157	A
54	1G	1158	C
54	1G	1159	U
54	1G	1160	G
54	1G	1171	G

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Mol	Chain	Res	Type
54	1G	1177	G
54	1G	1178	G
54	1G	1181	G
54	1G	1183	A
54	1G	1185	G
54	1G	1186	G
54	1G	1187	G
54	1G	1188	A
54	1G	1191	A
54	1G	1193	G
54	1G	1194	U
54	1G	1196	U
54	1G	1200	C
54	1G	1201	A
54	1G	1202	G
54	1G	1204	A
54	1G	1210	C
54	1G	1211	U
54	1G	1212	U
54	1G	1213	A
54	1G	1214	C
54	1G	1223	C
54	1G	1224	G
54	1G	1225	A
54	1G	1233	G
54	1G	1238	A
54	1G	1240	U
54	1G	1241	G
54	1G	1256	A
54	1G	1257	U
54	1G	1258	G
54	1G	1267	C
54	1G	1269	A
54	1G	1273	G
54	1G	1278	U
54	1G	1279	A
54	1G	1280	A
54	1G	1282	C
54	1G	1286	A
54	1G	1287	A
54	1G	1290	G
54	1G	1291	G

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Mol	Chain	Res	Type
54	1G	1293	G
54	1G	1295	G
54	1G	1297	C
54	1G	1298	C
54	1G	1299	A
54	1G	1300	G
54	1G	1301	U
54	1G	1303	C
54	1G	1305	G
54	1G	1313	U
54	1G	1316	G
54	1G	1317	C
54	1G	1319	A
54	1G	1320	C
54	1G	1322	C
54	1G	1323	G
54	1G	1324	A
54	1G	1331	G
54	1G	1333	A
54	1G	1335	C
54	1G	1336	C
54	1G	1338	G
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	1368	G
54	1G	1370	G
54	1G	1379	G
54	1G	1394	A
54	1G	1395	C
54	1G	1398	A
54	1G	1399	C
54	1G	1400	C
54	1G	1401	G
54	1G	1402	C
54	1G	1406	U
54	1G	1416	G
54	1G	1419	G
54	1G	1442	G

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Mol	Chain	Res	Type
54	1G	1443	G
54	1G	1446	A
54	1G	1449	C
54	1G	1450	U
54	1G	1451	A
54	1G	1453	G
54	1G	1454	G
54	1G	1466	C
54	1G	1482	G
54	1G	1490	C
54	1G	1492	A
54	1G	1493	A
54	1G	1494	G
54	1G	1497	G
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	1519	A
54	1G	1520	G
54	1G	1528	U
54	1G	1529	G
54	1G	1530	G
55	1L	4	G
55	1L	6	G
55	1L	7	G
55	1L	9	U
55	1L	10	C
55	1L	14	A
55	1L	16	C
55	1L	17	G
55	1L	18	G
55	1L	19	C
55	1L	20	C
55	1L	21	A
55	1L	22	A
55	1L	23	A
55	1L	24	G
55	1L	26	G
55	1L	27	A

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Mol	Chain	Res	Type
55	1L	28	G
55	1L	41	C
55	1L	42	U
55	1L	46	G
55	1L	47	U
55	1L	53	A
55	1L	54	C
55	1L	55	U
55	1L	57	C
55	1L	58	G
55	1L	64	U
55	1L	68	A
55	1L	72	U
55	1L	73	U
55	1L	76	C
55	1L	78	C
55	1L	79	A
55	1L	82	A
55	1L	83	C
55	1L	84	C
56	2L	6	G
56	2L	9	G
56	2L	16	C
56	2L	18	C
56	2L	19	G
56	2L	21	H2U
56	2L	22	A
56	2L	23	G
56	2L	24	C
56	2L	48	U
56	2L	49	C
56	2L	50	G
56	2L	54	G
56	2L	61	U
56	2L	62	C
56	2L	66	C
56	2L	77	A
55	3L	2	G
55	3L	9	U
55	3L	11	C
55	3L	14	A
55	3L	15	G

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Mol	Chain	Res	Type
55	3L	17	G
55	3L	18	G
55	3L	19	C
55	3L	20	C
55	3L	21	A
55	3L	26	G
55	3L	28	G
55	3L	29	C
55	3L	31	G
55	3L	32	A
55	3L	34	U
55	3L	46	G
55	3L	47	U
55	3L	49	A
55	3L	52	G
55	3L	53	A
55	3L	58	G
55	3L	67	A
55	3L	68	A
55	3L	69	U
55	3L	75	C
55	3L	82	A
55	3L	85	A
57	4L	12	A
57	4L	13	A
57	4L	14	A
57	4L	21	C
57	4L	23	A
25	14	2	G
25	14	4	C
25	14	5	A
25	14	9	U
25	14	14	A
25	14	15	G
25	14	34	C
25	14	35	G
25	14	36	G
25	14	46	C
25	14	55	G
25	14	58	G
25	14	60	G
25	14	71	A

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Mol	Chain	Res	Type
25	14	72	U
25	14	74	A
25	14	75	G
25	14	78	A
25	14	82	G
25	14	83	G
25	14	92	G
25	14	93	C
25	14	95	G
25	14	99	U
25	14	101	G
25	14	102	G
25	14	112	U
25	14	114	U
25	14	118	A
25	14	119	A
25	14	120	U
25	14	121	G
25	14	125	G
25	14	129	C
25	14	138	G
25	14	139	G
25	14	140	A
25	14	147	U
25	14	153	C
25	14	154	G
25	14	155	C
25	14	161	U
25	14	162	U
25	14	173	G
25	14	174	C
25	14	175	G
25	14	196	A
25	14	199	A
25	14	214	G
25	14	215	G
25	14	216	A
25	14	221	A
25	14	222	A
25	14	225	A
25	14	229	A
25	14	232	G

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Mol	Chain	Res	Type
25	14	233	A
25	14	244	A
25	14	248	G
25	14	249	C
25	14	252	G
25	14	265	A
25	14	267	C
25	14	270(F)	U
25	14	270(K)	C
25	14	270(L)	U
25	14	270(M)	U
25	14	270(O)	U
25	14	270(Z)	U
25	14	271(B)	G
25	14	271	G
25	14	273(C)	C
25	14	273(D)	C
25	14	274	G
25	14	275	G
25	14	276	A
25	14	277	C
25	14	278	A
25	14	279	C
25	14	283	A
25	14	289	A
25	14	290	G
25	14	292	C
25	14	311	A
25	14	312	G
25	14	317	G
25	14	324	A
25	14	327	G
25	14	329	G
25	14	330	A
25	14	331	A
25	14	352	G
25	14	363	G
25	14	363(A)	A
25	14	363(D)	G
25	14	363(E)	U
25	14	363(F)	A
25	14	364	C

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Mol	Chain	Res	Type
25	14	372	G
25	14	382	G
25	14	385	C
25	14	386	G
25	14	391	G
25	14	396	G
25	14	405	U
25	14	406	G
25	14	411	G
25	14	412	A
25	14	427	U
25	14	428	A
25	14	443	A
25	14	444	C
25	14	447	A
25	14	448	U
25	14	452	G
25	14	454	A
25	14	455	C
25	14	456	C
25	14	457	A
25	14	470	A
25	14	471	A
25	14	478	A
25	14	481	G
25	14	483	A
25	14	504	U
25	14	505	A
25	14	507	A
25	14	509	C
25	14	527	C
25	14	528	A
25	14	530	G
25	14	531	C
25	14	532	A
25	14	533	G
25	14	537	C
25	14	543	C
25	14	546	C
25	14	547	A
25	14	549	G
25	14	556	G

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Mol	Chain	Res	Type
25	14	558	G
25	14	563	G
25	14	573	G
25	14	575	A
25	14	592	G
25	14	603	A
25	14	606	U
25	14	607	U
25	14	609(A)	G
25	14	614	U
25	14	615	G
25	14	617	G
25	14	618	G
25	14	620	G
25	14	621	A
25	14	622	G
25	14	627	A
25	14	634	C
25	14	637	A
25	14	645	C
25	14	646	A
25	14	647	G
25	14	650	C
25	14	651	G
25	14	654	A
25	14	654(A)	A
25	14	654(E)	C
25	14	654(F)	C
25	14	654(G)	C
25	14	654(H)	G
25	14	654(I)	C
25	14	654(K)	C
25	14	654(L)	G
25	14	654(N)	G
25	14	654(O)	G
25	14	654(Q)	C
25	14	654(T)	A
25	14	656	G
25	14	662	G
25	14	668	G
25	14	669	G
25	14	670	A

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Mol	Chain	Res	Type
25	14	681	G
25	14	686	G
25	14	699	A
25	14	717	G
25	14	720	C
25	14	722	A
25	14	726	G
25	14	730	C
25	14	740	U
25	14	745	G
25	14	748	G
25	14	749	C
25	14	752	A
25	14	753	C
25	14	762	U
25	14	775	G
25	14	776	G
25	14	779	U
25	14	782	A
25	14	783	A
25	14	784	A
25	14	785	G
25	14	789	A
25	14	792	G
25	14	797	C
25	14	801	G
25	14	805	G
25	14	812	C
25	14	816	C
25	14	819	A
25	14	827	U
25	14	828	U
25	14	831	G
25	14	832	G
25	14	845	G
25	14	846	C
25	14	848	G
25	14	859	G
25	14	863	A
25	14	878	A
25	14	880	G
25	14	881	G

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Mol	Chain	Res	Type
25	14	882	G
25	14	885	C
25	14	886	C
25	14	887	A
25	14	888	C
25	14	889	C
25	14	890	A
25	14	896	A
25	14	897	C
25	14	899	A
25	14	901	A
25	14	903	C
25	14	904	C
25	14	905	U
25	14	906	G
25	14	907	U
25	14	910	A
25	14	911	A
25	14	914	C
25	14	915	C
25	14	917	A
25	14	918	A
25	14	922	U
25	14	932	G
25	14	933	A
25	14	934	G
25	14	935	C
25	14	941	A
25	14	945	A
25	14	946	G
25	14	958	U
25	14	959	A
25	14	961	C
25	14	972	G
25	14	974	G
25	14	980	A
25	14	983	A
25	14	987	G
25	14	989	G
25	14	990	A
25	14	991	C
25	14	996	A

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Mol	Chain	Res	Type
25	14	1012	U
25	14	1013	C
25	14	1017	G
25	14	1020	A
25	14	1022	G
25	14	1023	U
25	14	1024	G
25	14	1025	G
25	14	1026	U
25	14	1027	A
25	14	1028	A
25	14	1034	G
25	14	1037	G
25	14	1038	C
25	14	1039	G
25	14	1040	C
25	14	1044	G
25	14	1045	A
25	14	1046	A
25	14	1047	G
25	14	1048	A
25	14	1051	G
25	14	1053	C
25	14	1057	A
25	14	1060	U
25	14	1061	U
25	14	1062	G
25	14	1064	C
25	14	1065	U
25	14	1067	A
25	14	1068	G
25	14	1070	A
25	14	1071	G
25	14	1073	A
25	14	1079	C
25	14	1080	A
25	14	1081	U
25	14	1083	U
25	14	1084	A
25	14	1085	A
25	14	1086	A
25	14	1087	G

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Mol	Chain	Res	Type
25	14	1088	A
25	14	1090	U
25	14	1091	G
25	14	1093	G
25	14	1095	A
25	14	1096	A
25	14	1098	A
25	14	1099	G
25	14	1102	C
25	14	1105	U
25	14	1111	A
25	14	1112	G
25	14	1122	G
25	14	1126	A
25	14	1129	A
25	14	1130	U
25	14	1135	C
25	14	1136	G
25	14	1138	G
25	14	1139	G
25	14	1142	U
25	14	1142(A)	A
25	14	1143	A
25	14	1146	C
25	14	1148	A
25	14	1151	G
25	14	1155	A
25	14	1157	G
25	14	1170	G
25	14	1171	G
25	14	1174	A
25	14	1175	U
25	14	1177	A
25	14	1178	C
25	14	1183	G
25	14	1203	G
25	14	1204	A
25	14	1205	U
25	14	1220	A
25	14	1221	C
25	14	1230	C
25	14	1236	G

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Mol	Chain	Res	Type
25	14	1247	A
25	14	1248	G
25	14	1249	U
25	14	1250	G
25	14	1253	A
25	14	1256	G
25	14	1262	A
25	14	1271	G
25	14	1272	A
25	14	1273	U
25	14	1274	A
25	14	1275	A
25	14	1287	A
25	14	1300	U
25	14	1301	A
25	14	1313	U
25	14	1314	C
25	14	1321	A
25	14	1325	G
25	14	1332	G
25	14	1338	G
25	14	1342	A
25	14	1343	G
25	14	1345	C
25	14	1348	G
25	14	1349	A
25	14	1352	U
25	14	1354	A
25	14	1355	G
25	14	1360	A
25	14	1365	A
25	14	1368	G
25	14	1370	C
25	14	1378	A
25	14	1380	G
25	14	1383	C
25	14	1385	G
25	14	1395	A
25	14	1400	G
25	14	1403	C
25	14	1405	U
25	14	1407	C

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Mol	Chain	Res	Type
25	14	1416	G
25	14	1417	C
25	14	1419	A
25	14	1420	U
25	14	1421	G
25	14	1427	A
25	14	1428	C
25	14	1429	G
25	14	1444(A)	A
25	14	1445	C
25	14	1449	A
25	14	1449(A)	G
25	14	1451	C
25	14	1455	G
25	14	1459	G
25	14	1460	A
25	14	1467	C
25	14	1471	A
25	14	1475	G
25	14	1482	U
25	14	1483	G
25	14	1489	U
25	14	1490	A
25	14	1493	C
25	14	1494	A
25	14	1506	C
25	14	1508	A
25	14	1509	C
25	14	1510	A
25	14	1520	U
25	14	1523	U
25	14	1525	G
25	14	1533	C
25	14	1535	U
25	14	1543	A
25	14	1548	C
25	14	1554	A
25	14	1558	A
25	14	1559	G
25	14	1560	G
25	14	1566	A
25	14	1569	A

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Mol	Chain	Res	Type
25	14	1573	G
25	14	1578	U
25	14	1585	C
25	14	1586	A
25	14	1588	C
25	14	1593	G
25	14	1595	G
25	14	1598	C
25	14	1608	A
25	14	1609	A
25	14	1610	A
25	14	1614	A
25	14	1617	C
25	14	1618	A
25	14	1619	G
25	14	1628	G
25	14	1631	A
25	14	1639	U
25	14	1647	G
25	14	1648	C
25	14	1651	G
25	14	1654	A
25	14	1669	A
25	14	1670	C
25	14	1671	U
25	14	1674	G
25	14	1675	C
25	14	1682	G
25	14	1685	C
25	14	1696	G
25	14	1700	A
25	14	1701	A
25	14	1725	G
25	14	1726	G
25	14	1728	G
25	14	1729	A
25	14	1730	U
25	14	1742	C
25	14	1743	G
25	14	1750	G
25	14	1758	G
25	14	1760	A

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Mol	Chain	Res	Type
25	14	1762	A
25	14	1763	G
25	14	1764	G
25	14	1773	A
25	14	1776	G
25	14	1777	U
25	14	1780	A
25	14	1782	C
25	14	1791	A
25	14	1800	C
25	14	1801	G
25	14	1816	G
25	14	1820	U
25	14	1829	A
25	14	1835	G
25	14	1836	C
25	14	1839	G
25	14	1840	G
25	14	1847	A
25	14	1848	A
25	14	1858	G
25	14	1860	G
25	14	1878	G
25	14	1883	G
25	14	1885	A
25	14	1893	C
25	14	1895	C
25	14	1896	G
25	14	1900	A
25	14	1906	G
25	14	1914	C
25	14	1919	A
25	14	1929	G
25	14	1930	G
25	14	1936	A
25	14	1937	A
25	14	1938	A
25	14	1940	U
25	14	1951	U
25	14	1952	A
25	14	1955	U
25	14	1961	C

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Mol	Chain	Res	Type
25	14	1963	U
25	14	1964	G
25	14	1967	C
25	14	1968	G
25	14	1970	A
25	14	1971	A
25	14	1972	A
25	14	1985	G
25	14	1986	A
25	14	1991	U
25	14	1993	U
25	14	1994	C
25	14	2021	C
25	14	2023	G
25	14	2025	C
25	14	2031	A
25	14	2033	A
25	14	2039	C
25	14	2043	C
25	14	2049	G
25	14	2052	G
25	14	2055	C
25	14	2056	G
25	14	2058	A
25	14	2059	A
25	14	2060	A
25	14	2061	G
25	14	2062	A
25	14	2066	C
25	14	2069	G
25	14	2071	A
25	14	2076	U
25	14	2082	A
25	14	2099	U
25	14	2100	G
25	14	2108	C
25	14	2110	G
25	14	2111	C
25	14	2112	G
25	14	2113	U
25	14	2114	A
25	14	2117	A

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Mol	Chain	Res	Type
25	14	2118	U
25	14	2120	G
25	14	2121	G
25	14	2122	U
25	14	2123	G
25	14	2126	A
25	14	2127	G
25	14	2130	U
25	14	2131	G
25	14	2132	U
25	14	2133	G
25	14	2134	A
25	14	2136	C
25	14	2137	C
25	14	2140	C
25	14	2145	C
25	14	2146	C
25	14	2147	G
25	14	2148	G
25	14	2150	U
25	14	2161	C
25	14	2166	G
25	14	2167	U
25	14	2169	A
25	14	2170	A
25	14	2171	A
25	14	2172	U
25	14	2173	A
25	14	2181	G
25	14	2189	U
25	14	2191	G
25	14	2192	G
25	14	2198	A
25	14	2210	G
25	14	2211	G
25	14	2212	A
25	14	2213	U
25	14	2215	G
25	14	2225	A
25	14	2226	C
25	14	2238	G
25	14	2249	U

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Mol	Chain	Res	Type
25	14	2252	G
25	14	2261	C
25	14	2267	A
25	14	2268	A
25	14	2269	A
25	14	2273	A
25	14	2275	C
25	14	2278	A
25	14	2280	G
25	14	2281	C
25	14	2283	C
25	14	2287	A
25	14	2288	A
25	14	2303	G
25	14	2307	G
25	14	2308	G
25	14	2310	A
25	14	2311	A
25	14	2318	G
25	14	2321	G
25	14	2325	G
25	14	2334	G
25	14	2335	A
25	14	2336	A
25	14	2342	C
25	14	2346	A
25	14	2347	C
25	14	2348	U
25	14	2350	C
25	14	2353	G
25	14	2354	G
25	14	2355	C
25	14	2372	G
25	14	2374	C
25	14	2383	G
25	14	2385	C
25	14	2388	A
25	14	2389	G
25	14	2392	A
25	14	2396	G
25	14	2400	G
25	14	2401	U

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Mol	Chain	Res	Type
25	14	2402	C
25	14	2406	U
25	14	2408	U
25	14	2410	G
25	14	2414	G
25	14	2422	A
25	14	2426	A
25	14	2429	G
25	14	2430	A
25	14	2431	U
25	14	2432	A
25	14	2435	A
25	14	2439	A
25	14	2440	C
25	14	2441	C
25	14	2445	G
25	14	2447	G
25	14	2448	A
25	14	2464	C
25	14	2468	G
25	14	2469	A
25	14	2470	G
25	14	2474	C
25	14	2475	C
25	14	2482	G
25	14	2483	C
25	14	2484	G
25	14	2486	G
25	14	2496	C
25	14	2497	A
25	14	2502	G
25	14	2504	U
25	14	2505	G
25	14	2506	U
25	14	2507	C
25	14	2518	A
25	14	2520	C
25	14	2532	G
25	14	2537	U
25	14	2542	A
25	14	2543	G
25	14	2549	G

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Mol	Chain	Res	Type
25	14	2554	U
25	14	2556	C
25	14	2564	A
25	14	2566	A
25	14	2567	G
25	14	2569	G
25	14	2573	C
25	14	2574	G
25	14	2582	G
25	14	2585	U
25	14	2602	A
25	14	2603	G
25	14	2609	U
25	14	2611	U
25	14	2612	C
25	14	2613	U
25	14	2615	U
25	14	2617	C
25	14	2630	G
25	14	2636	U
25	14	2646	C
25	14	2656	U
25	14	2665	A
25	14	2667	C
25	14	2670	A
25	14	2673	G
25	14	2689	U
25	14	2690	C
25	14	2691	C
25	14	2700	C
25	14	2702	U
25	14	2703	C
25	14	2707	G
25	14	2712(A)	A
25	14	2713	A
25	14	2714	G
25	14	2726	U
25	14	2731	G
25	14	2733	A
25	14	2739	U
25	14	2741	A
25	14	2744	G

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Mol	Chain	Res	Type
25	14	2748	A
25	14	2750	A
25	14	2751	G
25	14	2752	C
25	14	2754	U
25	14	2757	A
25	14	2758	A
25	14	2762	G
25	14	2764	A
25	14	2765	A
25	14	2766	G
25	14	2777	G
25	14	2778	A
25	14	2779	U
25	14	2789	C
25	14	2790	A
25	14	2791	C
25	14	2794	C
25	14	2797	U
25	14	2818	G
25	14	2820	A
25	14	2821	A
25	14	2833	G
25	14	2834	G
25	14	2835	A
25	14	2836	U
25	14	2839	G
25	14	2849	U
25	14	2860	A
25	14	2872	G
25	14	2873	A
25	14	2874	C
25	14	2876	G
25	14	2879	C
25	14	2880	C
25	14	2892	A
25	14	2894	G
25	14	2896	C
26	1J	0	A
26	1J	8	U
26	1J	13	A
26	1J	15	A

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Mol	Chain	Res	Type
26	1J	16	G
26	1J	22	U
26	1J	25	A
26	1J	26	A
26	1J	28	C
26	1J	29	A
26	1J	30	C
26	1J	32	C
26	1J	34	U
26	1J	41	U
26	1J	42	C
26	1J	44	G
26	1J	45	A
26	1J	53	A
26	1J	73	A
26	1J	76	G
26	1J	81	G
26	1J	88	C
26	1J	89	G
26	1J	89(A)	A
26	1J	90	C
26	1J	94	C
26	1J	99	A
26	1J	101	A
26	1J	102	G
26	1J	109	G

All (185) RNA pucker outliers are listed below:

Mol	Chain	Res	Type
1	13	115	G
1	13	190	G
1	13	244	U
1	13	266	G
1	13	327	A
1	13	352	C
1	13	412	A
1	13	421	U
1	13	422	C
1	13	429	U
1	13	438	G
1	13	484	G

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Mol	Chain	Res	Type
1	13	509	A
1	13	703	G
1	13	748	C
1	13	793	U
1	13	913	A
1	13	991	U
1	13	992	U
1	13	1025	U
1	13	1027	C
1	13	1054	C
1	13	1064	G
1	13	1177	G
1	13	1285	A
1	13	1301	U
1	13	1452	C
1	13	1498	U
1	13	1503	A
1	13	1504	G
1	13	1529	G
22	1K	3	U
22	1K	6	G
22	1K	69	U
22	1K	78	C
23	2K	20	G
23	2K	47	7MG
23	2K	48	U
22	3K	17	OMG
22	3K	18	G
22	3K	67	A
25	1H	195	A
25	1H	196	A
25	1H	199	A
25	1H	229	A
25	1H	271(B)	G
25	1H	404	C
25	1H	508	G
25	1H	574	C
25	1H	587	C
25	1H	685	A
25	1H	746	A
25	1H	752	A
25	1H	764	A

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Mol	Chain	Res	Type
25	1H	800	A
25	1H	858	U
25	1H	859	G
25	1H	1022	G
25	1H	1026	U
25	1H	1060	U
25	1H	1081	U
25	1H	1084	A
25	1H	1110	G
25	1H	1178	C
25	1H	1312	U
25	1H	1379	A
25	1H	1451	C
25	1H	1508	A
25	1H	1543	A
25	1H	1558	A
25	1H	1559	G
25	1H	1608	A
25	1H	1609	A
25	1H	1617	C
25	1H	1639	U
25	1H	1653	G
25	1H	1694	C
25	1H	1698	A
25	1H	1757	U
25	1H	1780	A
25	1H	1799	G
25	1H	1913	A
25	1H	1929	G
25	1H	1992	G
25	1H	2019	A
25	1H	2157	G
25	1H	2171	A
25	1H	2351	G
25	1H	2428	G
25	1H	2439	A
25	1H	2448	A
25	1H	2476	A
25	1H	2481	G
25	1H	2566	A
25	1H	2611	U
25	1H	2689	U

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Mol	Chain	Res	Type
25	1H	2756	U
54	1G	64	G
54	1G	115	G
54	1G	197	A
54	1G	209	U
54	1G	244	U
54	1G	250	A
54	1G	266	G
54	1G	327	A
54	1G	328	C
54	1G	345	C
54	1G	412	A
54	1G	413	G
54	1G	429	U
54	1G	509	A
54	1G	560	U
54	1G	630	G
54	1G	687	A
54	1G	748	C
54	1G	793	U
54	1G	812	C
54	1G	913	A
54	1G	992	U
54	1G	1053	G
54	1G	1054	C
54	1G	1126	U
54	1G	1128	C
54	1G	1157	A
54	1G	1285	A
54	1G	1297	C
54	1G	1300	G
54	1G	1346	A
54	1G	1394	A
54	1G	1396	A
54	1G	1442	G
54	1G	1453	G
54	1G	1498	U
54	1G	1506	U
55	1L	3	U
55	1L	57	C
55	1L	75	C
55	1L	78	C

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Mol	Chain	Res	Type
56	2L	21	H2U
56	2L	48	U
55	3L	8	U
55	3L	18	G
55	3L	57	C
57	4L	13	A
25	14	128	C
25	14	196	A
25	14	197	A
25	14	278	A
25	14	310	A
25	14	503	A
25	14	529	A
25	14	614	U
25	14	669	G
25	14	746	A
25	14	752	A
25	14	827	U
25	14	877	U
25	14	1022	G
25	14	1085	A
25	14	1379	A
25	14	1416	G
25	14	1420	U
25	14	1558	A
25	14	1647	G
25	14	1819	A
25	14	1905	C
25	14	1963	U
25	14	1992	G
25	14	2126	A
25	14	2191	G
25	14	2212	A
25	14	2335	A
25	14	2406	U
25	14	2439	A
25	14	2506	U
25	14	2602	A
25	14	2611	U
25	14	2629	A
25	14	2689	U
25	14	2756	U

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Mol	Chain	Res	Type
25	14	2776	A
25	14	2859	G
25	14	2893	G
26	1J	52	A
26	1J	56	G

