



# Full wwPDB X-ray Structure Validation Report ⓘ

Oct 9, 2023 – 09:34 AM EDT

PDB ID : 5NDJ  
Title : Crystal structure of aminoglycoside TC007 in complex with 70S ribosome from *Thermus thermophilus*, three tRNAs and mRNA (soaking)  
Authors : Prokhorova, I.; Djumagulov, M.; Urzhumtsev, A.; Yusupov, M.; Yusupova, G.  
Deposited on : 2017-03-08  
Resolution : 3.15 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](mailto:validation@mail.wwpdb.org)

A user guide is available at

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

with specific help available everywhere you see the ⓘ symbol.

The types of validation reports are described at

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

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

MolProbity : 4.02b-467  
Mogul : 1.8.5 (274361), CSD as541be (2020)  
Xtriage (Phenix) : 1.13  
EDS : 2.35.1  
buster-report : 1.1.7 (2018)  
Percentile statistics : 20191225.v01 (using entries in the PDB archive December 25th 2019)  
Refmac : 5.8.0158  
CCP4 : 7.0.044 (Gargrove)  
Ideal geometry (proteins) : Engh & Huber (2001)  
Ideal geometry (DNA, RNA) : Parkinson et al. (1996)  
Validation Pipeline (wwPDB-VP) : 2.35.1

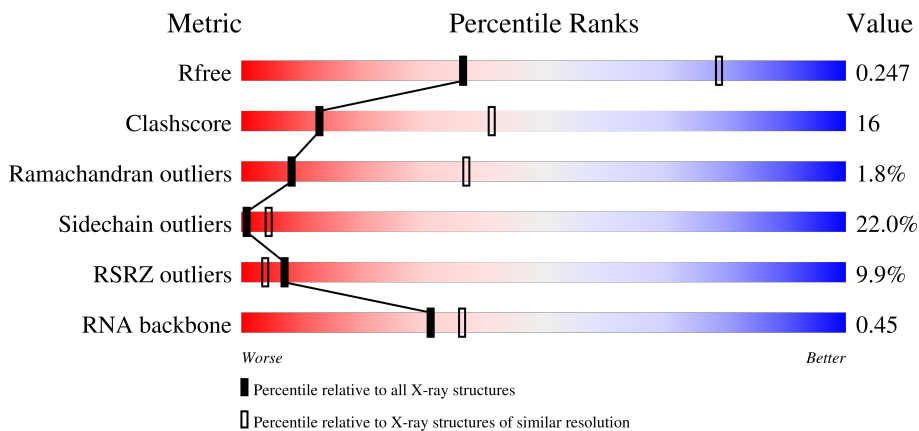
# 1 Overall quality at a glance i

The following experimental techniques were used to determine the structure:

*X-RAY DIFFRACTION*

The reported resolution of this entry is 3.15 Å.

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



Metric	Whole archive (#Entries)	Similar resolution (#Entries, resolution range(Å))
$R_{free}$	130704	1665 (3.20-3.12)
Clashscore	141614	1804 (3.20-3.12)
Ramachandran outliers	138981	1770 (3.20-3.12)
Sidechain outliers	138945	1769 (3.20-3.12)
RSRZ outliers	127900	1616 (3.20-3.12)
RNA backbone	3102	1073 (3.50-2.82)

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

Mol	Chain	Length	Quality of chain
1	13	1522	<div style="display: flex; align-items: center;"> <div style="width: 7%; height: 10px; background-color: red; margin-right: 5px;"></div> <div style="width: 38%; height: 10px; background-color: green; margin-right: 5px;"></div> <div style="width: 44%; height: 10px; background-color: yellow; margin-right: 5px;"></div> <div style="width: 14%; height: 10px; background-color: orange; margin-right: 5px;"></div> <div style="width: 1%; height: 10px; background-color: red; margin-right: 5px;"></div> <div style="width: 1%; height: 10px; background-color: grey;"></div> </div> <p style="text-align: center; margin-top: 5px;">7%      38%      44%      14%      ..</p>
1	1G	1522	<div style="display: flex; align-items: center;"> <div style="width: 8%; height: 10px; background-color: red; margin-right: 5px;"></div> <div style="width: 42%; height: 10px; background-color: green; margin-right: 5px;"></div> <div style="width: 42%; height: 10px; background-color: yellow; margin-right: 5px;"></div> <div style="width: 13%; height: 10px; background-color: orange; margin-right: 5px;"></div> <div style="width: 1%; height: 10px; background-color: red; margin-right: 5px;"></div> <div style="width: 1%; height: 10px; background-color: grey;"></div> </div> <p style="text-align: center; margin-top: 5px;">8%      42%      42%      13%      ..</p>
2	65	112	<div style="display: flex; align-items: center;"> <div style="width: 6%; height: 10px; background-color: red; margin-right: 5px;"></div> <div style="width: 38%; height: 10px; background-color: green; margin-right: 5px;"></div> <div style="width: 45%; height: 10px; background-color: yellow; margin-right: 5px;"></div> <div style="width: 16%; height: 10px; background-color: orange; margin-right: 5px;"></div> <div style="width: 1%; height: 10px; background-color: red; margin-right: 5px;"></div> <div style="width: 1%; height: 10px; background-color: grey;"></div> </div> <p style="text-align: center; margin-top: 5px;">6%      38%      45%      16%      ..</p>
2	A8	112	<div style="display: flex; align-items: center;"> <div style="width: 0%; height: 10px; background-color: red; margin-right: 5px;"></div> <div style="width: 37%; height: 10px; background-color: green; margin-right: 5px;"></div> <div style="width: 45%; height: 10px; background-color: yellow; margin-right: 5px;"></div> <div style="width: 17%; height: 10px; background-color: orange; margin-right: 5px;"></div> <div style="width: 1%; height: 10px; background-color: red; margin-right: 5px;"></div> <div style="width: 1%; height: 10px; background-color: grey;"></div> </div> <p style="text-align: center; margin-top: 5px;">%      37%      45%      17%      ..</p>

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Mol	Chain	Length	Quality of chain
3	B5	96	40% 48% 8% .
3	F8	96	52% 35% 9% ..
4	11	276	2% 54% 37% 8% ..
4	19	276	3% 56% 29% 12% ..
5	L5	49	2% 45% 51% .
5	P8	49	59% 31% . . .
6	2A	129	5% 50% 33% 6% 10%
6	2I	129	7% 43% 36% 10% 10%
7	8A	105	% 55% 34% 5% 6%
7	8I	105	% 38% 47% 10% 5%
8	22	239	11% 43% 35% 8% 14%
8	2E	239	10% 43% 36% 7% 14%
9	82	128	38% 44% 43% 9% . .
9	8E	128	52% 38% 46% 15% .
10	15	140	37% 52% 40% 6% .
10	58	140	45% 41% 12% .
11	C5	110	18% 30% 47% 15% . 5%
11	G8	110	% 35% 41% 15% . 6%
12	M5	65	55% 40% 37% 17% 5% .
12	Q8	65	25% 8% 42% 31% 12% 8%
13	3A	132	6% 51% 33% 10% . 5%
13	3I	132	2% 54% 30% 8% 8%
14	32	209	5% 52% 37% 10%
14	3E	209	4% 49% 40% 10%
15	14	2917	4% 36% 42% 18% .

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Mol	Chain	Length	Quality of chain
15	1H	2917	3% 34% 42% 19% 5%
16	75	146	5% 41% 38% 15% 6%
16	B8	146	3% 40% 34% 14% 12%
17	H5	60	37% 43% 50% 5%
17	L8	60	48% 37% 8% 5%
18	61	148	2% 41% 40% 16% ..
18	69	148	3% 53% 33% 11% ..
19	9A	88	% 42% 28% 8% 22%
19	9I	88	32% 34% 10% 24%
20	1B	27	93% 41% 48% 7%
20	1F	27	81% 33% 41% 11% 15%
21	25	122	20% 51% 39% 10% .
21	68	122	% 51% 43% 7%
22	D5	206	14% 21% 36% 7% 34%
22	H8	206	3% 35% 36% 9% 17%
23	21	206	4% 41% 39% 17% .
23	29	206	37% 44% 38% 16% .
24	4A	126	21% 29% 52% 12% 8%
24	4I	126	17% 39% 42% 11% 8%
25	42	162	% 48% 41% 7%
25	4E	162	6% 53% 30% 10% 7%
26	16	122	42% 38% 14% 7%
26	1J	122	% 37% 39% 19% 5%
27	85	118	8% 54% 34% 10% ..
27	C8	118	9% 59% 29% 10% ..



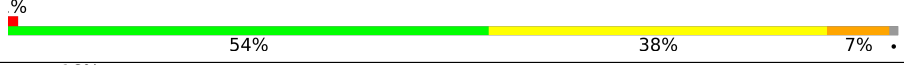
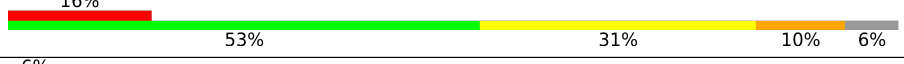
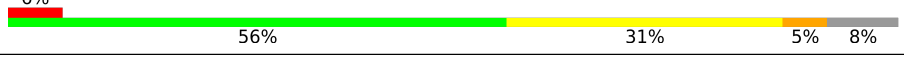
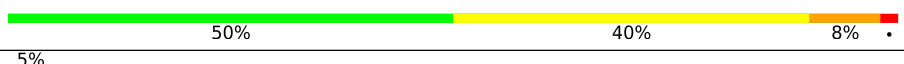
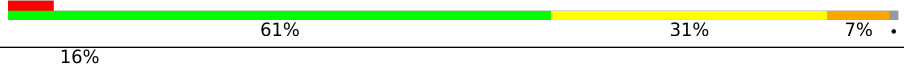
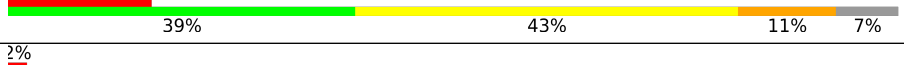
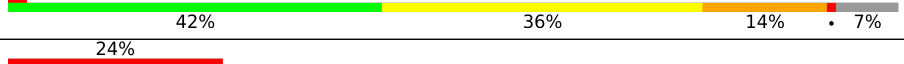


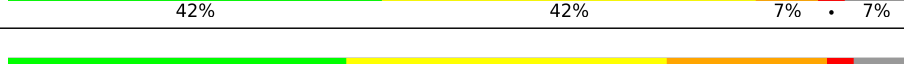

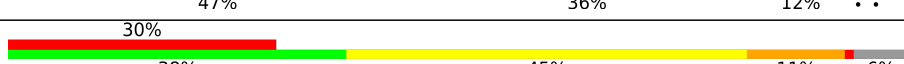
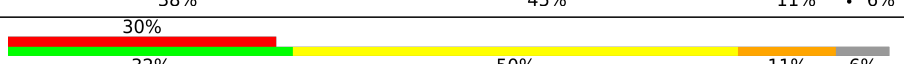
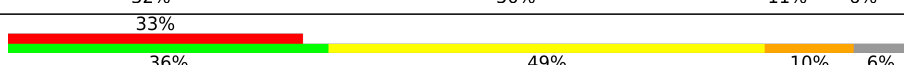


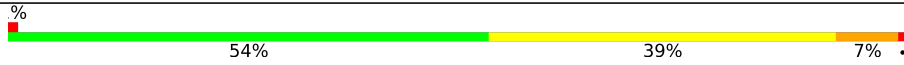

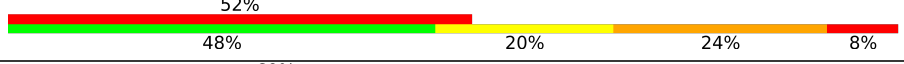
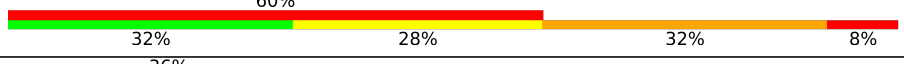

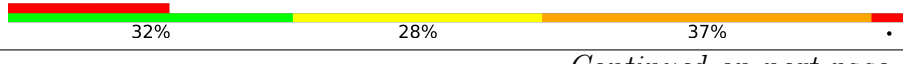

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Mol	Chain	Length	Quality of chain
28	I5	71	
28	M8	71	
29	AA	93	
29	AI	93	
30	35	150	
30	78	150	
31	E5	85	
31	I8	85	
32	31	210	
32	39	210	
33	5A	61	
33	5I	61	
34	52	101	
34	5E	101	
35	95	101	
35	D8	101	
36	J5	60	
36	N8	60	
37	BA	106	
37	BI	106	
38	45	141	
38	88	141	
39	F5	98	
39	J8	98	
40	41	182	

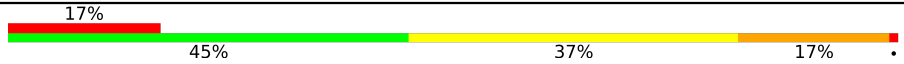



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Mol	Chain	Length	Quality of chain
40	49	182	
41	6A	89	
41	6I	89	
42	62	156	
42	6E	156	
43	A5	113	
43	E8	113	
44	12	256	
44	1E	256	
45	55	118	
45	98	118	
46	G5	72	
46	K8	72	
47	51	180	
47	59	180	
48	1A	105	
48	1I	105	
49	7A	88	
49	7I	88	
50	72	138	
50	7E	138	
51	Y1	25	
51	Y4	25	
52	V1	76	
52	V4	76	

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Mol	Chain	Length	Quality of chain
52	W1	76	
52	W4	76	
52	X1	76	
52	X4	76	

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
54	MG	13	2264	-	-	-	X
54	MG	13	2302	-	-	-	X
54	MG	13	2328	-	-	-	X
54	MG	13	2341	-	-	-	X
54	MG	13	2346	-	-	-	X
54	MG	13	2361	-	-	-	X
54	MG	13	2390	-	-	-	X
54	MG	14	3092	-	-	-	X
54	MG	14	3180	-	-	-	X
54	MG	14	3253	-	-	-	X
54	MG	14	3257	-	-	-	X
54	MG	14	3320	-	-	-	X
54	MG	14	3323	-	-	-	X
54	MG	14	3344	-	-	-	X
54	MG	14	3358	-	-	-	X
54	MG	14	3361	-	-	-	X
54	MG	14	3370	-	-	-	X
54	MG	14	3387	-	-	-	X
54	MG	14	3402	-	-	-	X
54	MG	14	3407	-	-	-	X
54	MG	14	3410	-	-	-	X
54	MG	14	3440	-	-	-	X
54	MG	14	3458	-	-	-	X
54	MG	14	3459	-	-	-	X
54	MG	14	3471	-	-	-	X
54	MG	14	3481	-	-	-	X
54	MG	14	3489	-	-	-	X
54	MG	14	3503	-	-	-	X
54	MG	14	3509	-	-	-	X
54	MG	14	3536	-	-	-	X

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Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
54	MG	14	3538	-	-	-	X
54	MG	14	3549	-	-	-	X
54	MG	14	3574	-	-	-	X
54	MG	14	3585	-	-	-	X
54	MG	1G	2252	-	-	-	X
54	MG	1G	2253	-	-	-	X
54	MG	1G	2263	-	-	-	X
54	MG	1G	2268	-	-	-	X
54	MG	1G	2277	-	-	-	X
54	MG	1G	2307	-	-	-	X
54	MG	1G	2330	-	-	-	X
54	MG	1G	2354	-	-	-	X
54	MG	1G	2377	-	-	-	X
54	MG	1G	2382	-	-	-	X
54	MG	1H	3142	-	-	-	X
54	MG	1H	3148	-	-	-	X
54	MG	1H	3301	-	-	-	X
54	MG	1H	3303	-	-	-	X
54	MG	1H	3334	-	-	-	X
54	MG	1H	3344	-	-	-	X
54	MG	1H	3395	-	-	-	X
54	MG	1H	3407	-	-	-	X
54	MG	1H	3468	-	-	-	X
54	MG	1H	3492	-	-	-	X
54	MG	1H	3569	-	-	-	X
54	MG	1H	3573	-	-	-	X
54	MG	1H	3576	-	-	-	X
54	MG	1H	3598	-	-	-	X
54	MG	1H	3611	-	-	-	X
54	MG	1H	3621	-	-	-	X
54	MG	1H	3628	-	-	-	X
54	MG	1H	3630	-	-	-	X
54	MG	1H	3631	-	-	-	X
54	MG	1H	3632	-	-	-	X
54	MG	1H	3639	-	-	-	X
54	MG	29	303	-	-	-	X
54	MG	7A	101	-	-	-	X
54	MG	BA	201	-	-	-	X
54	MG	P8	101	-	-	-	X
54	MG	X4	103	-	-	-	X



## 2 Entry composition [i](#)

There are 56 unique types of molecules in this entry. The entry contains 300009 atoms, of which 0 are hydrogens and 0 are deuteriums.

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

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	P			
1	13	1508	Total	C	N	O	P	0	0	0
			32409	14425	6001	10475	1508			
1	1G	1513	Total	C	N	O	P	0	0	0
			32514	14473	6021	10508	1512			

There are 2 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
13	2165	G	U	conflict	GB 55771382
1G	2165	G	U	conflict	GB 55771382

- Molecule 2 is a protein called 50S ribosomal protein L18.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
			Total	C	N	O			
2	A8	111	Total	C	N	O	0	0	0
			881	556	176	149			
2	65	111	Total	C	N	O	0	0	0
			881	556	176	149			

- Molecule 3 is a protein called 50S ribosomal protein L23.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
3	B5	92	Total	C	N	O	0	0	0	
			725	471	131	123				
3	F8	94	Total	C	N	O	S	0	0	0
			742	482	134	125	1			

- Molecule 4 is a protein called 50S ribosomal protein L2.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
4	11	273	Total	C	N	O	S	0	0	0
			2126	1341	424	358	3			

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Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
4	19	273	Total 2120	C 1338	N 421	O 358	S 3	0	0	0

- Molecule 5 is a protein called 50S ribosomal protein L34.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
5	L5	47	Total 409	C 251	N 102	O 54	S 2	0	0	0
5	P8	47	Total 409	C 251	N 102	O 54	S 2	0	0	0

- Molecule 6 is a protein called 30S ribosomal protein S11.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
6	2A	116	Total 864	C 537	N 164	O 160	S 3	0	0	0
6	2I	116	Total 864	C 537	N 164	O 160	S 3	0	0	0

- Molecule 7 is a protein called 30S ribosomal protein S17.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
7	8I	100	Total 834	C 534	N 155	O 143	S 2	0	0	0
7	8A	99	Total 823	C 528	N 151	O 142	S 2	0	0	0

- Molecule 8 is a protein called 30S ribosomal protein S3.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
8	22	206	Total 1612	C 1016	N 314	O 281	S 1	0	0	0
8	2E	205	Total 1605	C 1011	N 313	O 280	S 1	0	0	0

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

Mol	Chain	Residues	Atoms			ZeroOcc	AltConf	Trace	
			Total	C	N				O
9	8E	127	Total 1009	C 639	N 197	O 173	0	0	0
9	82	124	Total 983	C 624	N 190	O 169	0	0	0

- Molecule 10 is a protein called 50S ribosomal protein L13.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
10	58	138	Total	C	N	O	S	0	0	0
			1104	712	206	182	4			
10	15	138	Total	C	N	O	S	0	0	0
			1104	712	206	182	4			

- Molecule 11 is a protein called 50S ribosomal protein L24.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
11	G8	103	Total	C	N	O	S	0	0	0
			783	504	148	126	5			
11	C5	104	Total	C	N	O	S	0	0	0
			794	510	152	127	5			

- Molecule 12 is a protein called 50S ribosomal protein L35.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
12	Q8	60	Total	C	N	O	S	0	0	0
			480	306	98	74	2			
12	M5	64	Total	C	N	O	S	0	0	0
			517	331	102	82	2			

- Molecule 13 is a protein called 30S ribosomal protein S12.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
13	3I	122	Total	C	N	O	S	0	0	0
			956	603	193	159	1			
13	3A	125	Total	C	N	O	S	0	0	0
			975	614	196	164	1			

- Molecule 14 is a protein called 30S ribosomal protein S4.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
14	3E	208	Total	C	N	O	S	0	0	0
			1702	1066	339	290	7			
14	32	208	Total	C	N	O	S	0	0	0
			1702	1066	339	290	7			

- Molecule 15 is a RNA chain called 23S ribosomal RNA.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	P			
15	1H	2912	62707	27911	11722	20163	2911	0	0	0
15	14	2909	62647	27884	11716	20139	2908	0	0	0

There are 14 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
1H	156	U	UNK	conflict	GB 55771382
1H	682	A	G	conflict	GB 55771382
1H	686	C	G	conflict	GB 55771382
1H	697	G	C	conflict	GB 55771382
1H	701	A	C	conflict	GB 55771382
1H	1106	U	G	conflict	GB 55771382
1H	1128	A	C	conflict	GB 55771382
14	155A	U	UNK	conflict	GB 55771382
14	682	A	G	conflict	GB 55771382
14	686	C	G	conflict	GB 55771382
14	697	G	C	conflict	GB 55771382
14	701	A	C	conflict	GB 55771382
14	1106	U	G	conflict	GB 55771382
14	1128	A	C	conflict	GB 55771382

- Molecule 16 is a protein called 50S ribosomal protein L19.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
16	B8	129	1081	674	223	183	1	0	0	0
16	75	137	1141	710	234	196	1	0	0	0

- Molecule 17 is a protein called 50S ribosomal protein L30.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
			Total	C	N	O			
17	L8	57	452	288	88	76	0	0	0
17	H5	59	468	298	90	80	0	0	0

- Molecule 18 is a protein called 50S ribosomal protein L9.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
18	61	146	Total	C	N	O	S	0	0	0
			1136	726	201	208	1			
18	69	146	Total	C	N	O	S	0	0	0
			1136	726	201	208	1			

- Molecule 19 is a protein called 30S ribosomal protein S18.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
19	9I	67	Total	C	N	O	0	0	0
			550	352	107	91			
19	9A	69	Total	C	N	O	0	0	0
			564	361	110	93			

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

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
20	1F	23	Total	C	N	O	0	0	0
			199	122	48	29			
20	1B	25	Total	C	N	O	0	0	0
			217	134	52	31			

- Molecule 21 is a protein called 50S ribosomal protein L14.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
21	68	122	Total	C	N	O	S	0	0	0
			932	588	171	169	4			
21	25	122	Total	C	N	O	S	0	0	0
			932	588	171	169	4			

- Molecule 22 is a protein called 50S ribosomal protein L25.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
22	H8	171	Total	C	N	O	S	0	0	0
			1373	876	247	247	3			
22	D5	135	Total	C	N	O	S	0	0	0
			1120	720	202	195	3			

- Molecule 23 is a protein called 50S ribosomal protein L3.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
23	21	205	Total	C	N	O	S	0	0	0
			1568	991	300	271	6			

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Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
23	29	205	Total	C	N	O	S	0	0	0
			1568	991	300	271	6			

- Molecule 24 is a protein called 30S ribosomal protein S13.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
24	4I	116	Total	C	N	O	S	0	0	0
			928	574	191	161	2			
24	4A	116	Total	C	N	O	S	0	0	0
			928	574	191	161	2			

- Molecule 25 is a protein called 30S ribosomal protein S5.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
25	4E	151	Total	C	N	O	S	0	0	0
			1155	729	218	204	4			
25	42	151	Total	C	N	O	S	0	0	0
			1155	729	218	204	4			

- 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 L20.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
27	C8	117	Total	C	N	O	S	0	0	0
			963	610	202	150	1			
27	85	117	Total	C	N	O	S	0	0	0
			963	610	202	150	1			

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

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

- Molecule 29 is a protein called 30S ribosomal protein S19.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
29	AI	80	Total	C	N	O	S	0	0	0
			643	411	118	112	2			
29	AA	78	Total	C	N	O	S	0	0	0
			624	398	115	109	2			

- Molecule 30 is a protein called 50S ribosomal protein L15.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
30	78	147	Total	C	N	O	S	0	0	0
			1122	698	229	192	3			
30	35	150	Total	C	N	O	S	0	0	0
			1144	712	232	197	3			

- Molecule 31 is a protein called 50S ribosomal protein L27.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
31	I8	83	Total	C	N	O	S	0	0	0
			656	407	139	109	1			
31	E5	84	Total	C	N	O	S	0	0	0
			645	398	136	110	1			

- Molecule 32 is a protein called 50S ribosomal protein L4.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
32	31	202	Total	C	N	O	S	0	0	0
			1585	1011	297	275	2			
32	39	208	Total	C	N	O	S	0	0	0
			1627	1037	304	283	3			

- Molecule 33 is a protein called 30S ribosomal protein S14 type Z.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
33	5I	60	Total	C	N	O	S	0	0	0
			491	312	104	71	4			
33	5A	58	Total	C	N	O	S	0	0	0
			475	303	99	69	4			

- Molecule 34 is a protein called 30S ribosomal protein S6.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
34	5E	101	Total	C	N	O	S	0	0	0
			842	531	155	153	3			
34	52	101	Total	C	N	O	S	0	0	0
			842	531	155	153	3			

- Molecule 35 is a protein called 50S ribosomal protein L21.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
35	D8	101	Total	C	N	O	S	0	0	0
			778	501	142	134	1			
35	95	101	Total	C	N	O	S	0	0	0
			778	501	142	134	1			

- Molecule 36 is a protein called 50S ribosomal protein L32.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
36	N8	55	Total	C	N	O	S	0	0	0
			429	269	86	69	5			
36	J5	56	Total	C	N	O	S	0	0	0
			434	272	87	70	5			

- Molecule 37 is a protein called 30S ribosomal protein S20.

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

- Molecule 38 is a protein called 50S ribosomal protein L16.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
38	88	141	Total	C	N	O	S	0	0	0
			1121	715	212	187	7			
38	45	140	Total	C	N	O	S	0	0	0
			1113	710	211	186	6			

- Molecule 39 is a protein called 50S ribosomal protein L28.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
39	J8	95	Total	C	N	O	S	0	0	0
			746	469	148	128	1			

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Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
39	F5	94	737	463	146	127	1	0	0	0

- Molecule 40 is a protein called 50S ribosomal protein L5.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
40	41	181	1473	942	268	259	4	0	0	0
40	49	181	1473	942	268	259	4	0	0	0

- Molecule 41 is a protein called 30S ribosomal protein S15.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
41	6I	88	733	459	147	125	2	0	0	0
41	6A	88	733	459	147	125	2	0	0	0

- Molecule 42 is a protein called 30S ribosomal protein S7.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
42	6E	144	1157	718	230	203	6	0	0	0
42	62	147	1200	750	237	207	6	0	0	0

- Molecule 43 is a protein called 50S ribosomal protein L22.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
43	E8	112	890	560	175	153	2	0	0	0
43	A5	113	899	566	177	154	2	0	0	0

- Molecule 44 is a protein called 30S ribosomal protein S2.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
44	1E	237	1924	1228	344	347	5	0	0	0
44	12	237	1924	1228	344	347	5	0	0	0

- Molecule 45 is a protein called 50S ribosomal protein L17.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
45	98	118	Total	C	N	O	S	0	0	0
			967	604	203	159	1			
45	55	117	Total	C	N	O		0	0	0
			959	599	202	158				

- Molecule 46 is a protein called 50S ribosomal protein L29.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
46	K8	68	Total	C	N	O	S	0	0	0
			575	358	116	100	1			
46	G5	67	Total	C	N	O	S	0	0	0
			567	351	115	100	1			

- Molecule 47 is a protein called 50S ribosomal protein L6.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
47	51	174	Total	C	N	O	S	0	0	0
			1336	848	251	236	1			
47	59	170	Total	C	N	O	S	0	0	0
			1307	829	245	232	1			

- Molecule 48 is a protein called 30S ribosomal protein S10.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
48	1A	99	Total	C	N	O	S	0	0	0
			801	504	157	139	1			
48	1I	99	Total	C	N	O	S	0	0	0
			801	504	157	139	1			

- Molecule 49 is a protein called 30S ribosomal protein S16.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
49	7I	84	Total	C	N	O	S	0	0	0
			705	446	140	118	1			
49	7A	84	Total	C	N	O	S	0	0	0
			705	446	140	118	1			

- Molecule 50 is a protein called 30S ribosomal protein S8.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
50	7E	138	Total	C	N	O	S	0	0	0
			1115	705	215	192	3			
50	72	138	Total	C	N	O	S	0	0	0
			1115	705	215	192	3			

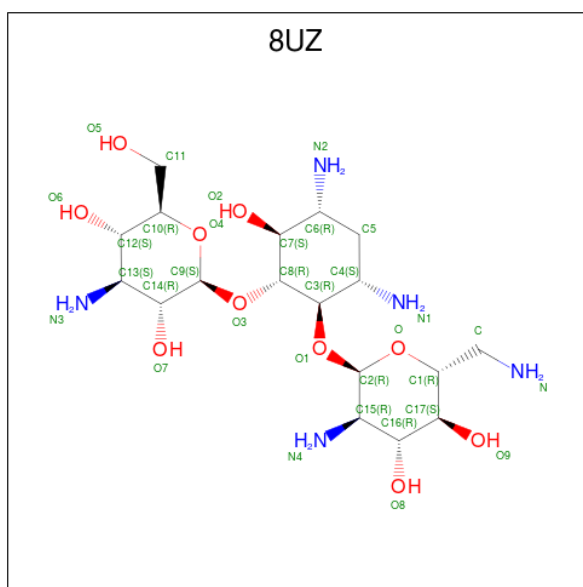
- Molecule 51 is a RNA chain called mRNA.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
51	Y1	25	Total	C	N	O	P	0	0	0
			521	234	78	185	24			
51	Y4	25	Total	C	N	O	P	0	0	0
			521	234	78	185	24			

- Molecule 52 is a RNA chain called tRNA-Phe.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
52	W1	76	Total	C	N	O	P	0	0	0
			1619	723	290	531	75			
52	X1	76	Total	C	N	O	P	0	0	0
			1619	723	290	531	75			
52	V1	76	Total	C	N	O	P	0	0	0
			1619	723	290	531	75			
52	W4	76	Total	C	N	O	P	0	0	0
			1619	723	290	531	75			
52	X4	76	Total	C	N	O	P	0	0	0
			1619	723	290	531	75			
52	V4	76	Total	C	N	O	P	0	0	0
			1619	723	290	531	75			

- Molecule 53 is TC007 (three-letter code: 8UZ) (formula: C<sub>18</sub>H<sub>37</sub>N<sub>5</sub>O<sub>10</sub>).



Mol	Chain	Residues	Atoms			ZeroOcc	AltConf	
			Total	C	N			O
53	13	1	33	18	5	10	0	0
53	13	1	33	18	5	10	0	0
53	1G	1	33	18	5	10	0	0
53	1G	1	33	18	5	10	0	0
53	1H	1	33	18	5	10	0	0
53	1H	1	33	18	5	10	0	0
53	1H	1	33	18	5	10	0	0
53	1H	1	33	18	5	10	0	0
53	14	1	33	18	5	10	0	0
53	14	1	33	18	5	10	0	0
53	14	1	33	18	5	10	0	0
53	14	1	33	18	5	10	0	0
53	14	1	33	18	5	10	0	0

- Molecule 54 is MAGNESIUM ION (three-letter code: MG) (formula: Mg).

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
54	13	197	Total Mg 197 197	0	0
54	A8	1	Total Mg 1 1	0	0
54	B5	1	Total Mg 1 1	0	0
54	11	4	Total Mg 4 4	0	0
54	2A	1	Total Mg 1 1	0	0
54	8I	1	Total Mg 1 1	0	0
54	1G	189	Total Mg 189 189	0	0
54	58	1	Total Mg 1 1	0	0
54	G8	1	Total Mg 1 1	0	0
54	19	1	Total Mg 1 1	0	0
54	3I	1	Total Mg 1 1	0	0
54	8A	1	Total Mg 1 1	0	0
54	3E	2	Total Mg 2 2	0	0
54	1H	657	Total Mg 657 657	0	0
54	15	1	Total Mg 1 1	0	0
54	B8	1	Total Mg 1 1	0	0
54	C5	1	Total Mg 1 1	0	0
54	32	3	Total Mg 3 3	0	0
54	14	591	Total Mg 591 591	0	0
54	68	2	Total Mg 2 2	0	0
54	75	1	Total Mg 1 1	0	0
54	21	4	Total Mg 4 4	0	0

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Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
54	4I	1	Total 1	Mg 1	0	0
54	4E	1	Total 1	Mg 1	0	0
54	16	14	Total 14	Mg 14	0	0
54	25	3	Total 3	Mg 3	0	0
54	C8	1	Total 1	Mg 1	0	0
54	29	6	Total 6	Mg 6	0	0
54	42	1	Total 1	Mg 1	0	0
54	1J	14	Total 14	Mg 14	0	0
54	78	3	Total 3	Mg 3	0	0
54	I8	3	Total 3	Mg 3	0	0
54	31	4	Total 4	Mg 4	0	0
54	5I	1	Total 1	Mg 1	0	0
54	5E	1	Total 1	Mg 1	0	0
54	35	2	Total 2	Mg 2	0	0
54	D8	2	Total 2	Mg 2	0	0
54	E5	2	Total 2	Mg 2	0	0
54	N8	1	Total 1	Mg 1	0	0
54	39	1	Total 1	Mg 1	0	0
54	52	1	Total 1	Mg 1	0	0
54	88	5	Total 5	Mg 5	0	0
54	J8	1	Total 1	Mg 1	0	0

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Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
54	41	2	Total Mg 2 2	0	0
54	BA	1	Total Mg 1 1	0	0
54	45	2	Total Mg 2 2	0	0
54	49	1	Total Mg 1 1	0	0
54	6A	1	Total Mg 1 1	0	0
54	98	3	Total Mg 3 3	0	0
54	K8	1	Total Mg 1 1	0	0
54	51	1	Total Mg 1 1	0	0
54	55	3	Total Mg 3 3	0	0
54	P8	1	Total Mg 1 1	0	0
54	7A	1	Total Mg 1 1	0	0
54	Y1	1	Total Mg 1 1	0	0
54	W1	3	Total Mg 3 3	0	0
54	X1	9	Total Mg 9 9	0	0
54	Y4	1	Total Mg 1 1	0	0
54	W4	4	Total Mg 4 4	0	0
54	X4	5	Total Mg 5 5	0	0

- Molecule 55 is ZINC ION (three-letter code: ZN) (formula: Zn).

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
55	G8	1	Total Zn 1 1	0	0
55	3E	1	Total Zn 1 1	0	0

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Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
55	C5	1	Total Zn 1 1	0	0
55	32	1	Total Zn 1 1	0	0
55	5I	1	Total Zn 1 1	0	0
55	5A	1	Total Zn 1 1	0	0

- Molecule 56 is water.

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
56	13	76	Total O 76 76	0	0
56	11	1	Total O 1 1	0	0
56	L5	2	Total O 2 2	0	0
56	1G	72	Total O 72 72	0	0
56	19	8	Total O 8 8	0	0
56	1H	532	Total O 532 532	0	0
56	M5	2	Total O 2 2	0	0
56	14	512	Total O 512 512	0	0
56	21	2	Total O 2 2	0	0
56	C8	2	Total O 2 2	0	0
56	29	3	Total O 3 3	0	0
56	78	2	Total O 2 2	0	0
56	I8	3	Total O 3 3	0	0
56	31	3	Total O 3 3	0	0
56	35	1	Total O 1 1	0	0

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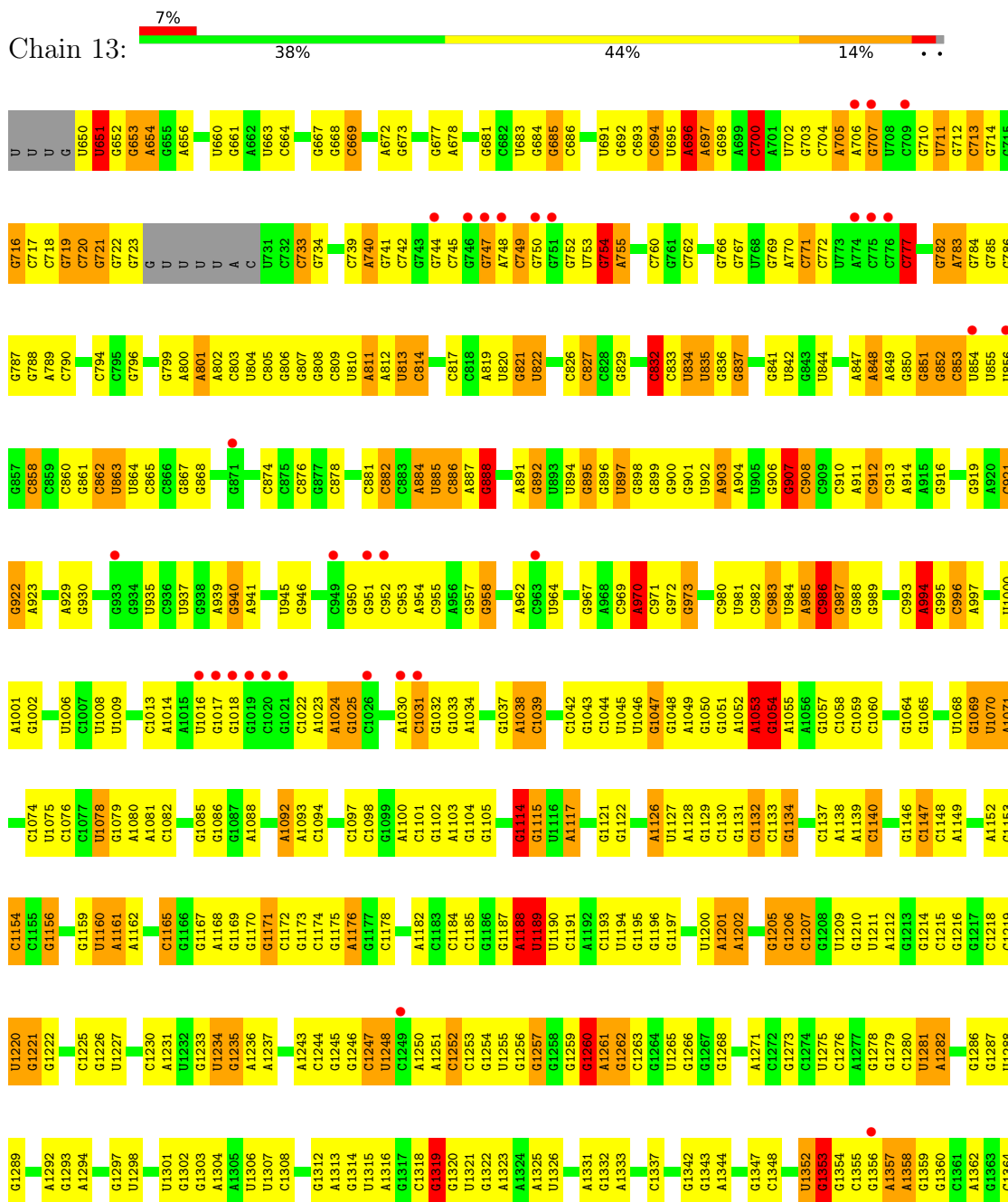
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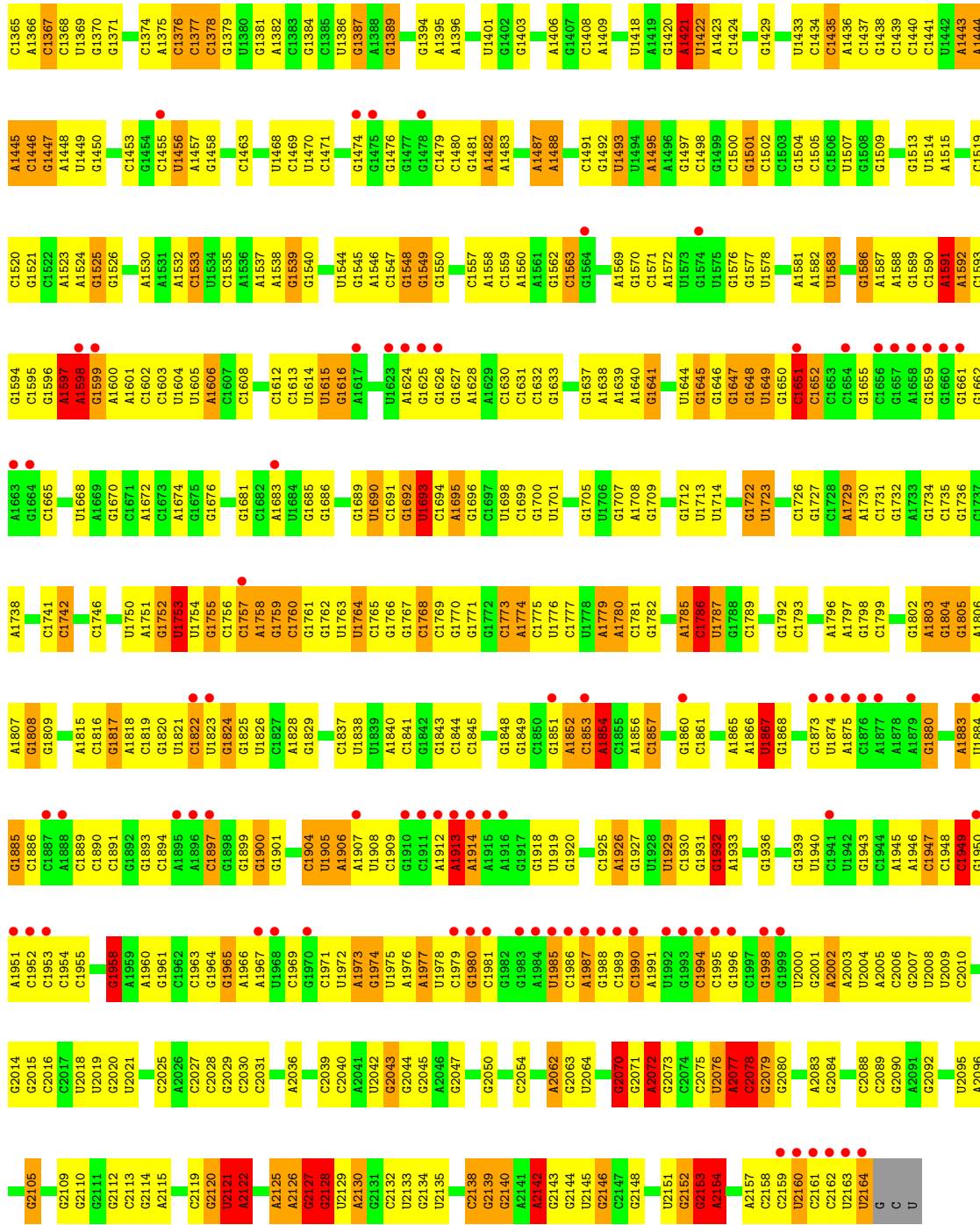
Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
56	D8	1	Total O 1 1	0	0
56	39	3	Total O 3 3	0	0
56	5A	1	Total O 1 1	0	0
56	J8	2	Total O 2 2	0	0
56	6I	1	Total O 1 1	0	0
56	E8	1	Total O 1 1	0	0
56	F5	1	Total O 1 1	0	0
56	6A	2	Total O 2 2	0	0
56	A5	1	Total O 1 1	0	0
56	55	2	Total O 2 2	0	0
56	F8	1	Total O 1 1	0	0
56	P8	1	Total O 1 1	0	0
56	7A	1	Total O 1 1	0	0
56	Y4	2	Total O 2 2	0	0

### 3 Residue-property plots i

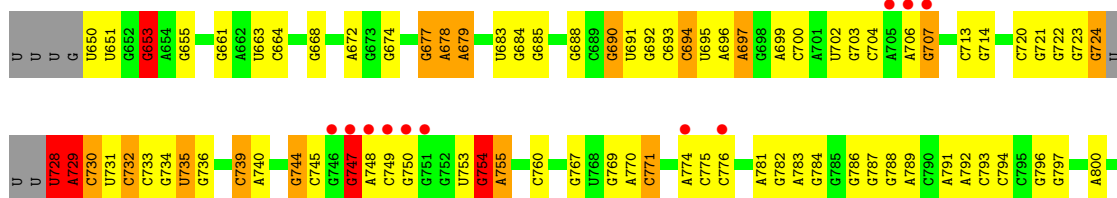
These plots are drawn for all protein, RNA, DNA and oligosaccharide chains in the entry. The first graphic for a chain summarises the proportions of the various outlier classes displayed in the second graphic. The second graphic shows the sequence view annotated by issues in geometry and electron density.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

- Molecule 1: 16S ribosomal RNA

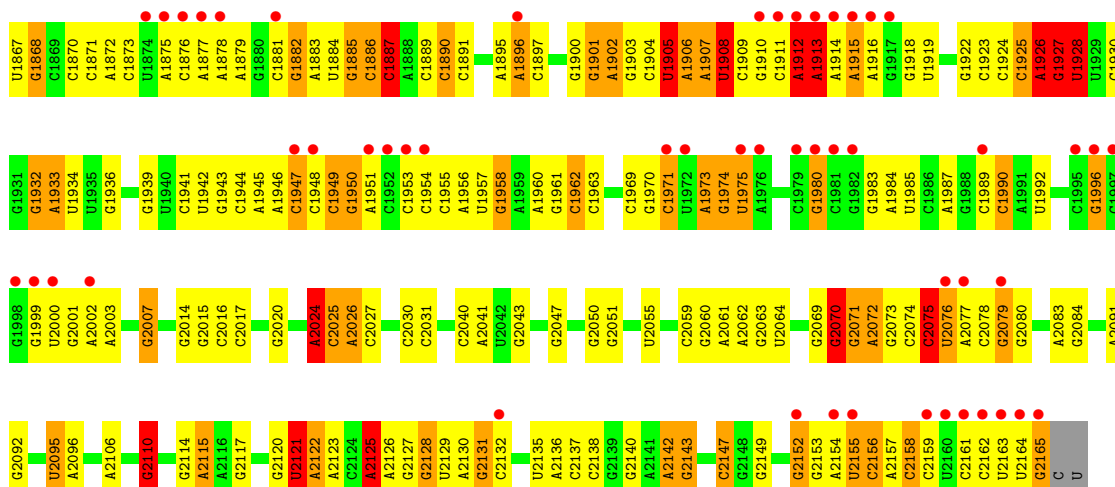




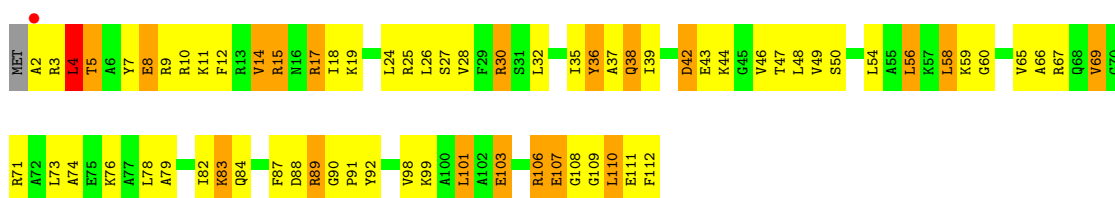
• Molecule 1: 16S ribosomal RNA



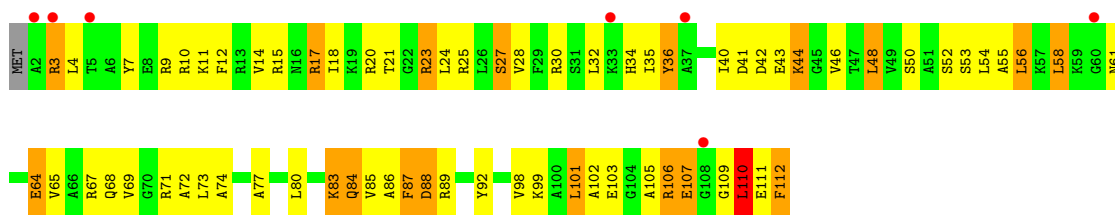
G803	G804	G805	G806	G807	G808	G809	U813	G814	C815	C816	A819	U820	G821	U822	G829	C830	C831	C832	C833	U834	U835	G836	G837	G838	G839	G841	U842	G843	U844	C845	C846	A847	A848	A849	G850	G851	G852	U856	G857	G861	C862	C865	C866	U870	G871	G872	G873	C876	C882								
G888	A891	G892	U893	U894	G895	G896	U897	G898	U901	U902	A903	A904	U905	U906	G907	C908	A911	G912	G913	C914	A915	G916	U917	G918	G922	G927	G930	A937	G938	A939	G940	A941	G946	G947	G948	G949	G950	U957	A1029	A1030	C1031	G960	C961	A962	C963	U964	G965	A966	G967	C969							
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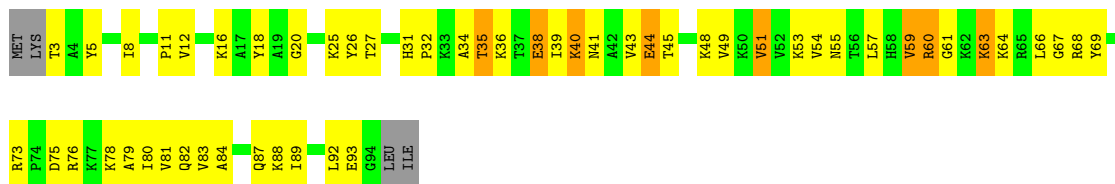
• Molecule 2: 50S ribosomal protein L18



• Molecule 2: 50S ribosomal protein L18

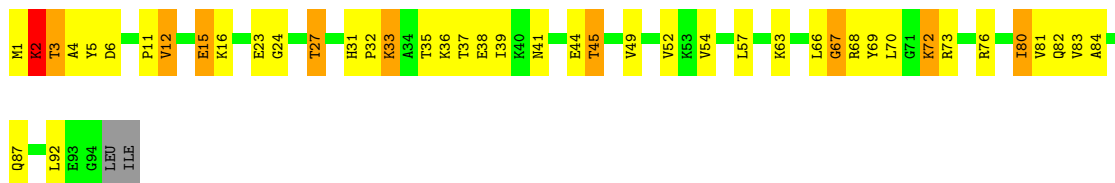


• Molecule 3: 50S ribosomal protein L23



• Molecule 3: 50S ribosomal protein L23





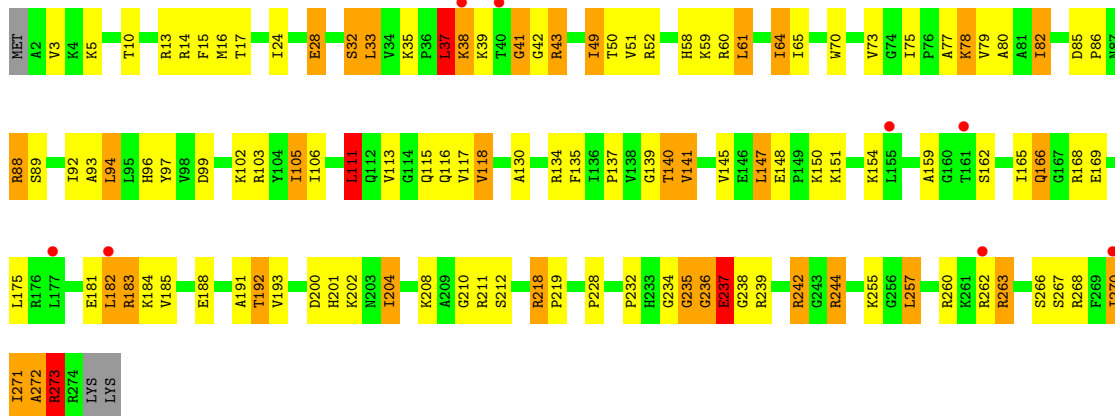
- Molecule 4: 50S ribosomal protein L2

Chain 11: 2% 54% 37% 8% ..



- Molecule 4: 50S ribosomal protein L2

Chain 19: 3% 56% 29% 12% ..



- Molecule 5: 50S ribosomal protein L34

Chain L5: 2% 45% 51% ..



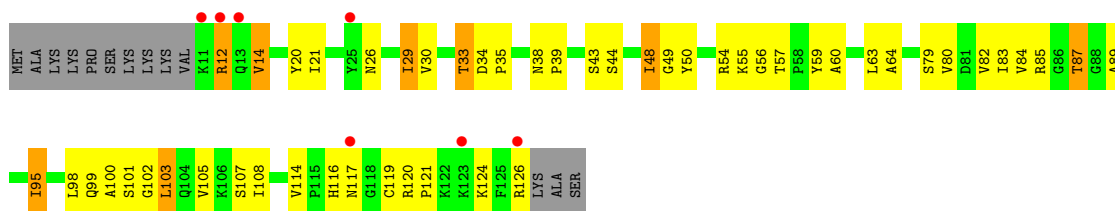
- Molecule 5: 50S ribosomal protein L34

Chain P8:  59% 31% . . .



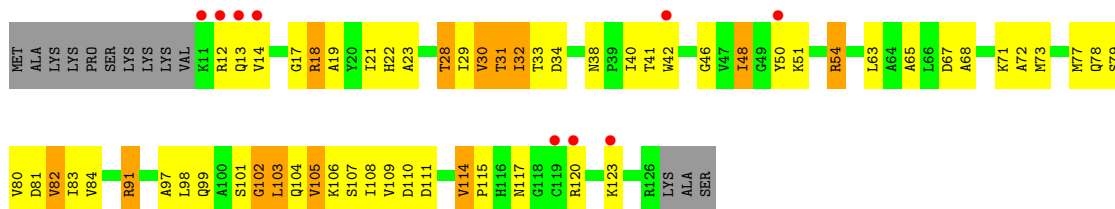
- Molecule 6: 30S ribosomal protein S11

Chain 2A:  5% 50% 33% 6% 10%




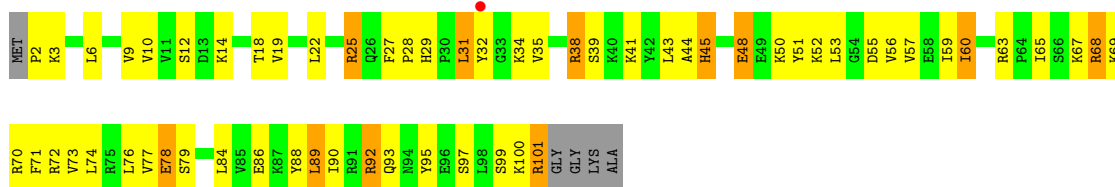
- Molecule 6: 30S ribosomal protein S11

Chain 2I:  7% 43% 36% 10% 10%



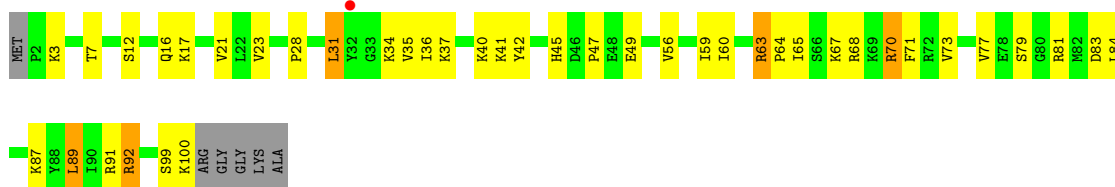
- Molecule 7: 30S ribosomal protein S17

Chain 8I:  38% 47% 10% 5%

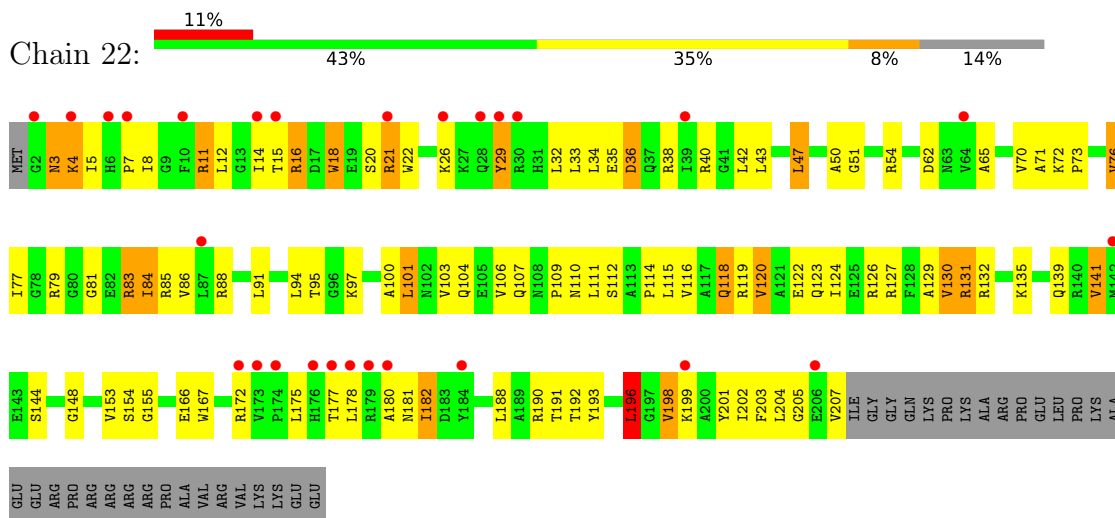


- Molecule 7: 30S ribosomal protein S17

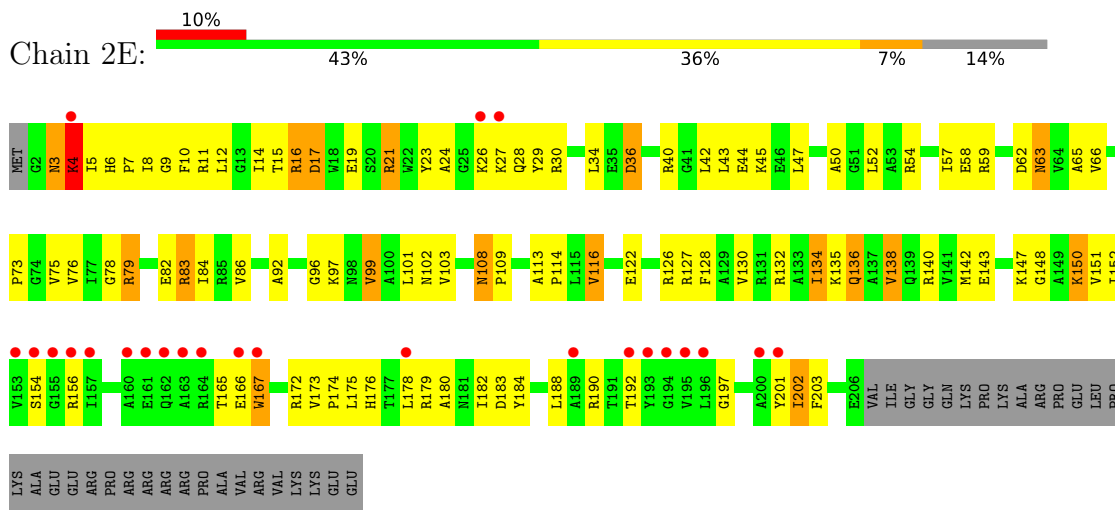
Chain 8A:  55% 34% 5% 6%



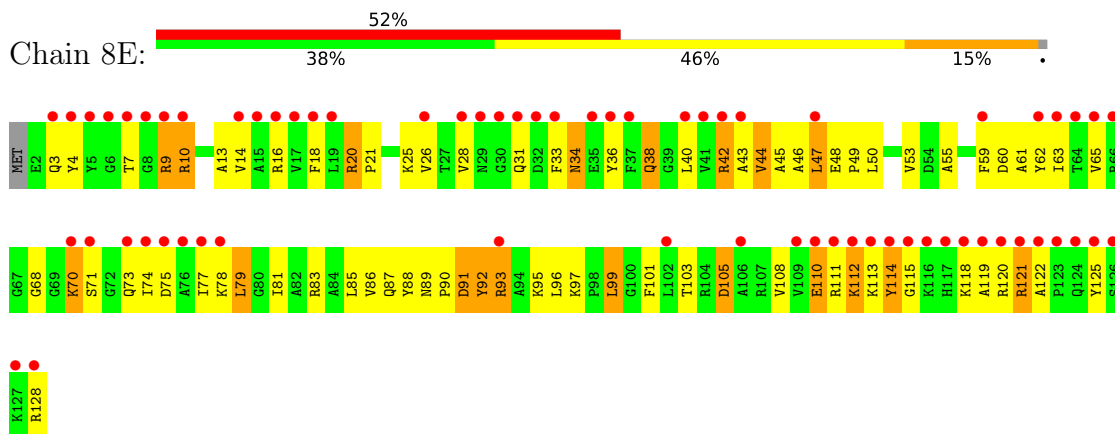
- Molecule 8: 30S ribosomal protein S3



• Molecule 8: 30S ribosomal protein S3



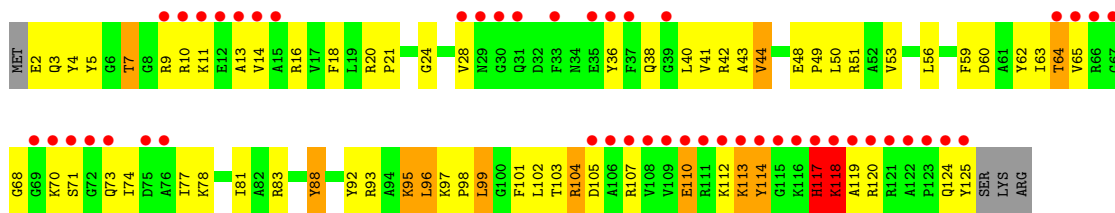
• Molecule 9: 30S ribosomal protein S9



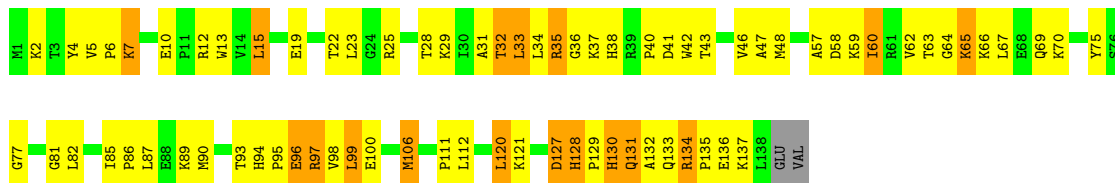
• Molecule 9: 30S ribosomal protein S9



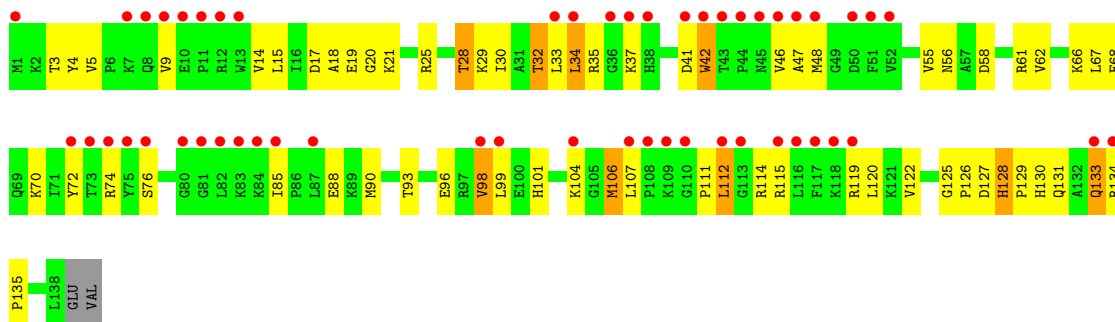




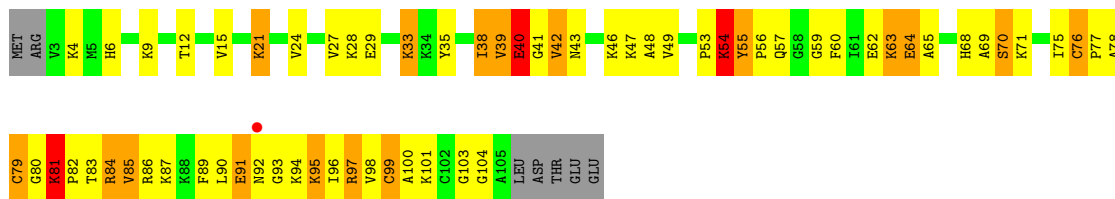
• Molecule 10: 50S ribosomal protein L13



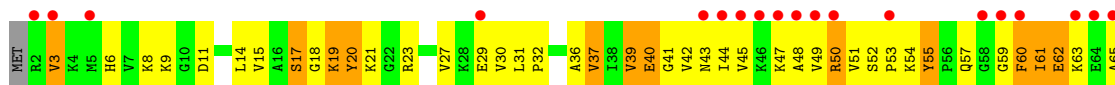
• Molecule 10: 50S ribosomal protein L13



• Molecule 11: 50S ribosomal protein L24

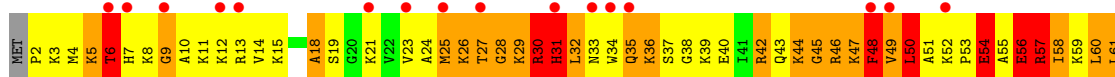


• Molecule 11: 50S ribosomal protein L24

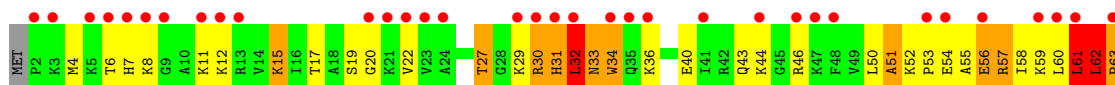
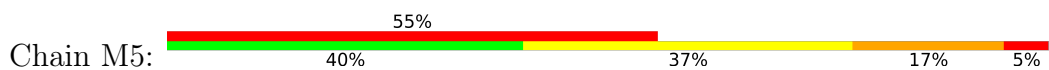




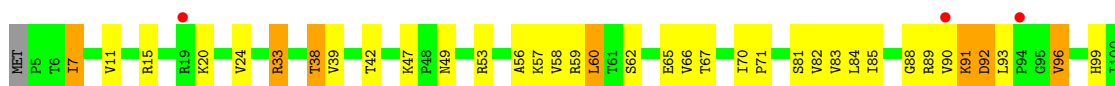
• Molecule 12: 50S ribosomal protein L35



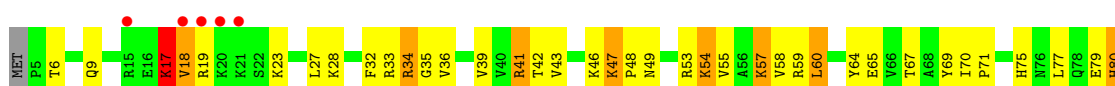
• Molecule 12: 50S ribosomal protein L35