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

25 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	OMG	1K	17	22	18,26,27	5.58	6 (33%)	21,38,41	6.02	10 (47%)
22	QUO	1K	35	24,22	27,35,36	5.75	8 (29%)	30,52,55	3.83	9 (30%)
22	MIA	1K	38	22	22,31,32	1.10	1 (4%)	26,44,47	1.97	3 (11%)
22	PSU	1K	40	22	15,21,22	1.02	1 (6%)	16,30,33	2.08	4 (25%)
22	5MU	1K	63	22	13,22,23	1.68	2 (15%)	16,32,35	1.55	1 (6%)
22	PSU	1K	64	22	15,21,22	0.96	1 (6%)	16,30,33	2.09	2 (12%)
22	4SU	1K	8	22	12,21,22	3.33	2 (16%)	15,30,33	1.24	1 (6%)
23	H2U	2K	21	23	17,21,22	2.62	4 (23%)	23,30,33	2.92	6 (26%)
23	OMC	2K	33	23	15,22,23	1.98	4 (26%)	20,31,34	1.89	3 (15%)
23	7MG	2K	47	23	20,26,27	3.24	6 (30%)	23,39,42	2.11	6 (26%)
23	5MU	2K	55	23	13,22,23	1.66	2 (15%)	16,32,35	1.43	2 (12%)
23	PSU	2K	56	23	15,21,22	1.10	2 (13%)	16,30,33	1.89	2 (12%)
23	4SU	2K	8	23	12,21,22	3.28	2 (16%)	15,30,33	0.75	1 (6%)
56	H2U	2L	21	56	17,21,22	2.43	4 (23%)	23,30,33	3.03	6 (26%)
56	OMC	2L	33	56	15,22,23	2.27	4 (26%)	20,31,34	1.63	2 (10%)
56	5MU	2L	55	56	13,22,23	1.67	2 (15%)	16,32,35	1.34	1 (6%)
56	PSU	2L	56	56	15,21,22	1.09	1 (6%)	16,30,33	1.87	3 (18%)
56	4SU	2L	8	56	12,21,22	3.41	2 (16%)	15,30,33	1.02	1 (6%)
22	OMG	3K	17	22	18,26,27	5.65	6 (33%)	21,38,41	6.12	7 (33%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	$\#\|Z\|>2$	Counts	RMSZ	$\#\|Z\|>2$
22	QUO	3K	35	22	27,35,36	6.00	9 (33%)	30,52,55	4.08	10 (33%)
22	MIA	3K	38	22	22,31,32	1.46	2 (9%)	26,44,47	1.78	5 (19%)
22	PSU	3K	40	22	15,21,22	1.13	1 (6%)	16,30,33	2.37	4 (25%)
22	5MU	3K	63	22	13,22,23	1.66	2 (15%)	16,32,35	1.53	1 (6%)
22	PSU	3K	64	22	15,21,22	1.21	1 (6%)	16,30,33	1.99	3 (18%)
22	4SU	3K	8	22	12,21,22	3.12	2 (16%)	15,30,33	1.21	1 (6%)

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	OMG	1K	17	22	-	0/5/27/28	0/3/3/3
22	QUO	1K	35	24,22	-	0/6/43/44	0/4/4/4
22	MIA	1K	38	22	-	0/11/33/34	0/3/3/3
22	PSU	1K	40	22	-	0/7/25/26	0/2/2/2
22	5MU	1K	63	22	-	0/3/25/26	0/2/2/2
22	PSU	1K	64	22	-	0/7/25/26	0/2/2/2
22	4SU	1K	8	22	-	0/3/25/26	0/2/2/2
23	H2U	2K	21	23	-	0/7/38/39	0/2/2/2
23	OMC	2K	33	23	-	0/5/27/28	0/2/2/2
23	7MG	2K	47	23	-	0/7/37/38	0/3/3/3
23	5MU	2K	55	23	-	0/3/25/26	0/2/2/2
23	PSU	2K	56	23	-	0/7/25/26	0/2/2/2
23	4SU	2K	8	23	-	0/3/25/26	0/2/2/2
56	H2U	2L	21	56	-	0/7/38/39	0/2/2/2
56	OMC	2L	33	56	-	0/5/27/28	0/2/2/2
56	5MU	2L	55	56	-	0/3/25/26	0/2/2/2
56	PSU	2L	56	56	-	0/7/25/26	0/2/2/2
56	4SU	2L	8	56	-	0/3/25/26	0/2/2/2
22	OMG	3K	17	22	-	0/5/27/28	0/3/3/3
22	QUO	3K	35	22	-	0/6/43/44	0/4/4/4
22	MIA	3K	38	22	-	0/11/33/34	0/3/3/3
22	PSU	3K	40	22	-	0/7/25/26	0/2/2/2
22	5MU	3K	63	22	-	0/3/25/26	0/2/2/2
22	PSU	3K	64	22	-	0/7/25/26	0/2/2/2
22	4SU	3K	8	22	-	0/3/25/26	0/2/2/2

All (77) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
22	1K	17	OMG	C8-N7	-13.51	1.08	1.34
22	3K	17	OMG	C8-N7	-13.35	1.09	1.34
22	1K	35	QUO	C8-N9	-10.11	1.23	1.38
22	3K	35	QUO	C8-N9	-9.86	1.24	1.38
22	1K	35	QUO	C6-N1	-9.77	1.15	1.33
22	3K	35	QUO	C6-N1	-9.53	1.15	1.33
22	1K	35	QUO	C6-C5	-7.15	1.29	1.41
22	3K	35	QUO	C6-C5	-7.13	1.29	1.41
23	2K	47	7MG	C5-C4	-5.78	1.23	1.39
22	3K	17	OMG	C6-N1	-4.51	1.24	1.33
22	1K	17	OMG	C6-N1	-4.33	1.25	1.33
56	2L	55	5MU	C4-N3	-3.17	1.27	1.33
22	3K	35	QUO	C14-C13	-3.11	1.49	1.53
22	3K	63	5MU	C4-N3	-3.04	1.27	1.33
23	2K	21	H2U	C6-N1	-2.99	1.43	1.47
23	2K	55	5MU	C4-N3	-2.88	1.27	1.33
56	2L	21	H2U	C6-N1	-2.67	1.43	1.47
22	1K	63	5MU	C4-N3	-2.59	1.28	1.33
22	3K	17	OMG	O6-C6	-2.40	1.18	1.24
22	1K	17	OMG	O6-C6	-2.26	1.18	1.24
23	2K	56	PSU	C5-C1'	-2.12	1.50	1.52
23	2K	47	7MG	C2-N1	2.34	1.39	1.35
22	3K	35	QUO	C16-C15	2.49	1.61	1.54
22	1K	35	QUO	C16-C15	2.52	1.61	1.54
22	1K	40	PSU	C4-N3	2.82	1.38	1.33
22	1K	64	PSU	C4-N3	2.93	1.38	1.33
22	1K	35	QUO	C2-N3	2.95	1.50	1.35
23	2K	56	PSU	C4-N3	2.98	1.38	1.33
22	3K	38	MIA	C6-N1	3.08	1.37	1.33
56	2L	33	OMC	C4-N4	3.13	1.44	1.35
23	2K	47	7MG	C2-N2	3.14	1.40	1.34
23	2K	33	OMC	C4-N4	3.15	1.44	1.35
22	3K	35	QUO	C2-N3	3.36	1.52	1.35
22	1K	17	OMG	C2-N2	3.37	1.41	1.34
56	2L	56	PSU	C4-N3	3.41	1.39	1.33
22	3K	40	PSU	C4-N3	3.41	1.39	1.33
56	2L	33	OMC	C2-N3	3.48	1.45	1.38
22	3K	64	PSU	C4-N3	3.48	1.39	1.33
22	3K	17	OMG	C2-N2	3.50	1.41	1.34
23	2K	33	OMC	C2-N3	3.62	1.45	1.38
23	2K	33	OMC	C5-C4	3.72	1.49	1.41
22	1K	38	MIA	C2-S10	3.84	1.79	1.75
22	1K	35	QUO	C2-N2	3.93	1.42	1.34

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
23	2K	33	OMC	C6-N1	4.18	1.41	1.35
56	2L	21	H2U	C2-N3	4.30	1.46	1.38
56	2L	33	OMC	C5-C4	4.38	1.51	1.41
23	2K	21	H2U	C2-N3	4.46	1.46	1.38
56	2L	21	H2U	C4-N3	4.47	1.44	1.37
23	2K	47	7MG	C6-C5	4.49	1.47	1.41
23	2K	21	H2U	C4-N3	4.63	1.44	1.37
23	2K	55	5MU	C2-N3	4.67	1.47	1.38
23	2K	47	7MG	C8-N7	4.68	1.65	1.43
22	3K	63	5MU	C2-N3	4.78	1.48	1.38
56	2L	55	5MU	C2-N3	4.79	1.48	1.38
22	3K	35	QUO	C2-N2	4.81	1.44	1.34
22	1K	63	5MU	C2-N3	4.85	1.48	1.38
22	3K	38	MIA	C2-S10	5.37	1.80	1.75
56	2L	33	OMC	C6-N1	5.73	1.43	1.35
22	3K	8	4SU	C6-N1	6.64	1.44	1.35
23	2K	8	4SU	C6-N1	6.77	1.44	1.35
56	2L	21	H2U	C2-N1	6.87	1.46	1.35
22	1K	8	4SU	C6-N1	6.96	1.44	1.35
56	2L	8	4SU	C6-N1	7.15	1.45	1.35
23	2K	21	H2U	C2-N1	7.78	1.47	1.35
22	3K	8	4SU	C5-C4	8.24	1.49	1.38
22	1K	8	4SU	C5-C4	8.92	1.50	1.38
23	2K	8	4SU	C5-C4	8.99	1.50	1.38
56	2L	8	4SU	C5-C4	9.15	1.50	1.38
22	1K	17	OMG	C5-C4	9.37	1.61	1.40
22	3K	17	OMG	C5-C4	9.56	1.62	1.40
22	1K	35	QUO	C7-C5	10.19	1.55	1.41
23	2K	47	7MG	C4-N3	10.47	1.47	1.34
22	3K	35	QUO	C7-C5	10.78	1.56	1.41
22	1K	17	OMG	C4-N3	15.85	1.60	1.35
22	3K	17	OMG	C4-N3	16.16	1.61	1.35
22	1K	35	QUO	C4-N3	22.12	1.70	1.35
22	3K	35	QUO	C4-N3	23.46	1.72	1.35

All (94) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
22	1K	35	QUO	C8-N9-C1'	-13.43	114.96	125.45
22	1K	17	OMG	C6-C5-C4	-12.27	106.83	120.86
22	3K	17	OMG	C6-C5-C4	-12.03	107.11	120.86
22	3K	35	QUO	C1'-N9-C4	-10.84	114.70	126.81

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
22	3K	35	QUO	C8-N9-C1'	-10.84	116.98	125.45
22	3K	35	QUO	N3-C2-N1	-8.89	115.46	127.56
22	1K	35	QUO	C1'-N9-C4	-8.06	117.81	126.81
22	1K	35	QUO	N3-C2-N1	-7.17	117.80	127.56
22	1K	17	OMG	N3-C2-N1	-6.59	118.59	127.56
22	3K	17	OMG	N3-C2-N1	-6.59	118.59	127.56
23	2K	47	7MG	C5-C4-N3	-5.85	120.78	126.74
23	2K	21	H2U	C4-N3-C2	-4.90	121.33	125.77
22	3K	40	PSU	C5-C1'-C2'	-4.46	107.86	115.44
22	1K	8	4SU	C5-C4-N3	-4.29	119.02	123.56
22	1K	64	PSU	C5-C1'-C2'	-4.09	108.48	115.44
22	1K	40	PSU	C5-C1'-C2'	-4.04	108.58	115.44
22	3K	8	4SU	C5-C4-N3	-3.96	119.36	123.56
22	3K	35	QUO	C16-C15-C14	-3.70	102.21	105.83
22	1K	38	MIA	C5-C6-N1	-3.65	116.88	120.58
23	2K	47	7MG	C5-C6-N1	-3.58	118.05	123.39
56	2L	21	H2U	C4-N3-C2	-3.43	122.66	125.77
56	2L	8	4SU	C5-C4-N3	-3.37	119.99	123.56
56	2L	56	PSU	C5-C6-N1	-3.10	120.06	124.38
22	3K	38	MIA	C5-C6-N1	-2.58	117.96	120.58
23	2K	47	7MG	N1-C2-N3	-2.56	121.32	125.51
22	1K	35	QUO	C16-C15-C14	-2.54	103.35	105.83
23	2K	21	H2U	O2-C2-N3	-2.50	116.53	121.44
22	3K	35	QUO	C7-C8-N9	-2.50	101.35	109.19
23	2K	33	OMC	C5-C4-N3	-2.49	118.63	121.79
22	3K	17	OMG	C4'-O4'-C1'	-2.47	107.03	109.64
22	3K	35	QUO	C7-C5-C4	-2.39	105.08	110.00
22	3K	38	MIA	N3-C2-N1	-2.35	122.51	126.84
22	1K	17	OMG	C3'-C2'-C1'	-2.34	98.15	102.63
22	1K	40	PSU	C5-C6-N1	-2.25	121.25	124.38
22	3K	64	PSU	C5-C6-N1	-2.17	121.36	124.38
56	2L	21	H2U	O2-C2-N3	-2.16	117.20	121.44
22	3K	40	PSU	O2'-C2'-C1'	-2.13	107.31	111.93
23	2K	8	4SU	C5-C4-N3	-2.10	121.34	123.56
22	1K	35	QUO	C7-C5-C4	-2.09	105.68	110.00
22	3K	40	PSU	C5-C6-N1	-2.01	121.58	124.38
22	1K	17	OMG	O2'-C2'-C3'	2.00	116.39	111.23
22	1K	17	OMG	CM2-O2'-C2'	2.06	120.37	114.58
23	2K	55	5MU	C5M-C5-C4	2.11	122.30	119.97
22	1K	17	OMG	O4'-C1'-N9	2.13	112.13	108.11
23	2K	47	7MG	N2-C2-N1	2.22	120.86	117.20
56	2L	21	H2U	N3-C2-N1	2.40	118.87	116.64

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
22	1K	40	PSU	O4'-C1'-C2'	2.40	107.29	104.69
56	2L	56	PSU	O4'-C1'-C2'	2.45	107.34	104.69
22	3K	35	QUO	N2-C2-N3	2.47	122.35	117.72
22	1K	35	QUO	O14-C14-C13	2.50	116.00	111.26
23	2K	56	PSU	O4'-C1'-C2'	2.56	107.46	104.69
23	2K	21	H2U	N3-C2-N1	2.61	119.06	116.64
22	3K	38	MIA	C12-N6-C6	2.65	126.52	123.46
22	3K	17	OMG	N2-C2-N1	2.80	121.82	117.20
22	3K	64	PSU	O4'-C1'-C2'	2.83	107.75	104.69
22	3K	38	MIA	C2-N1-C6	2.94	121.20	113.13
56	2L	33	OMC	N4-C4-N3	2.95	121.65	116.50
22	3K	35	QUO	N2-C2-N1	3.02	122.19	117.20
22	1K	38	MIA	C2-N1-C6	3.03	121.44	113.13
22	1K	35	QUO	N2-C2-N1	3.04	122.22	117.20
23	2K	47	7MG	C6-N1-C2	3.21	119.65	115.88
56	2L	21	H2U	C5-C4-N3	3.22	120.03	116.62
22	1K	17	OMG	N2-C2-N1	3.37	122.76	117.20
23	2K	33	OMC	N4-C4-N3	3.54	122.68	116.50
23	2K	21	H2U	C5-C4-N3	3.86	120.70	116.62
22	1K	17	OMG	C5-C6-N1	4.11	128.90	123.52
22	1K	35	QUO	C5-C6-N1	4.22	127.39	124.15
56	2L	55	5MU	C4-N3-C2	4.45	118.87	115.16
22	3K	17	OMG	C5-C6-N1	4.50	129.40	123.52
23	2K	55	5MU	C4-N3-C2	4.63	119.02	115.16
23	2K	47	7MG	C5-C4-N9	4.73	113.88	106.25
56	2L	21	H2U	C1'-N1-C2	5.42	125.78	118.19
23	2K	21	H2U	C1'-N1-C2	5.45	125.83	118.19
56	2L	33	OMC	C6-C5-C4	5.48	119.58	117.44
22	3K	63	5MU	C4-N3-C2	5.54	119.78	115.16
22	1K	63	5MU	C4-N3-C2	5.63	119.85	115.16
56	2L	56	PSU	C4-N3-C2	5.74	119.94	115.16
22	1K	64	PSU	C4-N3-C2	5.97	120.14	115.16
22	1K	40	PSU	C4-N3-C2	6.13	120.27	115.16
23	2K	56	PSU	C4-N3-C2	6.53	120.60	115.16
22	3K	38	MIA	C11-S10-C2	6.53	106.92	102.31
22	3K	64	PSU	C4-N3-C2	6.58	120.65	115.16
22	3K	35	QUO	C5-C6-N1	6.58	129.20	124.15
23	2K	33	OMC	C6-C5-C4	6.61	120.03	117.44
22	3K	40	PSU	C4-N3-C2	6.93	120.94	115.16
22	1K	38	MIA	C11-S10-C2	7.98	107.94	102.31
22	1K	35	QUO	C6-N1-C2	9.21	126.68	115.88
22	3K	35	QUO	C6-N1-C2	9.51	127.03	115.88

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
23	2K	21	H2U	C5-C6-N1	10.22	121.97	110.76
56	2L	21	H2U	C5-C6-N1	11.54	123.41	110.76
22	3K	17	OMG	C6-N1-C2	12.66	130.72	115.88
22	1K	17	OMG	C6-N1-C2	12.96	131.06	115.88
22	1K	17	OMG	C1'-N9-C4	18.44	147.39	126.81
22	3K	17	OMG	C1'-N9-C4	19.84	148.94	126.81

There are no chirality outliers.

There are no torsion outliers.

There are no ring outliers.

20 monomers are involved in 43 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
22	1K	17	OMG	3	0
22	1K	35	QUO	6	0
22	1K	38	MIA	5	0
22	1K	63	5MU	2	0
22	1K	64	PSU	2	0
22	1K	8	4SU	1	0
23	2K	21	H2U	1	0
23	2K	47	7MG	3	0
23	2K	55	5MU	3	0
23	2K	8	4SU	1	0
56	2L	21	H2U	1	0
56	2L	33	OMC	1	0
56	2L	55	5MU	2	0
56	2L	56	PSU	1	0
56	2L	8	4SU	1	0
22	3K	17	OMG	3	0
22	3K	35	QUO	2	0
22	3K	38	MIA	4	0
22	3K	64	PSU	1	0
22	3K	8	4SU	2	0

5.5 Carbohydrates (i)

There are no carbohydrates in this entry.

5.6 Ligand geometry

Of 1166 ligands modelled in this entry, 1166 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

There are no such residues in this entry.

5.8 Polymer linkage issues

The following chains have linkage breaks:

Mol	Chain	Number of breaks
54	1G	1

All chain breaks are listed below:

Model	Chain	Residue-1	Atom-1	Residue-2	Atom-2	Distance (Å)
1	1G	1530:G	O3'	1531:A	P	3.04

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	1498/1522 (98%)	0.03	24 (1%) 74 52	53, 97, 184, 399	0
2	12	237/256 (92%)	-0.05	8 (3%) 49 23	130, 169, 209, 225	0
2	1E	237/256 (92%)	-0.03	5 (2%) 67 42	106, 143, 183, 208	0
3	22	206/239 (86%)	0.31	19 (9%) 11 4	131, 148, 178, 208	0
3	2E	205/239 (85%)	-0.10	2 (0%) 84 66	84, 106, 147, 160	0
4	32	208/209 (99%)	0.96	25 (12%) 6 2	94, 116, 145, 163	0
4	3E	208/209 (99%)	0.56	18 (8%) 13 4	78, 104, 133, 148	0
5	42	151/162 (93%)	0.76	27 (17%) 2 1	104, 129, 145, 174	0
5	4E	151/162 (93%)	0.59	17 (11%) 7 2	73, 99, 121, 159	0
6	52	101/101 (100%)	-0.35	0 100 100	86, 101, 124, 148	0
6	5E	101/101 (100%)	0.11	1 (0%) 84 66	82, 104, 122, 147	0
7	62	155/156 (99%)	0.61	21 (13%) 4 1	107, 125, 147, 172	0
7	6E	155/156 (99%)	0.55	21 (13%) 4 1	99, 117, 150, 172	0
8	72	138/138 (100%)	1.45	40 (28%) 1 0	103, 129, 141, 146	0
8	7E	138/138 (100%)	0.70	24 (17%) 2 1	86, 107, 122, 130	0
9	82	127/128 (99%)	2.63	67 (52%) 0 0	112, 160, 189, 195	0
9	8E	127/128 (99%)	1.73	46 (36%) 0 0	87, 138, 174, 191	0
10	1A	99/105 (94%)	1.38	28 (28%) 1 0	125, 160, 189, 204	0
10	1I	99/105 (94%)	0.87	23 (23%) 1 0	84, 135, 166, 180	0
11	2A	119/129 (92%)	1.00	14 (11%) 6 2	90, 112, 142, 222	0
11	2I	116/129 (89%)	0.54	8 (6%) 20 7	75, 106, 136, 169	0
12	3A	125/132 (94%)	0.51	17 (13%) 4 1	84, 106, 150, 179	0
12	3I	125/132 (94%)	0.36	11 (8%) 12 4	65, 74, 119, 207	0
13	4A	117/126 (92%)	0.84	23 (19%) 1 0	113, 148, 183, 198	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å^2)	Q<0.9
13	4I	116/126 (92%)	0.30	9 (7%) 16 5	82, 125, 146, 160	0
14	5A	58/61 (95%)	3.45	41 (70%) 0 0	130, 150, 162, 165	0
14	5I	61/61 (100%)	0.89	9 (14%) 3 1	85, 96, 116, 139	0
15	6A	88/89 (98%)	0.37	5 (5%) 27 11	82, 113, 134, 140	0
15	6I	88/89 (98%)	0.47	4 (4%) 37 17	78, 99, 119, 132	0
16	7A	84/88 (95%)	1.87	34 (40%) 0 0	88, 105, 134, 165	0
16	7I	84/88 (95%)	2.61	48 (57%) 0 0	97, 113, 152, 171	0
17	8A	100/105 (95%)	0.86	21 (21%) 1 0	92, 111, 131, 172	0
17	8I	100/105 (95%)	0.61	12 (12%) 6 2	85, 103, 119, 129	0
18	9A	69/88 (78%)	0.02	2 (2%) 55 29	94, 116, 143, 162	0
18	9I	72/88 (81%)	0.14	0 100 100	87, 108, 156, 177	0
19	AA	82/93 (88%)	0.86	11 (13%) 4 1	144, 164, 200, 218	0
19	AI	83/93 (89%)	0.28	5 (6%) 25 10	93, 125, 162, 185	0
20	BA	99/106 (93%)	1.10	22 (22%) 1 0	85, 108, 139, 170	0
20	BI	99/106 (93%)	1.20	34 (34%) 0 0	107, 121, 164, 171	0
21	1B	25/27 (92%)	5.68	22 (88%) 0 0	114, 135, 154, 180	0
21	1F	22/27 (81%)	3.17	14 (63%) 0 0	96, 108, 115, 122	0
22	1K	78/85 (91%)	0.14	5 (6%) 23 8	84, 149, 162, 175	0
22	3K	78/85 (91%)	-0.27	3 (3%) 44 20	68, 166, 190, 197	0
23	2K	71/77 (92%)	-0.09	1 (1%) 78 57	65, 89, 122, 126	0
24	4K	15/27 (55%)	1.95	6 (40%) 0 0	68, 100, 173, 180	0
25	14	2907/2917 (99%)	0.05	40 (1%) 78 57	46, 81, 243, 482	0
25	1H	2912/2917 (99%)	0.08	20 (0%) 89 75	35, 69, 228, 380	0
26	16	122/122 (100%)	-0.31	0 100 100	64, 90, 115, 254	0
26	1J	122/122 (100%)	-0.43	0 100 100	79, 115, 142, 216	0
27	11	272/276 (98%)	0.19	1 (0%) 93 84	38, 61, 80, 92	0
27	19	273/276 (98%)	0.54	16 (5%) 26 10	43, 70, 87, 100	0
28	21	205/206 (99%)	0.52	10 (4%) 33 14	46, 86, 143, 168	0
28	29	205/206 (99%)	0.84	32 (15%) 3 1	56, 90, 162, 204	0
29	31	202/210 (96%)	0.08	0 100 100	41, 75, 128, 144	0
29	39	208/210 (99%)	0.20	10 (4%) 34 15	56, 99, 181, 218	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å^2)	Q<0.9
30	41	181/182 (99%)	0.43	9 (4%) 32 13	81, 107, 149, 173	0
30	49	181/182 (99%)	0.48	19 (10%) 8 3	110, 135, 175, 194	0
31	51	174/180 (96%)	0.25	8 (4%) 36 16	80, 105, 120, 146	0
31	59	171/180 (95%)	1.96	67 (39%) 0 0	138, 195, 241, 262	0
32	61	146/148 (98%)	0.11	6 (4%) 41 18	72, 128, 153, 163	0
32	69	146/148 (98%)	0.37	14 (9%) 10 3	77, 127, 159, 170	0
33	15	138/140 (98%)	0.97	26 (18%) 2 0	72, 103, 140, 162	0
33	58	138/140 (98%)	0.31	5 (3%) 46 21	62, 87, 134, 151	0
34	25	122/122 (100%)	0.35	6 (4%) 33 14	62, 84, 103, 109	0
34	68	122/122 (100%)	0.11	2 (1%) 74 52	53, 73, 90, 105	0
35	35	150/150 (100%)	0.93	28 (18%) 2 0	57, 105, 148, 199	0
35	78	150/150 (100%)	0.37	5 (3%) 50 24	43, 80, 110, 179	0
36	45	138/141 (97%)	1.83	53 (38%) 0 0	72, 104, 132, 153	0
36	88	141/141 (100%)	0.58	4 (2%) 56 30	55, 77, 101, 124	0
37	55	117/118 (99%)	0.62	14 (11%) 6 2	56, 76, 93, 114	0
37	98	118/118 (100%)	0.47	7 (5%) 26 10	56, 80, 99, 114	0
38	65	111/112 (99%)	0.81	17 (15%) 3 1	88, 112, 136, 157	0
38	A8	111/112 (99%)	0.15	4 (3%) 46 21	72, 87, 122, 145	0
39	75	137/146 (93%)	0.35	7 (5%) 32 13	75, 92, 156, 208	0
39	B8	136/146 (93%)	0.16	2 (1%) 76 55	70, 91, 146, 166	0
40	85	117/118 (99%)	0.82	15 (12%) 5 2	61, 89, 141, 183	0
40	C8	117/118 (99%)	0.74	12 (10%) 9 3	49, 77, 129, 152	0
41	95	101/101 (100%)	0.66	16 (15%) 3 1	59, 129, 145, 163	0
41	D8	101/101 (100%)	0.30	4 (3%) 42 19	52, 106, 146, 167	0
42	A5	113/113 (100%)	0.56	6 (5%) 30 12	58, 71, 109, 189	0
42	E8	113/113 (100%)	0.36	1 (0%) 85 69	51, 69, 100, 167	0
43	B5	92/96 (95%)	0.18	4 (4%) 39 17	64, 79, 106, 118	0
43	F8	94/96 (97%)	-0.08	0 100 100	52, 68, 95, 109	0
44	C5	104/110 (94%)	1.30	27 (25%) 1 0	90, 118, 184, 206	0
44	G8	102/110 (92%)	0.63	4 (3%) 43 20	64, 93, 138, 169	0
45	D5	179/206 (86%)	1.13	40 (22%) 1 0	111, 159, 253, 266	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å^2)	Q<0.9
45	H8	175/206 (84%)	-0.01	4 (2%) 64 38	83, 130, 215, 234	0
46	E5	77/85 (90%)	1.19	16 (20%) 1 0	64, 85, 108, 157	0
46	I8	77/85 (90%)	0.68	7 (9%) 11 4	53, 69, 93, 148	0
47	F5	97/98 (98%)	1.45	18 (18%) 2 0	57, 80, 139, 192	0
47	J8	93/98 (94%)	0.85	8 (8%) 13 4	48, 68, 134, 163	0
48	G5	66/72 (91%)	0.08	0 100 100	78, 100, 122, 175	0
48	K8	66/72 (91%)	0.56	5 (7%) 17 6	54, 78, 98, 148	0
49	H5	59/60 (98%)	1.42	15 (25%) 1 0	77, 97, 153, 166	0
49	L8	59/60 (98%)	0.41	1 (1%) 73 49	58, 77, 114, 136	0
50	I5	63/71 (88%)	1.99	26 (41%) 0 0	153, 212, 237, 256	0
50	M8	66/71 (92%)	0.71	8 (12%) 6 2	111, 171, 226, 241	0
51	J5	58/60 (96%)	0.32	2 (3%) 49 23	55, 84, 168, 218	0
51	N8	49/60 (81%)	0.44	0 100 100	45, 64, 135, 149	0
52	L5	45/49 (91%)	0.52	1 (2%) 65 40	47, 56, 67, 77	0
52	P8	45/49 (91%)	0.17	1 (2%) 65 40	38, 45, 58, 78	0
53	M5	60/65 (92%)	1.42	15 (25%) 1 0	66, 77, 112, 129	0
53	Q8	62/65 (95%)	1.51	19 (30%) 1 0	56, 70, 96, 108	0
54	1G	1498/1522 (98%)	0.07	40 (2%) 58 32	69, 115, 181, 370	0
55	1L	85/85 (100%)	1.93	28 (32%) 0 0	124, 157, 168, 180	0
55	3L	85/85 (100%)	0.08	2 (2%) 62 37	75, 171, 201, 208	0
56	2L	72/77 (93%)	-0.28	1 (1%) 78 57	74, 105, 136, 141	0
57	4L	16/27 (59%)	2.46	8 (50%) 0 0	93, 136, 209, 217	0
All	All	20977/21616 (97%)	0.39	1583 (7%) 17 6	35, 99, 186, 482	0

All (1583) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
11	2A	129	SER	23.9
47	F5	98	LEU	19.3
31	59	100	GLY	15.5
11	2A	128	ALA	15.0
47	F5	97	LEU	12.2
35	35	150	ALA	11.8
8	72	1	MET	11.6

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Mol	Chain	Res	Type	RSRZ
7	62	81	GLY	11.2
31	59	96	ALA	10.9
21	1B	23	PRO	10.5
55	1L	85	A	10.4
57	4L	25	A	10.3
38	A8	2	ALA	10.2
9	82	127	LYS	10.1
21	1B	18	TYR	9.4
21	1B	22	ARG	9.1
36	45	1	MET	9.1
21	1B	13	ILE	9.1
12	3I	129	ALA	9.1
9	82	106	ALA	9.1
11	2I	11	LYS	9.0
10	1A	62	HIS	8.9
10	1A	55	LYS	8.8
14	5A	39	LEU	8.7
38	65	2	ALA	8.6
19	AA	82	GLY	8.6
21	1B	25	LYS	8.6
14	5A	58	LYS	8.5
53	Q8	63	PRO	8.5
11	2A	13	GLN	8.5
31	59	4	ILE	8.4
9	82	109	VAL	8.4
9	82	115	GLY	8.4
55	1L	80	C	8.3
9	8E	126	SER	8.3
50	M8	55	ARG	8.2
16	7I	22	THR	8.1
19	AI	2	PRO	8.1
21	1B	14	TRP	8.0
13	4A	6	GLY	8.0
14	5A	34	TYR	8.0
7	62	82	GLY	7.9
20	BI	70	SER	7.9
25	14	1092	C	7.9
9	82	126	SER	7.9
14	5A	17	LYS	7.9
7	62	80	VAL	7.9
54	1G	1286	A	7.9
9	82	128	ARG	7.8

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Mol	Chain	Res	Type	RSRZ
47	J8	93	GLU	7.8
45	D5	117	LEU	7.8
11	2I	12	ARG	7.7
21	1B	6	ARG	7.6
8	72	2	LEU	7.6
21	1B	26	LYS	7.6
28	29	205	ALA	7.6
16	7I	1	MET	7.5
10	1A	54	PHE	7.5
25	1H	654(K)	C	7.5
47	J8	92	LYS	7.5
14	5A	59	ALA	7.5
16	7I	29	ASP	7.5
3	22	155	GLY	7.4
9	82	65	VAL	7.4
9	82	64	THR	7.3
31	59	99	VAL	7.3
10	1A	59	SER	7.2
57	4L	24	A	7.2
31	51	171	LEU	7.2
14	5A	23	ARG	7.2
31	59	123	PHE	7.2
50	I5	46	GLN	7.2
9	82	66	ARG	7.1
10	1A	46	ARG	7.0
8	7E	1	MET	7.0
10	1A	64	GLU	7.0
50	I5	28	LYS	6.9
55	1L	50	U	6.9
8	72	88	LYS	6.8
21	1F	15	ARG	6.8
13	4A	4	ILE	6.7
45	D5	146	ILE	6.7
14	5A	61	TRP	6.7
44	C5	59	GLY	6.6
9	82	110	GLU	6.6
7	62	79	ARG	6.6
31	59	115	VAL	6.6
36	45	91	GLU	6.6
36	45	104	PHE	6.6
21	1B	21	TYR	6.6
31	59	103	LEU	6.6

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Mol	Chain	Res	Type	RSRZ
22	1K	85	A	6.6
9	82	116	LYS	6.6
16	7I	9	PHE	6.6
45	D5	148	ASP	6.6
21	1F	16	GLY	6.5
9	82	7	THR	6.5
50	I5	52	THR	6.5
9	82	36	TYR	6.5
45	D5	172	ALA	6.5
55	1L	79	A	6.5
16	7I	32	TYR	6.4
8	72	87	SER	6.4
21	1B	17	THR	6.4
25	14	2902	C	6.4
45	D5	178	GLU	6.4
13	4A	102	ARG	6.4
8	72	3	THR	6.3
8	72	131	GLY	6.3
16	7I	7	ALA	6.3
53	Q8	62	LEU	6.3
7	6E	32	ARG	6.2
9	8E	36	TYR	6.2
7	6E	82	GLY	6.2
16	7I	27	LYS	6.2
10	1A	58	ASP	6.2
9	82	69	GLY	6.2
21	1B	16	GLY	6.2
21	1B	24	ARG	6.2
10	1I	64	GLU	6.2
14	5A	33	VAL	6.2
55	1L	84	C	6.2
12	3I	19	ARG	6.1
44	C5	47	LYS	6.1
36	45	90	VAL	6.1
20	BI	72	LEU	6.1
7	62	83	ALA	6.1
25	14	2901	C	6.1
16	7I	18	ARG	6.1
53	Q8	61	LEU	6.0
14	5A	30	ALA	6.0
54	1G	1531	A	6.0
31	59	89	ILE	5.9

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Mol	Chain	Res	Type	RSRZ
16	7I	65	GLN	5.9
21	1F	17	THR	5.9
11	2A	12	ARG	5.9
45	D5	112	ARG	5.9
9	8E	110	GLU	5.9
35	35	110	TYR	5.9
30	41	2	PRO	5.9
7	6E	84	ASN	5.9
11	2A	11	LYS	5.9
21	1B	15	ARG	5.9
45	D5	179	ASP	5.8
31	59	169	VAL	5.8
44	C5	29	GLU	5.8
13	4A	97	PRO	5.8
3	22	206	GLU	5.7
55	1L	78	C	5.7
31	59	117	PRO	5.7
50	I5	40	HIS	5.7
21	1F	14	TRP	5.7
5	42	81	GLU	5.7
1	13	1032	A	5.6
7	6E	83	ALA	5.6
16	7A	33	ILE	5.6
9	82	71	SER	5.6
7	6E	34	GLY	5.6
9	8E	117	HIS	5.6
9	82	15	ALA	5.6
14	5A	41	ARG	5.6
9	8E	109	VAL	5.6
28	29	151	TYR	5.6
24	4K	25	A	5.6
21	1B	8	THR	5.5
40	C8	118	GLY	5.5
44	C5	46	LYS	5.5
55	1L	83	C	5.5
8	72	92	ARG	5.5
16	7I	23	ASP	5.5
50	I5	63	TYR	5.5
41	95	74	LYS	5.5
45	D5	147	GLY	5.4
24	4K	26	A	5.4
8	72	133	LEU	5.4

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Mol	Chain	Res	Type	RSRZ
50	I5	54	GLY	5.4
19	AA	79	THR	5.4
17	8I	36	ILE	5.4
9	82	14	VAL	5.3
25	14	1093	G	5.3
45	D5	155	LEU	5.3
16	7A	31	LYS	5.3
14	5A	26	ARG	5.3
39	75	106	SER	5.3
40	C8	117	GLN	5.3
45	D5	141	VAL	5.3
14	5A	35	ARG	5.3
25	14	2899	G	5.3
31	59	85	LYS	5.3
55	1L	81	C	5.3
14	5A	37	PHE	5.3
16	7I	30	GLY	5.3
14	5A	57	ARG	5.2
55	1L	82	A	5.2
8	72	86	ILE	5.2
9	82	124	GLN	5.2
10	1A	66	ARG	5.2
14	5A	10	ALA	5.2
30	49	138	GLN	5.2
20	BI	68	LYS	5.2
21	1B	10	ARG	5.2
7	62	78	ARG	5.1
55	1L	1	G	5.1
36	45	68	ILE	5.1
10	1A	56	HIS	5.1
31	59	87	LEU	5.1
16	7I	10	GLY	5.1
21	1B	5	ASP	5.1
52	L5	1	MET	5.1
14	5A	31	ARG	5.1
19	AA	78	ARG	5.1
38	65	20	ARG	5.1
36	45	103	MET	5.1
7	62	85	TYR	5.1
47	F5	96	LYS	5.1
34	25	1	MET	5.0
8	7E	2	LEU	5.0

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Mol	Chain	Res	Type	RSRZ
31	59	132	ARG	5.0
12	3A	19	ARG	5.0
16	7I	28	ARG	5.0
14	5A	36	PHE	5.0
16	7A	1	MET	5.0
16	7I	31	LYS	5.0
45	D5	142	SER	5.0
31	59	170	ARG	5.0
9	82	123	PRO	5.0
10	1I	60	ARG	5.0
28	29	150	VAL	5.0
31	59	101	ARG	5.0
31	59	114	VAL	4.9
7	6E	81	GLY	4.9
33	15	84	LYS	4.9
10	1A	47	PHE	4.9
55	1L	74	C	4.9
7	62	84	ASN	4.9
31	51	172	LYS	4.9
10	1A	65	LEU	4.9
9	82	121	ARG	4.9
39	75	99	LEU	4.9
45	D5	115	GLY	4.9
8	7E	3	THR	4.9
31	59	33	LEU	4.9
9	82	12	GLU	4.9
9	8E	106	ALA	4.9
5	42	82	VAL	4.8
7	6E	78	ARG	4.8
19	AA	83	HIS	4.8
10	1A	43	ARG	4.8
44	C5	61	ILE	4.8
21	1B	2	GLY	4.8
9	82	114	TYR	4.8
11	2A	127	LYS	4.8
16	7A	7	ALA	4.8
31	59	29	PRO	4.8
31	59	168	PRO	4.8
7	62	32	ARG	4.8
9	8E	111	ARG	4.8
8	72	90	GLY	4.8
3	22	2	GLY	4.8

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Mol	Chain	Res	Type	RSRZ
13	4A	101	GLN	4.8
8	72	91	ARG	4.7
9	82	37	PHE	4.7
9	82	70	LYS	4.7
55	1L	52	G	4.7
20	BI	18	GLN	4.7
3	22	177	THR	4.7
30	41	26	GLN	4.7
14	5A	8	GLU	4.7
16	7I	25	ARG	4.7
8	7E	4	ASP	4.7
17	8I	35	VAL	4.7
9	8E	118	LYS	4.6
16	7I	17	TYR	4.6
50	I5	47	GLN	4.6
31	59	88	LEU	4.6
8	72	84	ARG	4.6
21	1F	6	ARG	4.6
9	8E	121	ARG	4.6
9	82	111	ARG	4.6
10	1A	61	GLU	4.6
8	72	112	LEU	4.6
46	E5	9	SER	4.6
9	8E	102	LEU	4.6
43	B5	68	ARG	4.6
16	7A	9	PHE	4.6
14	5A	32	SER	4.6
33	15	75	TYR	4.5
9	8E	37	PHE	4.5
36	45	69	PHE	4.5
11	2I	13	GLN	4.5
9	8E	116	LYS	4.5
16	7I	37	GLY	4.5
20	BA	71	THR	4.5
8	72	93	VAL	4.5
13	4A	2	ALA	4.5
44	C5	45	VAL	4.5
9	82	8	GLY	4.5
14	5A	38	GLY	4.5
49	H5	28	LEU	4.5
50	I5	51	ASP	4.5
14	5A	7	ILE	4.5

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Mol	Chain	Res	Type	RSRZ
31	59	165	ALA	4.5
36	45	65	PHE	4.5
4	32	83	SER	4.5
55	1L	51	C	4.5
4	32	49	ARG	4.4
5	4E	98	THR	4.4
45	D5	173	ALA	4.4
21	1B	9	ARG	4.4
16	7I	59	TRP	4.4
50	I5	32	TYR	4.4
31	59	84	SER	4.4
36	45	92	GLY	4.4
7	6E	33	ASP	4.4
22	1K	84	C	4.4
10	1A	60	ARG	4.4
12	3A	9	GLN	4.4
53	Q8	2	PRO	4.4
47	F5	95	LEU	4.4
25	14	2146	C	4.4
36	45	60	ARG	4.4
37	55	69	ASP	4.4
9	8E	115	GLY	4.4
9	8E	119	ALA	4.3
14	5I	59	ALA	4.3
9	82	117	HIS	4.3
10	1I	62	HIS	4.3
41	95	83	ARG	4.3
44	C5	44	ILE	4.3
16	7I	14	ASN	4.3
17	8A	22	LEU	4.3
45	D5	111	VAL	4.3
17	8A	7	THR	4.3
36	45	64	ILE	4.3
44	C5	58	GLY	4.3
46	E5	21	LEU	4.3
13	4A	7	VAL	4.3
44	C5	49	VAL	4.3
4	3E	139	ARG	4.3
1	13	1286	A	4.3
10	1I	47	PHE	4.3
16	7I	12	LYS	4.3
50	I5	9	LEU	4.3

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Mol	Chain	Res	Type	RSRZ
24	4K	24	A	4.3
31	59	95	ARG	4.3
45	H8	173	ALA	4.3
16	7A	59	TRP	4.3
45	D5	121	HIS	4.3
32	69	1	MET	4.3
9	8E	127	LYS	4.2
9	82	125	TYR	4.2
8	72	89	PRO	4.2
9	82	122	ALA	4.2
14	5A	22	THR	4.2
37	55	5	LYS	4.2
50	M8	22	ILE	4.2
14	5A	60	SER	4.2
54	1G	973	G	4.2
35	35	149	GLU	4.2
55	1L	3	U	4.2
10	1A	63	PHE	4.2
7	62	33	ASP	4.2
36	45	130	LYS	4.2
16	7A	6	LEU	4.2
50	I5	29	PRO	4.2
10	1I	61	GLU	4.2
55	1L	53	A	4.1
31	59	90	LYS	4.1
16	7I	66	PRO	4.1
39	B8	106	SER	4.1
16	7I	6	LEU	4.1
28	21	205	ALA	4.1
45	D5	149	SER	4.1
9	82	67	GLY	4.1
45	D5	153	SER	4.1
55	1L	33	C	4.1
33	15	80	GLY	4.1
44	C5	63	LYS	4.1
47	F5	28	GLY	4.1
14	5A	21	TYR	4.1
10	1I	59	SER	4.1
54	1G	1285	A	4.1
16	7A	32	TYR	4.1
8	72	98	LYS	4.1
9	82	79	LEU	4.0

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Mol	Chain	Res	Type	RSRZ
9	82	68	GLY	4.0
16	7I	35	LYS	4.0
16	7A	19	ILE	4.0
36	45	34	LEU	4.0
44	C5	50	ARG	4.0
9	82	11	LYS	4.0
14	5I	57	ARG	4.0
16	7A	35	LYS	4.0
31	59	83	TYR	4.0
8	72	85	ARG	4.0
9	82	120	ARG	4.0
10	1A	67	THR	4.0
45	D5	156	LYS	4.0
8	72	58	TYR	4.0
22	1K	82	A	4.0
10	1A	49	VAL	4.0
33	15	73	THR	4.0
8	7E	91	ARG	4.0
35	35	16	ARG	4.0
13	4I	6	GLY	4.0
4	3E	209	ARG	4.0
16	7I	8	ARG	4.0
9	82	83	ARG	4.0
19	AI	78	ARG	4.0
21	1F	22	ARG	3.9
12	3A	5	PRO	3.9
28	29	76	ARG	3.9
53	Q8	34	TRP	3.9
13	4A	25	ILE	3.9
17	8A	36	ILE	3.9
55	1L	32	A	3.9
7	62	41	ARG	3.9
2	12	136	VAL	3.9
10	1A	48	THR	3.9
8	72	134	ILE	3.9
12	3A	129	ALA	3.9
25	1H	654(I)	C	3.9
50	I5	55	ARG	3.9
11	2A	71	LYS	3.9
31	59	104	GLU	3.9
16	7I	2	VAL	3.9
45	D5	116	VAL	3.9

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Mol	Chain	Res	Type	RSRZ
50	I5	8	LYS	3.9
53	Q8	21	LYS	3.9
41	95	80	GLN	3.9
45	D5	170	THR	3.9
31	59	164	TYR	3.9
32	61	113	ARG	3.9
9	8E	15	ALA	3.9
17	8I	26	GLN	3.9
25	1H	2119	A	3.9
9	82	105	ASP	3.9
41	95	81	TYR	3.8
3	22	10	PHE	3.8
16	7I	3	LYS	3.8
31	59	159	GLU	3.8
40	85	17	ILE	3.8
20	BI	22	ARG	3.8
17	8I	34	LYS	3.8
33	15	85	ILE	3.8
20	BA	66	ALA	3.8
55	1L	16	C	3.8
7	62	37	ASN	3.8
9	8E	128	ARG	3.8
45	D5	118	GLN	3.8
45	D5	143	GLY	3.8
2	1E	31	TYR	3.8
16	7I	68	ASP	3.8
40	85	40	PHE	3.8
8	72	4	ASP	3.8
10	1A	57	LYS	3.8
36	45	66	ILE	3.8
13	4A	27	LYS	3.8
25	14	1094	U	3.8
16	7A	29	ASP	3.8
17	8I	33	GLY	3.8
21	1F	23	PRO	3.8
31	59	112	PRO	3.8
41	D8	45	THR	3.8
5	4E	89	ILE	3.8
16	7I	33	ILE	3.8
45	D5	120	ILE	3.8
2	12	133	LYS	3.8
18	9A	88	LYS	3.8

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Mol	Chain	Res	Type	RSRZ
12	3I	20	LYS	3.8
16	7A	26	ARG	3.8
9	8E	101	PHE	3.7
28	29	59	VAL	3.7
53	M5	22	VAL	3.7
31	59	124	GLU	3.7
48	K8	15	LYS	3.7
31	59	106	THR	3.7
38	65	33	LYS	3.7
38	65	112	PHE	3.7
9	82	75	ASP	3.7
25	1H	654(J)	A	3.7
16	7A	25	ARG	3.7
31	59	94	TYR	3.7
36	88	104	PHE	3.7
9	8E	75	ASP	3.7
16	7I	26	ARG	3.7
50	I5	44	THR	3.7
44	G8	91	GLU	3.7
50	M8	31	ILE	3.7
9	8E	65	VAL	3.7
10	1I	65	LEU	3.7
9	82	10	ARG	3.7
24	4K	19[A]	A	3.7
9	82	9	ARG	3.7
55	1L	2	G	3.6
17	8I	27	PHE	3.6
54	1G	1251	A	3.6
12	3A	27	LEU	3.6
9	82	33	PHE	3.6
9	82	19	LEU	3.6
19	AA	71	LEU	3.6
7	6E	35	LYS	3.6
12	3A	20	LYS	3.6
9	8E	8	GLY	3.6
8	72	59	LEU	3.6
40	85	20	LEU	3.6
9	8E	52	ALA	3.6
7	6E	85	TYR	3.6
20	BI	20	LEU	3.6
41	95	66	ARG	3.6
16	7I	4	ILE	3.6

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Mol	Chain	Res	Type	RSRZ
4	3E	138	TYR	3.6
9	82	112	LYS	3.6
36	45	129	THR	3.6
3	22	207	VAL	3.6
21	1F	10	ARG	3.6
48	K8	69	ARG	3.6
5	42	12	LEU	3.6
35	35	108	LYS	3.6
5	4E	90	VAL	3.6
12	3I	17	LYS	3.6
3	22	198	VAL	3.6
21	1F	5	ASP	3.6
25	14	1046	A	3.6
35	78	108	LYS	3.6
55	1L	41	C	3.6
35	35	13	ASN	3.6
4	32	209	ARG	3.6
43	B5	69	TYR	3.6
50	M8	25	TYR	3.6
16	7A	8	ARG	3.6
14	5A	56	VAL	3.6
12	3A	28	LYS	3.5
53	Q8	3	LYS	3.5
31	59	171	LEU	3.5
45	D5	168	GLU	3.5
16	7I	19	ILE	3.5
28	29	54	GLN	3.5
9	8E	120	ARG	3.5
45	H8	113	ALA	3.5
2	12	14	GLY	3.5
16	7A	64	ALA	3.5
49	H5	26	LEU	3.5
7	6E	154	TYR	3.5
31	59	109	PHE	3.5
11	2A	126	ARG	3.5
45	D5	119	GLU	3.5
37	55	9	LYS	3.5
9	82	113	LYS	3.5
17	8I	29	HIS	3.5
13	4A	5	ALA	3.5
20	BI	67	ALA	3.5
17	8I	32	TYR	3.5

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Mol	Chain	Res	Type	RSRZ
9	82	17	VAL	3.5
8	7E	90	GLY	3.5
36	45	88	GLY	3.5
12	3I	5	PRO	3.5
4	32	69	GLY	3.5
20	BI	16	HIS	3.5
17	8A	32	TYR	3.4
1	13	230	G	3.4
10	1I	10	GLY	3.4
15	6I	62	GLN	3.4
36	45	49	ALA	3.4
37	55	68	ARG	3.4
7	6E	80	VAL	3.4
5	42	109	ILE	3.4
29	39	1	MET	3.4
31	59	122	THR	3.4
9	82	108	VAL	3.4
35	35	35	HIS	3.4
25	14	2147	G	3.4
10	1A	34	VAL	3.4
50	I5	39	CYS	3.4
54	1G	876	G	3.4
36	45	38	GLU	3.4
8	7E	110	ALA	3.4
13	4I	96	LEU	3.4
4	3E	3	ARG	3.4
33	15	72	TYR	3.4
17	8A	37	LYS	3.4
41	95	76	LYS	3.4
45	D5	151	HIS	3.4
42	A5	113	LYS	3.4
25	1H	2145	C	3.4
54	1G	877	C	3.4
32	61	116	LEU	3.4
36	45	10	ARG	3.4
35	35	106	LEU	3.3
31	59	45	VAL	3.3
31	59	105	LEU	3.3
20	BI	10	LEU	3.3
17	8A	27	PHE	3.3
41	95	12	TYR	3.3
44	C5	92	ASN	3.3

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Mol	Chain	Res	Type	RSRZ
54	1G	1032	A	3.3
9	82	5	TYR	3.3
36	45	105	GLU	3.3
56	2L	1	C	3.3
20	BI	71	THR	3.3
20	BA	70	SER	3.3
39	75	50	ILE	3.3
14	5A	25	VAL	3.3
31	59	131	VAL	3.3
16	7A	36	ILE	3.3
20	BI	106	ALA	3.3
21	1F	13	ILE	3.3
16	7I	11	SER	3.3
20	BA	10	LEU	3.3
44	C5	31	LEU	3.3
10	1A	44	VAL	3.3
55	1L	4	G	3.3
49	H5	60	GLU	3.3
16	7A	34	GLU	3.3
19	AA	70	LYS	3.3
33	15	70	LYS	3.3
25	14	1091	G	3.3
30	49	2	PRO	3.3
7	6E	5	ARG	3.3
31	59	86	GLU	3.3
36	45	80	GLU	3.3
53	M5	40	GLU	3.3
14	5A	4	LYS	3.3
4	32	3	ARG	3.3
13	4I	102	ARG	3.3
33	15	48	MET	3.3
16	7I	64	ALA	3.3
25	1H	2476	A	3.2
31	59	127	GLU	3.2
16	7I	39	TYR	3.2
5	42	89	ILE	3.2
8	7E	88	LYS	3.2
32	69	38	LEU	3.2
4	3E	134	ASP	3.2
13	4A	99	ARG	3.2
4	3E	96	LEU	3.2
10	1A	45	ARG	3.2

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Mol	Chain	Res	Type	RSRZ
57	4L	23	A	3.2
35	35	14	LYS	3.2
14	5I	61	TRP	3.2
17	8A	92	ARG	3.2
50	M8	66	SER	3.2
10	1I	58	ASP	3.2
25	14	2167	U	3.2
25	14	1084	A	3.2
8	7E	135	CYS	3.2
14	5A	6	LEU	3.2
54	1G	1249	C	3.2
16	7I	20	VAL	3.2
30	41	25	TYR	3.2
10	1I	5	ARG	3.2
36	45	61	GLY	3.2
8	72	138	TRP	3.2
36	45	76	LYS	3.2
7	6E	79	ARG	3.2
9	8E	107	ARG	3.2
30	49	39	ILE	3.2
35	35	18	ARG	3.2
9	8E	105	ASP	3.2
31	59	128	PRO	3.2
7	62	16	LEU	3.2
49	H5	20	LYS	3.2
20	BI	79	ARG	3.2
9	8E	7	THR	3.2
50	I5	42	PHE	3.2
10	1A	69	ASN	3.2
1	13	134	A	3.2
14	5I	60	SER	3.2
25	1H	2799	A	3.2
53	Q8	19	SER	3.2
9	8E	42	ARG	3.2
36	45	7	MET	3.2
28	29	159	HIS	3.2
54	1G	1287	A	3.2
9	82	63	ILE	3.1
45	D5	171	ILE	3.1
8	72	136	GLU	3.1
15	6A	57	LEU	3.1
16	7A	28	ARG	3.1