• Molecule 13: 30S ribosomal protein S12



• Molecule 13: 30S ribosomal protein S12



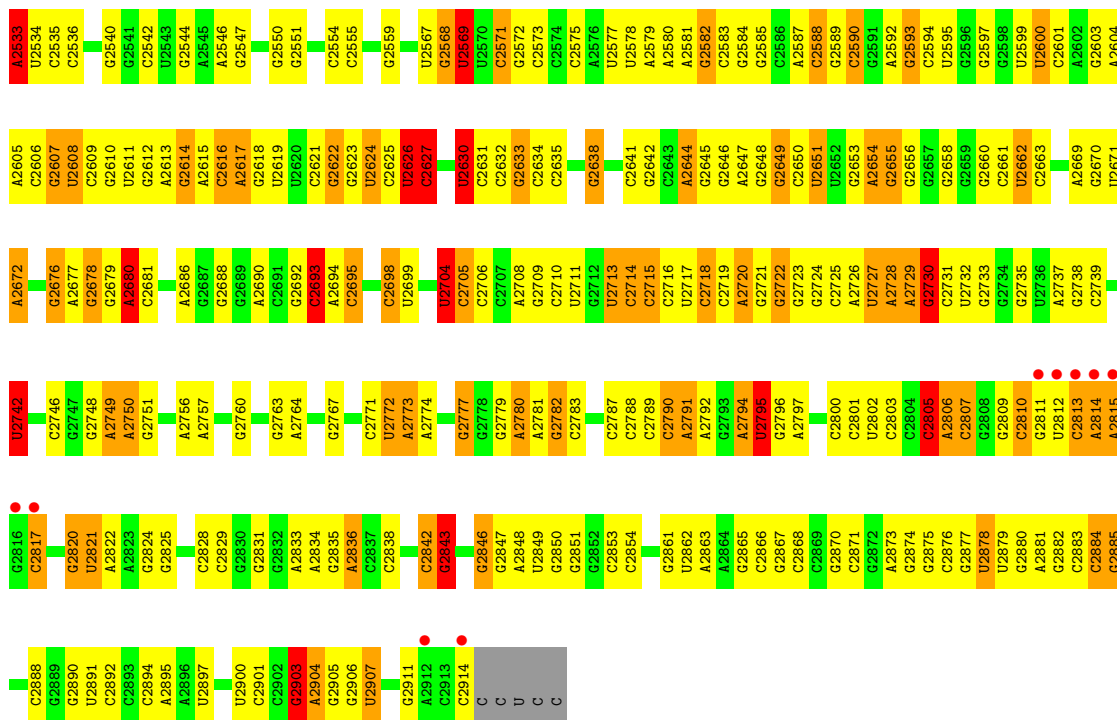
• Molecule 14: 30S ribosomal protein S4

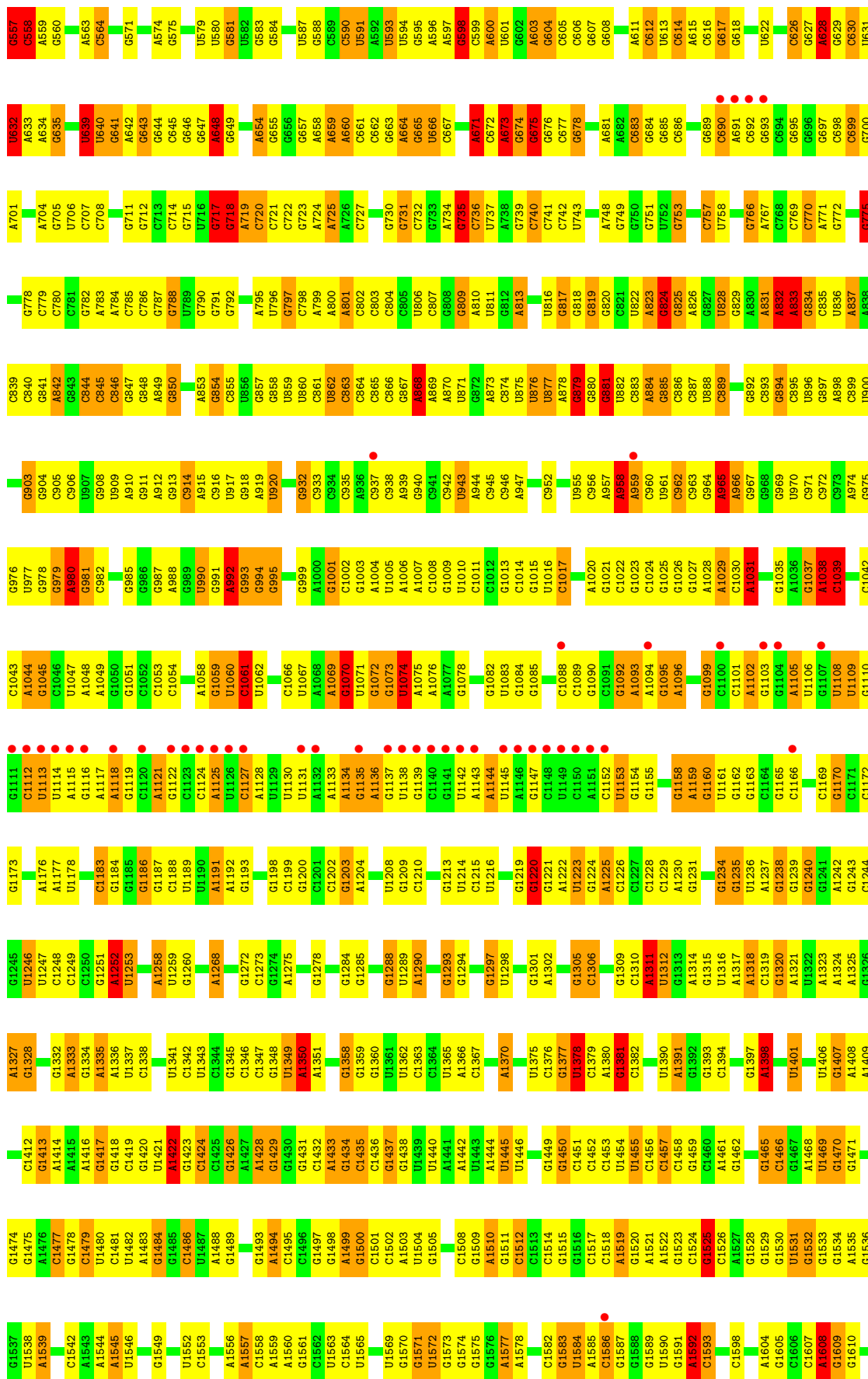






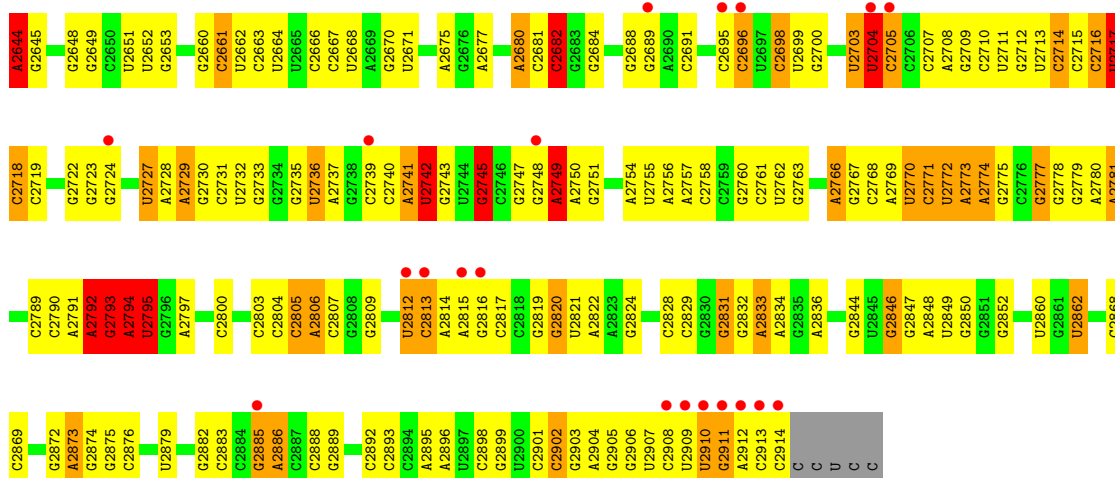
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G2460	G2461	A2462	G2463	U2464	A2465	A2466	C2467	A2468	G2469	C2470	C2471	U2472	G2473	C2476	U2477	C2478	C2479	C2482	G2483	A2484	G2485	C2486	G2487	U2488	C2489	G2490	A2491	C2492	A2493	G2494	C2495	G2496	G2497	A2503	G2504	G2505	U2506	U2507	U2508	C2511	A2512	C2513	C2514	G2517	U2518	G2520	U2521	C2522	C2527	G2531	C2532	G2533	G2534					



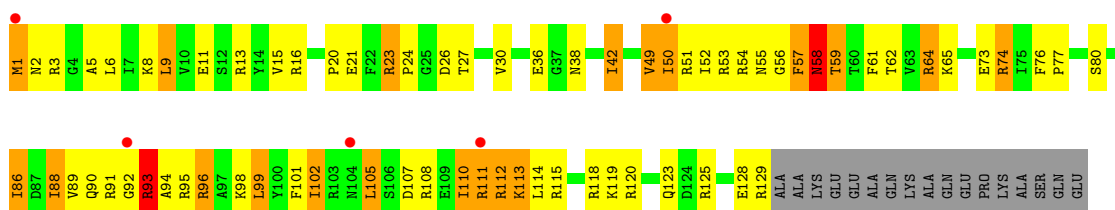




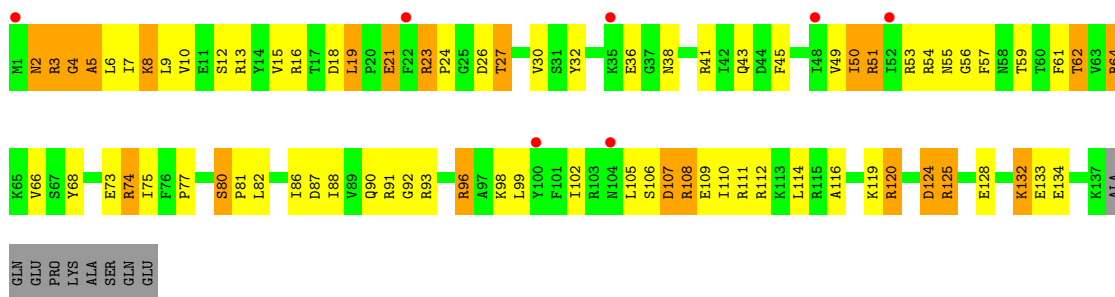




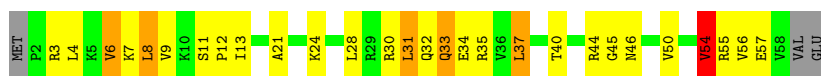
• Molecule 16: 50S ribosomal protein L19



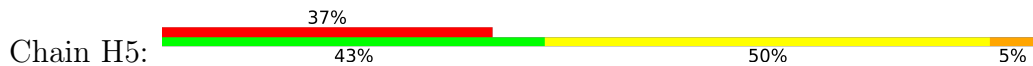
• Molecule 16: 50S ribosomal protein L19

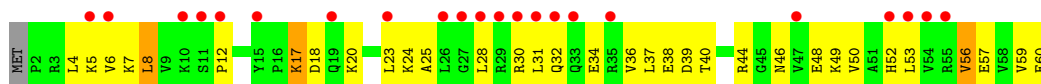


• Molecule 17: 50S ribosomal protein L30

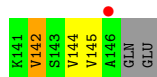
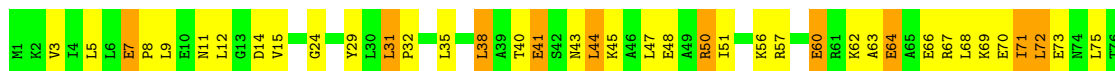


• Molecule 17: 50S ribosomal protein L30

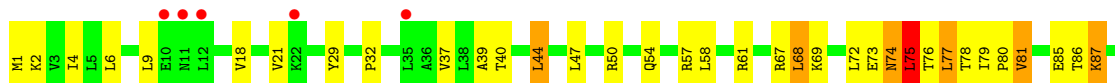




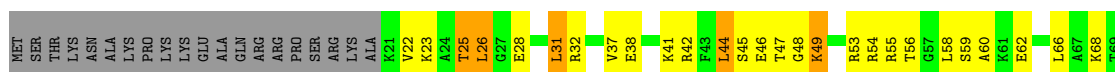
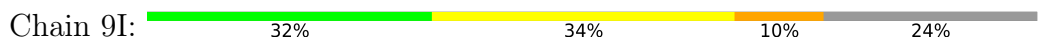
- Molecule 18: 50S ribosomal protein L9



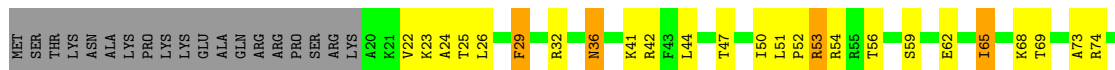
- Molecule 18: 50S ribosomal protein L9



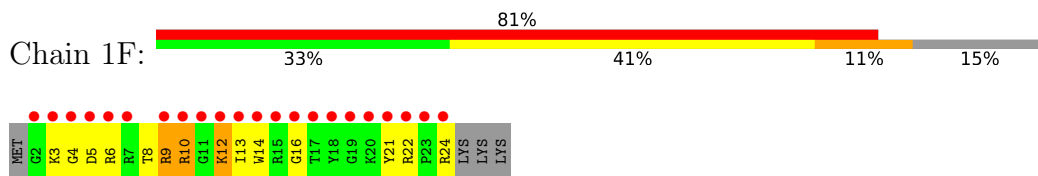
- Molecule 19: 30S ribosomal protein S18



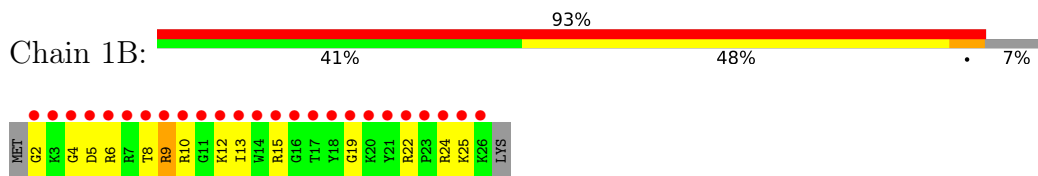
- Molecule 19: 30S ribosomal protein S18



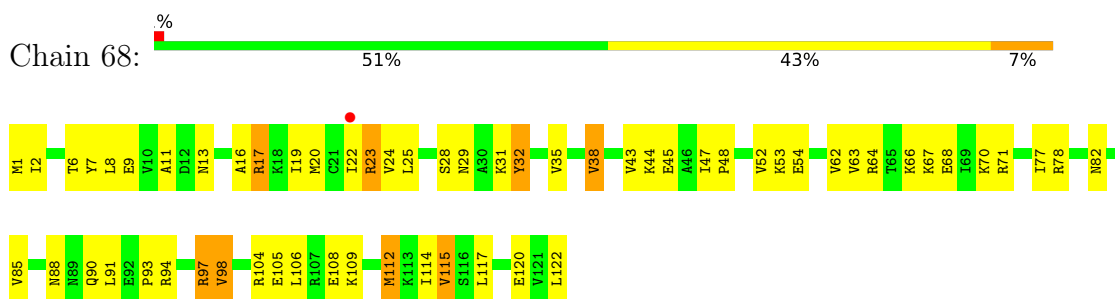
- Molecule 20: 30S ribosomal protein Thx



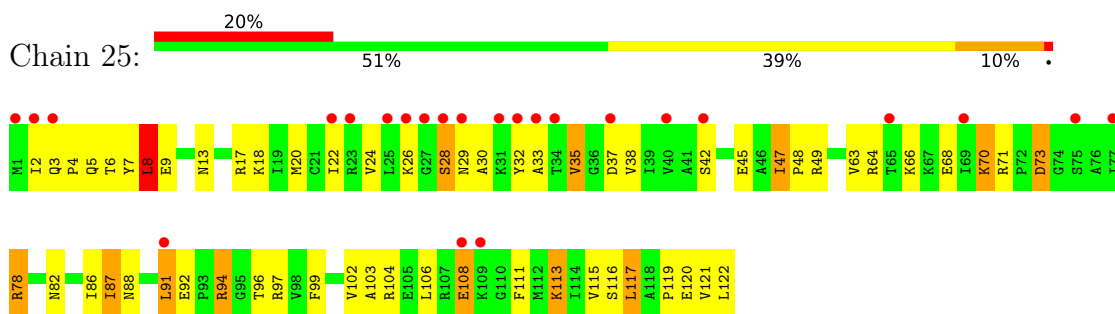
• Molecule 20: 30S ribosomal protein Thx



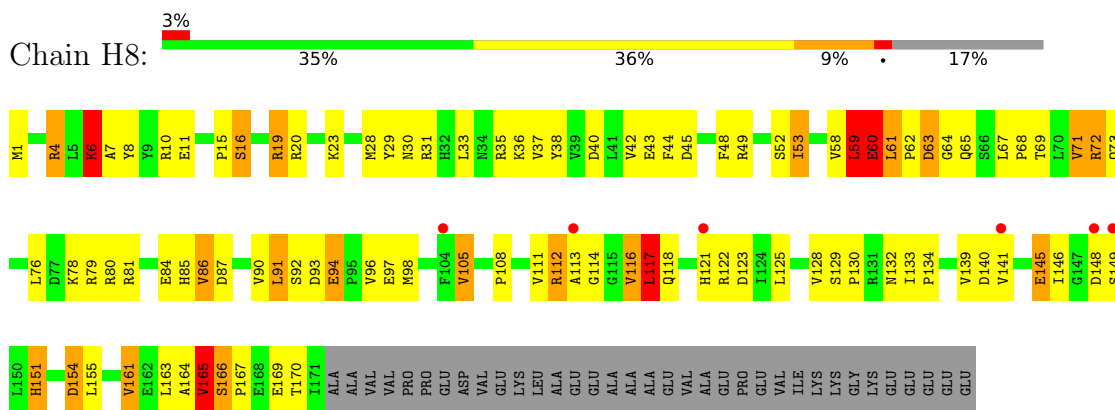
• Molecule 21: 50S ribosomal protein L14



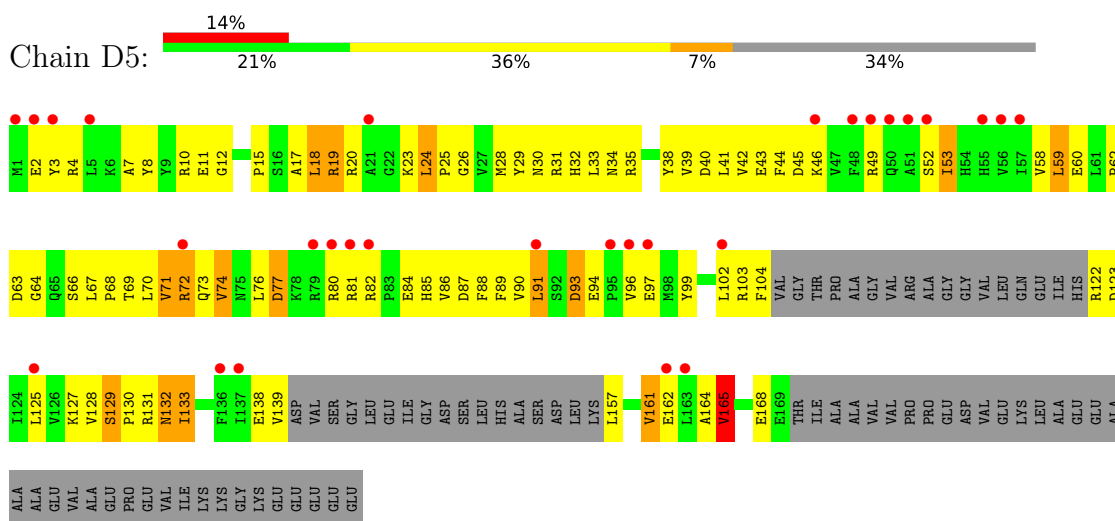
• Molecule 21: 50S ribosomal protein L14



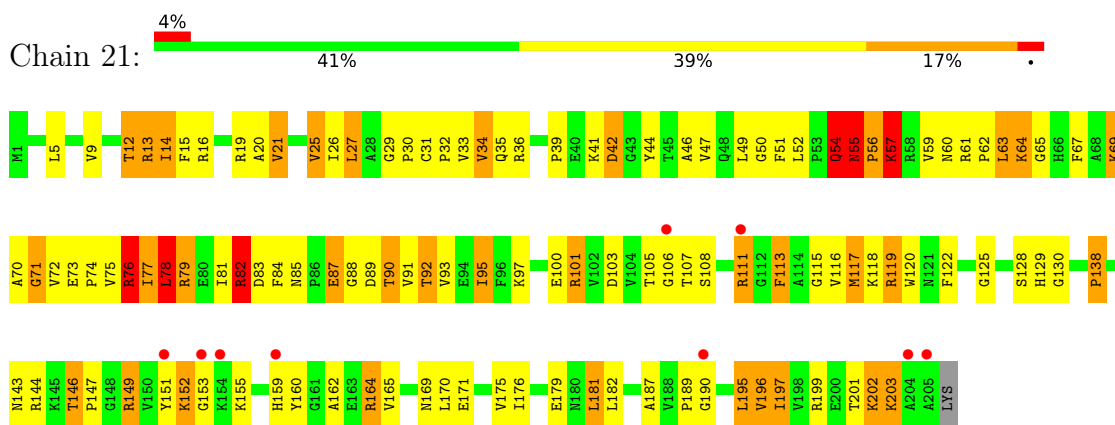
• Molecule 22: 50S ribosomal protein L25



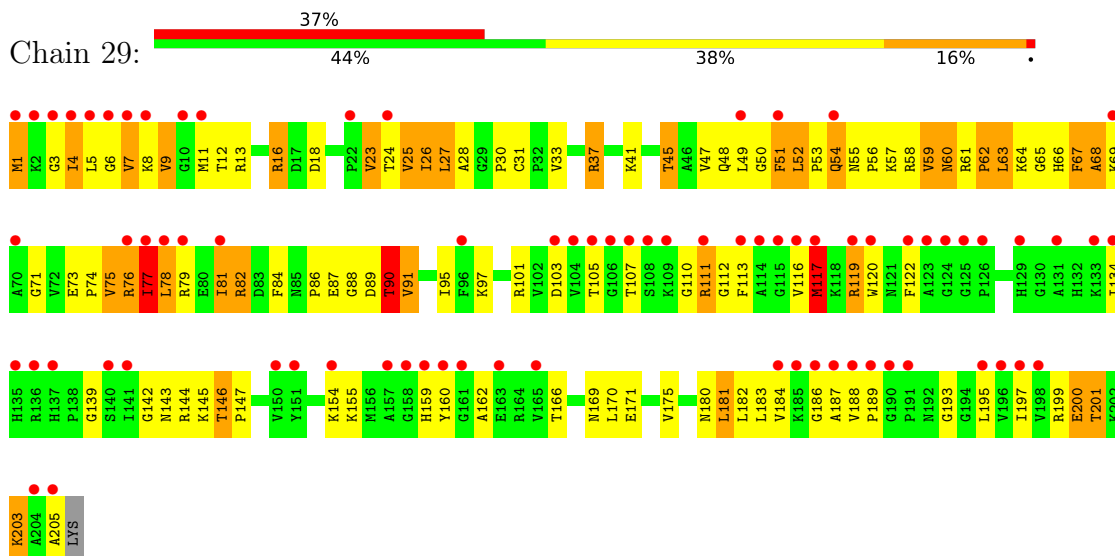
• Molecule 22: 50S ribosomal protein L25



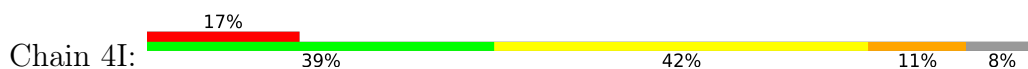
- Molecule 23: 50S ribosomal protein L3

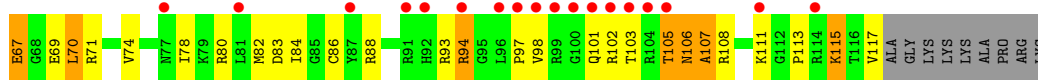
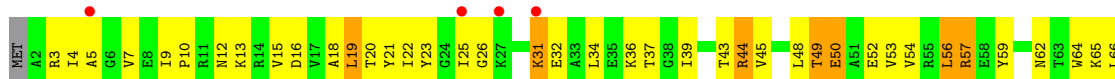


- Molecule 23: 50S ribosomal protein L3

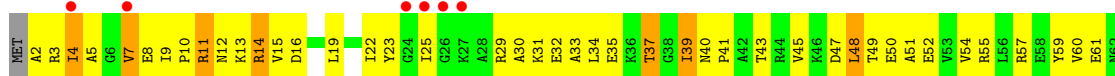


- Molecule 24: 30S ribosomal protein S13

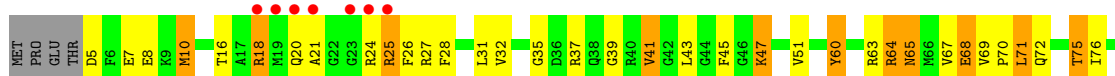




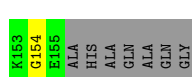
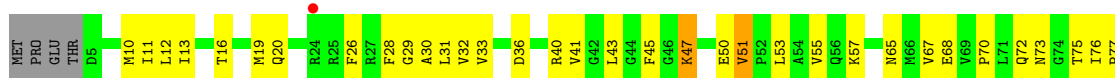
• Molecule 24: 30S ribosomal protein S13



• Molecule 25: 30S ribosomal protein S5



• Molecule 25: 30S ribosomal protein S5

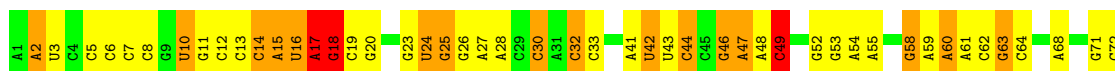


• Molecule 26: 5S ribosomal RNA





- Molecule 26: 5S ribosomal RNA



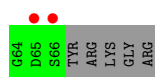
- Molecule 27: 50S ribosomal protein L20



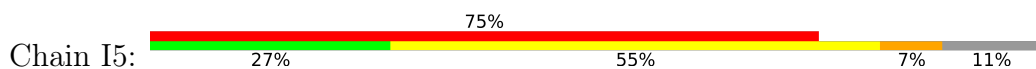
- Molecule 27: 50S ribosomal protein L20



- Molecule 28: 50S ribosomal protein L31

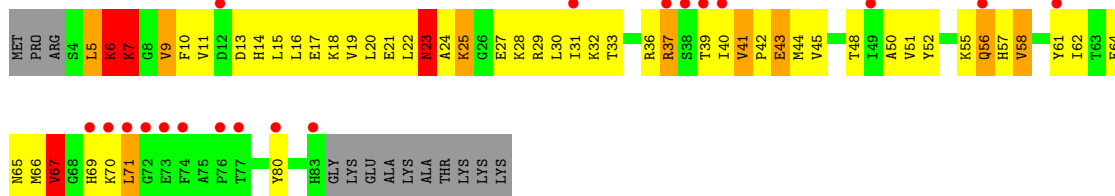


- Molecule 28: 50S ribosomal protein L31

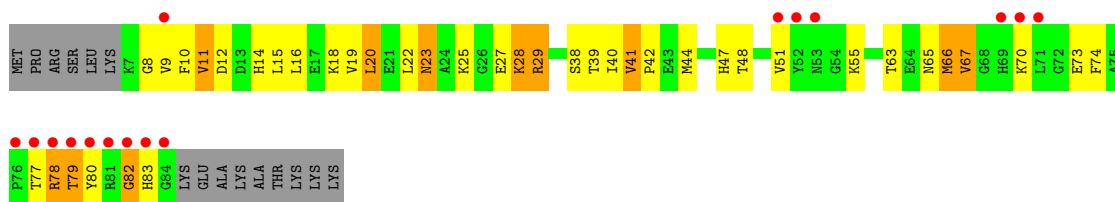




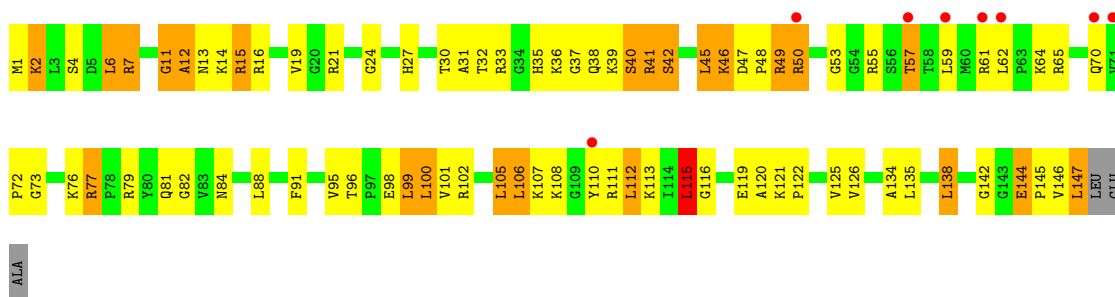
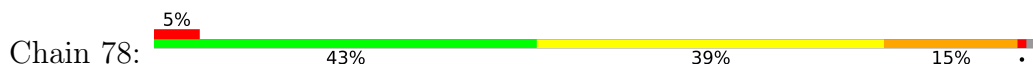
• Molecule 29: 30S ribosomal protein S19



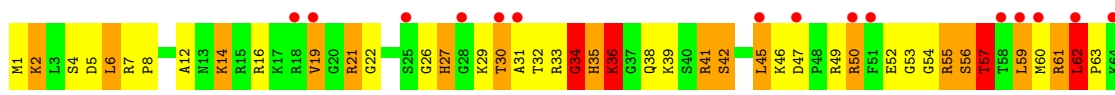
• Molecule 29: 30S ribosomal protein S19

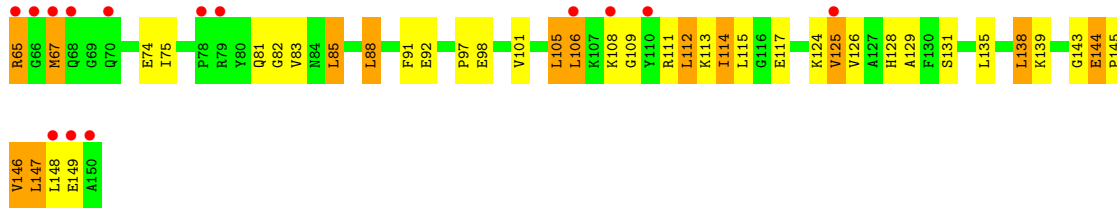


• Molecule 30: 50S ribosomal protein L15

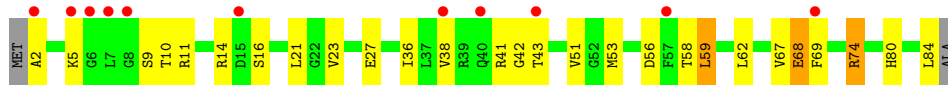


• Molecule 30: 50S ribosomal protein L15

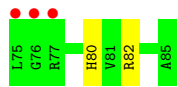
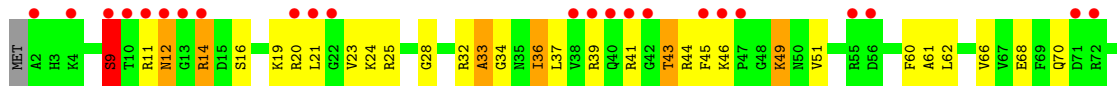




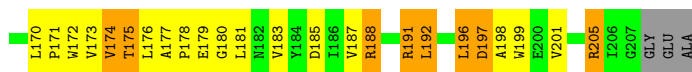
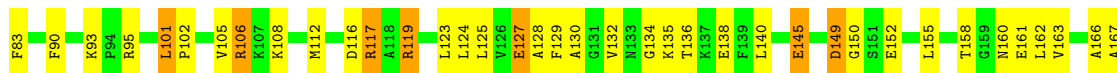
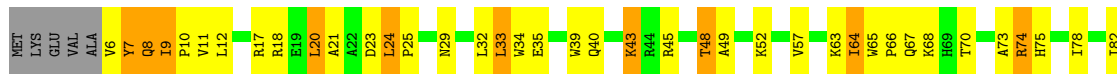
• Molecule 31: 50S ribosomal protein L27



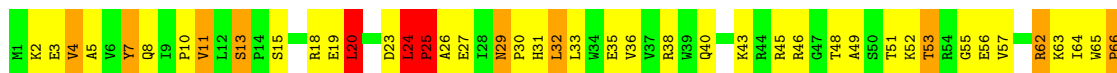
• Molecule 31: 50S ribosomal protein L27



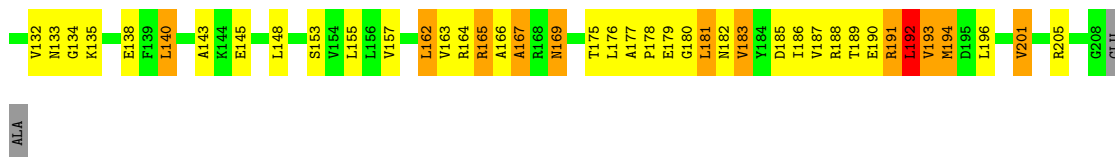
• Molecule 32: 50S ribosomal protein L4



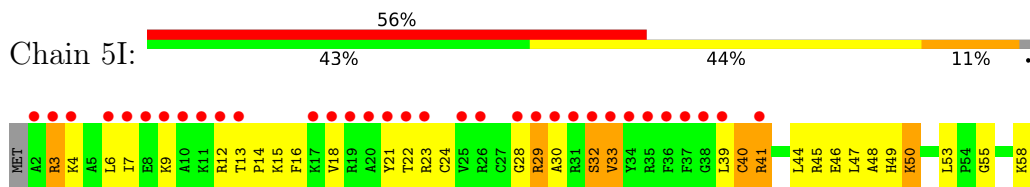
• Molecule 32: 50S ribosomal protein L4



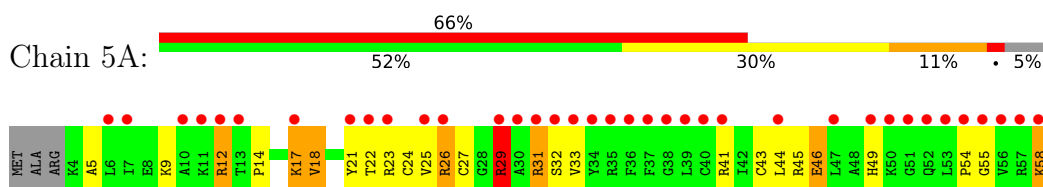




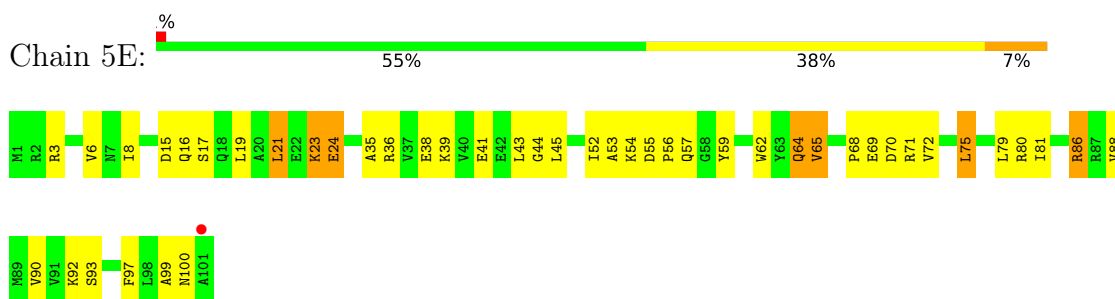
• Molecule 33: 30S ribosomal protein S14 type Z



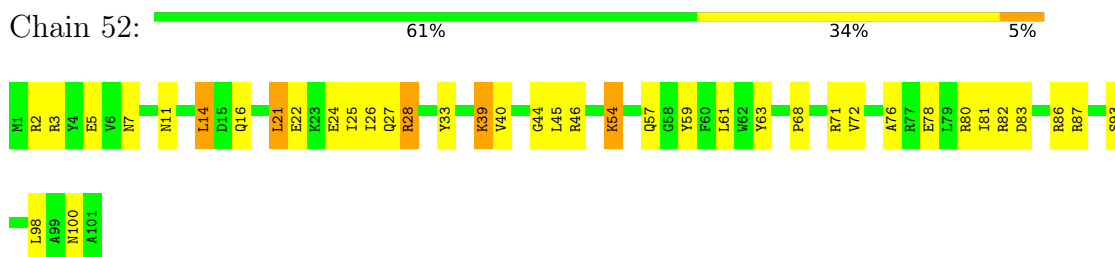
• Molecule 33: 30S ribosomal protein S14 type Z



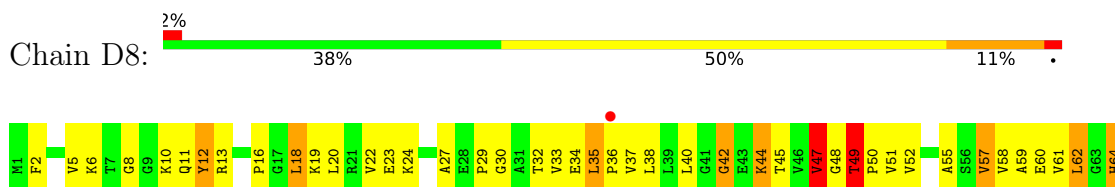
• Molecule 34: 30S ribosomal protein S6



• Molecule 34: 30S ribosomal protein S6

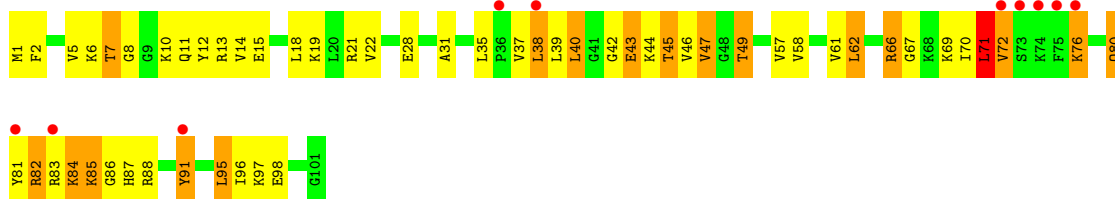


• Molecule 35: 50S ribosomal protein L21





• Molecule 35: 50S ribosomal protein L21



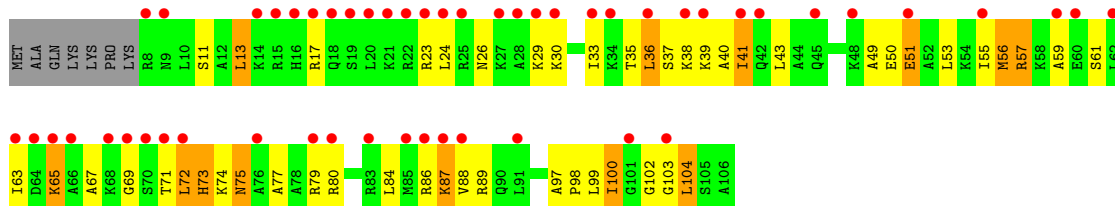
• Molecule 36: 50S ribosomal protein L32



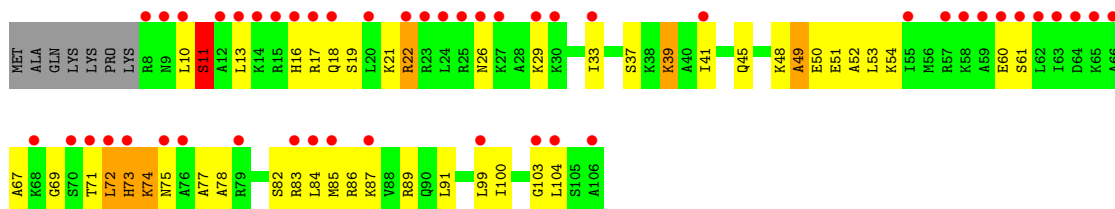
• Molecule 36: 50S ribosomal protein L32



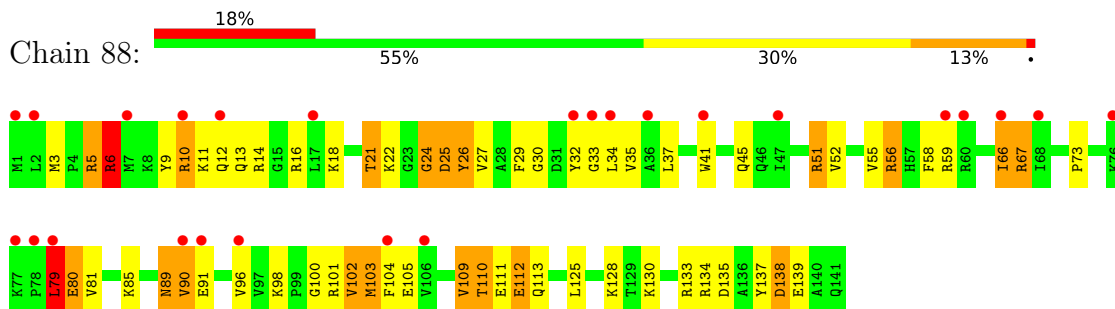
• Molecule 37: 30S ribosomal protein S20



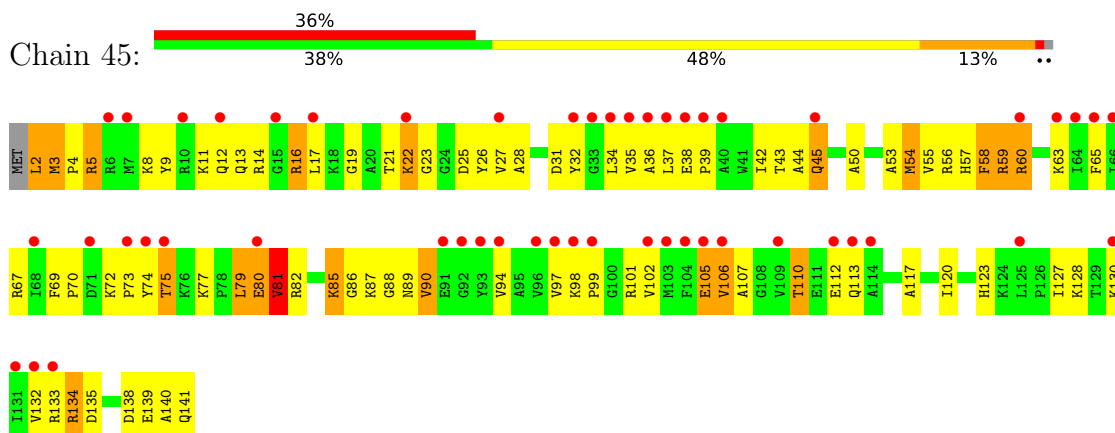
• Molecule 37: 30S ribosomal protein S20



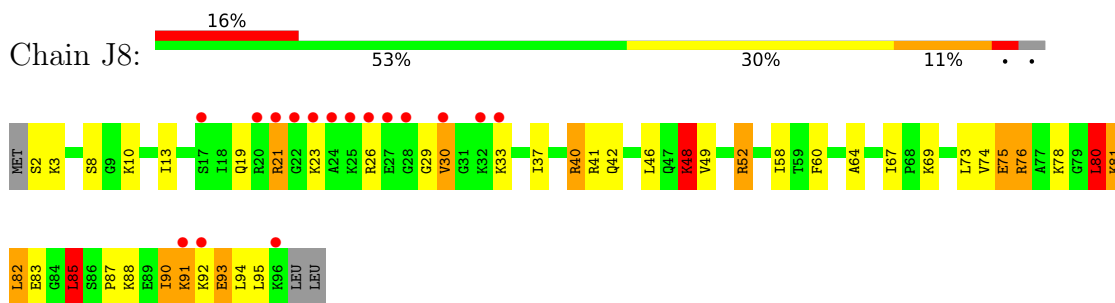
- Molecule 38: 50S ribosomal protein L16



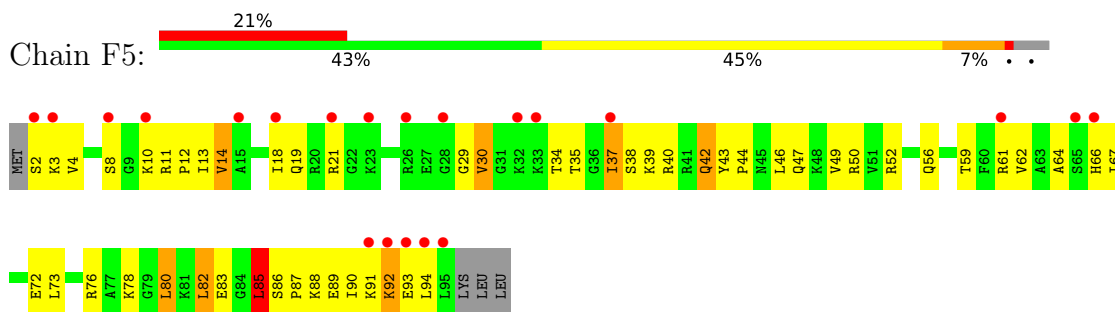
- Molecule 38: 50S ribosomal protein L16



- Molecule 39: 50S ribosomal protein L28

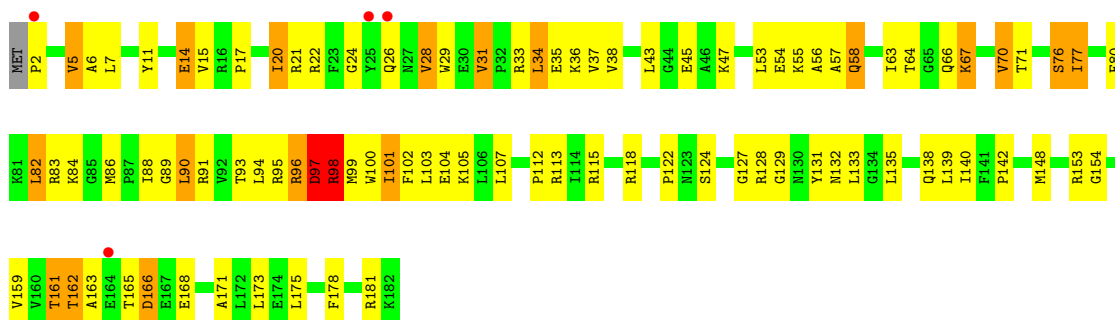


- Molecule 39: 50S ribosomal protein L28

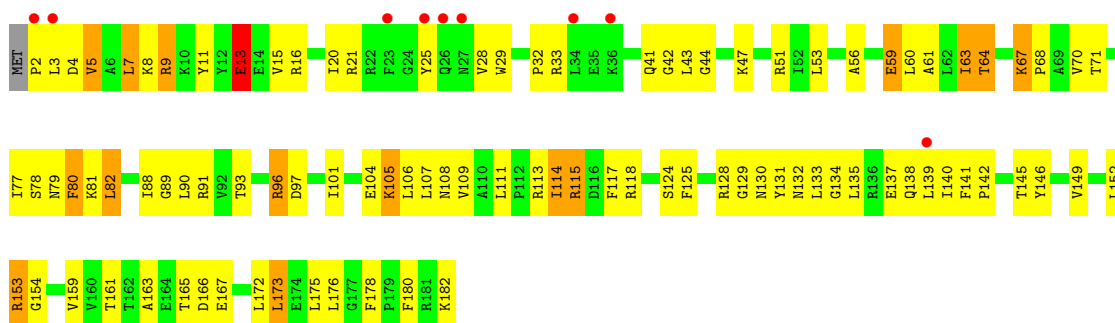


- Molecule 40: 50S ribosomal protein L5

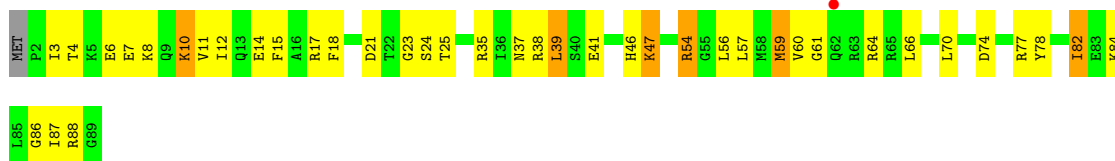




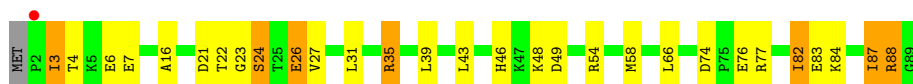
- Molecule 40: 50S ribosomal protein L5



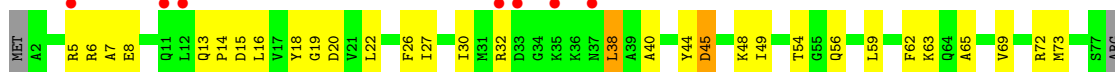
- Molecule 41: 30S ribosomal protein S15



- Molecule 41: 30S ribosomal protein S15

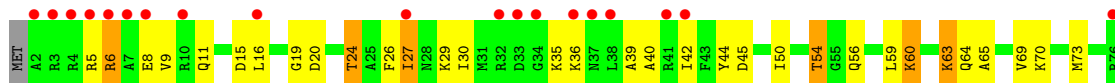


- Molecule 42: 30S ribosomal protein S7

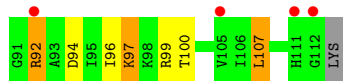




• Molecule 42: 30S ribosomal protein S7



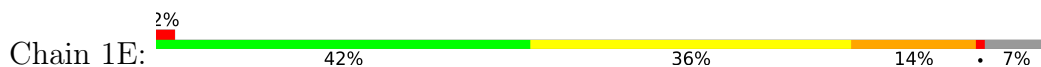
• Molecule 43: 50S ribosomal protein L22

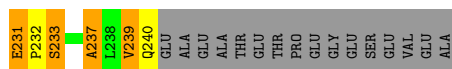


• Molecule 43: 50S ribosomal protein L22

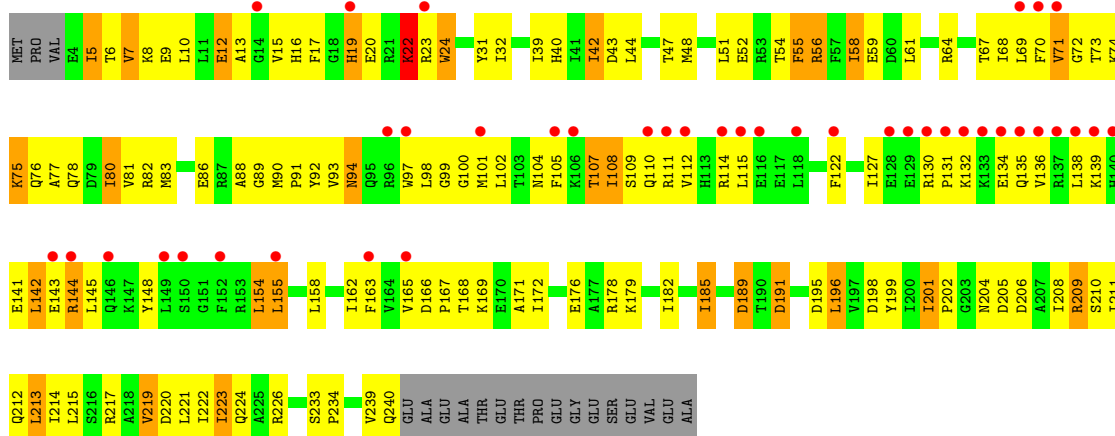


• Molecule 44: 30S ribosomal protein S2

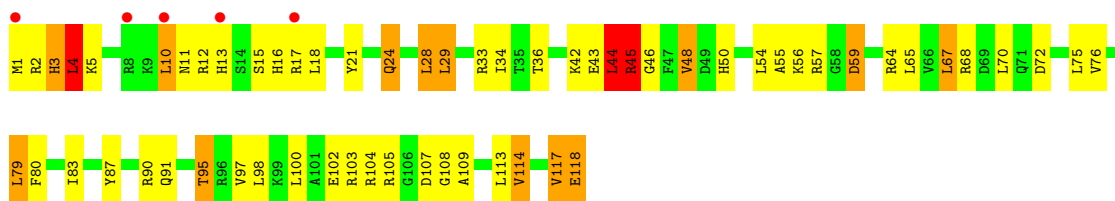




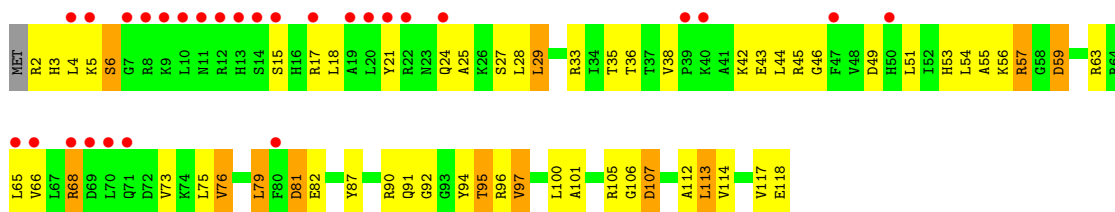
• Molecule 44: 30S ribosomal protein S2



• Molecule 45: 50S ribosomal protein L17



• Molecule 45: 50S ribosomal protein L17



• Molecule 46: 50S ribosomal protein L29



• Molecule 46: 50S ribosomal protein L29

Chain G5: 42% 42% 7% 7%



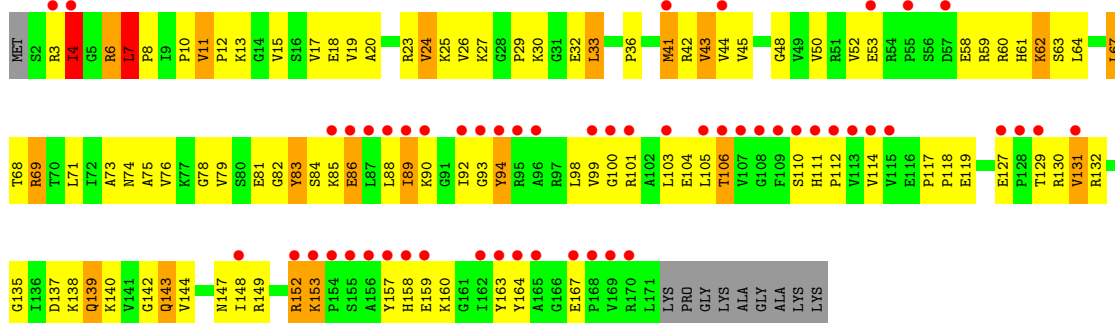
• Molecule 47: 50S ribosomal protein L6

Chain 51: 3% 47% 36% 12%



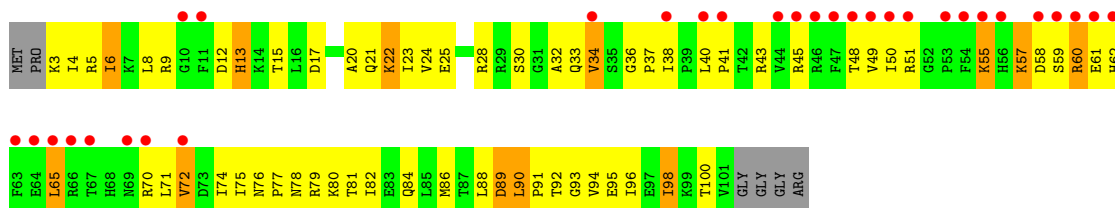
• Molecule 47: 50S ribosomal protein L6

Chain 59: 30% 38% 45% 11% 6%



• Molecule 48: 30S ribosomal protein S10

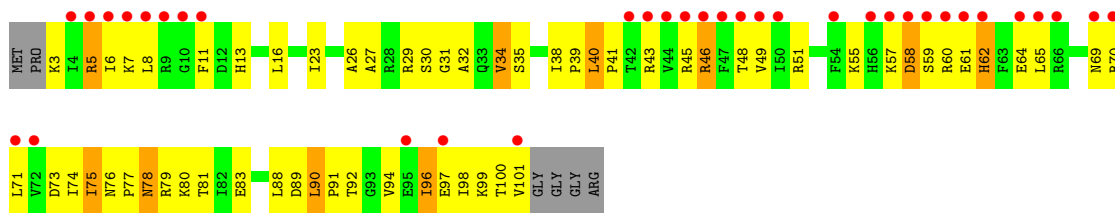
Chain 1A: 30% 32% 50% 11% 6%



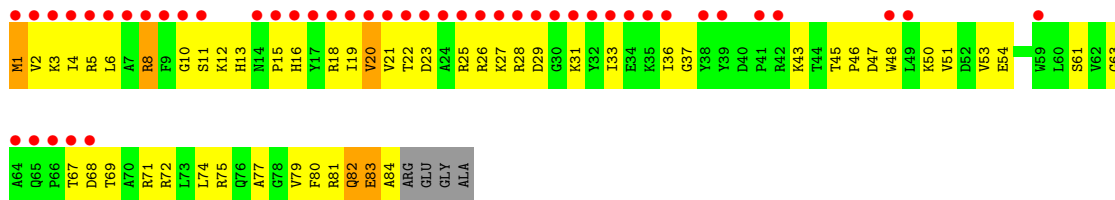
• Molecule 48: 30S ribosomal protein S10

Chain 1I: 33% 36% 49% 10% 6%

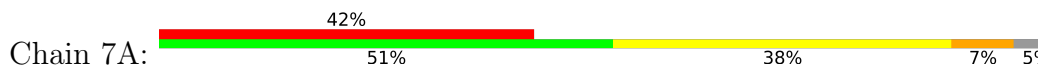




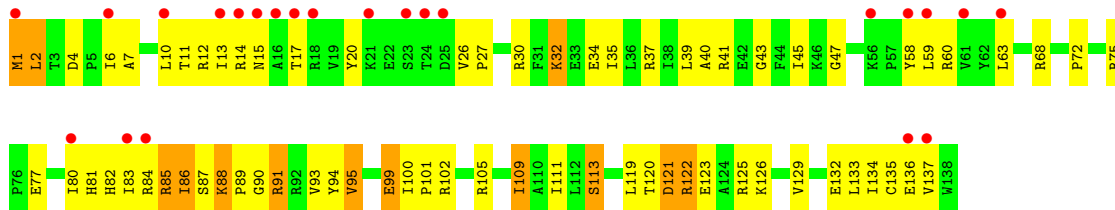
• Molecule 49: 30S ribosomal protein S16



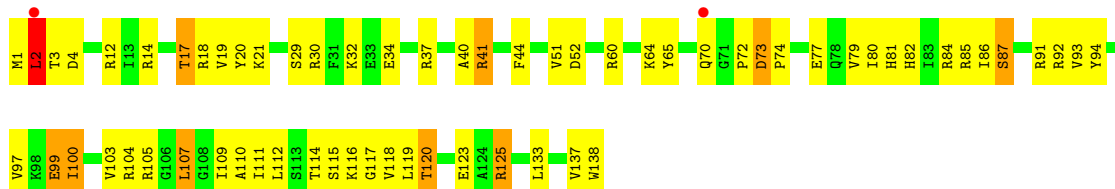
• Molecule 49: 30S ribosomal protein S16



• Molecule 50: 30S ribosomal protein S8



• Molecule 50: 30S ribosomal protein S8

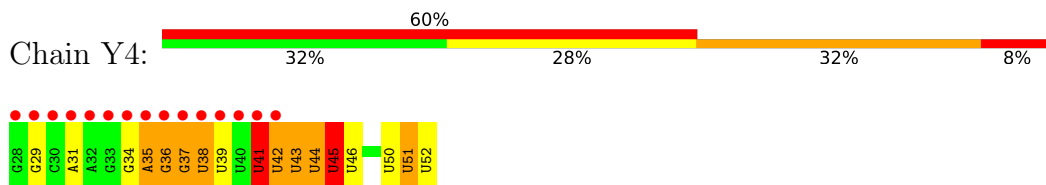




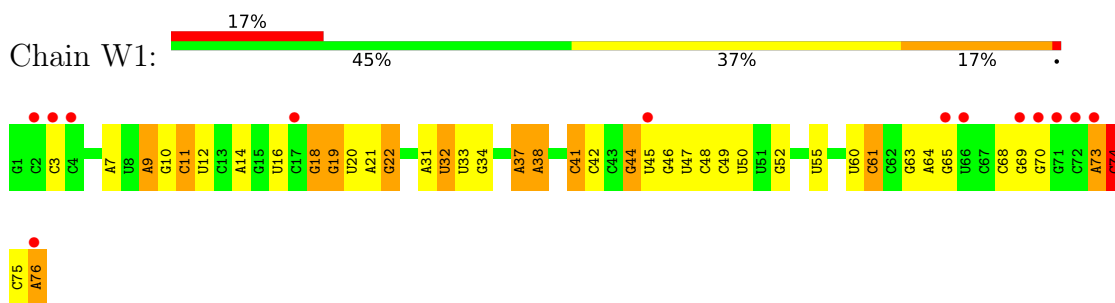
- Molecule 51: mRNA



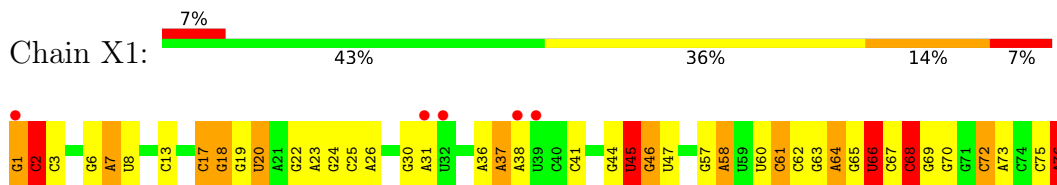
- Molecule 51: mRNA



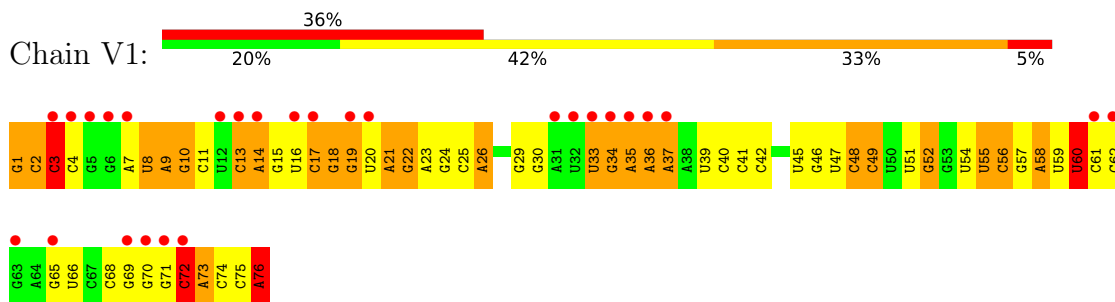
- Molecule 52: tRNA-Phe



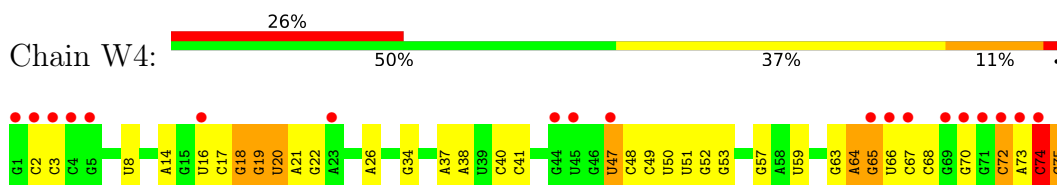
- Molecule 52: tRNA-Phe



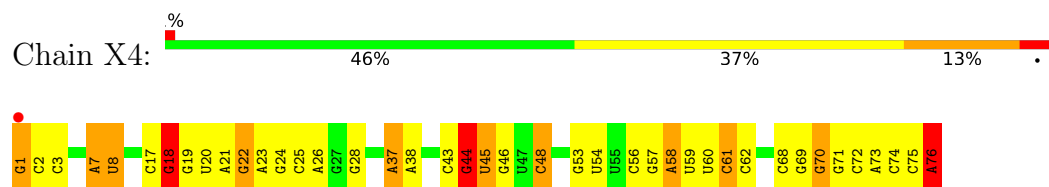
- Molecule 52: tRNA-Phe



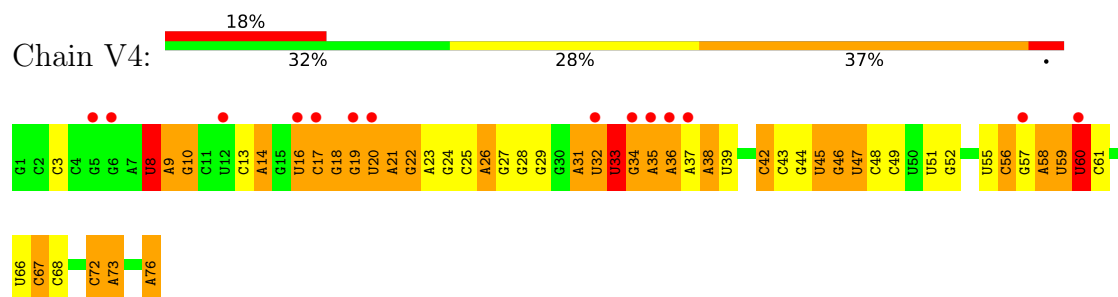
- Molecule 52: tRNA-Phe



- Molecule 52: tRNA-Phe



- Molecule 52: tRNA-Phe



## 4 Data and refinement statistics

Property	Value	Source
Space group	P 21 21 21	Depositor
Cell constants a, b, c, $\alpha$ , $\beta$ , $\gamma$	209.21Å 447.98Å 620.73Å 90.00° 90.00° 90.00°	Depositor
Resolution (Å)	104.61 – 3.15 187.84 – 3.15	Depositor EDS
% Data completeness (in resolution range)	100.0 (104.61-3.15) 94.4 (187.84-3.15)	Depositor EDS
$R_{merge}$	0.37	Depositor
$R_{sym}$	(Not available)	Depositor
$\langle I/\sigma(I) \rangle$ <sup>1</sup>	0.89 (at 3.13Å)	Xtrriage
Refinement program	PHENIX	Depositor
R, $R_{free}$	0.202 , 0.247 0.203 , 0.247	Depositor DCC
$R_{free}$ test set	19886 reflections (2.00%)	wwPDB-VP
Wilson B-factor (Å <sup>2</sup> )	72.1	Xtrriage
Anisotropy	0.295	Xtrriage
Bulk solvent $k_{sol}$ (e/Å <sup>3</sup> ), $B_{sol}$ (Å <sup>2</sup> )	0.28 , 67.9	EDS
L-test for twinning <sup>2</sup>	$\langle  L  \rangle = 0.47$ , $\langle L^2 \rangle = 0.30$	Xtrriage
Estimated twinning fraction	No twinning to report.	Xtrriage
$F_o, F_c$ correlation	0.88	EDS
Total number of atoms	300009	wwPDB-VP
Average B, all atoms (Å <sup>2</sup> )	85.0	wwPDB-VP

Xtrriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 1.49% of the height of the origin peak. No significant pseudotranslation is detected.*

<sup>1</sup>Intensities estimated from amplitudes.