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Mol	Chain	Res	Type	RSRZ
45	D5	145	GLU	3.1
14	5A	50	LYS	3.1
25	1H	654(H)	G	3.1
25	14	2797	U	3.1
31	59	97	ARG	3.1
20	BI	66	ALA	3.1
8	72	101	PRO	3.1
3	22	160	ALA	3.1
55	1L	54	C	3.1
11	2I	25	TYR	3.1
41	95	75	PHE	3.1
36	45	56	ARG	3.1
45	D5	154	ASP	3.1
49	H5	12	PRO	3.1
9	82	13	ALA	3.1
35	35	107	LYS	3.1
20	BI	15	ARG	3.1
11	2I	42	TRP	3.1
30	49	139	LEU	3.1
4	3E	137	SER	3.1
25	14	1065	U	3.1
36	45	99	PRO	3.1
25	1H	2117	A	3.1
5	42	24	ARG	3.1
12	3A	8	ASN	3.1
25	1H	2167	U	3.1
53	Q8	6	THR	3.1
35	78	107	LYS	3.1
25	14	2138	C	3.1
57	4L	11	A	3.1
16	7A	10	GLY	3.0
29	39	96	ASP	3.0
5	42	20	GLN	3.0
50	I5	31	ILE	3.0
53	Q8	22	VAL	3.0
25	1H	2116	G	3.0
25	14	1	G	3.0
20	BA	76	ALA	3.0
50	M8	32	TYR	3.0
54	1G	1115	C	3.0
36	45	71	ASP	3.0
12	3A	21	LYS	3.0

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Mol	Chain	Res	Type	RSRZ
53	M5	29	LYS	3.0
4	3E	2	GLY	3.0
4	32	70	ILE	3.0
16	7I	34	GLU	3.0
21	1B	12	LYS	3.0
37	98	9	LYS	3.0
9	82	44	VAL	3.0
36	45	17	LEU	3.0
40	85	13	LYS	3.0
12	3A	48	PRO	3.0
35	35	148	LEU	3.0
37	55	71	GLN	3.0
9	82	18	PHE	3.0
14	5A	19	ARG	3.0
8	72	83	ILE	3.0
31	59	46	GLU	3.0
31	59	108	GLY	3.0
7	62	36	LYS	3.0
10	1I	55	LYS	3.0
13	4A	65	LYS	3.0
10	1A	40	LEU	3.0
37	55	8	ARG	3.0
5	4E	118	ILE	3.0
21	1B	4	GLY	3.0
55	3L	50	U	3.0
31	59	55	PRO	3.0
33	15	74	ARG	3.0
36	88	81	VAL	3.0
33	15	79	PRO	3.0
38	65	108	GLY	3.0
40	C8	91	ASP	3.0
10	1I	48	THR	3.0
8	7E	89	PRO	3.0
16	7A	27	LYS	3.0
31	59	41	MET	3.0
9	82	74	ILE	3.0
16	7I	36	ILE	3.0
5	4E	88	LYS	3.0
33	15	109	LYS	3.0
19	AI	3	ARG	3.0
28	29	163	GLU	3.0
9	8E	66	ARG	2.9

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Mol	Chain	Res	Type	RSRZ
13	4A	3	ARG	2.9
11	2A	75	TYR	2.9
55	1L	75	C	2.9
12	3I	15	ARG	2.9
21	1F	9	ARG	2.9
9	8E	125	TYR	2.9
33	15	46	VAL	2.9
43	B5	33	LYS	2.9
22	3K	19	C	2.9
53	M5	59	LYS	2.9
5	4E	95	ALA	2.9
8	7E	132	GLU	2.9
5	42	98	THR	2.9
31	59	49	VAL	2.9
44	C5	39	VAL	2.9
16	7A	12	LYS	2.9
36	45	37	LEU	2.9
20	BA	25	ARG	2.9
9	8E	6	GLY	2.9
15	6I	89	GLY	2.9
31	59	35	VAL	2.9
49	H5	9	VAL	2.9
5	42	130	ASN	2.9
39	75	104	ASN	2.9
40	85	2	PRO	2.9
9	8E	103	THR	2.9
17	8A	33	GLY	2.9
8	72	111	ILE	2.9
17	8A	59	ILE	2.9
37	55	70	LEU	2.9
5	42	45	PHE	2.9
5	4E	81	GLU	2.9
12	3A	128	ALA	2.9
17	8A	4	LYS	2.9
19	AI	75	ALA	2.9
25	14	1537	C	2.9
33	58	109	LYS	2.9
49	H5	18	ASP	2.9
4	32	35	ARG	2.9
5	42	80	ILE	2.9
32	69	4	ILE	2.9
4	3E	110	PHE	2.9

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Mol	Chain	Res	Type	RSRZ
9	8E	124	GLN	2.9
9	82	73	GLN	2.9
16	7I	21	VAL	2.9
16	7A	2	VAL	2.9
5	4E	94	ALA	2.9
5	4E	119	LEU	2.9
14	5A	12	ARG	2.9
17	8A	24	GLU	2.9
54	1G	964	A	2.9
54	1G	975	A	2.9
53	Q8	11	LYS	2.9
30	49	28	VAL	2.8
30	41	102	PHE	2.8
4	32	68	TYR	2.8
36	45	32	TYR	2.8
45	D5	150	LEU	2.8
44	C5	30	VAL	2.8
20	BA	23	ARG	2.8
20	BA	83	ARG	2.8
35	78	79	ARG	2.8
39	75	98	LYS	2.8
44	G8	92	ASN	2.8
7	62	40	ALA	2.8
44	C5	19	LYS	2.8
34	25	32	TYR	2.8
37	98	21	TYR	2.8
35	35	29	LYS	2.8
54	1G	974	A	2.8
35	78	150	ALA	2.8
31	59	7	LEU	2.8
9	82	42	ARG	2.8
20	BI	63	ILE	2.8
20	BI	64	ASP	2.8
28	29	116	VAL	2.8
36	45	106	VAL	2.8
36	45	120	ILE	2.8
32	69	10	GLU	2.8
35	35	47	ASP	2.8
41	D8	36	PRO	2.8
16	7A	73	LEU	2.8
25	14	1095	A	2.8
16	7I	13	HIS	2.8

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Mol	Chain	Res	Type	RSRZ
35	35	27	HIS	2.8
10	1I	8	LEU	2.8
27	19	38	LYS	2.8
29	39	79	GLY	2.8
37	55	4	LEU	2.8
57	4L	22	A	2.8
28	21	76	ARG	2.8
30	49	75	LYS	2.8
30	49	146	TYR	2.8
2	12	152	PHE	2.8
5	42	90	VAL	2.8
28	29	149	ARG	2.8
52	P8	1	MET	2.8
5	42	88	LYS	2.8
47	F5	10	LYS	2.8
12	3I	14	GLY	2.8
21	1F	18	TYR	2.8
5	4E	122	GLU	2.8
15	6I	65	ARG	2.8
44	C5	64	GLU	2.8
53	M5	12	LYS	2.8
2	1E	11	LEU	2.8
13	4I	97	PRO	2.8
33	15	82	LEU	2.8
1	13	1349	A	2.8
8	7E	95	VAL	2.8
10	1I	49	VAL	2.8
12	3A	32	PHE	2.8
25	14	1177	A	2.8
1	13	311	C	2.8
7	6E	16	LEU	2.8
16	7A	51	VAL	2.8
28	29	160	TYR	2.8
38	65	5	THR	2.8
1	13	110	C	2.8
53	M5	2	PRO	2.8
53	M5	36	LYS	2.8
25	14	2118	U	2.7
54	1G	1370	G	2.7
8	7E	84	ARG	2.7
9	8E	11	LYS	2.7
10	1I	57	LYS	2.7

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Mol	Chain	Res	Type	RSRZ
10	1A	10	GLY	2.7
16	7A	18	ARG	2.7
2	12	132	LYS	2.7
4	3E	97	LEU	2.7
29	39	93	LYS	2.7
27	19	55	GLY	2.7
31	59	82	GLY	2.7
29	39	92	PRO	2.7
16	7I	67	THR	2.7
27	19	206	LEU	2.7
38	65	3	ARG	2.7
41	95	68	LYS	2.7
32	69	3	VAL	2.7
28	29	134	ILE	2.7
7	62	86	GLN	2.7
17	8A	100	LYS	2.7
20	BI	29	LYS	2.7
46	E5	74	ARG	2.7
28	21	193	GLY	2.7
38	65	87	PHE	2.7
25	14	1064	C	2.7
37	55	13	HIS	2.7
8	72	97	VAL	2.7
25	14	2799	A	2.7
5	4E	80	ILE	2.7
5	4E	101	ILE	2.7
9	82	78	LYS	2.7
7	6E	77	SER	2.7
22	3K	65	C	2.7
10	1I	54	PHE	2.7
44	C5	60	PHE	2.7
32	61	118	LYS	2.7
36	45	132	VAL	2.7
54	1G	1224	G	2.7
47	J8	70	VAL	2.7
5	4E	123	LEU	2.7
25	14	2116	G	2.7
31	51	170	ARG	2.7
35	35	111	ARG	2.7
38	65	29	PHE	2.7
20	BA	26	ASN	2.7
36	45	97	VAL	2.7

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Mol	Chain	Res	Type	RSRZ
25	1H	2477	C	2.7
3	22	190	ARG	2.7
30	49	15	VAL	2.7
46	I8	76	GLY	2.7
29	39	78	ILE	2.7
20	BI	8	ARG	2.7
53	Q8	25	MET	2.7
3	22	153	VAL	2.7
8	72	132	GLU	2.7
32	61	117	GLU	2.7
5	42	133	TYR	2.7
46	I8	46	LYS	2.7
30	41	23	PHE	2.7
8	72	9	MET	2.7
15	6A	2	PRO	2.7
46	E5	61	ALA	2.7
37	98	69	ASP	2.6
8	7E	93	VAL	2.6
13	4A	100	GLY	2.6
31	59	141	VAL	2.6
9	82	95	LYS	2.6
40	C8	35	ALA	2.6
41	95	90	PRO	2.6
19	AI	71	LEU	2.6
31	59	57	ASP	2.6
36	45	89	ASN	2.6
4	3E	89	THR	2.6
9	8E	112	LYS	2.6
32	69	144	VAL	2.6
35	35	64	LYS	2.6
54	1G	963	G	2.6
5	42	94	ALA	2.6
20	BA	13	LEU	2.6
28	29	126	PRO	2.6
38	65	32	LEU	2.6
49	H5	21	ALA	2.6
57	4L	10	A	2.6
44	C5	33	LYS	2.6
9	8E	114	TYR	2.6
13	4A	87	TYR	2.6
14	5A	53	LEU	2.6
44	C5	69	ALA	2.6

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Mol	Chain	Res	Type	RSRZ
11	2I	14	VAL	2.6
54	1G	1250	A	2.6
55	3L	51	C	2.6
12	3A	64	TYR	2.6
45	D5	107	THR	2.6
30	49	23	PHE	2.6
40	85	11	ARG	2.6
4	3E	80	GLU	2.6
8	72	135	CYS	2.6
4	32	108	LEU	2.6
15	6A	31	LEU	2.6
32	69	35	LEU	2.6
9	82	76	ALA	2.6
32	69	11	ASN	2.6
34	25	33	ALA	2.6
4	3E	81	GLU	2.6
21	1B	11	GLY	2.6
20	BA	72	LEU	2.6
27	19	5	LYS	2.6
34	68	122	LEU	2.6
38	65	58	LEU	2.6
45	D5	144	LEU	2.6
17	8A	25	ARG	2.6
19	AA	80	TYR	2.6
27	19	211	ARG	2.6
54	1G	1117	G	2.6
1	13	109	A	2.6
54	1G	1248	A	2.6
1	13	1367	C	2.6
21	1F	2	GLY	2.6
23	2K	1	C	2.6
37	98	7	GLY	2.6
2	1E	187	LEU	2.6
4	32	78	LEU	2.6
25	14	1026	U	2.6
3	2E	179	ARG	2.6
8	7E	92	ARG	2.6
9	8E	77	ILE	2.6
37	98	17	ARG	2.6
30	41	80	PHE	2.6
33	58	73	THR	2.6
35	35	22	GLY	2.6

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Mol	Chain	Res	Type	RSRZ
36	45	33	GLY	2.6
44	C5	93	GLY	2.6
31	59	111	HIS	2.6
57	4L	19	A	2.6
46	E5	71	ASP	2.6
4	32	133	VAL	2.6
13	4A	26	GLY	2.6
17	8A	35	VAL	2.6
36	45	102	VAL	2.6
47	F5	32	LYS	2.6
47	J8	94	LEU	2.6
2	1E	188	ALA	2.6
38	65	7	TYR	2.6
50	M8	34	GLU	2.6
27	19	37	LEU	2.6
29	39	82	ILE	2.6
31	59	17	VAL	2.5
46	E5	77	ARG	2.5
9	82	32	ASP	2.5
54	1G	1202	G	2.5
31	59	40	GLU	2.5
31	59	167	GLU	2.5
39	75	100	TYR	2.5
9	82	40	LEU	2.5
17	8I	28	PRO	2.5
12	3I	16	GLU	2.5
14	5A	29	ARG	2.5
20	BA	15	ARG	2.5
50	I5	24	THR	2.5
30	49	160	VAL	2.5
10	1I	71	LEU	2.5
20	BI	65	LYS	2.5
21	1F	3	LYS	2.5
2	12	163	PHE	2.5
10	1I	46	ARG	2.5
33	15	108	PRO	2.5
16	7A	20	VAL	2.5
14	5A	11	LYS	2.5
37	55	10	LEU	2.5
47	F5	91	LYS	2.5
31	59	53	GLU	2.5
44	C5	48	ALA	2.5

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Mol	Chain	Res	Type	RSRZ
1	13	1325	C	2.5
41	95	85	LYS	2.5
4	32	11	LEU	2.5
42	A5	94	ASP	2.5
16	7I	24	ALA	2.5
16	7A	50	LYS	2.5
28	21	75	VAL	2.5
37	55	21	TYR	2.5
38	65	60	GLY	2.5
45	D5	113	ALA	2.5
5	42	119	LEU	2.5
20	BA	20	LEU	2.5
27	19	203	ASN	2.5
28	21	195	LEU	2.5
42	A5	19	LEU	2.5
25	14	1762	A	2.5
28	29	117	MET	2.5
5	4E	117	ASP	2.5
14	5I	29	ARG	2.5
25	1H	2118	U	2.5
46	E5	59	LEU	2.5
5	42	121	LYS	2.5
1	13	136	C	2.5
24	4K	23	A	2.5
25	14	2111	C	2.5
33	15	100	GLU	2.5
53	Q8	56	GLU	2.5
30	49	34	LEU	2.5
30	49	85	GLY	2.5
33	58	72	TYR	2.5
46	E5	22	GLY	2.5
10	1A	68	HIS	2.5
40	85	44	ASN	2.5
42	E8	113	LYS	2.5
9	8E	28	VAL	2.5
12	3A	15	ARG	2.5
13	4I	110	ARG	2.5
32	61	27	ARG	2.5
30	41	90	LEU	2.5
46	E5	42	GLY	2.5
24	4K	12	A	2.5
54	1G	1369	C	2.5

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Mol	Chain	Res	Type	RSRZ
7	62	29	LYS	2.5
41	95	73	SER	2.5
35	35	32	THR	2.5
43	B5	60	ARG	2.5
16	7A	49	LEU	2.5
42	A5	82	LEU	2.5
54	1G	878	G	2.5
37	55	6	SER	2.5
13	4A	8	GLU	2.5
30	49	155	MET	2.5
40	85	50	ARG	2.5
39	B8	104	ASN	2.5
3	22	199	LYS	2.5
21	1B	20	LYS	2.5
27	19	147	LEU	2.5
30	41	34	LEU	2.5
9	8E	49	PRO	2.5
4	32	134	ASP	2.5
7	6E	4	ARG	2.5
10	1I	66	ARG	2.5
25	1H	2112	G	2.5
25	1H	1092	C	2.4
9	82	62	TYR	2.4
32	69	36	ALA	2.4
8	7E	83	ILE	2.4
12	3A	7	ILE	2.4
28	29	191	PRO	2.4
17	8I	37	LYS	2.4
54	1G	1048	G	2.4
20	BI	17	ARG	2.4
54	1G	1236	A	2.4
48	K8	66	GLU	2.4
12	3A	18	VAL	2.4
30	49	19	LEU	2.4
31	59	107	VAL	2.4
40	85	49	HIS	2.4
16	7I	48	TRP	2.4
41	95	79	VAL	2.4
36	45	93	TYR	2.4
48	K8	13	ALA	2.4
12	3A	47	LYS	2.4
27	19	253	GLN	2.4

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Mol	Chain	Res	Type	RSRZ
46	E5	24	LYS	2.4
53	M5	16	ILE	2.4
50	I5	11	PRO	2.4
9	8E	41	VAL	2.4
40	C8	56	ASP	2.4
5	42	14	ARG	2.4
14	5A	9	LYS	2.4
16	7I	60	LEU	2.4
46	E5	75	LEU	2.4
53	M5	4	MET	2.4
20	BA	64	ASP	2.4
54	1G	60	A	2.4
28	29	155	LYS	2.4
31	59	153	LYS	2.4
36	45	36	ALA	2.4
49	H5	25	ALA	2.4
28	29	77	ILE	2.4
36	88	80	GLU	2.4
7	6E	3	ARG	2.4
13	4A	88	ARG	2.4
7	62	34	GLY	2.4
36	45	100	GLY	2.4
19	AA	35	SER	2.4
25	1H	887	A	2.4
25	1H	1762	A	2.4
55	1L	66	G	2.4
40	85	52	ARG	2.4
16	7A	22	THR	2.4
8	72	94	TYR	2.4
9	8E	12	GLU	2.4
50	I5	53	GLU	2.4
42	A5	86	LEU	2.4
14	5A	55	GLY	2.4
53	Q8	5	LYS	2.4
54	1G	966	G	2.4
3	22	124	ILE	2.4
7	62	42	ILE	2.4
13	4A	64	TRP	2.4
6	5E	48	LEU	2.4
54	1G	1354	C	2.4
17	8I	91	ARG	2.4
28	29	114	ALA	2.4

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Mol	Chain	Res	Type	RSRZ
38	65	17	ARG	2.4
1	13	1031	G	2.4
14	5I	9	LYS	2.4
16	7A	4	ILE	2.4
28	29	141	ILE	2.4
28	21	78	LEU	2.4
47	F5	92	LYS	2.4
54	1G	1367	C	2.4
30	49	35	GLU	2.4
2	12	122	PHE	2.4
5	42	15	ARG	2.4
15	6I	28	GLN	2.4
45	H8	147	GLY	2.4
31	59	3	ARG	2.4
33	58	74	ARG	2.4
5	4E	92	LYS	2.4
12	3I	7	ILE	2.4
44	G8	16	ALA	2.4
55	1L	65	C	2.4
8	7E	85	ARG	2.3
53	Q8	24	ALA	2.3
55	1L	62	G	2.3
5	42	91	LEU	2.3
28	21	5	LEU	2.3
3	22	15	THR	2.3
4	32	140	VAL	2.3
11	2A	120	ARG	2.3
36	45	6	ARG	2.3
36	45	75	THR	2.3
11	2A	118	GLY	2.3
5	42	122	GLU	2.3
31	59	34	GLU	2.3
31	59	81	GLU	2.3
9	82	94	ALA	2.3
35	78	106	LEU	2.3
3	22	176	HIS	2.3
33	15	98	VAL	2.3
20	BA	14	LYS	2.3
46	I8	69	PHE	2.3
7	6E	86	GLN	2.3
3	2E	193	TYR	2.3
9	8E	40	LEU	2.3

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Mol	Chain	Res	Type	RSRZ
38	65	12	PHE	2.3
49	H5	7	LYS	2.3
33	15	1	MET	2.3
16	7I	5	ARG	2.3
14	5A	42	ILE	2.3
54	1G	112	G	2.3
10	1I	7	LYS	2.3
16	7A	3	LYS	2.3
40	C8	34	LYS	2.3
53	M5	21	LYS	2.3
4	3E	93	PHE	2.3
4	32	79	PHE	2.3
4	32	93	PHE	2.3
25	14	1090	U	2.3
2	12	135	GLN	2.3
9	8E	10	ARG	2.3
53	M5	6	THR	2.3
3	22	193	TYR	2.3
8	7E	10	LEU	2.3
8	7E	134	ILE	2.3
30	41	75	LYS	2.3
53	Q8	8	LYS	2.3
29	39	89	VAL	2.3
31	59	43	VAL	2.3
8	72	130	GLY	2.3
36	45	73	PRO	2.3
41	D8	50	PRO	2.3
25	14	2898	U	2.3
27	19	217	ARG	2.3
8	72	119	LEU	2.3
10	1A	71	LEU	2.3
20	BA	65	LYS	2.3
35	35	62	LEU	2.3
27	19	247	ALA	2.3
49	H5	13	ILE	2.3
8	7E	137	VAL	2.3
31	59	155	SER	2.3
35	35	25	SER	2.3
33	15	90	MET	2.3
28	29	135	HIS	2.3
25	14	2713	A	2.3
28	21	89	ASP	2.3

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Mol	Chain	Res	Type	RSRZ
35	35	30	THR	2.3
8	72	26	VAL	2.3
15	6A	15	PHE	2.3
40	C8	116	ALA	2.3
42	A5	81	ALA	2.3
9	82	6	GLY	2.3
3	22	174	PRO	2.3
5	42	92	LYS	2.3
28	29	69	LYS	2.3
33	15	83	LYS	2.3
37	55	14	SER	2.3
50	I5	36	CYS	2.3
53	M5	60	LEU	2.3
36	45	20	ALA	2.3
40	C8	90	VAL	2.3
46	E5	44	ARG	2.3
30	49	133	LEU	2.3
40	C8	29	SER	2.3
46	I8	40	GLN	2.3
14	5I	30	ALA	2.3
35	35	51	PHE	2.3
36	45	96	VAL	2.3
44	C5	65	ALA	2.3
5	42	125	SER	2.3
20	BI	23	ARG	2.3
31	59	121	ILE	2.3
7	6E	39	ALA	2.3
13	4A	60	VAL	2.3
13	4A	92	HIS	2.3
28	29	113	PHE	2.3
20	BA	69	GLY	2.3
47	J8	72	GLU	2.3
25	1H	2798	C	2.3
5	4E	91	LEU	2.3
33	15	47	ALA	2.3
53	M5	57	ARG	2.2
50	I5	38	LYS	2.2
46	I8	79	VAL	2.2
47	F5	26	ARG	2.2
54	1G	994	A	2.2
1	13	108	G	2.2
35	35	71	VAL	2.2

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Mol	Chain	Res	Type	RSRZ
54	1G	1196	U	2.2
1	13	43	C	2.2
31	51	86	GLU	2.2
32	61	121	LYS	2.2
33	15	87	LEU	2.2
45	D5	5	LEU	2.2
10	1I	63	PHE	2.2
54	1G	969	A	2.2
9	8E	108	VAL	2.2
17	8A	26	GLN	2.2
38	A8	109	GLY	2.2
41	95	77	ALA	2.2
50	M8	63	TYR	2.2
13	4A	66	LEU	2.2
28	29	128	SER	2.2
32	69	12	LEU	2.2
19	AA	44	MET	2.2
8	72	6	ILE	2.2
46	E5	69	PHE	2.2
27	19	51	VAL	2.2
5	42	126	ARG	2.2
38	A8	3	ARG	2.2
40	85	3	ARG	2.2
40	85	56	ASP	2.2
16	7I	38	TYR	2.2
16	7I	69	THR	2.2
25	14	2119	A	2.2
25	1H	1094	U	2.2
28	21	52	LEU	2.2
7	62	77	SER	2.2
54	1G	230	G	2.2
41	95	82	ARG	2.2
13	4A	73	GLU	2.2
19	AA	13	ASP	2.2
25	14	2900	A	2.2
54	1G	1289	A	2.2
9	82	77	ILE	2.2
17	8A	71	PHE	2.2
30	49	178	PHE	2.2
31	51	3	ARG	2.2
46	E5	45	PHE	2.2
10	1I	73	ASP	2.2

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Mol	Chain	Res	Type	RSRZ
22	1K	83	C	2.2
40	C8	38	THR	2.2
20	BI	25	ARG	2.2
25	14	2712	U	2.2
39	75	101	PHE	2.2
8	72	137	VAL	2.2
9	8E	17	VAL	2.2
44	G8	42	VAL	2.2
54	1G	968	A	2.2
1	13	135	C	2.2
33	15	104	LYS	2.2
35	35	33	ARG	2.2
46	E5	39	ARG	2.2
27	11	18	VAL	2.2
47	J8	89	GLU	2.2
46	I8	42	GLY	2.2
5	42	31	LEU	2.2
5	42	95	ALA	2.2
9	82	38	GLN	2.2
46	E5	55	ARG	2.2
49	H5	53	LEU	2.2
14	5I	58	LYS	2.2
53	M5	8	LYS	2.2
25	14	2145	C	2.2
8	7E	136	GLU	2.2
38	65	18	ILE	2.2
47	F5	57	GLU	2.2
4	3E	135	LEU	2.2
5	4E	9	LYS	2.2
36	45	50	ALA	2.2
38	A8	7	TYR	2.2
31	51	173	PRO	2.2
4	3E	140	VAL	2.2
4	32	131	ARG	2.2
11	2A	123	LYS	2.2
22	3K	51	C	2.2
8	7E	59	LEU	2.2
11	2I	15	ALA	2.2
16	7A	39	TYR	2.2
47	F5	21	ARG	2.2
20	BI	19	SER	2.2
20	BI	59	ALA	2.2

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Mol	Chain	Res	Type	RSRZ
28	29	157	ALA	2.2
34	25	122	LEU	2.2
36	45	118	LEU	2.2
1	13	1032(A)	G	2.2
4	32	146	ILE	2.2
9	8E	63	ILE	2.2
46	I8	71	ASP	2.2
1	13	1350	A	2.2
20	BI	14	LYS	2.2
36	45	62	GLY	2.2
40	C8	59	ARG	2.2
9	82	102	LEU	2.1
1	13	307	C	2.1
54	1G	879	C	2.1
25	14	2897	U	2.1
47	F5	7	ILE	2.1
28	29	8	LYS	2.1
40	85	30	LYS	2.1
4	32	43	HIS	2.1
11	2A	117	ASN	2.1
55	1L	61	G	2.1
16	7I	49	LEU	2.1
16	7A	17	TYR	2.1
31	59	113	VAL	2.1
32	69	112	LYS	2.1
41	95	69	LYS	2.1
47	F5	27	GLU	2.1
47	F5	69	LYS	2.1
19	AA	12	ASP	2.1
27	19	223	GLY	2.1
27	19	238	GLY	2.1
1	13	327	A	2.1
4	32	76	ARG	2.1
3	22	157	ILE	2.1
8	72	95	VAL	2.1
44	C5	38	ILE	2.1
53	Q8	43	GLN	2.1
17	8A	28	PRO	2.1
44	C5	53	PRO	2.1
50	I5	45	GLY	2.1
17	8I	31	LEU	2.1
20	BI	104	LEU	2.1

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Mol	Chain	Res	Type	RSRZ
54	1G	972	C	2.1
54	1G	1066	C	2.1
28	29	70	ALA	2.1
30	49	182	LYS	2.1
44	C5	34	LYS	2.1
45	D5	109	ALA	2.1
49	H5	30	ARG	2.1
4	32	208	SER	2.1
8	7E	5	PRO	2.1
20	BI	69	GLY	2.1
31	51	87	LEU	2.1
37	98	15	SER	2.1
14	5A	15	LYS	2.1
25	14	2896	C	2.1
12	3I	127	GLU	2.1
28	29	73	GLU	2.1
36	45	35	VAL	2.1
4	32	19	LEU	2.1
9	82	39	GLY	2.1
28	29	52	LEU	2.1
20	BA	22	ARG	2.1
1	13	378	G	2.1
20	BI	76	ALA	2.1
32	69	21	VAL	2.1
50	I5	10	VAL	2.1
51	J5	59	GLU	2.1
5	42	16	THR	2.1
45	D5	69	THR	2.1
10	1I	45	ARG	2.1
18	9A	84	LYS	2.1
20	BI	62	LEU	2.1
20	BI	74	LYS	2.1
33	15	120	LEU	2.1
49	H5	17	LYS	2.1
33	15	44	PRO	2.1
29	39	97	TYR	2.1
35	35	42	SER	2.1
13	4I	8	GLU	2.1
13	4I	98	VAL	2.1
14	5A	46	GLU	2.1
34	25	81	ASP	2.1
17	8A	9	VAL	2.1

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Mol	Chain	Res	Type	RSRZ
44	C5	62	GLU	2.1
53	Q8	58	ILE	2.1
7	62	31	MET	2.1
20	BI	9	ASN	2.1
20	BI	21	LYS	2.1
20	BI	80	ARG	2.1
55	1L	17	G	2.1
30	49	25	TYR	2.1
40	85	47	TYR	2.1
2	1E	43	ASP	2.1
9	82	41	VAL	2.1
27	19	18	VAL	2.1
38	65	14	VAL	2.1
47	F5	49	VAL	2.1
15	6A	65	ARG	2.1
1	13	112	G	2.1
40	C8	89	GLU	2.1
11	2I	124	LYS	2.1
45	D5	51	ALA	2.1
14	5I	31	ARG	2.1
14	5A	45	ARG	2.1
17	8A	68	ARG	2.1
20	BI	83	ARG	2.1
27	19	212	SER	2.1
51	J5	10	LYS	2.1
36	45	47	ILE	2.1
32	69	9	LEU	2.1
20	BA	68	LYS	2.1
20	BA	80	ARG	2.1
28	29	109	LYS	2.1
45	D5	169	GLU	2.1
50	I5	62	ARG	2.1
4	32	90	GLY	2.1
16	7I	63	GLY	2.1
17	8A	6	LEU	2.1
45	H8	166	SER	2.1
25	14	2	G	2.1
25	14	2148	G	2.1
11	2A	125	PHE	2.1
4	32	207	TYR	2.1
13	4I	104	ARG	2.1
28	21	79	ARG	2.1

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Mol	Chain	Res	Type	RSRZ
31	59	6	ARG	2.1
47	J8	69	LYS	2.1
48	K8	14	ARG	2.1
8	7E	6	ILE	2.1
28	29	195	LEU	2.1
54	1G	965	A	2.1
57	4L	20	A	2.1
28	29	137	HIS	2.1
20	BA	8	ARG	2.0
33	58	84	LYS	2.0
8	72	61	VAL	2.0
50	I5	12	ALA	2.0
33	15	51	PHE	2.0
40	85	16	LYS	2.0
47	F5	23	LYS	2.0
9	8E	82	ALA	2.0
28	29	187	ALA	2.0
20	BA	84	LEU	2.0
35	35	45	LEU	2.0
36	45	15	GLY	2.0
41	D8	38	LEU	2.0
37	55	17	ARG	2.0
7	6E	103	TRP	2.0
53	Q8	23	VAL	2.0
4	3E	108	LEU	2.0
37	98	8	ARG	2.0
25	1H	254	G	2.0
12	3I	21	LYS	2.0
33	15	9	VAL	2.0
47	J8	91	LYS	2.0
49	H5	15	TYR	2.0
53	M5	23	VAL	2.0
1	13	1287	A	2.0
4	32	122	ARG	2.0
8	72	12	ARG	2.0
36	45	125	LEU	2.0
49	L8	53	LEU	2.0
25	14	229	A	2.0
36	45	19	GLY	2.0
22	1K	16	C	2.0
45	D5	108	PRO	2.0
31	51	159	GLU	2.0

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Mol	Chain	Res	Type	RSRZ
25	14	3	U	2.0
3	22	6	HIS	2.0
4	3E	68	TYR	2.0
9	82	107	ARG	2.0
13	4I	107	ALA	2.0
16	7A	55	ARG	2.0
35	35	59	LEU	2.0
1	13	625	G	2.0
1	13	1370	G	2.0
29	39	90	PHE	2.0
3	22	7	PRO	2.0
10	1A	41	PRO	2.0
25	14	1301	A	2.0
34	68	1	MET	2.0
34	25	34	THR	2.0
36	88	85	LYS	2.0
45	D5	46	LYS	2.0
8	72	60	ARG	2.0
14	5A	47	LEU	2.0
17	8A	42	TYR	2.0
32	69	5	LEU	2.0
47	F5	62	VAL	2.0

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

In the following table, the Atoms column lists the number of modelled atoms in the group and the number defined in the chemical component dictionary. LLDF column lists the quality of electron density of the group with respect to its neighbouring residues in protein, DNA or RNA chains. The B-factors column lists the minimum, median, 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	LLDF	B-factors(Å^2)	Q<0.9
23	7MG	2K	47	24/25	0.95	0.14	-	91,98,108,113	0
56	PSU	2L	56	20/21	0.90	0.10	-	110,113,122,124	0
22	OMG	1K	17	24/25	0.79	0.19	-	131,142,162,173	0
22	PSU	3K	64	20/21	0.81	0.17	-	152,161,169,173	0
22	OMG	3K	17	24/25	0.85	0.16	-	155,167,174,174	0
22	MIA	3K	38	29/30	0.94	0.18	-	107,114,119,123	0
56	5MU	2L	55	21/22	0.95	0.10	-	109,115,121,126	0
22	5MU	1K	63	21/22	0.89	0.18	-	115,124,133,139	0
56	4SU	2L	8	20/21	0.91	0.12	-	108,114,119,122	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors(Å^2)	Q<0.9
56	OMC	2L	33	21/22	0.96	0.23	-	96,98,101,111	0
22	PSU	1K	40	20/21	0.93	0.17	-	75,99,107,110	0
23	5MU	2K	55	21/22	0.97	0.15	-	92,101,109,115	0
22	4SU	1K	8	20/21	0.86	0.14	-	137,141,150,153	0
22	PSU	3K	40	20/21	0.96	0.11	-	104,112,115,117	0
22	MIA	1K	38	29/30	0.94	0.32	-	76,87,107,110	0
22	5MU	3K	63	21/22	0.80	0.20	-	141,157,163,170	0
23	4SU	2K	8	20/21	0.96	0.15	-	87,91,95,95	0
23	PSU	2K	56	20/21	0.95	0.13	-	92,97,108,110	0
23	H2U	2K	21	20/21	0.86	0.19	-	113,120,123,125	0
22	PSU	1K	64	20/21	0.90	0.17	-	116,128,135,140	0
22	4SU	3K	8	20/21	0.83	0.12	-	159,163,169,172	0
56	H2U	2L	21	20/21	0.72	0.21	-	126,132,139,144	0
22	QUO	1K	35	32/33	0.93	0.35	-	71,90,101,103	0
23	OMC	2K	33	21/22	0.96	0.27	-	70,76,81,84	0
22	QUO	3K	35	32/33	0.91	0.26	-	107,114,128,136	0

6.3 Carbohydrates (i)

There are no carbohydrates 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. LLDF column lists the quality of electron density of the group with respect to its neighbouring residues in protein, DNA or RNA chains. The B-factors column lists the minimum, median, 95th percentile and maximum values of B factors of atoms in the group. The column labelled 'Q< 0.9' lists the number of atoms with occupancy less than 0.9.

Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors(Å^2)	Q<0.9
58	MG	13	1657	1/1	0.93	0.23	33.48	74,74,74,74	0
58	MG	1H	3154	1/1	0.96	0.32	25.09	52,52,52,52	0
58	MG	1H	3231	1/1	0.82	0.31	19.32	110,110,110,110	0
58	MG	1H	3055	1/1	0.99	0.36	18.87	41,41,41,41	0
58	MG	1H	3292	1/1	0.93	0.90	17.03	50,50,50,50	0
58	MG	1H	3081	1/1	0.94	0.37	13.49	67,67,67,67	0
58	MG	1H	3347	1/1	0.88	0.31	12.98	64,64,64,64	0
58	MG	1H	3090	1/1	0.98	0.27	12.28	45,45,45,45	0
58	MG	14	3247	1/1	0.93	0.47	11.99	64,64,64,64	0
58	MG	13	1618	1/1	0.96	0.31	11.70	92,92,92,92	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors(Å^2)	Q<0.9
58	MG	1H	3350	1/1	0.97	0.35	10.70	62,62,62,62	0
58	MG	14	3319	1/1	0.83	0.34	10.70	96,96,96,96	0
58	MG	1H	3356	1/1	0.98	0.34	10.59	55,55,55,55	0
58	MG	1H	3299	1/1	0.90	0.34	9.69	60,60,60,60	0
58	MG	14	3187	1/1	0.76	0.48	9.62	88,88,88,88	0
58	MG	1H	3007	1/1	0.98	0.34	9.43	45,45,45,45	0
58	MG	14	3217	1/1	0.97	0.39	9.35	79,79,79,79	0
58	MG	13	1629	1/1	0.98	0.32	9.15	45,45,45,45	0
58	MG	1H	3338	1/1	0.79	0.31	8.48	80,80,80,80	0
58	MG	13	1718	1/1	0.89	0.29	8.40	113,113,113,113	0
58	MG	1H	3288	1/1	0.86	0.28	8.22	76,76,76,76	0
58	MG	1H	3331	1/1	0.93	0.28	8.06	72,72,72,72	0
58	MG	1H	3188	1/1	0.91	0.29	7.86	60,60,60,60	0
58	MG	13	1664	1/1	0.95	0.26	7.33	71,71,71,71	0
58	MG	1H	3051	1/1	0.99	0.38	7.31	57,57,57,57	0
58	MG	14	3274	1/1	0.92	0.47	7.18	77,77,77,77	0
58	MG	14	3244	1/1	0.96	0.42	7.04	61,61,61,61	0
58	MG	1H	3043	1/1	0.96	0.26	6.94	62,62,62,62	0
58	MG	14	3303	1/1	0.87	0.40	6.91	73,73,73,73	0
58	MG	14	3074	1/1	0.99	0.28	6.74	41,41,41,41	0
58	MG	14	3149	1/1	0.97	0.23	6.56	69,69,69,69	0
58	MG	1H	3100	1/1	0.90	0.38	6.42	46,46,46,46	0
58	MG	1H	3238	1/1	0.83	0.31	6.35	67,67,67,67	0
58	MG	14	3172	1/1	0.95	0.21	6.33	64,64,64,64	0
58	MG	1H	3197	1/1	0.87	0.23	6.11	61,61,61,61	0
58	MG	1H	3161	1/1	0.88	0.28	5.65	68,68,68,68	0
58	MG	1H	3166	1/1	0.94	0.25	5.64	58,58,58,58	0
58	MG	1G	1665	1/1	0.90	0.27	5.53	77,77,77,77	0
58	MG	14	3316	1/1	0.63	0.28	5.49	96,96,96,96	0
58	MG	13	1695	1/1	0.93	0.30	5.42	75,75,75,75	0
58	MG	14	3038	1/1	0.95	0.29	5.19	71,71,71,71	0
58	MG	16	211	1/1	0.91	0.26	5.19	80,80,80,80	0
58	MG	1H	3220	1/1	0.94	0.22	5.18	64,64,64,64	0
58	MG	16	201	1/1	0.95	0.23	5.05	75,75,75,75	0
58	MG	14	3186	1/1	0.95	0.27	4.78	65,65,65,65	0
58	MG	14	3160	1/1	0.97	0.19	4.66	80,80,80,80	0
58	MG	13	1705	1/1	0.92	0.32	4.62	127,127,127,127	0
58	MG	14	3281	1/1	0.94	0.63	4.57	67,67,67,67	0
58	MG	1H	3085	1/1	0.95	0.33	4.52	48,48,48,48	0
58	MG	16	206	1/1	0.93	0.18	4.46	78,78,78,78	0
58	MG	14	3227	1/1	0.97	0.29	4.24	51,51,51,51	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors(Å^2)	Q<0.9
58	MG	14	3073	1/1	0.98	0.30	4.12	37,37,37,37	0
58	MG	14	3176	1/1	0.88	0.20	4.08	71,71,71,71	0
58	MG	1H	3263	1/1	0.77	0.20	3.82	61,61,61,61	0
58	MG	2K	103	1/1	0.51	0.22	3.54	80,80,80,80	0
58	MG	14	3022	1/1	0.95	0.28	3.51	80,80,80,80	0
58	MG	1H	3025	1/1	0.97	0.28	3.50	47,47,47,47	0
58	MG	1H	3016	1/1	0.99	0.29	3.47	45,45,45,45	0
58	MG	1H	3070	1/1	0.92	0.26	3.46	55,55,55,55	0
58	MG	1H	3121	1/1	0.97	0.26	3.37	41,41,41,41	0
58	MG	14	3148	1/1	0.90	0.20	3.28	79,79,79,79	0
58	MG	1H	3199	1/1	0.93	0.26	3.22	63,63,63,63	0
58	MG	1G	1647	1/1	0.87	0.27	3.09	83,83,83,83	0
58	MG	14	3072	1/1	0.97	0.30	3.02	56,56,56,56	0
59	ZN	3E	302	1/1	0.98	0.37	2.94	89,89,89,89	0
58	MG	1H	3162	1/1	0.97	0.39	2.93	57,57,57,57	0
58	MG	1H	3054	1/1	0.99	0.27	2.93	57,57,57,57	0
58	MG	1H	3164	1/1	0.88	0.23	2.91	78,78,78,78	0
58	MG	1H	3261	1/1	0.70	0.24	2.87	66,66,66,66	0
58	MG	1H	3342	1/1	0.84	0.23	2.65	70,70,70,70	0
58	MG	14	3065	1/1	0.99	0.29	2.58	39,39,39,39	0
58	MG	1H	3053	1/1	0.95	0.28	2.57	33,33,33,33	0
58	MG	14	3222	1/1	0.91	0.26	2.55	58,58,58,58	0
58	MG	13	1636	1/1	0.98	0.22	2.44	65,65,65,65	0
58	MG	1H	3206	1/1	0.95	0.22	2.41	65,65,65,65	0
58	MG	1H	3204	1/1	0.93	0.24	2.16	72,72,72,72	0
58	MG	1H	3066	1/1	0.89	0.23	2.12	71,71,71,71	0
58	MG	1H	3258	1/1	0.90	0.25	2.02	55,55,55,55	0
58	MG	14	3087	1/1	0.92	0.23	2.01	41,41,41,41	0
58	MG	13	1661	1/1	0.97	0.29	2.00	82,82,82,82	0
58	MG	14	3122	1/1	0.97	0.24	1.96	54,54,54,54	0
58	MG	1H	3074	1/1	0.84	0.25	1.84	58,58,58,58	0
58	MG	1H	3117	1/1	0.95	0.30	1.79	54,54,54,54	0
58	MG	1H	3052	1/1	0.92	0.24	1.72	63,63,63,63	0
58	MG	1H	3015	1/1	0.99	0.27	1.71	46,46,46,46	0
59	ZN	32	301	1/1	0.99	0.34	1.33	103,103,103,103	0
58	MG	14	3032	1/1	0.98	0.22	1.29	54,54,54,54	0
58	MG	16	205	1/1	0.80	0.19	1.22	87,87,87,87	0
58	MG	1G	1651	1/1	0.97	0.25	1.19	71,71,71,71	0
58	MG	13	1625	1/1	0.94	0.25	1.15	58,58,58,58	0
58	MG	1H	3125	1/1	0.93	0.24	1.12	46,46,46,46	0
58	MG	14	3306	1/1	0.71	0.23	1.04	66,66,66,66	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors(Å^2)	Q<0.9
58	MG	14	3002	1/1	0.97	0.21	1.04	43,43,43,43	0
58	MG	1H	3133	1/1	0.94	0.21	1.02	43,43,43,43	0
58	MG	14	3109	1/1	0.97	0.21	1.02	60,60,60,60	0
58	MG	1H	3101	1/1	0.96	0.25	0.99	30,30,30,30	0
58	MG	1H	3031	1/1	0.97	0.23	0.94	60,60,60,60	0
58	MG	14	3322	1/1	0.89	0.18	0.92	73,73,73,73	0
58	MG	14	3246	1/1	0.97	0.21	0.91	76,76,76,76	0
58	MG	14	3224	1/1	0.92	0.28	0.89	59,59,59,59	0
58	MG	31	301	1/1	0.87	0.23	0.86	56,56,56,56	0
58	MG	13	1688	1/1	0.89	0.19	0.83	101,101,101,101	0
58	MG	13	1643	1/1	0.99	0.22	0.83	50,50,50,50	0
58	MG	1H	3116	1/1	0.95	0.21	0.79	52,52,52,52	0
58	MG	14	3108	1/1	0.92	0.20	0.76	55,55,55,55	0
58	MG	1H	3037	1/1	0.94	0.20	0.76	47,47,47,47	0
58	MG	1H	3215	1/1	0.91	0.20	0.73	52,52,52,52	0
58	MG	14	3103	1/1	0.99	0.22	0.68	36,36,36,36	0
58	MG	1H	3073	1/1	0.93	0.26	0.59	52,52,52,52	0
58	MG	13	1623	1/1	0.98	0.26	0.52	56,56,56,56	0
58	MG	1H	3137	1/1	0.86	0.21	0.51	49,49,49,49	0
58	MG	13	1638	1/1	0.92	0.22	0.50	78,78,78,78	0
58	MG	14	3088	1/1	0.97	0.20	0.49	47,47,47,47	0
58	MG	1H	3077	1/1	0.96	0.22	0.48	47,47,47,47	0
58	MG	1H	3144	1/1	0.97	0.26	0.45	47,47,47,47	0
58	MG	13	1650	1/1	0.85	0.30	0.41	76,76,76,76	0
58	MG	1H	3349	1/1	0.90	0.20	0.38	62,62,62,62	0
58	MG	13	1607	1/1	0.97	0.23	0.37	69,69,69,69	0
58	MG	14	3104	1/1	0.97	0.26	0.36	42,42,42,42	0
58	MG	85	201	1/1	0.93	0.29	0.36	64,64,64,64	0
59	ZN	G8	201	1/1	0.73	0.33	0.36	185,185,185,185	0
58	MG	1H	3131	1/1	0.94	0.21	0.32	60,60,60,60	0
58	MG	14	3396	1/1	0.95	0.29	0.31	75,75,75,75	0
58	MG	1H	3139	1/1	0.94	0.19	0.24	48,48,48,48	0
58	MG	1G	1644	1/1	0.96	0.20	0.22	83,83,83,83	0
58	MG	1G	1619	1/1	0.97	0.18	0.21	88,88,88,88	0
58	MG	1H	3286	1/1	0.94	0.25	0.21	67,67,67,67	0
58	MG	14	3254	1/1	0.76	0.21	0.19	94,94,94,94	0
58	MG	3E	301	1/1	0.70	0.24	0.18	115,115,115,115	0
58	MG	14	3083	1/1	0.97	0.22	0.14	58,58,58,58	0
58	MG	1H	3018	1/1	0.96	0.29	0.09	48,48,48,48	0
58	MG	1G	1677	1/1	0.80	0.18	0.07	99,99,99,99	0
58	MG	14	3028	1/1	0.95	0.15	0.07	76,76,76,76	0
58	MG	14	3094	1/1	0.98	0.21	0.02	40,40,40,40	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors(Å^2)	Q<0.9
58	MG	1H	3096	1/1	0.98	0.21	-0.03	40,40,40,40	0
58	MG	1H	3124	1/1	0.99	0.20	-0.03	43,43,43,43	0
58	MG	13	1601	1/1	0.98	0.21	-0.04	59,59,59,59	0
58	MG	13	1617	1/1	0.98	0.27	-0.04	87,87,87,87	0
58	MG	1H	3165	1/1	0.93	0.20	-0.17	68,68,68,68	0
58	MG	1G	1601	1/1	0.98	0.22	-0.20	77,77,77,77	0
58	MG	1H	3058	1/1	0.98	0.23	-0.23	50,50,50,50	0
58	MG	13	1622	1/1	0.82	0.17	-0.28	64,64,64,64	0
58	MG	1H	3036	1/1	0.79	0.17	-0.30	67,67,67,67	0
58	MG	14	3282	1/1	0.96	0.25	-0.30	62,62,62,62	0
58	MG	14	3077	1/1	0.94	0.21	-0.34	68,68,68,68	0
58	MG	1J	206	1/1	0.93	0.14	-0.36	109,109,109,109	0
58	MG	98	202	1/1	0.92	0.20	-0.37	90,90,90,90	0
58	MG	14	3025	1/1	0.94	0.20	-0.40	79,79,79,79	0
58	MG	14	3079	1/1	0.97	0.20	-0.42	55,55,55,55	0
58	MG	14	3085	1/1	0.67	0.32	-0.43	59,59,59,59	0
58	MG	29	303	1/1	0.86	0.25	-0.49	63,63,63,63	0
58	MG	14	3018	1/1	0.98	0.16	-0.51	79,79,79,79	0
58	MG	1G	1655	1/1	0.90	0.18	-0.51	112,112,112,112	0
58	MG	14	3067	1/1	0.98	0.20	-0.53	54,54,54,54	0
58	MG	1H	3009	1/1	0.97	0.23	-0.54	42,42,42,42	0
58	MG	2L	101	1/1	0.95	0.19	-0.56	69,69,69,69	0
58	MG	29	302	1/1	0.61	0.26	-0.56	68,68,68,68	0
58	MG	1H	3034	1/1	0.98	0.22	-0.58	71,71,71,71	0
58	MG	1H	3091	1/1	0.92	0.21	-0.59	62,62,62,62	0
58	MG	1H	3149	1/1	0.97	0.21	-0.60	42,42,42,42	0
58	MG	1H	3418	1/1	0.91	0.19	-0.61	52,52,52,52	0
58	MG	1G	1666	1/1	0.74	0.21	-0.63	117,117,117,117	0
58	MG	1H	3147	1/1	0.99	0.20	-0.64	57,57,57,57	0
58	MG	14	3011	1/1	0.94	0.18	-0.65	48,48,48,48	0
58	MG	1J	201	1/1	0.97	0.16	-0.66	100,100,100,100	0
59	ZN	5I	101	1/1	0.99	0.18	-0.71	88,88,88,88	0
58	MG	1H	3038	1/1	0.96	0.16	-0.71	46,46,46,46	0
58	MG	13	1639	1/1	0.89	0.17	-0.71	69,69,69,69	0
58	MG	13	1710	1/1	0.82	0.20	-0.74	77,77,77,77	0
59	ZN	C5	202	1/1	0.80	0.15	-0.77	194,194,194,194	0
58	MG	13	1698	1/1	0.76	0.17	-0.79	83,83,83,83	0
58	MG	1H	3213	1/1	0.92	0.18	-0.81	63,63,63,63	0
58	MG	13	1606	1/1	0.96	0.17	-0.83	70,70,70,70	0
58	MG	14	3003	1/1	0.98	0.19	-0.83	49,49,49,49	0
58	MG	14	3191	1/1	0.98	0.22	-0.86	66,66,66,66	0
58	MG	14	3334	1/1	0.95	0.18	-0.86	48,48,48,48	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors(Å^2)	Q<0.9
58	MG	1H	3020	1/1	0.97	0.22	-0.87	38,38,38,38	0
58	MG	1H	3241	1/1	0.93	0.18	-0.88	65,65,65,65	0
58	MG	1G	1646	1/1	0.95	0.20	-0.90	117,117,117,117	0
58	MG	14	3066	1/1	0.98	0.18	-0.95	54,54,54,54	0
58	MG	14	3155	1/1	0.93	0.17	-0.96	57,57,57,57	0
58	MG	1G	1642	1/1	0.94	0.12	-0.96	80,80,80,80	0
58	MG	1G	1687	1/1	0.83	0.08	-0.97	106,106,106,106	0
58	MG	14	3293	1/1	0.90	0.13	-0.98	71,71,71,71	0
58	MG	14	3092	1/1	0.96	0.16	-0.99	59,59,59,59	0
58	MG	13	1686	1/1	0.95	0.17	-1.01	89,89,89,89	0
58	MG	14	3218	1/1	0.97	0.16	-1.02	89,89,89,89	0
58	MG	2K	101	1/1	0.99	0.21	-1.03	55,55,55,55	0
58	MG	14	3121	1/1	0.98	0.16	-1.04	64,64,64,64	0
58	MG	14	3033	1/1	0.98	0.15	-1.04	56,56,56,56	0
58	MG	1H	3028	1/1	0.98	0.18	-1.04	51,51,51,51	0
58	MG	1G	1617	1/1	0.97	0.16	-1.05	96,96,96,96	0
58	MG	14	3236	1/1	0.95	0.11	-1.05	71,71,71,71	0
58	MG	13	1694	1/1	0.86	0.15	-1.05	82,82,82,82	0
58	MG	1H	3021	1/1	0.97	0.20	-1.06	43,43,43,43	0
58	MG	14	3061	1/1	0.97	0.23	-1.06	43,43,43,43	0
58	MG	13	1723	1/1	0.77	0.14	-1.06	77,77,77,77	0
58	MG	1H	3087	1/1	0.93	0.16	-1.07	61,61,61,61	0
58	MG	14	3219	1/1	0.95	0.13	-1.07	68,68,68,68	0
59	ZN	5A	101	1/1	0.93	0.13	-1.08	132,132,132,132	0
58	MG	14	3315	1/1	0.92	0.16	-1.10	67,67,67,67	0
58	MG	14	3253	1/1	0.94	0.14	-1.12	83,83,83,83	0
58	MG	14	3382	1/1	0.94	0.14	-1.14	60,60,60,60	0
58	MG	1H	3169	1/1	0.91	0.17	-1.15	58,58,58,58	0
58	MG	14	3152	1/1	0.98	0.18	-1.16	72,72,72,72	0
58	MG	14	3045	1/1	0.97	0.16	-1.16	44,44,44,44	0
58	MG	14	3263	1/1	0.92	0.12	-1.17	84,84,84,84	0
58	MG	1H	3190	1/1	0.94	0.16	-1.20	50,50,50,50	0
58	MG	14	3137	1/1	0.98	0.19	-1.22	65,65,65,65	0
58	MG	1H	3041	1/1	0.94	0.14	-1.22	51,51,51,51	0
58	MG	1G	1654	1/1	0.77	0.16	-1.24	110,110,110,110	0
58	MG	1G	1625	1/1	0.87	0.20	-1.24	90,90,90,90	0
58	MG	1H	3175	1/1	0.62	0.17	-1.24	58,58,58,58	0
58	MG	14	3183	1/1	0.94	0.13	-1.27	60,60,60,60	0
58	MG	14	3359	1/1	0.84	0.19	-1.28	73,73,73,73	0
58	MG	1G	1620	1/1	0.80	0.14	-1.29	91,91,91,91	0
58	MG	1H	3194	1/1	0.92	0.20	-1.30	55,55,55,55	0
58	MG	14	3211	1/1	0.94	0.16	-1.31	60,60,60,60	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors(Å^2)	Q<0.9
58	MG	21	302	1/1	0.88	0.18	-1.32	69,69,69,69	0
58	MG	1H	3150	1/1	0.92	0.17	-1.34	48,48,48,48	0
58	MG	13	1728	1/1	0.83	0.06	-1.35	101,101,101,101	0
58	MG	1H	3227	1/1	0.95	0.15	-1.38	63,63,63,63	0
58	MG	13	1662	1/1	0.88	0.09	-1.42	81,81,81,81	0
58	MG	1H	3098	1/1	0.91	0.17	-1.43	44,44,44,44	0
58	MG	13	1605	1/1	0.98	0.11	-1.44	77,77,77,77	0
58	MG	14	3114	1/1	0.97	0.20	-1.44	65,65,65,65	0
58	MG	14	3013	1/1	0.99	0.18	-1.46	56,56,56,56	0
58	MG	14	3024	1/1	0.96	0.14	-1.49	70,70,70,70	0
58	MG	14	3285	1/1	0.95	0.18	-1.51	74,74,74,74	0
58	MG	1H	3262	1/1	0.80	0.17	-1.52	56,56,56,56	0
58	MG	14	3054	1/1	0.99	0.15	-1.58	48,48,48,48	0
58	MG	13	1609	1/1	0.98	0.19	-1.58	72,72,72,72	0
58	MG	1H	3064	1/1	0.87	0.18	-1.58	55,55,55,55	0
58	MG	1H	3002	1/1	0.99	0.19	-1.59	38,38,38,38	0
58	MG	14	3245	1/1	0.86	0.14	-1.60	69,69,69,69	0
58	MG	1H	3141	1/1	0.90	0.10	-1.66	70,70,70,70	0
58	MG	1H	3193	1/1	0.94	0.18	-1.68	52,52,52,52	0
58	MG	1H	3014	1/1	0.95	0.18	-1.69	33,33,33,33	0
58	MG	11	301	1/1	0.89	0.22	-1.69	39,39,39,39	0
58	MG	1H	3432	1/1	0.89	0.12	-1.73	77,77,77,77	0
58	MG	14	3133	1/1	0.90	0.13	-1.73	58,58,58,58	0
58	MG	1H	3395	1/1	0.98	0.17	-1.76	40,40,40,40	0
58	MG	1G	1616	1/1	0.86	0.14	-1.79	56,56,56,56	0
58	MG	1G	1602	1/1	0.96	0.21	-1.80	64,64,64,64	0
58	MG	31	303	1/1	0.81	0.15	-1.81	63,63,63,63	0
58	MG	14	3250	1/1	0.89	0.15	-1.82	70,70,70,70	0
58	MG	14	3042	1/1	0.98	0.18	-1.82	46,46,46,46	0
58	MG	14	3041	1/1	0.98	0.12	-1.82	35,35,35,35	0
58	MG	39	301	1/1	0.80	0.12	-1.88	60,60,60,60	0
58	MG	1G	1607	1/1	0.95	0.08	-1.90	92,92,92,92	0
58	MG	14	3203	1/1	0.96	0.23	-1.90	47,47,47,47	0
58	MG	14	3238	1/1	0.87	0.14	-1.94	83,83,83,83	0
58	MG	16	204	1/1	0.81	0.12	-1.97	75,75,75,75	0
58	MG	1H	3123	1/1	0.95	0.10	-1.98	32,32,32,32	0
58	MG	14	3053	1/1	0.94	0.12	-2.08	57,57,57,57	0
58	MG	14	3362	1/1	0.94	0.17	-2.10	70,70,70,70	0
58	MG	1H	3433	1/1	0.83	0.12	-2.11	53,53,53,53	0
58	MG	14	3208	1/1	0.92	0.16	-2.14	58,58,58,58	0
58	MG	1H	3274	1/1	0.95	0.14	-2.15	59,59,59,59	0
58	MG	13	1724	1/1	0.95	0.07	-2.15	87,87,87,87	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors(Å^2)	Q<0.9
58	MG	14	3016	1/1	0.97	0.15	-2.16	53,53,53,53	0
58	MG	14	3332	1/1	0.95	0.14	-2.17	62,62,62,62	0
58	MG	14	3336	1/1	0.92	0.11	-2.18	48,48,48,48	0
58	MG	13	1633	1/1	0.91	0.16	-2.19	54,54,54,54	0
58	MG	14	3329	1/1	0.92	0.10	-2.19	56,56,56,56	0
58	MG	14	3207	1/1	0.96	0.17	-2.19	53,53,53,53	0
58	MG	1H	3371	1/1	0.97	0.16	-2.23	59,59,59,59	0
58	MG	14	3387	1/1	0.74	0.09	-2.26	86,86,86,86	0
58	MG	14	3351	1/1	0.98	0.17	-2.27	60,60,60,60	0
58	MG	1H	3118	1/1	0.98	0.17	-2.27	36,36,36,36	0
58	MG	14	3142	1/1	0.83	0.17	-2.27	62,62,62,62	0
58	MG	1H	3146	1/1	0.93	0.16	-2.27	62,62,62,62	0
58	MG	13	1719	1/1	0.88	0.11	-2.28	89,89,89,89	0
58	MG	14	3043	1/1	0.99	0.21	-2.29	47,47,47,47	0
58	MG	14	3178	1/1	0.92	0.10	-2.29	85,85,85,85	0
58	MG	1H	3102	1/1	0.95	0.18	-2.29	44,44,44,44	0
58	MG	16	210	1/1	0.97	0.14	-2.32	63,63,63,63	0
58	MG	13	1691	1/1	0.98	0.14	-2.34	71,71,71,71	0
58	MG	14	3140	1/1	0.77	0.13	-2.37	61,61,61,61	0
58	MG	14	3204	1/1	0.88	0.14	-2.39	48,48,48,48	0
58	MG	1H	3156	1/1	0.96	0.16	-2.41	44,44,44,44	0
58	MG	1H	3449	1/1	0.97	0.08	-2.41	74,74,74,74	0
58	MG	14	3369	1/1	0.96	0.12	-2.41	69,69,69,69	0
58	MG	14	3075	1/1	0.99	0.19	-2.43	53,53,53,53	0
58	MG	14	3328	1/1	0.97	0.16	-2.48	55,55,55,55	0
58	MG	1H	3275	1/1	0.91	0.14	-2.52	53,53,53,53	0
58	MG	1H	3273	1/1	0.94	0.12	-2.52	66,66,66,66	0
58	MG	1G	1614	1/1	0.97	0.17	-2.53	73,73,73,73	0
58	MG	14	3124	1/1	0.93	0.15	-2.55	43,43,43,43	0
58	MG	14	3230	1/1	0.94	0.12	-2.55	63,63,63,63	0
58	MG	13	1656	1/1	0.91	0.13	-2.59	72,72,72,72	0
58	MG	13	1644	1/1	0.98	0.14	-2.71	56,56,56,56	0
58	MG	14	3350	1/1	0.95	0.13	-2.71	61,61,61,61	0
58	MG	1H	3417	1/1	0.94	0.12	-2.75	51,51,51,51	0
58	MG	1H	3076	1/1	0.98	0.15	-2.75	53,53,53,53	0
58	MG	14	3384	1/1	0.83	0.10	-2.79	71,71,71,71	0
58	MG	1H	3112	1/1	0.86	0.14	-2.81	33,33,33,33	0
58	MG	31	304	1/1	0.91	0.11	-2.83	48,48,48,48	0
58	MG	1H	3389	1/1	0.97	0.10	-2.83	49,49,49,49	0
58	MG	1G	1686	1/1	0.92	0.09	-2.88	83,83,83,83	0
58	MG	1H	3006	1/1	0.95	0.14	-2.91	42,42,42,42	0
58	MG	1G	1641	1/1	0.91	0.09	-2.92	94,94,94,94	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors(Å^2)	Q<0.9
58	MG	1H	3067	1/1	0.99	0.15	-2.92	53,53,53,53	0
58	MG	1H	3168	1/1	0.88	0.17	-2.92	64,64,64,64	0
58	MG	14	3209	1/1	0.94	0.12	-2.94	63,63,63,63	0
58	MG	1H	3253	1/1	0.78	0.15	-2.95	47,47,47,47	0
58	MG	14	3029	1/1	0.92	0.11	-2.96	77,77,77,77	0
58	MG	1H	3042	1/1	0.98	0.17	-2.97	48,48,48,48	0
58	MG	13	1645	1/1	0.94	0.14	-2.97	65,65,65,65	0
58	MG	1G	1609	1/1	0.95	0.14	-2.98	81,81,81,81	0
58	MG	1H	3348	1/1	0.90	0.15	-2.99	64,64,64,64	0
58	MG	1H	3011	1/1	0.97	0.19	-3.01	50,50,50,50	0
58	MG	14	3050	1/1	0.94	0.16	-3.04	55,55,55,55	0
58	MG	1G	1689	1/1	0.71	0.08	-3.05	108,108,108,108	0
58	MG	14	3040	1/1	0.96	0.17	-3.06	61,61,61,61	0
58	MG	13	1697	1/1	0.93	0.13	-3.11	90,90,90,90	0
58	MG	1H	3128	1/1	0.85	0.17	-3.17	46,46,46,46	0
58	MG	14	3358	1/1	0.95	0.12	-3.21	51,51,51,51	0
58	MG	1H	3319	1/1	0.92	0.19	-3.23	50,50,50,50	0
58	MG	13	1733	1/1	0.98	0.10	-3.27	61,61,61,61	0
58	MG	14	3019	1/1	0.97	0.13	-3.28	69,69,69,69	0
58	MG	1H	3095	1/1	0.92	0.15	-3.33	47,47,47,47	0
58	MG	14	3339	1/1	0.97	0.09	-3.34	60,60,60,60	0
58	MG	1H	3114	1/1	0.99	0.16	-3.36	40,40,40,40	0
58	MG	14	3132	1/1	0.83	0.08	-3.38	64,64,64,64	0
58	MG	1H	3386	1/1	0.96	0.16	-3.40	39,39,39,39	0
58	MG	13	1729	1/1	0.93	0.08	-3.47	85,85,85,85	0
58	MG	14	3280	1/1	0.94	0.13	-3.48	51,51,51,51	0
58	MG	14	3380	1/1	0.90	0.09	-3.49	90,90,90,90	0
58	MG	1H	3384	1/1	0.95	0.13	-3.55	38,38,38,38	0
58	MG	1G	1683	1/1	0.96	0.11	-3.63	81,81,81,81	0
58	MG	14	3232	1/1	0.93	0.13	-3.65	73,73,73,73	0
58	MG	14	3333	1/1	0.98	0.21	-3.71	54,54,54,54	0
58	MG	3I	201	1/1	0.86	0.09	-3.75	59,59,59,59	0
58	MG	1H	3455	1/1	0.94	0.13	-3.84	58,58,58,58	0
58	MG	13	1721	1/1	0.81	0.12	-3.91	59,59,59,59	0
58	MG	1G	1684	1/1	0.95	0.08	-3.94	81,81,81,81	0
58	MG	14	3058	1/1	0.99	0.20	-4.08	61,61,61,61	0
58	MG	1H	3404	1/1	0.86	0.12	-4.15	56,56,56,56	0
58	MG	14	3242	1/1	0.98	0.12	-4.19	55,55,55,55	0
58	MG	14	3348	1/1	0.97	0.07	-4.20	42,42,42,42	0
58	MG	14	3117	1/1	0.94	0.11	-4.24	52,52,52,52	0
58	MG	1H	3420	1/1	0.99	0.14	-4.30	37,37,37,37	0
58	MG	13	1682	1/1	0.82	0.11	-4.35	78,78,78,78	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors(Å^2)	Q<0.9
58	MG	1H	3388	1/1	0.96	0.14	-4.40	39,39,39,39	0
58	MG	1H	3421	1/1	0.98	0.10	-4.50	43,43,43,43	0
58	MG	1H	3099	1/1	0.94	0.15	-4.53	37,37,37,37	0
58	MG	14	3312	1/1	0.97	0.09	-4.56	89,89,89,89	0
58	MG	14	3089	1/1	0.87	0.08	-4.58	72,72,72,72	0
58	MG	14	3213	1/1	0.94	0.13	-4.61	55,55,55,55	0
58	MG	14	3364	1/1	0.98	0.11	-4.62	45,45,45,45	0
58	MG	14	3039	1/1	0.97	0.14	-4.63	45,45,45,45	0
58	MG	1H	3394	1/1	0.94	0.15	-4.72	47,47,47,47	0
58	MG	14	3372	1/1	0.97	0.08	-4.72	59,59,59,59	0
58	MG	1H	3109	1/1	0.94	0.15	-4.87	37,37,37,37	0
58	MG	14	3036	1/1	0.86	0.12	-4.99	74,74,74,74	0
58	MG	1H	3434	1/1	0.98	0.12	-5.09	42,42,42,42	0
58	MG	13	1674	1/1	0.89	0.09	-5.10	81,81,81,81	0
58	MG	1H	3392	1/1	0.96	0.10	-5.13	60,60,60,60	0
58	MG	14	3340	1/1	0.95	0.15	-5.16	60,60,60,60	0
58	MG	14	3113	1/1	0.97	0.10	-5.22	46,46,46,46	0
58	MG	1H	3447	1/1	0.89	0.14	-5.23	47,47,47,47	0
58	MG	1H	3368	1/1	0.96	0.15	-5.28	72,72,72,72	0
58	MG	1H	3307	1/1	0.97	0.12	-5.37	64,64,64,64	0
58	MG	14	3006	1/1	0.97	0.13	-5.46	46,46,46,46	0
58	MG	13	1677	1/1	0.73	0.11	-5.52	59,59,59,59	0
58	MG	1H	3414	1/1	0.93	0.10	-5.61	50,50,50,50	0
58	MG	1H	3405	1/1	0.95	0.10	-5.62	41,41,41,41	0
58	MG	14	3371	1/1	0.96	0.08	-5.74	59,59,59,59	0