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

## 5 Model quality i

### 5.1 Standard geometry i

Bond lengths and bond angles in the following residue types are not validated in this section: 8UZ, MG, ZN

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

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# $ Z  > 5$	RMSZ	# $ Z  > 5$
1	13	0.77	7/36276 (0.0%)	1.35	294/56615 (0.5%)
1	1G	0.70	4/36394 (0.0%)	1.27	238/56800 (0.4%)
2	65	0.62	0/891	0.92	4/1187 (0.3%)
2	A8	0.71	0/891	0.89	1/1187 (0.1%)
3	B5	0.81	0/739	0.87	1/993 (0.1%)
3	F8	0.92	1/756 (0.1%)	0.94	2/1014 (0.2%)
4	11	0.88	2/2176 (0.1%)	1.01	6/2933 (0.2%)
4	19	0.77	1/2170 (0.0%)	0.98	6/2926 (0.2%)
5	L5	0.85	0/417	0.91	0/550
5	P8	0.92	0/417	0.95	0/550
6	2A	0.50	0/879	0.66	0/1187
6	2I	0.53	0/879	0.78	1/1187 (0.1%)
7	8A	0.60	0/836	0.66	0/1117
7	8I	0.60	0/847	0.76	0/1131
8	22	0.50	0/1636	0.67	1/2205 (0.0%)
8	2E	0.57	0/1629	0.70	0/2195
9	82	0.41	0/1002	0.62	0/1346
9	8E	0.45	0/1028	0.65	0/1379
10	15	0.53	0/1131	0.77	0/1525
10	58	0.69	0/1131	0.90	1/1525 (0.1%)
11	C5	0.79	0/807	0.95	3/1076 (0.3%)
11	G8	0.86	0/796	1.06	5/1062 (0.5%)
12	M5	0.94	2/525 (0.4%)	1.13	5/691 (0.7%)
12	Q8	1.44	3/486 (0.6%)	1.61	8/638 (1.3%)
13	3A	0.68	0/991	0.82	1/1327 (0.1%)
13	3I	0.74	0/972	0.89	0/1301
14	32	0.54	1/1732 (0.1%)	0.75	0/2318
14	3E	0.70	3/1732 (0.2%)	0.78	1/2318 (0.0%)
15	14	0.94	70/70167 (0.1%)	1.56	1281/109541 (1.2%)
15	1H	1.12	154/70233 (0.2%)	1.72	1902/109643 (1.7%)
16	75	0.69	0/1155	0.90	2/1542 (0.1%)
16	B8	0.78	1/1095 (0.1%)	0.92	1/1463 (0.1%)

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z  >5	RMSZ	# Z  >5
17	H5	0.60	0/473	0.69	0/635
17	L8	0.91	2/457 (0.4%)	0.93	2/613 (0.3%)
18	61	0.61	0/1151	0.81	3/1558 (0.2%)
18	69	0.56	0/1151	0.78	1/1558 (0.1%)
19	9A	0.56	0/569	0.79	0/757
19	9I	0.59	0/555	0.83	1/739 (0.1%)
20	1B	0.58	0/221	0.68	0/288
20	1F	0.41	0/203	0.68	0/266
21	25	0.67	0/942	0.81	1/1269 (0.1%)
21	68	0.71	0/942	0.81	0/1269
22	D5	0.53	0/1145	0.72	1/1547 (0.1%)
22	H8	0.59	0/1403	0.81	2/1901 (0.1%)
23	21	0.81	0/1601	1.03	4/2160 (0.2%)
23	29	0.71	0/1601	1.03	5/2160 (0.2%)
24	4A	0.42	0/938	0.61	0/1258
24	4I	0.47	0/938	0.69	0/1258
25	42	0.54	0/1171	0.72	0/1576
25	4E	0.66	0/1171	0.75	0/1576
26	16	0.90	3/2928 (0.1%)	1.56	54/4568 (1.2%)
26	1J	0.78	2/2928 (0.1%)	1.45	40/4568 (0.9%)
27	85	0.64	0/981	0.81	1/1306 (0.1%)
27	C8	0.78	0/981	0.90	1/1306 (0.1%)
28	I5	0.69	0/527	0.86	0/709
28	M8	0.69	0/545	0.82	2/733 (0.3%)
29	AA	0.45	0/638	0.73	1/860 (0.1%)
29	AI	0.51	0/657	0.77	0/885
30	35	0.70	0/1161	1.03	3/1544 (0.2%)
30	78	0.72	0/1139	1.03	3/1514 (0.2%)
31	E5	0.73	0/653	0.91	0/872
31	I8	0.82	2/665 (0.3%)	0.93	0/885
32	31	0.86	1/1620 (0.1%)	0.91	2/2194 (0.1%)
32	39	0.70	0/1662	0.93	4/2249 (0.2%)
33	5A	0.46	0/484	0.73	0/643
33	5I	0.55	0/500	0.72	0/664
34	52	0.62	0/855	0.70	0/1154
34	5E	0.56	0/855	0.72	0/1154
35	95	0.70	0/789	0.92	0/1057
35	D8	0.74	0/789	0.93	1/1057 (0.1%)
36	J5	0.73	0/448	0.84	1/606 (0.2%)
36	N8	0.88	0/443	1.08	3/599 (0.5%)
37	BA	0.46	0/764	0.77	0/1007
37	BI	0.44	0/764	0.69	0/1007
38	45	0.68	0/1134	0.87	0/1517

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z  >5	RMSZ	# Z  >5
38	88	0.83	0/1142	0.96	2/1527 (0.1%)
39	F5	0.73	0/744	0.93	0/989
39	J8	0.80	0/753	1.03	3/1000 (0.3%)
40	41	0.57	0/1498	0.74	0/2016
40	49	0.44	0/1498	0.69	0/2016
41	6A	0.56	0/744	0.65	0/992
41	6I	0.63	0/744	0.77	0/992
42	62	0.48	0/1218	0.61	0/1632
42	6E	0.46	0/1171	0.60	0/1567
43	A5	0.74	0/910	0.89	2/1220 (0.2%)
43	E8	0.78	0/901	0.93	1/1209 (0.1%)
44	12	0.43	0/1959	0.66	0/2642
44	1E	0.47	0/1959	0.68	2/2642 (0.1%)
45	55	0.65	0/973	0.85	0/1302
45	98	0.67	0/981	0.84	0/1312
46	G5	0.68	0/569	0.86	1/753 (0.1%)
46	K8	0.83	0/577	1.01	1/763 (0.1%)
47	51	0.63	0/1362	0.84	0/1841
47	59	0.46	0/1332	0.76	3/1802 (0.2%)
48	1A	0.42	0/814	0.68	1/1095 (0.1%)
48	1I	0.46	0/814	0.72	0/1095
49	7A	0.54	0/721	0.71	0/970
49	7I	0.52	0/721	0.78	0/970
50	72	0.47	0/1135	0.67	1/1527 (0.1%)
50	7E	0.56	0/1135	0.73	0/1527
51	Y1	0.81	0/579	1.26	2/899 (0.2%)
51	Y4	0.69	0/579	1.30	5/899 (0.6%)
52	V1	0.72	1/1809 (0.1%)	1.32	18/2819 (0.6%)
52	V4	0.64	0/1809	1.24	18/2819 (0.6%)
52	W1	0.68	3/1809 (0.2%)	1.21	13/2819 (0.5%)
52	W4	0.63	0/1809	1.14	10/2819 (0.4%)
52	X1	0.84	2/1809 (0.1%)	1.49	22/2819 (0.8%)
52	X4	0.75	2/1809 (0.1%)	1.39	23/2819 (0.8%)
All	All	0.86	267/322745 (0.1%)	1.38	4028/483631 (0.8%)

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
3	B5	0	1

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Mol	Chain	#Chirality outliers	#Planarity outliers
4	11	0	2
4	19	0	5
5	P8	0	1
6	2A	0	1
9	82	0	1
9	8E	0	1
10	15	0	1
11	C5	0	2
11	G8	0	4
12	M5	0	3
12	Q8	0	9
13	3A	0	2
14	32	0	3
16	75	0	2
16	B8	0	1
18	61	0	4
18	69	0	3
22	H8	0	3
23	21	0	5
23	29	0	1
24	4I	0	1
27	85	0	1
27	C8	0	1
28	M8	0	2
29	AI	0	1
30	35	0	6
30	78	0	6
31	I8	0	1
32	39	0	7
33	5A	0	1
35	D8	0	1
36	J5	0	1
36	N8	0	2
37	BA	0	2
37	BI	0	1
38	45	0	2
38	88	0	2
39	F5	0	1
39	J8	0	3
40	41	0	1
40	49	0	1
43	A5	0	1

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Mol	Chain	#Chirality outliers	#Planarity outliers
44	12	0	2
44	1E	0	2
45	98	0	2
46	G5	0	3
46	K8	0	2
48	1A	0	1
All	All	0	112

All (267) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
15	1H	555	A	N9-C4	-14.91	1.28	1.37
15	1H	2445	A	N9-C4	-13.51	1.29	1.37
15	14	555	A	N9-C4	-11.67	1.30	1.37
15	1H	832	A	N9-C4	-11.39	1.31	1.37
15	1H	1820	A	N9-C4	-11.01	1.31	1.37
15	1H	73	A	N9-C4	-10.68	1.31	1.37
15	14	832	A	N9-C4	-10.67	1.31	1.37
15	14	823	A	N9-C4	-10.58	1.31	1.37
15	1H	823	A	N9-C4	-10.26	1.31	1.37
15	14	2087	A	N7-C5	10.25	1.45	1.39
15	1H	2302	A	N9-C4	-9.94	1.31	1.37
15	1H	1069	A	N9-C4	-9.91	1.31	1.37
15	1H	1924	G	N9-C8	9.81	1.44	1.37
15	1H	1975	G	C2-N3	9.53	1.40	1.32
1	13	1421	A	N9-C4	-9.46	1.32	1.37
15	1H	725	A	N9-C4	-9.16	1.32	1.37
15	1H	2729	A	N9-C4	-9.13	1.32	1.37
15	14	2445	A	N9-C4	-9.13	1.32	1.37
15	1H	1663	A	N9-C4	-9.03	1.32	1.37
15	14	725	A	N9-C4	-8.87	1.32	1.37
15	1H	2361	A	N3-C4	-8.81	1.29	1.34
15	1H	1820	A	N7-C5	-8.78	1.33	1.39
1	13	1421	A	C5-C6	-8.62	1.33	1.41
15	1H	1191	A	N9-C4	-8.50	1.32	1.37
15	14	1381	G	N9-C4	-8.44	1.31	1.38
15	1H	648	A	N9-C4	-8.43	1.32	1.37
15	14	1924	G	N9-C4	-8.31	1.31	1.38
15	1H	355	A	N9-C4	-8.25	1.32	1.37
15	1H	725	A	N9-C8	8.22	1.44	1.37
12	Q8	54	GLU	CG-CD	8.13	1.64	1.51
17	L8	57	GLU	CG-CD	8.02	1.64	1.51

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
4	11	28	GLU	CG-CD	7.88	1.63	1.51
52	X1	37	A	N3-C4	7.86	1.39	1.34
15	1H	2533	A	N9-C4	-7.77	1.33	1.37
15	1H	2445	A	C5-C6	-7.73	1.34	1.41
15	1H	1290	A	N9-C4	-7.63	1.33	1.37
3	F8	15	GLU	CB-CG	7.59	1.66	1.52
26	16	122	A	N9-C4	7.53	1.42	1.37
15	1H	1924	G	N9-C4	-7.50	1.31	1.38
15	1H	2604	A	N9-C4	-7.45	1.33	1.37
15	1H	187	A	N3-C4	-7.44	1.30	1.34
14	3E	31	CYS	CB-SG	7.43	1.94	1.82
15	14	73	A	N9-C4	-7.42	1.33	1.37
15	1H	823	A	C5-C6	-7.42	1.34	1.41
15	1H	2407	A	N9-C4	-7.39	1.33	1.37
15	1H	725	A	C5-C4	7.38	1.44	1.38
15	1H	867	G	N3-C4	-7.28	1.30	1.35
15	1H	1748	A	N7-C5	-7.25	1.34	1.39
15	1H	1258	A	C5-C6	-7.23	1.34	1.41
14	3E	9	CYS	CB-SG	7.23	1.94	1.82
12	Q8	48	PHE	CB-CG	-7.21	1.39	1.51
15	1H	867	G	C2-N3	-7.10	1.27	1.32
15	14	725	A	N9-C8	7.08	1.43	1.37
15	14	1252	A	N9-C4	-7.07	1.33	1.37
52	X1	37	A	C6-N1	7.04	1.40	1.35
15	1H	2457	C	N1-C6	-7.04	1.32	1.37
15	14	2361	A	N9-C4	-7.00	1.33	1.37
15	1H	2408	A	N7-C5	-6.95	1.35	1.39
15	1H	2392	A	N9-C4	-6.95	1.33	1.37
15	14	992	A	N3-C4	-6.93	1.30	1.34
15	14	555	A	N3-C4	-6.91	1.30	1.34
15	14	2361	A	N3-C4	-6.91	1.30	1.34
15	14	2302	A	N9-C4	-6.88	1.33	1.37
15	1H	1820	A	C5-C6	-6.86	1.34	1.41
15	1H	1663	A	N3-C4	-6.85	1.30	1.34
15	1H	832	A	N7-C5	-6.84	1.35	1.39
15	14	648	A	N9-C4	-6.80	1.33	1.37
26	1J	92	A	N9-C4	6.80	1.42	1.37
15	1H	555	A	N3-C4	-6.78	1.30	1.34
15	1H	681	A	N9-C4	6.76	1.42	1.37
15	1H	725	A	C5-C6	-6.71	1.35	1.41
15	1H	1748	A	N3-C4	-6.71	1.30	1.34
15	1H	2361	A	N7-C5	-6.65	1.35	1.39

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
15	14	1860	G	C5-C4	-6.64	1.33	1.38
15	1H	1820	A	N1-C2	6.61	1.40	1.34
15	14	1663	A	N9-C4	-6.60	1.33	1.37
15	14	1510	A	N3-C4	6.59	1.38	1.34
15	1H	747	C	N1-C6	-6.58	1.33	1.37
17	L8	57	GLU	CB-CG	6.53	1.64	1.52
15	1H	992	A	C5-C6	-6.53	1.35	1.41
15	14	1327	A	N9-C4	-6.50	1.33	1.37
15	1H	2445	A	N3-C4	-6.50	1.30	1.34
15	1H	844	C	N1-C6	-6.48	1.33	1.37
4	19	28	GLU	CG-CD	6.46	1.61	1.51
4	11	122	ASP	CB-CG	6.42	1.65	1.51
15	1H	823	A	N9-C8	6.34	1.42	1.37
15	14	1820	A	N9-C4	-6.33	1.34	1.37
15	1H	137	G	N9-C8	6.33	1.42	1.37
15	1H	1863	A	N3-C4	-6.32	1.31	1.34
15	1H	1381	G	N3-C4	-6.31	1.31	1.35
15	1H	710	C	N1-C6	-6.29	1.33	1.37
15	1H	1381	G	N9-C4	-6.24	1.32	1.38
15	1H	34	C	N3-C4	6.22	1.38	1.33
52	W1	37	A	N3-C4	6.19	1.38	1.34
15	1H	203	A	N9-C4	-6.19	1.34	1.37
1	1G	2165	G	C1'-N9	-6.17	1.38	1.46
1	13	2125	A	C5-C6	-6.15	1.35	1.41
15	14	1391	A	N9-C4	-6.10	1.34	1.37
15	14	1510	A	N9-C4	6.10	1.41	1.37
12	Q8	54	GLU	CB-CG	6.10	1.63	1.52
15	1H	1924	G	C2-N3	-6.09	1.27	1.32
15	14	2030	A	N9-C4	-6.09	1.34	1.37
15	1H	252	A	N9-C4	-6.08	1.34	1.37
15	1H	2445	A	N7-C5	-6.07	1.35	1.39
15	1H	1013	G	N9-C8	-6.04	1.33	1.37
15	14	742	C	N3-C4	-6.04	1.29	1.33
15	14	2087	A	C6-N1	6.01	1.39	1.35
15	14	725	A	C5-C4	6.01	1.43	1.38
15	14	1381	G	N3-C4	-6.00	1.31	1.35
15	1H	70	A	C5-C4	5.99	1.43	1.38
15	14	1665	A	N7-C5	-5.99	1.35	1.39
15	1H	826	A	N3-C4	-5.99	1.31	1.34
15	1H	726	A	N9-C4	-5.98	1.34	1.37
15	1H	199	C	N1-C6	-5.98	1.33	1.37
15	1H	833	A	N9-C4	-5.95	1.34	1.37

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
15	14	1748	A	C5-C6	-5.93	1.35	1.41
15	14	2533	A	N9-C4	-5.93	1.34	1.37
15	1H	1748	A	N9-C4	-5.93	1.34	1.37
15	1H	2262	A	N3-C4	-5.88	1.31	1.34
15	14	1252	A	N3-C4	-5.88	1.31	1.34
15	1H	557	G	N9-C8	5.86	1.42	1.37
15	14	2262	A	C6-N1	-5.85	1.31	1.35
15	14	1924	G	C2-N3	-5.84	1.28	1.32
15	1H	1666	C	N1-C6	-5.82	1.33	1.37
15	1H	1381	G	N9-C8	5.82	1.42	1.37
15	1H	603	A	N7-C5	-5.81	1.35	1.39
15	1H	2407	A	N7-C5	-5.78	1.35	1.39
26	16	83	G	N9-C8	5.78	1.41	1.37
15	14	1258	A	N9-C4	-5.77	1.34	1.37
15	14	1665	A	C5-C6	-5.73	1.35	1.41
15	14	1252	A	C5-C6	-5.72	1.35	1.41
15	14	1069	A	N9-C4	-5.72	1.34	1.37
15	1H	783	A	N9-C4	-5.71	1.34	1.37
15	1H	1651	U	C2-N3	-5.70	1.33	1.37
15	1H	139	A	N7-C5	-5.70	1.35	1.39
1	1G	968	A	N9-C4	-5.70	1.34	1.37
15	1H	139	A	N9-C4	-5.69	1.34	1.37
52	W1	37	A	N9-C4	5.69	1.41	1.37
15	1H	742	C	N3-C4	-5.68	1.29	1.33
15	1H	2063	G	N1-C2	-5.67	1.33	1.37
15	1H	1975	G	N1-C2	5.66	1.42	1.37
15	1H	2466	A	C6-N1	-5.65	1.31	1.35
15	14	2729	A	N9-C4	-5.64	1.34	1.37
15	1H	778	G	N3-C4	-5.62	1.31	1.35
15	1H	992	A	N3-C4	-5.62	1.31	1.34
15	1H	1748	A	C5-C6	-5.62	1.35	1.41
26	16	122	A	N3-C4	5.61	1.38	1.34
15	1H	1820	A	N3-C4	-5.61	1.31	1.34
15	1H	2463	A	C5-C6	-5.60	1.36	1.41
15	1H	1621	A	N3-C4	-5.59	1.31	1.34
15	1H	726	A	N3-C4	-5.59	1.31	1.34
15	1H	1975	G	C2-N2	5.58	1.40	1.34
15	14	70	A	N9-C4	-5.57	1.34	1.37
52	W1	37	A	C6-N1	5.56	1.39	1.35
15	1H	219	A	C5-C4	5.56	1.42	1.38
12	M5	56	GLU	CB-CG	-5.55	1.41	1.52
15	1H	1688	C	N1-C6	-5.54	1.33	1.37

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
15	1H	844	C	N3-C4	-5.54	1.30	1.33
15	1H	1913	G	C2-N3	5.53	1.37	1.32
15	1H	139	A	C5-C6	-5.52	1.36	1.41
15	1H	1585	A	N9-C4	5.50	1.41	1.37
15	14	1924	G	N3-C4	-5.50	1.31	1.35
52	X4	37	A	N3-C4	5.50	1.38	1.34
15	1H	824	G	N7-C5	-5.48	1.35	1.39
15	1H	1415	A	N9-C4	-5.48	1.34	1.37
15	1H	1584	U	N1-C2	5.48	1.43	1.38
15	1H	2447	A	N9-C4	-5.48	1.34	1.37
15	1H	1665	A	N7-C5	-5.48	1.35	1.39
15	1H	1805	C	N3-C4	-5.45	1.30	1.33
15	14	2087	A	N3-C4	5.45	1.38	1.34
15	1H	535	G	C2-N3	5.45	1.37	1.32
15	1H	961	U	C2-N3	-5.45	1.33	1.37
15	14	2515	U	C2-N3	-5.43	1.33	1.37
14	3E	26	CYS	CB-SG	5.43	1.91	1.82
15	1H	239	C	N1-C6	-5.42	1.33	1.37
32	31	145	GLU	CG-CD	5.42	1.60	1.51
15	1H	2261	G	N9-C8	-5.42	1.34	1.37
15	14	844	C	N3-C4	-5.42	1.30	1.33
15	1H	2002	A	N9-C8	-5.41	1.33	1.37
15	1H	2463	A	N9-C4	-5.40	1.34	1.37
15	1H	800	A	N3-C4	-5.38	1.31	1.34
15	1H	1820	A	C5-C4	5.37	1.42	1.38
15	1H	878	A	N9-C8	-5.37	1.33	1.37
15	1H	2283	A	N9-C4	-5.37	1.34	1.37
15	14	1318	A	N9-C4	-5.36	1.34	1.37
15	1H	832	A	C5-C6	-5.36	1.36	1.41
15	1H	2575	C	N1-C6	-5.36	1.33	1.37
15	1H	1327	A	N9-C4	-5.34	1.34	1.37
15	1H	640	U	N1-C2	5.34	1.43	1.38
15	14	482	A	N9-C4	-5.33	1.34	1.37
15	1H	992	A	N9-C4	-5.33	1.34	1.37
1	13	696	A	N9-C4	5.33	1.41	1.37
1	13	1421	A	N3-C4	-5.32	1.31	1.34
15	1H	1823	A	N9-C4	-5.32	1.34	1.37
15	1H	1815	C	N3-C4	5.30	1.37	1.33
15	1H	1258	A	N7-C5	-5.28	1.36	1.39
15	14	1191	A	N9-C4	-5.28	1.34	1.37
15	14	1381	G	N9-C8	5.27	1.41	1.37
15	14	2617	A	N7-C5	5.27	1.42	1.39

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
15	1H	235	G	N7-C5	-5.26	1.36	1.39
15	1H	1235	G	C5-C4	-5.26	1.34	1.38
26	1J	92	A	C5-C6	5.26	1.45	1.41
15	1H	2093	U	N3-C4	-5.26	1.33	1.38
15	14	2262	A	N3-C4	-5.26	1.31	1.34
15	1H	218	A	N9-C4	5.26	1.41	1.37
15	14	1727	A	N7-C5	-5.25	1.36	1.39
12	M5	56	GLU	CG-CD	-5.25	1.44	1.51
15	1H	1252	A	C5-C6	-5.25	1.36	1.41
15	1H	500	A	N3-C4	-5.24	1.31	1.34
15	14	2719	C	N1-C6	-5.24	1.34	1.37
52	X4	37	A	C6-N1	5.24	1.39	1.35
15	1H	1710	C	N3-C4	-5.21	1.30	1.33
15	14	2615	A	N3-C4	-5.21	1.31	1.34
15	14	1609	G	C6-N1	5.21	1.43	1.39
15	14	1820	A	C5-C4	5.21	1.42	1.38
15	1H	1381	G	C5-C6	-5.20	1.37	1.42
15	14	2703	U	N3-C4	-5.20	1.33	1.38
15	1H	219	A	N3-C4	5.20	1.38	1.34
15	14	1988	U	C2-N3	5.20	1.41	1.37
14	32	12	CYS	CB-SG	5.19	1.91	1.82
15	1H	2729	A	C5-C4	5.19	1.42	1.38
15	1H	1661	C	N1-C6	-5.19	1.34	1.37
15	1H	70	A	N9-C8	5.18	1.41	1.37
15	1H	1878	C	N1-C6	-5.17	1.34	1.37
1	13	1444	A	N9-C4	-5.17	1.34	1.37
15	1H	2466	A	N9-C4	-5.17	1.34	1.37
1	1G	1828	A	N9-C4	-5.16	1.34	1.37
15	14	2627	C	N3-C4	5.15	1.37	1.33
15	14	1860	G	C8-N7	-5.15	1.27	1.30
1	1G	2121	U	N1-C2	5.15	1.43	1.38
15	1H	223	A	N9-C4	-5.14	1.34	1.37
15	1H	2729	A	N9-C8	5.14	1.41	1.37
15	1H	1975	G	N9-C8	5.14	1.41	1.37
15	1H	2603	G	C6-N1	-5.14	1.35	1.39
15	1H	1306	C	N3-C4	-5.13	1.30	1.33
15	1H	810	A	N9-C8	-5.13	1.33	1.37
15	1H	1621	A	N9-C4	-5.13	1.34	1.37
15	1H	1069	A	N3-C4	-5.13	1.31	1.34
15	14	2087	A	C5-C4	5.13	1.42	1.38
15	14	832	A	C5-C6	-5.12	1.36	1.41
15	1H	2091	C	N1-C6	-5.12	1.34	1.37

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
15	1H	2087	A	C6-N1	5.11	1.39	1.35
15	14	992	A	C5-C6	-5.11	1.36	1.41
31	I8	68	GLU	CG-CD	5.10	1.59	1.51
15	1H	2231	G	C2-N3	5.09	1.36	1.32
15	14	832	A	N7-C5	-5.08	1.36	1.39
15	1H	2704	U	C3'-O3'	5.08	1.49	1.42
15	1H	70	A	N9-C4	-5.08	1.34	1.37
15	1H	829	G	N9-C8	-5.08	1.34	1.37
15	14	2644	A	N9-C4	5.08	1.40	1.37
15	1H	2276	C	N3-C4	-5.07	1.30	1.33
16	B8	21	GLU	CG-CD	5.07	1.59	1.51
15	14	2617	A	N3-C4	5.07	1.37	1.34
15	14	1860	G	N9-C8	-5.06	1.34	1.37
15	1H	878	A	N7-C5	-5.06	1.36	1.39
1	13	2154	A	C5-C4	5.06	1.42	1.38
15	1H	2054	G	N7-C5	-5.05	1.36	1.39
15	1H	1688	C	N3-C4	-5.05	1.30	1.33
15	1H	1961	A	C6-N6	-5.05	1.29	1.33
15	1H	1324	A	N7-C5	-5.04	1.36	1.39
15	1H	832	A	N3-C4	-5.04	1.31	1.34
15	14	1031	A	N9-C4	-5.04	1.34	1.37
15	14	1924	G	N9-C8	5.03	1.41	1.37
31	I8	68	GLU	CB-CG	5.03	1.61	1.52
52	V1	76	A	C5-C4	5.02	1.42	1.38
15	14	2597	G	N7-C5	-5.02	1.36	1.39
15	1H	545	G	N9-C8	-5.01	1.34	1.37

All (4028) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
15	1H	1924	G	N3-C4-N9	-24.98	111.01	126.00
15	1H	725	A	C2-N3-C4	-21.91	99.64	110.60
15	1H	2445	A	C2-N3-C4	-20.92	100.14	110.60
15	14	1924	G	N3-C4-N9	-20.79	113.53	126.00
15	1H	1924	G	N3-C4-C5	20.69	138.94	128.60
15	1H	1820	A	C2-N3-C4	-19.83	100.69	110.60
15	14	1924	G	N3-C2-N2	-19.20	106.46	119.90
15	1H	73	A	C2-N3-C4	-19.00	101.10	110.60
15	1H	1956	U	N3-C2-O2	-17.14	110.20	122.20
15	14	1924	G	N3-C4-C5	16.97	137.08	128.60
15	1H	1820	A	C5-N7-C8	-16.73	95.54	103.90
15	1H	823	A	C2-N3-C4	-16.59	102.30	110.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
15	1H	2361	A	N1-C2-N3	16.55	137.57	129.30
15	1H	1381	G	C5-N7-C8	-16.40	96.10	104.30
15	1H	992	A	N1-C6-N6	15.90	128.14	118.60
15	1H	648	A	C2-N3-C4	-15.84	102.68	110.60
15	1H	1820	A	N7-C8-N9	15.80	121.70	113.80
15	1H	555	A	C2-N3-C4	-15.54	102.83	110.60
15	1H	2302	A	C2-N3-C4	-15.45	102.87	110.60
15	1H	1924	G	N3-C2-N2	-15.41	109.11	119.90
15	1H	1381	G	C2-N3-C4	-15.34	104.23	111.90
15	14	2445	A	C2-N3-C4	-15.27	102.97	110.60
15	1H	1069	A	C2-N3-C4	-15.14	103.03	110.60
15	14	725	A	C5-N7-C8	-15.10	96.35	103.90
15	1H	992	A	C6-C5-N7	-14.89	121.88	132.30
15	1H	1924	G	C2-N3-C4	-14.88	104.46	111.90
1	13	1421	A	N1-C6-N6	14.77	127.46	118.60
1	13	1421	A	C2-N3-C4	-14.71	103.25	110.60
15	14	2231	G	O5'-P-OP2	-14.69	92.48	105.70
15	14	823	A	C2-N3-C4	-14.67	103.26	110.60
15	1H	2445	A	N1-C6-N6	14.50	127.30	118.60
15	1H	1381	G	C6-C5-N7	-14.37	121.78	130.40
15	1H	832	A	C5-N7-C8	-14.37	96.71	103.90
15	14	2361	A	C2-N3-C4	-14.30	103.45	110.60
15	14	1820	A	N7-C8-N9	14.24	120.92	113.80
15	14	823	A	N3-C4-C5	14.15	136.71	126.80
15	1H	1381	G	C4-C5-N7	14.13	116.45	110.80
15	1H	1381	G	N7-C8-N9	14.08	120.14	113.10
15	1H	1665	A	C5-N7-C8	-14.04	96.88	103.90
15	1H	355	A	C2-N3-C4	-14.03	103.59	110.60
15	14	2435	C	O5'-P-OP1	-13.99	93.10	105.70
15	1H	1728	G	C4-C5-N7	13.90	116.36	110.80
15	14	2886	A	N7-C8-N9	13.82	120.71	113.80
15	14	1252	A	C2-N3-C4	-13.75	103.72	110.60
15	1H	2445	A	C5-N7-C8	-13.72	97.04	103.90
15	14	1820	A	C5-N7-C8	-13.71	97.05	103.90
15	1H	1748	A	C2-N3-C4	-13.71	103.75	110.60
15	1H	1252	A	C2-N3-C4	-13.61	103.80	110.60
15	1H	1697	G	O5'-P-OP1	-13.52	93.53	105.70
15	14	1665	A	N7-C8-N9	13.48	120.54	113.80
15	14	2886	A	N1-C2-N3	13.40	136.00	129.30
15	1H	823	A	N3-C4-C5	13.36	136.15	126.80
15	1H	725	A	C5-N7-C8	-13.35	97.23	103.90
15	1H	1975	G	N7-C8-N9	13.34	119.77	113.10