58	MG	14	3353	1/1	0.97	0.06	-5.75	57,57,57,57	0
58	MG	1H	3221	1/1	0.76	0.15	-5.78	69,69,69,69	0
58	MG	1H	3453	1/1	0.86	0.13	-5.78	51,51,51,51	0
58	MG	14	3136	1/1	0.95	0.11	-5.78	50,50,50,50	0
58	MG	1H	3466	1/1	0.98	0.12	-5.83	51,51,51,51	0
58	MG	1H	3448	1/1	0.99	0.12	-5.84	50,50,50,50	0
58	MG	14	3237	1/1	0.96	0.11	-5.87	48,48,48,48	0
58	MG	14	3395	1/1	0.96	0.08	-5.89	64,64,64,64	0
58	MG	1H	3465	1/1	0.84	0.09	-5.96	87,87,87,87	0
58	MG	1H	3180	1/1	0.92	0.14	-6.06	63,63,63,63	0
58	MG	1H	3001	1/1	0.97	0.15	-6.07	44,44,44,44	0
58	MG	1H	3452	1/1	0.89	0.07	-6.18	71,71,71,71	0
58	MG	14	3361	1/1	0.97	0.08	-6.55	52,52,52,52	0
58	MG	13	1632	1/1	0.94	0.10	-6.74	45,45,45,45	0
58	MG	14	3342	1/1	0.95	0.10	-6.77	51,51,51,51	0
58	MG	14	3360	1/1	0.98	0.07	-6.79	55,55,55,55	0
58	MG	1H	3413	1/1	0.96	0.07	-6.81	40,40,40,40	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors(Å^2)	Q<0.9
58	MG	1G	1603	1/1	0.91	0.12	-6.91	71,71,71,71	0
58	MG	1H	3443	1/1	0.99	0.12	-7.09	55,55,55,55	0
58	MG	1H	3424	1/1	0.98	0.08	-7.29	48,48,48,48	0
58	MG	1H	3412	1/1	0.97	0.10	-7.30	48,48,48,48	0
58	MG	1H	3255	1/1	0.96	0.12	-7.34	40,40,40,40	0
58	MG	1H	3252	1/1	0.97	0.11	-7.51	36,36,36,36	0
58	MG	1H	3445	1/1	0.99	0.11	-7.86	40,40,40,40	0
58	MG	14	3331	1/1	0.98	0.09	-8.01	53,53,53,53	0
58	MG	13	1689	1/1	0.98	0.10	-8.19	70,70,70,70	0
58	MG	1H	3390	1/1	0.95	0.09	-8.35	41,41,41,41	0
58	MG	1H	3401	1/1	0.97	0.10	-8.44	71,71,71,71	0
58	MG	1H	3430	1/1	0.95	0.06	-8.47	69,69,69,69	0
58	MG	14	3311	1/1	0.95	0.14	-8.80	66,66,66,66	0
58	MG	14	3335	1/1	0.90	0.11	-8.94	71,71,71,71	0
58	MG	13	1726	1/1	0.96	0.10	-9.38	75,75,75,75	0
58	MG	1H	3402	1/1	0.94	0.07	-9.69	58,58,58,58	0
58	MG	13	1651	1/1	0.89	0.11	-10.48	63,63,63,63	0
58	MG	1H	3460	1/1	0.95	0.12	-10.62	53,53,53,53	0
58	MG	1H	3044	1/1	0.93	0.15	-10.87	50,50,50,50	0
58	MG	14	3389	1/1	0.87	0.09	-11.26	73,73,73,73	0
58	MG	1H	3422	1/1	0.95	0.13	-11.73	63,63,63,63	0
58	MG	14	3343	1/1	0.97	0.08	-13.42	49,49,49,49	0
58	MG	1H	3459	1/1	0.99	0.07	-14.63	65,65,65,65	0
58	MG	1H	3472	1/1	0.98	0.07	-16.89	75,75,75,75	0
58	MG	14	3059	1/1	0.90	0.40	-	65,65,65,65	0
58	MG	1H	3235	1/1	0.97	0.12	-	53,53,53,53	0
58	MG	1H	3071	1/1	0.89	0.27	-	52,52,52,52	0
58	MG	1H	3446	1/1	0.94	0.07	-	60,60,60,60	0
58	MG	1H	3191	1/1	0.91	0.14	-	68,68,68,68	0
58	MG	13	1670	1/1	0.83	0.19	-	86,86,86,86	0
58	MG	1H	3357	1/1	0.78	0.38	-	86,86,86,86	0
58	MG	1G	1667	1/1	0.90	0.14	-	84,84,84,84	0
58	MG	14	3081	1/1	0.97	0.18	-	52,52,52,52	0
58	MG	1H	3259	1/1	0.96	0.19	-	46,46,46,46	0
58	MG	16	203	1/1	0.81	0.36	-	77,77,77,77	0
58	MG	1H	3475	1/1	0.84	0.13	-	95,95,95,95	0
58	MG	14	3266	1/1	0.91	0.22	-	72,72,72,72	0
58	MG	14	3295	1/1	0.80	0.19	-	80,80,80,80	0
58	MG	14	3177	1/1	0.93	0.13	-	70,70,70,70	0
58	MG	1G	1610	1/1	0.90	0.17	-	95,95,95,95	0
58	MG	13	1714	1/1	0.81	0.36	-	95,95,95,95	0
58	MG	14	3168	1/1	0.86	0.28	-	79,79,79,79	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors(Å^2)	Q<0.9
58	MG	1H	3271	1/1	0.89	0.35	-	77,77,77,77	0
58	MG	14	3116	1/1	0.97	0.12	-	57,57,57,57	0
58	MG	13	1653	1/1	0.81	0.15	-	84,84,84,84	0
58	MG	1H	3093	1/1	0.98	0.39	-	38,38,38,38	0
58	MG	14	3095	1/1	0.93	0.11	-	52,52,52,52	0
58	MG	1H	3065	1/1	0.96	0.19	-	72,72,72,72	0
58	MG	1H	3171	1/1	0.89	0.43	-	89,89,89,89	0
58	MG	1H	3195	1/1	0.84	0.28	-	80,80,80,80	0
58	MG	1G	1636	1/1	0.84	0.24	-	85,85,85,85	0
58	MG	1H	3391	1/1	0.95	0.08	-	47,47,47,47	0
58	MG	1H	3427	1/1	0.92	0.10	-	55,55,55,55	0
58	MG	13	1727	1/1	0.95	0.14	-	69,69,69,69	0
58	MG	1H	3113	1/1	0.94	0.31	-	37,37,37,37	0
58	MG	13	1738	1/1	0.90	0.08	-	112,112,112,112	0
58	MG	1H	3201	1/1	0.84	0.44	-	87,87,87,87	0
58	MG	13	1646	1/1	0.95	0.12	-	63,63,63,63	0
58	MG	13	1679	1/1	0.91	0.34	-	96,96,96,96	0
58	MG	1H	3324	1/1	0.87	0.42	-	86,86,86,86	0
58	MG	14	3397	1/1	0.79	0.10	-	86,86,86,86	0
58	MG	14	3341	1/1	0.95	0.04	-	71,71,71,71	0
58	MG	1H	3381	1/1	0.92	0.26	-	90,90,90,90	0
58	MG	14	3145	1/1	0.91	0.17	-	65,65,65,65	0
58	MG	14	3048	1/1	0.94	0.22	-	66,66,66,66	0
58	MG	1H	3428	1/1	0.98	0.10	-	38,38,38,38	0
58	MG	1J	202	1/1	0.95	0.43	-	84,84,84,84	0
58	MG	14	3064	1/1	0.68	0.54	-	63,63,63,63	0
58	MG	1H	3103	1/1	0.94	0.29	-	47,47,47,47	0
58	MG	1H	3170	1/1	0.90	0.28	-	65,65,65,65	0
58	MG	1H	3325	1/1	0.91	0.22	-	67,67,67,67	0
58	MG	1H	3153	1/1	0.94	0.29	-	58,58,58,58	0
58	MG	1H	3062	1/1	0.98	0.21	-	66,66,66,66	0
58	MG	1G	1608	1/1	0.93	0.24	-	81,81,81,81	0
58	MG	1H	3282	1/1	0.90	0.51	-	85,85,85,85	0
58	MG	14	3392	1/1	0.93	0.11	-	61,61,61,61	0
58	MG	1H	3343	1/1	0.95	0.28	-	62,62,62,62	0
58	MG	1G	1682	1/1	0.96	0.10	-	75,75,75,75	0
58	MG	1H	3322	1/1	0.99	0.23	-	39,39,39,39	0
58	MG	1G	1657	1/1	0.81	0.39	-	110,110,110,110	0
58	MG	1H	3178	1/1	0.88	0.49	-	69,69,69,69	0
58	MG	1G	1627	1/1	0.79	0.26	-	77,77,77,77	0
58	MG	14	3126	1/1	0.95	0.29	-	78,78,78,78	0
58	MG	1H	3382	1/1	0.87	0.21	-	80,80,80,80	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors(Å^2)	Q<0.9
58	MG	3L	101	1/1	0.94	0.30	-	81,81,81,81	0
58	MG	14	3190	1/1	0.97	0.21	-	65,65,65,65	0
58	MG	14	3210	1/1	0.88	0.32	-	79,79,79,79	0
58	MG	1H	3264	1/1	0.97	0.19	-	47,47,47,47	0
58	MG	14	3070	1/1	0.96	0.19	-	62,62,62,62	0
58	MG	1H	3415	1/1	0.95	0.12	-	48,48,48,48	0
58	MG	1H	3029	1/1	0.99	0.21	-	50,50,50,50	0
58	MG	14	3363	1/1	0.86	0.07	-	77,77,77,77	0
58	MG	14	3255	1/1	0.89	0.35	-	69,69,69,69	0
58	MG	1H	3339	1/1	0.88	0.42	-	78,78,78,78	0
58	MG	14	3202	1/1	0.49	0.23	-	70,70,70,70	0
58	MG	1G	1628	1/1	0.89	0.21	-	64,64,64,64	0
58	MG	13	1616	1/1	0.97	0.18	-	59,59,59,59	0
58	MG	13	1620	1/1	0.98	0.12	-	64,64,64,64	0
58	MG	14	3166	1/1	0.74	0.25	-	76,76,76,76	0
58	MG	14	3182	1/1	0.90	0.23	-	61,61,61,61	0
58	MG	16	202	1/1	0.92	0.30	-	63,63,63,63	0
58	MG	14	3120	1/1	0.94	0.10	-	84,84,84,84	0
58	MG	13	1630	1/1	0.91	0.30	-	70,70,70,70	0
58	MG	1G	1612	1/1	0.74	0.24	-	78,78,78,78	0
58	MG	14	3046	1/1	0.91	0.24	-	73,73,73,73	0
58	MG	14	3275	1/1	0.87	0.15	-	70,70,70,70	0
58	MG	1H	3326	1/1	0.96	0.16	-	92,92,92,92	0
58	MG	1H	3205	1/1	0.90	0.34	-	71,71,71,71	0
58	MG	1H	3105	1/1	0.86	0.15	-	59,59,59,59	0
58	MG	1H	3312	1/1	0.86	0.27	-	68,68,68,68	0
58	MG	13	1717	1/1	0.70	0.32	-	93,93,93,93	0
58	MG	1H	3439	1/1	0.99	0.06	-	70,70,70,70	0
58	MG	1H	3362	1/1	0.93	0.20	-	105,105,105,105	0
58	MG	14	3198	1/1	0.90	0.31	-	84,84,84,84	0
58	MG	14	3037	1/1	0.96	0.08	-	72,72,72,72	0
58	MG	1H	3287	1/1	0.89	0.37	-	62,62,62,62	0
58	MG	13	1631	1/1	0.93	0.20	-	64,64,64,64	0
58	MG	14	3378	1/1	0.98	0.08	-	73,73,73,73	0
58	MG	1H	3245	1/1	0.89	0.25	-	69,69,69,69	0
58	MG	1H	3355	1/1	0.97	0.21	-	73,73,73,73	0
58	MG	13	1702	1/1	0.82	0.23	-	77,77,77,77	0
58	MG	13	1603	1/1	0.98	0.12	-	61,61,61,61	0
58	MG	1G	1634	1/1	0.90	0.24	-	87,87,87,87	0
58	MG	1H	3409	1/1	0.69	0.14	-	46,46,46,46	0
58	MG	14	3393	1/1	0.97	0.07	-	71,71,71,71	0
58	MG	14	3309	1/1	0.86	0.24	-	83,83,83,83	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors(Å^2)	Q<0.9
58	MG	1H	3294	1/1	0.93	0.22	-	70,70,70,70	0
58	MG	14	3106	1/1	0.95	0.13	-	57,57,57,57	0
58	MG	1G	1618	1/1	0.97	0.20	-	86,86,86,86	0
58	MG	14	3005	1/1	0.99	0.24	-	49,49,49,49	0
58	MG	14	3205	1/1	0.96	0.14	-	44,44,44,44	0
58	MG	14	3180	1/1	0.96	0.26	-	75,75,75,75	0
58	MG	1G	1652	1/1	0.94	0.20	-	91,91,91,91	0
58	MG	14	3165	1/1	0.93	0.19	-	65,65,65,65	0
58	MG	1H	3228	1/1	0.89	0.33	-	83,83,83,83	0
58	MG	1G	1604	1/1	0.98	0.12	-	84,84,84,84	0
58	MG	1H	3004	1/1	0.97	0.35	-	33,33,33,33	0
58	MG	1H	3239	1/1	0.84	0.37	-	76,76,76,76	0
58	MG	14	3161	1/1	0.86	0.27	-	88,88,88,88	0
58	MG	1H	3363	1/1	0.87	0.46	-	98,98,98,98	0
58	MG	1G	1605	1/1	0.95	0.12	-	78,78,78,78	0
58	MG	14	3374	1/1	0.75	0.15	-	87,87,87,87	0
58	MG	14	3234	1/1	0.90	0.07	-	56,56,56,56	0
58	MG	14	3139	1/1	0.96	0.36	-	68,68,68,68	0
58	MG	13	1713	1/1	0.74	0.24	-	83,83,83,83	0
58	MG	13	1654	1/1	0.63	0.24	-	76,76,76,76	0
58	MG	1L	101	1/1	0.98	0.17	-	71,71,71,71	0
58	MG	1H	3373	1/1	0.76	0.48	-	72,72,72,72	0
58	MG	13	1709	1/1	0.85	0.33	-	87,87,87,87	0
58	MG	1H	3182	1/1	0.93	0.49	-	73,73,73,73	0
58	MG	1H	3336	1/1	0.88	0.34	-	66,66,66,66	0
58	MG	13	1660	1/1	0.82	0.20	-	87,87,87,87	0
58	MG	2K	106	1/1	0.93	0.07	-	87,87,87,87	0
58	MG	1H	3358	1/1	0.89	0.44	-	92,92,92,92	0
58	MG	14	3366	1/1	0.93	0.12	-	76,76,76,76	0
58	MG	14	3049	1/1	0.98	0.13	-	47,47,47,47	0
58	MG	14	3102	1/1	0.86	0.48	-	81,81,81,81	0
58	MG	1H	3211	1/1	0.92	0.36	-	59,59,59,59	0
58	MG	1H	3232	1/1	0.90	0.26	-	70,70,70,70	0
58	MG	1H	3406	1/1	0.93	0.16	-	53,53,53,53	0
58	MG	14	3398	1/1	0.65	0.21	-	107,107,107,107	0
58	MG	14	3153	1/1	0.92	0.30	-	104,104,104,104	0
58	MG	14	3383	1/1	0.95	0.12	-	70,70,70,70	0
58	MG	14	3159	1/1	0.94	0.21	-	63,63,63,63	0
58	MG	14	3125	1/1	0.94	0.14	-	42,42,42,42	0
58	MG	1H	3243	1/1	0.96	0.28	-	50,50,50,50	0
58	MG	14	3144	1/1	0.94	0.27	-	75,75,75,75	0
58	MG	1G	1668	1/1	0.82	0.24	-	76,76,76,76	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors(Å^2)	Q<0.9
58	MG	1H	3157	1/1	0.92	0.20	-	48,48,48,48	0
58	MG	1H	3249	1/1	0.97	0.18	-	53,53,53,53	0
58	MG	1H	3456	1/1	0.90	0.09	-	87,87,87,87	0
58	MG	1H	3134	1/1	0.98	0.21	-	45,45,45,45	0
58	MG	1H	3385	1/1	0.93	0.14	-	49,49,49,49	0
58	MG	1G	1623	1/1	0.93	0.16	-	96,96,96,96	0
58	MG	1H	3244	1/1	0.87	0.42	-	75,75,75,75	0
58	MG	1H	3186	1/1	0.92	0.33	-	52,52,52,52	0
58	MG	1H	3260	1/1	0.96	0.32	-	48,48,48,48	0
58	MG	14	3269	1/1	0.97	0.16	-	78,78,78,78	0
58	MG	1H	3026	1/1	0.97	0.19	-	45,45,45,45	0
58	MG	1G	1664	1/1	0.87	0.34	-	88,88,88,88	0
58	MG	14	3325	1/1	0.80	0.30	-	86,86,86,86	0
58	MG	14	3174	1/1	0.86	0.11	-	78,78,78,78	0
58	MG	14	3385	1/1	0.96	0.15	-	71,71,71,71	0
58	MG	1H	3361	1/1	0.95	0.33	-	112,112,112,112	0
58	MG	13	1676	1/1	0.86	0.25	-	76,76,76,76	0
58	MG	13	1619	1/1	0.52	0.23	-	99,99,99,99	0
58	MG	14	3256	1/1	0.96	0.27	-	80,80,80,80	0
58	MG	1H	3111	1/1	0.98	0.11	-	53,53,53,53	0
58	MG	1H	3145	1/1	0.97	0.33	-	53,53,53,53	0
58	MG	1H	3303	1/1	0.76	0.26	-	75,75,75,75	0
58	MG	1H	3010	1/1	0.99	0.33	-	33,33,33,33	0
58	MG	13	1711	1/1	0.85	0.35	-	89,89,89,89	0
58	MG	14	3277	1/1	0.88	0.18	-	73,73,73,73	0
58	MG	1H	3270	1/1	0.93	0.34	-	76,76,76,76	0
58	MG	1H	3468	1/1	0.97	0.07	-	59,59,59,59	0
58	MG	1H	3039	1/1	0.98	0.31	-	76,76,76,76	0
58	MG	1H	3122	1/1	0.78	0.35	-	74,74,74,74	0
58	MG	13	1699	1/1	0.87	0.45	-	71,71,71,71	0
58	MG	14	3157	1/1	0.95	0.35	-	63,63,63,63	0
58	MG	14	3349	1/1	0.99	0.12	-	57,57,57,57	0
58	MG	14	3192	1/1	0.97	0.18	-	74,74,74,74	0
58	MG	14	3228	1/1	0.49	0.38	-	79,79,79,79	0
58	MG	1H	3229	1/1	0.89	0.21	-	61,61,61,61	0
58	MG	1H	3092	1/1	0.98	0.26	-	65,65,65,65	0
58	MG	1H	3280	1/1	0.94	0.14	-	44,44,44,44	0
58	MG	14	3017	1/1	0.98	0.22	-	49,49,49,49	0
58	MG	1H	3019	1/1	0.97	0.28	-	38,38,38,38	0
58	MG	14	3259	1/1	0.78	0.21	-	66,66,66,66	0
58	MG	14	3249	1/1	0.88	0.62	-	49,49,49,49	0
58	MG	14	3150	1/1	0.85	0.37	-	70,70,70,70	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors(Å^2)	Q<0.9
58	MG	4E	201	1/1	0.89	0.29	-	76,76,76,76	0
58	MG	14	3119	1/1	0.97	0.32	-	75,75,75,75	0
58	MG	1H	3321	1/1	0.96	0.27	-	80,80,80,80	0
58	MG	16	213	1/1	0.88	0.13	-	82,82,82,82	0
58	MG	1H	3233	1/1	0.90	0.27	-	65,65,65,65	0
58	MG	1H	3187	1/1	0.95	0.24	-	64,64,64,64	0
58	MG	14	3004	1/1	0.97	0.15	-	50,50,50,50	0
58	MG	1H	3089	1/1	0.92	0.14	-	68,68,68,68	0
58	MG	14	3196	1/1	0.85	0.31	-	82,82,82,82	0
58	MG	P8	101	1/1	0.68	0.34	-	70,70,70,70	0
58	MG	14	3289	1/1	0.79	0.41	-	75,75,75,75	0
58	MG	14	3220	1/1	0.95	0.15	-	66,66,66,66	0
58	MG	14	3012	1/1	0.97	0.27	-	66,66,66,66	0
58	MG	1H	3297	1/1	0.82	0.22	-	59,59,59,59	0
58	MG	1G	1633	1/1	0.58	0.20	-	80,80,80,80	0
58	MG	14	3355	1/1	0.97	0.12	-	43,43,43,43	0
58	MG	1H	3383	1/1	0.86	0.23	-	113,113,113,113	0
58	MG	1H	3214	1/1	0.96	0.27	-	53,53,53,53	0
58	MG	14	3216	1/1	0.88	0.20	-	83,83,83,83	0
58	MG	14	3030	1/1	0.86	0.18	-	91,91,91,91	0
58	MG	14	3135	1/1	0.97	0.14	-	67,67,67,67	0
58	MG	1G	1685	1/1	0.77	0.07	-	111,111,111,111	0
58	MG	1H	3234	1/1	0.92	0.45	-	85,85,85,85	0
58	MG	1H	3225	1/1	0.85	0.34	-	68,68,68,68	0
58	MG	14	3287	1/1	0.89	0.43	-	112,112,112,112	0
58	MG	14	3197	1/1	0.86	0.17	-	85,85,85,85	0
58	MG	14	3225	1/1	0.96	0.15	-	68,68,68,68	0
58	MG	21	301	1/1	0.94	0.14	-	46,46,46,46	0
58	MG	1H	3354	1/1	0.94	0.29	-	80,80,80,80	0
58	MG	13	1675	1/1	0.97	0.22	-	63,63,63,63	0
58	MG	14	3226	1/1	0.93	0.17	-	74,74,74,74	0
58	MG	14	3007	1/1	0.96	0.13	-	42,42,42,42	0
58	MG	1H	3056	1/1	0.98	0.19	-	59,59,59,59	0
58	MG	1H	3463	1/1	0.84	0.25	-	92,92,92,92	0
58	MG	1H	3317	1/1	0.89	0.27	-	73,73,73,73	0
58	MG	1G	1632	1/1	0.93	0.28	-	64,64,64,64	0
58	MG	1H	3328	1/1	0.86	0.31	-	63,63,63,63	0
58	MG	14	3337	1/1	0.98	0.10	-	49,49,49,49	0
58	MG	1H	3387	1/1	0.98	0.12	-	38,38,38,38	0
58	MG	14	3184	1/1	0.94	0.26	-	60,60,60,60	0
58	MG	14	3302	1/1	0.73	0.25	-	131,131,131,131	0
58	MG	14	3260	1/1	0.99	0.12	-	57,57,57,57	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors(Å^2)	Q<0.9
58	MG	14	3324	1/1	0.93	0.17	-	83,83,83,83	0
58	MG	14	3273	1/1	0.96	0.11	-	64,64,64,64	0
58	MG	13	1637	1/1	0.88	0.40	-	73,73,73,73	0
58	MG	1G	1670	1/1	0.92	0.18	-	86,86,86,86	0
58	MG	1H	3209	1/1	0.94	0.18	-	57,57,57,57	0
58	MG	13	1690	1/1	0.92	0.18	-	66,66,66,66	0
58	MG	1H	3431	1/1	0.95	0.08	-	57,57,57,57	0
58	MG	1H	3458	1/1	0.91	0.14	-	68,68,68,68	0
58	MG	1H	3045	1/1	0.95	0.20	-	90,90,90,90	0
58	MG	14	3300	1/1	0.94	0.09	-	81,81,81,81	0
58	MG	1H	3410	1/1	0.92	0.08	-	59,59,59,59	0
58	MG	1H	3080	1/1	0.96	0.25	-	67,67,67,67	0
58	MG	1H	3078	1/1	0.98	0.22	-	41,41,41,41	0
58	MG	1H	3411	1/1	0.98	0.11	-	43,43,43,43	0
58	MG	1H	3226	1/1	0.81	0.48	-	66,66,66,66	0
58	MG	13	1642	1/1	0.86	0.17	-	59,59,59,59	0
58	MG	1H	3359	1/1	0.62	0.56	-	97,97,97,97	0
58	MG	1H	3250	1/1	0.98	0.20	-	41,41,41,41	0
58	MG	1H	3176	1/1	0.91	0.28	-	70,70,70,70	0
58	MG	14	3101	1/1	0.97	0.18	-	60,60,60,60	0
58	MG	13	1706	1/1	0.86	0.18	-	98,98,98,98	0
58	MG	14	3297	1/1	0.98	0.11	-	60,60,60,60	0
58	MG	14	3354	1/1	0.98	0.11	-	57,57,57,57	0
58	MG	14	3080	1/1	0.84	0.19	-	45,45,45,45	0
58	MG	14	3127	1/1	0.94	0.17	-	55,55,55,55	0
58	MG	14	3233	1/1	0.92	0.19	-	66,66,66,66	0
58	MG	13	1673	1/1	0.90	0.26	-	70,70,70,70	0
58	MG	1H	3330	1/1	0.92	0.16	-	74,74,74,74	0
58	MG	13	1668	1/1	0.94	0.29	-	69,69,69,69	0
58	MG	14	3386	1/1	0.89	0.09	-	83,83,83,83	0
58	MG	1H	3397	1/1	0.97	0.10	-	51,51,51,51	0
58	MG	1H	3159	1/1	0.84	0.38	-	64,64,64,64	0
58	MG	1G	1622	1/1	0.96	0.12	-	113,113,113,113	0
58	MG	14	3279	1/1	0.96	0.09	-	67,67,67,67	0
58	MG	1H	3198	1/1	0.76	0.16	-	79,79,79,79	0
58	MG	1H	3200	1/1	0.93	0.25	-	73,73,73,73	0
58	MG	14	3123	1/1	0.98	0.15	-	59,59,59,59	0
58	MG	1H	3172	1/1	0.93	0.37	-	56,56,56,56	0
58	MG	1J	204	1/1	0.92	0.28	-	88,88,88,88	0
58	MG	1G	1648	1/1	0.92	0.30	-	95,95,95,95	0
58	MG	1H	3435	1/1	0.93	0.08	-	70,70,70,70	0
58	MG	L8	101	1/1	0.78	0.24	-	84,84,84,84	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors(Å^2)	Q<0.9
58	MG	14	3076	1/1	0.94	0.13	-	59,59,59,59	0
58	MG	14	3111	1/1	0.98	0.19	-	63,63,63,63	0
58	MG	1H	3407	1/1	0.93	0.12	-	60,60,60,60	0
58	MG	14	3107	1/1	0.78	0.24	-	64,64,64,64	0
58	MG	14	3096	1/1	0.96	0.11	-	61,61,61,61	0
58	MG	13	1640	1/1	0.93	0.19	-	65,65,65,65	0
58	MG	14	3031	1/1	0.97	0.25	-	56,56,56,56	0
58	MG	14	3206	1/1	0.93	0.18	-	56,56,56,56	0
58	MG	1H	3257	1/1	0.96	0.17	-	55,55,55,55	0
58	MG	14	3188	1/1	0.87	0.25	-	79,79,79,79	0
58	MG	1H	3346	1/1	0.85	0.28	-	78,78,78,78	0
58	MG	14	3015	1/1	0.92	0.14	-	76,76,76,76	0
58	MG	14	3173	1/1	0.97	0.12	-	78,78,78,78	0
58	MG	14	3298	1/1	0.80	0.57	-	80,80,80,80	0
58	MG	14	3100	1/1	0.95	0.47	-	62,62,62,62	0
58	MG	14	3014	1/1	0.99	0.19	-	61,61,61,61	0
58	MG	2L	102	1/1	0.77	0.19	-	76,76,76,76	0
58	MG	14	3170	1/1	0.85	0.12	-	69,69,69,69	0
58	MG	14	3060	1/1	0.95	0.17	-	67,67,67,67	0
58	MG	14	3056	1/1	0.94	0.12	-	73,73,73,73	0
58	MG	14	3252	1/1	0.94	0.11	-	71,71,71,71	0
58	MG	13	1612	1/1	0.82	0.15	-	74,74,74,74	0
58	MG	1H	3163	1/1	0.75	0.38	-	78,78,78,78	0
58	MG	13	1602	1/1	0.96	0.22	-	71,71,71,71	0
58	MG	1H	3208	1/1	0.95	0.43	-	70,70,70,70	0
58	MG	14	3344	1/1	0.94	0.09	-	60,60,60,60	0
58	MG	1H	3040	1/1	0.87	0.16	-	62,62,62,62	0
58	MG	14	3185	1/1	0.70	0.15	-	63,63,63,63	0
58	MG	1G	1653	1/1	0.92	0.13	-	77,77,77,77	0
58	MG	13	1665	1/1	0.96	0.20	-	82,82,82,82	0
58	MG	C5	201	1/1	0.89	0.29	-	105,105,105,105	0
58	MG	1G	1649	1/1	0.95	0.19	-	78,78,78,78	0
58	MG	14	3138	1/1	0.82	0.19	-	69,69,69,69	0
58	MG	1H	3130	1/1	0.96	0.31	-	67,67,67,67	0
58	MG	1G	1631	1/1	0.76	0.26	-	73,73,73,73	0
58	MG	1G	1645	1/1	0.79	0.23	-	78,78,78,78	0
58	MG	13	1704	1/1	0.93	0.20	-	130,130,130,130	0
58	MG	1H	3035	1/1	0.83	0.34	-	83,83,83,83	0
58	MG	1H	3068	1/1	0.92	0.31	-	63,63,63,63	0
58	MG	1H	3370	1/1	0.72	0.45	-	83,83,83,83	0
58	MG	1H	3283	1/1	0.97	0.20	-	59,59,59,59	0
58	MG	14	3086	1/1	0.86	0.19	-	69,69,69,69	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors(Å^2)	Q<0.9
58	MG	13	1658	1/1	0.93	0.29	-	73,73,73,73	0
58	MG	14	3212	1/1	0.70	0.28	-	68,68,68,68	0
58	MG	1H	3306	1/1	0.96	0.23	-	54,54,54,54	0
58	MG	14	3321	1/1	0.92	0.38	-	86,86,86,86	0
58	MG	13	1667	1/1	0.89	0.33	-	59,59,59,59	0
58	MG	13	1734	1/1	0.99	0.09	-	76,76,76,76	0
58	MG	1H	3202	1/1	0.93	0.33	-	60,60,60,60	0
58	MG	1H	3369	1/1	0.95	0.33	-	54,54,54,54	0
58	MG	14	3189	1/1	0.83	0.25	-	71,71,71,71	0
58	MG	13	1655	1/1	0.89	0.28	-	78,78,78,78	0
58	MG	14	3317	1/1	0.93	0.30	-	65,65,65,65	0
58	MG	2K	104	1/1	0.95	0.21	-	72,72,72,72	0
58	MG	1H	3316	1/1	0.71	0.24	-	80,80,80,80	0
58	MG	1H	3017	1/1	0.99	0.17	-	52,52,52,52	0
58	MG	14	3110	1/1	0.99	0.17	-	44,44,44,44	0
58	MG	13	1692	1/1	0.73	0.39	-	80,80,80,80	0
58	MG	1H	3372	1/1	0.94	0.21	-	78,78,78,78	0
58	MG	1G	1629	1/1	0.78	0.26	-	85,85,85,85	0
58	MG	78	201	1/1	0.88	0.21	-	53,53,53,53	0
58	MG	1H	3174	1/1	0.94	0.14	-	51,51,51,51	0
58	MG	13	1615	1/1	0.86	0.18	-	86,86,86,86	0
58	MG	1H	3345	1/1	0.96	0.19	-	75,75,75,75	0
58	MG	1H	3301	1/1	0.76	0.21	-	75,75,75,75	0
58	MG	1G	1672	1/1	0.94	0.10	-	91,91,91,91	0
58	MG	1H	3470	1/1	0.97	0.10	-	64,64,64,64	0
58	MG	1H	3300	1/1	0.86	0.30	-	63,63,63,63	0
58	MG	14	3283	1/1	0.85	0.28	-	88,88,88,88	0
58	MG	14	3307	1/1	0.92	0.08	-	62,62,62,62	0
58	MG	14	3051	1/1	0.99	0.09	-	52,52,52,52	0
58	MG	14	3292	1/1	0.94	0.17	-	109,109,109,109	0
58	MG	14	3265	1/1	0.97	0.19	-	55,55,55,55	0
58	MG	14	3026	1/1	0.94	0.09	-	76,76,76,76	0
58	MG	1H	3063	1/1	0.95	0.25	-	45,45,45,45	0
58	MG	1H	3184	1/1	0.80	0.16	-	87,87,87,87	0
58	MG	1H	3008	1/1	0.98	0.30	-	37,37,37,37	0
58	MG	1H	3473	1/1	0.94	0.07	-	99,99,99,99	0
58	MG	14	3235	1/1	0.85	0.19	-	87,87,87,87	0
58	MG	1H	3400	1/1	0.93	0.14	-	58,58,58,58	0
58	MG	13	1701	1/1	0.97	0.21	-	74,74,74,74	0
58	MG	14	3323	1/1	0.91	0.20	-	85,85,85,85	0
58	MG	1H	3107	1/1	0.98	0.32	-	54,54,54,54	0
58	MG	1H	3237	1/1	0.97	0.12	-	44,44,44,44	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors(Å^2)	Q<0.9
58	MG	1H	3094	1/1	0.92	0.24	-	53,53,53,53	0
58	MG	14	3105	1/1	0.93	0.12	-	65,65,65,65	0