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
15	14	555	A	C2-N3-C4	-13.34	103.93	110.60
15	1H	1728	G	C6-C5-N7	-13.30	122.42	130.40
15	1H	1191	A	C2-N3-C4	-13.20	104.00	110.60
15	1H	555	A	N3-C4-C5	13.17	136.02	126.80
15	1H	1820	A	C6-C5-N7	-13.14	123.10	132.30
15	14	1381	G	C2-N3-C4	-13.13	105.34	111.90
15	1H	1290	A	C2-N3-C4	-13.09	104.06	110.60
15	1H	1381	G	N1-C6-O6	13.08	127.75	119.90
15	1H	1252	A	O4'-C1'-N9	13.04	118.63	108.20
15	14	1381	G	N3-C4-N9	-13.03	118.18	126.00
15	14	1924	G	C2-N3-C4	-13.00	105.40	111.90
15	1H	1820	A	N1-C2-N3	12.99	135.79	129.30
15	1H	204	G	O5'-P-OP2	-12.98	94.02	105.70
15	1H	1728	G	C5-N7-C8	-12.97	97.81	104.30
15	14	725	A	C2-N3-C4	-12.88	104.16	110.60
15	1H	1665	A	N7-C8-N9	12.82	120.21	113.80
15	14	832	A	C5-N7-C8	-12.79	97.50	103.90
15	1H	832	A	C2-N3-C4	-12.77	104.22	110.60
15	14	992	A	C2-N3-C4	-12.72	104.24	110.60
15	1H	725	A	N3-C4-C5	12.69	135.69	126.80
15	14	139	A	N7-C8-N9	12.65	120.12	113.80
15	14	2302	A	C2-N3-C4	-12.64	104.28	110.60
15	1H	992	A	C5-N7-C8	-12.64	97.58	103.90
15	14	1665	A	C5-N7-C8	-12.62	97.59	103.90
15	1H	1748	A	C6-C5-N7	-12.61	123.48	132.30
15	14	1924	G	C8-N9-C1'	12.50	143.25	127.00
15	1H	555	A	N3-C4-N9	-12.44	117.45	127.40
15	14	73	A	C2-N3-C4	-12.37	104.42	110.60
15	1H	675	G	O5'-P-OP2	-12.36	94.58	105.70
15	1H	1298	U	O5'-P-OP1	-12.33	94.61	105.70
15	1H	648	A	C5-N7-C8	-12.29	97.76	103.90
15	14	1381	G	N3-C4-C5	12.29	134.74	128.60
15	14	2505	G	N7-C8-N9	12.21	119.20	113.10
15	14	832	A	C2-N3-C4	-12.19	104.50	110.60
15	1H	2361	A	C8-N9-C4	-12.18	100.93	105.80
1	13	1421	A	C4-C5-N7	12.16	116.78	110.70
15	1H	1748	A	N1-C2-N3	12.15	135.38	129.30
15	14	2886	A	C8-N9-C4	-12.08	100.97	105.80
52	V1	76	A	C5-N7-C8	-12.08	97.86	103.90
15	14	2322	G	O4'-C1'-N9	12.07	117.85	108.20
15	1H	1792	G	O5'-P-OP1	-12.06	94.85	105.70
1	1G	849	A	C8-N9-C4	-11.92	101.03	105.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
15	14	2703	U	N3-C2-O2	-11.90	113.87	122.20
15	14	2886	A	C2-N3-C4	-11.90	104.65	110.60
15	1H	1665	A	C4-C5-N7	11.90	116.65	110.70
15	14	1820	A	C2-N3-C4	-11.83	104.68	110.60
15	14	1665	A	C6-C5-N7	-11.82	124.03	132.30
15	14	823	A	N3-C4-N9	-11.76	117.99	127.40
1	13	1421	A	C5-N7-C8	-11.75	98.02	103.90
15	1H	2361	A	C2-N3-C4	-11.73	104.74	110.60
15	14	139	A	C8-N9-C4	-11.72	101.11	105.80
15	1H	2361	A	N7-C8-N9	11.68	119.64	113.80
15	1H	535	G	C8-N9-C4	-11.66	101.73	106.40
15	1H	1924	G	N9-C4-C5	11.57	110.03	105.40
15	14	725	A	N7-C8-N9	11.53	119.57	113.80
15	1H	1252	A	N1-C2-N3	11.52	135.06	129.30
15	14	2795	U	N3-C2-O2	-11.51	114.14	122.20
15	1H	139	A	C5-N7-C8	-11.49	98.15	103.90
15	1H	832	A	N1-C6-N6	11.46	125.48	118.60
15	14	1665	A	C8-N9-C4	-11.43	101.23	105.80
15	14	2886	A	C5-N7-C8	-11.41	98.19	103.90
15	14	2505	G	C5-N7-C8	-11.41	98.60	104.30
15	1H	70	A	C5-N7-C8	-11.40	98.20	103.90
15	1H	992	A	N7-C8-N9	11.38	119.49	113.80
15	14	1924	G	C4-N9-C1'	-11.28	111.84	126.50
15	1H	1748	A	C5-N7-C8	-11.28	98.26	103.90
15	1H	592	A	O5'-P-OP1	-11.27	95.56	105.70
15	1H	1820	A	C4-C5-N7	11.24	116.32	110.70
15	1H	1975	G	C5-N7-C8	-11.24	98.68	104.30
15	14	2517	G	O5'-P-OP1	-11.23	95.59	105.70
15	1H	823	A	C5-N7-C8	-11.22	98.29	103.90
15	14	725	A	N3-C4-C5	11.22	134.65	126.80
15	1H	1975	G	C8-N9-C4	-11.20	101.92	106.40
15	1H	740	C	C6-N1-C2	11.13	124.75	120.30
15	14	70	A	C5-N7-C8	-11.11	98.34	103.90
15	1H	1725	C	N3-C4-C5	-11.11	117.46	121.90
15	1H	2407	A	N1-C6-N6	11.11	125.26	118.60
15	1H	535	G	N7-C8-N9	11.10	118.65	113.10
15	14	2087	A	C8-N9-C4	11.09	110.24	105.80
15	1H	539	G	O4'-C1'-N9	11.04	117.03	108.20
15	1H	832	A	C4-C5-N7	11.04	116.22	110.70
15	1H	725	A	N3-C4-N9	-11.03	118.57	127.40
15	14	1381	G	C5-N7-C8	-11.01	98.79	104.30
1	13	1421	A	C6-C5-N7	-11.00	124.60	132.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
15	1H	1314	A	C8-N9-C4	-11.00	101.40	105.80
15	1H	823	A	N1-C6-N6	10.99	125.19	118.60
1	1G	849	A	N7-C8-N9	10.96	119.28	113.80
15	1H	832	A	N7-C8-N9	10.96	119.28	113.80
15	1H	1728	G	N7-C8-N9	10.93	118.56	113.10
15	1H	2407	A	C5-N7-C8	-10.93	98.44	103.90
26	16	83	G	C5-N7-C8	-10.90	98.85	104.30
15	1H	1697	G	O5'-P-OP2	10.90	123.78	110.70
15	1H	992	A	C4-C5-C6	10.89	122.44	117.00
15	1H	2729	A	C5-N7-C8	-10.87	98.47	103.90
15	14	1545	A	N7-C8-N9	10.84	119.22	113.80
26	16	83	G	C4-C5-N7	10.80	115.12	110.80
15	14	1059	G	O4'-C1'-N9	10.78	116.82	108.20
15	1H	1820	A	C8-N9-C4	-10.74	101.50	105.80
15	1H	1663	A	C2-N3-C4	-10.73	105.23	110.60
15	1H	1924	G	C8-N9-C1'	10.73	140.95	127.00
15	14	823	A	O5'-P-OP2	-10.71	96.06	105.70
15	14	2717	U	O5'-P-OP2	-10.71	96.06	105.70
15	1H	2445	A	C4-C5-N7	10.70	116.05	110.70
15	1H	140	A	C5-N7-C8	-10.69	98.55	103.90
15	1H	118	U	C4-C5-C6	10.69	126.11	119.70
15	1H	2445	A	N3-C4-C5	10.69	134.28	126.80
15	1H	1069	A	C5-N7-C8	-10.67	98.56	103.90
15	1H	1258	A	C5-N7-C8	-10.65	98.58	103.90
15	1H	2483	G	O4'-C1'-N9	10.63	116.71	108.20
15	1H	1663	A	C5-N7-C8	-10.62	98.59	103.90
15	1H	2361	A	C4-C5-C6	10.61	122.30	117.00
15	1H	1665	A	C8-N9-C4	-10.60	101.56	105.80
15	1H	1956	U	N1-C2-N3	10.60	121.26	114.90
15	1H	535	G	C6-C5-N7	-10.60	124.04	130.40
15	1H	1258	A	N1-C6-N6	10.59	124.95	118.60
52	V1	76	A	N7-C8-N9	10.59	119.10	113.80
15	1H	992	A	O4'-C1'-N9	10.58	116.67	108.20
15	1H	1748	A	N7-C8-N9	10.54	119.07	113.80
15	14	2087	A	N9-C4-C5	-10.52	101.59	105.80
15	1H	823	A	C4-C5-N7	10.51	115.95	110.70
15	1H	876	U	O5'-P-OP2	-10.50	96.25	105.70
15	1H	849	A	O5'-P-OP2	-10.45	96.30	105.70
15	1H	2302	A	N3-C4-C5	10.44	134.11	126.80
15	1H	725	A	N7-C8-N9	10.43	119.01	113.80
15	1H	2445	A	C6-C5-N7	-10.42	125.01	132.30
15	1H	139	A	N7-C8-N9	10.40	119.00	113.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
15	1H	1663	A	C5-C6-N1	-10.39	112.50	117.70
15	1H	474	G	N1-C6-O6	10.39	126.13	119.90
15	14	1728	G	N7-C8-N9	10.39	118.29	113.10
15	1H	1925	A	O5'-P-OP2	-10.37	96.37	105.70
15	14	725	A	C4-C5-N7	10.37	115.88	110.70
15	1H	140	A	N7-C8-N9	10.36	118.98	113.80
15	1H	977	U	C5-C4-O4	10.36	132.11	125.90
15	14	992	A	N1-C6-N6	10.35	124.81	118.60
52	X1	37	A	N1-C2-N3	-10.35	124.12	129.30
15	14	2606	C	N1-C2-O2	-10.29	112.72	118.90
1	13	1908	U	N3-C2-O2	-10.27	115.01	122.20
15	1H	2361	A	O4'-C1'-N9	10.26	116.41	108.20
15	14	139	A	C5-N7-C8	-10.26	98.77	103.90
15	1H	73	A	N3-C4-C5	10.25	133.97	126.80
15	1H	2846	G	O4'-C1'-N9	10.25	116.40	108.20
15	1H	2339	C	C6-N1-C2	10.23	124.39	120.30
15	1H	2445	A	N1-C2-N3	10.19	134.40	129.30
15	1H	1545	A	N7-C8-N9	10.19	118.89	113.80
15	1H	70	A	C2-N3-C4	-10.17	105.51	110.60
15	14	2605	A	C8-N9-C4	10.14	109.86	105.80
15	14	1728	G	C5-N7-C8	-10.14	99.23	104.30
15	14	1748	A	C2-N3-C4	-10.13	105.53	110.60
1	13	1520	C	C6-N1-C2	10.12	124.35	120.30
15	14	70	A	C2-N3-C4	-10.12	105.54	110.60
15	1H	2407	A	C4-C5-N7	10.09	115.75	110.70
16	75	4	GLY	N-CA-C	-10.09	87.87	113.10
15	14	73	A	N1-C6-N6	10.08	124.65	118.60
15	14	1665	A	C4-C5-N7	10.06	115.73	110.70
15	14	2727	U	C5-C6-N1	-10.04	117.68	122.70
15	1H	725	A	C5-C6-N1	-10.04	112.68	117.70
15	1H	2627	C	C6-N1-C2	10.04	124.31	120.30
15	1H	2704	U	N3-C4-O4	-10.02	112.38	119.40
15	1H	2445	A	C5-C6-N1	-10.02	112.69	117.70
15	1H	823	A	N3-C4-N9	-10.01	119.39	127.40
15	14	1663	A	C2-N3-C4	-10.01	105.59	110.60
15	1H	2729	A	C2-N3-C4	-10.01	105.59	110.60
15	14	1651	U	O5'-P-OP2	10.01	122.71	110.70
1	13	1319	G	O4'-C1'-N9	9.99	116.20	108.20
15	14	992	A	N1-C2-N3	9.99	134.30	129.30
15	1H	2087	A	N7-C8-N9	-9.99	108.81	113.80
15	1H	1258	A	C6-C5-N7	-9.96	125.33	132.30
15	14	1924	G	N9-C4-C5	9.96	109.39	105.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
15	14	832	A	N1-C6-N6	9.96	124.58	118.60
15	1H	992	A	C4-C5-N7	9.95	115.68	110.70
15	1H	2455	C	N3-C4-C5	-9.95	117.92	121.90
15	1H	2290	C	N1-C2-O2	-9.94	112.94	118.90
15	1H	867	G	N3-C2-N2	-9.94	112.95	119.90
15	1H	2569	U	O5'-P-OP1	-9.93	96.77	105.70
15	14	992	A	C6-C5-N7	-9.91	125.36	132.30
15	14	1398	A	N1-C6-N6	9.90	124.54	118.60
15	1H	73	A	N1-C2-N3	9.88	134.24	129.30
15	1H	2087	A	C8-N9-C4	9.86	109.75	105.80
26	16	32	C	C6-N1-C2	-9.86	116.36	120.30
15	1H	2704	U	C5-C4-O4	9.84	131.80	125.90
15	1H	2361	A	C6-C5-N7	-9.83	125.42	132.30
15	14	555	A	N3-C4-N9	-9.82	119.55	127.40
15	1H	537	C	O5'-P-OP2	-9.81	96.87	105.70
15	1H	832	A	N3-C4-C5	9.78	133.65	126.80
1	13	1421	A	O4'-C1'-N9	9.78	116.02	108.20
1	13	2125	A	C5-N7-C8	-9.77	99.02	103.90
15	1H	2407	A	C2-N3-C4	-9.76	105.72	110.60
15	14	1545	A	C5-N7-C8	-9.76	99.02	103.90
15	1H	2407	A	C5-C6-N1	-9.73	112.84	117.70
15	1H	1824	C	C2-N3-C4	-9.72	115.04	119.90
52	W4	76	A	N7-C8-N9	9.71	118.66	113.80
15	1H	555	A	C5-C6-N1	-9.70	112.85	117.70
15	1H	1381	G	N1-C2-N3	9.70	129.72	123.90
15	1H	648	A	N7-C8-N9	9.70	118.65	113.80
15	1H	1956	U	C5-C6-N1	-9.70	117.85	122.70
15	14	1252	A	N1-C6-N6	9.69	124.42	118.60
1	13	2122	A	O5'-P-OP1	-9.69	96.98	105.70
15	1H	780	C	C6-N1-C2	-9.68	116.43	120.30
36	N8	41	PRO	C-N-CD	-9.68	99.32	120.60
15	1H	2417	C	C6-N1-C2	-9.66	116.44	120.30
15	1H	850	G	O5'-P-OP2	-9.64	97.02	105.70
15	1H	639	U	C5-C4-O4	9.63	131.68	125.90
15	1H	2715	C	O5'-P-OP2	-9.63	97.03	105.70
15	1H	1252	A	C6-C5-N7	-9.59	125.59	132.30
15	14	1839	U	O5'-P-OP1	-9.59	97.07	105.70
15	14	832	A	C4-C5-N7	9.57	115.48	110.70
15	1H	118	U	C5-C6-N1	-9.56	117.92	122.70
15	1H	725	A	C4-C5-N7	9.56	115.48	110.70
15	14	555	A	N3-C4-C5	9.55	133.49	126.80
26	1J	91	G	C4-C5-N7	9.55	114.62	110.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
15	1H	1381	G	C8-N9-C4	-9.55	102.58	106.40
15	1H	139	A	N1-C6-N6	9.51	124.31	118.60
26	16	83	G	N7-C8-N9	9.50	117.85	113.10
2	65	110	LEU	CA-CB-CG	9.49	137.12	115.30
15	14	2729	A	C5-N7-C8	-9.49	99.16	103.90
1	13	2125	A	C4-C5-N7	9.49	115.44	110.70
15	1H	1924	G	N1-C2-N2	9.48	124.73	116.20
15	1H	2457	C	C5-C6-N1	-9.48	116.26	121.00
26	1J	8	C	C6-N1-C2	9.48	124.09	120.30
15	1H	1975	G	C4-N9-C1'	9.47	138.81	126.50
15	14	648	A	C5-N7-C8	-9.47	99.17	103.90
15	1H	867	G	N3-C4-N9	-9.45	120.33	126.00
15	1H	48	A	C5-N7-C8	9.44	108.62	103.90
15	14	1651	U	O5'-P-OP1	-9.45	97.20	105.70
15	14	1924	G	N1-C2-N2	9.43	124.68	116.20
15	1H	1748	A	C8-N9-C4	-9.43	102.03	105.80
26	16	49	C	C6-N1-C2	9.41	124.07	120.30
15	1H	1191	A	C5-C6-N1	-9.41	113.00	117.70
15	1H	2729	A	N3-C4-C5	9.40	133.38	126.80
15	1H	555	A	C5-N7-C8	-9.39	99.21	103.90
15	14	832	A	N7-C8-N9	9.39	118.49	113.80
15	1H	1665	A	C6-C5-N7	-9.36	125.75	132.30
15	1H	235	G	C5-C6-O6	-9.36	122.98	128.60
15	1H	1258	A	C2-N3-C4	-9.36	105.92	110.60
15	1H	1252	A	C5-N7-C8	-9.33	99.23	103.90
15	14	2048	G	O5'-P-OP2	-9.33	97.31	105.70
15	1H	139	A	C4-C5-N7	9.32	115.36	110.70
6	2I	102	GLY	N-CA-C	-9.32	89.81	113.10
52	X4	1	G	C8-N9-C4	-9.31	102.67	106.40
15	1H	1663	A	N7-C8-N9	9.31	118.45	113.80
15	14	2569	U	O5'-P-OP1	-9.31	97.32	105.70
15	1H	1820	A	N1-C6-N6	9.30	124.18	118.60
15	14	1252	A	C5-N7-C8	-9.29	99.25	103.90
52	V1	76	A	C2-N3-C4	-9.29	105.95	110.60
1	1G	1319	G	C6-C5-N7	-9.28	124.83	130.40
15	1H	2843	G	C8-N9-C4	-9.25	102.70	106.40
15	14	1258	A	N1-C6-N6	9.25	124.15	118.60
52	V1	72	C	C6-N1-C2	9.25	124.00	120.30
15	1H	832	A	C5-C6-N1	-9.24	113.08	117.70
15	1H	498	A	O5'-P-OP1	-9.24	97.38	105.70
15	14	1853	A	O5'-P-OP1	-9.24	97.39	105.70
15	1H	1975	G	C4-C5-N7	9.24	114.50	110.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
15	14	1975	G	C5-N7-C8	-9.24	99.68	104.30
1	1G	1319	G	N7-C8-N9	9.23	117.72	113.10
1	13	2125	A	C2-N3-C4	-9.22	105.99	110.60
15	1H	894	G	C4-C5-N7	9.22	114.49	110.80
15	1H	70	A	N7-C8-N9	9.22	118.41	113.80
15	14	2505	G	C8-N9-C4	-9.21	102.71	106.40
15	1H	1975	G	O4'-C1'-N9	9.21	115.57	108.20
15	1H	1545	A	C5-N7-C8	-9.21	99.29	103.90
1	13	1533	C	C6-N1-C2	9.20	123.98	120.30
15	1H	2346	G	C8-N9-C4	9.20	110.08	106.40
15	14	2288	A	O5'-P-OP2	-9.20	97.42	105.70
15	1H	2346	G	N9-C4-C5	-9.20	101.72	105.40
52	W1	37	A	N1-C2-N3	-9.20	124.70	129.30
15	14	1665	A	N1-C6-N6	9.19	124.11	118.60
15	14	1820	A	C8-N9-C4	-9.17	102.13	105.80
15	14	1728	G	C8-N9-C4	-9.16	102.73	106.40
15	14	905	C	C6-N1-C2	-9.14	116.64	120.30
15	1H	736	C	C6-N1-C2	-9.14	116.65	120.30
15	1H	535	G	C4-N9-C1'	9.12	138.36	126.50
15	1H	992	A	C2-N3-C4	-9.12	106.04	110.60
15	14	48	A	P-O3'-C3'	9.12	130.64	119.70
15	1H	725	A	O4'-C1'-N9	9.12	115.49	108.20
15	14	481	C	C6-N1-C2	9.11	123.95	120.30
15	14	2505	G	C4-C5-N7	9.12	114.45	110.80
15	1H	826	A	N1-C6-N6	-9.11	113.13	118.60
15	14	1545	A	C8-N9-C4	-9.10	102.16	105.80
15	14	648	A	C2-N3-C4	-9.10	106.05	110.60
15	14	1391	A	C2-N3-C4	-9.05	106.08	110.60
15	1H	992	A	C4-N9-C1'	9.04	142.58	126.30
15	14	1748	A	C5-N7-C8	-9.04	99.38	103.90
15	1H	612	C	C6-N1-C2	-9.04	116.69	120.30
15	1H	1665	A	N1-C6-N6	9.03	124.02	118.60
15	14	1748	A	C6-C5-N7	-9.03	125.98	132.30
15	1H	1975	G	C6-C5-N7	-9.03	124.98	130.40
15	1H	2063	G	N3-C2-N2	9.03	126.22	119.90
15	1H	1258	A	C4-C5-N7	9.01	115.21	110.70
15	14	725	A	N3-C4-N9	-9.00	120.20	127.40
15	1H	1957	A	O5'-P-OP1	-9.00	97.60	105.70
15	14	884	A	O5'-P-OP2	-8.99	97.61	105.70
15	1H	1924	G	C8-N9-C4	-8.99	102.81	106.40
15	1H	70	A	O4'-C1'-N9	-8.98	101.01	108.20
15	1H	1748	A	N1-C6-N6	8.97	123.98	118.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
15	14	1370	A	N1-C6-N6	8.96	123.98	118.60
15	1H	1258	A	N7-C8-N9	8.95	118.27	113.80
15	1H	832	A	C6-C5-N7	-8.95	126.04	132.30
15	1H	1069	A	N7-C8-N9	8.95	118.27	113.80
15	1H	73	A	C5-C6-N1	-8.93	113.23	117.70
23	21	78	LEU	CA-CB-CG	8.93	135.84	115.30
15	1H	288	G	P-O3'-C3'	8.93	130.41	119.70
15	14	204	G	O5'-P-OP2	-8.89	97.70	105.70
15	14	2361	A	N1-C2-N3	8.89	133.75	129.30
15	14	868	A	O5'-P-OP2	-8.89	97.70	105.70
15	1H	2063	G	N1-C6-O6	-8.88	114.57	119.90
1	13	1281	U	O5'-P-OP1	-8.88	97.71	105.70
15	14	198	C	C6-N1-C2	8.87	123.85	120.30
1	1G	2075	C	C2-N1-C1'	8.87	128.55	118.80
15	14	2361	A	C5-C6-N1	-8.87	113.27	117.70
15	1H	235	G	N1-C6-O6	8.86	125.22	119.90
15	14	1820	A	C5-C6-N1	-8.86	113.27	117.70
15	1H	714	C	C6-N1-C2	8.85	123.84	120.30
15	14	690	C	C2-N1-C1'	8.85	128.54	118.80
15	14	2445	A	N3-C4-C5	8.83	132.98	126.80
15	1H	1748	A	C4-C5-N7	8.83	115.12	110.70
15	1H	648	A	N3-C4-C5	8.82	132.98	126.80
15	1H	1391	A	O5'-P-OP2	-8.82	97.76	105.70
15	1H	861	C	N1-C2-O2	-8.81	113.62	118.90
15	14	725	A	O4'-C1'-N9	8.80	115.24	108.20
15	14	1728	G	C2-N3-C4	-8.80	107.50	111.90
15	1H	1748	A	C4-C5-C6	8.79	121.40	117.00
15	1H	896	U	C5-C6-N1	-8.79	118.30	122.70
15	1H	1252	A	N1-C6-N6	8.79	123.88	118.60
15	1H	2843	G	N7-C8-N9	8.79	117.49	113.10
15	1H	648	A	C4-C5-N7	8.78	115.09	110.70
1	1G	1319	G	O4'-C1'-N9	8.78	115.22	108.20
15	14	1931	G	O5'-P-OP1	-8.77	97.81	105.70
15	14	355	A	N7-C8-N9	8.76	118.18	113.80
15	14	2453	U	O5'-P-OP2	-8.76	97.82	105.70
15	1H	977	U	N3-C4-O4	-8.72	113.30	119.40
15	14	736	C	O5'-P-OP1	-8.71	97.86	105.70
15	1H	992	A	C5-C6-N1	-8.70	113.35	117.70
15	1H	1314	A	N7-C8-N9	8.70	118.15	113.80
15	1H	1665	A	O4'-C1'-N9	8.70	115.16	108.20
15	1H	535	G	C5-N7-C8	-8.67	99.96	104.30
15	1H	1956	U	C4-C5-C6	8.67	124.91	119.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
15	14	2061	C	O5'-P-OP2	-8.67	97.89	105.70
52	W1	37	A	C2-N3-C4	8.67	114.94	110.60
15	14	1748	A	C4-C5-N7	8.67	115.04	110.70
15	14	2896	A	O5'-P-OP2	-8.67	97.90	105.70
1	1G	1928	U	C2-N1-C1'	8.66	128.10	117.70
1	13	1389	G	N1-C6-O6	8.66	125.09	119.90
15	1H	1925	A	C8-N9-C4	-8.66	102.34	105.80
52	V4	76	A	C5-N7-C8	-8.65	99.58	103.90
15	1H	1361	U	O5'-P-OP1	-8.64	97.92	105.70
15	1H	1324	A	N1-C6-N6	8.64	123.78	118.60
15	1H	1381	G	C5-C6-O6	-8.64	123.42	128.60
15	14	743	U	O5'-P-OP2	-8.64	97.93	105.70
15	1H	38	A	C2-N3-C4	8.63	114.91	110.60
15	14	2622	G	N1-C2-N2	-8.63	108.43	116.20
15	14	1840	C	C6-N1-C2	8.62	123.75	120.30
15	1H	612	C	N3-C2-O2	-8.61	115.87	121.90
15	1H	1994	A	O5'-P-OP1	-8.60	97.96	105.70
15	14	1442	A	O5'-P-OP2	-8.59	97.97	105.70
15	1H	1069	A	N1-C2-N3	8.59	133.59	129.30
1	1G	1054	G	C4-C5-N7	-8.58	107.37	110.80
15	14	140	A	C2-N3-C4	-8.58	106.31	110.60
15	1H	2455	C	C2-N3-C4	8.58	124.19	119.90
15	1H	1428	A	N1-C6-N6	8.57	123.74	118.60
15	14	1252	A	N1-C2-N3	8.56	133.58	129.30
15	1H	1545	A	C8-N9-C4	-8.55	102.38	105.80
1	13	1507	U	O5'-P-OP2	-8.55	98.00	105.70
15	1H	1191	A	N3-C4-C5	8.54	132.78	126.80
15	1H	535	G	C4-C5-N7	8.53	114.21	110.80
15	14	304	C	O5'-P-OP2	-8.53	98.03	105.70
15	14	980	A	C5-N7-C8	-8.51	99.64	103.90
15	1H	2795	U	C5-C6-N1	-8.49	118.46	122.70
15	14	832	A	N3-C4-C5	8.48	132.74	126.80
1	1G	2155	U	C5-C6-N1	8.48	126.94	122.70
15	1H	1810	G	C4-C5-N7	8.48	114.19	110.80
15	14	2703	U	C5-C4-O4	8.48	130.99	125.90
15	1H	648	A	N1-C2-N3	8.48	133.54	129.30
15	14	493	G	C8-N9-C4	-8.47	103.01	106.40
15	1H	819	G	N1-C6-O6	8.46	124.98	119.90
15	1H	70	A	C4-C5-N7	8.45	114.92	110.70
15	14	355	A	N1-C2-N3	8.43	133.51	129.30
15	14	1860	G	C5-N7-C8	8.43	108.51	104.30
26	1J	32	C	C6-N1-C2	-8.43	116.93	120.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
15	1H	140	A	C2-N3-C4	-8.42	106.39	110.60
15	14	725	A	C5-C6-N1	-8.42	113.49	117.70
15	14	73	A	N3-C4-C5	8.41	132.69	126.80
15	1H	2392	A	C8-N9-C4	8.39	109.16	105.80
15	1H	416	G	O5'-P-OP2	-8.38	98.16	105.70
15	1H	2555	C	C6-N1-C2	8.37	123.65	120.30
15	1H	2533	A	C5-N7-C8	-8.36	99.72	103.90
15	1H	2469	G	N1-C6-O6	-8.35	114.89	119.90
15	1H	1436	C	C6-N1-C2	-8.35	116.96	120.30
15	1H	355	A	N3-C4-C5	8.35	132.64	126.80
26	16	101	G	N9-C4-C5	-8.33	102.07	105.40
15	1H	48	A	N7-C8-N9	-8.33	109.64	113.80
1	13	1319	G	N7-C8-N9	8.32	117.26	113.10
15	1H	1314	A	O5'-P-OP2	-8.31	98.22	105.70
15	1H	2729	A	C4-C5-N7	8.31	114.86	110.70
15	1H	639	U	N3-C2-O2	-8.31	116.38	122.20
15	14	1975	G	C4-C5-N7	8.31	114.12	110.80
15	1H	1728	G	N1-C6-O6	8.30	124.88	119.90
15	1H	2407	A	C6-C5-N7	-8.29	126.50	132.30
1	13	1822	C	C6-N1-C2	-8.28	116.99	120.30
15	14	1924	G	N1-C2-N3	8.26	128.85	123.90
1	13	2142	A	O5'-P-OP2	-8.26	98.27	105.70
15	1H	1616	A	O5'-P-OP2	-8.25	98.27	105.70
1	13	1421	A	N9-C4-C5	-8.25	102.50	105.80
15	1H	2063	G	N1-C2-N2	-8.24	108.78	116.20
15	1H	487	U	O5'-P-OP2	-8.23	98.30	105.70
1	13	2125	A	C6-C5-N7	-8.22	126.54	132.30
15	14	2302	A	N1-C6-N6	8.22	123.53	118.60
15	14	70	A	C4-C5-N7	8.22	114.81	110.70
15	14	70	A	N7-C8-N9	8.22	117.91	113.80
15	14	2462	G	C8-N9-C1'	8.21	137.68	127.00
15	14	1382	C	N3-C4-C5	8.21	125.18	121.90
15	1H	2795	U	N3-C4-O4	-8.20	113.66	119.40
15	14	2458	C	C6-N1-C2	-8.20	117.02	120.30
52	V1	76	A	C4-C5-N7	8.20	114.80	110.70
15	1H	179	G	C5-C6-O6	-8.19	123.68	128.60
15	1H	255	A	C5-N7-C8	-8.19	99.80	103.90
15	1H	1956	U	N1-C2-O2	8.19	128.53	122.80
15	14	2886	A	C6-C5-N7	-8.18	126.57	132.30
15	1H	139	A	C6-C5-N7	-8.18	126.57	132.30
1	13	907	G	C5-N7-C8	-8.18	100.21	104.30
15	1H	1577	A	C5-N7-C8	-8.17	99.81	103.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
15	1H	1290	A	C5-C6-N1	-8.17	113.61	117.70
15	14	1820	A	C4-C5-N7	8.17	114.78	110.70
15	1H	415	U	C5-C4-O4	-8.16	121.00	125.90
15	1H	1273	C	C6-N1-C2	8.15	123.56	120.30
15	1H	725	A	C8-N9-C4	-8.15	102.54	105.80
15	14	2515	U	C5-C6-N1	-8.14	118.63	122.70
15	1H	255	A	C2-N3-C4	-8.14	106.53	110.60
52	W4	76	A	C5-N7-C8	-8.14	99.83	103.90
15	1H	1955	G	O5'-P-OP1	-8.13	98.38	105.70
15	1H	140	A	C8-N9-C4	-8.12	102.55	105.80
15	14	823	A	C5-C6-N1	-8.12	113.64	117.70
15	14	2605	A	N7-C8-N9	-8.11	109.75	113.80
52	X4	37	A	N1-C2-N3	-8.11	125.25	129.30
15	1H	195	G	O5'-P-OP2	-8.11	98.40	105.70
15	1H	2302	A	O5'-P-OP2	-8.11	98.41	105.70
15	1H	660	A	N1-C6-N6	8.10	123.46	118.60
15	1H	139	A	C8-N9-C4	-8.09	102.56	105.80
15	14	1686	C	N1-C2-O2	-8.09	114.05	118.90
15	1H	839	C	N1-C2-O2	-8.09	114.05	118.90
15	14	2445	A	N3-C4-N9	-8.09	120.93	127.40
15	1H	474	G	C5-C6-O6	-8.09	123.75	128.60
15	1H	1770	A	O4'-C1'-N9	8.08	114.67	108.20
15	1H	2466	A	N1-C6-N6	-8.08	113.75	118.60
15	1H	2361	A	C4-N9-C1'	8.07	140.83	126.30
15	1H	1577	A	N7-C8-N9	8.07	117.83	113.80
15	1H	1359	G	O5'-P-OP1	-8.06	98.44	105.70
15	14	1778	C	C6-N1-C2	-8.06	117.07	120.30
15	14	2445	A	C5-N7-C8	-8.06	99.87	103.90
15	1H	2407	A	N7-C8-N9	8.05	117.83	113.80
1	13	1598	A	N1-C6-N6	8.05	123.43	118.60
15	14	355	A	C5-N7-C8	-8.05	99.87	103.90
15	1H	1376	C	C6-N1-C2	-8.05	117.08	120.30
15	14	2445	A	N1-C6-N6	8.05	123.43	118.60
15	1H	2361	A	C5-N7-C8	-8.04	99.88	103.90
15	14	557	G	C4-C5-N7	8.04	114.02	110.80
15	14	992	A	C5-N7-C8	-8.04	99.88	103.90
15	1H	1584	U	C2-N1-C1'	8.03	127.33	117.70
15	1H	1956	U	C2-N3-C4	-8.03	122.18	127.00
1	1G	2121	U	N3-C2-O2	-8.02	116.58	122.20
15	14	2510	G	N1-C6-O6	8.02	124.71	119.90
15	1H	867	G	C4-C5-N7	-8.01	107.59	110.80
15	1H	1820	A	O4'-C1'-N9	8.01	114.61	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
15	14	845	C	N3-C4-C5	8.01	125.10	121.90
15	14	1665	A	C2-N3-C4	-8.00	106.60	110.60
15	14	296	C	O5'-P-OP2	-8.00	98.50	105.70
15	14	1662	G	N3-C4-N9	8.00	130.80	126.00
15	1H	2600	U	N1-C2-O2	8.00	128.40	122.80
15	1H	73	A	N3-C4-N9	-7.99	121.00	127.40
15	1H	599	C	N1-C2-O2	7.99	123.70	118.90
15	14	842	A	O5'-P-OP2	-7.98	98.52	105.70
1	1G	1319	G	C5-N7-C8	-7.98	100.31	104.30
15	1H	480	G	C5-C6-N1	7.97	115.48	111.50
15	1H	1477	C	O5'-P-OP1	-7.97	98.53	105.70
15	1H	844	C	C4-C5-C6	7.97	121.38	117.40
26	16	101	G	N3-C4-N9	7.96	130.78	126.00
15	1H	639	U	N3-C4-O4	-7.96	113.83	119.40
15	1H	2326	A	C2-N3-C4	-7.96	106.62	110.60
15	1H	2571	C	N3-C4-N4	7.96	123.57	118.00
15	14	2361	A	O4'-C1'-N9	7.96	114.56	108.20
15	1H	111	G	O5'-P-OP1	-7.95	98.55	105.70
15	1H	1699	G	N1-C6-O6	-7.95	115.13	119.90
15	1H	594	U	C5-C6-N1	-7.94	118.73	122.70
15	1H	2445	A	N7-C8-N9	7.94	117.77	113.80
15	1H	1307	C	O5'-P-OP2	-7.94	98.56	105.70
15	1H	1586	C	C6-N1-C2	-7.94	117.12	120.30
15	14	2461	G	O5'-P-OP2	-7.93	98.56	105.70
15	14	2627	C	N1-C2-O2	7.93	123.66	118.90
15	1H	2600	U	N3-C2-O2	-7.93	116.65	122.20
15	1H	288	G	N3-C4-C5	-7.93	124.64	128.60
15	1H	1361	U	O5'-P-OP2	7.93	120.22	110.70
15	14	1381	G	N7-C8-N9	7.93	117.06	113.10
1	1G	2110	G	N1-C6-O6	7.92	124.66	119.90
15	1H	1924	G	C4-N9-C1'	-7.92	116.20	126.50
26	1J	83	G	C8-N9-C4	-7.92	103.23	106.40
15	1H	2224	A	O5'-P-OP1	-7.91	98.58	105.70
26	16	83	G	C6-C5-N7	-7.91	125.65	130.40
15	1H	1939	C	C6-N1-C2	-7.91	117.14	120.30
15	14	690	C	N1-C2-O2	7.91	123.64	118.90
26	16	46	G	C4-N9-C1'	-7.91	116.22	126.50
15	14	1486	C	C6-N1-C2	-7.91	117.14	120.30
15	1H	1651	U	N3-C4-O4	-7.90	113.87	119.40
15	1H	2338	G	N1-C6-O6	7.90	124.64	119.90
15	14	1252	A	C6-C5-N7	-7.90	126.77	132.30
15	1H	1577	A	O4'-C1'-N9	7.89	114.52	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
15	14	2290	C	P-O3'-C3'	7.89	129.17	119.70
15	1H	118	U	N3-C2-O2	-7.88	116.68	122.20
15	14	249	G	N1-C6-O6	7.88	124.63	119.90
15	14	1954	G	O5'-P-OP2	-7.88	98.61	105.70
15	1H	1069	A	N3-C4-C5	7.87	132.31	126.80
52	V1	60	U	C2-N1-C1'	7.87	127.15	117.70
1	13	1690	U	O5'-P-OP2	-7.87	98.62	105.70
1	13	1436	A	C8-N9-C4	-7.87	102.65	105.80
15	14	490	C	O5'-P-OP2	-7.86	98.63	105.70
15	14	2729	A	N1-C6-N6	7.85	123.31	118.60
52	X4	26	A	C8-N9-C4	7.85	108.94	105.80
15	1H	137	G	O4'-C1'-N9	7.84	114.47	108.20
15	1H	1252	A	N7-C8-N9	7.84	117.72	113.80
15	14	823	A	N1-C6-N6	7.83	123.30	118.60
15	1H	198	C	C6-N1-C2	7.83	123.43	120.30
15	1H	2460	G	N1-C6-O6	-7.81	115.21	119.90
15	1H	992	A	C8-N9-C1'	-7.81	113.64	127.70
15	1H	867	G	N9-C4-C5	7.81	108.52	105.40
2	A8	110	LEU	CA-CB-CG	7.80	133.25	115.30
15	14	2742	U	C5-C6-N1	-7.80	118.80	122.70
1	13	2125	A	N1-C6-N6	7.80	123.28	118.60
15	14	1258	A	C5-N7-C8	-7.78	100.01	103.90
15	14	2518	A	C2-N3-C4	7.78	114.49	110.60
1	13	1421	A	N3-C4-C5	7.78	132.25	126.80
15	1H	727	C	C6-N1-C2	7.78	123.41	120.30
15	14	73	A	C5-C6-N1	-7.78	113.81	117.70
1	13	1429	G	N1-C6-O6	7.77	124.56	119.90
1	13	2128	G	OP1-P-OP2	-7.76	107.95	119.60
15	1H	1054	C	O5'-P-OP1	-7.76	98.71	105.70
15	14	823	A	C6-N1-C2	7.75	123.25	118.60
15	14	2117	U	C5-C4-O4	7.75	130.55	125.90
1	1G	1441	C	P-O3'-C3'	7.75	129.00	119.70
15	14	1069	A	C2-N3-C4	-7.75	106.72	110.60
15	14	1670	U	O5'-P-OP1	-7.75	98.73	105.70
15	1H	474	G	N9-C4-C5	-7.75	102.30	105.40
15	1H	1943	A	C8-N9-C4	7.75	108.90	105.80
15	1H	235	G	C4-C5-N7	7.74	113.90	110.80
15	1H	2067	A	O5'-P-OP2	-7.74	98.74	105.70
15	1H	1924	G	C5-C6-N1	-7.74	107.63	111.50
15	1H	2346	G	N1-C6-O6	7.73	124.54	119.90
52	X1	37	A	N1-C6-N6	7.73	123.24	118.60
15	1H	1858	G	O5'-P-OP2	-7.73	98.75	105.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
15	1H	474	G	C6-C5-N7	-7.72	125.77	130.40
15	1H	1887	A	O5'-P-OP1	-7.72	98.75	105.70
15	14	2445	A	N1-C2-N3	7.72	133.16	129.30
15	14	742	C	N3-C4-N4	-7.71	112.60	118.00
15	14	1955	G	C4-N9-C1'	-7.71	116.48	126.50
26	16	98	U	C5-C4-O4	7.71	130.53	125.90
15	1H	2366	G	O5'-P-OP1	-7.71	98.76	105.70
15	1H	603	A	N1-C6-N6	7.71	123.22	118.60
15	1H	1069	A	N3-C4-N9	-7.70	121.24	127.40
15	1H	2462	G	C6-N1-C2	-7.70	120.48	125.10
15	14	2603	G	C5-C6-N1	-7.70	107.65	111.50
1	1G	1319	G	C8-N9-C4	-7.70	103.32	106.40
15	1H	876	U	C5-C6-N1	-7.70	118.85	122.70
15	1H	612	C	N1-C2-O2	7.70	123.52	118.90
1	13	1114	G	C8-N9-C4	-7.70	103.32	106.40
15	1H	2232	A	O4'-C1'-N9	7.69	114.35	108.20
15	1H	2361	A	N1-C6-N6	7.69	123.21	118.60
15	14	963	C	C6-N1-C2	-7.69	117.22	120.30
52	V4	76	A	N7-C8-N9	7.69	117.64	113.80
15	14	823	A	C4-N9-C1'	-7.68	112.47	126.30
15	1H	2457	C	C6-N1-C2	7.68	123.37	120.30
15	1H	562	C	C5-C6-N1	-7.68	117.16	121.00
15	1H	801	A	P-O3'-C3'	7.68	128.92	119.70
15	14	1703	G	N3-C4-C5	-7.68	124.76	128.60
15	1H	2361	A	C5-C6-N1	-7.68	113.86	117.70
15	1H	1975	G	N3-C2-N2	7.68	125.27	119.90
15	14	980	A	N1-C6-N6	7.68	123.21	118.60
15	14	1748	A	N7-C8-N9	7.68	117.64	113.80
38	88	24	GLY	N-CA-C	-7.67	93.91	113.10
1	1G	1926	A	C8-N9-C4	-7.67	102.73	105.80
15	1H	1964	U	O5'-P-OP1	-7.67	98.80	105.70
15	14	178	G	C5-C6-O6	-7.67	124.00	128.60
15	14	1363	C	N1-C2-O2	7.66	123.50	118.90
15	1H	2346	G	C4-C5-N7	7.66	113.86	110.80
1	1G	849	A	P-O3'-C3'	7.66	128.89	119.70
15	1H	2713	U	O5'-P-OP2	-7.66	98.81	105.70
15	1H	2569	U	O5'-P-OP2	7.65	119.88	110.70
15	14	137	G	N3-C4-C5	-7.65	124.78	128.60
15	14	753	G	N1-C6-O6	7.65	124.49	119.90
15	1H	140	A	C4-C5-N7	7.64	114.52	110.70
15	1H	2729	A	N1-C6-N6	7.64	123.19	118.60
15	1H	535	G	N3-C4-C5	-7.64	124.78	128.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
15	14	1252	A	C4-C5-N7	7.64	114.52	110.70
15	1H	2478	C	N3-C4-C5	7.64	124.96	121.90
15	14	1706	C	O5'-P-OP2	-7.64	98.83	105.70
15	1H	480	G	N1-C6-O6	-7.64	115.32	119.90
15	1H	2261	G	C8-N9-C4	7.63	109.45	106.40
15	14	535	G	O5'-P-OP1	-7.63	98.83	105.70
15	14	1398	A	C5-N7-C8	-7.63	100.08	103.90
15	1H	782	G	N3-C2-N2	7.63	125.24	119.90
15	1H	1877	C	C6-N1-C2	7.63	123.35	120.30
15	14	2729	A	N7-C8-N9	7.63	117.61	113.80
15	1H	830	A	C5-C6-N6	-7.63	117.60	123.70
15	1H	1987	C	C6-N1-C2	-7.63	117.25	120.30
15	14	1975	G	N7-C8-N9	7.62	116.91	113.10
15	1H	728	C	N3-C4-C5	7.62	124.95	121.90
15	14	881	G	C2-N3-C4	7.62	115.71	111.90
15	14	1656	C	C5-C4-N4	-7.62	114.87	120.20
15	14	1252	A	O4'-C1'-N9	7.61	114.29	108.20
23	29	52	LEU	CA-CB-CG	7.61	132.80	115.30
1	13	1421	A	C5-C6-N1	-7.61	113.90	117.70
15	1H	728	C	C6-N1-C2	7.61	123.34	120.30
15	1H	1931	G	O5'-P-OP1	-7.60	98.86	105.70
52	W1	37	A	N1-C6-N6	7.60	123.16	118.60
15	1H	157	U	C2-N1-C1'	7.59	126.81	117.70
15	14	2533	A	O4'-C1'-N9	-7.59	102.12	108.20
1	13	1825	G	O5'-P-OP1	-7.59	98.87	105.70
15	1H	725	A	N1-C2-N3	7.59	133.09	129.30
15	14	2588	C	C2-N1-C1'	7.59	127.15	118.80
15	14	992	A	C4-C5-N7	7.59	114.49	110.70
15	1H	557	G	C5-N7-C8	-7.59	100.51	104.30
15	1H	1206	G	C4-N9-C1'	7.59	136.36	126.50
15	14	2014	G	C8-N9-C4	-7.59	103.36	106.40
1	13	907	G	C4-C5-N7	7.58	113.83	110.80
15	1H	1798	G	C8-N9-C4	-7.58	103.37	106.40
15	1H	1191	A	N3-C4-N9	-7.57	121.34	127.40
15	1H	48	A	O5'-P-OP2	-7.57	98.89	105.70
15	1H	819	G	C5-C6-O6	-7.57	124.06	128.60
15	1H	1005	U	C6-N1-C2	-7.57	116.46	121.00
15	1H	1452	C	O5'-P-OP1	-7.56	98.89	105.70
15	14	832	A	C6-C5-N7	-7.56	127.01	132.30
26	16	83	G	C8-N9-C4	-7.56	103.38	106.40
15	1H	838	A	O4'-C1'-N9	-7.56	102.15	108.20
15	1H	2633	G	O5'-P-OP2	-7.55	98.90	105.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
15	14	111	G	N3-C4-C5	7.55	132.38	128.60
15	14	1832	U	O5'-P-OP2	-7.55	98.90	105.70
15	1H	2471	C	C6-N1-C2	7.55	123.32	120.30
1	13	1319	G	C5-N7-C8	-7.55	100.53	104.30
15	1H	2096	A	N1-C6-N6	7.55	123.13	118.60
52	V1	60	U	C5-C6-N1	7.54	126.47	122.70
15	1H	1815	C	C6-N1-C1'	-7.54	111.75	120.80
15	1H	139	A	C2-N3-C4	-7.54	106.83	110.60
15	1H	2081	G	N1-C6-O6	7.54	124.42	119.90
15	1H	1205	A	O5'-P-OP2	-7.52	98.93	105.70
15	1H	1721	U	N3-C4-O4	7.52	124.66	119.40
15	14	1860	G	N7-C8-N9	-7.52	109.34	113.10
15	14	1608	A	P-O3'-C3'	7.52	128.72	119.70
1	1G	969	C	N1-C2-O2	7.51	123.41	118.90
15	1H	845	C	C6-N1-C2	7.51	123.30	120.30
1	13	1515	A	N1-C6-N6	7.50	123.10	118.60
15	1H	1833	G	P-O3'-C3'	7.50	128.70	119.70
15	1H	193	C	N1-C2-O2	-7.49	114.40	118.90
15	1H	713	C	O5'-P-OP2	-7.49	98.96	105.70
15	1H	1731	G	N3-C4-N9	-7.49	121.50	126.00
1	13	1549	G	C8-N9-C4	-7.49	103.40	106.40
15	1H	782	G	N1-C2-N2	-7.49	109.46	116.20
15	1H	2325	A	C2-N3-C4	7.49	114.34	110.60
15	1H	140	A	N1-C6-N6	7.49	123.09	118.60
15	1H	912	A	O5'-P-OP2	-7.49	98.96	105.70
15	14	512	C	C6-N1-C2	-7.49	117.31	120.30
1	1G	1089	C	N3-C2-O2	-7.48	116.67	121.90
15	14	1545	A	C4-C5-N7	7.47	114.44	110.70
15	14	2492	C	C6-N1-C2	-7.47	117.31	120.30
15	1H	976	G	O5'-P-OP1	-7.47	98.97	105.70
15	1H	1584	U	N1-C2-O2	7.47	128.03	122.80
1	13	986	C	N1-C2-O2	7.47	123.38	118.90
26	1J	117	G	C8-N9-C4	7.47	109.39	106.40
1	13	1319	G	C6-C5-N7	-7.46	125.92	130.40
15	1H	2578	U	N1-C2-O2	7.46	128.03	122.80
15	1H	457	A	OP1-P-O3'	7.46	121.62	105.20
1	13	1319	G	C4-N9-C1'	7.46	136.20	126.50
15	1H	1252	A	C4-C5-N7	7.46	114.43	110.70
15	14	2559	G	N1-C6-O6	7.46	124.38	119.90
1	1G	1054	G	O4'-C1'-N9	7.46	114.17	108.20
15	14	2459	G	O5'-P-OP2	-7.46	98.99	105.70
1	13	2127	G	O5'-P-OP1	-7.46	98.99	105.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
15	14	823	A	C8-N9-C1'	7.45	141.11	127.70
15	14	1252	A	C5-C6-N1	-7.45	113.97	117.70
15	14	70	A	N1-C2-N3	7.45	133.02	129.30
52	V4	76	A	N1-C6-N6	7.45	123.07	118.60
15	14	137	G	C2-N3-C4	7.44	115.62	111.90
15	14	892	G	C8-N9-C4	7.44	109.38	106.40
1	13	2121	U	P-O3'-C3'	7.44	128.62	119.70
15	14	2492	C	N1-C2-O2	7.44	123.36	118.90
1	1G	2125	A	C2-N3-C4	-7.43	106.88	110.60
15	14	242	G	C8-N9-C4	7.43	109.37	106.40
15	14	2624	U	O5'-P-OP2	-7.43	99.01	105.70
15	14	2014	G	N9-C4-C5	7.43	108.37	105.40
26	1J	91	G	C5-C6-O6	-7.43	124.14	128.60
15	14	487	U	N3-C2-O2	-7.42	117.00	122.20
15	14	12	U	N1-C2-O2	7.42	127.99	122.80
1	13	1147	C	N3-C2-O2	-7.42	116.71	121.90
15	1H	1663	A	O4'-C1'-N9	7.41	114.13	108.20
15	14	411	U	N3-C2-O2	-7.41	117.01	122.20
15	14	1391	A	N1-C2-N3	7.41	133.01	129.30
15	14	648	A	C5-C6-N1	-7.41	114.00	117.70
15	14	1549	G	O5'-P-OP2	-7.41	99.03	105.70
15	1H	25	U	N3-C4-O4	7.41	124.58	119.40
15	14	481	C	C5-C6-N1	-7.41	117.30	121.00
15	1H	1258	A	C8-N9-C4	-7.40	102.84	105.80
15	14	648	A	N7-C8-N9	7.40	117.50	113.80
15	14	2611	U	N1-C2-N3	7.40	119.34	114.90
15	14	2696	C	C4-C5-C6	7.40	121.10	117.40
15	1H	1924	G	C6-C5-N7	7.40	134.84	130.40
15	1H	415	U	N3-C2-O2	7.39	127.38	122.20
15	1H	1699	G	C2-N3-C4	7.39	115.60	111.90
15	14	1841	G	C8-N9-C4	7.39	109.36	106.40
15	1H	480	G	O5'-P-OP2	-7.39	99.05	105.70
1	13	1597	A	O4'-C1'-N9	7.39	114.11	108.20
15	14	255	A	C5-N7-C8	-7.39	100.21	103.90
15	1H	1584	U	N3-C2-O2	-7.39	117.03	122.20
15	1H	1290	A	C5-N7-C8	-7.38	100.21	103.90
15	14	178	G	N1-C6-O6	7.38	124.33	119.90
26	1J	92	A	C8-N9-C4	-7.38	102.85	105.80
27	85	95	LEU	CA-CB-CG	-7.38	98.32	115.30
15	14	2246	C	N3-C4-C5	7.38	124.85	121.90
15	1H	1810	G	C5-C6-O6	-7.38	124.17	128.60
15	14	2246	C	C6-N1-C2	7.38	123.25	120.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
15	1H	137	G	C5-N7-C8	-7.37	100.61	104.30
15	1H	2079	A	N1-C6-N6	7.37	123.02	118.60
15	1H	1546	U	N3-C4-O4	7.37	124.56	119.40
15	1H	137	G	N7-C8-N9	7.37	116.78	113.10
15	1H	2715	C	O5'-P-OP1	7.36	119.53	110.70
15	1H	70	A	C6-C5-N7	-7.36	127.15	132.30
15	1H	2063	G	C5-C6-O6	7.36	133.01	128.60
46	K8	16	LEU	N-CA-C	-7.36	91.13	111.00
1	1G	2075	C	C6-N1-C1'	-7.36	111.97	120.80
15	14	2231	G	C4-N9-C1'	7.36	136.06	126.50
15	1H	474	G	C4-C5-N7	7.35	113.74	110.80
1	1G	986	C	C6-N1-C2	-7.35	117.36	120.30
15	1H	2407	A	N3-C4-C5	7.35	131.94	126.80
15	1H	255	A	N7-C8-N9	7.35	117.47	113.80
15	1H	2028	G	C8-N9-C4	7.34	109.34	106.40
15	14	2103	C	N3-C4-C5	-7.34	118.96	121.90
15	1H	178	G	C8-N9-C4	7.34	109.34	106.40
15	1H	2445	A	N3-C4-N9	-7.34	121.53	127.40
15	14	1860	G	C2-N3-C4	7.34	115.57	111.90
15	1H	1801	C	O5'-P-OP1	-7.33	99.10	105.70
15	14	137	G	C8-N9-C4	-7.33	103.47	106.40
15	1H	2417	C	C5-C6-N1	7.33	124.66	121.00
15	14	2231	G	C6-C5-N7	-7.33	126.00	130.40
1	13	1438	G	C8-N9-C4	-7.33	103.47	106.40
15	1H	2454	A	N1-C6-N6	7.32	122.99	118.60
15	14	725	A	C6-N1-C2	7.32	123.00	118.60
15	14	231	A	N1-C6-N6	-7.32	114.21	118.60
15	14	2729	A	C2-N3-C4	-7.32	106.94	110.60
15	14	1258	A	C4-C5-N7	7.32	114.36	110.70
15	14	219	A	O4'-C1'-N9	7.32	114.05	108.20
15	1H	2495	C	C6-N1-C2	-7.31	117.38	120.30
15	14	1238	G	N1-C6-O6	-7.31	115.51	119.90
15	1H	2729	A	N7-C8-N9	7.31	117.45	113.80
15	1H	2242	A	C8-N9-C4	-7.30	102.88	105.80
15	1H	235	G	C6-C5-N7	-7.30	126.02	130.40
15	14	2795	U	C5-C6-N1	-7.29	119.05	122.70
15	1H	736	C	N1-C2-O2	-7.29	114.53	118.90
15	1H	1316	U	O5'-P-OP2	-7.29	99.14	105.70
15	14	1634	C	N1-C2-O2	7.29	123.27	118.90
15	1H	823	A	C5-C6-N1	-7.29	114.06	117.70
1	13	1589	G	C5-C6-O6	-7.28	124.23	128.60
15	1H	199	C	C6-N1-C2	7.28	123.21	120.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
15	1H	355	A	N1-C2-N3	7.28	132.94	129.30
15	1H	2795	U	C2-N3-C4	-7.27	122.64	127.00
15	1H	801	A	N1-C6-N6	7.27	122.96	118.60
15	1H	1618	G	N1-C6-O6	7.27	124.26	119.90
15	1H	735	G	OP1-P-OP2	7.27	130.50	119.60
15	14	198	C	N3-C4-C5	7.27	124.81	121.90
52	X1	60	U	O5'-P-OP2	-7.27	99.16	105.70
1	13	696	A	C8-N9-C4	-7.26	102.89	105.80
15	1H	648	A	O4'-C1'-N9	7.26	114.01	108.20
15	14	868	A	O5'-P-OP1	7.26	119.41	110.70
15	14	2462	G	C4-N9-C1'	-7.26	117.06	126.50
15	1H	603	A	C5-C6-N6	-7.25	117.90	123.70
15	1H	70	A	N1-C6-N6	7.25	122.95	118.60
15	14	139	A	C4-C5-N7	7.25	114.33	110.70
47	59	153	LYS	C-N-CD	7.25	143.63	128.40
15	1H	483	C	C6-N1-C2	7.25	123.20	120.30
15	14	487	U	O5'-P-OP2	-7.25	99.17	105.70
15	14	715	G	C8-N9-C4	7.25	109.30	106.40
15	14	2302	A	C5-N7-C8	-7.25	100.28	103.90
12	Q8	54	GLU	OE1-CD-OE2	-7.25	114.61	123.30
15	1H	557	G	C2-N3-C4	-7.24	108.28	111.90
15	1H	1956	U	C5-C4-O4	7.24	130.24	125.90
15	1H	747	C	C4-C5-C6	7.23	121.02	117.40
15	1H	2301	A	C4-C5-C6	7.22	120.61	117.00
15	1H	339	A	N1-C6-N6	-7.22	114.27	118.60
15	14	1959	C	C6-N1-C2	7.22	123.19	120.30
1	1G	1319	G	C4-C5-N7	7.22	113.69	110.80
15	1H	2559	G	C5-C6-O6	-7.21	124.27	128.60
11	G8	81	LYS	N-CA-C	-7.21	91.54	111.00
15	1H	125	A	N9-C4-C5	-7.21	102.92	105.80
15	14	2729	A	C4-C5-N7	7.21	114.30	110.70
15	1H	783	A	C2-N3-C4	-7.20	107.00	110.60
43	E8	90	ARG	NE-CZ-NH1	-7.20	116.70	120.30
1	1G	2121	U	C2-N1-C1'	7.20	126.34	117.70
15	14	139	A	C6-C5-N7	-7.20	127.26	132.30
15	1H	731	G	C8-N9-C1'	-7.20	117.64	127.00
15	14	1665	A	O4'-C1'-N9	7.20	113.96	108.20
15	14	2717	U	O4'-C1'-N1	7.20	113.96	108.20
15	1H	1797	G	O5'-P-OP2	-7.20	99.22	105.70
15	14	1820	A	C6-C5-N7	-7.19	127.27	132.30
15	14	823	A	C5-N7-C8	-7.19	100.31	103.90
1	1G	1054	G	C6-C5-N7	7.18	134.71	130.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
15	14	2231	G	O4'-C1'-N9	7.18	113.95	108.20
15	14	1059	G	C4-N9-C1'	-7.18	117.17	126.50
52	X1	37	A	N9-C4-C5	-7.18	102.93	105.80
15	1H	557	G	C8-N9-C4	-7.18	103.53	106.40
15	1H	1700	G	N1-C6-O6	7.18	124.21	119.90
15	14	1398	A	C4-C5-N7	7.18	114.29	110.70
15	1H	863	C	O5'-P-OP2	-7.17	99.25	105.70
15	1H	2742	U	N3-C2-O2	-7.17	117.18	122.20
1	1G	2143	G	O5'-P-OP2	-7.17	99.25	105.70
15	1H	2884	C	O5'-P-OP2	-7.16	99.25	105.70
15	14	1663	A	C5-N7-C8	-7.16	100.32	103.90
15	14	2616	C	O5'-P-OP2	-7.16	99.26	105.70
52	W1	32	U	C6-N1-C2	-7.16	116.70	121.00
15	1H	718	G	N1-C6-O6	-7.16	115.61	119.90
15	14	2717	U	C2-N1-C1'	7.16	126.29	117.70
1	1G	2110	G	C6-C5-N7	-7.15	126.11	130.40
15	1H	558	C	O5'-P-OP1	-7.15	99.26	105.70
15	1H	1913	G	N3-C4-N9	7.15	130.29	126.00
1	13	907	G	C8-N9-C4	-7.15	103.54	106.40
15	14	1814	A	N1-C6-N6	-7.15	114.31	118.60
15	1H	2098	C	N1-C2-O2	-7.15	114.61	118.90
15	14	1945	C	O5'-P-OP2	-7.15	99.27	105.70
15	1H	544	C	OP2-P-O3'	7.14	120.91	105.20
15	14	742	C	C5-C6-N1	-7.14	117.43	121.00
15	1H	25	U	C5-C4-O4	-7.14	121.62	125.90
15	1H	1379	C	N1-C2-O2	-7.13	114.62	118.90
15	14	1654	C	O5'-P-OP1	-7.13	99.28	105.70
15	14	1986	C	C6-N1-C2	7.13	123.15	120.30
15	14	1398	A	C6-C5-N7	-7.13	127.31	132.30
15	14	1651	U	N3-C4-C5	-7.13	110.32	114.60
15	1H	2292	G	N1-C6-O6	-7.12	115.62	119.90
15	1H	2286	G	N3-C4-N9	7.12	130.27	126.00
15	1H	1592	A	C2-N3-C4	-7.12	107.04	110.60
15	1H	2302	A	N1-C2-N3	7.12	132.86	129.30
15	14	2445	A	C5-C6-N1	-7.11	114.14	117.70
15	1H	2275	C	C6-N1-C2	7.10	123.14	120.30
15	1H	125	A	N1-C6-N6	7.10	122.86	118.60
15	1H	1820	A	C4-C5-C6	7.10	120.55	117.00
15	1H	562	C	C6-N1-C2	7.10	123.14	120.30
15	14	992	A	C5-C6-N1	-7.10	114.15	117.70
1	13	895	G	O5'-P-OP1	-7.09	99.31	105.70
15	14	980	A	C4-C5-N7	7.09	114.25	110.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
15	1H	899	C	O5'-P-OP1	-7.09	99.32	105.70
15	1H	1381	G	N3-C4-C5	7.09	132.15	128.60
15	1H	2605	A	N1-C6-N6	7.09	122.85	118.60
15	14	113	C	O5'-P-OP1	-7.09	99.32	105.70
15	14	1477	C	O5'-P-OP1	-7.08	99.33	105.70
15	1H	1820	A	N9-C1'-C2'	7.08	123.21	114.00
15	1H	1842	U	N3-C2-O2	7.08	127.16	122.20
26	1J	62	C	C6-N1-C2	-7.08	117.47	120.30
52	V4	20	U	C2-N1-C1'	7.08	126.20	117.70
1	1G	1158	G	N1-C6-O6	7.08	124.15	119.90
15	1H	2457	C	C2-N3-C4	-7.08	116.36	119.90
1	13	907	G	N7-C8-N9	7.08	116.64	113.10
15	1H	1713	C	N3-C4-C5	7.07	124.73	121.90
15	1H	838	A	O5'-P-OP1	-7.07	99.33	105.70
46	G5	42	GLY	N-CA-C	-7.07	95.42	113.10
15	1H	739	G	C5-C6-O6	-7.07	124.36	128.60
15	1H	2610	G	O5'-P-OP1	-7.07	99.34	105.70
15	14	1663	A	C5-C6-N1	-7.07	114.17	117.70
15	1H	830	A	N1-C6-N6	7.06	122.84	118.60
15	14	1814	A	N9-C4-C5	7.06	108.62	105.80
1	13	1513	G	O4'-C1'-N9	7.06	113.85	108.20
15	14	2886	A	O4'-C1'-N9	7.06	113.85	108.20
15	1H	991	G	O5'-P-OP2	-7.06	99.35	105.70
47	59	93	GLY	N-CA-C	7.06	130.74	113.10
15	1H	2302	A	N3-C4-N9	-7.05	121.76	127.40
15	14	2488	U	N1-C2-O2	7.05	127.74	122.80
15	1H	410	G	C5-C6-N1	7.05	115.03	111.50
16	75	5	ALA	N-CA-C	-7.05	91.96	111.00
15	1H	1669	G	C8-N9-C4	7.04	109.22	106.40
1	13	2077	A	C8-N9-C4	-7.04	102.98	105.80
15	1H	602	G	OP1-P-OP2	-7.04	109.04	119.60
15	14	493	G	N7-C8-N9	7.04	116.62	113.10
15	1H	2087	A	C5-N7-C8	7.04	107.42	103.90
23	29	88	GLY	N-CA-C	7.04	130.69	113.10
15	14	1830	U	C5-C4-O4	7.03	130.12	125.90
15	1H	894	G	OP1-P-O3'	7.03	120.67	105.20
15	1H	1651	U	N3-C2-O2	-7.03	117.28	122.20
15	1H	1669	G	N7-C8-N9	-7.03	109.59	113.10
15	1H	126	C	C6-N1-C2	7.03	123.11	120.30
15	1H	1069	A	C8-N9-C4	-7.03	102.99	105.80
15	14	1748	A	C8-N9-C4	-7.03	102.99	105.80
15	14	2079	A	C8-N9-C4	-7.02	102.99	105.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
30	35	109	GLY	N-CA-C	-7.02	95.54	113.10
1	13	1539	G	C8-N9-C4	-7.02	103.59	106.40
15	1H	1191	A	C5-N7-C8	-7.02	100.39	103.90
15	14	1891	G	N3-C4-N9	7.02	130.21	126.00
15	14	785	C	N1-C2-O2	-7.02	114.69	118.90
26	1J	83	G	N7-C8-N9	7.02	116.61	113.10
15	1H	894	G	C5-N7-C8	-7.01	100.79	104.30
52	W1	38	A	N1-C6-N6	7.01	122.81	118.60
15	14	419	G	C8-N9-C1'	-7.01	117.88	127.00
15	1H	1647	C	O5'-P-OP1	-7.01	99.39	105.70
15	1H	2492	C	C5-C6-N1	7.01	124.50	121.00
15	14	198	C	C5-C4-N4	-7.00	115.30	120.20
15	14	20	C	C4-C5-C6	7.00	120.90	117.40
15	1H	200	C	C6-N1-C2	7.00	123.10	120.30
15	1H	1810	G	N9-C4-C5	-7.00	102.60	105.40
15	1H	1820	A	C5-C6-N1	-6.99	114.20	117.70
15	1H	1206	G	C8-N9-C1'	-6.99	117.91	127.00
15	1H	1235	G	C5-C6-O6	-6.99	124.41	128.60
15	14	1975	G	O4'-C1'-N9	6.99	113.79	108.20
15	1H	73	A	O4'-C1'-N9	-6.99	102.61	108.20
15	1H	708	C	C5-C6-N1	-6.99	117.51	121.00
15	1H	1069	A	C5-C6-N1	-6.99	114.21	117.70
1	1G	1319	G	C4-N9-C1'	6.99	135.58	126.50
15	1H	963	C	N3-C2-O2	-6.98	117.01	121.90
15	1H	1279	C	C6-N1-C2	6.98	123.09	120.30
1	1G	969	C	N3-C2-O2	-6.98	117.02	121.90
15	1H	2061	C	O5'-P-OP1	6.98	119.07	110.70
15	1H	844	C	C5-C6-N1	-6.98	117.51	121.00
15	1H	214	G	O5'-P-OP2	-6.97	99.42	105.70
15	1H	2660	G	O5'-P-OP1	-6.97	99.42	105.70
15	14	2103	C	C6-N1-C2	-6.97	117.51	120.30
1	13	1520	C	C5-C6-N1	-6.97	117.51	121.00
52	X4	76	A	C8-N9-C4	6.97	108.59	105.80
15	1H	832	A	N3-C4-N9	-6.97	121.82	127.40
15	1H	203	A	C8-N9-C4	6.97	108.59	105.80
1	13	929	A	N1-C6-N6	6.97	122.78	118.60
15	1H	255	A	C6-C5-N7	-6.97	127.42	132.30
15	14	731	G	C4-N9-C1'	6.97	135.56	126.50
15	1H	1005	U	N1-C2-N3	6.96	119.08	114.90
15	14	355	A	C6-C5-N7	-6.96	127.43	132.30
15	14	2703	U	N3-C4-O4	-6.96	114.53	119.40
1	13	1215	C	C6-N1-C2	6.96	123.08	120.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
15	1H	2301	A	C6-C5-N7	-6.96	127.43	132.30
15	1H	2795	U	N3-C2-O2	-6.96	117.33	122.20
15	14	140	A	N1-C6-N6	6.95	122.77	118.60
15	14	1692	G	N1-C6-O6	-6.95	115.73	119.90
15	1H	2589	G	C5-C6-O6	-6.95	124.43	128.60
1	13	996	C	O5'-P-OP2	-6.95	99.45	105.70
1	13	1913	A	N7-C8-N9	6.95	117.27	113.80
15	14	2622	G	C6-C5-N7	-6.95	126.23	130.40
15	1H	179	G	C4-C5-N7	6.94	113.58	110.80
15	1H	1994	A	N1-C6-N6	-6.94	114.43	118.60
15	1H	1663	A	N1-C6-N6	6.94	122.77	118.60
15	1H	1061	C	C6-N1-C2	6.94	123.08	120.30
15	1H	2590	C	C6-N1-C2	6.94	123.08	120.30
15	1H	140	A	C6-C5-N7	-6.94	127.44	132.30
15	14	355	A	C2-N3-C4	-6.94	107.13	110.60
15	1H	978	G	N3-C4-C5	-6.93	125.13	128.60
15	14	1680	C	N1-C2-O2	-6.93	114.74	118.90
1	1G	2070	G	N3-C4-C5	6.93	132.07	128.60
15	1H	179	G	N1-C6-O6	6.93	124.06	119.90
15	14	230	G	N3-C4-C5	6.93	132.07	128.60
52	W1	37	A	C5-C6-N6	-6.93	118.15	123.70
15	1H	1300	C	C5-C4-N4	-6.93	115.35	120.20
15	1H	2451	G	N3-C2-N2	-6.93	115.05	119.90
15	14	2468	A	N1-C6-N6	6.93	122.76	118.60
15	1H	346	G	C5-C6-O6	-6.92	124.44	128.60
1	1G	1536	A	P-O3'-C3'	6.92	128.01	119.70
15	1H	1074	U	C5-C6-N1	6.92	126.16	122.70
1	13	696	A	C2-N3-C4	6.92	114.06	110.60
15	14	185	A	N1-C6-N6	6.91	122.75	118.60
4	19	272	ALA	N-CA-C	6.91	129.66	111.00
15	14	2492	C	N3-C2-O2	-6.91	117.06	121.90
1	13	754	G	P-O3'-C3'	6.91	127.99	119.70
15	1H	1701	G	N1-C6-O6	6.91	124.04	119.90
15	1H	2795	U	C5-C4-O4	6.91	130.04	125.90
15	14	579	U	O5'-P-OP2	-6.90	99.49	105.70
15	14	718	G	N3-C2-N2	-6.90	115.07	119.90
15	14	1748	A	N1-C6-N6	6.90	122.74	118.60
15	1H	824	G	O4'-C1'-N9	6.90	113.72	108.20
15	1H	1721	U	C5-C4-O4	-6.90	121.76	125.90
15	1H	125	A	C8-N9-C4	6.90	108.56	105.80
15	1H	2533	A	N7-C8-N9	6.90	117.25	113.80
26	16	43	U	C5-C6-N1	-6.90	119.25	122.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	1G	1469	C	C2-N1-C1'	6.90	126.39	118.80
1	13	747	G	N7-C8-N9	6.89	116.55	113.10
15	1H	1924	G	C4-C5-C6	-6.89	114.66	118.80
4	11	242	ARG	NE-CZ-NH1	-6.89	116.85	120.30
15	14	258	C	C6-N1-C2	-6.89	117.54	120.30
15	14	725	A	C8-N9-C4	-6.89	103.04	105.80
15	14	1862	G	C5-C6-O6	6.89	132.73	128.60
1	13	1753	U	P-O3'-C3'	6.89	127.97	119.70
19	9I	31	LEU	CA-CB-CG	6.89	131.15	115.30
15	14	1424	C	N3-C4-C5	6.89	124.66	121.90
1	1G	1316	A	P-O3'-C3'	6.89	127.96	119.70
15	1H	1546	U	C5-C4-O4	-6.89	121.77	125.90
15	1H	1663	A	C8-N9-C4	-6.89	103.05	105.80
1	13	1235	G	C5-C6-N1	6.88	114.94	111.50
15	1H	140	A	O4'-C1'-N9	6.88	113.71	108.20
15	14	557	G	C6-C5-N7	-6.88	126.27	130.40
52	V4	76	A	C4-C5-N7	6.88	114.14	110.70
15	1H	136	G	C5-C6-O6	-6.88	124.47	128.60
15	14	626	C	C4-C5-C6	6.88	120.84	117.40
15	14	740	C	C6-N1-C2	6.88	123.05	120.30
15	1H	1070	G	N9-C4-C5	6.87	108.15	105.40
32	39	68	LYS	C-N-CA	-6.87	104.53	121.70
15	1H	861	C	N3-C2-O2	6.87	126.71	121.90
15	1H	2662	U	C5-C6-N1	-6.87	119.27	122.70
15	1H	1181	U	C5-C4-O4	-6.87	121.78	125.90
15	14	1022	C	N3-C2-O2	-6.87	117.09	121.90
15	1H	557	G	N3-C4-N9	-6.87	121.88	126.00
15	1H	1830	U	N3-C4-C5	6.86	118.72	114.60
15	14	2361	A	N3-C4-C5	6.86	131.60	126.80
15	1H	200	C	N3-C4-C5	6.86	124.64	121.90
15	14	2533	A	N1-C6-N6	6.86	122.71	118.60
15	1H	1832	U	O5'-P-OP2	-6.86	99.53	105.70
26	1J	91	G	C6-C5-N7	-6.86	126.29	130.40
15	1H	800	A	OP1-P-OP2	-6.85	109.32	119.60
15	14	595	G	C5-C6-O6	6.85	132.71	128.60
15	1H	1857	G	O5'-P-OP2	-6.85	99.54	105.70
15	14	920	U	O5'-P-OP1	-6.85	99.54	105.70
52	V4	20	U	N1-C2-O2	6.85	127.59	122.80
15	1H	839	C	N3-C2-O2	6.84	126.69	121.90
15	14	1924	G	C6-C5-N7	6.84	134.51	130.40
1	1G	1247	C	O5'-P-OP1	-6.84	99.54	105.70
15	1H	736	C	N3-C4-C5	-6.84	119.16	121.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
15	1H	855	C	N3-C4-C5	6.84	124.64	121.90
15	14	660	A	N1-C6-N6	6.84	122.71	118.60
15	14	2599	U	N3-C2-O2	-6.84	117.41	122.20
26	1J	91	G	O5'-P-OP1	-6.84	99.54	105.70
15	14	1728	G	C4-C5-N7	6.84	113.54	110.80
15	14	2517	G	OP1-P-O3'	6.84	120.25	105.20
1	1G	1905	U	C2-N1-C1'	6.84	125.91	117.70
15	1H	778	G	N3-C2-N2	-6.84	115.11	119.90
15	1H	137	G	C4-C5-N7	6.84	113.53	110.80
15	1H	618	G	N1-C2-N2	-6.83	110.05	116.20
15	1H	648	A	N3-C4-N9	-6.83	121.93	127.40
15	14	2488	U	C2-N1-C1'	6.83	125.90	117.70
15	1H	2275	C	N1-C2-O2	6.83	123.00	118.90
15	14	355	A	C8-N9-C4	-6.83	103.07	105.80
15	14	1479	C	O5'-P-OP2	-6.83	99.56	105.70
15	14	1748	A	N1-C2-N3	6.82	132.71	129.30
15	1H	494	A	C5-C6-N1	6.82	121.11	117.70
15	1H	1806	G	N1-C6-O6	-6.82	115.81	119.90
15	14	1391	A	C5-N7-C8	-6.82	100.49	103.90
15	1H	192	U	N3-C4-C5	6.81	118.69	114.60
15	1H	1428	A	C5-C6-N6	-6.80	118.26	123.70
15	14	1509	G	C8-N9-C4	-6.80	103.68	106.40
1	13	2036	A	N1-C6-N6	6.80	122.68	118.60
15	14	1689	U	C2-N3-C4	-6.80	122.92	127.00
15	14	1975	G	C8-N9-C4	-6.80	103.68	106.40
15	1H	411	U	N3-C2-O2	-6.80	117.44	122.20
1	1G	1927	G	P-O3'-C3'	6.80	127.86	119.70
15	14	12	U	N3-C2-O2	-6.80	117.44	122.20
15	14	639	U	N3-C2-O2	-6.80	117.44	122.20
15	14	22	C	N1-C2-O2	6.80	122.98	118.90
15	14	198	C	N3-C2-O2	6.80	126.66	121.90
15	1H	73	A	C5-N7-C8	-6.79	100.50	103.90
15	1H	2469	G	C5-C6-O6	6.79	132.67	128.60
15	14	558	C	C6-N1-C2	6.79	123.02	120.30
15	14	648	A	N3-C4-C5	6.79	131.55	126.80
15	14	992	A	O4'-C1'-N9	6.79	113.63	108.20
15	1H	2276	C	OP2-P-O3'	6.79	120.13	105.20
15	1H	1290	A	N3-C4-C5	6.79	131.55	126.80
15	14	1663	A	N7-C8-N9	6.79	117.19	113.80
15	1H	2729	A	N3-C4-N9	-6.79	121.97	127.40
15	14	858	G	N3-C4-C5	-6.79	125.21	128.60
15	1H	782	G	N3-C4-N9	6.78	130.07	126.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
15	1H	876	U	C6-N1-C2	6.78	125.07	121.00
15	14	1728	G	C6-C5-N7	-6.78	126.33	130.40
26	16	101	G	C8-N9-C4	6.78	109.11	106.40
15	1H	1324	A	C6-C5-N7	-6.78	127.56	132.30
15	14	1811	U	N3-C2-O2	-6.78	117.46	122.20
15	1H	253	C	N1-C2-O2	6.77	122.96	118.90
1	1G	1446	C	C5-C4-N4	-6.77	115.46	120.20
15	14	964	G	O5'-P-OP1	-6.77	99.61	105.70
15	1H	835	C	N1-C2-O2	6.77	122.96	118.90
15	1H	1181	U	N3-C2-O2	6.77	126.94	122.20
15	1H	1185	G	N1-C6-O6	6.77	123.96	119.90
15	14	1444	A	O4'-C1'-N9	6.77	113.61	108.20
15	1H	204	G	N3-C4-N9	6.77	130.06	126.00
15	1H	1820	A	N3-C4-C5	6.76	131.54	126.80
12	Q8	45	GLY	N-CA-C	-6.76	96.19	113.10
15	1H	190	U	O5'-P-OP1	-6.76	99.61	105.70
15	1H	718	G	C5-C6-O6	6.76	132.66	128.60
52	W1	74	C	C2-N1-C1'	6.76	126.24	118.80
15	1H	140	A	C5-C6-N1	-6.76	114.32	117.70
15	1H	675	G	O5'-P-OP1	6.76	118.81	110.70
15	14	2231	G	C8-N9-C1'	-6.76	118.21	127.00
15	14	564	C	C5-C6-N1	6.76	124.38	121.00
15	1H	1931	G	N1-C6-O6	-6.76	115.85	119.90
15	1H	1983	C	N3-C2-O2	6.75	126.62	121.90
15	14	255	A	N7-C8-N9	6.75	117.17	113.80
15	14	1649	C	O5'-P-OP2	-6.75	99.63	105.70
1	1G	1926	A	N7-C8-N9	6.75	117.17	113.80
15	1H	2366	G	N3-C4-C5	-6.75	125.23	128.60
15	1H	1241	G	C8-N9-C4	6.74	109.09	106.40
52	X4	18	G	N3-C4-N9	6.74	130.04	126.00
15	1H	2301	A	N1-C6-N6	6.74	122.64	118.60
15	14	1381	G	N1-C2-N3	6.74	127.94	123.90
15	1H	648	A	N1-C6-N6	6.73	122.64	118.60
15	1H	2704	U	N1-C2-N3	6.73	118.94	114.90
15	1H	1663	A	N3-C4-N9	-6.73	122.01	127.40
15	1H	2517	G	O5'-P-OP1	-6.73	99.64	105.70
15	14	1674	C	N1-C2-O2	6.73	122.94	118.90
15	1H	204	G	N3-C4-C5	-6.73	125.23	128.60
15	14	242	G	N7-C8-N9	-6.73	109.74	113.10
15	1H	895	C	O5'-P-OP1	-6.73	99.65	105.70
15	14	2716	C	P-O3'-C3'	6.73	127.77	119.70
39	J8	80	LEU	CA-CB-CG	6.73	130.77	115.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
15	14	2696	C	C5-C6-N1	-6.72	117.64	121.00
15	1H	139	A	O4'-C1'-N9	6.72	113.58	108.20
15	1H	179	G	N9-C4-C5	-6.72	102.71	105.40
15	1H	1821	A	O5'-P-OP1	-6.72	99.66	105.70
15	1H	2440	A	N1-C2-N3	6.72	132.66	129.30
15	14	1966	C	O5'-P-OP1	-6.72	99.66	105.70
15	14	1234	G	O5'-P-OP2	-6.71	99.66	105.70
15	14	2014	G	N3-C2-N2	-6.71	115.20	119.90
1	13	1829	G	C5-C6-O6	6.71	132.63	128.60
15	1H	239	C	C6-N1-C2	6.71	122.98	120.30
15	1H	2313	A	O5'-P-OP2	-6.71	99.67	105.70
15	14	2622	G	N1-C2-N3	6.71	127.92	123.90
15	14	837	A	C5-C6-N6	-6.70	118.34	123.70
15	14	963	C	N3-C4-C5	-6.70	119.22	121.90
1	1G	1722	G	OP2-P-O3'	6.70	119.94	105.20
15	1H	2611	U	N1-C2-O2	-6.70	118.11	122.80
15	14	112	U	O5'-P-OP2	6.70	118.74	110.70
15	1H	1656	C	C2-N1-C1'	6.70	126.17	118.80
15	14	2361	A	N1-C6-N6	6.70	122.62	118.60
15	14	2451	G	N1-C6-O6	6.70	123.92	119.90
15	14	1022	C	N1-C2-O2	6.70	122.92	118.90
15	1H	961	U	C6-N1-C2	6.69	125.02	121.00
1	13	2154	A	C5-C6-N1	-6.69	114.35	117.70
15	14	1975	G	N3-C4-C5	6.69	131.95	128.60
15	1H	399	A	O5'-P-OP2	-6.69	99.68	105.70
15	1H	1833	G	C5-C6-O6	6.69	132.61	128.60
15	1H	192	U	C6-N1-C2	6.69	125.01	121.00
15	14	1038	A	O5'-P-OP1	-6.69	99.68	105.70
15	1H	963	C	N1-C2-O2	6.68	122.91	118.90
15	14	22	C	N3-C2-O2	-6.68	117.22	121.90
15	1H	802	C	N3-C4-N4	-6.68	113.32	118.00
15	1H	662	C	C6-N1-C2	-6.68	117.63	120.30
15	1H	509	G	O4'-C1'-N9	6.68	113.54	108.20
15	1H	2302	A	C8-N9-C4	6.68	108.47	105.80
3	F8	67	GLY	N-CA-C	-6.68	96.41	113.10
52	X4	1	G	N7-C8-N9	6.68	116.44	113.10
1	13	1786	C	C6-N1-C2	-6.68	117.63	120.30
15	14	2488	U	N3-C2-O2	-6.68	117.53	122.20
26	16	1	A	C5-N7-C8	6.68	107.24	103.90
26	1J	92	A	C2-N3-C4	6.68	113.94	110.60
15	1H	355	A	C5-N7-C8	-6.67	100.56	103.90
15	1H	2704	U	P-O3'-C3'	6.67	127.71	119.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	1G	1054	G	C4-N9-C1'	-6.67	117.83	126.50
15	14	2035	G	N1-C6-O6	6.67	123.90	119.90
15	1H	593	U	N3-C2-O2	6.67	126.87	122.20
15	1H	1290	A	O4'-C1'-N9	6.67	113.54	108.20
15	14	832	A	N3-C4-N9	-6.67	122.06	127.40
1	1G	2075	C	N1-C2-O2	6.67	122.90	118.90
15	14	2011	A	C2-N3-C4	-6.67	107.27	110.60
1	1G	907	G	P-O3'-C3'	6.67	127.70	119.70
1	13	1908	U	C6-N1-C2	-6.66	117.00	121.00
15	1H	2254	G	C8-N9-C4	6.66	109.06	106.40
15	1H	1524	C	C6-N1-C2	6.66	122.97	120.30
1	1G	1210	G	N3-C4-C5	6.66	131.93	128.60
15	1H	1815	C	C2-N1-C1'	6.66	126.13	118.80
15	1H	993	G	C8-N9-C4	6.66	109.06	106.40
15	1H	2031	C	N3-C4-C5	6.66	124.56	121.90
15	1H	2105	G	N1-C2-N3	6.66	127.89	123.90
4	11	242	ARG	NE-CZ-NH2	6.66	123.63	120.30
15	14	784	A	C8-N9-C4	6.66	108.46	105.80
15	14	1689	U	C5-C6-N1	-6.65	119.37	122.70
15	14	2515	U	N3-C4-O4	-6.65	114.74	119.40
15	1H	1699	G	N3-C4-C5	-6.65	125.27	128.60
15	14	2435	C	O5'-P-OP2	6.65	118.68	110.70
15	1H	53	G	O5'-P-OP1	-6.65	99.72	105.70
15	1H	823	A	C6-N1-C2	6.65	122.59	118.60
15	1H	1984	G	N1-C6-O6	-6.65	115.91	119.90
15	1H	2302	A	N1-C6-N6	6.65	122.59	118.60
15	1H	2622	G	N3-C4-N9	-6.65	122.01	126.00
15	14	1577	A	C5-N7-C8	-6.65	100.58	103.90
26	16	83	G	O4'-C1'-N9	6.65	113.52	108.20
15	14	809	G	OP1-P-O3'	6.65	119.82	105.20
15	14	1545	A	N1-C6-N6	6.65	122.59	118.60
15	1H	498	A	C5-C6-N6	-6.65	118.38	123.70
15	1H	211	A	C8-N9-C4	6.64	108.46	105.80
26	1J	17	A	O4'-C1'-N9	6.64	113.52	108.20
1	1G	849	A	C6-C5-N7	-6.64	127.65	132.30
52	V4	33	U	C2-N1-C1'	6.64	125.67	117.70
15	1H	1235	G	C8-N9-C4	6.64	109.06	106.40
15	1H	184	G	C8-N9-C4	6.64	109.06	106.40
15	14	73	A	C5-N7-C8	-6.64	100.58	103.90
15	1H	115	G	OP1-P-OP2	-6.64	109.64	119.60
15	1H	2346	G	C5-C6-O6	-6.64	124.62	128.60
15	14	1398	A	O4'-C1'-N9	6.64	113.51	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
15	1H	1363	C	N1-C2-O2	6.63	122.88	118.90
15	14	139	A	N1-C6-N6	6.63	122.58	118.60
15	14	2557	A	P-O3'-C3'	6.63	127.66	119.70
1	1G	2125	A	N1-C2-N3	6.63	132.62	129.30
15	1H	1191	A	N1-C6-N6	6.63	122.58	118.60
15	14	2703	U	N1-C2-O2	6.63	127.44	122.80
52	X1	76	A	C8-N9-C4	6.63	108.45	105.80
15	1H	17	G	C4-C5-N7	6.63	113.45	110.80
52	V1	3	C	C6-N1-C2	-6.63	117.65	120.30
15	1H	600	A	N1-C2-N3	6.62	132.61	129.30
15	1H	876	U	C2-N1-C1'	-6.62	109.75	117.70
15	14	1001	G	N1-C6-O6	-6.62	115.93	119.90
32	39	80	ALA	C-N-CD	6.62	142.30	128.40
1	13	1530	A	N1-C2-N3	-6.62	125.99	129.30
15	1H	780	C	C5-C6-N1	6.62	124.31	121.00
15	14	1413	G	C8-N9-C4	6.62	109.05	106.40
1	1G	1469	C	N1-C2-O2	6.61	122.87	118.90
15	1H	1797	G	C8-N9-C4	6.61	109.04	106.40
15	1H	992	A	N9-C1'-C2'	6.61	122.59	114.00
1	13	2142	A	C5-C6-N6	6.61	128.99	123.70
1	1G	1973	A	P-O3'-C3'	6.61	127.63	119.70
15	14	2079	A	N7-C8-N9	6.61	117.10	113.80
1	13	2138	C	N3-C4-C5	-6.60	119.26	121.90
15	14	980	A	N7-C8-N9	6.60	117.10	113.80
15	14	1838	C	C5-C4-N4	-6.60	115.58	120.20
15	1H	1675	G	C8-N9-C4	-6.60	103.76	106.40
15	1H	1913	G	C8-N9-C1'	-6.59	118.43	127.00
15	14	2515	U	C2-N3-C4	-6.59	123.04	127.00
1	13	1515	A	C2-N3-C4	-6.59	107.30	110.60
15	1H	216	G	O4'-C1'-N9	6.59	113.47	108.20
15	14	73	A	C4-C5-N7	6.59	114.00	110.70
1	1G	1928	U	C6-N1-C1'	-6.59	111.97	121.20
1	13	1319	G	C8-N9-C4	-6.59	103.77	106.40
1	13	1440	C	C2-N3-C4	-6.59	116.61	119.90
15	14	481	C	C2-N1-C1'	-6.58	111.56	118.80
15	1H	778	G	C8-N9-C4	-6.58	103.77	106.40
15	14	2792	A	P-O3'-C3'	6.58	127.60	119.70
15	14	1074	U	C2-N1-C1'	6.58	125.60	117.70
1	13	1456	U	C2-N1-C1'	6.58	125.59	117.70
15	1H	1954	G	O5'-P-OP2	-6.58	99.78	105.70
15	14	2779	G	N3-C4-C5	-6.58	125.31	128.60
1	13	2135	U	O5'-P-OP2	-6.58	99.78	105.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
15	1H	2346	G	C2-N3-C4	-6.58	108.61	111.90
15	1H	531	U	C2-N1-C1'	6.57	125.59	117.70
15	1H	1795	C	O5'-P-OP2	-6.57	99.78	105.70
15	1H	1335	A	O5'-P-OP2	-6.57	99.78	105.70
15	1H	1592	A	C5-C6-N1	-6.57	114.41	117.70
15	1H	2031	C	C6-N1-C2	6.57	122.93	120.30
15	14	648	A	C4-C5-N7	6.57	113.99	110.70
15	14	1623	G	O5'-P-OP2	-6.57	99.79	105.70
15	14	202	G	O5'-P-OP2	-6.57	99.79	105.70
1	13	660	U	O5'-P-OP1	-6.56	99.79	105.70
15	1H	1651	U	C5-C4-O4	6.56	129.84	125.90
15	1H	878	A	O5'-P-OP2	-6.56	99.80	105.70
1	13	2127	G	P-O3'-C3'	6.56	127.57	119.70
15	1H	56	C	C6-N1-C2	6.56	122.92	120.30
15	14	1674	C	N3-C2-O2	-6.56	117.31	121.90
1	1G	1319	G	C2-N3-C4	-6.56	108.62	111.90
15	14	30	G	C8-N9-C4	-6.56	103.78	106.40
15	1H	1185	G	C5-C6-N1	-6.55	108.22	111.50
1	1G	2075	C	C5-C6-N1	6.55	124.28	121.00
15	1H	98	U	N3-C2-O2	-6.55	117.61	122.20
15	14	823	A	C4-C5-C6	-6.55	113.72	117.00
15	1H	2461	G	C5-C6-O6	-6.55	124.67	128.60
15	1H	1577	A	C8-N9-C4	-6.55	103.18	105.80
15	1H	1728	G	C2-N3-C4	-6.54	108.63	111.90
52	V1	76	A	C8-N9-C4	-6.54	103.18	105.80
15	1H	1252	A	C4-N9-C1'	6.54	138.08	126.30
15	1H	1694	C	O5'-P-OP1	-6.54	99.81	105.70
15	14	2093	U	C5-C4-O4	6.54	129.82	125.90
52	X1	37	A	C2-N3-C4	6.54	113.87	110.60
15	1H	557	G	N7-C8-N9	6.53	116.37	113.10
1	1G	1887	C	C5-C6-N1	6.53	124.27	121.00
15	1H	1663	A	N3-C4-C5	6.53	131.37	126.80
1	13	1076	C	C6-N1-C2	-6.53	117.69	120.30
15	1H	1003	G	N1-C6-O6	6.53	123.82	119.90
15	1H	1408	A	C2-N3-C4	-6.53	107.34	110.60
15	1H	1428	A	C4-C5-N7	6.53	113.96	110.70
43	A5	23	LEU	CA-CB-CG	6.53	130.31	115.30
1	13	2140	G	O5'-P-OP2	-6.52	99.83	105.70
15	1H	850	G	N9-C4-C5	6.52	108.01	105.40
15	1H	2224	A	N1-C6-N6	-6.52	114.69	118.60
15	1H	2842	C	C6-N1-C2	6.52	122.91	120.30
15	14	493	G	O5'-P-OP2	6.52	118.53	110.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
52	V4	76	A	C2-N3-C4	-6.52	107.34	110.60
15	1H	701	A	N1-C6-N6	6.52	122.51	118.60
15	1H	802	C	OP1-P-OP2	6.52	129.38	119.60
1	13	1768	C	C6-N1-C2	-6.52	117.69	120.30
15	1H	2004	C	C6-N1-C2	-6.52	117.69	120.30
15	14	1838	C	C6-N1-C2	-6.52	117.69	120.30
15	14	2727	U	N3-C4-O4	-6.52	114.84	119.40
52	W4	76	A	C8-N9-C4	-6.51	103.19	105.80
15	14	1378	U	N1-C2-N3	6.51	118.81	114.90
26	16	7	C	C6-N1-C2	6.51	122.91	120.30
15	1H	330	U	C6-N1-C2	-6.51	117.09	121.00
26	16	25	G	O5'-P-OP1	-6.51	99.84	105.70
15	1H	979	G	C8-N9-C4	-6.51	103.80	106.40
15	1H	1993	G	C5-C6-O6	-6.51	124.69	128.60
52	W4	76	A	N1-C6-N6	6.51	122.50	118.60
15	14	1316	U	OP2-P-O3'	6.51	119.52	105.20
15	1H	704	A	C8-N9-C4	-6.50	103.20	105.80
15	14	2794	A	C8-N9-C4	6.50	108.40	105.80
15	14	2316	C	C6-N1-C2	-6.50	117.70	120.30
15	1H	1656	C	C5-C4-N4	-6.49	115.65	120.20
15	1H	1860	G	C8-N9-C4	6.49	109.00	106.40
12	M5	50	LEU	N-CA-C	6.49	128.53	111.00
15	14	1729	U	N3-C2-O2	-6.49	117.66	122.20
26	16	46	G	C8-N9-C1'	6.49	135.44	127.00
52	X1	66	U	C2-N1-C1'	6.49	125.49	117.70
15	1H	557	G	N3-C4-C5	6.49	131.84	128.60
15	14	2519	U	OP1-P-OP2	-6.49	109.87	119.60
52	W1	32	U	N3-C2-O2	-6.49	117.66	122.20
15	1H	1030	C	C6-N1-C2	-6.48	117.71	120.30
15	1H	255	A	C4-C5-N7	6.48	113.94	110.70
15	1H	992	A	C5-C6-N6	-6.48	118.51	123.70
15	14	1452	C	O5'-P-OP1	-6.48	99.86	105.70
1	13	1981	C	C6-N1-C2	-6.48	117.71	120.30
1	1G	849	A	C4-C5-C6	6.48	120.24	117.00
15	1H	2231	G	N3-C4-C5	-6.48	125.36	128.60
15	14	659	A	O5'-P-OP2	6.48	118.47	110.70
1	13	2125	A	N7-C8-N9	6.48	117.04	113.80
15	1H	1033	C	C6-N1-C2	6.48	122.89	120.30
15	14	2328	C	C6-N1-C2	-6.48	117.71	120.30
15	1H	483	C	N3-C4-C5	6.47	124.49	121.90
15	14	100	G	O4'-C1'-N9	6.47	113.38	108.20
15	1H	1202	C	N1-C2-O2	-6.47	115.02	118.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
15	1H	1250	C	N1-C2-O2	-6.47	115.02	118.90
15	1H	2411	G	C2-N3-C4	-6.47	108.67	111.90
15	14	1748	A	O4'-C1'-N9	6.47	113.38	108.20
52	X1	36	A	C8-N9-C4	6.47	108.39	105.80
15	1H	1795	C	O5'-P-OP1	6.47	118.46	110.70
15	1H	1833	G	N1-C6-O6	-6.47	116.02	119.90
15	1H	2731	C	C2-N3-C4	-6.47	116.67	119.90
15	14	1059	G	C8-N9-C1'	6.47	135.41	127.00
15	14	1235	G	C8-N9-C4	-6.47	103.81	106.40
15	1H	1656	C	C6-N1-C1'	-6.47	113.04	120.80
15	14	303	A	P-O3'-C3'	6.47	127.46	119.70
1	1G	1201	A	N1-C6-N6	-6.46	114.72	118.60
15	14	1665	A	C4-C5-C6	6.46	120.23	117.00
15	14	1796	A	O4'-C1'-N9	6.46	113.37	108.20
15	14	2627	C	C2-N1-C1'	6.46	125.91	118.80
15	14	2639	G	N1-C6-O6	6.46	123.78	119.90
1	13	1857	C	C5-C6-N1	6.46	124.23	121.00
15	1H	380	G	N1-C6-O6	6.46	123.78	119.90
15	1H	1824	C	N3-C4-C5	6.46	124.48	121.90
15	1H	76	C	C5-C4-N4	-6.46	115.68	120.20
15	1H	2084	A	O5'-P-OP2	-6.46	99.89	105.70
15	1H	2600	U	N3-C4-O4	-6.46	114.88	119.40
15	1H	520	G	O5'-P-OP2	-6.45	99.89	105.70
15	1H	1869	G	N3-C4-N9	6.45	129.87	126.00
15	1H	1945	C	C5-C6-N1	6.45	124.23	121.00
15	14	70	A	N1-C6-N6	6.45	122.47	118.60
15	14	1725	C	OP2-P-O3'	6.45	119.40	105.20
15	1H	2742	U	C5-C6-N1	-6.45	119.47	122.70
12	Q8	31	HIS	N-CA-C	6.45	128.41	111.00
15	1H	2578	U	N3-C2-O2	-6.45	117.69	122.20
15	14	1955	G	C8-N9-C1'	6.45	135.38	127.00
15	1H	1728	G	C8-N9-C4	-6.45	103.82	106.40
1	1G	1767	G	N3-C4-C5	6.45	131.82	128.60
15	1H	171	A	O5'-P-OP1	-6.45	99.90	105.70
15	1H	288	G	C4-N9-C1'	6.45	134.88	126.50
15	1H	849	A	OP1-P-O3'	6.44	119.38	105.20
15	1H	1238	G	C5-C6-O6	-6.44	124.73	128.60
15	14	2447	A	N1-C6-N6	6.44	122.46	118.60
52	W4	37	A	N1-C2-N3	-6.44	126.08	129.30
15	1H	2096	A	C5-C6-N6	-6.44	118.55	123.70
1	13	1147	C	N1-C2-O2	6.43	122.76	118.90
15	1H	2588	C	C5-C4-N4	-6.43	115.70	120.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
15	14	1647	C	C6-N1-C2	-6.43	117.73	120.30
15	1H	1392	G	C8-N9-C4	-6.43	103.83	106.40
15	1H	1252	A	C5-C6-N1	-6.43	114.48	117.70
15	1H	2002	A	C8-N9-C4	6.43	108.37	105.80
15	14	255	A	C2-N3-C4	-6.43	107.39	110.60
1	13	1260	G	N7-C8-N9	6.43	116.31	113.10
1	1G	961	C	C6-N1-C2	6.43	122.87	120.30
15	1H	177	G	N3-C2-N2	6.43	124.40	119.90
1	13	2121	U	C2-N1-C1'	6.42	125.41	117.70
15	1H	1925	A	N7-C8-N9	6.42	117.01	113.80
15	14	2569	U	O5'-P-OP2	6.42	118.41	110.70
15	14	124	A	OP2-P-O3'	6.42	119.33	105.20
15	1H	1324	A	C5-C6-N6	-6.42	118.56	123.70
15	14	195	G	C2-N3-C4	6.42	115.11	111.90
15	14	2346	G	C8-N9-C4	6.42	108.97	106.40
15	1H	2325	A	C5-C6-N1	6.42	120.91	117.70
1	13	1803	A	C8-N9-C4	-6.42	103.23	105.80
1	13	2154	A	N7-C8-N9	6.42	117.01	113.80
15	14	509	G	O5'-P-OP2	-6.42	99.92	105.70
1	1G	1027	C	C2-N1-C1'	-6.42	111.74	118.80
15	1H	618	G	N1-C2-N3	6.42	127.75	123.90
1	13	1519	C	C6-N1-C2	6.42	122.87	120.30
15	1H	2261	G	N7-C8-N9	-6.42	109.89	113.10
26	1J	83	G	C5-N7-C8	-6.42	101.09	104.30
1	13	1867	U	C5-C6-N1	6.41	125.91	122.70
15	1H	546	U	N3-C2-O2	6.41	126.69	122.20
1	13	1252	C	C6-N1-C2	-6.41	117.73	120.30
1	1G	1817	G	C5-C6-O6	6.41	132.45	128.60
15	1H	46	C	C2-N3-C4	-6.41	116.69	119.90
15	1H	894	G	P-O3'-C3'	6.41	127.39	119.70
15	1H	1473	G	O5'-P-OP2	-6.41	99.93	105.70
15	14	26	G	N3-C4-C5	-6.41	125.40	128.60
15	1H	867	G	C5-C6-N1	-6.41	108.30	111.50
15	1H	192	U	C5-C6-N1	-6.40	119.50	122.70
15	14	823	A	C4-C5-N7	6.40	113.90	110.70
15	14	2042	U	O5'-P-OP1	-6.40	99.94	105.70
1	13	1446	C	C6-N1-C2	6.40	122.86	120.30
1	13	747	G	C4-N9-C1'	6.40	134.82	126.50
15	14	1519	A	C8-N9-C4	-6.40	103.24	105.80
15	1H	46	C	N3-C4-C5	6.40	124.46	121.90
15	14	905	C	N3-C4-C5	-6.40	119.34	121.90
15	1H	832	A	C8-N9-C4	-6.39	103.24	105.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
15	1H	2289	A	C2-N3-C4	-6.39	107.40	110.60
15	1H	2461	G	N9-C4-C5	-6.39	102.84	105.40
15	1H	2612	G	C4-C5-N7	6.39	113.36	110.80
15	14	499	A	C2-N3-C4	-6.39	107.40	110.60
15	14	2302	A	N3-C4-C5	6.39	131.28	126.80
26	16	118	G	C5-C6-O6	-6.39	124.77	128.60
26	1J	58	G	O5'-P-OP2	-6.39	99.95	105.70
15	1H	842	A	O5'-P-OP2	-6.39	99.95	105.70
15	1H	2444	G	OP2-P-O3'	6.39	119.26	105.20
15	14	1996	A	C5-C6-N6	-6.39	118.59	123.70
52	V1	72	C	N1-C2-N3	-6.39	114.73	119.20
1	13	1319	G	C4-C5-N7	6.38	113.35	110.80
15	1H	1748	A	O4'-C1'-N9	6.38	113.31	108.20
15	14	300	G	N3-C4-N9	6.38	129.83	126.00
15	1H	2046	C	N1-C2-O2	6.38	122.73	118.90
15	1H	990	U	N1-C2-O2	-6.37	118.34	122.80
15	14	2557	A	N1-C2-N3	6.37	132.49	129.30
15	14	2302	A	N1-C2-N3	6.37	132.49	129.30
1	13	1367	C	C6-N1-C2	-6.37	117.75	120.30
1	1G	1444	A	C8-N9-C4	6.37	108.35	105.80
15	1H	354	G	O5'-P-OP2	-6.37	99.97	105.70
15	1H	594	U	C2-N3-C4	-6.37	123.18	127.00
15	1H	1608	A	P-O3'-C3'	6.37	127.34	119.70
1	13	2121	U	N3-C2-O2	-6.36	117.75	122.20
15	14	303	A	OP1-P-O3'	6.36	119.19	105.20
15	1H	498	A	N1-C6-N6	6.36	122.42	118.60
15	1H	535	G	N3-C4-N9	6.36	129.81	126.00
15	1H	1618	G	C5-N7-C8	-6.36	101.12	104.30
52	W4	37	A	C2-N3-C4	6.36	113.78	110.60
15	1H	2343	A	C8-N9-C4	6.35	108.34	105.80
15	1H	1791	U	OP1-P-O3'	6.35	119.17	105.20
15	1H	1973	G	N1-C6-O6	-6.35	116.09	119.90
15	1H	2063	G	N3-C4-C5	-6.35	125.42	128.60
15	1H	2241	C	C6-N1-C2	6.35	122.84	120.30
15	1H	2794	A	O5'-P-OP2	-6.35	99.98	105.70
1	1G	1928	U	N1-C2-O2	6.35	127.24	122.80
15	1H	201	A	OP2-P-O3'	6.35	119.16	105.20
15	1H	866	C	C6-N1-C2	-6.34	117.76	120.30
15	1H	1339	C	C6-N1-C2	-6.34	117.76	120.30
1	13	1519	C	C5-C6-N1	-6.34	117.83	121.00
15	1H	723	G	C8-N9-C4	6.34	108.94	106.40
1	13	1786	C	N3-C2-O2	-6.34	117.46	121.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
15	14	628	A	N7-C8-N9	6.34	116.97	113.80
15	1H	1477	C	C5-C6-N1	-6.34	117.83	121.00
15	14	2795	U	N1-C2-N3	6.34	118.70	114.90
15	1H	847	G	C8-N9-C4	6.33	108.93	106.40
15	14	2246	C	N3-C4-N4	-6.33	113.57	118.00
15	1H	124	A	O5'-P-OP2	-6.33	100.00	105.70
1	13	1421	A	C5-C6-N6	-6.33	118.64	123.70
15	1H	1323	A	O5'-P-OP2	-6.33	100.00	105.70
15	1H	2601	C	N3-C2-O2	6.33	126.33	121.90
1	13	1447	G	C4-C5-N7	-6.33	108.27	110.80
15	1H	549	G	C5-C6-O6	-6.33	124.80	128.60
15	1H	1545	A	C4-C5-N7	6.33	113.86	110.70
15	1H	1647	C	N1-C2-O2	-6.33	115.10	118.90
15	1H	1798	G	C5-C6-O6	6.32	132.39	128.60
15	14	332	G	N1-C6-O6	6.32	123.69	119.90
15	1H	786	C	C5-C6-N1	-6.32	117.84	121.00
15	1H	1877	C	N3-C2-O2	6.32	126.32	121.90
15	1H	2078	G	N3-C2-N2	-6.32	115.47	119.90
15	1H	600	A	O5'-P-OP2	6.32	118.28	110.70
15	14	724	A	C4-C5-N7	6.32	113.86	110.70
15	1H	2492	C	C6-N1-C2	-6.32	117.77	120.30
15	14	1437	G	O5'-P-OP2	-6.32	100.02	105.70
52	V4	76	A	C6-C5-N7	-6.32	127.88	132.30
1	13	2002	A	O4'-C1'-N9	6.31	113.25	108.20
15	14	992	A	N9-C1'-C2'	6.31	122.21	114.00
18	69	131	LYS	C-N-CD	-6.31	106.71	120.60
15	1H	1721	U	C5-C6-N1	6.31	125.86	122.70
15	14	234	A	C8-N9-C4	6.31	108.33	105.80
15	1H	911	G	O5'-P-OP2	-6.31	100.02	105.70
15	14	139	A	O4'-C1'-N9	6.31	113.25	108.20
15	14	555	A	C5-N7-C8	-6.31	100.75	103.90
15	1H	2008	C	C6-N1-C2	6.31	122.82	120.30
15	1H	25	U	N1-C2-O2	-6.30	118.39	122.80
15	14	2703	U	N1-C2-N3	6.30	118.68	114.90
14	3E	12	CYS	CA-CB-SG	6.30	125.35	114.00
15	1H	97	G	OP1-P-OP2	6.30	129.05	119.60
15	1H	1980	U	O5'-P-OP2	-6.30	100.03	105.70
1	13	1082	C	C6-N1-C2	-6.30	117.78	120.30
1	1G	1887	C	C6-N1-C2	-6.30	117.78	120.30
15	14	1577	A	N7-C8-N9	6.30	116.95	113.80
15	1H	725	A	C6-C5-N7	-6.30	127.89	132.30
15	1H	826	A	N9-C4-C5	6.29	108.32	105.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
15	1H	415	U	N3-C4-O4	6.29	123.81	119.40
15	14	1039	C	C6-N1-C2	-6.29	117.78	120.30
15	14	1881	A	O4'-C1'-N9	6.29	113.23	108.20
15	1H	380	G	C5-C6-O6	-6.29	124.83	128.60
1	13	970	A	C8-N9-C4	-6.29	103.28	105.80
15	14	1381	G	C8-N9-C4	-6.29	103.88	106.40
15	1H	1841	G	N9-C1'-C2'	-6.29	105.08	112.00
15	14	627	G	C8-N9-C4	6.29	108.92	106.40
1	13	1207	C	N3-C4-C5	-6.29	119.39	121.90
15	1H	1819	A	C4-C5-C6	6.29	120.14	117.00
15	14	724	A	N1-C6-N6	6.29	122.37	118.60
15	1H	600	A	C4-C5-C6	6.28	120.14	117.00
15	1H	144	C	C5-C6-N1	-6.28	117.86	121.00
15	1H	704	A	N7-C8-N9	6.28	116.94	113.80
15	1H	1290	A	N1-C2-N3	6.28	132.44	129.30
15	1H	1428	A	C5-N7-C8	-6.28	100.76	103.90
15	14	419	G	C4-N9-C1'	6.28	134.66	126.50
15	14	992	A	C4-C5-C6	6.28	120.14	117.00
15	14	1325	A	N9-C4-C5	-6.28	103.29	105.80
26	1J	90	C	C6-N1-C2	6.28	122.81	120.30
4	19	111	LEU	CA-CB-CG	6.28	129.74	115.30
15	1H	2034	G	O5'-P-OP2	-6.28	100.05	105.70
1	1G	1089	C	C6-N1-C2	-6.28	117.79	120.30
15	1H	1486	C	C6-N1-C2	-6.28	117.79	120.30
15	14	632	U	N1-C2-O2	-6.28	118.41	122.80
15	14	1696	C	OP1-P-O3'	6.28	119.01	105.20
1	1G	1054	G	N1-C6-O6	-6.27	116.14	119.90
15	1H	2536	C	C5-C6-N1	-6.27	117.86	121.00
15	14	2441	A	N1-C6-N6	6.27	122.36	118.60
15	14	1831	C	N3-C4-C5	-6.27	119.39	121.90
15	1H	1863	A	O5'-P-OP1	-6.27	100.06	105.70
15	14	2795	U	N3-C4-O4	-6.27	115.01	119.40
15	14	1703	G	N3-C4-N9	6.27	129.76	126.00
1	13	1913	A	C8-N9-C4	-6.26	103.29	105.80
15	1H	1443	U	C5-C6-N1	6.26	125.83	122.70
15	1H	1728	G	C5-C6-O6	-6.26	124.84	128.60
15	1H	2646	G	N1-C6-O6	6.26	123.66	119.90
15	1H	201	A	O5'-P-OP1	6.26	118.22	110.70
15	1H	837	A	N9-C4-C5	-6.26	103.30	105.80
15	1H	2261	G	C5-N7-C8	6.26	107.43	104.30
15	14	1240	G	C8-N9-C4	6.26	108.90	106.40
15	1H	1540	G	C5-C6-N1	-6.26	108.37	111.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
15	1H	2482	C	C6-N1-C2	6.26	122.80	120.30
52	V1	60	U	C6-N1-C2	-6.26	117.25	121.00
1	1G	2121	U	P-O3'-C3'	6.25	127.20	119.70
15	14	1840	C	N3-C4-C5	6.25	124.40	121.90
51	Y4	45	U	O5'-P-OP2	-6.25	100.07	105.70
15	14	1847	G	C8-N9-C4	6.25	108.90	106.40
15	14	2448	A	N7-C8-N9	6.25	116.93	113.80
15	1H	572	C	N1-C2-O2	6.25	122.65	118.90
15	1H	826	A	C6-N1-C2	-6.25	114.85	118.60
15	1H	2063	G	N3-C4-N9	6.25	129.75	126.00
15	14	1070	G	C8-N9-C4	-6.25	103.90	106.40
15	1H	557	G	C4-C5-N7	6.25	113.30	110.80
15	1H	590	C	N3-C4-C5	-6.25	119.40	121.90
15	1H	2655	G	N1-C6-O6	6.25	123.65	119.90
15	1H	2757	A	C8-N9-C4	6.25	108.30	105.80
15	1H	2231	G	P-O3'-C3'	6.25	127.19	119.70
15	1H	611	A	C8-N9-C4	6.24	108.30	105.80
15	1H	1711	G	C8-N9-C4	6.24	108.90	106.40
15	14	832	A	C8-N9-C4	-6.24	103.30	105.80
1	1G	1817	G	C4-C5-N7	-6.24	108.30	110.80
15	1H	1097	C	N1-C2-O2	6.24	122.64	118.90
15	14	1191	A	O4'-C1'-N9	-6.24	103.21	108.20
1	13	1803	A	N7-C8-N9	6.24	116.92	113.80
15	1H	105	C	N3-C2-O2	6.24	126.27	121.90
15	1H	991	G	C8-N9-C1'	-6.24	118.89	127.00
15	1H	1869	G	N3-C4-C5	-6.23	125.48	128.60
15	1H	743	U	C5-C6-N1	-6.23	119.58	122.70
15	14	423	U	N3-C2-O2	-6.23	117.84	122.20
15	1H	909	U	C5-C6-N1	6.23	125.81	122.70
1	13	1421	A	C3'-C2'-C1'	-6.23	96.52	101.50
15	1H	1084	G	C8-N9-C4	6.23	108.89	106.40
15	1H	1327	A	C2-N3-C4	-6.23	107.49	110.60
15	1H	1953	A	O5'-P-OP1	-6.23	100.09	105.70
51	Y4	36	G	C4-N9-C1'	6.23	134.60	126.50
15	1H	488	A	C2-N3-C4	-6.23	107.49	110.60
15	14	313	C	N1-C2-O2	6.23	122.64	118.90
15	14	1660	C	N1-C2-O2	-6.23	115.16	118.90
4	19	235	GLY	N-CA-C	6.22	128.66	113.10
15	1H	594	U	N1-C2-N3	6.22	118.63	114.90
15	14	1672	G	OP2-P-O3'	6.22	118.89	105.20
15	14	2757	A	C8-N9-C4	6.22	108.29	105.80
15	14	580	U	C2-N1-C1'	-6.22	110.24	117.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
15	1H	39	C	O5'-P-OP2	-6.21	100.11	105.70
15	1H	2704	U	C5-C6-N1	-6.21	119.59	122.70
51	Y4	36	G	N7-C8-N9	6.21	116.21	113.10
15	14	630	C	C6-N1-C2	6.21	122.78	120.30
15	1H	2079	A	C5-C6-N6	-6.21	118.73	123.70
52	V4	76	A	O4'-C1'-N9	6.21	113.17	108.20
15	14	179	G	C5-C6-O6	-6.21	124.88	128.60
15	14	581	G	N3-C4-N9	6.21	129.72	126.00
15	14	727	C	C6-N1-C2	6.21	122.78	120.30
15	14	825	G	N3-C2-N2	-6.21	115.55	119.90
15	1H	1727	A	C2-N3-C4	-6.21	107.50	110.60
15	1H	2048	G	O5'-P-OP1	-6.21	100.11	105.70
52	V1	76	A	N1-C6-N6	6.20	122.32	118.60
15	1H	894	G	C2-N3-C4	-6.20	108.80	111.90
15	14	195	G	C5-C6-N1	6.20	114.60	111.50
15	1H	2462	G	C5-C6-O6	-6.20	124.88	128.60
1	1G	1908	U	C5-C6-N1	6.20	125.80	122.70
15	14	587	U	N1-C2-N3	6.20	118.62	114.90
15	14	2613	A	O5'-P-OP2	6.20	118.14	110.70
15	14	2696	C	N3-C2-O2	-6.20	117.56	121.90
15	14	731	G	C8-N9-C1'	-6.19	118.95	127.00
15	1H	2104	U	N3-C2-O2	-6.19	117.87	122.20
26	16	10	U	O5'-P-OP2	-6.19	100.13	105.70
15	1H	187	A	OP2-P-O3'	6.19	118.82	105.20
15	1H	48	A	C8-N9-C4	6.19	108.27	105.80
15	14	15	G	O5'-P-OP1	-6.19	100.13	105.70
26	1J	91	G	N1-C6-O6	6.19	123.61	119.90
1	13	1424	C	O5'-P-OP1	-6.18	100.13	105.70
15	1H	2007	C	C2-N3-C4	6.18	122.99	119.90
23	29	78	LEU	CA-CB-CG	6.18	129.52	115.30
15	1H	2619	U	N3-C4-O4	6.18	123.73	119.40
15	14	2588	C	N1-C2-O2	6.18	122.61	118.90
1	1G	849	A	C5-N7-C8	-6.18	100.81	103.90
15	1H	976	G	N1-C6-O6	6.18	123.61	119.90
15	14	603	A	N1-C2-N3	-6.18	126.21	129.30
15	14	604	G	N1-C6-O6	6.18	123.61	119.90
15	14	2795	U	N1-C2-O2	6.18	127.12	122.80
15	14	2622	G	N3-C4-N9	6.18	129.71	126.00
15	1H	747	C	C5-C6-N1	-6.18	117.91	121.00
15	14	2030	A	N1-C6-N6	6.18	122.31	118.60
15	1H	255	A	O4'-C1'-N9	6.17	113.14	108.20
15	14	1827	C	C6-N1-C2	-6.17	117.83	120.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
15	1H	2450	A	OP1-P-OP2	6.17	128.86	119.60
15	14	1325	A	C2-N3-C4	-6.17	107.51	110.60
15	14	1986	C	C2-N1-C1'	-6.17	112.01	118.80
1	13	700	C	C6-N1-C2	6.17	122.77	120.30
15	1H	823	A	C8-N9-C1'	6.17	138.81	127.70
15	1H	2443	G	C5-C6-O6	6.17	132.30	128.60
15	14	1940	U	N3-C2-O2	-6.17	117.88	122.20
1	13	1854	A	C5-N7-C8	-6.17	100.81	103.90
15	1H	894	G	N3-C4-C5	6.17	131.69	128.60
15	1H	1692	G	O5'-P-OP1	-6.17	100.15	105.70
15	1H	2466	A	N9-C4-C5	6.17	108.27	105.80
15	1H	17	G	C5-C6-O6	-6.17	124.90	128.60
15	1H	1396	G	OP1-P-O3'	6.17	118.76	105.20
1	13	1437	C	C4-C5-C6	6.16	120.48	117.40
15	1H	509	G	OP2-P-O3'	6.16	118.76	105.20
15	1H	2322	G	C6-C5-N7	-6.16	126.70	130.40
15	14	991	G	O5'-P-OP2	-6.16	100.16	105.70
15	1H	1014	C	N3-C2-O2	-6.16	117.59	121.90
15	1H	1251	G	N1-C6-O6	-6.16	116.21	119.90
15	1H	1389	U	O5'-P-OP1	-6.16	100.16	105.70
15	14	496	G	N3-C2-N2	-6.16	115.59	119.90
15	14	1778	C	C5-C6-N1	6.16	124.08	121.00
15	1H	743	U	N3-C2-O2	-6.15	117.89	122.20
15	1H	2536	C	C6-N1-C2	6.15	122.76	120.30
15	14	2795	U	C2-N3-C4	-6.15	123.31	127.00
26	16	83	G	C5-C6-O6	-6.15	124.91	128.60
15	14	137	G	N1-C6-O6	-6.15	116.21	119.90
15	14	2792	A	C8-N9-C4	-6.15	103.34	105.80
15	14	178	G	C6-C5-N7	-6.15	126.71	130.40
15	14	2470	G	C5-C6-O6	-6.15	124.91	128.60
1	13	1651	C	OP1-P-O3'	6.14	118.72	105.20
15	1H	115	G	O5'-P-OP1	6.14	118.07	110.70
15	1H	419	G	C2-N3-C4	-6.14	108.83	111.90
15	14	717	G	C2-N3-C4	-6.14	108.83	111.90
1	1G	2155	U	C6-N1-C2	-6.14	117.32	121.00
15	14	905	C	C2-N1-C1'	6.14	125.55	118.80
15	1H	1841	G	N1-C6-O6	6.14	123.58	119.90
15	1H	2714	C	C6-N1-C2	6.14	122.75	120.30
15	14	1950	C	OP2-P-O3'	6.13	118.70	105.20
15	14	2727	U	C2-N3-C4	-6.13	123.32	127.00
1	1G	1506	C	C6-N1-C2	-6.13	117.85	120.30
1	1G	2095	U	O5'-P-OP2	-6.13	100.18	105.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
15	1H	1656	C	N3-C4-N4	6.13	122.29	118.00
15	1H	2367	A	O5'-P-OP1	-6.13	100.18	105.70
15	14	2104	U	O5'-P-OP1	-6.13	100.19	105.70
15	14	1913	G	N1-C6-O6	-6.13	116.22	119.90
11	G8	79	CYS	N-CA-C	6.12	127.54	111.00
1	13	971	C	N1-C2-O2	6.12	122.57	118.90
15	1H	1748	A	C4-N9-C1'	6.12	137.32	126.30
15	1H	1826	G	C6-C5-N7	6.12	134.07	130.40
15	14	1422	A	C8-N9-C4	6.12	108.25	105.80
15	1H	708	C	C6-N1-C2	6.12	122.75	120.30
15	14	639	U	C5-C4-O4	6.12	129.57	125.90
15	1H	1545	A	O4'-C1'-N9	6.12	113.10	108.20
15	1H	193	C	N3-C2-O2	6.12	126.18	121.90
15	1H	2045	A	C5-C6-N6	-6.12	118.81	123.70
15	14	2628	U	N1-C2-O2	-6.12	118.52	122.80
1	13	2072	A	O4'-C1'-N9	6.12	113.09	108.20
15	14	816	U	N3-C4-O4	-6.12	115.12	119.40
15	1H	498	A	N9-C4-C5	-6.11	103.36	105.80
15	1H	874	C	N1-C2-O2	-6.11	115.23	118.90
15	1H	2041	U	C5-C6-N1	-6.11	119.64	122.70
15	14	2292	G	N1-C6-O6	-6.11	116.23	119.90
15	14	1445	U	N3-C2-O2	-6.11	117.92	122.20
15	14	1070	G	N9-C4-C5	6.11	107.84	105.40
15	1H	255	A	N1-C6-N6	6.11	122.27	118.60
15	1H	725	A	C6-N1-C2	6.11	122.26	118.60
1	1G	891	A	P-O3'-C3'	6.10	127.02	119.70
15	1H	46	C	N1-C2-O2	-6.10	115.24	118.90
15	1H	202	G	C8-N9-C4	6.10	108.84	106.40
15	1H	1447	C	OP2-P-O3'	6.10	118.62	105.20
15	1H	1701	G	C5-C6-O6	-6.10	124.94	128.60
15	14	2441	A	N9-C4-C5	-6.10	103.36	105.80
15	14	1981	U	C5-C4-O4	6.10	129.56	125.90
15	1H	1913	G	C4-N9-C1'	6.10	134.43	126.50
15	14	2703	U	C5-C6-N1	-6.10	119.65	122.70
15	14	833	A	N1-C6-N6	-6.09	114.94	118.60
1	1G	892	G	O4'-C1'-N9	-6.09	103.33	108.20
15	14	249	G	C2-N3-C4	-6.09	108.85	111.90
15	14	977	U	N3-C2-O2	-6.09	117.94	122.20
15	14	2322	G	C4-N9-C1'	6.09	134.42	126.50
15	1H	103	C	C6-N1-C2	-6.09	117.86	120.30
15	14	2333	G	N1-C6-O6	6.09	123.55	119.90
15	1H	1849	A	C6-N1-C2	-6.09	114.95	118.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	1G	907	G	O4'-C1'-N9	-6.08	103.33	108.20
15	1H	877	U	N1-C2-N3	6.08	118.55	114.90
15	14	1525	G	C6-C5-N7	-6.08	126.75	130.40
1	1G	754	G	P-O3'-C3'	6.08	126.99	119.70
15	1H	191	C	O5'-P-OP2	-6.08	100.23	105.70
15	1H	2638	G	N1-C6-O6	-6.08	116.25	119.90
15	14	2454	A	N1-C6-N6	6.08	122.25	118.60
1	1G	1905	U	C5-C6-N1	6.08	125.74	122.70
15	1H	199	C	C5-C6-N1	-6.08	117.96	121.00
15	1H	355	A	O5'-P-OP2	-6.08	100.23	105.70
15	1H	1923	U	O5'-P-OP2	-6.08	100.23	105.70
15	1H	2342	A	N1-C6-N6	-6.08	114.95	118.60
15	14	1176	A	C5-C6-N6	-6.08	118.84	123.70
1	13	2146	G	O5'-P-OP1	-6.07	100.23	105.70
15	1H	1524	C	N3-C2-O2	6.07	126.15	121.90
15	14	182	C	C6-N1-C2	6.07	122.73	120.30
15	14	1323	A	N1-C6-N6	6.07	122.25	118.60
15	1H	1853	A	N7-C8-N9	-6.07	110.76	113.80
1	13	1819	C	C6-N1-C2	-6.07	117.87	120.30
15	1H	2045	A	N1-C6-N6	6.07	122.24	118.60
15	14	2084	A	O5'-P-OP1	-6.07	100.24	105.70
15	1H	1114	U	C2-N1-C1'	6.07	124.98	117.70
15	1H	1822	C	C6-N1-C1'	-6.07	113.52	120.80
15	14	617	G	C8-N9-C4	-6.07	103.97	106.40
15	1H	1685	G	C4-N9-C1'	6.06	134.38	126.50
15	1H	1665	A	C5-C6-N6	-6.06	118.85	123.70
15	14	520	G	N1-C6-O6	6.06	123.54	119.90
15	1H	187	A	N1-C2-N3	6.06	132.33	129.30
15	1H	718	G	C4-C5-N7	-6.06	108.38	110.80
15	1H	1381	G	O4'-C1'-N9	-6.06	103.35	108.20
1	13	1421	A	N9-C1'-C2'	6.06	121.88	114.00
1	1G	747	G	C4-C5-N7	6.06	113.22	110.80
15	1H	158	U	C2-N1-C1'	6.06	124.97	117.70
15	1H	2007	C	C5-C6-N1	6.06	124.03	121.00
15	14	612	C	N3-C4-C5	-6.06	119.48	121.90
15	14	626	C	C5-C6-N1	-6.06	117.97	121.00
52	X1	45	U	O4'-C1'-N1	6.06	113.05	108.20
15	1H	989	G	OP1-P-O3'	6.06	118.52	105.20
15	1H	1618	G	C5-C6-O6	-6.06	124.97	128.60
15	14	1316	U	O5'-P-OP2	-6.06	100.25	105.70
15	1H	2231	G	C2-N3-C4	6.05	114.93	111.90
30	35	62	LEU	CA-CB-CG	6.05	129.23	115.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	13	1140	C	C6-N1-C1'	6.05	128.06	120.80
15	1H	715	G	N1-C6-O6	6.05	123.53	119.90
15	1H	1663	A	C6-C5-N7	-6.05	128.06	132.30
15	1H	2439	C	N3-C4-N4	-6.05	113.76	118.00
15	1H	419	G	N9-C4-C5	-6.05	102.98	105.40
15	1H	462	C	O5'-P-OP2	-6.05	100.25	105.70
15	1H	786	C	C6-N1-C2	6.05	122.72	120.30
15	1H	712	G	C8-N9-C4	-6.05	103.98	106.40
15	14	300	G	C5-C6-O6	-6.05	124.97	128.60
15	1H	12	U	N3-C2-O2	-6.05	117.97	122.20
15	1H	1314	A	C4-C5-C6	6.05	120.02	117.00
15	1H	1520	G	N1-C6-O6	6.05	123.53	119.90
15	14	987	G	C5-C6-O6	-6.05	124.97	128.60
15	14	1333	A	O5'-P-OP2	-6.05	100.26	105.70
15	14	1861	C	N3-C2-O2	-6.05	117.67	121.90
52	V1	1	G	N3-C4-N9	6.05	129.63	126.00
15	1H	1069	A	C4-C5-N7	6.04	113.72	110.70
1	1G	1441	C	C6-N1-C2	-6.04	117.88	120.30
15	1H	148	C	C5-C6-N1	-6.04	117.98	121.00
15	1H	255	A	N1-C2-N3	6.04	132.32	129.30
15	1H	572	C	C6-N1-C2	-6.04	117.88	120.30
15	14	690	C	C6-N1-C2	-6.04	117.88	120.30
52	W4	74	C	C5-C6-N1	6.04	124.02	121.00
15	1H	1673	G	C8-N9-C4	6.04	108.81	106.40
15	1H	1795	C	C6-N1-C2	6.04	122.71	120.30
15	14	299	G	C8-N9-C4	-6.04	103.99	106.40
15	1H	1999	C	O5'-P-OP2	-6.03	100.27	105.70
15	14	1820	A	N3-C4-C5	6.03	131.02	126.80
15	1H	1422	A	O5'-P-OP2	-6.03	100.27	105.70
15	14	1703	G	OP1-P-OP2	6.03	128.65	119.60
26	16	118	G	C6-C5-N7	-6.03	126.78	130.40
15	1H	1869	G	C4-N9-C1'	6.03	134.34	126.50
15	1H	2252	G	N9-C4-C5	-6.03	102.99	105.40
15	1H	673	A	C8-N9-C4	-6.03	103.39	105.80
15	1H	1919	C	C6-N1-C2	-6.03	117.89	120.30
15	14	2087	A	C4-C5-C6	-6.03	113.99	117.00
15	1H	1685	G	C8-N9-C1'	-6.03	119.17	127.00
15	14	674	G	N3-C4-C5	-6.03	125.59	128.60
15	14	683	C	C5-C6-N1	6.03	124.01	121.00
15	14	690	C	C6-N1-C1'	-6.03	113.57	120.80
15	14	2729	A	C6-C5-N7	-6.03	128.08	132.30
22	D5	91	LEU	CA-CB-CG	6.03	129.16	115.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
15	1H	2454	A	C5-N7-C8	-6.02	100.89	103.90
15	1H	2483	G	C4-N9-C1'	6.02	134.33	126.50
15	1H	2569	U	C5-C4-O4	-6.02	122.29	125.90
15	14	837	A	N1-C6-N6	6.02	122.21	118.60
15	1H	762	G	C5-C6-O6	-6.02	124.99	128.60
15	1H	1616	A	O5'-P-OP1	6.02	117.92	110.70
15	1H	1860	G	N7-C8-N9	-6.02	110.09	113.10
15	14	1665	A	C4-N9-C1'	6.02	137.14	126.30
52	X4	28	G	N1-C6-O6	6.02	123.51	119.90
15	1H	500	A	C2-N3-C4	-6.02	107.59	110.60
15	1H	1805	C	C5-C6-N1	-6.02	117.99	121.00
15	1H	2392	A	C2-N3-C4	-6.02	107.59	110.60
15	1H	2725	C	C5-C6-N1	-6.02	117.99	121.00
15	14	690	C	N3-C2-O2	-6.02	117.69	121.90
15	14	1891	G	C4-N9-C1'	6.02	134.32	126.50
15	1H	2870	G	N3-C4-C5	6.02	131.61	128.60
15	14	2698	C	N3-C4-C5	-6.02	119.49	121.90
1	13	1598	A	C5-N7-C8	-6.01	100.89	103.90
15	1H	567	C	C6-N1-C2	-6.01	117.89	120.30
15	1H	2292	G	C2-N3-C4	6.01	114.91	111.90
15	14	2597	G	O5'-P-OP2	6.01	117.92	110.70
44	1E	196	LEU	CA-CB-CG	6.01	129.13	115.30
15	1H	2094	G	OP2-P-O3'	6.01	118.43	105.20
15	14	2588	C	C6-N1-C1'	-6.01	113.58	120.80
1	13	1389	G	C5-C6-O6	-6.01	124.99	128.60
15	1H	253	C	N3-C2-O2	-6.01	117.69	121.90
15	1H	1235	G	N3-C4-N9	6.01	129.61	126.00
15	1H	1624	C	N1-C2-O2	-6.01	115.29	118.90
15	14	2161	C	C6-N1-C2	-6.01	117.89	120.30
1	13	1803	A	N1-C2-N3	6.01	132.31	129.30
15	1H	983	C	C6-N1-C2	6.01	122.70	120.30
15	1H	1478	G	N3-C4-C5	-6.01	125.59	128.60
15	1H	186	A	O4'-C1'-N9	6.01	113.00	108.20
15	14	1877	C	N1-C2-O2	-6.01	115.30	118.90
15	1H	894	G	C6-C5-N7	-6.00	126.80	130.40
15	1H	1975	G	C8-N9-C1'	-6.00	119.20	127.00
15	1H	2247	U	C5-C4-O4	6.00	129.50	125.90
15	1H	2366	G	C8-N9-C4	-6.00	104.00	106.40
15	14	1690	C	N3-C4-C5	6.00	124.30	121.90
15	14	2341	C	C6-N1-C2	-6.00	117.90	120.30
1	13	1786	C	C2-N1-C1'	6.00	125.40	118.80
15	1H	629	G	O5'-P-OP1	-6.00	100.30	105.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
15	1H	1307	C	N3-C4-C5	-6.00	119.50	121.90
15	1H	2002	A	C2-N3-C4	-6.00	107.60	110.60
15	1H	2505	G	N1-C6-O6	6.00	123.50	119.90
15	1H	2263	C	N1-C2-O2	6.00	122.50	118.90
15	14	1815	C	N1-C2-O2	-5.99	115.31	118.90
15	14	722	C	O5'-P-OP1	5.99	117.89	110.70
15	14	2742	U	N3-C4-O4	-5.99	115.21	119.40
12	Q8	28	GLY	N-CA-C	-5.99	98.13	113.10
15	14	243	C	N3-C4-C5	-5.99	119.50	121.90
15	14	1663	A	C8-N9-C4	-5.99	103.41	105.80
15	1H	1613	G	N1-C6-O6	-5.99	116.31	119.90
15	14	2492	C	C2-N1-C1'	5.99	125.39	118.80
4	19	257	LEU	CA-CB-CG	5.99	129.07	115.30
15	1H	1431	G	C5-C6-O6	-5.99	125.01	128.60
15	14	965	A	O5'-P-OP1	-5.99	100.31	105.70
15	14	1838	C	C5-C6-N1	5.99	123.99	121.00
15	14	2714	C	C6-N1-C2	5.99	122.69	120.30
15	1H	1340	C	C5-C6-N1	-5.98	118.01	121.00
15	14	1996	A	N1-C6-N6	5.98	122.19	118.60
15	14	2516	C	N3-C4-C5	5.98	124.29	121.90
15	14	482	A	C8-N9-C4	5.98	108.19	105.80
15	14	539	G	N1-C6-O6	-5.98	116.31	119.90
15	1H	725	A	N1-C6-N6	5.98	122.19	118.60
15	1H	1013	G	N1-C6-O6	-5.98	116.31	119.90
15	14	980	A	C6-C5-N7	-5.98	128.12	132.30
1	1G	1941	C	C6-N1-C2	-5.98	117.91	120.30
15	1H	200	C	C5-C6-N1	-5.98	118.01	121.00
15	1H	851	A	N1-C6-N6	5.98	122.19	118.60
15	14	2084	A	N1-C6-N6	-5.98	115.01	118.60
15	1H	1618	G	C4-C5-N7	5.98	113.19	110.80
12	Q8	30	ARG	NE-CZ-NH1	-5.97	117.31	120.30
15	1H	1272	G	C5-C6-N1	5.97	114.49	111.50
15	14	2398	G	C4-N9-C1'	5.97	134.27	126.50
26	16	28	A	N9-C4-C5	5.97	108.19	105.80
15	14	155	C	N1-C2-O2	5.97	122.48	118.90
1	13	1377	C	P-O3'-C3'	5.97	126.86	119.70
15	1H	2670	G	O4'-C1'-N9	5.97	112.97	108.20
15	1H	732	C	N3-C4-C5	5.97	124.29	121.90
15	1H	1673	G	C5-C6-O6	-5.97	125.02	128.60
15	14	1191	A	C2-N3-C4	-5.97	107.62	110.60
1	1G	1852	A	N1-C2-N3	5.96	132.28	129.30
15	1H	1408	A	N1-C2-N3	5.96	132.28	129.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
15	14	1605	G	C5-C6-O6	-5.96	125.02	128.60
15	1H	77	A	C2-N3-C4	-5.96	107.62	110.60
15	1H	1252	A	C4-C5-C6	5.96	119.98	117.00
15	1H	2034	G	OP1-P-O3'	5.96	118.32	105.20
15	14	1378	U	C6-N1-C2	-5.96	117.42	121.00
1	13	1205	G	N1-C6-O6	5.96	123.48	119.90
15	1H	2467	C	N3-C4-N4	5.96	122.17	118.00
15	14	1381	G	C4-C5-N7	5.96	113.19	110.80
15	14	535	G	OP1-P-OP2	5.96	128.54	119.60
15	1H	1731	G	N3-C4-C5	5.96	131.58	128.60
15	1H	2593	G	OP2-P-O3'	5.96	118.31	105.20
15	1H	1363	C	C2-N1-C1'	5.96	125.35	118.80
15	14	2590	C	C6-N1-C2	5.95	122.68	120.30
52	V4	20	U	N3-C2-O2	-5.95	118.03	122.20
15	1H	555	A	C6-N1-C2	5.95	122.17	118.60
15	14	782	G	O5'-P-OP2	-5.95	100.35	105.70
15	14	1839	U	N3-C2-O2	-5.95	118.04	122.20
26	16	101	G	C8-N9-C1'	-5.95	119.27	127.00
15	14	1820	A	N9-C1'-C2'	5.95	121.73	114.00
15	1H	814	G	C8-N9-C4	-5.95	104.02	106.40
15	1H	2346	G	C6-C5-N7	-5.95	126.83	130.40
15	14	303	A	O4'-C1'-N9	5.95	112.96	108.20
15	14	992	A	N7-C8-N9	5.95	116.77	113.80
15	1H	2046	C	C6-N1-C2	5.94	122.68	120.30
15	14	2060	G	O4'-C1'-N9	5.94	112.95	108.20
15	1H	1754	G	C5-C6-O6	-5.94	125.03	128.60
15	14	99	G	OP1-P-O3'	5.94	118.27	105.20
15	14	1663	A	O4'-C1'-N9	5.94	112.95	108.20
15	1H	38	A	C5-C6-N1	5.94	120.67	117.70
15	1H	2569	U	N3-C4-O4	5.94	123.56	119.40
15	14	731	G	N3-C4-N9	5.94	129.56	126.00
15	14	1398	A	C5-C6-N6	-5.94	118.95	123.70
15	14	2417	C	C6-N1-C2	-5.94	117.92	120.30
15	1H	660	A	C4-C5-N7	5.94	113.67	110.70
15	14	299	G	N7-C8-N9	5.94	116.07	113.10
15	14	833	A	C5-C6-N6	5.94	128.45	123.70
15	14	818	G	OP1-P-O3'	5.94	118.26	105.20
15	1H	648	A	C8-N9-C4	-5.94	103.43	105.80
12	M5	62	LEU	CB-CG-CD2	5.94	121.09	111.00
1	1G	1341	A	N1-C6-N6	5.93	122.16	118.60
15	1H	850	G	C8-N9-C4	-5.93	104.03	106.40
15	1H	2326	A	C5-N7-C8	-5.93	100.93	103.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
15	1H	2624	U	O5'-P-OP2	-5.93	100.36	105.70
15	14	1999	C	C6-N1-C2	5.93	122.67	120.30
26	16	58	G	C4-N9-C1'	5.93	134.21	126.50
1	1G	1714	U	C5-C6-N1	5.93	125.67	122.70
15	1H	1297	G	O5'-P-OP1	5.93	117.82	110.70
15	14	2434	U	N3-C4-C5	-5.93	111.04	114.60
15	14	2793	G	N1-C6-O6	5.93	123.46	119.90
15	1H	1608	A	C2-N3-C4	-5.93	107.64	110.60
15	14	857	G	N3-C4-C5	-5.93	125.64	128.60
15	14	1680	C	O5'-P-OP1	-5.93	100.36	105.70
15	14	2771	C	C6-N1-C2	-5.93	117.93	120.30
15	1H	70	A	C8-N9-C4	-5.92	103.43	105.80
15	14	70	A	O4'-C1'-N9	-5.92	103.46	108.20
15	14	468	G	OP1-P-O3'	5.92	118.23	105.20
15	14	1878	C	N3-C4-C5	5.92	124.27	121.90
1	13	1438	G	N7-C8-N9	5.92	116.06	113.10
15	1H	1466	C	C6-N1-C2	-5.92	117.93	120.30
15	14	2398	G	N3-C4-N9	5.92	129.55	126.00
15	14	2886	A	C4-C5-N7	5.92	113.66	110.70
15	14	1288	G	N3-C4-C5	5.92	131.56	128.60
15	1H	34	C	O5'-P-OP1	-5.92	100.37	105.70
15	1H	2627	C	O5'-P-OP1	-5.92	100.37	105.70
15	1H	2843	G	C6-C5-N7	-5.92	126.85	130.40
15	1H	1873	G	C4-N9-C1'	5.92	134.19	126.50
15	14	557	G	N1-C6-O6	5.92	123.45	119.90
15	14	617	G	N3-C4-C5	-5.92	125.64	128.60
15	14	1446	U	C5-C4-O4	5.92	129.45	125.90
15	14	1792	G	C8-N9-C4	5.92	108.77	106.40
15	14	1975	G	N3-C4-N9	-5.92	122.45	126.00
15	1H	1833	G	C4-C5-N7	-5.92	108.43	110.80
15	14	2361	A	C5-N7-C8	-5.91	100.94	103.90
15	14	905	C	O5'-P-OP1	-5.91	100.38	105.70
1	13	651	U	P-O3'-C3'	5.91	126.79	119.70
1	1G	1926	A	C4-N9-C1'	5.91	136.94	126.30
15	1H	1307	C	C4-C5-C6	5.91	120.36	117.40
15	1H	1584	U	C5-C6-N1	5.91	125.66	122.70
15	1H	2658	G	C8-N9-C4	5.91	108.76	106.40
1	13	1904	C	C6-N1-C2	-5.91	117.94	120.30
15	1H	32	C	N1-C2-O2	-5.91	115.36	118.90
15	1H	808	G	N1-C6-O6	5.91	123.44	119.90
15	14	1749	G	N9-C4-C5	5.91	107.76	105.40
1	1G	729	A	P-O3'-C3'	5.91	126.79	119.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	13	2070	G	N3-C4-C5	5.90	131.55	128.60
15	1H	1805	C	N1-C2-O2	-5.90	115.36	118.90
15	14	1453	C	O5'-P-OP2	-5.90	100.39	105.70
11	G8	95	LYS	N-CA-C	-5.90	95.07	111.00
15	1H	788	G	C5-C6-O6	-5.90	125.06	128.60
15	1H	1070	G	C4-C5-N7	-5.90	108.44	110.80
15	14	531	U	C2-N1-C1'	5.90	124.78	117.70
15	14	1252	A	N7-C8-N9	5.90	116.75	113.80
15	14	1069	A	N1-C2-N3	5.90	132.25	129.30
15	14	1890	G	C5-C6-O6	-5.90	125.06	128.60
1	1G	809	C	C5-C6-N1	5.90	123.95	121.00
15	1H	657	G	N1-C6-O6	5.90	123.44	119.90
15	14	731	G	N3-C4-C5	-5.90	125.65	128.60
15	1H	731	G	C8-N9-C4	5.89	108.76	106.40
15	1H	823	A	C4-N9-C1'	-5.89	115.69	126.30
15	1H	1013	G	N3-C2-N2	5.89	124.03	119.90
15	1H	1306	C	C4-C5-C6	5.89	120.35	117.40
52	W1	74	C	N1-C2-O2	5.89	122.44	118.90
15	14	871	U	N1-C2-N3	5.89	118.43	114.90
15	14	1294	G	C5-C6-O6	-5.89	125.07	128.60
15	14	1351	A	OP1-P-OP2	5.89	128.43	119.60
15	14	1358	G	N1-C6-O6	5.89	123.43	119.90
15	1H	739	G	N1-C6-O6	5.89	123.43	119.90
15	1H	1458	C	N3-C4-C5	5.89	124.25	121.90
15	14	1176	A	C5-C6-N1	5.89	120.64	117.70
15	1H	1349	U	C5-C4-O4	5.89	129.43	125.90
15	1H	1824	C	C5-C6-N1	-5.89	118.06	121.00
15	14	2409	C	O5'-P-OP2	-5.89	100.40	105.70
15	1H	1924	G	C5-N7-C8	-5.88	101.36	104.30
15	1H	918	G	N1-C2-N3	5.88	127.43	123.90
15	1H	107	G	N9-C4-C5	5.88	107.75	105.40
15	1H	620	C	C6-N1-C2	5.88	122.65	120.30
15	14	1001	G	N9-C4-C5	5.88	107.75	105.40
15	14	2322	G	C8-N9-C4	-5.88	104.05	106.40
1	13	1932	G	C8-N9-C4	-5.88	104.05	106.40
15	14	2105	G	O5'-P-OP2	-5.88	100.41	105.70
15	1H	1892	G	P-O3'-C3'	5.88	126.75	119.70
15	1H	203	A	OP2-P-O3'	5.87	118.12	105.20
15	1H	255	A	C8-N9-C4	-5.87	103.45	105.80
15	1H	2427	A	C6-N1-C2	-5.87	115.08	118.60
15	14	1823	A	N1-C6-N6	-5.87	115.08	118.60
15	14	2398	G	N3-C4-C5	-5.87	125.66	128.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
15	14	2771	C	C5-C6-N1	5.87	123.94	121.00
15	1H	2625	C	N1-C2-O2	5.87	122.42	118.90
15	14	74	G	C8-N9-C4	-5.87	104.05	106.40
15	1H	288	G	C8-N9-C4	-5.87	104.05	106.40
15	1H	1646	A	O5'-P-OP2	-5.87	100.42	105.70
1	13	2152	G	N3-C2-N2	-5.87	115.79	119.90
15	1H	1695	G	N3-C4-N9	5.87	129.52	126.00
15	14	26	G	C8-N9-C4	-5.87	104.05	106.40
15	14	859	U	N1-C2-O2	-5.87	118.69	122.80
26	1J	83	G	C4-C5-N7	5.87	113.15	110.80
15	1H	1555	C	N1-C2-O2	5.87	122.42	118.90
15	14	1412	C	N3-C4-C5	5.87	124.25	121.90
15	1H	70	A	N1-C2-N3	5.87	132.23	129.30
15	1H	187	A	C2-N3-C4	-5.87	107.67	110.60
15	1H	1929	G	C5-C6-N1	5.87	114.43	111.50
15	1H	2795	U	N1-C2-N3	5.87	118.42	114.90
15	14	2090	C	N1-C2-O2	5.87	122.42	118.90
15	1H	128	C	C6-N1-C2	5.86	122.64	120.30
15	1H	842	A	C5-C6-N1	5.86	120.63	117.70
15	14	1891	G	C8-N9-C1'	-5.86	119.38	127.00
15	14	2302	A	C5-C6-N1	-5.86	114.77	117.70
15	14	2371	C	N1-C2-O2	-5.86	115.38	118.90
26	16	118	G	C4-C5-N7	5.86	113.14	110.80
15	14	1632	C	N1-C2-O2	5.86	122.42	118.90
15	1H	673	A	N7-C8-N9	5.86	116.73	113.80
15	1H	2286	G	OP2-P-O3'	5.86	118.09	105.20
18	61	131	LYS	C-N-CD	-5.86	107.71	120.60
15	14	708	C	C6-N1-C2	5.86	122.64	120.30
15	1H	187	A	OP1-P-O3'	-5.86	92.31	105.20
15	14	782	G	C6-C5-N7	-5.86	126.89	130.40
1	1G	2121	U	C6-N1-C2	-5.86	117.49	121.00
15	14	1860	G	C4-C5-N7	-5.86	108.46	110.80
15	14	2717	U	C6-N1-C1'	-5.86	113.00	121.20
15	1H	2286	G	N3-C4-C5	-5.85	125.67	128.60
15	1H	415	U	N1-C2-O2	-5.85	118.70	122.80
15	1H	1725	C	C2-N3-C4	5.85	122.83	119.90
15	1H	2065	C	C5-C4-N4	-5.85	116.10	120.20
15	1H	2618	G	N1-C6-O6	5.85	123.41	119.90
15	14	45	C	C6-N1-C2	5.85	122.64	120.30
15	14	1922	G	N1-C6-O6	5.85	123.41	119.90
1	13	2119	C	O5'-P-OP2	-5.85	100.43	105.70
15	14	743	U	N3-C2-O2	-5.85	118.10	122.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	13	1387	G	N3-C4-C5	5.85	131.52	128.60
1	13	1509	G	N9-C4-C5	5.85	107.74	105.40
15	1H	355	A	C4-C5-N7	5.85	113.62	110.70
15	1H	992	A	C8-N9-C4	-5.85	103.46	105.80
15	1H	1997	A	C5-C6-N1	5.85	120.62	117.70
15	1H	2727	U	N3-C4-O4	-5.85	115.31	119.40
15	1H	965	A	N1-C2-N3	-5.85	126.38	129.30
15	14	2264	U	O5'-P-OP2	-5.85	100.44	105.70
15	1H	1473	G	N1-C6-O6	5.85	123.41	119.90
15	14	502	G	C8-N9-C4	-5.85	104.06	106.40
15	14	2261	G	N3-C2-N2	-5.85	115.81	119.90
15	1H	253	C	O5'-P-OP2	-5.84	100.44	105.70
15	1H	1238	G	N1-C6-O6	5.84	123.41	119.90
15	14	737	U	N3-C4-O4	5.84	123.49	119.40
15	14	871	U	C6-N1-C2	-5.84	117.49	121.00
15	14	1802	U	N3-C4-O4	-5.84	115.31	119.40
15	1H	2030	A	N1-C6-N6	5.84	122.11	118.60
15	1H	2075	C	N1-C2-O2	-5.84	115.39	118.90
15	1H	200	C	N3-C4-N4	-5.84	113.91	118.00
15	14	2079	A	N1-C2-N3	5.84	132.22	129.30
15	14	2247	U	C5-C4-O4	5.84	129.41	125.90
15	1H	425	G	N3-C4-C5	5.84	131.52	128.60
15	1H	440	A	C8-N9-C4	5.84	108.14	105.80
15	1H	1184	G	C8-N9-C4	5.84	108.74	106.40
15	1H	2392	A	N9-C4-C5	-5.84	103.46	105.80
15	1H	2731	C	N3-C4-C5	5.84	124.24	121.90
1	13	1436	A	N9-C4-C5	5.84	108.14	105.80
1	1G	1123	G	N3-C4-C5	-5.84	125.68	128.60
15	1H	2617	A	C5-C6-N6	-5.84	119.03	123.70
15	14	1310	C	N3-C4-C5	5.84	124.23	121.90
1	13	1326	U	N1-C2-O2	-5.84	118.72	122.80
15	1H	1841	G	C5-C6-O6	-5.84	125.10	128.60
15	14	1659	A	N1-C6-N6	5.84	122.10	118.60
52	V4	42	C	N1-C2-O2	5.84	122.40	118.90
1	1G	653	G	N3-C4-C5	5.83	131.52	128.60
15	14	1746	G	O5'-P-OP2	-5.83	100.45	105.70
15	1H	1682	A	C8-N9-C4	5.83	108.13	105.80
15	1H	1824	C	C5-C4-N4	-5.83	116.12	120.20
15	14	555	A	C5-C6-N1	-5.83	114.78	117.70
1	1G	2125	A	C5-N7-C8	-5.83	100.98	103.90
15	1H	1454	U	O5'-P-OP2	-5.83	100.45	105.70
15	1H	737	U	C4-C5-C6	5.83	123.20	119.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	1G	994	A	C5-N7-C8	-5.83	100.98	103.90
15	1H	713	C	O5'-P-OP1	5.83	117.69	110.70
15	1H	2075	C	N3-C4-N4	5.83	122.08	118.00
1	13	1161	A	C2-N3-C4	-5.83	107.69	110.60
1	13	1435	C	C6-N1-C2	-5.83	117.97	120.30
1	13	1932	G	N9-C4-C5	5.83	107.73	105.40
1	1G	1962	C	C6-N1-C2	5.83	122.63	120.30
15	1H	1070	G	C2-N3-C4	5.83	114.81	111.90
1	13	1260	G	O4'-C1'-N9	5.82	112.86	108.20
15	1H	2053	U	N3-C4-O4	5.82	123.48	119.40
15	1H	1728	G	C4-N9-C1'	5.82	134.07	126.50
15	1H	1853	A	C8-N9-C4	5.82	108.13	105.80
15	1H	2483	G	C6-C5-N7	-5.82	126.91	130.40
15	14	1001	G	C6-C5-N7	5.82	133.89	130.40
15	14	1793	A	C2-N3-C4	-5.82	107.69	110.60
15	1H	558	C	C5-C6-N1	-5.82	118.09	121.00
15	1H	594	U	N1-C2-O2	-5.82	118.73	122.80
15	1H	1753	G	O5'-P-OP2	-5.82	100.46	105.70
15	1H	1913	G	O4'-C1'-N9	5.82	112.86	108.20
15	14	918	G	OP1-P-O3'	5.82	118.00	105.20
15	14	1677	G	N9-C4-C5	-5.82	103.07	105.40
15	14	2322	G	N7-C8-N9	5.82	116.01	113.10
51	Y4	36	G	C8-N9-C4	-5.82	104.07	106.40
15	14	591	U	C5-C6-N1	-5.82	119.79	122.70
15	1H	97	G	O5'-P-OP2	-5.82	100.46	105.70
15	1H	881	G	C8-N9-C4	-5.82	104.07	106.40
15	1H	1570	G	C8-N9-C4	-5.82	104.07	106.40
15	1H	2375	A	O5'-P-OP1	5.82	117.68	110.70
15	14	878	A	OP1-P-OP2	5.82	128.32	119.60
15	14	1663	A	N1-C6-N6	5.82	122.09	118.60
26	16	101	G	C5-C6-O6	-5.82	125.11	128.60
15	1H	1381	G	C4-N9-C1'	5.82	134.06	126.50
15	14	1417	G	C2-N3-C4	5.82	114.81	111.90
15	14	2053	U	N3-C4-C5	-5.82	111.11	114.60
26	1J	92	A	N1-C6-N6	-5.82	115.11	118.60
15	1H	254	C	N1-C2-O2	5.81	122.39	118.90
15	1H	2007	C	C6-N1-C2	-5.81	117.97	120.30
15	1H	2843	G	C5-N7-C8	-5.81	101.39	104.30
15	14	503	U	C2-N1-C1'	5.81	124.67	117.70
15	14	2443	G	C2-N3-C4	-5.81	108.99	111.90
26	16	8	C	C6-N1-C2	5.81	122.62	120.30
1	13	1337	C	OP1-P-O3'	5.81	117.98	105.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
23	29	117	MET	CA-CB-CG	5.81	123.18	113.30
1	13	1598	A	O4'-C1'-N9	-5.81	103.55	108.20
15	1H	160	U	C2-N1-C1'	5.81	124.67	117.70
15	1H	487	U	C5-C6-N1	-5.81	119.80	122.70
15	1H	2274	G	C5-C6-O6	-5.81	125.11	128.60
15	14	1017	C	N1-C2-O2	-5.81	115.42	118.90
15	1H	354	G	C5-C6-N1	5.81	114.40	111.50
15	1H	790	G	N3-C2-N2	-5.81	115.83	119.90
15	1H	1002	C	O5'-P-OP2	-5.81	100.47	105.70
15	14	26	G	C6-C5-N7	-5.81	126.92	130.40
15	14	905	C	N3-C4-N4	5.81	122.06	118.00
15	14	987	G	C4-C5-N7	5.81	113.12	110.80
15	14	990	U	N3-C4-C5	-5.81	111.12	114.60
15	14	1865	G	C5-C6-N1	-5.81	108.60	111.50
15	1H	1682	A	N9-C4-C5	-5.81	103.48	105.80
12	M5	61	LEU	CB-CG-CD1	5.81	120.87	111.00
1	1G	1429	G	OP2-P-O3'	5.80	117.97	105.20
15	1H	1924	G	OP2-P-O3'	5.80	117.97	105.20
15	14	249	G	C5-C6-N1	-5.80	108.60	111.50
15	14	1608	A	C2-N3-C4	-5.80	107.70	110.60
1	13	1156	G	N3-C4-N9	-5.80	122.52	126.00
15	1H	1339	C	N3-C4-C5	-5.80	119.58	121.90
15	1H	1545	A	N1-C6-N6	5.80	122.08	118.60
15	14	958	A	C8-N9-C4	5.80	108.12	105.80
15	14	1633	A	O5'-P-OP2	-5.80	100.48	105.70
15	14	1659	A	N9-C4-C5	-5.80	103.48	105.80
15	14	1925	A	C5-C6-N6	-5.80	119.06	123.70
15	14	2265	G	C8-N9-C4	-5.80	104.08	106.40
52	X4	44	G	N3-C4-N9	5.80	129.48	126.00
15	1H	1666	C	O5'-P-OP1	-5.80	100.48	105.70
15	1H	1858	G	C8-N9-C4	5.80	108.72	106.40
1	13	842	U	C5-C6-N1	5.80	125.60	122.70
15	1H	845	C	N3-C4-C5	5.80	124.22	121.90
15	1H	778	G	N1-C2-N2	5.79	121.41	116.20
15	14	1843	A	C8-N9-C4	-5.79	103.48	105.80
15	1H	1397	G	N3-C2-N2	-5.79	115.85	119.90
15	14	824	G	O4'-C1'-N9	5.79	112.83	108.20
15	14	1663	A	N3-C4-C5	5.79	130.85	126.80
1	1G	895	G	O5'-P-OP1	-5.79	100.49	105.70
15	1H	2056	A	N1-C2-N3	-5.79	126.41	129.30
15	1H	1226	C	P-O3'-C3'	5.79	126.65	119.70
15	1H	2262	A	N9-C4-C5	5.79	108.12	105.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
15	14	725	A	N1-C6-N6	5.79	122.07	118.60
1	13	986	C	N3-C2-O2	-5.79	117.85	121.90
1	13	1515	A	N9-C4-C5	-5.79	103.48	105.80
15	1H	411	U	O5'-P-OP2	5.79	117.64	110.70
15	1H	712	G	N9-C4-C5	5.79	107.71	105.40
15	1H	2022	G	O5'-P-OP2	-5.79	100.49	105.70
1	1G	1057	G	C4-N9-C1'	5.78	134.02	126.50
1	1G	2125	A	C6-C5-N7	-5.78	128.25	132.30
15	14	1619	A	C5-N7-C8	-5.78	101.01	103.90
15	1H	411	U	C4-C5-C6	5.78	123.17	119.70
15	1H	2455	C	C5-C4-N4	5.78	124.25	120.20
15	1H	2605	A	C5-C6-N6	-5.78	119.08	123.70
15	14	70	A	C6-C5-N7	-5.78	128.25	132.30
26	1J	24	U	C5-C6-N1	5.78	125.59	122.70
1	1G	995	G	C6-C5-N7	-5.78	126.93	130.40
15	1H	2777	G	C8-N9-C4	5.78	108.71	106.40
15	14	1813	U	O5'-P-OP2	-5.78	100.50	105.70
15	1H	2107	A	N7-C8-N9	-5.78	110.91	113.80
15	14	2044	A	C8-N9-C4	5.78	108.11	105.80
15	14	2533	A	C2-N3-C4	-5.78	107.71	110.60
1	13	1908	U	N1-C2-O2	5.77	126.84	122.80
15	1H	1376	C	C2-N3-C4	5.77	122.79	119.90
1	1G	964	U	N1-C2-O2	-5.77	118.76	122.80
15	1H	1806	G	C4-C5-N7	-5.77	108.49	110.80
15	1H	2407	A	C6-N1-C2	5.77	122.06	118.60
15	1H	535	G	C8-N9-C1'	-5.77	119.50	127.00
15	1H	2518	A	C5-C6-N1	5.77	120.58	117.70
15	14	834	G	C5-C6-O6	5.77	132.06	128.60
15	1H	1189	U	O4'-C1'-N1	5.77	112.81	108.20
15	1H	1949	C	C6-N1-C2	-5.77	117.99	120.30
15	1H	2571	C	C5-C4-N4	-5.77	116.16	120.20
15	14	140	A	C5-N7-C8	-5.77	101.02	103.90
15	14	178	G	N9-C4-C5	-5.77	103.09	105.40
15	1H	572	C	N3-C2-O2	-5.77	117.86	121.90
15	1H	2050	C	O5'-P-OP2	-5.76	100.51	105.70
15	1H	2571	C	C2-N1-C1'	5.76	125.14	118.80
15	1H	889	C	C6-N1-C2	5.76	122.60	120.30
15	1H	216	G	N3-C4-N9	5.76	129.46	126.00
15	1H	999	G	N1-C6-O6	5.76	123.36	119.90
15	1H	2290	C	C5'-C4'-O4'	-5.76	102.19	109.10
15	14	1398	A	N7-C8-N9	5.76	116.68	113.80
15	14	1955	G	O5'-P-OP1	-5.76	100.52	105.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
15	14	1412	C	N3-C4-N4	-5.76	113.97	118.00
52	W4	76	A	C6-C5-N7	-5.76	128.27	132.30
1	1G	1362	A	N1-C6-N6	5.75	122.05	118.60
1	13	1456	U	C6-N1-C1'	-5.75	113.14	121.20
1	13	1742	C	C6-N1-C2	-5.75	118.00	120.30
1	1G	1054	G	C8-N9-C1'	5.75	134.48	127.00
1	1G	1190	U	N3-C4-O4	5.75	123.43	119.40
1	1G	1682	C	O5'-P-OP2	5.75	117.60	110.70
15	1H	543	C	C6-N1-C2	-5.75	118.00	120.30
15	1H	777	G	C8-N9-C4	5.75	108.70	106.40
52	V4	60	U	C2-N1-C1'	5.75	124.60	117.70
15	14	1954	G	OP1-P-OP2	5.75	128.23	119.60
15	1H	1680	C	O5'-P-OP1	-5.75	100.53	105.70
15	14	555	A	N1-C2-N3	5.75	132.18	129.30
15	14	714	C	C6-N1-C2	5.75	122.60	120.30
15	14	919	A	C8-N9-C4	5.75	108.10	105.80
15	14	1370	A	C5-C6-N6	-5.75	119.10	123.70
15	1H	765	A	C8-N9-C4	-5.75	103.50	105.80
15	1H	2408	A	C8-N9-C4	-5.75	103.50	105.80
15	14	896	U	C2-N1-C1'	-5.75	110.80	117.70
52	W1	74	C	C6-N1-C1'	-5.75	113.90	120.80
15	1H	584	G	C2-N3-C4	-5.75	109.03	111.90
15	1H	118	U	N1-C2-N3	5.74	118.35	114.90
15	1H	2292	G	C5-C6-N1	5.74	114.37	111.50
15	14	255	A	C6-C5-N7	-5.74	128.28	132.30
1	1G	1886	C	C6-N1-C2	-5.74	118.00	120.30
15	14	111	G	N3-C4-N9	-5.74	122.56	126.00
15	14	2302	A	C4-C5-N7	5.74	113.57	110.70
52	V1	76	A	C6-C5-N7	-5.74	128.28	132.30
1	13	1440	C	C5-C6-N1	-5.74	118.13	121.00
15	1H	2233	U	O5'-P-OP2	-5.74	100.53	105.70
15	14	2610	G	C5-C6-N1	5.74	114.37	111.50
52	X1	68	C	OP1-P-O3'	5.74	117.83	105.20
15	14	531	U	C6-N1-C1'	-5.74	113.17	121.20
15	14	590	C	C6-N1-C2	5.74	122.59	120.30
15	1H	148	C	C6-N1-C2	5.74	122.59	120.30
15	1H	657	G	C5-C6-O6	-5.74	125.16	128.60
15	14	2510	G	C5-C6-O6	-5.74	125.16	128.60
26	1J	91	G	C5-N7-C8	-5.74	101.43	104.30
15	1H	831	A	C5-C6-N6	-5.73	119.11	123.70
15	1H	1583	G	C8-N9-C4	-5.73	104.11	106.40
15	1H	2291	G	C5-C6-O6	-5.73	125.16	128.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
15	14	874	C	N1-C2-O2	-5.73	115.46	118.90
15	14	1251	G	C5-C6-O6	5.73	132.04	128.60
15	1H	239	C	C5-C6-N1	-5.73	118.14	121.00
15	1H	1925	A	C5'-C4'-O4'	-5.73	102.22	109.10
15	1H	2243	G	N3-C4-C5	-5.73	125.73	128.60
15	14	1290	A	C5-C6-N1	-5.73	114.83	117.70
15	14	2363	U	N1-C2-O2	5.73	126.81	122.80
15	1H	515	C	C6-N1-C2	-5.73	118.01	120.30
15	1H	1079	G	N1-C6-O6	5.73	123.34	119.90
15	14	1685	G	O5'-P-OP2	-5.73	100.54	105.70
52	V1	76	A	O4'-C1'-N9	5.73	112.78	108.20
23	21	65	GLY	N-CA-C	-5.73	98.78	113.10
15	14	1252	A	N3-C4-C5	5.72	130.81	126.80
15	14	2035	G	C5-C6-O6	-5.72	125.17	128.60
15	1H	563	A	N7-C8-N9	-5.72	110.94	113.80
15	1H	1327	A	O5'-P-OP2	-5.72	100.55	105.70
15	1H	2527	C	N1-C2-O2	-5.72	115.47	118.90
15	1H	2678	G	C8-N9-C4	-5.72	104.11	106.40
15	14	2795	U	C5-C4-O4	5.72	129.33	125.90
15	1H	612	C	C2-N1-C1'	5.72	125.09	118.80
1	1G	1123	G	N3-C4-N9	5.72	129.43	126.00
15	1H	687	C	C6-N1-C2	-5.72	118.01	120.30
15	1H	961	U	C5-C6-N1	-5.72	119.84	122.70
15	1H	1299	G	C5-C6-N1	5.72	114.36	111.50
15	1H	2757	A	N7-C8-N9	-5.72	110.94	113.80
15	1H	808	G	C5-C6-O6	-5.72	125.17	128.60
15	1H	2724	G	OP1-P-O3'	5.72	117.78	105.20
1	13	2142	A	N1-C6-N6	-5.72	115.17	118.60
1	1G	1913	A	C8-N9-C4	-5.72	103.51	105.80
15	1H	1545	A	C6-C5-N7	-5.72	128.30	132.30
15	14	2587	A	C8-N9-C4	5.72	108.09	105.80
15	1H	232	G	N3-C4-N9	-5.71	122.57	126.00
15	1H	1435	C	N1-C2-O2	-5.71	115.47	118.90
15	1H	2084	A	O4'-C1'-N9	5.71	112.77	108.20
15	14	673	A	N7-C8-N9	5.71	116.66	113.80
1	13	1441	C	N3-C4-C5	5.71	124.19	121.90
15	1H	1340	C	O5'-P-OP2	-5.71	100.56	105.70
15	14	1325	A	C8-N9-C4	5.71	108.08	105.80
1	1G	2125	A	N7-C8-N9	5.71	116.66	113.80
15	14	648	A	O4'-C1'-N9	5.71	112.77	108.20
15	1H	116	A	C8-N9-C4	-5.71	103.52	105.80
15	1H	2462	G	N1-C2-N3	5.71	127.33	123.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
15	14	845	C	C2-N3-C4	-5.71	117.05	119.90
26	16	2	A	P-O3'-C3'	5.71	126.55	119.70
26	1J	106	U	C6-N1-C2	5.71	124.42	121.00
1	1G	1089	C	N3-C4-N4	-5.71	114.01	118.00
15	1H	650	G	C8-N9-C4	5.71	108.68	106.40
15	1H	740	C	N3-C2-O2	5.71	125.89	121.90
15	1H	2411	G	C5-C6-N1	-5.71	108.65	111.50
15	14	743	U	N1-C2-O2	5.71	126.79	122.80
15	14	801	A	P-O3'-C3'	5.71	126.55	119.70
15	14	1350	A	O4'-C1'-N9	5.71	112.77	108.20
15	1H	137	G	C8-N9-C4	-5.71	104.12	106.40
15	1H	831	A	N1-C6-N6	5.70	122.02	118.60
15	1H	1306	C	C6-N1-C2	-5.70	118.02	120.30
15	1H	2107	A	C8-N9-C4	5.70	108.08	105.80
15	1H	2301	A	C8-N9-C4	-5.70	103.52	105.80
15	1H	2467	C	N3-C2-O2	5.70	125.89	121.90
15	14	847	G	N1-C6-O6	5.70	123.32	119.90
15	1H	598	G	OP2-P-O3'	5.70	117.74	105.20
15	14	2557	A	N1-C6-N6	5.70	122.02	118.60
15	1H	1861	C	O5'-P-OP2	-5.70	100.57	105.70
15	14	2510	G	N9-C4-C5	-5.70	103.12	105.40
15	14	427	G	C8-N9-C4	5.69	108.68	106.40
1	13	1456	U	N3-C2-O2	-5.69	118.22	122.20
15	1H	1640	G	N1-C6-O6	-5.69	116.48	119.90
15	14	826	A	N1-C2-N3	5.69	132.15	129.30
15	14	1662	G	N3-C4-C5	-5.69	125.75	128.60
15	14	2117	U	N1-C2-N3	5.69	118.31	114.90
15	14	2555	C	O5'-P-OP2	-5.69	100.58	105.70
15	14	2622	G	C2-N3-C4	-5.69	109.05	111.90
1	13	1458	G	O5'-P-OP2	-5.69	100.58	105.70
4	11	111	LEU	CA-CB-CG	5.69	128.39	115.30
15	1H	643	G	N3-C4-C5	-5.69	125.75	128.60
15	1H	2034	G	O4'-C1'-N9	5.69	112.75	108.20
15	14	795	A	O4'-C1'-N9	5.69	112.75	108.20
1	13	2070	G	C2-N3-C4	-5.69	109.06	111.90
15	1H	1803	G	N3-C4-C5	-5.69	125.75	128.60
15	1H	1994	A	C5-N7-C8	5.69	106.74	103.90
1	1G	1052	A	O5'-P-OP2	-5.69	100.58	105.70
15	1H	2727	U	P-O3'-C3'	5.69	126.53	119.70
1	1G	1901	G	C6-C5-N7	-5.69	126.99	130.40
15	1H	1297	G	N1-C6-O6	5.69	123.31	119.90
15	1H	1318	A	C2-N3-C4	-5.69	107.76	110.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
15	14	2050	C	N3-C2-O2	5.69	125.88	121.90
15	14	1309	G	C8-N9-C4	5.68	108.67	106.40
15	14	1605	G	N1-C6-O6	5.68	123.31	119.90
15	1H	121	G	C8-N9-C4	5.68	108.67	106.40
15	1H	539	G	OP2-P-O3'	5.68	117.70	105.20
15	1H	1174	A	N1-C6-N6	-5.68	115.19	118.60
15	1H	1930	C	O5'-P-OP2	-5.68	100.59	105.70
15	1H	2292	G	N3-C4-C5	-5.68	125.76	128.60
15	14	2779	G	N3-C4-N9	5.68	129.41	126.00
15	1H	108	G	OP1-P-OP2	5.68	128.12	119.60
1	1G	1199	G	C4-N9-C1'	5.68	133.88	126.50
15	1H	2230	G	P-O3'-C3'	5.68	126.52	119.70
15	1H	2603	G	N1-C2-N3	5.68	127.31	123.90
15	14	497	G	N1-C6-O6	-5.68	116.49	119.90
15	14	878	A	O5'-P-OP2	-5.68	100.59	105.70
15	14	1290	A	C2-N3-C4	-5.68	107.76	110.60
1	1G	1817	G	N1-C6-O6	-5.68	116.49	119.90
15	1H	1306	C	N3-C2-O2	-5.68	117.92	121.90
15	1H	2301	A	C4-N9-C1'	5.68	136.52	126.30
15	1H	2861	G	O4'-C1'-N9	5.68	112.74	108.20
15	14	2703	U	C4-C5-C6	5.68	123.11	119.70
26	1J	46	G	C4-N9-C1'	-5.68	119.12	126.50
15	14	871	U	N3-C2-O2	-5.68	118.23	122.20
15	14	885	G	C4-C5-N7	5.68	113.07	110.80
15	14	121	G	C4-C5-N7	5.67	113.07	110.80
15	14	255	A	O4'-C1'-N9	5.67	112.74	108.20
15	14	313	C	C2-N1-C1'	5.67	125.04	118.80
15	14	673	A	C8-N9-C4	-5.67	103.53	105.80
15	1H	480	G	C2-N3-C4	5.67	114.74	111.90
15	1H	572	C	C2-N1-C1'	5.67	125.04	118.80
15	1H	2604	A	C8-N9-C4	5.67	108.07	105.80
15	14	832	A	C5-C6-N1	-5.67	114.86	117.70
15	1H	2366	G	C6-C5-N7	-5.67	127.00	130.40
51	Y1	43	U	N1-C2-O2	5.67	126.77	122.80
15	1H	33	U	N3-C2-O2	-5.67	118.23	122.20
15	1H	1818	A	C2-N3-C4	-5.67	107.77	110.60
15	14	894	G	C6-C5-N7	-5.67	127.00	130.40
15	1H	648	A	C5-C6-N1	-5.67	114.87	117.70
15	1H	1235	G	C5-C6-N1	5.67	114.33	111.50
15	1H	1330	G	N1-C6-O6	5.67	123.30	119.90
15	14	1422	A	N7-C8-N9	-5.67	110.97	113.80
15	1H	1290	A	N3-C4-N9	-5.67	122.87	127.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
15	1H	2658	G	C2-N3-C4	-5.67	109.07	111.90
15	1H	790	G	C8-N9-C1'	5.66	134.36	127.00
15	1H	1206	G	N3-C4-C5	-5.66	125.77	128.60
15	14	1001	G	C4-C5-N7	-5.66	108.53	110.80
15	14	1375	U	OP2-P-O3'	5.66	117.66	105.20
11	C5	90	LEU	CA-CB-CG	5.66	128.32	115.30
15	14	2517	G	N1-C2-N2	-5.66	111.10	116.20
1	13	790	C	C6-N1-C2	-5.66	118.03	120.30
15	14	557	G	C2-N3-C4	-5.66	109.07	111.90
15	14	879	G	N1-C2-N2	-5.66	111.11	116.20
15	1H	1956	U	N3-C4-O4	-5.66	115.44	119.40
15	1H	2746	C	C5-C6-N1	-5.66	118.17	121.00
15	1H	730	G	C8-N9-C4	5.66	108.66	106.40
15	14	1417	G	N3-C4-C5	-5.66	125.77	128.60
1	1G	747	G	N7-C8-N9	5.65	115.93	113.10
15	1H	2024	C	N1-C2-O2	-5.65	115.51	118.90
15	1H	2434	U	C6-N1-C2	-5.65	117.61	121.00
15	1H	1297	G	N3-C2-N2	-5.65	115.94	119.90
26	16	28	A	N1-C6-N6	-5.65	115.21	118.60
1	1G	1522	C	C6-N1-C2	5.65	122.56	120.30
15	1H	1873	G	C8-N9-C1'	-5.65	119.66	127.00
15	1H	2460	G	C5-C6-O6	5.65	131.99	128.60
1	13	1387	G	N3-C4-N9	-5.65	122.61	126.00
15	1H	45	C	N3-C2-O2	5.65	125.85	121.90
15	1H	611	A	N7-C8-N9	-5.65	110.98	113.80
15	14	1450	G	OP1-P-OP2	-5.65	111.13	119.60
15	14	1662	G	C8-N9-C1'	-5.65	119.66	127.00
15	14	2351	A	O4'-C1'-N9	-5.65	103.68	108.20
10	58	15	LEU	CA-CB-CG	5.64	128.28	115.30
15	1H	252	A	OP2-P-O3'	5.64	117.62	105.20
15	14	2727	U	O4'-C1'-N1	5.64	112.72	108.20
1	13	1353	G	OP1-P-O3'	5.64	117.61	105.20
15	1H	894	G	N9-C4-C5	-5.64	103.14	105.40
15	1H	992	A	N1-C2-N3	5.64	132.12	129.30
15	1H	2729	A	C5-C6-N1	-5.64	114.88	117.70
15	1H	2000	G	N3-C4-N9	5.64	129.38	126.00
15	1H	2361	A	N9-C1'-C2'	5.64	121.33	114.00
15	14	553	A	N1-C6-N6	-5.64	115.22	118.60
15	14	1545	A	O4'-C1'-N9	5.64	112.71	108.20
26	1J	24	U	C6-N1-C2	-5.64	117.62	121.00
1	1G	2121	U	N1-C2-O2	5.64	126.75	122.80
15	14	1990	C	N3-C4-C5	5.64	124.16	121.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
15	1H	235	G	N9-C4-C5	-5.64	103.14	105.40
15	1H	1017	C	C6-N1-C2	5.64	122.56	120.30
15	1H	1832	U	C2-N3-C4	-5.64	123.62	127.00
26	16	1	A	N7-C8-N9	-5.64	110.98	113.80
15	1H	1695	G	N9-C4-C5	-5.63	103.15	105.40
15	14	1769	G	N1-C6-O6	-5.63	116.52	119.90
15	14	2061	C	O5'-P-OP1	5.63	117.46	110.70
1	1G	2131	G	C8-N9-C4	5.63	108.65	106.40
15	1H	168	G	O5'-P-OP1	-5.63	100.63	105.70
15	1H	179	G	C8-N9-C4	5.63	108.65	106.40
15	1H	1014	C	O5'-P-OP2	-5.63	100.63	105.70
15	1H	29	U	O5'-P-OP2	-5.63	100.63	105.70
15	1H	2053	U	N1-C2-O2	-5.63	118.86	122.80
15	14	556	A	O4'-C1'-N9	5.63	112.71	108.20
15	14	2469	G	N9-C4-C5	5.63	107.65	105.40
15	14	1861	C	OP1-P-O3'	5.63	117.59	105.20
15	1H	987	G	C2-N3-C4	5.63	114.71	111.90
15	1H	2882	G	C8-N9-C4	-5.63	104.15	106.40
11	C5	39	VAL	N-CA-C	5.63	126.20	111.00
26	16	32	C	C5-C6-N1	5.63	123.81	121.00
15	1H	806	U	C4-C5-C6	5.63	123.08	119.70
15	1H	2053	U	O5'-P-OP1	-5.63	100.64	105.70
15	1H	1927	C	N1-C2-O2	5.62	122.28	118.90
15	14	491	G	C2-N3-C4	-5.62	109.09	111.90
15	14	2367	A	O5'-P-OP1	-5.62	100.64	105.70
15	1H	2813	C	C6-N1-C2	-5.62	118.05	120.30
15	14	250	G	N1-C6-O6	-5.62	116.53	119.90
1	13	2132	C	N3-C4-C5	5.62	124.15	121.90
1	1G	1787	U	O4'-C1'-N1	5.62	112.70	108.20
23	29	50	GLY	N-CA-C	5.62	127.15	113.10
15	14	1011	C	N3-C4-N4	5.62	121.93	118.00
15	14	1332	G	C2-N3-C4	5.62	114.71	111.90
1	13	2126	A	C8-N9-C4	5.62	108.05	105.80
15	1H	1181	U	C6-N1-C2	5.62	124.37	121.00
15	1H	1712	C	N1-C2-O2	-5.62	115.53	118.90
15	14	2627	C	C6-N1-C1'	-5.62	114.06	120.80
30	78	115	LEU	CA-CB-CG	5.62	128.22	115.30
1	13	1054	G	O4'-C1'-N9	5.62	112.69	108.20
15	1H	867	G	C5-C6-O6	5.62	131.97	128.60
15	1H	2310	C	C6-N1-C2	-5.62	118.05	120.30
1	1G	1249	C	C6-N1-C2	5.62	122.55	120.30
15	1H	867	G	N1-C2-N2	5.62	121.25	116.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
15	1H	1392	G	N3-C4-C5	-5.62	125.79	128.60
15	1H	2339	C	N3-C4-C5	5.62	124.15	121.90
15	14	2270	G	O5'-P-OP2	-5.62	100.65	105.70
15	1H	600	A	C6-N1-C2	-5.61	115.23	118.60
15	1H	2626	U	O5'-P-OP1	-5.61	100.65	105.70
15	14	255	A	N1-C6-N6	5.61	121.97	118.60
1	13	1591	A	N1-C6-N6	5.61	121.97	118.60
15	14	1702	A	C8-N9-C4	5.61	108.05	105.80
15	14	2098	C	N1-C2-O2	-5.61	115.53	118.90
1	13	1140	C	C2-N1-C1'	-5.61	112.63	118.80
15	1H	125	A	C5-C6-N6	-5.61	119.21	123.70
15	1H	2454	A	N7-C8-N9	5.61	116.61	113.80
15	14	193	C	N3-C4-N4	-5.61	114.07	118.00
15	14	2443	G	P-O3'-C3'	5.61	126.43	119.70
15	14	2736	U	OP1-P-O3'	5.61	117.54	105.20
15	1H	233	U	C5-C6-N1	5.61	125.50	122.70
15	1H	2385	G	N1-C6-O6	-5.61	116.53	119.90
52	X4	75	C	OP2-P-O3'	5.61	117.54	105.20
15	1H	2361	A	C6-N1-C2	-5.61	115.24	118.60
15	14	2230	G	OP2-P-O3'	5.61	117.53	105.20
15	1H	1001	G	N1-C6-O6	-5.60	116.54	119.90
15	14	648	A	C6-N1-C2	5.60	121.96	118.60
1	13	2125	A	N9-C4-C5	-5.60	103.56	105.80
15	1H	2366	G	N3-C4-N9	5.60	129.36	126.00
26	1J	78	G	N1-C6-O6	5.60	123.26	119.90
15	1H	1827	C	N3-C4-N4	-5.60	114.08	118.00
15	14	884	A	C2-N3-C4	5.60	113.40	110.60
15	14	2093	U	O5'-P-OP1	-5.60	100.66	105.70
1	13	1235	G	C2-N3-C4	5.60	114.70	111.90
1	13	1786	C	N1-C2-O2	5.60	122.26	118.90
15	1H	1700	G	C5-C6-O6	-5.60	125.24	128.60
15	1H	2466	A	C5-C6-N6	5.60	128.18	123.70
15	14	2516	C	C2-N3-C4	-5.60	117.10	119.90
15	1H	2280	U	N3-C2-O2	-5.60	118.28	122.20
15	1H	107	G	N1-C6-O6	-5.59	116.54	119.90
15	1H	218	A	C8-N9-C4	-5.59	103.56	105.80
15	1H	1235	G	N7-C8-N9	-5.59	110.30	113.10
15	1H	1873	G	O4'-C1'-N9	-5.59	103.72	108.20
15	14	1703	G	C4-C5-C6	5.59	122.16	118.80
15	14	2004	C	C6-N1-C2	-5.59	118.06	120.30
15	1H	253	C	O5'-P-OP1	5.59	117.41	110.70
15	14	782	G	N3-C4-N9	5.59	129.36	126.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
15	14	991	G	N1-C6-O6	-5.59	116.54	119.90
15	14	1981	U	N3-C2-O2	-5.59	118.28	122.20
3	F8	3	THR	C-N-CA	5.59	135.68	121.70
11	G8	81	LYS	C-N-CD	-5.59	108.30	120.60
15	1H	490	C	C6-N1-C2	-5.59	118.06	120.30
1	13	1445	A	OP2-P-O3'	5.59	117.50	105.20
15	1H	2274	G	N3-C2-N2	-5.59	115.99	119.90
15	1H	2730	G	C4-C5-N7	5.59	113.04	110.80
15	1H	20	C	C5-C6-N1	-5.59	118.21	121.00
15	14	584	G	C5-C6-N1	-5.59	108.71	111.50
1	1G	1057	G	C6-C5-N7	-5.59	127.05	130.40
15	1H	1790	G	C8-N9-C4	-5.59	104.17	106.40
15	1H	2439	C	OP1-P-OP2	5.59	127.98	119.60
15	1H	2714	C	C2-N3-C4	-5.59	117.11	119.90
15	14	337	G	O5'-P-OP1	-5.59	100.67	105.70
15	14	2740	C	N3-C4-C5	5.59	124.14	121.90
15	1H	593	U	C5-C6-N1	5.58	125.49	122.70
15	14	719	A	O4'-C1'-N9	-5.58	103.73	108.20
15	14	1683	G	C8-N9-C4	-5.58	104.17	106.40
15	14	2062	G	N3-C4-C5	-5.58	125.81	128.60
1	1G	1158	G	C5-C6-O6	-5.58	125.25	128.60
15	1H	1447	C	C5-C4-N4	-5.58	116.29	120.20
15	1H	2614	G	N1-C6-O6	-5.58	116.55	119.90
15	14	717	G	N3-C4-C5	5.58	131.39	128.60
15	14	1890	G	N1-C6-O6	5.58	123.25	119.90
15	14	2076	A	C8-N9-C4	-5.58	103.57	105.80
15	1H	105	C	N1-C2-O2	-5.58	115.55	118.90
15	1H	1727	A	C8-N9-C4	5.58	108.03	105.80
15	1H	2534	U	N3-C4-O4	5.58	123.31	119.40
11	C5	93	GLY	N-CA-C	5.58	127.05	113.10
15	14	2886	A	N9-C1'-C2'	5.58	121.26	114.00
15	1H	640	U	N1-C2-O2	5.58	126.71	122.80
15	1H	1252	A	C3'-C2'-C1'	-5.58	97.04	101.50
13	3A	95	GLY	N-CA-C	-5.58	99.15	113.10
15	1H	206	A	C8-N9-C4	5.58	108.03	105.80
15	1H	648	A	C6-C5-N7	-5.58	128.40	132.30
15	1H	970	U	O5'-P-OP1	-5.58	100.68	105.70
15	1H	1965	U	N3-C4-O4	5.58	123.30	119.40
15	14	1363	C	C2-N1-C1'	5.58	124.94	118.80
15	14	1656	C	C6-N1-C2	5.58	122.53	120.30
15	1H	2038	A	N1-C2-N3	5.58	132.09	129.30
52	V4	72	C	C2-N3-C4	5.58	122.69	119.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	13	2021	U	N3-C4-O4	5.58	123.30	119.40
15	1H	1327	A	C8-N9-C4	5.58	108.03	105.80
15	1H	1980	U	C2-N1-C1'	-5.58	111.01	117.70
15	14	2333	G	C4-C5-N7	5.58	113.03	110.80
15	1H	881	G	N3-C2-N2	-5.57	116.00	119.90
15	1H	2088	C	N1-C2-O2	-5.57	115.56	118.90
15	14	2443	G	N1-C2-N3	5.57	127.24	123.90
52	V4	8	U	OP1-P-O3'	5.57	117.46	105.20
15	14	162	C	C5-C6-N1	5.57	123.79	121.00
15	14	411	U	O4'-C1'-N1	5.57	112.66	108.20
1	13	1949	C	O5'-P-OP2	-5.57	100.69	105.70
1	1G	1767	G	N3-C4-N9	-5.57	122.66	126.00
15	1H	601	U	OP2-P-O3'	5.57	117.45	105.20
15	1H	861	C	C5-C4-N4	-5.57	116.30	120.20
15	14	2019	C	N3-C2-O2	-5.57	118.00	121.90
52	X4	76	A	N7-C8-N9	-5.57	111.02	113.80
1	13	1053	A	P-O3'-C3'	5.57	126.38	119.70
1	1G	1210	G	N3-C4-N9	-5.57	122.66	126.00
15	1H	476	U	OP1-P-O3'	5.57	117.45	105.20
15	1H	1251	G	C4-C5-N7	-5.57	108.57	110.80
15	1H	2274	G	N1-C6-O6	5.57	123.24	119.90
15	14	1669	G	C5-C6-O6	-5.57	125.26	128.60
1	13	1958	G	OP1-P-OP2	-5.57	111.25	119.60
15	1H	547	G	N1-C6-O6	-5.56	116.56	119.90
15	14	791	G	C2-N3-C4	-5.56	109.12	111.90
15	14	1348	G	O5'-P-OP1	-5.56	100.69	105.70
15	14	1850	G	O5'-P-OP1	-5.56	100.69	105.70
15	14	2639	G	C8-N9-C4	5.56	108.63	106.40
1	1G	1319	G	N1-C6-O6	5.56	123.24	119.90
15	1H	729	G	N9-C4-C5	-5.56	103.17	105.40
15	1H	1206	G	N3-C4-N9	5.56	129.34	126.00
15	1H	2727	U	OP2-P-O3'	5.56	117.44	105.20
15	14	2557	A	C6-C5-N7	-5.56	128.41	132.30
26	1J	16	U	C5-C4-O4	5.56	129.24	125.90
15	1H	549	G	OP1-P-OP2	-5.56	111.26	119.60
15	14	255	A	C4-C5-N7	5.56	113.48	110.70
15	1H	355	A	N3-C4-N9	-5.56	122.95	127.40
15	14	671	A	C5-C6-N6	5.56	128.15	123.70
1	1G	2026	A	C8-N9-C4	5.56	108.02	105.80
15	1H	993	G	OP1-P-OP2	-5.56	111.27	119.60
15	1H	2527	C	N3-C2-O2	5.56	125.79	121.90
15	1H	2611	U	OP1-P-OP2	5.56	127.94	119.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
15	14	554	C	N3-C2-O2	-5.56	118.01	121.90
1	13	1521	G	C6-C5-N7	5.56	133.73	130.40
12	M5	32	LEU	CA-CB-CG	5.56	128.08	115.30
15	14	995	G	N3-C4-N9	-5.56	122.67	126.00
52	X4	18	G	C2-N3-C4	5.56	114.68	111.90
52	X4	18	G	N3-C4-C5	-5.56	125.82	128.60
1	13	1043	G	C8-N9-C4	5.55	108.62	106.40
15	1H	2789	C	C6-N1-C2	5.55	122.52	120.30
26	16	81	C	C6-N1-C2	-5.55	118.08	120.30
15	1H	1018	C	C6-N1-C2	-5.55	118.08	120.30
15	1H	1820	A	C1'-O4'-C4'	-5.55	105.46	109.90
15	1H	2286	G	C8-N9-C1'	-5.55	119.78	127.00
15	1H	2585	G	C5-C6-N1	-5.55	108.72	111.50
15	1H	1577	A	C4-C5-N7	5.55	113.48	110.70
17	L8	54	VAL	CB-CA-C	-5.55	100.86	111.40
15	14	622	U	N1-C2-O2	-5.55	118.92	122.80
15	14	2581	A	O5'-P-OP2	-5.55	100.71	105.70
1	13	1598	A	C5-C6-N1	-5.55	114.93	117.70
1	13	1998	G	N1-C6-O6	5.55	123.23	119.90
15	1H	1584	U	C6-N1-C2	-5.55	117.67	121.00
15	1H	2409	C	OP2-P-O3'	5.55	117.41	105.20
1	1G	739	C	C6-N1-C2	-5.55	118.08	120.30
15	1H	157	U	N1-C2-O2	5.55	126.68	122.80
15	1H	171	A	N1-C6-N6	-5.55	115.27	118.60
15	1H	1577	A	C6-C5-N7	-5.55	128.42	132.30
15	14	26	G	C4-C5-C6	5.55	122.13	118.80
15	14	1865	G	C5-C6-O6	5.55	131.93	128.60
15	1H	1671	G	C4-C5-N7	-5.54	108.58	110.80
15	14	1827	C	N1-C2-O2	-5.54	115.57	118.90
15	14	2451	G	C5-C6-O6	-5.54	125.28	128.60
1	13	1495	A	N1-C2-N3	-5.54	126.53	129.30
8	22	196	LEU	CA-CB-CG	5.54	128.04	115.30
15	1H	185	A	OP2-P-O3'	5.54	117.38	105.20
15	1H	1770	A	P-O3'-C3'	5.54	126.35	119.70
15	14	469	U	O5'-P-OP1	-5.54	100.72	105.70
15	14	1849	A	OP1-P-O3'	5.54	117.39	105.20
15	14	2073	G	C8-N9-C4	-5.54	104.19	106.40
1	1G	699	A	N1-C6-N6	5.54	121.92	118.60
15	14	2846	G	O4'-C1'-N9	5.54	112.63	108.20
15	1H	216	G	N3-C4-C5	-5.54	125.83	128.60
15	1H	1922	G	C5-C6-N1	-5.54	108.73	111.50
15	1H	2417	C	C2-N1-C1'	5.54	124.89	118.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
15	14	2547	G	N1-C6-O6	-5.54	116.58	119.90
1	1G	1867	U	O4'-C1'-N1	5.53	112.63	108.20
15	1H	1693	G	N3-C4-C5	-5.53	125.83	128.60
15	14	2516	C	N1-C2-O2	-5.53	115.58	118.90
15	1H	2242	A	N9-C4-C5	5.53	108.01	105.80
15	1H	2392	A	N3-C4-C5	5.53	130.67	126.80
30	78	35	HIS	N-CA-C	5.53	125.94	111.00
15	1H	890	A	N1-C6-N6	5.53	121.92	118.60
15	14	2886	A	C4-C5-C6	5.53	119.77	117.00
15	1H	98	U	N1-C2-O2	5.53	126.67	122.80
15	1H	1018	C	OP2-P-O3'	5.53	117.36	105.20
15	1H	1858	G	N7-C8-N9	-5.53	110.34	113.10
15	1H	843	G	N1-C2-N2	-5.53	111.23	116.20
15	1H	2725	C	C4-C5-C6	5.53	120.16	117.40
15	1H	2884	C	N3-C4-C5	5.53	124.11	121.90
15	14	712	G	C5-C6-N1	-5.53	108.74	111.50
15	14	2510	G	C4-C5-N7	5.53	113.01	110.80
26	1J	91	G	N9-C4-C5	-5.53	103.19	105.40
15	1H	1235	G	N9-C4-C5	-5.52	103.19	105.40
15	1H	2878	U	N1-C2-N3	5.52	118.21	114.90
15	14	140	A	C6-C5-N7	-5.52	128.44	132.30
15	14	1446	U	N3-C2-O2	-5.52	118.33	122.20
15	14	2717	U	C5-C6-N1	5.52	125.46	122.70
27	C8	74	LEU	CA-CB-CG	5.52	128.00	115.30
1	1G	1971	C	O5'-P-OP2	-5.52	100.73	105.70
44	1E	187	LEU	CA-CB-CG	5.52	128.00	115.30
1	1G	1399	C	O5'-P-OP2	-5.52	100.73	105.70
15	14	994	G	N1-C6-O6	5.52	123.21	119.90
15	14	2024	C	N1-C2-O2	-5.52	115.59	118.90
1	13	1651	C	P-O3'-C3'	5.52	126.32	119.70
15	1H	979	G	N9-C4-C5	5.52	107.61	105.40
1	13	1189	U	P-O3'-C3'	5.52	126.32	119.70
1	1G	882	C	C5-C6-N1	-5.52	118.24	121.00
15	14	1290	A	C6-N1-C2	5.52	121.91	118.60
15	14	1694	C	O5'-P-OP2	-5.52	100.74	105.70
15	14	1449	G	N3-C4-C5	-5.51	125.84	128.60
15	14	1847	G	N7-C8-N9	-5.51	110.34	113.10
26	16	118	G	N1-C6-O6	5.51	123.21	119.90
15	1H	288	G	C6-N1-C2	-5.51	121.79	125.10
15	1H	856	U	C5-C4-O4	-5.51	122.59	125.90
15	1H	903	G	C5-C6-N1	-5.51	108.74	111.50
15	1H	535	G	N3-C2-N2	5.51	123.76	119.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
15	1H	1180	A	N1-C6-N6	-5.51	115.29	118.60
15	14	2886	A	C4-N9-C1'	5.51	136.22	126.30
1	1G	697	A	C8-N9-C4	5.51	108.00	105.80
15	14	863	C	C6-N1-C2	5.51	122.50	120.30
52	W4	76	A	C4-C5-N7	5.51	113.45	110.70
15	1H	1745	G	N3-C4-N9	5.51	129.31	126.00
15	14	862	U	N1-C2-O2	-5.51	118.94	122.80
15	1H	1709	U	N1-C2-N3	5.51	118.20	114.90
21	25	8	LEU	CA-CB-CG	5.51	127.96	115.30
15	14	1705	A	OP2-P-O3'	5.50	117.31	105.20
15	1H	2416	U	C2-N1-C1'	5.50	124.30	117.70
15	14	1663	A	N3-C4-N9	-5.50	123.00	127.40
15	1H	1577	A	C2-N3-C4	-5.50	107.85	110.60
15	1H	2522	C	C6-N1-C2	-5.50	118.10	120.30
15	1H	2542	C	OP2-P-O3'	5.50	117.31	105.20
15	1H	2630	U	N1-C2-O2	5.50	126.65	122.80
15	14	1792	G	N7-C8-N9	-5.50	110.35	113.10
15	14	2715	C	C6-N1-C2	5.50	122.50	120.30
15	14	675	G	O5'-P-OP1	5.50	117.30	110.70
15	14	1655	G	C2-N3-C4	5.50	114.65	111.90
15	14	2448	A	O5'-P-OP2	5.50	117.30	110.70
15	1H	1803	G	N3-C4-N9	5.50	129.30	126.00
15	1H	2532	C	N3-C2-O2	5.50	125.75	121.90
15	14	418	A	C2-N3-C4	-5.50	107.85	110.60
52	V4	72	C	N1-C2-N3	-5.50	115.35	119.20
15	14	1813	U	OP1-P-OP2	5.50	127.84	119.60
15	14	1979	G	N9-C4-C5	5.50	107.60	105.40
1	1G	1054	G	C5-C6-O6	5.49	131.90	128.60
1	1G	1138	A	C2'-C3'-O3'	5.49	122.49	113.70
15	14	1634	C	N3-C2-O2	-5.49	118.06	121.90
15	14	557	G	C5-N7-C8	-5.49	101.55	104.30
1	1G	728	U	C2-N1-C1'	5.49	124.29	117.70
15	1H	1822	C	C2-N1-C1'	5.49	124.84	118.80
15	14	660	A	C4-C5-N7	5.49	113.44	110.70
15	14	1258	A	C6-C5-N7	-5.49	128.46	132.30
15	14	1420	G	N1-C6-O6	5.49	123.19	119.90
15	14	2580	A	OP2-P-O3'	5.49	117.28	105.20
26	1J	49	C	C6-N1-C2	5.49	122.50	120.30
1	1G	1941	C	N3-C4-C5	-5.49	119.70	121.90
15	1H	883	C	N3-C4-N4	5.49	121.84	118.00
1	13	2002	A	C2-N3-C4	-5.49	107.86	110.60
15	14	1899	G	N3-C4-N9	-5.49	122.71	126.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
15	1H	1496	C	C6-N1-C2	-5.49	118.11	120.30
15	1H	1609	G	N1-C6-O6	5.49	123.19	119.90
1	1G	986	C	C5-C6-N1	5.48	123.74	121.00
15	1H	2714	C	C5-C4-N4	-5.48	116.36	120.20
1	13	1598	A	C6-C5-N7	-5.48	128.46	132.30
15	1H	1635	A	N1-C6-N6	5.48	121.89	118.60
15	1H	2028	G	C5-C6-O6	-5.48	125.31	128.60
52	X1	2	C	N3-C4-C5	5.48	124.09	121.90
15	1H	175	U	N3-C4-C5	-5.48	111.31	114.60
15	1H	184	G	N3-C4-C5	5.48	131.34	128.60
15	1H	432	C	P-O3'-C3'	5.48	126.28	119.70
15	1H	1070	G	C6-N1-C2	-5.48	121.81	125.10
15	1H	856	U	N3-C4-O4	5.48	123.24	119.40
1	1G	1057	G	C8-N9-C1'	-5.48	119.88	127.00
15	1H	123	G	C5-C6-O6	-5.48	125.31	128.60
15	1H	620	C	N3-C4-C5	5.48	124.09	121.90
15	1H	2751	G	C8-N9-C4	5.48	108.59	106.40
15	14	905	C	C5-C6-N1	5.48	123.74	121.00
52	V1	76	A	N3-C4-C5	5.48	130.63	126.80
1	1G	1469	C	C6-N1-C1'	-5.48	114.23	120.80
15	1H	1070	G	N3-C4-C5	-5.48	125.86	128.60
15	1H	1827	C	N3-C4-C5	5.48	124.09	121.90
15	1H	1849	A	C5-C6-N1	5.48	120.44	117.70
15	14	358	G	C8-N9-C4	-5.48	104.21	106.40
15	1H	1696	C	OP1-P-O3'	5.47	117.24	105.20
15	1H	2044	A	O5'-P-OP2	-5.47	100.77	105.70
15	1H	2462	G	OP1-P-O3'	5.47	117.24	105.20
15	14	2047	U	C2-N1-C1'	5.47	124.27	117.70
15	1H	894	G	N3-C2-N2	5.47	123.73	119.90
15	1H	1892	G	C8-N9-C4	-5.47	104.21	106.40
15	1H	1924	G	C5-C6-O6	5.47	131.88	128.60
15	1H	2312	C	O5'-P-OP1	-5.47	100.78	105.70
15	14	981	G	O5'-P-OP2	-5.47	100.78	105.70
15	1H	1922	G	N1-C6-O6	5.47	123.18	119.90
15	14	992	A	C4-N9-C1'	5.47	136.15	126.30
15	14	1347	C	C5-C6-N1	5.47	123.74	121.00
15	14	2505	G	O4'-C1'-N9	5.47	112.58	108.20
15	1H	26	G	N3-C4-N9	5.47	129.28	126.00
15	1H	1298	U	C6-N1-C2	5.47	124.28	121.00
15	14	2518	A	N1-C2-N3	-5.47	126.56	129.30
26	1J	91	G	C4-N9-C1'	5.47	133.61	126.50
1	13	672	A	C5-C6-N1	5.47	120.43	117.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	1G	1699	C	C6-N1-C2	-5.47	118.11	120.30
15	1H	1555	C	C2-N1-C1'	5.47	124.81	118.80
15	1H	2716	C	N3-C4-C5	5.47	124.09	121.90
1	13	1433	U	C5-C4-O4	5.46	129.18	125.90
1	13	2153	G	C8-N9-C4	5.46	108.59	106.40
15	1H	619	U	C5-C6-N1	-5.46	119.97	122.70
15	1H	660	A	C5-N7-C8	-5.46	101.17	103.90
15	1H	1996	A	O5'-P-OP2	-5.46	100.78	105.70
15	1H	2034	G	N9-C4-C5	5.46	107.59	105.40
15	1H	2038	A	OP1-P-O3'	5.46	117.22	105.20
15	14	2771	C	C2-N1-C1'	5.46	124.81	118.80
52	X4	1	G	N9-C4-C5	5.46	107.58	105.40
1	13	754	G	N3-C4-C5	-5.46	125.87	128.60
15	1H	821	C	N3-C4-C5	-5.46	119.72	121.90
15	1H	828	U	N3-C4-O4	-5.46	115.58	119.40
15	14	409	G	O5'-P-OP2	-5.46	100.79	105.70
15	14	1391	A	C4-C5-N7	5.46	113.43	110.70
26	16	106	U	OP2-P-O3'	5.46	117.21	105.20
1	13	1188	A	O5'-P-OP2	-5.46	100.79	105.70
1	1G	775	C	N3-C2-O2	5.46	125.72	121.90
1	1G	809	C	C6-N1-C2	-5.46	118.12	120.30
15	1H	965	A	C4-C5-C6	-5.46	114.27	117.00
15	1H	2050	C	O5'-P-OP1	5.46	117.25	110.70
15	14	797	G	O4'-C1'-N9	5.46	112.57	108.20
30	78	88	LEU	CA-CB-CG	5.46	127.85	115.30
15	1H	135	C	N1-C2-O2	5.46	122.17	118.90
15	1H	157	U	C6-N1-C1'	-5.46	113.56	121.20
15	1H	185	A	P-O3'-C3'	5.46	126.25	119.70
15	1H	730	G	N3-C4-N9	5.46	129.27	126.00
15	1H	1375	U	OP2-P-O3'	5.46	117.20	105.20
15	1H	1440	U	C2-N1-C1'	5.46	124.25	117.70
15	1H	2109	C	N1-C2-O2	-5.46	115.63	118.90
15	1H	2715	C	C6-N1-C2	5.46	122.48	120.30
15	14	1796	A	N1-C6-N6	5.46	121.87	118.60
28	M8	39	CYS	CA-CB-SG	5.46	123.82	114.00
15	14	884	A	O5'-P-OP1	5.46	117.25	110.70
15	1H	2046	C	C5-C6-N1	-5.45	118.27	121.00
15	14	302	C	C6-N1-C2	-5.45	118.12	120.30
15	14	2395	C	N3-C4-C5	5.45	124.08	121.90
15	1H	776	A	C2-N3-C4	-5.45	107.87	110.60
15	14	1802	U	C5-C4-O4	5.45	129.17	125.90
15	1H	723	G	OP2-P-O3'	5.45	117.19	105.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
15	14	2326	A	N1-C6-N6	5.45	121.87	118.60
52	X4	26	A	C4-C5-C6	-5.45	114.28	117.00
1	1G	1260	G	C8-N9-C4	-5.45	104.22	106.40
15	1H	682	A	N1-C2-N3	5.45	132.02	129.30
15	1H	812	G	C6-C5-N7	-5.45	127.13	130.40
15	14	879	G	N3-C2-N2	5.45	123.71	119.90
15	14	959	A	OP1-P-O3'	5.45	117.19	105.20
15	14	2464	U	N3-C4-O4	5.45	123.21	119.40
52	X4	37	A	C6-N1-C2	5.45	121.87	118.60
15	1H	1252	A	C8-N9-C1'	-5.45	117.89	127.70
15	14	1238	G	C5-C6-N1	5.45	114.22	111.50
15	14	2223	A	O4'-C1'-N9	5.45	112.56	108.20
1	1G	969	C	C5-C4-N4	5.45	124.01	120.20
1	1G	1962	C	O5'-P-OP1	-5.45	100.80	105.70
15	1H	48	A	C4-C5-N7	-5.45	107.98	110.70
15	1H	1555	C	C5-C6-N1	5.45	123.72	121.00
15	1H	2465	A	O5'-P-OP2	-5.45	100.80	105.70
15	14	155	C	N3-C2-O2	-5.45	118.09	121.90
15	14	911	G	N1-C6-O6	-5.45	116.63	119.90
1	13	1549	G	N9-C4-C5	5.44	107.58	105.40
1	1G	2122	A	C8-N9-C4	5.44	107.98	105.80
15	1H	1846	A	OP1-P-OP2	5.44	127.77	119.60
15	14	1203	G	C4-C5-N7	5.44	112.98	110.80
15	1H	1647	C	N1-C2-N3	5.44	123.01	119.20
15	1H	1822	C	C4-C5-C6	5.44	120.12	117.40
15	14	327	C	C6-N1-C2	-5.44	118.12	120.30
15	14	617	G	C4-N9-C1'	5.44	133.58	126.50
52	X1	37	A	C5-C6-N6	-5.44	119.35	123.70
1	1G	747	G	C5-N7-C8	-5.44	101.58	104.30
1	1G	994	A	N1-C6-N6	5.44	121.86	118.60
15	14	886	C	O5'-P-OP1	-5.44	100.80	105.70
15	14	591	U	C6-N1-C2	5.44	124.26	121.00
15	1H	2622	G	N9-C4-C5	5.44	107.58	105.40
15	14	1929	G	C8-N9-C4	5.44	108.58	106.40
15	14	2517	G	P-O3'-C3'	5.44	126.22	119.70
15	1H	2021	C	N3-C4-C5	5.43	124.07	121.90
15	1H	2462	G	P-O3'-C3'	5.43	126.22	119.70
15	1H	1878	C	N3-C4-C5	-5.43	119.73	121.90
15	1H	2461	G	N3-C4-N9	5.43	129.26	126.00
15	14	2019	C	N1-C2-O2	5.43	122.16	118.90
15	14	627	G	N9-C4-C5	-5.43	103.23	105.40
15	14	1944	A	C8-N9-C4	5.43	107.97	105.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	13	2105	G	N1-C6-O6	5.43	123.16	119.90
15	1H	740	C	C5-C6-N1	-5.43	118.28	121.00
15	14	1814	A	C8-N9-C4	-5.43	103.63	105.80
15	14	2742	U	N1-C2-O2	5.43	126.60	122.80
12	Q8	54	GLU	CA-CB-CG	5.43	125.34	113.40
15	1H	1434	G	O4'-C1'-N9	5.43	112.54	108.20
15	1H	2401	C	C6-N1-C2	5.43	122.47	120.30
15	14	708	C	C5-C6-N1	-5.43	118.29	121.00
52	X1	75	C	C6-N1-C2	5.43	122.47	120.30
1	1G	2024	A	P-O3'-C3'	5.42	126.21	119.70
15	1H	1862	G	C5-C6-N1	-5.42	108.79	111.50
15	1H	2323	G	C4-C5-N7	5.42	112.97	110.80
15	14	1820	A	N1-C6-N6	5.42	121.86	118.60
15	1H	876	U	O5'-P-OP1	5.42	117.21	110.70
15	1H	2317	G	O5'-P-OP2	-5.42	100.82	105.70
1	13	669	C	C6-N1-C2	-5.42	118.13	120.30
15	1H	1635	A	O5'-P-OP1	-5.42	100.82	105.70
15	1H	2724	G	C5-C6-N1	-5.42	108.79	111.50
15	1H	2742	U	N3-C4-O4	-5.42	115.61	119.40
15	1H	2791	A	C8-N9-C4	5.42	107.97	105.80
15	1H	2882	G	C5-C6-N1	-5.42	108.79	111.50
15	14	786	C	C6-N1-C2	5.42	122.47	120.30
15	14	2240	A	P-O3'-C3'	5.42	126.20	119.70
52	X1	1	G	N3-C4-C5	-5.42	125.89	128.60
15	1H	2254	G	N9-C4-C5	-5.42	103.23	105.40
15	14	1074	U	N1-C2-O2	5.42	126.59	122.80
1	13	1443	A	N1-C6-N6	5.42	121.85	118.60
1	1G	1205	G	N3-C4-N9	5.42	129.25	126.00
15	1H	76	C	N3-C4-N4	5.42	121.79	118.00
15	1H	237	G	C8-N9-C4	5.42	108.57	106.40
15	14	1753	G	N1-C6-O6	-5.42	116.65	119.90
1	13	1154	C	C5-C6-N1	5.42	123.71	121.00
15	1H	558	C	C4-C5-C6	5.42	120.11	117.40
15	14	850	G	O5'-P-OP1	5.42	117.20	110.70
52	V4	36	A	C8-N9-C4	-5.42	103.63	105.80
1	13	1437	C	N3-C4-C5	-5.41	119.73	121.90
15	1H	610	G	N3-C2-N2	-5.41	116.11	119.90
15	1H	1838	C	OP1-P-OP2	-5.41	111.48	119.60
15	1H	1913	G	N3-C2-N2	5.41	123.69	119.90
35	D8	42	GLY	N-CA-C	5.41	126.63	113.10
15	1H	2391	A	C8-N9-C4	5.41	107.97	105.80
15	1H	114	C	C4-C5-C6	5.41	120.11	117.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
15	1H	806	U	C5-C4-O4	5.41	129.15	125.90
15	1H	982	C	C6-N1-C2	5.41	122.46	120.30
15	1H	2555	C	C5-C6-N1	-5.41	118.30	121.00
15	14	2349	G	N3-C4-N9	5.41	129.25	126.00
36	J5	51	TYR	CA-CB-CG	5.41	123.68	113.40
15	1H	2301	A	N7-C8-N9	5.41	116.50	113.80
15	1H	2346	G	N3-C4-C5	5.41	131.30	128.60
1	13	748	A	C8-N9-C4	5.41	107.96	105.80
15	1H	840	C	OP2-P-O3'	5.41	117.09	105.20
15	1H	1415	A	C8-N9-C4	5.41	107.96	105.80
15	1H	1945	C	C2-N1-C1'	5.41	124.75	118.80
15	1H	2462	G	N3-C4-C5	-5.41	125.90	128.60
15	14	531	U	N1-C2-O2	5.40	126.58	122.80
1	13	921	C	C6-N1-C2	5.40	122.46	120.30
1	1G	894	U	O5'-P-OP1	-5.40	100.84	105.70
15	1H	563	A	C6-N1-C2	-5.40	115.36	118.60
15	1H	978	G	C2-N3-C4	5.40	114.60	111.90
15	14	1686	C	N3-C2-O2	5.40	125.68	121.90
15	1H	419	G	C4-C5-N7	5.40	112.96	110.80
15	1H	866	C	C4-C5-C6	5.40	120.10	117.40
15	1H	1810	G	N1-C6-O6	5.40	123.14	119.90
15	1H	1842	U	C5-C4-O4	-5.40	122.66	125.90
15	14	598	G	OP2-P-O3'	5.40	117.08	105.20
1	13	1649	U	C5-C6-N1	5.40	125.40	122.70
15	1H	407	G	C8-N9-C4	5.40	108.56	106.40
15	14	837	A	N9-C4-C5	-5.40	103.64	105.80
15	14	1675	G	O5'-P-OP2	5.40	117.18	110.70
15	1H	1069	A	C6-C5-N7	-5.40	128.52	132.30
15	1H	2224	A	C8-N9-C4	-5.40	103.64	105.80
15	1H	2233	U	P-O3'-C3'	5.40	126.18	119.70
15	14	1927	C	C5-C4-N4	5.40	123.98	120.20
15	14	2682	C	C6-N1-C2	-5.40	118.14	120.30
15	14	580	U	O4'-C1'-N1	5.40	112.52	108.20
15	14	2691	C	C6-N1-C2	5.40	122.46	120.30
1	13	1202	A	C2-N3-C4	5.39	113.30	110.60
15	1H	404	C	N3-C2-O2	-5.39	118.12	121.90
15	1H	821	C	OP2-P-O3'	5.39	117.07	105.20
52	V1	4	C	C6-N1-C2	-5.39	118.14	120.30
1	13	1908	U	N1-C2-N3	5.39	118.14	114.90
15	1H	13	A	N9-C4-C5	-5.39	103.64	105.80
15	1H	1412	C	C5-C6-N1	-5.39	118.30	121.00
15	1H	1598	C	C6-N1-C2	-5.39	118.14	120.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
15	14	20	C	N3-C4-C5	-5.39	119.74	121.90
15	14	1635	A	N7-C8-N9	5.39	116.50	113.80
52	X4	44	G	O5'-P-OP1	5.39	117.17	110.70
1	1G	1261	A	OP2-P-O3'	5.39	117.06	105.20
1	1G	2115	A	C8-N9-C4	5.39	107.96	105.80
15	14	1420	G	C5-C6-O6	-5.39	125.37	128.60
15	14	2303	A	N9-C4-C5	-5.39	103.64	105.80
12	Q8	5	LYS	N-CA-C	5.39	125.55	111.00
15	1H	160	U	C5-C6-N1	5.39	125.39	122.70
15	1H	2247	U	N3-C4-C5	-5.39	111.37	114.60
15	14	816	U	C5-C4-O4	5.39	129.13	125.90
15	1H	732	C	C6-N1-C2	5.39	122.45	120.30
15	1H	2491	A	C8-N9-C4	-5.39	103.64	105.80
15	14	2533	A	C6-C5-N7	-5.39	128.53	132.30
15	1H	571	G	N9-C1'-C2'	-5.38	106.08	112.00
15	14	225	U	N3-C4-O4	-5.38	115.63	119.40
15	14	2038	A	N1-C2-N3	5.38	131.99	129.30
1	13	862	C	C6-N1-C2	-5.38	118.15	120.30
15	1H	355	A	N1-C6-N6	5.38	121.83	118.60
15	1H	2289	A	C5-C6-N1	-5.38	115.01	117.70
15	14	1010	U	O5'-P-OP2	5.38	117.16	110.70
15	1H	354	G	N3-C4-N9	5.38	129.23	126.00
15	1H	580	U	C5-C6-N1	-5.38	120.01	122.70
15	1H	795	A	O4'-C1'-N9	5.38	112.50	108.20
15	1H	849	A	N1-C6-N6	-5.38	115.37	118.60
15	14	423	U	O4'-C1'-N1	5.38	112.51	108.20
15	14	1964	U	OP2-P-O3'	5.38	117.04	105.20
52	W1	32	U	C5-C6-N1	5.38	125.39	122.70
1	13	1200	U	O5'-P-OP1	-5.38	100.86	105.70
15	14	2741	A	N1-C6-N6	-5.38	115.37	118.60
1	13	2125	A	O5'-P-OP2	-5.38	100.86	105.70
15	1H	1074	U	C2-N1-C1'	5.38	124.15	117.70
15	1H	1663	A	N1-C2-N3	5.38	131.99	129.30
15	1H	1748	A	C5-C6-N1	-5.38	115.01	117.70
15	1H	1961	A	O4'-C1'-N9	5.38	112.50	108.20
15	1H	2302	A	C4-C5-N7	5.38	113.39	110.70
15	1H	2457	C	C4-C5-C6	5.38	120.09	117.40
52	X1	47	U	N3-C2-O2	-5.38	118.44	122.20
1	1G	937	U	C5-C4-O4	5.38	129.13	125.90
15	1H	498	A	C4-C5-N7	5.38	113.39	110.70
15	1H	1990	C	N3-C4-C5	5.38	124.05	121.90
15	1H	2723	G	C8-N9-C4	5.38	108.55	106.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
15	14	1258	A	C5-C6-N6	-5.38	119.40	123.70
15	14	2745	G	C6-C5-N7	-5.38	127.17	130.40
23	21	76	ARG	NE-CZ-NH1	5.38	122.99	120.30
52	V4	8	U	P-O3'-C3'	5.38	126.15	119.70
1	13	1266	G	N1-C6-O6	-5.38	116.67	119.90
15	1H	2600	U	C5-C4-O4	5.38	129.12	125.90
15	1H	2614	G	C6-C5-N7	5.38	133.62	130.40
15	1H	1687	A	N1-C6-N6	-5.37	115.38	118.60
1	13	1319	G	C8-N9-C1'	-5.37	120.02	127.00
15	1H	1975	G	N1-C2-N2	-5.37	111.37	116.20
15	1H	2059	U	O5'-P-OP2	-5.37	100.87	105.70
15	1H	1745	G	C4-N9-C1'	5.37	133.48	126.50
15	14	48	A	OP2-P-O3'	5.37	117.01	105.20
15	14	683	C	C6-N1-C2	-5.37	118.15	120.30
15	14	2533	A	N9-C4-C5	-5.37	103.65	105.80
1	13	1389	G	C6-C5-N7	-5.37	127.18	130.40
1	1G	2070	G	N3-C4-N9	-5.37	122.78	126.00
15	1H	1422	A	O5'-P-OP1	5.37	117.14	110.70
15	14	1749	G	C4-C5-N7	-5.37	108.65	110.80
15	14	2462	G	P-O3'-C3'	5.37	126.14	119.70
1	13	1591	A	C2-N3-C4	-5.37	107.92	110.60
1	1G	2096	A	N1-C6-N6	5.37	121.82	118.60
15	1H	1064	G	OP1-P-OP2	-5.37	111.55	119.60
15	14	216	G	O4'-C1'-N9	5.37	112.49	108.20
15	14	1328	G	O5'-P-OP2	-5.37	100.87	105.70
1	13	777	C	O5'-P-OP2	-5.37	100.87	105.70
15	1H	823	A	O5'-P-OP2	-5.37	100.87	105.70
15	14	844	C	C5-C4-N4	5.37	123.96	120.20
15	14	1268	A	C2-N3-C4	5.37	113.28	110.60
15	14	1966	C	N3-C4-N4	5.37	121.76	118.00
15	14	2055	A	C8-N9-C4	5.37	107.95	105.80
15	14	2590	C	N3-C4-N4	-5.37	114.24	118.00
15	1H	896	U	C4-C5-C6	5.36	122.92	119.70
15	1H	728	C	C2-N3-C4	-5.36	117.22	119.90
15	1H	1611	G	C8-N9-C4	-5.36	104.26	106.40
15	1H	1682	A	N1-C6-N6	5.36	121.82	118.60
15	1H	1937	A	N1-C6-N6	-5.36	115.38	118.60
15	1H	2411	G	N3-C4-C5	5.36	131.28	128.60
15	14	38	A	C2-N3-C4	5.36	113.28	110.60
15	14	300	G	O4'-C1'-N9	5.36	112.49	108.20
15	14	2332	C	C6-N1-C2	-5.36	118.16	120.30
15	14	2088	C	N1-C2-O2	-5.36	115.68	118.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
52	X1	76	A	N7-C8-N9	-5.36	111.12	113.80
15	1H	1013	G	C5-C6-O6	5.36	131.81	128.60
26	1J	18	G	C8-N9-C4	-5.36	104.26	106.40
1	13	1220	U	N3-C2-O2	-5.36	118.45	122.20
1	1G	1027	C	C5-C6-N1	-5.36	118.32	121.00
15	1H	144	C	C4-C5-C6	5.36	120.08	117.40
15	1H	2028	G	N9-C4-C5	-5.36	103.26	105.40
15	1H	2302	A	C5-N7-C8	-5.36	101.22	103.90
18	61	116	LEU	CA-CB-CG	5.36	127.62	115.30
15	14	785	C	N3-C2-O2	5.36	125.65	121.90
15	14	1928	G	C8-N9-C4	-5.36	104.26	106.40
15	1H	1381	G	C5-C6-N1	-5.35	108.82	111.50
1	13	803	C	C2-N1-C1'	5.35	124.69	118.80
15	1H	528	A	OP1-P-OP2	5.35	127.63	119.60
15	14	2027	G	N1-C6-O6	5.35	123.11	119.90
1	13	1433	U	C2-N1-C1'	-5.35	111.28	117.70
15	14	540	A	N1-C6-N6	5.35	121.81	118.60
26	16	82	U	C5-C4-O4	5.35	129.11	125.90
1	13	1421	A	N7-C8-N9	5.35	116.47	113.80
15	14	149	A	C5-C6-N1	-5.35	115.03	117.70
1	1G	1138	A	P-O3'-C3'	5.35	126.12	119.70
15	1H	52	A	C5-C6-N6	-5.35	119.42	123.70
15	1H	372	A	C8-N9-C4	-5.35	103.66	105.80
15	1H	1124	C	C6-N1-C2	-5.35	118.16	120.30
15	1H	1845	G	C8-N9-C4	-5.35	104.26	106.40
15	14	1434	G	O4'-C1'-N9	5.35	112.48	108.20
15	14	2340	G	N3-C2-N2	-5.35	116.16	119.90
43	A5	82	LEU	CA-CB-CG	5.35	127.60	115.30
15	14	2336	G	C8-N9-C4	-5.35	104.26	106.40
15	1H	1846	A	OP1-P-O3'	5.34	116.96	105.20
15	1H	2079	A	OP2-P-O3'	5.34	116.96	105.20
15	14	38	A	C8-N9-C4	-5.34	103.66	105.80
15	14	1417	G	N1-C6-O6	-5.34	116.69	119.90
15	1H	871	U	N3-C2-O2	-5.34	118.46	122.20
15	1H	1786	C	C6-N1-C2	5.34	122.44	120.30
15	1H	2790	C	O5'-P-OP2	-5.34	100.89	105.70
1	1G	1089	C	C5-C4-N4	5.34	123.94	120.20
15	1H	158	U	N1-C2-O2	5.34	126.54	122.80
15	1H	1913	G	N9-C4-C5	-5.34	103.26	105.40
15	14	1220	G	O4'-C1'-N9	5.34	112.47	108.20
15	14	1608	A	N1-C2-N3	5.34	131.97	129.30
15	14	1891	G	C6-C5-N7	-5.34	127.19	130.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
26	1J	105	G	C8-N9-C4	5.34	108.54	106.40
15	1H	824	G	C8-N9-C4	-5.34	104.26	106.40
15	1H	1721	U	N3-C2-O2	5.34	125.94	122.20
15	14	128	C	C6-N1-C2	5.34	122.44	120.30
15	14	2622	G	N3-C2-N2	5.34	123.64	119.90
15	1H	1408	A	N1-C6-N6	5.34	121.80	118.60
15	1H	2383	C	C6-N1-C2	-5.34	118.17	120.30
15	14	1440	U	C5-C6-N1	5.34	125.37	122.70
32	39	192	LEU	CA-CB-CG	5.34	127.58	115.30
15	1H	658	A	N7-C8-N9	-5.34	111.13	113.80
15	1H	1609	G	C2-N3-C4	-5.34	109.23	111.90
15	1H	1928	G	O5'-P-OP2	-5.34	100.90	105.70
15	1H	2361	A	C8-N9-C1'	-5.34	118.09	127.70
15	1H	2698	C	N3-C4-C5	-5.34	119.77	121.90
15	14	112	U	O5'-P-OP1	-5.34	100.90	105.70
15	14	299	G	C4-C5-N7	5.34	112.94	110.80
15	14	1647	C	C5-C6-N1	5.34	123.67	121.00
15	14	111	G	C8-N9-C4	5.33	108.53	106.40
15	14	724	A	C5-C6-N6	-5.33	119.43	123.70
15	14	2024	C	C6-N1-C2	5.33	122.43	120.30
15	14	2231	G	C4-C5-N7	5.33	112.93	110.80
29	AA	82	GLY	N-CA-C	5.33	126.44	113.10
1	13	1488	A	N7-C8-N9	5.33	116.47	113.80
15	1H	915	A	C4-N9-C1'	5.33	135.90	126.30
15	1H	1207	C	C5-C6-N1	-5.33	118.33	121.00
15	1H	1432	C	N3-C4-N4	5.33	121.73	118.00
15	1H	1635	A	C6-C5-N7	-5.33	128.57	132.30
15	1H	2559	G	N1-C6-O6	5.33	123.10	119.90
52	X1	36	A	N1-C6-N6	5.33	121.80	118.60
1	13	1589	G	N9-C4-C5	-5.33	103.27	105.40
15	1H	34	C	C5-C6-N1	5.33	123.67	121.00
15	1H	2630	U	C5-C6-N1	5.33	125.36	122.70
15	14	65	C	N3-C4-C5	5.33	124.03	121.90
15	14	614	C	N1-C2-O2	-5.33	115.70	118.90
15	14	1519	A	N7-C8-N9	5.33	116.47	113.80
52	W1	3	C	C5-C6-N1	5.33	123.67	121.00
1	13	2130	A	O5'-P-OP1	-5.33	100.90	105.70
1	1G	1160	U	N1-C2-O2	5.33	126.53	122.80
1	1G	1205	G	C6-C5-N7	-5.33	127.20	130.40
15	1H	1803	G	C5-N7-C8	5.33	106.97	104.30
15	1H	26	G	N3-C4-C5	-5.33	125.94	128.60
15	1H	157	U	C5-C6-N1	5.33	125.36	122.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
15	1H	2527	C	C6-N1-C2	5.33	122.43	120.30
15	14	1855	A	N1-C6-N6	-5.33	115.40	118.60
1	13	1362	A	C8-N9-C4	5.33	107.93	105.80
1	13	1549	G	C5-C6-O6	5.33	131.80	128.60
15	1H	2731	C	C5-C6-N1	-5.33	118.34	121.00
15	14	1592	A	O5'-P-OP1	5.33	117.09	110.70
26	1J	92	A	N9-C4-C5	5.33	107.93	105.80
52	X4	44	G	C5-C6-O6	-5.33	125.40	128.60
1	13	2002	A	N1-C2-N3	5.32	131.96	129.30
15	1H	831	A	C4-C5-N7	5.32	113.36	110.70
15	1H	1022	C	N1-C2-O2	5.32	122.09	118.90
15	14	2050	C	C6-N1-C2	5.32	122.43	120.30
26	16	1	A	C8-N9-C4	5.32	107.93	105.80
48	1A	90	LEU	CA-CB-CG	5.32	127.54	115.30
47	59	7	LEU	CA-CB-CG	5.32	127.54	115.30
15	1H	1349	U	N1-C2-N3	5.32	118.09	114.90
15	14	478	G	C5-C6-N1	-5.32	108.84	111.50
1	13	860	C	C6-N1-C2	-5.32	118.17	120.30
15	1H	980	A	C8-N9-C4	5.32	107.93	105.80
15	1H	1643	G	OP1-P-O3'	5.32	116.91	105.20
15	1H	1727	A	N7-C8-N9	-5.32	111.14	113.80
15	1H	1972	C	C5-C4-N4	-5.32	116.48	120.20
15	1H	2533	A	C4-C5-N7	5.32	113.36	110.70
26	1J	111	C	N3-C4-C5	-5.32	119.77	121.90
15	14	481	C	N3-C4-C5	5.32	124.03	121.90
1	13	1132	C	C6-N1-C2	-5.32	118.17	120.30
15	1H	191	C	C6-N1-C2	5.32	122.43	120.30
15	14	355	A	C4-C5-N7	5.32	113.36	110.70
15	1H	2695	C	C6-N1-C2	5.32	122.43	120.30
15	14	34	C	O5'-P-OP1	-5.31	100.92	105.70
15	1H	1426	G	C4-C5-N7	-5.31	108.67	110.80
15	1H	1912	C	C5-C4-N4	-5.31	116.48	120.20
15	1H	2613	A	OP2-P-O3'	5.31	116.89	105.20
15	14	1823	A	C6-N1-C2	-5.31	115.41	118.60
52	X4	7	A	C8-N9-C4	5.31	107.92	105.80
15	1H	108	G	O5'-P-OP2	-5.31	100.92	105.70
15	1H	1186	G	O5'-P-OP1	-5.31	100.92	105.70
15	1H	1748	A	N9-C1'-C2'	5.31	120.90	114.00
15	1H	2000	G	C5-C6-N1	5.31	114.16	111.50
1	13	716	G	O4'-C1'-N9	5.31	112.44	108.20
15	1H	1931	G	N3-C2-N2	5.31	123.61	119.90
15	14	2489	C	C6-N1-C2	-5.31	118.18	120.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
26	16	81	C	N3-C2-O2	-5.31	118.19	121.90
15	1H	999	G	C5-C6-O6	-5.31	125.42	128.60
15	1H	1298	U	N3-C2-O2	5.31	125.91	122.20
1	1G	1827	C	N1-C2-O2	5.30	122.08	118.90
1	1G	2114	G	N3-C4-C5	5.30	131.25	128.60
15	14	1306	C	C6-N1-C2	-5.30	118.18	120.30
1	1G	983	C	C6-N1-C2	-5.30	118.18	120.30
15	1H	139	A	C5-C6-N6	-5.30	119.46	123.70
15	14	2268	G	O5'-P-OP2	-5.30	100.93	105.70
15	14	2398	G	N1-C2-N2	-5.30	111.43	116.20
26	16	83	G	C4-N9-C1'	5.30	133.39	126.50
1	13	1526	G	O5'-P-OP2	-5.30	100.93	105.70
15	1H	2825	G	C8-N9-C4	5.30	108.52	106.40
1	1G	994	A	OP2-P-O3'	5.30	116.86	105.20
15	1H	36	G	N3-C2-N2	-5.30	116.19	119.90
15	1H	1870	C	N1-C2-O2	5.30	122.08	118.90
15	14	126	C	C5-C6-N1	5.30	123.65	121.00
15	14	355	A	N1-C6-N6	5.30	121.78	118.60
15	14	788	G	N7-C8-N9	-5.30	110.45	113.10
1	1G	1319	G	N1-C2-N3	5.30	127.08	123.90
1	1G	1446	C	C6-N1-C1'	-5.30	114.44	120.80
15	14	1305	G	C5-C6-O6	-5.30	125.42	128.60
15	14	2296	C	N3-C4-N4	5.30	121.71	118.00
1	1G	755	A	C4-C5-C6	5.30	119.65	117.00
15	1H	1892	G	N3-C4-C5	-5.30	125.95	128.60
15	1H	2448	A	N1-C2-N3	5.30	131.95	129.30
15	14	690	C	C5-C6-N1	5.30	123.65	121.00
15	14	2639	G	C5-C6-O6	-5.30	125.42	128.60
15	14	2727	U	C5-C4-O4	5.30	129.08	125.90
1	13	858	C	C6-N1-C2	5.29	122.42	120.30
1	13	2062	A	C8-N9-C4	5.29	107.92	105.80
15	14	1690	C	C6-N1-C2	5.29	122.42	120.30
1	13	1358	A	OP1-P-O3'	5.29	116.85	105.20
15	1H	122	G	O5'-P-OP1	5.29	117.05	110.70
15	1H	837	A	C8-N9-C4	5.29	107.92	105.80
15	1H	1306	C	N1-C2-N3	5.29	122.91	119.20
15	1H	1613	G	C5-C6-O6	5.29	131.78	128.60
15	1H	2434	U	N1-C2-N3	5.29	118.08	114.90
15	14	878	A	C5-C6-N1	-5.29	115.05	117.70
15	14	2749	A	N1-C2-N3	5.29	131.95	129.30
26	16	46	G	N7-C8-N9	-5.29	110.45	113.10
15	1H	2611	U	N1-C2-N3	5.29	118.08	114.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
15	14	162	C	C6-N1-C2	-5.29	118.18	120.30
15	14	187	A	C6-N1-C2	-5.29	115.42	118.60
15	14	775	G	O5'-P-OP1	-5.29	100.94	105.70
15	14	2532	C	O5'-P-OP2	-5.29	100.94	105.70
15	1H	735	G	C5-C6-O6	-5.29	125.43	128.60
52	W1	32	U	C2-N1-C1'	5.29	124.05	117.70
1	1G	653	G	C4-N9-C1'	-5.29	119.62	126.50
1	1G	747	G	C8-N9-C4	-5.29	104.28	106.40
15	1H	1330	G	N3-C4-C5	5.29	131.24	128.60
15	1H	1479	C	O5'-P-OP2	-5.29	100.94	105.70
15	1H	2863	A	OP1-P-OP2	-5.29	111.67	119.60
26	1J	14	C	C5-C6-N1	5.29	123.64	121.00
15	14	845	C	OP2-P-O3'	5.29	116.83	105.20
30	35	34	GLY	N-CA-C	-5.29	99.88	113.10
15	1H	801	A	C5-N7-C8	-5.29	101.26	103.90
15	1H	1837	A	C2-N3-C4	5.29	113.24	110.60
15	1H	2037	G	C5-C6-N1	5.29	114.14	111.50
15	14	617	G	N7-C8-N9	5.29	115.74	113.10
15	14	1061	C	C6-N1-C2	-5.29	118.19	120.30
15	14	1963	A	C2-N3-C4	-5.29	107.96	110.60
15	1H	502	G	C8-N9-C4	-5.28	104.29	106.40
15	1H	2517	G	N3-C4-C5	-5.28	125.96	128.60
15	14	1826	G	OP1-P-O3'	5.28	116.83	105.20
15	1H	1850	G	C2-N3-C4	5.28	114.54	111.90
1	13	935	U	N3-C2-O2	-5.28	118.50	122.20
15	1H	2518	A	C2-N3-C4	5.28	113.24	110.60
1	1G	2149	G	N1-C6-O6	5.28	123.07	119.90
15	1H	123	G	C4-C5-N7	5.28	112.91	110.80
15	1H	816	U	O5'-P-OP1	-5.28	100.95	105.70
15	1H	1616	A	N1-C6-N6	-5.28	115.43	118.60
15	1H	2354	G	O5'-P-OP2	-5.28	100.95	105.70
15	14	1924	G	OP2-P-O3'	5.28	116.81	105.20
1	1G	1321	U	C5-C4-O4	-5.28	122.73	125.90
15	1H	2008	C	C5-C6-N1	-5.28	118.36	121.00
15	1H	2727	U	C2-N3-C4	-5.28	123.83	127.00
15	14	183	U	C5-C6-N1	-5.28	120.06	122.70
15	14	2407	A	N1-C6-N6	-5.28	115.44	118.60
15	14	2445	A	C4-C5-N7	5.28	113.34	110.70
38	88	26	TYR	N-CA-C	5.28	125.24	111.00
1	1G	653	G	N3-C4-N9	-5.27	122.84	126.00
15	1H	1604	A	C4-C5-C6	5.27	119.64	117.00
1	13	1134	G	N3-C4-N9	5.27	129.16	126.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	1G	946	G	C4-C5-N7	-5.27	108.69	110.80
15	1H	211	A	N7-C8-N9	-5.27	111.16	113.80
15	14	179	G	C8-N9-C4	5.27	108.51	106.40
15	14	2017	G	O5'-P-OP2	-5.27	100.95	105.70
15	1H	94	G	N3-C4-C5	-5.27	125.96	128.60
15	1H	584	G	N1-C6-O6	5.27	123.06	119.90
15	1H	814	G	N7-C8-N9	5.27	115.73	113.10
15	1H	147	U	C6-N1-C2	5.27	124.16	121.00
15	1H	842	A	C5-C6-N6	-5.27	119.48	123.70
15	1H	1288	G	OP2-P-O3'	5.27	116.79	105.20
15	1H	1832	U	C5-C4-O4	-5.27	122.74	125.90
15	1H	2105	G	N3-C2-N2	-5.27	116.21	119.90
15	1H	2599	U	C2-N3-C4	-5.27	123.84	127.00
15	14	817	G	C4-C5-C6	5.27	121.96	118.80
15	1H	418	A	N1-C6-N6	5.27	121.76	118.60
15	1H	611	A	N1-C2-N3	-5.27	126.67	129.30
15	1H	731	G	C4-N9-C1'	5.27	133.35	126.50
15	1H	1520	G	OP2-P-O3'	5.27	116.79	105.20
15	1H	2238	G	N1-C6-O6	5.27	123.06	119.90
15	1H	2404	G	OP1-P-O3'	5.27	116.79	105.20
15	14	507	A	P-O3'-C3'	5.27	126.02	119.70
1	13	1488	A	N1-C6-N6	5.27	121.76	118.60
1	13	1695	A	C8-N9-C4	5.27	107.91	105.80
12	M5	57	ARG	NE-CZ-NH2	-5.27	117.67	120.30
15	14	1009	G	OP1-P-O3'	5.27	116.78	105.20
15	1H	459	G	C4-C5-C6	5.26	121.96	118.80
15	1H	991	G	C4-N9-C1'	5.26	133.34	126.50
15	1H	2322	G	N1-C6-O6	5.26	123.06	119.90
15	1H	2343	A	N7-C8-N9	-5.26	111.17	113.80
15	14	2517	G	N1-C2-N3	5.26	127.06	123.90
4	19	41	GLY	N-CA-C	-5.26	99.94	113.10
15	1H	1477	C	C2-N1-C1'	-5.26	113.01	118.80
1	13	1515	A	C8-N9-C4	5.26	107.90	105.80
1	1G	973	G	N1-C6-O6	5.26	123.06	119.90
15	1H	528	A	OP1-P-O3'	5.26	116.77	105.20
1	13	2112	G	C8-N9-C4	5.26	108.50	106.40
1	1G	1321	U	N3-C4-O4	5.26	123.08	119.40
15	1H	466	G	O5'-P-OP2	5.26	117.01	110.70
15	1H	911	G	N1-C6-O6	-5.26	116.75	119.90
15	1H	1741	C	C6-N1-C2	-5.26	118.20	120.30
15	1H	2338	G	C5-C6-O6	-5.25	125.45	128.60
15	1H	2678	G	N7-C8-N9	5.25	115.73	113.10

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
15	1H	2014	G	C5-C6-O6	-5.25	125.45	128.60
15	1H	2374	C	N3-C4-C5	-5.25	119.80	121.90
15	1H	2478	C	C6-N1-C2	5.25	122.40	120.30
15	14	1708	C	N3-C2-O2	5.25	125.58	121.90
15	1H	183	U	C5-C6-N1	-5.25	120.08	122.70
15	14	1762	C	C6-N1-C2	-5.25	118.20	120.30
4	19	273	ARG	N-CA-C	5.25	125.17	111.00
15	1H	1937	A	C4-C5-N7	-5.25	108.08	110.70
15	14	195	G	N3-C4-N9	5.25	129.15	126.00
15	14	2084	A	C4-C5-N7	-5.25	108.08	110.70
15	1H	1922	G	C4-C5-C6	5.25	121.95	118.80
15	14	1704	A	O5'-P-OP1	-5.25	100.98	105.70
15	14	2515	U	N3-C4-C5	5.25	117.75	114.60
15	14	2621	C	C2-N1-C1'	-5.25	113.03	118.80
26	16	101	G	N3-C2-N2	5.25	123.57	119.90
15	1H	556	A	C8-N9-C4	-5.25	103.70	105.80
15	14	1891	G	N3-C4-C5	-5.25	125.98	128.60
15	14	2704	U	P-O3'-C3'	5.25	125.99	119.70
15	1H	2599	U	O5'-P-OP1	5.24	116.99	110.70
15	14	648	A	N1-C6-N6	5.24	121.75	118.60
15	14	1842	U	N3-C2-O2	5.24	125.87	122.20
26	16	10	U	O5'-P-OP1	5.24	116.99	110.70
15	1H	1480	U	N3-C2-O2	5.24	125.87	122.20
15	14	1847	G	C5-N7-C8	5.24	106.92	104.30
15	1H	437	C	O5'-P-OP1	5.24	116.99	110.70
15	1H	1997	A	C6-N1-C2	-5.24	115.46	118.60
15	1H	2286	G	C6-C5-N7	-5.24	127.25	130.40
15	1H	2483	G	C8-N9-C1'	-5.24	120.19	127.00
15	1H	2720	A	C8-N9-C4	5.24	107.90	105.80
15	14	833	A	O4'-C1'-N9	5.24	112.39	108.20
15	14	1843	A	N7-C8-N9	5.24	116.42	113.80
15	14	2438	U	C6-N1-C2	5.24	124.14	121.00
15	14	2618	G	OP1-P-O3'	5.24	116.73	105.20
26	1J	78	G	C6-C5-N7	-5.24	127.25	130.40
15	1H	2654	A	N1-C2-N3	5.24	131.92	129.30
15	14	720	C	C4-C5-C6	5.24	120.02	117.40
23	21	71	GLY	N-CA-C	-5.24	100.00	113.10
1	1G	1785	A	P-O3'-C3'	5.24	125.98	119.70
15	14	1925	A	N3-C4-N9	5.24	131.59	127.40
1	1G	1928	U	C5-C6-N1	5.24	125.32	122.70
15	1H	733	G	C5-C6-O6	5.24	131.74	128.60
15	14	742	C	C2-N3-C4	-5.24	117.28	119.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
15	14	892	G	N3-C4-C5	5.24	131.22	128.60
15	14	1486	C	C5-C6-N1	5.24	123.62	121.00
15	14	1774	G	N1-C6-O6	5.24	123.04	119.90
15	14	1818	A	O4'-C1'-N9	-5.24	104.01	108.20
15	14	1865	G	C2-N3-C4	-5.24	109.28	111.90
15	14	2268	G	N1-C6-O6	5.24	123.04	119.90
1	1G	1867	U	C5-C6-N1	-5.23	120.08	122.70
15	1H	1956	U	O5'-P-OP1	5.23	116.98	110.70
15	1H	2692	G	C8-N9-C4	5.23	108.49	106.40
15	14	817	G	O5'-P-OP2	-5.23	100.99	105.70
1	13	1418	U	C5-C4-O4	5.23	129.04	125.90
15	1H	158	U	N3-C2-O2	-5.23	118.54	122.20
15	1H	556	A	N7-C8-N9	5.23	116.42	113.80
15	1H	1478	G	C4-N9-C1'	5.23	133.30	126.50
15	1H	1824	C	OP2-P-O3'	5.23	116.71	105.20
15	14	1930	C	O5'-P-OP2	-5.23	100.99	105.70
1	13	1994	C	O5'-P-OP1	-5.23	100.99	105.70
1	1G	994	A	N7-C8-N9	5.23	116.42	113.80
1	1G	1555	C	N1-C2-O2	5.23	122.04	118.90
15	1H	433	U	N1-C2-O2	5.23	126.46	122.80
15	14	1512	C	C6-N1-C2	-5.23	118.21	120.30
15	14	2521	U	N3-C4-O4	-5.23	115.74	119.40
52	X4	44	G	C4-C5-N7	5.23	112.89	110.80
15	1H	2071	G	C8-N9-C4	5.23	108.49	106.40
3	B5	40	LYS	C-N-CA	-5.23	108.63	121.70
1	1G	1434	C	N1-C2-O2	-5.23	115.76	118.90
15	1H	474	G	C2-N3-C4	-5.23	109.29	111.90
15	1H	1939	C	C5-C4-N4	5.23	123.86	120.20
15	14	2115	G	C8-N9-C4	5.23	108.49	106.40
15	14	2438	U	C5-C6-N1	-5.23	120.09	122.70
15	14	1477	C	C2-N1-C1'	-5.23	113.05	118.80
15	1H	196	U	C5-C6-N1	-5.22	120.09	122.70
15	1H	603	A	C6-C5-N7	-5.22	128.64	132.30
15	1H	1592	A	N1-C2-N3	5.22	131.91	129.30
15	1H	2073	G	C8-N9-C4	-5.22	104.31	106.40
15	14	2041	U	O5'-P-OP2	-5.22	101.00	105.70
15	14	2518	A	C5-C6-N1	5.22	120.31	117.70
15	14	2740	C	C6-N1-C2	5.22	122.39	120.30
52	X1	75	C	OP2-P-O3'	5.22	116.69	105.20
1	1G	2149	G	C5-C6-O6	-5.22	125.47	128.60
15	1H	719	A	O4'-C1'-N9	-5.22	104.02	108.20
15	1H	2483	G	N7-C8-N9	5.22	115.71	113.10