58	MG	1H	3360	1/1	0.93	0.34	-	73,73,73,73	0
58	MG	14	3320	1/1	0.93	0.14	-	61,61,61,61	0
58	MG	13	1684	1/1	0.87	0.27	-	96,96,96,96	0
58	MG	14	3084	1/1	0.97	0.21	-	54,54,54,54	0
58	MG	14	3008	1/1	0.98	0.21	-	55,55,55,55	0
58	MG	1H	3398	1/1	0.83	0.12	-	50,50,50,50	0
58	MG	1G	1626	1/1	0.81	0.18	-	80,80,80,80	0
58	MG	1H	3329	1/1	0.94	0.37	-	74,74,74,74	0
58	MG	1G	1679	1/1	0.79	0.22	-	157,157,157,157	0
58	MG	1H	3167	1/1	0.94	0.26	-	65,65,65,65	0
58	MG	14	3034	1/1	0.85	0.30	-	57,57,57,57	0
58	MG	1H	3097	1/1	0.96	0.22	-	47,47,47,47	0
58	MG	L8	102	1/1	0.89	0.23	-	67,67,67,67	0
58	MG	1H	3152	1/1	0.93	0.19	-	62,62,62,62	0
58	MG	1H	3217	1/1	0.83	0.34	-	77,77,77,77	0
58	MG	14	3390	1/1	0.85	0.14	-	70,70,70,70	0
58	MG	1H	3203	1/1	0.97	0.14	-	68,68,68,68	0
58	MG	14	3128	1/1	0.93	0.41	-	79,79,79,79	0
58	MG	1H	3050	1/1	0.96	0.29	-	59,59,59,59	0
58	MG	14	3129	1/1	0.82	0.36	-	73,73,73,73	0
58	MG	1G	1613	1/1	0.91	0.33	-	81,81,81,81	0
58	MG	14	3130	1/1	0.87	0.28	-	68,68,68,68	0
58	MG	1H	3069	1/1	0.98	0.43	-	69,69,69,69	0
58	MG	1H	3281	1/1	0.95	0.21	-	65,65,65,65	0
58	MG	16	209	1/1	0.87	0.27	-	59,59,59,59	0
58	MG	1H	3296	1/1	0.69	0.24	-	66,66,66,66	0
58	MG	1G	1606	1/1	0.93	0.07	-	92,92,92,92	0
58	MG	1H	3284	1/1	0.94	0.10	-	72,72,72,72	0
58	MG	13	1700	1/1	0.68	0.33	-	96,96,96,96	0
58	MG	14	3071	1/1	0.98	0.27	-	38,38,38,38	0
58	MG	14	3299	1/1	0.84	0.22	-	53,53,53,53	0
58	MG	14	3346	1/1	0.91	0.07	-	63,63,63,63	0
58	MG	14	3286	1/1	0.84	0.30	-	84,84,84,84	0
58	MG	1H	3075	1/1	0.93	0.13	-	41,41,41,41	0
58	MG	1H	3290	1/1	0.88	0.18	-	66,66,66,66	0
58	MG	1G	1680	1/1	0.97	0.12	-	83,83,83,83	0
58	MG	1H	3084	1/1	0.89	0.14	-	59,59,59,59	0
58	MG	1H	3425	1/1	0.99	0.10	-	43,43,43,43	0
58	MG	14	3271	1/1	0.97	0.11	-	58,58,58,58	0
58	MG	1H	3024	1/1	0.98	0.21	-	40,40,40,40	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors(Å^2)	Q<0.9
58	MG	1H	3471	1/1	0.98	0.11	-	54,54,54,54	0
58	MG	1H	3327	1/1	0.93	0.34	-	80,80,80,80	0
58	MG	1H	3441	1/1	0.94	0.12	-	40,40,40,40	0
58	MG	14	3270	1/1	0.47	0.26	-	84,84,84,84	0
58	MG	1H	3461	1/1	0.79	0.16	-	103,103,103,103	0
58	MG	14	3258	1/1	0.95	0.40	-	68,68,68,68	0
58	MG	14	3391	1/1	0.97	0.11	-	93,93,93,93	0
58	MG	13	1708	1/1	0.82	0.24	-	81,81,81,81	0
58	MG	1H	3308	1/1	0.90	0.34	-	82,82,82,82	0
58	MG	14	3175	1/1	0.94	0.32	-	64,64,64,64	0
58	MG	1G	1673	1/1	0.91	0.35	-	94,94,94,94	0
58	MG	14	3154	1/1	0.98	0.17	-	80,80,80,80	0
58	MG	13	1732	1/1	0.96	0.08	-	79,79,79,79	0
58	MG	1H	3061	1/1	0.94	0.20	-	51,51,51,51	0
58	MG	1H	3310	1/1	0.99	0.16	-	79,79,79,79	0
58	MG	1H	3335	1/1	0.99	0.16	-	47,47,47,47	0
58	MG	1H	3047	1/1	0.95	0.43	-	84,84,84,84	0
58	MG	14	3200	1/1	0.72	0.21	-	85,85,85,85	0
58	MG	13	1627	1/1	0.94	0.44	-	72,72,72,72	0
58	MG	14	3240	1/1	0.93	0.17	-	71,71,71,71	0
58	MG	45	201	1/1	0.91	0.15	-	59,59,59,59	0
58	MG	1H	3365	1/1	0.63	0.46	-	84,84,84,84	0
58	MG	13	1659	1/1	0.91	0.27	-	85,85,85,85	0
58	MG	14	3151	1/1	0.57	0.24	-	82,82,82,82	0
58	MG	1H	3352	1/1	0.92	0.36	-	81,81,81,81	0
58	MG	14	3373	1/1	0.96	0.06	-	65,65,65,65	0
58	MG	1H	3106	1/1	0.63	0.25	-	78,78,78,78	0
58	MG	1G	1676	1/1	0.90	0.31	-	105,105,105,105	0
58	MG	14	3345	1/1	0.91	0.13	-	63,63,63,63	0
58	MG	1H	3289	1/1	0.94	0.18	-	63,63,63,63	0
58	MG	14	3118	1/1	0.94	0.19	-	40,40,40,40	0
58	MG	1G	1638	1/1	0.92	0.31	-	80,80,80,80	0
58	MG	14	3377	1/1	0.97	0.15	-	66,66,66,66	0
58	MG	14	3313	1/1	0.95	0.17	-	81,81,81,81	0
58	MG	1H	3367	1/1	0.73	0.50	-	88,88,88,88	0
58	MG	14	3381	1/1	0.86	0.08	-	70,70,70,70	0
58	MG	13	1669	1/1	0.93	0.21	-	70,70,70,70	0
58	MG	1H	3438	1/1	0.95	0.06	-	71,71,71,71	0
58	MG	1H	3132	1/1	0.90	0.21	-	63,63,63,63	0
58	MG	1H	3023	1/1	0.99	0.25	-	40,40,40,40	0
58	MG	1H	3060	1/1	0.95	0.39	-	59,59,59,59	0
58	MG	14	3370	1/1	0.90	0.06	-	75,75,75,75	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors(Å^2)	Q<0.9
58	MG	1H	3277	1/1	0.95	0.18	-	70,70,70,70	0
58	MG	1H	3374	1/1	0.67	0.34	-	78,78,78,78	0
58	MG	14	3027	1/1	0.94	0.23	-	76,76,76,76	0
58	MG	13	1696	1/1	0.96	0.35	-	81,81,81,81	0
58	MG	14	3169	1/1	0.95	0.29	-	91,91,91,91	0
58	MG	14	3276	1/1	0.91	0.25	-	75,75,75,75	0
58	MG	1H	3332	1/1	0.77	0.17	-	62,62,62,62	0
58	MG	13	1681	1/1	0.94	0.06	-	71,71,71,71	0
58	MG	1H	3083	1/1	0.92	0.26	-	71,71,71,71	0
58	MG	1H	3295	1/1	0.97	0.27	-	51,51,51,51	0
58	MG	14	3294	1/1	0.96	0.31	-	90,90,90,90	0
58	MG	1H	3177	1/1	0.92	0.20	-	47,47,47,47	0
58	MG	14	3248	1/1	0.91	0.10	-	65,65,65,65	0
58	MG	I8	102	1/1	0.95	0.24	-	49,49,49,49	0
58	MG	1H	3236	1/1	0.99	0.12	-	52,52,52,52	0
58	MG	14	3251	1/1	0.91	0.18	-	80,80,80,80	0
58	MG	1H	3219	1/1	0.96	0.26	-	61,61,61,61	0
58	MG	1H	3285	1/1	0.85	0.26	-	62,62,62,62	0
58	MG	14	3044	1/1	0.97	0.14	-	40,40,40,40	0
58	MG	1H	3179	1/1	0.93	0.31	-	71,71,71,71	0
58	MG	1G	1659	1/1	0.96	0.10	-	76,76,76,76	0
58	MG	14	3146	1/1	0.69	0.52	-	88,88,88,88	0
58	MG	1H	3302	1/1	0.80	0.55	-	92,92,92,92	0
58	MG	14	3010	1/1	0.95	0.18	-	48,48,48,48	0
58	MG	14	3278	1/1	0.73	0.17	-	67,67,67,67	0
58	MG	13	1672	1/1	0.98	0.29	-	56,56,56,56	0
58	MG	13	1735	1/1	0.80	0.12	-	93,93,93,93	0
58	MG	1H	3240	1/1	0.92	0.62	-	86,86,86,86	0
58	MG	14	3264	1/1	0.94	0.24	-	69,69,69,69	0
58	MG	13	1707	1/1	0.58	0.27	-	83,83,83,83	0
58	MG	13	1635	1/1	0.80	0.32	-	77,77,77,77	0
58	MG	1H	3027	1/1	0.97	0.28	-	36,36,36,36	0
58	MG	14	3231	1/1	0.92	0.27	-	75,75,75,75	0
58	MG	1J	203	1/1	0.85	0.23	-	75,75,75,75	0
58	MG	1H	3256	1/1	0.93	0.17	-	57,57,57,57	0
58	MG	14	3090	1/1	0.97	0.23	-	65,65,65,65	0
58	MG	16	212	1/1	0.83	0.11	-	78,78,78,78	0
58	MG	1H	3140	1/1	0.89	0.25	-	59,59,59,59	0
58	MG	14	3262	1/1	0.83	0.21	-	86,86,86,86	0
58	MG	1H	3138	1/1	0.97	0.44	-	62,62,62,62	0
58	MG	1H	3366	1/1	0.78	0.42	-	83,83,83,83	0
58	MG	1H	3267	1/1	0.90	0.15	-	57,57,57,57	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors(Å^2)	Q<0.9
58	MG	1H	3408	1/1	0.88	0.11	-	47,47,47,47	0
58	MG	1H	3108	1/1	0.93	0.49	-	56,56,56,56	0
58	MG	1G	1624	1/1	0.86	0.31	-	89,89,89,89	0
58	MG	1H	3173	1/1	0.93	0.23	-	68,68,68,68	0
58	MG	14	3167	1/1	0.94	0.17	-	61,61,61,61	0
58	MG	1H	3393	1/1	0.95	0.11	-	47,47,47,47	0
58	MG	14	3021	1/1	0.98	0.16	-	51,51,51,51	0
58	MG	1H	3440	1/1	0.98	0.07	-	59,59,59,59	0
58	MG	98	201	1/1	0.95	0.29	-	64,64,64,64	0
58	MG	14	3156	1/1	0.84	0.33	-	70,70,70,70	0
58	MG	14	3388	1/1	0.91	0.12	-	88,88,88,88	0
58	MG	13	1614	1/1	0.89	0.22	-	65,65,65,65	0
58	MG	1H	3298	1/1	0.98	0.36	-	94,94,94,94	0
58	MG	1H	3276	1/1	0.84	0.45	-	76,76,76,76	0
58	MG	13	1666	1/1	0.97	0.34	-	81,81,81,81	0
58	MG	13	1621	1/1	0.98	0.23	-	59,59,59,59	0
58	MG	1H	3315	1/1	0.75	0.26	-	67,67,67,67	0
58	MG	14	3063	1/1	0.94	0.20	-	51,51,51,51	0
58	MG	1H	3155	1/1	0.95	0.14	-	41,41,41,41	0
58	MG	1G	1656	1/1	0.76	0.17	-	92,92,92,92	0
58	MG	14	3304	1/1	0.92	0.34	-	63,63,63,63	0
58	MG	13	1648	1/1	0.80	0.30	-	75,75,75,75	0
58	MG	13	1687	1/1	0.89	0.20	-	82,82,82,82	0
58	MG	1G	1643	1/1	0.98	0.09	-	83,83,83,83	0
58	MG	1H	3059	1/1	0.97	0.34	-	55,55,55,55	0
58	MG	1G	1658	1/1	0.70	0.30	-	104,104,104,104	0
58	MG	1H	3126	1/1	0.98	0.24	-	46,46,46,46	0
58	MG	1H	3254	1/1	0.89	0.22	-	73,73,73,73	0
58	MG	1H	3423	1/1	0.85	0.11	-	71,71,71,71	0
58	MG	1H	3419	1/1	0.96	0.11	-	37,37,37,37	0
58	MG	1H	3337	1/1	0.94	0.40	-	67,67,67,67	0
58	MG	1H	3379	1/1	0.94	0.21	-	85,85,85,85	0
58	MG	14	3068	1/1	0.95	0.20	-	54,54,54,54	0
58	MG	1H	3192	1/1	0.80	0.23	-	58,58,58,58	0
58	MG	13	1703	1/1	0.88	0.27	-	71,71,71,71	0
58	MG	14	3338	1/1	0.95	0.07	-	61,61,61,61	0
58	MG	14	3347	1/1	0.94	0.09	-	49,49,49,49	0
58	MG	1H	3320	1/1	0.87	0.23	-	59,59,59,59	0
58	MG	1H	3222	1/1	0.87	0.36	-	82,82,82,82	0
58	MG	1H	3403	1/1	0.98	0.11	-	69,69,69,69	0
58	MG	1H	3046	1/1	0.86	0.31	-	82,82,82,82	0
58	MG	1G	1674	1/1	0.93	0.22	-	136,136,136,136	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors(Å^2)	Q<0.9
58	MG	1G	1637	1/1	0.83	0.17	-	75,75,75,75	0
58	MG	14	3163	1/1	0.87	0.43	-	71,71,71,71	0
58	MG	13	1683	1/1	0.94	0.10	-	94,94,94,94	0
58	MG	14	3301	1/1	0.45	0.23	-	87,87,87,87	0
58	MG	1G	1661	1/1	0.55	0.21	-	100,100,100,100	0
58	MG	L5	400	1/1	0.91	0.15	-	70,70,70,70	0
58	MG	13	1649	1/1	0.90	0.45	-	83,83,83,83	0
58	MG	1H	3230	1/1	0.98	0.23	-	47,47,47,47	0
58	MG	1H	3013	1/1	0.98	0.28	-	46,46,46,46	0
58	MG	13	1611	1/1	0.86	0.29	-	64,64,64,64	0
58	MG	14	3164	1/1	0.71	0.12	-	76,76,76,76	0
58	MG	1G	1639	1/1	0.96	0.24	-	110,110,110,110	0
58	MG	14	3368	1/1	0.92	0.10	-	64,64,64,64	0
58	MG	14	3091	1/1	0.99	0.26	-	50,50,50,50	0
58	MG	1H	3380	1/1	0.84	0.22	-	69,69,69,69	0
58	MG	13	1715	1/1	0.98	0.08	-	78,78,78,78	0
58	MG	14	3290	1/1	0.90	0.18	-	74,74,74,74	0
58	MG	1G	1681	1/1	0.97	0.40	-	85,85,85,85	0
58	MG	1H	3030	1/1	0.97	0.19	-	40,40,40,40	0
58	MG	1H	3212	1/1	0.97	0.32	-	80,80,80,80	0
58	MG	14	3069	1/1	0.99	0.26	-	75,75,75,75	0
58	MG	14	3131	1/1	0.86	0.23	-	71,71,71,71	0
58	MG	1G	1635	1/1	0.88	0.21	-	86,86,86,86	0
58	MG	14	3093	1/1	0.99	0.11	-	63,63,63,63	0
58	MG	1H	3272	1/1	0.94	0.46	-	88,88,88,88	0
58	MG	1H	3088	1/1	0.90	0.30	-	56,56,56,56	0
58	MG	14	3001	1/1	0.98	0.27	-	50,50,50,50	0
58	MG	13	1678	1/1	0.95	0.28	-	92,92,92,92	0
58	MG	1H	3048	1/1	0.98	0.18	-	52,52,52,52	0
58	MG	1H	3248	1/1	0.91	0.20	-	88,88,88,88	0
58	MG	14	3288	1/1	0.88	0.15	-	66,66,66,66	0
58	MG	1H	3399	1/1	0.98	0.08	-	58,58,58,58	0
58	MG	14	3112	1/1	0.94	0.26	-	86,86,86,86	0
58	MG	14	3078	1/1	0.84	0.26	-	87,87,87,87	0
58	MG	1H	3110	1/1	0.68	0.30	-	58,58,58,58	0
58	MG	13	1722	1/1	0.88	0.11	-	101,101,101,101	0
58	MG	1G	1615	1/1	0.96	0.19	-	82,82,82,82	0
58	MG	14	3326	1/1	0.84	0.13	-	90,90,90,90	0
58	MG	1H	3313	1/1	0.69	0.40	-	82,82,82,82	0
58	MG	31	302	1/1	0.98	0.08	-	57,57,57,57	0
58	MG	25	201	1/1	0.71	0.26	-	88,88,88,88	0
58	MG	8E	201	1/1	0.82	0.22	-	95,95,95,95	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors(Å^2)	Q<0.9
58	MG	1H	3375	1/1	0.89	0.55	-	94,94,94,94	0
58	MG	1G	1675	1/1	0.89	0.25	-	83,83,83,83	0
58	MG	1H	3251	1/1	0.97	0.18	-	33,33,33,33	0
58	MG	1H	3344	1/1	0.93	0.35	-	71,71,71,71	0
58	MG	14	3239	1/1	0.89	0.15	-	64,64,64,64	0
58	MG	1H	3049	1/1	0.89	0.24	-	56,56,56,56	0
58	MG	1K	101	1/1	0.88	0.21	-	84,84,84,84	0
58	MG	13	1647	1/1	0.96	0.30	-	47,47,47,47	0
58	MG	1H	3129	1/1	0.91	0.32	-	58,58,58,58	0
58	MG	1H	3022	1/1	0.99	0.17	-	39,39,39,39	0
58	MG	1H	3437	1/1	0.82	0.13	-	66,66,66,66	0
58	MG	1H	3291	1/1	0.73	0.25	-	70,70,70,70	0
58	MG	13	1730	1/1	0.92	0.09	-	88,88,88,88	0
58	MG	1H	3143	1/1	0.79	0.29	-	66,66,66,66	0
58	MG	14	3097	1/1	0.95	0.22	-	51,51,51,51	0
58	MG	14	3023	1/1	0.97	0.12	-	46,46,46,46	0
58	MG	1G	1640	1/1	0.83	0.27	-	78,78,78,78	0
58	MG	13	1671	1/1	0.80	0.20	-	138,138,138,138	0
58	MG	14	3055	1/1	0.95	0.18	-	55,55,55,55	0
58	MG	1G	1690	1/1	0.91	0.31	-	98,98,98,98	0
58	MG	13	1736	1/1	0.95	0.14	-	97,97,97,97	0
58	MG	2L	103	1/1	0.88	0.12	-	102,102,102,102	0
58	MG	13	1716	1/1	0.77	0.16	-	80,80,80,80	0
58	MG	1H	3442	1/1	0.99	0.06	-	60,60,60,60	0
58	MG	1G	1669	1/1	0.94	0.28	-	131,131,131,131	0
58	MG	1H	3279	1/1	0.91	0.21	-	77,77,77,77	0
58	MG	14	3147	1/1	0.74	0.15	-	73,73,73,73	0
58	MG	13	1634	1/1	0.97	0.20	-	52,52,52,52	0
58	MG	14	3181	1/1	0.93	0.24	-	81,81,81,81	0
58	MG	1G	1630	1/1	0.89	0.19	-	71,71,71,71	0
58	MG	14	3134	1/1	0.94	0.14	-	54,54,54,54	0
58	MG	14	3047	1/1	0.97	0.17	-	71,71,71,71	0
58	MG	1H	3082	1/1	0.84	0.36	-	60,60,60,60	0
58	MG	1H	3216	1/1	0.94	0.22	-	68,68,68,68	0
58	MG	1H	3377	1/1	0.70	0.29	-	68,68,68,68	0
58	MG	14	3062	1/1	0.93	0.17	-	51,51,51,51	0
58	MG	1H	3469	1/1	0.80	0.10	-	106,106,106,106	0
58	MG	1G	1662	1/1	0.94	0.18	-	78,78,78,78	0
58	MG	1H	3135	1/1	0.98	0.27	-	52,52,52,52	0
58	MG	16	208	1/1	0.78	0.31	-	80,80,80,80	0
58	MG	1G	1660	1/1	0.86	0.41	-	82,82,82,82	0
58	MG	I8	101	1/1	0.83	0.19	-	63,63,63,63	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors(Å^2)	Q<0.9
58	MG	14	3115	1/1	0.76	0.20	-	71,71,71,71	0
58	MG	13	1731	1/1	0.98	0.11	-	85,85,85,85	0
58	MG	1H	3311	1/1	0.95	0.18	-	58,58,58,58	0
58	MG	13	1712	1/1	0.85	0.17	-	74,74,74,74	0
58	MG	14	3314	1/1	0.92	0.26	-	59,59,59,59	0
58	MG	14	3352	1/1	0.92	0.11	-	73,73,73,73	0
58	MG	14	3394	1/1	0.97	0.07	-	94,94,94,94	0
58	MG	1H	3467	1/1	0.82	0.09	-	68,68,68,68	0
58	MG	1H	3309	1/1	0.53	0.28	-	83,83,83,83	0
58	MG	13	1652	1/1	0.91	0.21	-	60,60,60,60	0
58	MG	1G	1678	1/1	0.91	0.32	-	92,92,92,92	0
58	MG	14	3296	1/1	0.57	0.37	-	97,97,97,97	0
58	MG	1H	3104	1/1	0.94	0.16	-	47,47,47,47	0
58	MG	13	1613	1/1	0.96	0.14	-	66,66,66,66	0
58	MG	1H	3464	1/1	0.90	0.08	-	88,88,88,88	0
58	MG	14	3195	1/1	0.87	0.33	-	81,81,81,81	0
58	MG	14	3158	1/1	0.94	0.14	-	72,72,72,72	0
58	MG	1H	3396	1/1	0.96	0.13	-	55,55,55,55	0
58	MG	1H	3207	1/1	0.85	0.21	-	57,57,57,57	0
58	MG	1J	205	1/1	0.93	0.27	-	75,75,75,75	0
58	MG	13	1626	1/1	0.94	0.24	-	80,80,80,80	0
58	MG	1H	3185	1/1	0.88	0.45	-	77,77,77,77	0
58	MG	1H	3278	1/1	0.96	0.14	-	75,75,75,75	0
58	MG	1G	1621	1/1	0.87	0.15	-	81,81,81,81	0
58	MG	14	3179	1/1	0.95	0.45	-	63,63,63,63	0
58	MG	14	3291	1/1	0.85	0.15	-	77,77,77,77	0
58	MG	1H	3247	1/1	0.93	0.48	-	73,73,73,73	0
58	MG	1H	3246	1/1	0.93	0.46	-	79,79,79,79	0
58	MG	14	3201	1/1	0.95	0.42	-	49,49,49,49	0
58	MG	14	3009	1/1	0.99	0.16	-	49,49,49,49	0
58	MG	2K	105	1/1	0.83	0.30	-	87,87,87,87	0
58	MG	13	1624	1/1	0.99	0.26	-	85,85,85,85	0
58	MG	1H	3158	1/1	0.88	0.26	-	69,69,69,69	0
58	MG	1H	3119	1/1	0.94	0.20	-	55,55,55,55	0
58	MG	1G	1650	1/1	0.92	0.27	-	68,68,68,68	0
58	MG	14	3257	1/1	0.93	0.18	-	63,63,63,63	0
58	MG	14	3099	1/1	0.95	0.41	-	75,75,75,75	0
58	MG	1H	3120	1/1	0.96	0.18	-	63,63,63,63	0
58	MG	14	3305	1/1	0.89	0.19	-	59,59,59,59	0
58	MG	14	3267	1/1	0.80	0.12	-	74,74,74,74	0
58	MG	14	3223	1/1	0.97	0.19	-	44,44,44,44	0
58	MG	13	1610	1/1	0.80	0.32	-	94,94,94,94	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors(Å^2)	Q<0.9
58	MG	1H	3127	1/1	0.96	0.30	-	75,75,75,75	0
58	MG	14	3020	1/1	0.89	0.17	-	63,63,63,63	0
58	MG	1H	3341	1/1	0.88	0.51	-	86,86,86,86	0
58	MG	13	1604	1/1	0.98	0.14	-	65,65,65,65	0
58	MG	14	3082	1/1	0.95	0.18	-	54,54,54,54	0
58	MG	14	3193	1/1	0.96	0.23	-	60,60,60,60	0
58	MG	1H	3266	1/1	0.83	0.14	-	43,43,43,43	0
58	MG	1H	3218	1/1	0.91	0.28	-	57,57,57,57	0
58	MG	1H	3323	1/1	0.88	0.16	-	61,61,61,61	0
58	MG	1H	3142	1/1	0.90	0.23	-	59,59,59,59	0
58	MG	1H	3012	1/1	0.96	0.22	-	58,58,58,58	0
58	MG	1H	3293	1/1	0.97	0.12	-	56,56,56,56	0
58	MG	1H	3057	1/1	0.95	0.23	-	60,60,60,60	0
58	MG	1H	3210	1/1	0.70	0.27	-	86,86,86,86	0
58	MG	1H	3318	1/1	0.99	0.10	-	50,50,50,50	0
58	MG	1H	3451	1/1	0.91	0.11	-	84,84,84,84	0
58	MG	14	3310	1/1	0.81	0.30	-	76,76,76,76	0
58	MG	13	1628	1/1	0.97	0.25	-	43,43,43,43	0
58	MG	14	3143	1/1	0.84	0.21	-	64,64,64,64	0
58	MG	1H	3072	1/1	0.88	0.20	-	62,62,62,62	0
58	MG	1H	3160	1/1	0.98	0.18	-	64,64,64,64	0
58	MG	14	3367	1/1	0.94	0.08	-	49,49,49,49	0
58	MG	1H	3457	1/1	0.94	0.09	-	81,81,81,81	0
58	MG	14	3141	1/1	0.79	0.17	-	75,75,75,75	0
58	MG	14	3215	1/1	0.95	0.27	-	60,60,60,60	0
58	MG	14	3318	1/1	0.97	0.06	-	81,81,81,81	0
58	MG	13	1680	1/1	0.74	0.25	-	71,71,71,71	0
58	MG	1H	3224	1/1	0.80	0.38	-	79,79,79,79	0
58	MG	1H	3353	1/1	0.94	0.20	-	93,93,93,93	0
58	MG	1H	3032	1/1	0.90	0.26	-	71,71,71,71	0
58	MG	14	3376	1/1	0.96	0.11	-	87,87,87,87	0
58	MG	1G	1663	1/1	0.95	0.20	-	105,105,105,105	0
58	MG	14	3379	1/1	0.96	0.10	-	51,51,51,51	0
58	MG	14	3375	1/1	0.94	0.07	-	65,65,65,65	0
58	MG	14	3221	1/1	0.97	0.17	-	66,66,66,66	0
58	MG	16	207	1/1	0.90	0.40	-	76,76,76,76	0
58	MG	14	3194	1/1	0.79	0.14	-	57,57,57,57	0
58	MG	1H	3429	1/1	0.88	0.13	-	49,49,49,49	0
58	MG	1H	3450	1/1	0.99	0.05	-	79,79,79,79	0
58	MG	1H	3462	1/1	0.82	0.07	-	76,76,76,76	0
58	MG	14	3171	1/1	0.92	0.17	-	65,65,65,65	0
58	MG	14	3268	1/1	0.87	0.25	-	88,88,88,88	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors(Å^2)	Q<0.9
58	MG	1H	3136	1/1	0.94	0.24	-	53,53,53,53	0
58	MG	13	1693	1/1	0.73	0.30	-	87,87,87,87	0
58	MG	1H	3364	1/1	0.90	0.56	-	90,90,90,90	0
58	MG	1H	3086	1/1	0.97	0.40	-	52,52,52,52	0
58	MG	1H	3378	1/1	0.88	0.21	-	68,68,68,68	0
58	MG	2K	102	1/1	0.94	0.20	-	78,78,78,78	0
58	MG	14	3365	1/1	0.87	0.12	-	67,67,67,67	0
58	MG	14	3243	1/1	0.96	0.14	-	68,68,68,68	0
58	MG	1H	3314	1/1	0.90	0.36	-	86,86,86,86	0
58	MG	13	1663	1/1	0.85	0.20	-	68,68,68,68	0
58	MG	1H	3268	1/1	0.95	0.25	-	65,65,65,65	0
58	MG	14	3162	1/1	0.54	0.34	-	100,100,100,100	0
58	MG	29	301	1/1	0.98	0.19	-	46,46,46,46	0
58	MG	1H	3416	1/1	0.99	0.12	-	51,51,51,51	0
58	MG	14	3057	1/1	0.96	0.23	-	62,62,62,62	0
58	MG	1H	3242	1/1	0.92	0.34	-	66,66,66,66	0
58	MG	14	3098	1/1	0.91	0.39	-	67,67,67,67	0
58	MG	1H	3426	1/1	0.89	0.09	-	39,39,39,39	0
58	MG	14	3272	1/1	0.99	0.14	-	72,72,72,72	0
58	MG	1H	3376	1/1	0.92	0.28	-	78,78,78,78	0
58	MG	1H	3436	1/1	0.91	0.11	-	87,87,87,87	0
58	MG	14	3357	1/1	0.96	0.16	-	48,48,48,48	0
58	MG	14	3229	1/1	0.76	0.54	-	82,82,82,82	0
58	MG	1H	3003	1/1	0.97	0.35	-	30,30,30,30	0
58	MG	1H	3005	1/1	0.96	0.23	-	53,53,53,53	0
58	MG	1H	3340	1/1	0.93	0.23	-	51,51,51,51	0
58	MG	1G	1611	1/1	0.85	0.23	-	89,89,89,89	0
58	MG	13	1737	1/1	0.80	0.14	-	132,132,132,132	0
58	MG	1H	3148	1/1	0.95	0.28	-	57,57,57,57	0
58	MG	13	1608	1/1	0.95	0.20	-	77,77,77,77	0
58	MG	14	3214	1/1	0.94	0.22	-	54,54,54,54	0
58	MG	1H	3183	1/1	0.94	0.23	-	56,56,56,56	0
58	MG	14	3356	1/1	0.94	0.17	-	78,78,78,78	0
58	MG	14	3052	1/1	0.96	0.15	-	52,52,52,52	0
58	MG	1H	3334	1/1	0.95	0.14	-	55,55,55,55	0
58	MG	1H	3474	1/1	0.62	0.07	-	84,84,84,84	0
58	MG	14	3261	1/1	0.87	0.39	-	68,68,68,68	0
58	MG	14	3241	1/1	0.94	0.10	-	72,72,72,72	0
58	MG	1H	3333	1/1	0.93	0.20	-	63,63,63,63	0
58	MG	14	3035	1/1	0.96	0.20	-	76,76,76,76	0
58	MG	1H	3265	1/1	0.96	0.15	-	66,66,66,66	0
58	MG	1H	3181	1/1	0.98	0.30	-	71,71,71,71	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors(Å^2)	Q<0.9
58	MG	13	1685	1/1	0.90	0.26	-	65,65,65,65	0
58	MG	14	3330	1/1	0.96	0.14	-	58,58,58,58	0
58	MG	14	3327	1/1	0.87	0.29	-	86,86,86,86	0
58	MG	13	1725	1/1	0.90	0.07	-	85,85,85,85	0
58	MG	1H	3033	1/1	0.89	0.41	-	82,82,82,82	0
58	MG	1H	3151	1/1	0.77	0.27	-	56,56,56,56	0
58	MG	1H	3196	1/1	0.76	0.39	-	71,71,71,71	0
58	MG	1G	1688	1/1	0.94	0.17	-	105,105,105,105	0
58	MG	13	1641	1/1	0.83	0.26	-	68,68,68,68	0
58	MG	14	3199	1/1	0.97	0.22	-	66,66,66,66	0
58	MG	14	3284	1/1	0.74	0.18	-	70,70,70,70	0
58	MG	1H	3115	1/1	0.88	0.20	-	48,48,48,48	0
58	MG	1H	3454	1/1	0.88	0.08	-	65,65,65,65	0
58	MG	1H	3444	1/1	0.91	0.08	-	90,90,90,90	0
58	MG	1H	3305	1/1	0.76	0.24	-	66,66,66,66	0
58	MG	1H	3223	1/1	0.85	0.25	-	63,63,63,63	0
58	MG	1H	3304	1/1	0.84	0.39	-	77,77,77,77	0
58	MG	1H	3269	1/1	0.73	0.25	-	55,55,55,55	0
58	MG	1H	3079	1/1	0.98	0.32	-	55,55,55,55	0
58	MG	14	3308	1/1	0.74	0.53	-	79,79,79,79	0
58	MG	13	1720	1/1	0.72	0.26	-	89,89,89,89	0
58	MG	1G	1671	1/1	0.95	0.13	-	85,85,85,85	0
58	MG	1H	3351	1/1	0.93	0.19	-	62,62,62,62	0
58	MG	1H	3189	1/1	0.90	0.35	-	73,73,73,73	0

6.5 Other polymers

There are no such residues in this entry.