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	13	907	G	N3-C4-C5	5.22	131.21	128.60
1	13	1216	G	N3-C2-N2	-5.22	116.25	119.90
15	1H	2325	A	N7-C8-N9	5.22	116.41	113.80
15	1H	180	A	C8-N9-C4	5.22	107.89	105.80
15	1H	182	C	C5-C4-N4	-5.22	116.55	120.20
15	1H	2338	G	N3-C4-C5	5.22	131.21	128.60
15	1H	2903	G	N3-C4-N9	5.22	129.13	126.00
15	14	853	A	C5-C6-N1	5.22	120.31	117.70
15	14	1967	C	C6-N1-C2	-5.22	118.21	120.30
15	1H	549	G	O5'-P-OP2	5.22	116.96	110.70
1	1G	1545	G	C5-C6-N1	-5.22	108.89	111.50
15	1H	12	U	C6-N1-C2	-5.22	117.87	121.00
15	1H	17	G	C5-N7-C8	-5.22	101.69	104.30
15	1H	1538	U	C5-C4-O4	5.22	129.03	125.90
15	1H	2084	A	C2-N3-C4	-5.22	107.99	110.60
15	1H	2495	C	N3-C4-C5	-5.22	119.81	121.90
15	14	1072	G	N1-C6-O6	5.22	123.03	119.90
15	14	1412	C	C2-N1-C1'	-5.22	113.06	118.80
15	14	1665	A	C5-C6-N6	-5.22	119.53	123.70
15	1H	558	C	C6-N1-C2	5.21	122.39	120.30
15	1H	1442	A	C5-C6-N6	5.21	127.87	123.70
15	1H	2693	C	N1-C2-O2	-5.21	115.77	118.90
15	14	557	G	N9-C4-C5	-5.21	103.31	105.40
15	14	1293	G	N1-C6-O6	5.21	123.03	119.90
15	14	1397	G	C5-C6-O6	-5.21	125.47	128.60
1	1G	1928	U	OP1-P-O3'	5.21	116.67	105.20
15	1H	1316	U	OP1-P-OP2	5.21	127.42	119.60
1	13	1742	C	C5-C6-N1	5.21	123.61	121.00
1	1G	1017	G	C5-C6-N1	-5.21	108.89	111.50
15	1H	797	G	OP1-P-O3'	5.21	116.67	105.20
15	1H	1673	G	N9-C4-C5	-5.21	103.31	105.40
1	1G	1003	G	C8-N9-C4	-5.21	104.32	106.40
1	1G	1908	U	C6-N1-C2	-5.21	117.87	121.00
15	1H	2605	A	C8-N9-C4	5.21	107.88	105.80
15	14	188	C	O5'-P-OP1	-5.21	101.01	105.70
15	14	732	C	N3-C2-O2	-5.21	118.25	121.90
52	X4	26	A	N9-C4-C5	-5.21	103.72	105.80
1	13	929	A	N9-C4-C5	-5.21	103.72	105.80
15	1H	1878	C	N3-C4-N4	5.21	121.65	118.00
15	1H	2518	A	OP1-P-OP2	-5.21	111.79	119.60
15	14	600	A	O5'-P-OP2	5.21	116.95	110.70
22	H8	117	LEU	CA-CB-CG	5.21	127.28	115.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
51	Y4	41	U	P-O3'-C3'	5.21	125.95	119.70
1	1G	2055	U	N1-C2-N3	5.21	118.02	114.90
15	1H	38	A	N3-C4-C5	-5.21	123.16	126.80
15	1H	75	C	C6-N1-C2	-5.21	118.22	120.30
15	1H	910	A	C4-C5-N7	5.21	113.30	110.70
15	1H	1083	U	C5-C4-O4	5.21	129.02	125.90
15	1H	1709	U	N1-C2-O2	-5.21	119.16	122.80
15	14	1186	G	C6-C5-N7	-5.21	127.28	130.40
15	14	1565	U	N3-C4-O4	-5.21	115.76	119.40
15	14	1663	A	C6-C5-N7	-5.21	128.66	132.30
15	14	1979	G	C8-N9-C4	-5.21	104.32	106.40
15	14	2086	G	N3-C4-C5	-5.21	126.00	128.60
15	14	2297	G	O5'-P-OP1	-5.21	101.01	105.70
15	14	2515	U	C2-N1-C1'	-5.21	111.45	117.70
15	1H	795	A	C5-C6-N6	-5.21	119.54	123.70
15	1H	1813	U	O4'-C1'-N1	5.21	112.36	108.20
15	1H	1852	U	N3-C4-O4	-5.21	115.76	119.40
15	1H	945	C	C2-N1-C1'	5.20	124.52	118.80
15	14	497	G	C5-C6-N1	5.20	114.10	111.50
15	14	648	A	N3-C4-N9	-5.20	123.24	127.40
15	1H	1167	C	C6-N1-C2	5.20	122.38	120.30
15	14	2398	G	C8-N9-C1'	-5.20	120.24	127.00
26	16	58	G	C8-N9-C1'	-5.20	120.24	127.00
15	1H	158	U	C5-C6-N1	5.20	125.30	122.70
15	14	1549	G	N1-C6-O6	5.20	123.02	119.90
15	14	1928	G	N9-C4-C5	5.20	107.48	105.40
15	14	2392	A	C2-N3-C4	-5.20	108.00	110.60
15	14	2888	C	C6-N1-C2	5.20	122.38	120.30
1	13	958	G	C6-C5-N7	-5.20	127.28	130.40
1	13	1851	G	C2-N3-C4	5.20	114.50	111.90
1	1G	2158	C	C5-C6-N1	5.20	123.60	121.00
15	1H	718	G	N3-C4-C5	-5.20	126.00	128.60
15	1H	1239	G	N7-C8-N9	-5.20	110.50	113.10
15	1H	2098	C	C6-N1-C2	-5.20	118.22	120.30
15	14	549	G	C8-N9-C4	-5.20	104.32	106.40
15	14	885	G	C5-N7-C8	-5.20	101.70	104.30
15	14	2063	G	C8-N9-C4	5.20	108.48	106.40
1	13	1857	C	N3-C4-N4	5.20	121.64	118.00
15	1H	1315	G	C8-N9-C4	5.20	108.48	106.40
26	16	62	C	C6-N1-C2	-5.20	118.22	120.30
15	1H	199	C	C2-N3-C4	-5.20	117.30	119.90
15	1H	205	G	C8-N9-C4	5.20	108.48	106.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
39	J8	85	LEU	CA-CB-CG	-5.20	103.35	115.30
1	13	747	G	C4-C5-N7	5.19	112.88	110.80
15	1H	1362	U	C2-N1-C1'	5.19	123.93	117.70
15	14	725	A	OP1-P-OP2	5.19	127.39	119.60
15	1H	1240	G	N7-C8-N9	-5.19	110.50	113.10
15	1H	1376	C	N3-C4-C5	-5.19	119.82	121.90
15	1H	2373	G	OP1-P-O3'	5.19	116.62	105.20
15	1H	2416	U	OP2-P-O3'	5.19	116.62	105.20
15	1H	2490	C	C6-N1-C2	-5.19	118.22	120.30
1	13	1396	A	C8-N9-C4	5.19	107.88	105.80
15	1H	577	G	C5-C6-N1	5.19	114.09	111.50
15	1H	752	U	C5-C6-N1	-5.19	120.11	122.70
15	1H	1300	C	N3-C4-N4	5.19	121.63	118.00
15	1H	1826	G	C4-C5-C6	-5.19	115.69	118.80
15	14	663	G	N3-C2-N2	-5.19	116.27	119.90
15	14	885	G	C6-C5-N7	-5.19	127.28	130.40
26	16	3	U	O5'-P-OP1	-5.19	101.03	105.70
52	X1	37	A	C6-N1-C2	5.19	121.71	118.60
1	1G	1901	G	C4-N9-C1'	5.19	133.25	126.50
15	14	715	G	N3-C4-C5	5.19	131.19	128.60
15	14	1932	G	C5-C6-O6	-5.19	125.49	128.60
1	13	1429	G	C5-C6-O6	-5.19	125.49	128.60
15	1H	437	C	C6-N1-C2	5.19	122.38	120.30
15	1H	2003	A	OP2-P-O3'	5.19	116.61	105.20
15	1H	2608	U	N3-C4-C5	-5.19	111.49	114.60
15	14	785	C	C2-N1-C1'	-5.19	113.09	118.80
15	14	1839	U	OP2-P-O3'	5.19	116.61	105.20
15	14	2028	G	OP2-P-O3'	5.19	116.61	105.20
15	1H	848	G	C8-N9-C1'	-5.19	120.26	127.00
15	1H	1202	C	N3-C4-N4	5.19	121.63	118.00
15	14	1614	C	C5-C6-N1	-5.19	118.41	121.00
1	13	772	C	O5'-P-OP1	-5.18	101.03	105.70
15	1H	731	G	N9-C4-C5	-5.18	103.33	105.40
15	1H	1661	C	C6-N1-C2	5.18	122.37	120.30
15	1H	1725	C	C5-C4-N4	5.18	123.83	120.20
15	1H	1876	G	O5'-P-OP2	-5.18	101.03	105.70
15	1H	2026	A	C2-N3-C4	5.18	113.19	110.60
15	14	718	G	N1-C2-N2	5.18	120.87	116.20
15	14	903	G	C5-C6-N1	-5.18	108.91	111.50
26	16	46	G	C6-C5-N7	5.18	133.51	130.40
1	1G	1819	C	C6-N1-C2	-5.18	118.23	120.30
15	1H	531	U	C5-C6-N1	5.18	125.29	122.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
15	1H	1020	A	N1-C2-N3	5.18	131.89	129.30
15	14	1808	C	OP1-P-OP2	-5.18	111.83	119.60
1	13	672	A	C6-N1-C2	-5.18	115.49	118.60
1	13	1854	A	C2-N3-C4	-5.18	108.01	110.60
15	1H	288	G	N3-C4-N9	5.18	129.11	126.00
1	1G	1054	G	N9-C4-C5	5.18	107.47	105.40
1	1G	1537	A	N9-C4-C5	-5.18	103.73	105.80
15	1H	661	C	N3-C4-C5	5.18	123.97	121.90
15	1H	2322	G	N7-C8-N9	5.18	115.69	113.10
15	1H	2325	A	C8-N9-C4	-5.18	103.73	105.80
15	1H	2383	C	N3-C4-C5	-5.18	119.83	121.90
15	14	2392	A	C8-N9-C4	5.18	107.87	105.80
15	1H	2334	G	N3-C4-N9	5.18	129.11	126.00
15	1H	2415	G	OP2-P-O3'	5.18	116.59	105.20
15	1H	2520	G	C5-C6-N1	-5.18	108.91	111.50
15	14	660	A	C5-N7-C8	-5.18	101.31	103.90
1	1G	2149	G	C4-C5-N7	5.18	112.87	110.80
15	1H	800	A	N9-C4-C5	5.18	107.87	105.80
15	1H	2065	C	N3-C4-N4	5.18	121.62	118.00
15	1H	2349	G	OP2-P-O3'	5.18	116.59	105.20
15	14	2262	A	N1-C6-N6	-5.18	115.49	118.60
1	13	747	G	C5-N7-C8	-5.17	101.71	104.30
1	13	1147	C	C2-N1-C1'	5.17	124.49	118.80
1	13	1439	C	O5'-P-OP2	-5.17	101.04	105.70
15	1H	2453	U	C5-C6-N1	-5.17	120.11	122.70
15	1H	2465	A	C8-N9-C4	-5.17	103.73	105.80
15	14	423	U	N1-C2-O2	5.17	126.42	122.80
36	N8	41	PRO	C-N-CA	5.17	143.73	122.00
4	11	235	GLY	N-CA-C	5.17	126.03	113.10
15	1H	2256	A	C4-C5-N7	-5.17	108.11	110.70
15	14	1311	A	OP1-P-O3'	5.17	116.58	105.20
15	14	2285	G	N7-C8-N9	5.17	115.69	113.10
15	1H	123	G	N3-C4-N9	5.17	129.10	126.00
15	1H	1070	G	P-O3'-C3'	5.17	125.91	119.70
15	1H	1316	U	OP2-P-O3'	5.17	116.58	105.20
15	1H	2760	G	C2-N3-C4	-5.17	109.31	111.90
15	14	242	G	C5-N7-C8	5.17	106.89	104.30
15	14	2610	G	O5'-P-OP1	-5.17	101.05	105.70
1	1G	973	G	N9-C4-C5	-5.17	103.33	105.40
15	1H	842	A	O4'-C1'-N9	-5.17	104.06	108.20
15	1H	1027	G	C5-C6-O6	-5.17	125.50	128.60
15	14	2444	G	O5'-P-OP2	-5.17	101.05	105.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
15	1H	862	U	O5'-P-OP2	-5.17	101.05	105.70
15	1H	955	U	OP2-P-O3'	5.17	116.57	105.20
15	1H	2304	G	O5'-P-OP1	5.17	116.90	110.70
16	B8	93	ARG	NE-CZ-NH1	5.17	122.89	120.30
15	1H	1663	A	C4-C5-N7	5.17	113.28	110.70
15	14	140	A	C4-C5-N7	5.17	113.28	110.70
15	14	792	G	C5-C6-O6	5.17	131.70	128.60
15	14	1525	G	N1-C6-O6	5.17	123.00	119.90
15	14	1838	C	OP1-P-O3'	5.17	116.57	105.20
15	14	2440	A	C2-N3-C4	5.17	113.18	110.60
4	11	122	ASP	CB-CG-OD2	5.17	122.95	118.30
15	1H	2527	C	C5-C4-N4	-5.17	116.58	120.20
15	14	2361	A	N3-C4-N9	-5.17	123.27	127.40
1	13	669	C	N3-C4-C5	-5.16	119.83	121.90
1	13	1693	U	P-O3'-C3'	5.16	125.90	119.70
1	13	1851	G	N1-C6-O6	-5.16	116.80	119.90
15	1H	53	G	C8-N9-C4	-5.16	104.33	106.40
15	1H	851	A	O5'-P-OP1	5.16	116.90	110.70
15	1H	819	G	C4-C5-N7	5.16	112.86	110.80
15	1H	1877	C	N3-C4-C5	5.16	123.97	121.90
15	1H	2476	C	C2-N3-C4	-5.16	117.32	119.90
15	14	2350	A	N1-C6-N6	-5.16	115.50	118.60
1	1G	849	A	C4-N9-C1'	5.16	135.59	126.30
15	1H	272	U	N3-C2-O2	-5.16	118.59	122.20
15	1H	1661	C	O5'-P-OP2	-5.16	101.06	105.70
15	14	2448	A	C8-N9-C4	-5.16	103.74	105.80
15	14	2793	G	C5-C6-O6	-5.16	125.50	128.60
15	1H	202	G	N7-C8-N9	-5.16	110.52	113.10
15	1H	1815	C	C2-N3-C4	-5.16	117.32	119.90
15	14	990	U	C4-C5-C6	5.16	122.80	119.70
15	14	2407	A	C5-C6-N6	5.16	127.83	123.70
52	W4	34	G	C4-N9-C1'	5.16	133.21	126.50
1	13	2043	G	N1-C6-O6	5.16	122.99	119.90
2	65	110	LEU	CB-CG-CD2	5.16	119.77	111.00
15	1H	137	G	C5-C6-O6	-5.16	125.51	128.60
1	13	754	G	N1-C6-O6	-5.16	116.81	119.90
15	1H	1648	C	C2-N3-C4	-5.16	117.32	119.90
15	14	231	A	O5'-P-OP2	-5.16	101.06	105.70
15	14	234	A	N7-C8-N9	-5.16	111.22	113.80
26	16	28	A	C8-N9-C4	-5.16	103.74	105.80
52	V1	76	A	N1-C2-N3	5.16	131.88	129.30
1	1G	1973	A	OP2-P-O3'	5.15	116.54	105.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	1G	679	A	C8-N9-C4	-5.15	103.74	105.80
1	1G	744	G	N3-C4-C5	-5.15	126.02	128.60
15	1H	2607	G	N1-C6-O6	5.15	122.99	119.90
1	13	1931	G	C8-N9-C4	5.15	108.46	106.40
15	1H	100	G	C4-C5-N7	-5.15	108.74	110.80
15	1H	825	G	O4'-C1'-N9	-5.15	104.08	108.20
15	1H	1624	C	N3-C2-O2	5.15	125.51	121.90
15	1H	1669	G	C5-N7-C8	5.15	106.88	104.30
15	1H	2726	A	OP1-P-O3'	5.15	116.53	105.20
15	14	4	C	C2-N1-C1'	5.15	124.47	118.80
15	14	1996	A	C8-N9-C4	5.15	107.86	105.80
15	14	2742	U	C6-N1-C2	5.15	124.09	121.00
15	1H	639	U	N1-C2-O2	5.15	126.40	122.80
15	1H	2432	C	N3-C4-C5	-5.15	119.84	121.90
15	14	1545	A	C6-C5-N7	-5.15	128.70	132.30
1	13	2122	A	O5'-P-OP2	5.15	116.88	110.70
15	1H	1017	C	N3-C2-O2	5.15	125.50	121.90
15	1H	1869	G	C6-C5-N7	-5.15	127.31	130.40
15	14	495	G	N7-C8-N9	-5.15	110.53	113.10
15	14	1045	G	OP1-P-O3'	5.15	116.53	105.20
15	14	1343	U	C5-C4-O4	-5.15	122.81	125.90
15	14	2740	C	C5-C6-N1	-5.15	118.43	121.00
1	13	1389	G	C4-C5-N7	5.15	112.86	110.80
15	1H	1085	G	C8-N9-C4	5.15	108.46	106.40
15	14	903	G	N3-C4-N9	-5.15	122.91	126.00
15	14	966	A	O5'-P-OP1	-5.15	101.07	105.70
1	13	1595	C	N3-C2-O2	-5.14	118.30	121.90
1	1G	730	C	O5'-P-OP1	-5.14	101.07	105.70
1	1G	907	G	C4-N9-C1'	5.14	133.19	126.50
15	1H	1355	C	N3-C2-O2	5.14	125.50	121.90
15	1H	1445	U	C5-C4-O4	5.14	128.99	125.90
15	1H	2086	G	N3-C2-N2	5.14	123.50	119.90
15	1H	2601	C	N1-C2-O2	-5.14	115.81	118.90
15	1H	2654	A	C5-C6-N1	-5.14	115.13	117.70
1	13	1501	G	C8-N9-C4	5.14	108.46	106.40
1	13	1913	A	C5-N7-C8	-5.14	101.33	103.90
1	1G	2155	U	O5'-P-OP1	-5.14	101.07	105.70
15	1H	59	G	OP2-P-O3'	5.14	116.51	105.20
15	1H	177	G	N1-C2-N2	-5.14	111.57	116.20
15	1H	1652	A	N1-C6-N6	5.14	121.68	118.60
15	14	185	A	C5-C6-N6	-5.14	119.59	123.70
15	14	2333	G	C6-C5-N7	-5.14	127.32	130.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
39	J8	40	ARG	NE-CZ-NH2	-5.14	117.73	120.30
51	Y1	36	G	OP2-P-O3'	5.14	116.51	105.20
15	14	1525	G	N7-C8-N9	5.14	115.67	113.10
4	11	131	LEU	CA-CB-CG	5.14	127.11	115.30
1	1G	1682	C	O5'-P-OP1	-5.14	101.08	105.70
15	1H	780	C	C2-N1-C1'	5.14	124.45	118.80
15	1H	1725	C	C6-N1-C2	-5.14	118.25	120.30
15	1H	1798	G	N1-C6-O6	-5.14	116.82	119.90
15	1H	1837	A	OP2-P-O3'	5.14	116.50	105.20
15	1H	2286	G	C4-N9-C1'	5.14	133.18	126.50
15	1H	2354	G	C4-C5-N7	-5.14	108.75	110.80
15	14	502	G	N7-C8-N9	5.14	115.67	113.10
15	14	2117	U	C6-N1-C2	-5.14	117.92	121.00
15	14	2268	G	C5-C6-O6	-5.14	125.52	128.60
1	13	1369	U	C2-N1-C1'	-5.13	111.54	117.70
1	13	1940	U	C5-C6-N1	5.13	125.27	122.70
1	13	2021	U	N3-C4-C5	-5.13	111.52	114.60
15	1H	689	G	C2-N3-C4	5.13	114.47	111.90
15	1H	1249	C	N3-C4-C5	5.13	123.95	121.90
15	1H	1987	C	C5-C6-N1	5.13	123.57	121.00
15	1H	898	A	C8-N9-C4	5.13	107.85	105.80
15	14	990	U	N1-C2-O2	-5.13	119.21	122.80
1	1G	1190	U	C5-C4-O4	-5.13	122.82	125.90
15	1H	860	U	C5-C6-N1	-5.13	120.13	122.70
15	1H	2569	U	N1-C2-O2	-5.13	119.21	122.80
15	14	2290	C	OP2-P-O3'	5.13	116.49	105.20
15	14	2644	A	C2-N3-C4	5.13	113.17	110.60
1	13	1443	A	C8-N9-C4	5.13	107.85	105.80
1	1G	1053	A	P-O3'-C3'	5.13	125.86	119.70
15	1H	1045	G	C8-N9-C4	5.13	108.45	106.40
15	14	1656	C	N3-C4-N4	5.13	121.59	118.00
15	14	232	G	C2-N3-C4	-5.13	109.34	111.90
1	1G	852	G	N3-C4-N9	5.13	129.07	126.00
1	1G	1867	U	C2-N1-C1'	-5.13	111.55	117.70
15	1H	1381	G	N3-C2-N2	-5.13	116.31	119.90
15	14	1703	G	C4-N9-C1'	5.13	133.16	126.50
15	14	1928	G	N3-C2-N2	-5.13	116.31	119.90
15	14	2369	G	N1-C6-O6	-5.13	116.82	119.90
15	14	2586	C	O5'-P-OP1	-5.13	101.09	105.70
15	14	2593	G	C5-C6-O6	5.13	131.68	128.60
15	1H	2442	C	N1-C2-O2	-5.12	115.83	118.90
15	1H	2599	U	N3-C4-C5	5.12	117.67	114.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	13	1114	G	N7-C8-N9	5.12	115.66	113.10
1	13	2006	C	C6-N1-C2	-5.12	118.25	120.30
1	1G	1309	C	C6-N1-C2	5.12	122.35	120.30
15	1H	797	G	C8-N9-C1'	5.12	133.66	127.00
26	1J	90	C	N1-C2-N3	-5.12	115.61	119.20
15	1H	915	A	N7-C8-N9	5.12	116.36	113.80
15	1H	2002	A	N7-C8-N9	-5.12	111.24	113.80
15	14	2505	G	OP1-P-O3'	5.12	116.47	105.20
15	1H	331	U	C6-N1-C2	-5.12	117.93	121.00
15	1H	1861	C	N3-C2-O2	-5.12	118.32	121.90
15	1H	2256	A	N1-C6-N6	-5.12	115.53	118.60
1	1G	2147	C	O5'-P-OP1	-5.12	101.09	105.70
15	14	1416	A	C2-N3-C4	-5.12	108.04	110.60
1	13	2078	C	P-O3'-C3'	5.12	125.84	119.70
15	1H	1383	G	C6-C5-N7	-5.12	127.33	130.40
15	14	1497	G	C2-N3-C4	5.12	114.46	111.90
1	1G	1123	G	C4-N9-C1'	5.12	133.15	126.50
15	1H	72	A	C2-N3-C4	5.12	113.16	110.60
15	14	537	C	N1-C2-O2	-5.12	115.83	118.90
15	14	1413	G	N7-C8-N9	-5.12	110.54	113.10
1	1G	1261	A	OP1-P-OP2	-5.11	111.93	119.60
15	14	1697	G	C8-N9-C4	5.11	108.44	106.40
15	1H	689	G	N3-C4-C5	-5.11	126.04	128.60
15	1H	227	C	C6-N1-C2	5.11	122.34	120.30
15	1H	458	A	O5'-P-OP1	-5.11	101.10	105.70
15	14	1391	A	O4'-C1'-N9	5.11	112.29	108.20
26	16	33	C	O5'-P-OP2	-5.11	101.10	105.70
26	1J	58	G	N3-C4-N9	5.11	129.07	126.00
1	13	747	G	C6-C5-N7	-5.11	127.33	130.40
1	1G	2122	A	N7-C8-N9	-5.11	111.25	113.80
15	1H	834	G	N1-C2-N3	5.11	126.97	123.90
15	1H	836	U	O5'-P-OP1	5.11	116.83	110.70
15	1H	894	G	O4'-C1'-N9	5.11	112.29	108.20
15	1H	2084	A	C8-N9-C4	5.11	107.84	105.80
15	1H	1650	G	C4-C5-N7	5.11	112.84	110.80
15	1H	1869	G	C8-N9-C1'	-5.11	120.36	127.00
15	14	1830	U	C6-N1-C1'	5.11	128.35	121.20
15	14	1833	G	C4-C5-N7	-5.11	108.76	110.80
1	1G	1448	A	C2-N3-C4	-5.11	108.05	110.60
15	1H	47	G	C8-N9-C4	5.11	108.44	106.40
15	1H	1531	U	C5-C4-O4	5.11	128.96	125.90
15	1H	1703	G	C8-N9-C1'	-5.11	120.36	127.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
15	14	211	A	O5'-P-OP1	-5.11	101.11	105.70
15	14	553	A	N9-C4-C5	5.11	107.84	105.80
50	72	2	LEU	CA-CB-CG	5.11	127.04	115.30
1	13	1234	U	C2-N1-C1'	-5.10	111.58	117.70
1	13	2114	G	OP2-P-O3'	5.10	116.43	105.20
1	1G	946	G	C5-N7-C8	5.10	106.85	104.30
15	14	421	C	C5-C6-N1	-5.10	118.45	121.00
15	1H	477	A	OP1-P-O3'	5.10	116.42	105.20
15	1H	673	A	C5-N7-C8	-5.10	101.35	103.90
15	1H	1697	G	O4'-C1'-N9	-5.10	104.12	108.20
15	1H	2276	C	C5-C4-N4	5.10	123.77	120.20
26	1J	91	G	N7-C8-N9	5.10	115.65	113.10
52	X4	44	G	C4-N9-C1'	5.10	133.13	126.50
15	1H	1300	C	C6-N1-C1'	-5.10	114.68	120.80
1	1G	969	C	C2-N1-C1'	5.10	124.41	118.80
1	1G	994	A	C4-C5-N7	5.10	113.25	110.70
1	1G	2114	G	N3-C4-N9	-5.10	122.94	126.00
15	1H	1924	G	C6-N1-C2	5.10	128.16	125.10
15	14	2038	A	C2-N3-C4	-5.10	108.05	110.60
52	X1	17	C	C5-C6-N1	5.10	123.55	121.00
15	14	1907	C	C6-N1-C2	-5.10	118.26	120.30
15	14	2047	U	C5-C4-O4	-5.10	122.84	125.90
26	16	7	C	N3-C4-C5	5.10	123.94	121.90
15	1H	867	G	N3-C4-C5	5.10	131.15	128.60
15	1H	911	G	N3-C4-C5	-5.10	126.05	128.60
15	1H	1426	G	C5-N7-C8	5.10	106.85	104.30
1	13	940	G	C5-C6-O6	5.09	131.66	128.60
15	14	1010	U	C5-C6-N1	5.09	125.25	122.70
15	14	1607	C	O5'-P-OP2	-5.09	101.12	105.70
15	14	1745	G	C5-C6-N1	-5.09	108.95	111.50
15	14	1796	A	C6-C5-N7	-5.09	128.73	132.30
26	1J	106	U	C5-C6-N1	-5.09	120.15	122.70
15	1H	1604	A	N1-C6-N6	5.09	121.66	118.60
15	14	211	A	O4'-C1'-N9	5.09	112.27	108.20
1	1G	2079	G	O4'-C1'-N9	5.09	112.27	108.20
15	14	1828	U	N1-C2-N3	5.09	117.95	114.90
1	13	1583	U	C2-N1-C1'	5.09	123.81	117.70
2	65	101	LEU	CA-CB-CG	5.09	127.01	115.30
15	1H	1701	G	N3-C2-N2	-5.09	116.34	119.90
15	1H	1813	U	O5'-P-OP1	-5.09	101.12	105.70
15	14	840	C	C6-N1-C2	5.09	122.34	120.30
15	14	1607	C	C6-N1-C2	5.09	122.34	120.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
15	14	1838	C	OP1-P-OP2	-5.09	111.97	119.60
15	14	2084	A	N7-C8-N9	-5.09	111.25	113.80
26	16	30	C	O5'-P-OP1	5.09	116.81	110.70
32	31	106	ARG	NE-CZ-NH1	-5.09	117.76	120.30
15	1H	945	C	N1-C2-O2	5.09	121.95	118.90
26	16	62	C	C5-C6-N1	5.09	123.54	121.00
15	1H	484	C	C6-N1-C2	5.09	122.33	120.30
15	14	39	C	C6-N1-C2	-5.09	118.27	120.30
15	14	115	G	O5'-P-OP2	5.09	116.80	110.70
15	14	230	G	C4-C5-C6	-5.09	115.75	118.80
1	13	1161	A	O4'-C1'-N9	5.08	112.27	108.20
1	1G	1536	A	OP2-P-O3'	5.08	116.38	105.20
15	1H	1713	C	C6-N1-C2	5.08	122.33	120.30
15	1H	2354	G	N1-C6-O6	-5.08	116.85	119.90
15	14	1824	C	N1-C2-O2	-5.08	115.85	118.90
15	14	2097	G	N1-C2-N3	-5.08	120.85	123.90
32	39	68	LYS	CA-C-N	5.08	128.38	117.20
1	13	749	C	C6-N1-C2	5.08	122.33	120.30
1	13	888	G	N3-C4-C5	-5.08	126.06	128.60
1	13	1480	C	N3-C4-C5	-5.08	119.87	121.90
15	1H	2269	C	N1-C2-O2	-5.08	115.85	118.90
15	14	211	A	C8-N9-C4	-5.08	103.77	105.80
15	14	2261	G	C2-N3-C4	-5.08	109.36	111.90
15	1H	2336	G	O5'-P-OP1	5.08	116.80	110.70
15	14	792	G	N3-C2-N2	5.08	123.46	119.90
15	14	995	G	N3-C4-C5	5.08	131.14	128.60
15	14	1660	C	N3-C4-N4	5.08	121.56	118.00
15	14	1689	U	N3-C4-C5	5.08	117.65	114.60
15	14	2395	C	C6-N1-C2	5.08	122.33	120.30
15	1H	2276	C	N3-C4-C5	-5.08	119.87	121.90
15	14	231	A	N1-C2-N3	5.08	131.84	129.30
15	14	286	U	O4'-C1'-N1	5.08	112.26	108.20
15	14	494	A	N1-C6-N6	5.08	121.65	118.60
15	14	1928	G	C4-C5-N7	-5.08	108.77	110.80
15	1H	2614	G	C8-N9-C4	5.08	108.43	106.40
15	1H	2779	G	N1-C2-N2	-5.08	111.63	116.20
15	14	724	A	N9-C4-C5	-5.08	103.77	105.80
15	14	2779	G	C4-N9-C1'	5.08	133.10	126.50
1	13	2113	C	OP2-P-O3'	5.08	116.37	105.20
15	1H	634	A	C8-N9-C4	5.08	107.83	105.80
15	1H	1324	A	C4-C5-C6	5.08	119.54	117.00
15	1H	1456	C	C5-C6-N1	5.08	123.54	121.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
15	1H	1609	G	C6-C5-N7	-5.08	127.35	130.40
15	14	2606	C	C6-N1-C1'	5.08	126.89	120.80
52	X1	36	A	N9-C4-C5	-5.08	103.77	105.80
1	1G	1027	C	C6-N1-C2	5.07	122.33	120.30
1	1G	1205	G	C4-N9-C1'	5.07	133.09	126.50
15	1H	107	G	C4-C5-N7	-5.07	108.77	110.80
15	1H	1033	C	N3-C4-C5	5.07	123.93	121.90
15	1H	2256	A	N1-C2-N3	5.07	131.84	129.30
15	14	571	G	C4-N9-C1'	-5.07	119.90	126.50
15	1H	1621	A	OP1-P-OP2	5.07	127.21	119.60
15	14	834	G	N1-C6-O6	-5.07	116.86	119.90
15	14	1958	G	C4-C5-C6	5.07	121.84	118.80
15	1H	1850	G	O5'-P-OP1	-5.07	101.14	105.70
15	1H	1929	G	C8-N9-C4	5.07	108.43	106.40
1	13	994	A	OP2-P-O3'	5.07	116.35	105.20
15	1H	1369	C	N3-C4-C5	5.07	123.93	121.90
15	1H	1465	G	O4'-C1'-N9	5.07	112.25	108.20
15	1H	1655	G	N3-C4-C5	5.07	131.13	128.60
15	1H	1695	G	C8-N9-C1'	-5.07	120.41	127.00
15	1H	2291	G	N1-C6-O6	5.07	122.94	119.90
52	X4	70	G	C3'-C2'-C1'	-5.07	97.44	101.50
15	1H	500	A	C5-C6-N1	-5.07	115.17	117.70
15	1H	809	G	O5'-P-OP2	5.07	116.78	110.70
15	1H	1376	C	C5-C6-N1	5.07	123.53	121.00
15	14	1453	C	C4-C5-C6	5.07	119.93	117.40
1	1G	1194	U	N1-C2-N3	5.07	117.94	114.90
1	1G	2142	A	C5-C6-N6	5.07	127.75	123.70
36	N8	50	GLY	N-CA-C	5.07	125.77	113.10
1	1G	1054	G	C5-N7-C8	5.06	106.83	104.30
15	14	1577	A	C4-C5-N7	5.06	113.23	110.70
1	13	907	G	C2-N3-C4	-5.06	109.37	111.90
15	1H	889	C	C5-C6-N1	-5.06	118.47	121.00
15	1H	897	G	O5'-P-OP2	-5.06	101.14	105.70
15	1H	2389	C	C5-C6-N1	-5.06	118.47	121.00
15	1H	2727	U	N3-C2-O2	-5.06	118.66	122.20
15	14	978	G	O5'-P-OP1	-5.06	101.14	105.70
26	1J	30	C	N1-C2-O2	5.06	121.94	118.90
52	X1	61	C	O5'-P-OP2	-5.06	101.14	105.70
15	1H	2326	A	N1-C2-N3	5.06	131.83	129.30
15	1H	2397	G	O5'-P-OP1	5.06	116.77	110.70
15	1H	2680	A	O4'-C1'-N9	5.06	112.25	108.20
15	14	1343	U	O5'-P-OP2	5.06	116.77	110.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	13	852	G	C8-N9-C4	5.06	108.42	106.40
1	1G	707	G	C8-N9-C4	-5.06	104.38	106.40
15	1H	123	G	C6-C5-N7	-5.06	127.36	130.40
15	1H	992	A	N9-C4-C5	-5.06	103.78	105.80
15	1H	1927	C	N3-C2-O2	-5.06	118.36	121.90
15	1H	2455	C	N1-C2-O2	5.06	121.94	118.90
15	14	665	G	OP1-P-OP2	5.06	127.19	119.60
15	14	2404	G	C4-C5-N7	5.06	112.82	110.80
15	1H	1836	A	N1-C2-N3	5.06	131.83	129.30
15	14	89	U	C5-C4-O4	-5.06	122.87	125.90
15	14	2505	G	C4-N9-C1'	5.06	133.07	126.50
28	M8	63	TYR	CA-CB-CG	5.06	123.01	113.40
1	13	929	A	C5-C6-N6	-5.06	119.66	123.70
15	1H	1965	U	O5'-P-OP2	-5.06	101.15	105.70
15	14	1802	U	C2-N1-C1'	-5.06	111.63	117.70
15	14	2597	G	O5'-P-OP1	-5.06	101.15	105.70
15	14	2603	G	C6-C5-N7	-5.06	127.37	130.40
15	1H	2385	G	N3-C2-N2	5.05	123.44	119.90
15	1H	2431	C	N3-C4-N4	-5.05	114.46	118.00
15	14	1939	C	C2-N1-C1'	5.05	124.36	118.80
15	14	2484	A	N1-C2-N3	5.05	131.83	129.30
1	1G	1926	A	C4-C5-C6	5.05	119.53	117.00
15	14	2573	C	C5-C4-N4	-5.05	116.66	120.20
11	G8	81	LYS	C-N-CA	5.05	143.22	122.00
15	1H	54	G	OP1-P-O3'	5.05	116.31	105.20
15	1H	1444	A	O4'-C1'-N9	5.05	112.24	108.20
15	1H	1994	A	C4-C5-N7	-5.05	108.17	110.70
15	14	1990	C	C6-N1-C2	5.05	122.32	120.30
15	14	2264	U	C6-N1-C2	-5.05	117.97	121.00
15	1H	886	C	C6-N1-C2	-5.05	118.28	120.30
15	1H	1258	A	C5-C6-N6	-5.05	119.66	123.70
15	1H	1361	U	N3-C2-O2	-5.05	118.67	122.20
15	14	2490	C	N1-C2-O2	5.05	121.93	118.90
15	1H	1615	C	C6-N1-C2	5.05	122.32	120.30
15	1H	2729	A	O4'-C1'-N9	-5.05	104.16	108.20
15	14	735	G	O5'-C5'-C4'	-5.05	102.11	111.70
1	1G	882	C	N1-C2-O2	-5.05	115.87	118.90
15	1H	2001	U	C5-C4-O4	5.05	128.93	125.90
15	1H	2243	G	C4-N9-C1'	5.05	133.06	126.50
17	L8	54	VAL	N-CA-C	5.05	124.62	111.00
15	14	2444	G	O5'-P-OP1	5.05	116.76	110.70
15	1H	727	C	N3-C4-C5	5.04	123.92	121.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
15	1H	1635	A	C8-N9-C4	-5.04	103.78	105.80
15	1H	2727	U	O4'-C1'-N1	5.04	112.24	108.20
15	14	337	G	C4-C5-N7	5.04	112.82	110.80
1	1G	776	C	N3-C2-O2	-5.04	118.37	121.90
15	1H	20	C	C6-N1-C2	5.04	122.32	120.30
15	1H	529	A	O5'-P-OP1	-5.04	101.16	105.70
15	1H	1361	U	P-O3'-C3'	5.04	125.75	119.70
15	14	258	C	C5-C6-N1	5.04	123.52	121.00
15	14	1951	U	O5'-P-OP2	-5.04	101.16	105.70
22	H8	6	LYS	N-CA-C	-5.04	97.38	111.00
1	1G	1440	C	C6-N1-C2	-5.04	118.28	120.30
15	1H	1314	A	C5'-C4'-C3'	-5.04	107.94	116.00
15	1H	1873	G	C4-C5-N7	5.04	112.82	110.80
15	1H	2266	G	N3-C2-N2	-5.04	116.37	119.90
15	1H	2511	C	N1-C2-O2	-5.04	115.88	118.90
15	1H	2805	C	N1-C2-O2	5.04	121.92	118.90
15	14	536	C	N3-C2-O2	-5.04	118.37	121.90
15	14	1037	G	O5'-P-OP1	-5.04	101.16	105.70
15	14	2002	A	N1-C2-N3	5.04	131.82	129.30
15	1H	484	C	OP2-P-O3'	5.04	116.29	105.20
15	1H	675	G	C5-C6-N1	-5.04	108.98	111.50
15	1H	963	C	O4'-C1'-N1	5.04	112.23	108.20
15	1H	2057	G	C8-N9-C1'	-5.04	120.45	127.00
15	1H	546	U	C2-N1-C1'	-5.04	111.66	117.70
15	1H	1069	A	N1-C6-N6	5.04	121.62	118.60
15	14	157	U	P-O3'-C3'	5.04	125.75	119.70
15	14	2520	G	N3-C4-C5	-5.04	126.08	128.60
26	16	17	A	O4'-C1'-N9	5.04	112.23	108.20
52	X4	37	A	N1-C6-N6	5.04	121.62	118.60
12	Q8	3	LYS	CD-CE-NZ	5.04	123.28	111.70
2	65	20	ARG	N-CA-C	-5.04	97.40	111.00
15	1H	20	C	C2-N3-C4	-5.04	117.38	119.90
15	1H	1315	G	N9-C4-C5	-5.04	103.39	105.40
15	14	89	U	N3-C4-O4	5.04	122.93	119.40
15	14	833	A	C6-N1-C2	5.04	121.62	118.60
15	14	1996	A	N9-C4-C5	-5.04	103.79	105.80
15	14	2080	C	C6-N1-C2	5.04	122.31	120.30
1	1G	1199	G	C8-N9-C1'	-5.03	120.46	127.00
15	1H	339	A	C6-C5-N7	5.03	135.82	132.30
15	1H	731	G	N3-C4-N9	5.03	129.02	126.00
15	1H	1009	G	OP1-P-OP2	-5.03	112.05	119.60
15	1H	1626	U	N3-C2-O2	-5.03	118.68	122.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
15	14	73	A	N3-C4-N9	-5.03	123.37	127.40
15	14	666	U	O5'-P-OP2	-5.03	101.17	105.70
15	14	1378	U	C5-C4-O4	5.03	128.92	125.90
1	13	2142	A	OP1-P-OP2	5.03	127.15	119.60
1	1G	653	G	C8-N9-C1'	5.03	133.54	127.00
15	1H	666	U	O5'-P-OP2	-5.03	101.17	105.70
15	1H	2420	G	O5'-P-OP2	-5.03	101.17	105.70
15	14	1343	U	N1-C2-O2	-5.03	119.28	122.80
1	13	1078	U	C6-N1-C2	-5.03	117.98	121.00
15	1H	599	C	N3-C4-N4	-5.03	114.48	118.00
15	1H	1013	G	N1-C2-N2	-5.03	111.67	116.20
15	1H	2423	U	O5'-P-OP2	-5.03	101.17	105.70
15	1H	2437	A	C2-N3-C4	-5.03	108.08	110.60
15	1H	2580	A	C8-N9-C4	5.03	107.81	105.80
15	14	1029	A	N1-C6-N6	-5.03	115.58	118.60
15	14	2307	C	C5-C6-N1	-5.03	118.48	121.00
15	1H	922	G	C8-N9-C4	-5.03	104.39	106.40
15	1H	1982	C	O5'-P-OP2	-5.03	101.17	105.70
15	14	1407	G	C2-N3-C4	-5.03	109.39	111.90
1	13	2054	C	N3-C4-C5	-5.03	119.89	121.90
15	1H	179	G	C6-C5-N7	-5.03	127.38	130.40
15	1H	1040	C	OP1-P-OP2	-5.03	112.06	119.60
15	1H	2489	C	C2-N1-C1'	5.03	124.33	118.80
15	14	2435	C	N3-C4-N4	5.03	121.52	118.00
1	13	2154	A	N1-C6-N6	5.03	121.62	118.60
1	1G	1615	U	P-O3'-C3'	5.03	125.73	119.70
15	1H	536	C	OP2-P-O3'	5.03	116.26	105.20
15	1H	842	A	N3-C4-C5	-5.03	123.28	126.80
15	1H	1260	G	N3-C4-N9	5.03	129.01	126.00
15	14	1831	C	N1-C2-O2	-5.03	115.89	118.90
15	14	2417	C	N3-C4-C5	-5.03	119.89	121.90
15	14	2711	U	O5'-P-OP1	-5.03	101.18	105.70
1	13	1589	G	N3-C4-N9	5.02	129.01	126.00
15	1H	874	C	C4-C5-C6	5.02	119.91	117.40
15	14	256	G	O5'-P-OP2	-5.02	101.18	105.70
15	1H	546	U	N1-C2-O2	-5.02	119.28	122.80
15	1H	891	G	N3-C4-C5	5.02	131.11	128.60
15	1H	1396	G	C8-N9-C4	-5.02	104.39	106.40
15	1H	1904	C	C6-N1-C2	-5.02	118.29	120.30
18	61	31	LEU	CA-CB-CG	-5.02	103.75	115.30
15	14	340	G	C6-C5-N7	-5.02	127.39	130.40
1	1G	2059	C	N1-C2-O2	5.02	121.91	118.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
15	1H	618	G	OP2-P-O3'	5.02	116.25	105.20
15	14	495	G	C8-N9-C4	5.02	108.41	106.40
15	1H	480	G	C6-C5-N7	5.02	133.41	130.40
1	13	832	C	C6-N1-C2	-5.02	118.29	120.30
1	13	1205	G	C5-C6-N1	-5.02	108.99	111.50
1	1G	677	G	N1-C6-O6	5.02	122.91	119.90
1	1G	1158	G	C4-C5-N7	5.02	112.81	110.80
15	1H	831	A	C6-C5-N7	-5.02	128.79	132.30
15	14	554	C	C5-C4-N4	5.02	123.71	120.20
1	1G	1926	A	N1-C2-N3	5.02	131.81	129.30
1	13	1446	C	N3-C2-O2	5.01	125.41	121.90
1	13	1535	C	C5-C4-N4	-5.01	116.69	120.20
15	1H	842	A	C6-N1-C2	-5.01	115.59	118.60
15	1H	1682	A	C4-C5-N7	5.01	113.21	110.70
15	14	30	G	N9-C4-C5	5.01	107.41	105.40
15	14	182	C	N3-C2-O2	5.01	125.41	121.90
15	14	259	U	C2-N1-C1'	5.01	123.72	117.70
15	14	1030	C	C5-C6-N1	5.01	123.51	121.00
15	14	1345	G	N9-C4-C5	-5.01	103.39	105.40
15	14	2322	G	C6-C5-N7	-5.01	127.39	130.40
15	1H	515	C	C5-C6-N1	5.01	123.51	121.00
15	1H	1548	C	C2-N1-C1'	-5.01	113.28	118.80
26	16	75	A	N9-C4-C5	-5.01	103.80	105.80
1	13	1092	A	C4-C5-C6	-5.01	114.50	117.00
1	1G	775	C	N1-C2-O2	-5.01	115.89	118.90
15	1H	240	G	O5'-P-OP1	-5.01	101.19	105.70
15	1H	1205	A	O4'-C1'-N9	-5.01	104.19	108.20
15	1H	1257	G	O5'-P-OP2	-5.01	101.19	105.70
15	14	2093	U	C2-N3-C4	5.01	130.01	127.00
15	14	2416	U	O4'-C1'-N1	5.01	112.21	108.20
1	13	1440	C	OP2-P-O3'	5.01	116.22	105.20
1	13	1598	A	C4-C5-N7	5.01	113.20	110.70
15	1H	1036	A	C5-C6-N1	5.01	120.20	117.70
15	1H	1459	G	OP2-P-O3'	5.01	116.22	105.20
15	1H	1826	G	C5-C6-N1	5.01	114.00	111.50
15	14	1377	G	C5-C6-O6	-5.01	125.59	128.60
15	14	1922	G	C5-C6-O6	-5.01	125.59	128.60
15	14	2243	G	C6-C5-N7	-5.01	127.39	130.40
15	1H	1079	G	C5-C6-O6	-5.01	125.59	128.60
15	1H	1855	A	C6-N1-C2	-5.01	115.59	118.60
1	1G	1156	G	C8-N9-C4	-5.01	104.40	106.40
15	1H	203	A	N3-C4-C5	5.01	130.31	126.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
15	1H	479	C	N3-C2-O2	5.01	125.40	121.90
15	1H	1473	G	C5-C6-O6	-5.01	125.60	128.60
15	1H	1838	C	C6-N1-C2	5.01	122.30	120.30
15	1H	1931	G	N1-C2-N2	-5.01	111.69	116.20
15	1H	2291	G	C6-C5-N7	-5.01	127.40	130.40
15	14	721	C	C4-C5-C6	5.01	119.90	117.40
15	14	2084	A	C5-N7-C8	5.01	106.40	103.90
32	31	196	LEU	CA-CB-CG	-5.01	103.78	115.30
1	13	1586	G	O5'-P-OP2	-5.00	101.19	105.70
1	1G	1912	A	P-O3'-C3'	5.00	125.71	119.70
15	1H	2022	G	N1-C2-N2	-5.00	111.69	116.20
1	13	1880	G	N3-C4-N9	5.00	129.00	126.00
15	1H	411	U	O5'-P-OP1	-5.00	101.20	105.70
15	1H	424	G	C5-C6-O6	-5.00	125.60	128.60
15	14	2088	C	N3-C2-O2	5.00	125.40	121.90
15	14	2333	G	C5-N7-C8	-5.00	101.80	104.30
1	13	827	C	C6-N1-C2	-5.00	118.30	120.30
1	13	1171	G	O5'-P-OP1	-5.00	101.20	105.70
1	13	1819	C	C5-C6-N1	5.00	123.50	121.00
1	1G	1520	C	O5'-P-OP2	-5.00	101.20	105.70
1	1G	2110	G	C5-C6-O6	-5.00	125.60	128.60
15	1H	1703	G	C4-C5-C6	5.00	121.80	118.80
15	1H	2030	A	C5-C6-N6	-5.00	119.70	123.70
15	14	2060	G	C5-C6-O6	5.00	131.60	128.60
15	14	2622	G	C4-C5-C6	5.00	121.80	118.80
26	16	81	C	OP2-P-O3'	5.00	116.20	105.20

There are no chirality outliers.

All (112) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
4	11	197	GLY	Peptide
4	11	273	ARG	Peptide
44	12	19	HIS	Peptide
44	12	22	LYS	Peptide
10	15	41	ASP	Peptide
4	19	236	GLY	Peptide
4	19	237	GLU	Peptide
4	19	270	ILE	Peptide
4	19	32	SER	Peptide
4	19	37	LEU	Peptide
48	1A	55	LYS	Peptide

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>Group</b>
44	1E	194	PRO	Peptide
44	1E	237	ALA	Peptide
23	21	115	GLY	Peptide
23	21	153	GLY	Peptide
23	21	56	PRO	Peptide
23	21	57	LYS	Peptide
23	21	82	ARG	Peptide
23	29	186	GLY	Peptide
6	2A	49	GLY	Peptide
14	32	152	SER	Peptide
14	32	155	LEU	Peptide
14	32	30	LYS	Peptide
30	35	106	LEU	Peptide
30	35	14	LYS	Peptide
30	35	22	GLY	Peptide
30	35	26	GLY	Peptide
30	35	36	LYS	Peptide
30	35	56	SER	Peptide
32	39	127	GLU	Peptide
32	39	166	ALA	Peptide
32	39	20	LEU	Peptide
32	39	24	LEU	Peptide
32	39	25	PRO	Peptide
32	39	69	HIS	Mainchain
32	39	82	ILE	Peptide
13	3A	17	LYS	Peptide
13	3A	18	VAL	Peptide
40	41	95	ARG	Peptide
38	45	134	ARG	Peptide
38	45	81	VAL	Peptide
40	49	13	GLU	Peptide
24	4I	107	ALA	Peptide
33	5A	29	ARG	Peptide
18	61	11	ASN	Peptide
18	61	114	LEU	Peptide
18	61	134	PRO	Peptide
18	61	82	ARG	Peptide
18	69	101	LEU	Peptide
18	69	112	LYS	Peptide
18	69	143	SER	Peptide
16	75	105	LEU	Peptide
16	75	3	ARG	Peptide

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>Group</b>
30	78	11	GLY	Peptide
30	78	115	LEU	Peptide
30	78	14	LYS	Peptide
30	78	19	VAL	Peptide
30	78	24	GLY	Peptide
30	78	70	GLN	Peptide
9	82	117	HIS	Peptide
27	85	90	VAL	Peptide
38	88	79	LEU	Peptide
38	88	89	ASN	Peptide
9	8E	110	GLU	Peptide
45	98	3	HIS	Peptide
45	98	44	LEU	Peptide
43	A5	43	GLY	Peptide
29	AI	6	LYS	Peptide
3	B5	61	GLY	Peptide
16	B8	58	ASN	Peptide
37	BA	11	SER	Peptide
37	BA	72	LEU	Peptide
37	BI	98	PRO	Peptide
11	C5	81	LYS	Peptide
11	C5	99	CYS	Peptide
27	C8	90	VAL	Peptide
35	D8	47	VAL	Peptide
39	F5	85	LEU	Peptide
46	G5	15	LYS	Peptide
46	G5	17	SER	Peptide
46	G5	43	GLN	Peptide
11	G8	53	PRO	Peptide
11	G8	54	LYS	Peptide
11	G8	80	GLY	Peptide
11	G8	99	CYS	Peptide
22	H8	165	VAL	Peptide
22	H8	59	LEU	Peptide
22	H8	63	ASP	Peptide
31	I8	2	ALA	Peptide
36	J5	3	LYS	Peptide
39	J8	48	LYS	Peptide
39	J8	75	GLU	Peptide
39	J8	85	LEU	Peptide
46	K8	17	SER	Peptide
46	K8	46	GLN	Peptide

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Mol	Chain	Res	Type	Group
12	M5	32	LEU	Peptide
12	M5	51	ALA	Peptide
12	M5	62	LEU	Peptide
28	M8	41	PRO	Peptide
28	M8	43	TYR	Peptide
36	N8	41	PRO	Peptide
36	N8	55	ARG	Peptide
5	P8	46	VAL	Peptide
12	Q8	18	ALA	Peptide
12	Q8	26	LYS	Peptide
12	Q8	30	ARG	Peptide
12	Q8	36	LYS	Peptide
12	Q8	49	VAL	Peptide
12	Q8	50	LEU	Peptide
12	Q8	56	GLU	Peptide
12	Q8	57	ARG	Peptide
12	Q8	9	GLY	Peptide

## 5.2 Too-close contacts [i](#)

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

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	13	32409	0	16361	682	0
1	1G	32514	0	16416	654	0
2	65	881	0	943	62	0
2	A8	881	0	943	56	0
3	B5	725	0	778	40	0
3	F8	742	0	803	42	0
4	11	2126	0	2208	73	0
4	19	2120	0	2197	104	0
5	L5	409	0	454	15	0
5	P8	409	0	454	9	0
6	2A	864	0	881	31	0
6	2I	864	0	881	41	0
7	8A	823	0	891	26	0
7	8I	834	0	904	55	0
8	22	1612	0	1677	76	0
8	2E	1605	0	1668	72	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
9	82	983	0	1006	68	0
9	8E	1009	0	1037	73	0
10	15	1104	0	1180	40	0
10	58	1104	0	1180	63	0
11	C5	794	0	886	66	0
11	G8	783	0	873	61	0
12	M5	517	0	582	45	0
12	Q8	480	0	549	110	0
13	3A	975	0	1062	38	0
13	3I	956	0	1046	45	0
14	32	1702	0	1764	74	0
14	3E	1702	0	1763	77	0
15	14	62647	0	31583	1235	0
15	1H	62707	0	31614	1207	0
16	75	1141	0	1202	58	0
16	B8	1081	0	1141	59	0
17	H5	468	0	518	21	0
17	L8	452	0	503	15	0
18	61	1136	0	1223	62	0
18	69	1136	0	1223	43	0
19	9A	564	0	631	27	0
19	9I	550	0	613	31	0
20	1B	217	0	234	12	0
20	1F	199	0	208	14	0
21	25	932	0	996	41	0
21	68	932	0	996	39	0
22	D5	1120	0	1146	64	0
22	H8	1373	0	1402	74	0
23	21	1568	0	1634	103	0
23	29	1568	0	1633	113	0
24	4A	928	0	987	68	0
24	4I	928	0	987	57	0
25	42	1155	0	1213	47	0
25	4E	1155	0	1213	45	0
26	16	2617	0	1328	55	0
26	1J	2617	0	1328	59	0
27	85	963	0	1022	55	0
27	C8	963	0	1022	43	0
28	I5	515	0	514	38	0
28	M8	533	0	526	49	0
29	AA	624	0	636	32	0
29	AI	643	0	662	41	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
30	35	1144	0	1228	82	0
30	78	1122	0	1206	77	0
31	E5	645	0	652	31	0
31	I8	656	0	683	22	0
32	31	1585	0	1632	84	0
32	39	1627	0	1680	96	0
33	5A	475	0	511	26	0
33	5I	491	0	529	27	0
34	52	842	0	857	24	0
34	5E	842	0	857	30	0
35	95	778	0	852	71	0
35	D8	778	0	852	47	0
36	J5	434	0	454	20	0
36	N8	429	0	449	40	0
37	BA	762	0	861	39	0
37	BI	762	0	861	44	0
38	45	1113	0	1167	88	0
38	88	1121	0	1179	66	0
39	F5	737	0	813	37	0
39	J8	746	0	826	39	0
40	41	1473	0	1535	82	0
40	49	1473	0	1535	71	0
41	6A	733	0	771	17	0
41	6I	733	0	771	29	0
42	62	1200	0	1238	41	0
42	6E	1157	0	1202	38	0
43	A5	899	0	964	36	0
43	E8	890	0	951	25	0
44	12	1924	0	1975	105	0
44	1E	1924	0	1975	88	0
45	55	959	0	1021	36	0
45	98	967	0	1033	55	0
46	G5	567	0	618	28	0
46	K8	575	0	634	31	0
47	51	1336	0	1418	71	0
47	59	1307	0	1382	73	0
48	1A	801	0	849	43	0
48	1I	801	0	849	49	0
49	7A	705	0	725	29	0
49	7I	705	0	725	48	0
50	72	1115	0	1177	48	0
50	7E	1115	0	1177	52	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
51	Y1	521	0	262	12	0
51	Y4	521	0	262	21	0
52	V1	1619	0	822	59	0
52	V4	1619	0	822	46	0
52	W1	1619	0	822	23	0
52	W4	1619	0	822	24	0
52	X1	1619	0	822	22	0
52	X4	1619	0	822	30	0
53	13	66	0	0	1	0
53	14	165	0	0	8	0
53	1G	66	0	0	3	0
53	1H	132	0	0	14	0
54	11	4	0	0	0	0
54	13	197	0	0	0	0
54	14	591	0	0	0	0
54	15	1	0	0	0	0
54	16	14	0	0	0	0
54	19	1	0	0	0	0
54	1G	189	0	0	0	0
54	1H	657	0	0	0	0
54	1J	14	0	0	0	0
54	21	4	0	0	0	0
54	25	3	0	0	0	0
54	29	6	0	0	0	0
54	2A	1	0	0	0	0
54	31	4	0	0	0	0
54	32	3	0	0	0	0
54	35	2	0	0	0	0
54	39	1	0	0	0	0
54	3E	2	0	0	0	0
54	3I	1	0	0	0	0
54	41	2	0	0	0	0
54	42	1	0	0	0	0
54	45	2	0	0	0	0
54	49	1	0	0	0	0
54	4E	1	0	0	0	0
54	4I	1	0	0	0	0
54	51	1	0	0	0	0
54	52	1	0	0	0	0
54	55	3	0	0	0	0
54	58	1	0	0	0	0
54	5E	1	0	0	0	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
54	5I	1	0	0	0	0
54	68	2	0	0	0	0
54	6A	1	0	0	0	0
54	75	1	0	0	0	0
54	78	3	0	0	0	0
54	7A	1	0	0	0	0
54	88	5	0	0	0	0
54	8A	1	0	0	0	0
54	8I	1	0	0	0	0
54	98	3	0	0	0	0
54	A8	1	0	0	0	0
54	B5	1	0	0	0	0
54	B8	1	0	0	0	0
54	BA	1	0	0	0	0
54	C5	1	0	0	0	0
54	C8	1	0	0	0	0
54	D8	2	0	0	0	0
54	E5	2	0	0	0	0
54	G8	1	0	0	0	0
54	I8	3	0	0	0	0
54	J8	1	0	0	0	0
54	K8	1	0	0	0	0
54	N8	1	0	0	0	0
54	P8	1	0	0	0	0
54	W1	3	0	0	0	0
54	W4	4	0	0	0	0
54	X1	9	0	0	0	0
54	X4	5	0	0	0	0
54	Y1	1	0	0	0	0
54	Y4	1	0	0	0	0
55	32	1	0	0	0	0
55	3E	1	0	0	0	0
55	5A	1	0	0	0	0
55	5I	1	0	0	0	0
55	C5	1	0	0	0	0
55	G8	1	0	0	0	0
56	11	1	0	0	0	0
56	13	76	0	0	7	0
56	14	512	0	0	113	0
56	19	8	0	0	1	0
56	1G	72	0	0	6	0
56	1H	532	0	0	123	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
56	21	2	0	0	1	0
56	29	3	0	0	0	0
56	31	3	0	0	0	0
56	35	1	0	0	0	0
56	39	3	0	0	0	0
56	55	2	0	0	0	0
56	5A	1	0	0	1	0
56	6A	2	0	0	0	0
56	6I	1	0	0	0	0
56	78	2	0	0	0	0
56	7A	1	0	0	0	0
56	A5	1	0	0	0	0
56	C8	2	0	0	1	0
56	D8	1	0	0	0	0
56	E8	1	0	0	0	0
56	F5	1	0	0	0	0
56	F8	1	0	0	0	0
56	I8	3	0	0	0	0
56	J8	2	0	0	0	0
56	L5	2	0	0	0	0
56	M5	2	0	0	0	0
56	P8	1	0	0	0	0
56	Y4	2	0	0	0	0
All	All	300009	0	199455	7924	0

The all-atom clashscore is defined as the number of clashes found per 1000 atoms (including hydrogen atoms). The all-atom clashscore for this structure is 16.

All (7924) 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)
1:1G:2165:G:O6	51:Y4:29:G:N2	1.73	1.19
15:14:1697:G:OP2	56:14:3601:HOH:O	1.72	1.08
15:14:1808:C:OP1	56:14:3602:HOH:O	1.74	1.04
15:14:2463:A:OP1	56:14:3604:HOH:O	1.76	1.04
15:1H:1067:U:HO2'	15:1H:1069:A:H2	1.04	1.03
15:14:725:A:H8	15:14:2094:G:H21	1.03	1.03
51:Y4:35:A:H2'	51:Y4:36:G:H8	1.21	1.03
15:1H:355:A:H2	15:1H:1258:A:HO2'	1.02	1.02
15:1H:632:U:H3	15:1H:648:A:H2	1.07	1.01
15:14:790:G:OP1	56:14:3603:HOH:O	1.75	1.01

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:78:15:ARG:HB2	30:78:16:ARG:HB2	1.38	1.01
28:M8:63:TYR:HB2	29:A1:9:VAL:HG21	1.41	1.01
15:1H:2057:G:N7	56:1H:3718:HOH:O	1.92	1.00
35:95:76:LYS:NZ	35:95:80:GLN:OE1	1.94	1.00
15:1H:458:A:OP2	56:1H:3701:HOH:O	1.79	0.99
16:B8:26:ASP:HB3	16:B8:92:GLY:H	1.22	0.99
15:1H:66:U:H3	15:1H:73:A:H2	1.08	0.98
15:14:2716:C:H3'	15:14:2717:U:H5''	1.42	0.98
15:1H:1391:A:OP2	56:1H:3702:HOH:O	1.81	0.98
15:14:1714:A:OP2	56:14:3605:HOH:O	1.82	0.98
15:14:239:C:OP1	56:14:3606:HOH:O	1.82	0.98
15:1H:859:U:OP1	56:1H:3704:HOH:O	1.83	0.97
2:65:3:ARG:HH21	2:65:4:LEU:HB2	1.29	0.97
44:12:75:LYS:HA	44:12:78:GLN:HB2	1.46	0.97
12:M5:32:LEU:HD13	12:M5:33:ASN:HB2	1.43	0.96
31:I8:53:MET:HG3	31:I8:59:LEU:HD23	1.46	0.96
15:1H:800:A:OP1	56:1H:3703:HOH:O	1.82	0.96
15:14:1662:G:N7	56:14:3621:HOH:O	1.97	0.96
15:1H:592:A:OP1	56:1H:3706:HOH:O	1.84	0.95
15:1H:2421:U:OP1	56:1H:3707:HOH:O	1.84	0.95
15:14:2514:C:OP2	56:14:3608:HOH:O	1.84	0.95
1:13:1932:G:H22	1:13:1958:G:H2'	1.28	0.95
15:14:2736:U:H3	15:14:2886:A:H2	1.14	0.95
44:1E:185:ILE:HG22	44:1E:199:TYR:HB2	1.48	0.95
15:14:1665:A:O2'	56:14:3607:HOH:O	1.82	0.95
15:1H:1663:A:OP1	56:1H:3710:HOH:O	1.85	0.95
1:13:2079:G:H2'	37:BI:39:LYS:HE2	1.50	0.94
15:1H:850:G:OP2	56:1H:3705:HOH:O	1.83	0.94
15:1H:207:G:OP2	56:1H:3711:HOH:O	1.85	0.94
15:1H:588:G:OP2	56:1H:3708:HOH:O	1.84	0.94
27:85:92:ARG:HD2	27:85:95:LEU:HD12	1.48	0.94
15:14:2886:A:H8	45:55:6:SER:H	1.06	0.94
15:14:544:C:OP1	36:J5:16:ARG:NH2	2.01	0.94
15:1H:2093:U:H3	15:1H:2445:A:H2	1.16	0.94
52:V1:10:G:H1	52:V1:25:C:H42	1.14	0.94
1:13:799:G:N2	1:13:802:A:OP2	2.01	0.93
36:N8:55:ARG:HB2	45:98:33:ARG:HH12	1.34	0.93
4:19:242:ARG:HE	15:14:1860:G:H4'	1.33	0.93
19:9A:84:LYS:H	19:9A:84:LYS:HE2	1.33	0.93
15:1H:961:U:O4	56:1H:3709:HOH:O	1.85	0.93
32:39:53:THR:HG22	32:39:56:GLU:HG3	1.49	0.93

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:Q8:14:VAL:HG21	12:Q8:21:LYS:HZ2	1.34	0.93
15:1H:779:C:OP2	56:1H:3712:HOH:O	1.86	0.92
2:A8:78:LEU:HD12	2:A8:108:GLY:HA2	1.48	0.92
15:1H:1808:C:OP1	56:1H:3713:HOH:O	1.87	0.92
47:51:101:ARG:HH22	47:51:122:THR:HA	1.33	0.92
1:1G:1456:U:H3	1:1G:1495:A:H62	1.19	0.91
15:14:1663:A:OP1	56:14:3610:HOH:O	1.88	0.91
15:14:1924:G:H22	15:14:1927:C:H41	1.13	0.91
15:14:2270:G:OP2	56:14:3609:HOH:O	1.86	0.91
14:32:157:LEU:O	14:32:161:ASN:ND2	2.03	0.91
15:1H:867:G:OP2	56:1H:3714:HOH:O	1.89	0.91
15:1H:810:A:OP1	56:1H:3712:HOH:O	1.88	0.91
44:1E:12:GLU:HA	44:1E:16:HIS:HD2	1.36	0.91
40:41:37:VAL:HG22	40:41:159:VAL:HG12	1.51	0.90
15:1H:1041:G:OP1	27:C8:50:ARG:NH2	2.04	0.90
15:14:1805:C:HO2'	15:14:1820:A:H8	1.13	0.90
30:35:39:LYS:HG3	30:35:45:LEU:HD22	1.53	0.90
15:14:2696:C:H5	15:14:2741:A:H62	1.14	0.90
38:45:57:HIS:HD2	38:45:117:ALA:HB2	1.37	0.90
15:14:2893:C:H1'	45:55:92:GLY:HA3	1.54	0.90
15:1H:1915:A:OP2	56:1H:3716:HOH:O	1.90	0.89
15:14:1273:C:H4'	35:95:85:LYS:HG2	1.55	0.89
1:13:1352:U:H3	1:13:2160:U:HO2'	0.95	0.89
15:1H:480:G:OP2	56:1H:3715:HOH:O	1.89	0.89
12:M5:31:HIS:O	12:M5:33:ASN:ND2	2.06	0.89
7:8I:76:LEU:HD11	7:8I:79:SER:HB3	1.53	0.89
15:14:2603:G:OP2	56:14:3611:HOH:O	1.89	0.89
15:1H:1235:G:N7	56:1H:3741:HOH:O	2.06	0.89
15:14:881:G:H5'	30:35:45:LEU:HD11	1.52	0.89
1:1G:2125:A:H2	1:1G:2128:G:H1	1.21	0.89
39:J8:92:LYS:HA	39:J8:95:LEU:HB2	1.52	0.89
48:1I:8:LEU:HD22	48:1I:96:ILE:HG22	1.55	0.89
14:32:26:CYS:HA	14:32:31:CYS:HB3	1.52	0.88
15:14:2512:A:O3'	56:14:3613:HOH:O	1.91	0.88
47:51:9:ILE:HG21	47:51:49:VAL:HB	1.55	0.88
12:Q8:59:LYS:HE3	12:Q8:60:LEU:HD11	1.55	0.88
1:13:1995:C:H5'	48:1I:60:ARG:HH21	1.37	0.88
15:1H:780:C:OP2	56:1H:3712:HOH:O	1.90	0.88
1:1G:2165:G:C6	51:Y4:29:G:N2	2.29	0.88
4:19:242:ARG:O	56:19:401:HOH:O	1.91	0.88
52:V1:72:C:H2'	52:V1:73:A:H5''	1.56	0.88

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:2A:29:ILE:HG22	6:2A:44:SER:HB2	1.54	0.88
15:14:1109:U:H5'	15:14:1118:A:H1'	1.56	0.88
15:14:1947:G:N7	53:14:3002:8UZ:N2	2.21	0.88
9:82:112:LYS:HA	9:82:119:ALA:HB2	1.55	0.88
15:14:1381:G:N2	15:14:1658:A:O2'	2.07	0.88
47:51:88:LEU:HB3	47:51:130:ARG:HG2	1.56	0.88
13:3A:49:ASN:ND2	13:3A:92:ASP:OD2	2.06	0.88
15:14:1096:A:N6	15:14:1160:G:O2'	2.06	0.88
15:14:2613:A:OP1	56:14:3612:HOH:O	1.90	0.88
15:1H:829:G:H21	15:1H:832:A:H62	1.20	0.87
15:1H:1235:G:OP2	56:1H:3717:HOH:O	1.91	0.87
15:1H:1020:A:OP2	56:1H:3719:HOH:O	1.92	0.87
32:39:53:THR:HG23	32:39:55:GLY:H	1.39	0.87
44:12:185:ILE:HG22	44:12:199:TYR:HB2	1.54	0.87
1:13:1167:G:H5''	13:3I:114:LYS:HB2	1.56	0.87
51:Y4:35:A:H2'	51:Y4:36:G:C8	2.09	0.87
1:13:1352:U:N3	1:13:2160:U:O2'	2.05	0.87
15:14:2254:G:OP2	56:14:3614:HOH:O	1.92	0.87
23:29:33:VAL:HG12	23:29:89:ASP:HB3	1.54	0.87
36:N8:40:LYS:NZ	36:N8:46:CYS:HB3	1.90	0.87
37:BI:86:ARG:NH1	37:BI:86:ARG:O	2.05	0.87
48:1I:48:THR:HG1	48:1I:62:HIS:HD1	0.89	0.87
15:1H:2302:A:H62	15:1H:2359:U:H3	1.17	0.87
15:1H:2648:G:OP2	53:1H:3004:8UZ:O8	1.93	0.86
10:15:106:MET:HE3	15:14:1186:G:H21	1.39	0.86
15:14:2514:C:OP2	56:14:3615:HOH:O	1.92	0.86
40:49:125:PHE:HB3	40:49:166:ASP:HB2	1.57	0.86
19:9I:26:LEU:HB3	19:9I:42:ARG:HH22	1.41	0.86
1:13:1230:C:H2'	1:13:1231:A:H8	1.38	0.86
12:Q8:30:ARG:NH2	15:1H:2407:A:OP2	2.09	0.86
9:82:28:VAL:HG22	9:82:63:ILE:HB	1.57	0.85
15:14:1020:A:OP2	56:14:3616:HOH:O	1.93	0.85
24:4A:57:ARG:NH1	28:I5:34:GLU:O	2.09	0.85
15:1H:470:G:H1'	32:3I:48:THR:HG21	1.59	0.85
32:3I:6:VAL:N	32:3I:24:LEU:O	2.09	0.85
15:1H:1805:C:HO2'	15:1H:1820:A:H8	0.87	0.85
26:1J:17:A:H1'	26:1J:112:G:C5	2.11	0.85
11:G8:54:LYS:O	11:G8:54:LYS:NZ	2.09	0.85
1:13:1975:U:H3	1:13:2002:A:H2	1.22	0.85
15:1H:2595:U:H4'	23:2I:130:GLY:HA3	1.55	0.85
15:14:2286:G:N7	56:14:3652:HOH:O	2.10	0.85

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:1E:74:LYS:NZ	44:1E:205:ASP:OD2	2.09	0.85
1:1G:1260:G:H3'	1:1G:1261:A:H8	1.39	0.85
15:1H:48:A:N7	15:1H:118:U:H5	1.74	0.85
15:14:474:G:OP2	56:14:3618:HOH:O	1.94	0.85
15:1H:427:G:OP2	56:1H:3721:HOH:O	1.95	0.84
15:14:2513:C:OP2	56:14:3608:HOH:O	1.94	0.84
15:1H:2022:G:OP2	56:1H:3720:HOH:O	1.95	0.84
15:14:1005:U:OP2	38:45:14:ARG:NH1	2.09	0.84
1:1G:1714:U:H3	1:1G:1727:G:H22	1.22	0.84
15:14:1924:G:H22	15:14:1927:C:N4	1.76	0.84
15:14:2022:G:OP2	56:14:3617:HOH:O	1.93	0.84
6:2I:99:GLN:HA	6:2I:105:VAL:HG11	1.59	0.84
27:85:92:ARG:HD3	27:85:94:ASN:HB3	1.59	0.84
15:14:2271:G:N7	56:14:3650:HOH:O	2.10	0.84
1:13:1738:A:OP2	56:13:2501:HOH:O	1.94	0.84
15:14:1042:C:OP1	27:85:53:ARG:NH2	2.09	0.84
15:14:2598:G:H21	52:W4:76:A:H8	1.21	0.84
15:1H:1089:C:H42	15:1H:1162:G:H1	1.21	0.84
15:14:593:U:O4	56:14:3616:HOH:O	1.94	0.83
23:29:54:GLN:HB2	23:29:75:VAL:HG22	1.60	0.83
15:14:1739:A:H62	15:14:1748:A:H2	1.22	0.83
1:13:1302:G:H2'	1:13:1303:G:C8	2.13	0.83
10:58:130:HIS:HA	10:58:134:ARG:HH12	1.44	0.83
25:4E:102:ALA:HB1	25:4E:106:PRO:HG2	1.58	0.83
32:39:122:LYS:HD2	32:39:191:ARG:HD2	1.60	0.83
1:1G:927:G:N7	56:1G:2401:HOH:O	2.12	0.83
15:1H:2271:G:N7	56:1H:3749:HOH:O	2.10	0.83
36:N8:33:CYS:SG	36:N8:40:LYS:NZ	2.51	0.83
15:1H:1916:G:O6	56:1H:3723:HOH:O	1.97	0.83
15:14:800:A:OP1	56:14:3620:HOH:O	1.97	0.83
15:1H:780:C:OP2	56:1H:3722:HOH:O	1.96	0.82
1:1G:1088:A:OP2	1:1G:1115:G:N2	2.10	0.82
15:1H:269:G:H1	15:1H:277:C:H42	1.26	0.82
15:14:2850:G:N7	56:14:3662:HOH:O	2.12	0.82
18:69:80:PRO:HA	18:69:143:SER:HA	1.60	0.82
15:1H:249:G:HO2'	15:1H:648:A:HO2'	1.28	0.82
15:14:1465:G:O2'	15:14:1466:C:O5'	1.97	0.82
15:14:2302:A:H62	15:14:2359:U:H3	1.27	0.82
1:1G:1088:A:P	1:1G:1115:G:H22	2.03	0.82
15:14:427:G:OP2	56:14:3619:HOH:O	1.96	0.82
1:13:1293:G:H22	1:13:1370:G:H1	1.28	0.82

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:1G:1756:C:H1'	1:1G:1774:A:H61	1.45	0.82
15:1H:1302:A:N7	56:1H:3755:HOH:O	2.13	0.82
44:12:111:ARG:HA	44:12:111:ARG:HH11	1.44	0.81
15:14:48:A:H4'	15:14:49:U:H5''	1.61	0.81
15:14:1676:G:OP1	56:14:3622:HOH:O	1.98	0.81
23:29:31:CYS:HB3	23:29:49:LEU:HB2	1.62	0.81
47:51:64:LEU:O	47:51:68:THR:OG1	1.98	0.81
1:13:2120:G:H2'	1:13:2121:U:H5'	1.63	0.81
3:B5:31:HIS:HE2	15:14:70:A:H2	1.29	0.81
2:65:3:ARG:HE	2:65:4:LEU:N	1.77	0.81
15:1H:797:G:OP2	56:1H:3724:HOH:O	1.97	0.81
16:B8:74:ARG:HG2	16:B8:74:ARG:HH11	1.43	0.81
18:69:130:TYR:HB3	18:69:136:VAL:HG13	1.61	0.81
6:2I:91:ARG:NH2	6:2I:110:ASP:OD2	2.13	0.81
50:7E:20:TYR:HE2	50:7E:75:ARG:HD2	1.46	0.81
15:1H:2057:G:H21	23:21:146:THR:HG23	1.45	0.81
15:14:2487:G:H2'	15:14:2490:C:H41	1.45	0.81
35:D8:59:ALA:HB2	35:D8:96:ILE:HD13	1.61	0.81
15:1H:1069:A:H8	15:1H:1070:G:H5''	1.43	0.81
15:1H:2888:C:H4'	16:B8:5:ALA:HB2	1.63	0.81
15:14:514:C:O2'	43:A5:60:ASN:ND2	2.14	0.81
52:V1:9:A:H62	52:V1:23:A:H62	1.29	0.81
4:11:8:PRO:HB3	4:11:14:ARG:HB3	1.62	0.81
1:1G:1598:A:H4'	1:1G:1599:G:H5''	1.62	0.81
23:21:105:THR:OG1	23:21:199:ARG:NH2	2.14	0.81
2:A8:56:LEU:HB3	2:A8:58:LEU:HD21	1.63	0.80
15:14:628:A:H8	15:14:629:G:H1'	1.45	0.80
1:13:1596:G:H3'	1:13:1597:A:H5''	1.63	0.80
1:1G:2165:G:N1	51:Y4:29:G:N2	2.28	0.80
15:14:2612:G:O3'	56:14:3624:HOH:O	1.99	0.80
5:L5:39:ARG:NH1	15:14:497:G:O6	2.14	0.80
15:1H:544:C:OP1	36:N8:16:ARG:NH2	2.13	0.80
21:68:63:VAL:HG12	21:68:106:LEU:HD11	1.63	0.80
1:13:667:G:OP1	56:13:2502:HOH:O	1.98	0.80
1:1G:1975:U:H3	1:1G:2002:A:H2	1.29	0.80
35:95:85:LYS:HB3	35:95:87:HIS:H	1.46	0.80
13:3A:41:ARG:HB3	13:3A:41:ARG:HH11	1.45	0.80
24:4I:3:ARG:HE	24:4I:9:ILE:HD11	1.47	0.80
15:1H:2230:G:H3'	15:1H:2231:G:C5	2.17	0.80
15:14:593:U:O2'	56:14:3627:HOH:O	2.00	0.80
22:H8:108:PRO:HB2	22:H8:112:ARG:HA	1.63	0.80

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:19:35:LYS:NZ	15:14:1850:G:O6	2.13	0.80
50:7E:87:SER:HB2	50:7E:93:VAL:HB	1.64	0.80
52:X1:61:C:H2'	52:X1:62:C:H6	1.47	0.80
1:1G:1171:G:OP1	14:32:10:ARG:NH2	2.15	0.79
47:59:137:ASP:HB3	47:59:140:LYS:HB2	1.64	0.79
15:1H:2842:C:H2'	15:1H:2843:G:H5''	1.63	0.79
15:14:1426:G:OP2	56:14:3623:HOH:O	1.99	0.79
43:A5:33:ARG:NH1	43:A5:52:GLU:OE2	2.14	0.79
46:K8:47:ASN:O	46:K8:49:LYS:N	2.13	0.79
1:1G:2165:G:H1	51:Y4:29:G:N2	1.79	0.79
4:19:238:GLY:O	4:19:239:ARG:HG2	1.81	0.79
15:14:66:U:H3	15:14:73:A:H2	1.28	0.79
29:AA:78:ARG:H	29:AA:78:ARG:HD3	1.48	0.79
35:95:80:GLN:HE22	35:95:82:ARG:HE	1.31	0.79
3:F8:24:GLY:HA3	3:F8:82:GLN:HE22	1.46	0.79
1:13:817:C:OP1	37:BI:65:LYS:NZ	2.16	0.79
15:14:427:G:OP2	56:14:3630:HOH:O	2.01	0.79
37:BI:71:THR:HG22	37:BI:72:LEU:H	1.46	0.79
15:1H:851:A:OP1	56:1H:3727:HOH:O	2.01	0.79
15:1H:1545:A:H8	15:1H:1627:C:HO2'	1.27	0.79
39:F5:46:LEU:O	39:F5:47:GLN:NE2	2.16	0.79
39:J8:48:LYS:HD2	39:J8:49:VAL:HA	1.65	0.79
44:1E:60:ASP:OD2	44:1E:64:ARG:NH2	2.15	0.79
15:14:685:G:H22	15:14:698:C:H42	1.26	0.79
14:32:175:SER:HB3	14:32:186:LEU:HD11	1.65	0.79
15:14:83:A:N6	15:14:100:G:O2'	2.16	0.79
38:45:57:HIS:CD2	38:45:117:ALA:HB2	2.18	0.79
15:1H:1067:U:H3	15:1H:1191:A:H62	1.30	0.78
15:14:657:G:N2	15:14:660:A:OP2	2.15	0.78
15:14:836:U:OP1	56:14:3632:HOH:O	2.01	0.78
15:14:2099:U:OP1	56:14:3631:HOH:O	2.01	0.78
15:14:2463:A:OP2	56:14:3608:HOH:O	2.00	0.78
8:2E:180:ALA:HB1	8:2E:182:ILE:HG13	1.63	0.78
13:3I:53:ARG:HG3	13:3I:93:LEU:HD21	1.63	0.78
15:14:2099:U:OP1	56:14:3628:HOH:O	2.00	0.78
44:1E:87:ARG:NH2	44:1E:220:ASP:OD1	2.16	0.78
15:14:1862:G:OP2	56:14:3625:HOH:O	2.00	0.78
15:1H:1529:G:N7	15:1H:1559:A:N6	2.31	0.78
15:14:1349:U:O4	56:14:3626:HOH:O	2.00	0.78
33:5I:45:ARG:NH1	48:1I:61:GLU:OE2	2.16	0.78
15:1H:2104:U:O4	56:1H:3725:HOH:O	2.00	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:14:601:U:OP1	56:14:3633:HOH:O	2.01	0.78
1:13:2125:A:H2	1:13:2128:G:H1	1.28	0.78
9:8E:3:GLN:OE1	9:8E:20:ARG:NH1	2.16	0.78
12:Q8:57:ARG:HH11	12:Q8:57:ARG:H	1.30	0.78
9:82:112:LYS:HE3	9:82:118:LYS:H	1.48	0.78
15:1H:596:A:OP2	56:1H:3731:HOH:O	2.02	0.78
15:1H:2587:A:C8	23:21:144:ARG:HD3	2.19	0.78
15:14:2762:U:H4'	47:59:138:LYS:HB3	1.64	0.78
1:13:1661:G:H2'	1:13:1662:G:H8	1.47	0.78
4:19:244:ARG:NH2	56:14:3614:HOH:O	2.15	0.78
44:12:9:GLU:HB2	44:12:217:ARG:HH12	1.48	0.78
1:13:1883:A:N6	1:13:1905:U:OP2	2.12	0.78
15:1H:810:A:N7	56:1H:3765:HOH:O	2.15	0.78
15:1H:2022:G:OP2	56:1H:3729:HOH:O	2.01	0.78
15:1H:2027:G:N7	56:1H:3771:HOH:O	2.17	0.78
15:1H:2302:A:N6	15:1H:2359:U:H3	1.82	0.78
12:M5:4:MET:HE2	15:14:617:G:H21	1.47	0.78
24:4I:84:ILE:HD11	29:AI:66:MET:HG2	1.65	0.78
1:13:1598:A:H4'	1:13:1599:G:H5''	1.65	0.78
12:Q8:57:ARG:HD3	12:Q8:57:ARG:N	1.99	0.78
15:14:1689:U:OP1	56:14:3629:HOH:O	2.00	0.78
21:68:88:ASN:HD21	21:68:90:GLN:HB2	1.47	0.78
2:65:84:GLN:HA	2:65:110:LEU:HD12	1.64	0.77
12:Q8:32:LEU:HG	12:Q8:33:ASN:N	1.99	0.77
28:I5:22:ILE:HG12	28:I5:23:GLU:H	1.48	0.77
48:1I:77:PRO:HB2	48:1I:79:ARG:HH12	1.48	0.77
1:1G:1886:C:O2'	1:1G:1910:G:N2	2.16	0.77
22:D5:60:GLU:HA	22:D5:66:SER:HA	1.65	0.77
35:95:35:LEU:O	35:95:37:VAL:HG22	1.82	0.77
22:H8:72:ARG:NH2	22:H8:97:GLU:O	2.16	0.77
23:29:68:ALA:O	23:29:71:GLY:N	2.18	0.77
1:1G:1168:A:OP2	13:3A:115:LYS:NZ	2.17	0.77
1:1G:1934:U:OP1	24:4A:101:GLN:NE2	2.17	0.77
11:G8:95:LYS:HE3	11:G8:97:ARG:HH22	1.47	0.77
4:19:263:ARG:NH2	15:14:2243:G:OP1	2.18	0.77
15:1H:1304:U:O2	56:1H:3730:HOH:O	2.02	0.77
30:78:50:ARG:HH21	30:78:50:ARG:HG3	1.48	0.77
46:G5:47:ASN:O	46:G5:49:LYS:N	2.16	0.77
15:14:906:C:H4'	31:E5:23:VAL:HG21	1.65	0.77
32:39:123:LEU:O	32:39:125:LEU:N	2.17	0.77
1:13:1752:G:O2'	1:13:1773:C:N4	2.17	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:1H:118:U:OP1	56:1H:3728:HOH:O	2.01	0.77
15:1H:2671:U:H3	15:1H:2680:A:H2	1.31	0.77
1:1G:1805:G:H5''	9:82:93:ARG:HH22	1.48	0.77
9:82:50:LEU:HB3	9:82:56:LEU:HA	1.66	0.77
15:1H:1651:U:O4	56:1H:3726:HOH:O	2.00	0.77
49:7I:45:THR:HG22	49:7I:47:ASP:H	1.49	0.77
1:13:907:G:H5''	1:13:908:C:C5	2.20	0.77
15:14:839:C:OP2	56:14:3638:HOH:O	2.03	0.77
15:14:1312:U:OP2	56:14:3634:HOH:O	2.01	0.77
12:Q8:47:LYS:HB2	12:Q8:47:LYS:HZ2	1.48	0.77
15:1H:249:G:O2'	15:1H:648:A:O2'	2.02	0.77
1:13:1980:G:OP1	20:1F:10:ARG:NH2	2.18	0.76
15:1H:34:C:OP2	15:1H:34:C:H6	1.66	0.76
22:D5:74:VAL:HG23	38:45:139:GLU:HB3	1.66	0.76
35:D8:38:LEU:HD12	35:D8:57:VAL:HG12	1.66	0.76
15:1H:1739:A:H62	15:1H:1748:A:H2	1.32	0.76
15:14:2331:C:O2'	40:49:128:ARG:NH1	2.17	0.76
15:14:2754:A:OP2	56:14:3635:HOH:O	2.02	0.76
6:2A:48:ILE:HD11	6:2A:64:ALA:HA	1.68	0.76
12:Q8:59:LYS:NZ	12:Q8:60:LEU:HD21	2.01	0.76
15:14:2093:U:H3	15:14:2445:A:H2	1.29	0.76
35:D8:65:GLY:HA3	35:D8:91:TYR:CZ	2.21	0.76
15:14:2258:U:OP1	56:14:3637:HOH:O	2.03	0.76
30:35:50:ARG:HB3	30:35:50:ARG:HH11	1.51	0.76
16:B8:77:PRO:HG2	16:B8:80:SER:HB2	1.65	0.76
15:14:2417:C:H5	15:14:2430:G:H22	1.33	0.76
15:14:2482:C:H4'	38:45:123:HIS:CD2	2.20	0.76
40:41:97:ASP:O	40:41:100:TRP:N	2.19	0.76
1:1G:1115:G:H1'	1:1G:1116:U:H5	1.51	0.76
1:1G:1932:G:H22	1:1G:1958:G:H2'	1.50	0.76
15:1H:911:G:OP2	56:1H:3732:HOH:O	2.03	0.76
15:1H:1728:G:N2	15:1H:2014:G:H22	1.82	0.76
15:1H:2060:G:OP1	56:1H:3735:HOH:O	2.03	0.76
15:14:2230:G:H4'	15:14:2231:G:OP2	1.86	0.76
44:12:59:GLU:HB2	44:12:221:LEU:HD23	1.67	0.76
46:G5:15:LYS:H	46:G5:67:LYS:HE2	1.51	0.76
15:14:296:C:N4	15:14:390:G:O6	2.17	0.76
25:42:50:GLU:HB2	25:42:53:LEU:HD13	1.67	0.76
1:13:1932:G:N2	1:13:1958:G:H2'	2.00	0.76
15:14:2862:U:O4	16:75:23:ARG:NH2	2.18	0.76
15:1H:1924:G:H22	15:1H:1927:C:H5	1.34	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:14:819:G:OP2	56:14:3640:HOH:O	2.04	0.76
52:X4:18:G:H5'	52:X4:57:G:H22	1.51	0.76
25:4E:8:GLU:OE1	25:4E:63:ARG:NH2	2.19	0.76
47:59:26:VAL:HG21	47:59:75:ALA:HB1	1.67	0.75
15:1H:2577:U:H1'	21:68:23:ARG:HH11	1.52	0.75
1:1G:2154:A:H2'	1:1G:2155:U:C4	2.22	0.75
12:Q8:27:THR:HG21	12:Q8:34:TRP:CH2	2.21	0.75
15:1H:612:C:O2	30:78:33:ARG:NH1	2.19	0.75
15:1H:1925:A:H5'	15:1H:1925:A:H8	1.50	0.75
15:1H:2323:G:H1	15:1H:2326:A:H2	1.32	0.75
12:M5:54:GLU:OE1	12:M5:57:ARG:NH2	2.20	0.75
15:14:1728:G:N2	15:14:2014:G:H22	1.83	0.75
15:14:1924:G:N2	15:14:1927:C:H41	1.82	0.75
6:2I:54:ARG:NH2	52:V1:39:U:O2'	2.20	0.75
15:14:2518:A:OP1	56:14:3643:HOH:O	2.05	0.75
15:14:2812:U:H5'	15:14:2813:C:H5	1.50	0.75
28:M8:17:GLY:HA3	28:M8:35:VAL:HG23	1.67	0.75
30:78:39:LYS:HG3	30:78:45:LEU:HD22	1.66	0.75
4:11:241:PRO:HD3	15:1H:1996:A:C4	2.22	0.75
8:22:70:VAL:HG12	8:22:72:LYS:H	1.51	0.75
15:1H:10:G:O2'	15:1H:2815:A:N3	2.19	0.75
15:14:428:G:O6	56:14:3636:HOH:O	2.03	0.75
15:14:1070:G:H22	15:14:1191:A:H2	1.35	0.75
15:14:1398:A:OP1	56:14:3641:HOH:O	2.04	0.75
32:31:9:ILE:HD11	32:31:125:LEU:HG	1.69	0.75
40:41:66:GLN:OE1	40:41:98:ARG:NH1	2.20	0.75
1:13:1853:C:H2'	24:4I:103:THR:HB	1.68	0.75
12:M5:62:LEU:O	12:M5:64:TYR:N	2.18	0.75
10:15:4:TYR:O	27:85:64:ARG:NH1	2.19	0.74
15:1H:427:G:OP2	56:1H:3733:HOH:O	2.03	0.74
15:14:2342:A:H2'	15:14:2343:A:C8	2.22	0.74
1:13:2070:G:H1	1:13:2084:G:H21	1.33	0.74
15:1H:2862:U:O4	16:B8:23:ARG:NH2	2.20	0.74
15:14:1483:A:H61	15:14:1608:A:H62	1.35	0.74
15:14:2761:C:O2	47:59:139:GLN:NE2	2.20	0.74
39:F5:85:LEU:HA	39:F5:87:PRO:HD2	1.69	0.74
44:1E:84:GLU:HB3	44:1E:219:VAL:HG21	1.66	0.74
4:19:79:VAL:HG21	4:19:111:LEU:HD21	1.69	0.74
15:14:723:G:O2'	32:39:74:ARG:HG3	1.88	0.74
35:95:45:THR:OG1	35:95:46:VAL:N	2.18	0.74
15:14:1820:A:OP1	56:14:3639:HOH:O	2.04	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:39:18:ARG:HE	32:39:20:LEU:HD23	1.53	0.74
36:J5:41:PRO:O	36:J5:44:THR:OG1	2.05	0.74
43:A5:25:ARG:NH2	43:A5:74:ALA:O	2.21	0.74
8:2E:16:ARG:NH2	8:2E:183:ASP:OD1	2.20	0.74
1:1G:1235:G:N2	1:1G:1260:G:O2'	2.20	0.74
1:1G:1948:C:H3'	1:1G:1949:C:H5''	1.68	0.74
4:19:145:VAL:HG13	4:19:191:ALA:HB2	1.70	0.74
14:3E:22:LYS:HB2	14:3E:26:CYS:SG	2.27	0.74
15:1H:627:G:HO2'	15:1H:629:G:HO2'	1.36	0.74
15:1H:867:G:OP2	56:1H:3736:HOH:O	2.04	0.74
15:1H:1110:G:N2	15:1H:1124:C:O2	2.20	0.74
15:1H:1651:U:O4	56:1H:3702:HOH:O	2.04	0.74
15:14:711:G:H5'	30:35:14:LYS:HB2	1.69	0.74
23:29:3:GLY:HA3	23:29:81:ILE:HD12	1.67	0.74
13:3I:82:VAL:HG13	13:3I:105:TYR:HB3	1.67	0.74
15:1H:1474:G:O6	56:1H:3734:HOH:O	2.03	0.74
29:AI:40:ILE:HG23	29:AI:41:VAL:HG13	1.70	0.74
15:1H:75:C:O2'	46:K8:62:THR:HG21	1.86	0.74
15:1H:1298:U:OP1	56:1H:3737:HOH:O	2.04	0.74
15:14:1273:C:O3'	35:95:85:LYS:HA	1.88	0.74
18:69:4:ILE:HD11	18:69:44:LEU:HD22	1.69	0.74
26:16:44:C:O3'	40:41:67:LYS:NZ	2.17	0.74
44:1E:115:LEU:HD13	44:1E:145:LEU:HB3	1.70	0.74
12:Q8:31:HIS:HB2	12:Q8:34:TRP:HE3	1.53	0.74
15:1H:992:A:OP1	56:1H:3738:HOH:O	2.05	0.74
37:BI:33:ILE:O	37:BI:37:SER:OG	2.06	0.74
47:59:159:GLU:O	47:59:163:TYR:OH	2.06	0.74
49:7A:53:VAL:HG13	49:7A:79:VAL:HG22	1.70	0.74
1:1G:1281:U:H1'	1:1G:1282:A:H2	1.53	0.74
11:C5:90:LEU:HB3	11:C5:91:GLU:HA	1.69	0.74
15:14:829:G:H21	15:14:832:A:H62	1.34	0.74
16:75:21:GLU:O	16:75:91:ARG:NH2	2.21	0.74
11:C5:50:ARG:HB3	11:C5:53:PRO:HG3	1.68	0.73
15:14:1545:A:H8	15:14:1627:C:HO2'	1.35	0.73
28:M8:37:SER:H	40:41:112:PRO:HB3	1.52	0.73
31:I8:68:GLU:HG3	31:I8:80:HIS:HB2	1.70	0.73
37:BI:50:GLU:HB2	37:BI:100:ILE:HD13	1.69	0.73
34:52:68:PRO:HG2	34:52:71:ARG:HG3	1.70	0.73
39:F5:87:PRO:O	39:F5:91:LYS:N	2.21	0.73
5:L5:11:LYS:NZ	15:14:735:G:OP1	2.19	0.73
1:1G:2165:G:O6	51:Y4:29:G:C2	2.41	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:14:2852:G:H5'	45:55:46:GLY:HA2	1.70	0.73
21:68:2:ILE:HD12	21:68:6:THR:HG21	1.69	0.73
30:35:98:GLU:HA	30:35:101:VAL:HG12	1.70	0.73
39:J8:90:ILE:HA	39:J8:94:LEU:HD12	1.67	0.73
47:59:81:GLU:O	47:59:138:LYS:NZ	2.21	0.73
15:1H:2425:G:N7	56:1H:3775:HOH:O	2.20	0.73
22:H8:7:ALA:HB3	22:H8:61:LEU:HB3	1.70	0.73
26:16:17:A:H5'	26:16:18:G:C8	2.23	0.73
23:29:61:ARG:O	23:29:63:LEU:N	2.20	0.73
30:78:116:GLY:H	30:78:134:ALA:HB2	1.54	0.73
32:39:24:LEU:HD12	32:39:25:PRO:HD3	1.70	0.73
49:7I:25:ARG:HG3	49:7I:25:ARG:HH11	1.52	0.73
1:1G:1601:A:O2'	1:1G:1949:C:N3	2.22	0.73
15:1H:2349:G:O6	31:I8:74:ARG:NH2	2.22	0.73
15:14:2087:A:N3	15:14:2087:A:H2'	2.02	0.73
7:8I:100:LYS:HB3	7:8I:101:ARG:NH1	2.03	0.73
2:65:25:ARG:NH2	26:1J:10:U:O3'	2.18	0.73
15:1H:711:G:H5'	30:78:15:ARG:HB3	1.69	0.73
14:32:139:ARG:HH11	14:32:139:ARG:HG3	1.54	0.73
24:4I:23:TYR:HB3	24:4I:67:GLU:HB2	1.70	0.73
1:1G:1873:C:O2	1:1G:1918:G:N2	2.14	0.73
12:Q8:48:PHE:HB3	12:Q8:52:LYS:HB3	1.71	0.73
15:1H:1663:A:OP1	56:1H:3739:HOH:O	2.06	0.73
14:32:105:VAL:HG13	14:32:110:PHE:HB2	1.70	0.73
1:1G:1543:U:H2'	1:1G:1544:U:C6	2.24	0.73
15:1H:1302:A:N6	56:1H:3778:HOH:O	2.21	0.73
15:1H:1924:G:N2	15:1H:1927:C:H5	1.86	0.73
14:32:111:ALA:HB2	14:32:120:LEU:HD12	1.71	0.73
15:14:1314:A:O2'	56:14:3644:HOH:O	2.05	0.73
25:4E:91:LEU:HD12	25:4E:120:THR:HG22	1.70	0.73
33:5I:58:LYS:NZ	48:1I:61:GLU:OE1	2.15	0.73
44:1E:17:PHE:HB3	44:1E:44:LEU:HD11	1.71	0.73
1:13:1816:C:OP1	48:1I:51:ARG:NH2	2.21	0.73
12:Q8:46:ARG:CZ	12:Q8:46:ARG:HB3	2.17	0.73
15:14:2792:A:O2'	53:14:3004:8UZ:N	2.22	0.73
26:1J:12:C:O2	26:1J:113:G:N2	2.18	0.73
1:1G:2080:G:OP1	37:BA:39:LYS:NZ	2.22	0.73
15:1H:249:G:H21	15:1H:648:A:H8	1.37	0.73
15:14:607:G:N7	56:14:3684:HOH:O	2.22	0.73
24:4I:23:TYR:HD1	24:4I:67:GLU:HA	1.54	0.73
22:D5:93:ASP:HB3	22:D5:131:ARG:HH12	1.52	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:1H:1252:A:H2	15:1H:1290:A:N1	1.87	0.73
15:14:230:G:O6	56:14:3642:HOH:O	2.05	0.73
15:14:643:G:OP1	32:39:40:GLN:NE2	2.17	0.73
44:1E:187:LEU:HA	44:1E:201:ILE:HB	1.69	0.73
19:9I:59:SER:HB3	19:9I:62:GLU:HG3	1.72	0.72
15:14:958:A:H62	38:45:12:GLN:HA	1.53	0.72
1:1G:2117:G:N7	53:1G:2201:8UZ:N1	2.37	0.72
15:1H:688:C:O2	15:1H:695:G:N2	2.22	0.72
14:32:148:VAL:O	14:32:152:SER:OG	2.06	0.72
1:13:1979:C:OP1	20:1F:3:LYS:NZ	2.22	0.72
4:11:137:PRO:O	4:11:140:THR:OG1	2.07	0.72
45:98:45:ARG:HD2	45:98:97:VAL:HG21	1.69	0.72
48:1A:3:LYS:N	48:1A:74:ILE:O	2.22	0.72
15:1H:2285:G:OP2	56:1H:3740:HOH:O	2.06	0.72
15:14:2302:A:N6	15:14:2359:U:H3	1.86	0.72
36:N8:3:LYS:NZ	36:N8:3:LYS:HB3	2.04	0.72
6:2I:98:LEU:O	6:2I:101:SER:OG	2.07	0.72
2:A8:37:ALA:HB2	2:A8:101:LEU:HD21	1.71	0.72
15:14:478:G:OP2	56:14:3646:HOH:O	2.06	0.72
32:31:101:LEU:HD22	32:31:102:PRO:HD2	1.71	0.72
1:13:1188:A:OP1	25:4E:126:ARG:NH2	2.22	0.72
15:14:1872:C:O3'	56:14:3645:HOH:O	2.06	0.72
27:C8:92:ARG:HD3	27:C8:94:ASN:HB3	1.72	0.72
1:13:1255:U:H2'	1:13:1256:G:H8	1.55	0.72
1:1G:1782:G:H2'	1:1G:1783:G:H8	1.55	0.72
15:1H:990:U:OP2	56:1H:3744:HOH:O	2.08	0.72
15:14:1642:G:H2'	15:14:1643:G:C8	2.25	0.72
15:14:1790:G:OP2	56:14:3647:HOH:O	2.07	0.72
15:14:2487:G:H22	15:14:2492:C:H5'	1.55	0.72
32:39:65:TRP:CZ3	32:39:72:ARG:HB3	2.25	0.72
39:J8:48:LYS:HB3	39:J8:49:VAL:HA	1.71	0.72
7:8A:17:LYS:HD3	7:8A:47:PRO:HA	1.72	0.72
32:39:40:GLN:HE22	32:39:182:ASN:HB2	1.55	0.72
42:6E:111:ARG:NH1	42:6E:113:GLU:OE2	2.23	0.72
12:M5:8:LYS:HB3	12:M5:12:LYS:HE3	1.72	0.72
15:14:2462:G:H3'	56:14:3808:HOH:O	1.89	0.72
27:C8:108:GLU:OE1	27:C8:112:ARG:NH1	2.22	0.72
38:88:135:ASP:HB3	38:88:137:TYR:H	1.55	0.72
40:41:64:THR:HG22	40:41:66:GLN:H	1.55	0.72
38:45:25:ASP:HB3	38:45:102:VAL:HG23	1.71	0.71
45:98:67:LEU:HD13	45:98:76:VAL:HG21	1.72	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:19:33:LEU:HD21	4:19:103:ARG:HA	1.71	0.71
15:1H:1583:G:H2'	15:1H:1584:U:H4'	1.71	0.71
17:H5:59:VAL:HG12	17:H5:60:GLU:H	1.55	0.71
25:4E:39:GLY:HA3	25:4E:71:LEU:HD11	1.71	0.71
2:65:3:ARG:NH2	2:65:4:LEU:HB2	2.02	0.71
15:1H:725:A:H8	15:1H:2094:G:H21	1.37	0.71
15:1H:1205:A:OP2	56:1H:3742:HOH:O	2.07	0.71
10:15:18:ALA:HA	10:15:21:LYS:HG3	1.72	0.71
15:14:1431:G:N7	56:14:3689:HOH:O	2.22	0.71
22:H8:165:VAL:HB	22:H8:167:PRO:HD3	1.72	0.71
24:4I:3:ARG:HH22	40:41:139:LEU:HD13	1.55	0.71
15:1H:1214:U:H2'	15:1H:1215:C:C6	2.25	0.71
36:N8:40:LYS:HZ1	36:N8:46:CYS:HB3	1.52	0.71
1:1G:1017:G:H5''	49:7A:5:ARG:HD2	1.73	0.71
11:G8:68:HIS:ND1	11:G8:70:SER:HB2	2.05	0.71
15:1H:2150:G:H1	15:1H:2196:A:H5''	1.55	0.71
15:14:2145:G:H2'	15:14:2146:G:C8	2.25	0.71
23:29:60:ASN:HB3	23:29:61:ARG:C	2.11	0.71
32:39:101:LEU:O	32:39:106:ARG:NH1	2.23	0.71
35:95:69:LYS:HG3	35:95:86:GLY:HA3	1.72	0.71
52:W4:50:U:H3	52:W4:64:A:H61	1.36	0.71
1:13:1919:U:H2'	1:13:1920:G:H8	1.54	0.71
1:13:2050:G:H5''	21:68:48:PRO:HB3	1.72	0.71
15:1H:623:G:H5'	30:78:11:GLY:HA3	1.70	0.71
15:14:118:U:OP1	56:14:3649:HOH:O	2.09	0.71
40:49:161:THR:HG22	40:49:163:ALA:H	1.54	0.71
1:1G:994:A:H5'	1:1G:994:A:H8	1.54	0.71
1:1G:1908:U:OP2	1:1G:1909:C:N4	2.21	0.71
25:42:126:ARG:HH11	25:42:126:ARG:HG3	1.55	0.71
30:35:1:MET:N	32:39:116:ASP:OD2	2.24	0.71
15:1H:428:G:O6	56:1H:3743:HOH:O	2.08	0.71
28:I5:14:ILE:HG22	28:I5:22:ILE:HA	1.71	0.71
4:19:237:GLU:HB2	4:19:239:ARG:C	2.12	0.71
15:1H:674:G:OP2	53:1H:3005:8UZ:O6	2.07	0.71
15:1H:782:G:OP2	56:1H:3745:HOH:O	2.08	0.71
23:21:105:THR:HG22	23:21:106:GLY:H	1.55	0.71
26:1J:82:U:H2'	26:1J:83:G:H21	1.56	0.71
40:41:7:LEU:N	40:41:104:GLU:OE1	2.23	0.71
45:98:56:LYS:NZ	45:98:90:ARG:O	2.23	0.71
8:22:95:THR:HB	8:22:97:LYS:HG2	1.72	0.71
15:1H:1010:U:OP1	56:1H:3746:HOH:O	2.09	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:3A:41:ARG:HB3	13:3A:41:ARG:NH1	2.06	0.71
15:14:1203:G:OP2	27:85:58:ARG:NH1	2.23	0.71
40:49:114:ILE:HG22	40:49:117:PHE:HB2	1.72	0.71
52:X4:60:U:H5''	52:X4:61:C:H5	1.54	0.71
9:8E:89:ASN:O	9:8E:89:ASN:ND2	2.23	0.70
15:1H:1901:A:H2'	15:1H:1902:A:C8	2.26	0.70
29:AI:40:ILE:HD11	29:AI:62:ILE:HD12	1.73	0.70
47:59:30:LYS:NZ	47:59:78:GLY:O	2.24	0.70
47:59:152:ARG:HG3	47:59:153:LYS:HB2	1.72	0.70
1:13:1637:G:N2	1:13:1640:A:OP2	2.24	0.70
1:1G:1767:G:H22	1:1G:1771:G:H22	1.38	0.70
2:65:17:ARG:NH2	15:14:2307:C:OP1	2.22	0.70
9:82:2:GLU:OE1	9:82:20:ARG:NH1	2.23	0.70
15:1H:1565:U:H2'	15:1H:1566:G:H8	1.55	0.70
15:1H:2850:G:H21	45:98:45:ARG:HH21	1.39	0.70
15:14:1089:C:H42	15:14:1162:G:H22	1.37	0.70
33:5I:41:ARG:HB2	48:1I:49:VAL:HG23	1.73	0.70
1:13:1562:G:H5''	42:6E:102:ARG:NH2	2.06	0.70
12:Q8:21:LYS:NZ	12:Q8:55:ALA:HB1	2.05	0.70
12:Q8:29:LYS:NZ	15:1H:2434:U:O4	2.19	0.70
22:H8:122:ARG:HH22	38:88:139:GLU:HG2	1.54	0.70
1:13:876:C:H5'	7:8I:70:ARG:HG2	1.73	0.70
15:1H:2160:A:N6	15:1H:2181:G:O2'	2.24	0.70
35:95:80:GLN:HE22	35:95:82:ARG:NE	1.90	0.70
52:V4:8:U:H2'	52:V4:13:C:H41	1.54	0.70
15:1H:1583:G:H21	15:1H:1584:U:H5''	1.57	0.70
15:14:611:A:H5'	32:39:89:VAL:HG21	1.73	0.70
37:BI:26:ASN:HB2	37:BI:71:THR:HG23	1.71	0.70
1:1G:782:G:H2'	1:1G:783:A:C8	2.27	0.70
15:1H:1413:G:N7	39:J8:2:SER:HB3	2.06	0.70
15:1H:1583:G:H22	15:1H:1587:G:H22	1.39	0.70
15:1H:1498:G:O2'	15:1H:1578:A:N1	2.23	0.70
18:61:3:VAL:HG12	18:61:38:LEU:HA	1.72	0.70
15:14:845:C:H2'	15:14:846:C:C6	2.26	0.70
26:16:14:C:O2'	31:I8:74:ARG:HG2	1.92	0.70
43:A5:65:LEU:HD13	43:A5:68:ARG:HD3	1.73	0.70
15:1H:2850:G:N7	56:1H:3787:HOH:O	2.23	0.70
15:14:2704:U:OP2	15:14:2735:G:N2	2.22	0.70
6:2A:21:ILE:HB	6:2A:84:VAL:HG12	1.72	0.70
9:8E:53:VAL:HG12	9:8E:55:ALA:H	1.55	0.70
15:14:960:C:OP1	38:45:8:LYS:NZ	2.24	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:14:1092:G:H4'	15:14:1096:A:H1'	1.73	0.70
15:14:2128:C:H2'	15:14:2129:G:C8	2.27	0.70
16:75:4:GLY:O	16:75:7:ILE:HB	1.92	0.70
17:H5:39:ASP:O	17:H5:44:ARG:NH2	2.25	0.70
47:59:130:ARG:HH22	47:59:132:ARG:HH21	1.40	0.70
49:7A:34:GLU:OE1	49:7A:55:ARG:NH1	2.25	0.70
8:2E:40:ARG:O	8:2E:44:GLU:HG2	1.91	0.70
9:8E:50:LEU:HD23	9:8E:85:LEU:HD11	1.72	0.70
15:1H:1812:U:H2'	15:1H:1818:A:N6	2.05	0.70
13:3A:46:LYS:HG3	13:3A:47:LYS:HB2	1.72	0.70
13:3A:57:LYS:HG3	13:3A:67:THR:HG22	1.73	0.70
15:14:487:U:H2'	15:14:488:A:H8	1.57	0.70
15:14:2603:G:OP1	56:14:3648:HOH:O	2.09	0.70
38:88:111:GLU:OE1	38:88:133:ARG:NH2	2.25	0.70
39:F5:3:LYS:H	39:F5:61:ARG:HH22	1.39	0.70
25:4E:110:LEU:HD13	25:4E:118:ILE:HD13	1.72	0.69
30:35:85:LEU:HA	30:35:88:LEU:HB2	1.73	0.69
40:49:172:LEU:HD23	40:49:173:LEU:HD23	1.74	0.69
1:13:673:G:H4'	14:3E:209:ARG:HG3	1.74	0.69
1:1G:1260:G:H3'	1:1G:1261:A:C8	2.27	0.69
15:1H:555:A:N1	15:1H:2067:A:H2'	2.06	0.69
10:15:14:VAL:HA	10:15:135:PRO:HD2	1.73	0.69
15:14:2704:U:P	15:14:2735:G:H22	2.15	0.69
15:14:2832:G:OP1	56:14:3654:HOH:O	2.10	0.69
24:4A:23:TYR:CZ	24:4A:71:ARG:HG3	2.27	0.69
37:BI:43:LEU:HD13	37:BI:51:GLU:HB3	1.74	0.69
38:45:22:LYS:N	38:45:23:GLY:HA3	2.07	0.69
1:13:1597:A:OP2	33:5I:29:ARG:NH2	2.25	0.69
1:1G:1302:G:H2'	1:1G:1303:G:C8	2.27	0.69
12:Q8:30:ARG:HB2	12:Q8:30:ARG:CZ	2.21	0.69
15:14:1391:A:H2	15:14:1651:U:H3	1.40	0.69
22:D5:40:ASP:HB3	22:D5:43:GLU:HG3	1.72	0.69
46:K8:50:ILE:HD12	46:K8:51:ARG:H	1.56	0.69
49:7I:28:ARG:NH1	49:7I:29:ASP:OD1	2.25	0.69
1:1G:1313:A:N6	56:1G:2406:HOH:O	2.24	0.69
4:19:93:ALA:HB3	4:19:105:ILE:HG22	1.73	0.69
15:14:249:G:H21	15:14:648:A:H8	1.39	0.69
33:5A:21:TYR:OH	33:5A:23:ARG:NH2	2.22	0.69
42:6E:5:ARG:HG2	42:6E:7:ALA:H	1.58	0.69
52:V4:33:U:H3'	52:V4:34:G:H5''	1.73	0.69
1:13:1230:C:H2'	1:13:1231:A:C8	2.27	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:65:87:PHE:CE1	2:65:102:ALA:HB2	2.27	0.69
12:Q8:36:LYS:HA	12:Q8:39:LYS:HG2	1.73	0.69
9:82:51:ARG:HG2	9:82:56:LEU:HD22	1.72	0.69
15:1H:613:U:H2'	15:1H:614:C:C6	2.28	0.69
15:1H:1381:G:C8	15:1H:1381:G:H5'	2.27	0.69
47:59:18:GLU:HB3	47:59:25:LYS:HD2	1.75	0.69
12:Q8:26:LYS:HG2	15:1H:2376:A:OP1	1.92	0.69
15:1H:573:A:H2'	15:1H:574:A:C8	2.28	0.69
15:1H:1236:U:H4'	35:D8:79:VAL:HG22	1.74	0.69
15:1H:1379:C:OP1	56:1H:3751:HOH:O	2.10	0.69
15:1H:1924:G:H1	15:1H:1927:C:H41	1.40	0.69
15:14:239:C:OP1	56:14:3651:HOH:O	2.10	0.69
15:14:850:G:OP2	56:14:3653:HOH:O	2.10	0.69
45:98:44:LEU:HD22	45:98:48:VAL:HG22	1.74	0.69
47:51:4:ILE:HG13	47:51:6:ARG:NE	2.06	0.69
48:1I:57:LYS:HG3	48:1I:60:ARG:HH12	1.58	0.69
49:7I:28:ARG:HG2	49:7I:29:ASP:OD1	1.92	0.69
8:2E:122:GLU:OE1	8:2E:126:ARG:NH1	2.25	0.69
1:13:1306:U:H3	1:13:1342:G:H22	1.41	0.69
1:1G:888:G:OP2	7:8A:100:LYS:N	2.25	0.69
15:1H:1258:A:H5'	15:1H:1258:A:H8	1.57	0.69
15:1H:2128:C:O2	15:1H:2211:G:N2	2.22	0.69
16:B8:3:ARG:HB3	16:B8:6:LEU:HB2	1.73	0.69
12:M5:32:LEU:CD1	12:M5:33:ASN:HB2	2.20	0.69
21:68:35:VAL:HA	21:68:62:VAL:HG12	1.73	0.69
1:1G:1595:C:O3'	48:1A:57:LYS:HG3	1.91	0.69
2:65:54:LEU:O	2:65:56:LEU:N	2.25	0.69
15:1H:2290:C:O2	38:88:85:LYS:HD2	1.93	0.69
14:32:23:GLY:H	14:32:26:CYS:HB2	1.57	0.69
15:14:348:G:HO2'	15:14:1253:U:H3	1.38	0.69
23:21:116:VAL:HG11	23:21:138:PRO:HB3	1.73	0.69
21:25:24:VAL:HB	21:25:33:ALA:HB2	1.74	0.69
32:39:32:LEU:HD11	32:39:105:VAL:HG13	1.75	0.69
38:45:26:TYR:O	38:45:28:ALA:N	2.26	0.69
47:59:6:ARG:HH11	47:59:6:ARG:H	1.38	0.69
11:G8:97:ARG:HD2	11:G8:97:ARG:N	2.08	0.69
15:1H:277:C:OP1	18:61:45:LYS:NZ	2.24	0.69
15:1H:1341:U:H2'	15:1H:1342:C:C6	2.28	0.69
23:21:50:GLY:HA2	23:21:77:ILE:HA	1.73	0.69
13:3I:66:VAL:HG22	13:3I:67:THR:H	1.58	0.69
15:1H:1275:A:OP1	35:D8:84:LYS:NZ	2.26	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:B8:57:PHE:O	16:B8:58:ASN:ND2	2.26	0.69
14:32:13:ARG:NH1	14:32:38:TYR:O	2.25	0.69
15:14:1585:A:H62	15:14:1587:G:H1'	1.57	0.69
27:85:90:VAL:HG22	35:95:39:LEU:HB3	1.74	0.69
45:98:33:ARG:CZ	45:98:113:LEU:HD21	2.23	0.69
51:Y1:36:G:H5'	51:Y1:37:G:OP2	1.93	0.69
1:13:1577:G:H21	1:13:1854:A:H62	1.40	0.68
1:1G:1106:G:H2'	1:1G:1107:G:H8	1.57	0.68
1:1G:1306:U:H3	1:1G:1342:G:H22	1.39	0.68
9:82:13:ALA:HB2	9:82:68:GLY:HA3	1.74	0.68
15:1H:276:C:H2'	15:1H:277:C:C6	2.28	0.68
15:1H:457:A:OP1	56:1H:3750:HOH:O	2.10	0.68
18:69:81:VAL:HG23	18:69:143:SER:HB2	1.75	0.68
2:A8:48:LEU:HD23	2:A8:82:ILE:HD11	1.75	0.68
15:1H:810:A:OP2	56:1H:3748:HOH:O	2.10	0.68
15:1H:1922:G:N7	56:1H:3793:HOH:O	2.26	0.68
15:1H:2287:U:O4	56:1H:3747:HOH:O	2.10	0.68
15:1H:2415:G:H2'	15:1H:2416:U:H6	1.58	0.68
12:M5:61:LEU:HD13	12:M5:62:LEU:H	1.56	0.68
24:4A:91:ARG:HB2	24:4A:98:VAL:HG12	1.74	0.68
26:1J:19:C:H2'	26:1J:20:G:O4'	1.92	0.68
52:X4:53:G:H2'	52:X4:54:U:C6	2.29	0.68
1:13:1152:A:H61	13:3I:92:ASP:HB2	1.59	0.68
15:14:613:U:H2'	15:14:614:C:C6	2.28	0.68
15:14:1089:C:H2'	15:14:1090:G:H8	1.59	0.68
15:14:1334:G:N2	15:14:1378:U:OP1	2.20	0.68
26:1J:44:C:O2	40:49:93:THR:N	2.22	0.68
52:W1:9:A:O2'	52:W1:45:U:N3	2.25	0.68
11:G8:87:LYS:H	11:G8:94:LYS:HG2	1.58	0.68
15:14:711:G:H5'	30:35:14:LYS:CB	2.23	0.68
45:98:45:ARG:HA	45:98:95:THR:HG21	1.74	0.68
3:F8:3:THR:OG1	3:F8:4:ALA:HA	1.94	0.68
52:V1:1:G:H1'	52:V1:73:A:C2	2.27	0.68
2:65:106:ARG:NH1	2:65:107:GLU:OE2	2.27	0.68
15:1H:2409:C:H42	52:V1:76:A:H8	1.40	0.68
28:M8:11:PRO:HA	28:M8:25:TYR:HA	1.75	0.68
45:98:3:HIS:O	45:98:5:LYS:N	2.26	0.68
1:1G:1254:G:H2'	1:1G:1255:U:H6	1.58	0.68
1:1G:1379:G:N3	41:6A:23:GLY:HA3	2.09	0.68
10:58:96:GLU:O	10:58:98:VAL:N	2.25	0.68
2:65:27:SER:HA	2:65:88:ASP:HB2	1.76	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:G8:76:CYS:HB2	11:G8:82:PRO:HD3	1.76	0.68
15:1H:1078:G:OP2	38:88:128:LYS:NZ	2.26	0.68
15:1H:1133:A:H1'	15:1H:1134:A:H2	1.59	0.68
15:14:800:A:H5'	43:A5:90:ARG:HA	1.75	0.68
15:14:1689:U:OP1	56:14:3657:HOH:O	2.11	0.68
22:H8:165:VAL:HB	22:H8:166:SER:HA	1.75	0.68
34:52:25:ILE:HD12	34:52:82:ARG:HD2	1.74	0.68
2:A8:17:ARG:HH22	15:1H:2307:C:P	2.17	0.68
15:1H:993:G:OP2	56:1H:3752:HOH:O	2.11	0.68
15:1H:1005:U:OP2	38:88:14:ARG:NH1	2.27	0.68
15:1H:1586:C:H2'	15:1H:1587:G:O4'	1.93	0.68
15:14:1059:G:O2'	15:14:1061:C:O4'	2.09	0.68
41:6A:26:GLU:OE2	41:6A:77:ARG:NH1	2.26	0.68
15:1H:1454:U:H2'	15:1H:1455:U:C6	2.28	0.68
15:14:854:G:OP2	30:35:41:ARG:HG2	1.94	0.68
24:4I:37:THR:HG23	24:4I:59:TYR:HD2	1.58	0.68
15:1H:1161:U:H5'	47:51:2:SER:HB2	1.76	0.68
15:1H:2416:U:H2'	15:1H:2417:C:O4'	1.94	0.68
15:14:1663:A:OP1	56:14:3656:HOH:O	2.11	0.68
22:D5:68:PRO:O	22:D5:91:LEU:HD23	1.93	0.68
26:1J:24:U:H3	26:1J:63:G:H1	1.39	0.68
35:D8:34:GLU:O	35:D8:36:PRO:HD3	1.93	0.68
44:1E:12:GLU:HA	44:1E:16:HIS:CD2	2.25	0.68
4:11:146:GLU:HB2	4:11:189:CYS:HB3	1.75	0.68
1:1G:1698:U:H2'	1:1G:1699:C:H6	1.58	0.68
29:AI:5:LEU:HD13	29:AI:10:PHE:HD1	1.59	0.68
44:1E:54:THR:HG21	44:1E:201:ILE:HD11	1.74	0.68
47:51:7:LEU:HD12	47:51:8:PRO:HD3	1.75	0.68
1:13:903:A:H2'	1:13:904:A:C8	2.30	0.67
10:58:96:GLU:C	10:58:98:VAL:H	1.97	0.67
12:Q8:50:LEU:HA	12:Q8:53:PRO:CD	2.24	0.67
15:1H:1543:A:H2'	15:1H:1544:A:C8	2.30	0.67
15:1H:2045:A:O2'	15:1H:2046:C:H5'	1.93	0.67
18:61:124:GLY:H	18:61:142:VAL:HG23	1.59	0.67
15:14:2335:A:H61	15:14:2348:A:H2'	1.59	0.67
15:1H:1892:G:H1'	15:1H:1909:A:N6	2.09	0.67
15:1H:2409:C:N4	52:V1:76:A:H8	1.93	0.67
37:BA:50:GLU:HA	37:BA:100:ILE:HG21	1.75	0.67
1:13:1975:U:H4'	9:8E:120:ARG:HD2	1.76	0.67
11:G8:94:LYS:HA	11:G8:94:LYS:HZ3	1.60	0.67
10:15:56:ASN:H	10:15:125:GLY:HA3	1.58	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:AI:50:ALA:HB1	29:AI:57:HIS:HB3	1.76	0.67
31:E5:12:ASN:HA	31:E5:14:ARG:HH21	1.59	0.67
1:1G:1732:G:OP1	44:12:144:ARG:NH1	2.27	0.67
15:1H:958:A:H62	38:88:12:GLN:HA	1.59	0.67
15:1H:1582:C:H3'	15:1H:1583:G:H5''	1.77	0.67
15:14:555:A:C2	15:14:2067:A:H2'	2.29	0.67
44:1E:33:TYR:HB2	44:1E:43:ASP:HB2	1.76	0.67
4:19:24:ILE:HA	4:19:82:ILE:HG22	1.75	0.67
15:1H:2084:A:OP2	56:1H:3754:HOH:O	2.12	0.67
15:1H:2880:G:OP2	16:B8:119:LYS:NZ	2.17	0.67
15:14:833:A:OP1	56:14:3655:HOH:O	2.11	0.67
26:1J:47:A:OP2	40:49:96:ARG:NH1	2.28	0.67
44:12:98:LEU:O	44:12:101:MET:HG2	1.95	0.67
46:G5:47:ASN:HD22	46:G5:47:ASN:N	1.93	0.67
52:W1:18:G:H1	52:W1:55:U:H1'	1.59	0.67
11:C5:87:LYS:HB3	11:C5:94:LYS:HA	1.77	0.67
23:21:201:THR:HG22	23:21:203:LYS:H	1.60	0.67
27:C8:75:ASN:HB2	27:C8:78:THR:OG1	1.94	0.67
1:13:1948:C:H3'	1:13:1949:C:H5''	1.77	0.67
4:19:43:ARG:HD2	4:19:43:ARG:N	2.10	0.67
15:1H:417:G:H22	30:78:72:PRO:HD3	1.60	0.67
15:14:1301:G:N3	27:85:33:ARG:HD2	2.10	0.67
29:AI:5:LEU:HB3	29:AI:10:PHE:HE1	1.60	0.67
32:31:66:PRO:O	32:31:67:GLN:HB3	1.93	0.67
32:39:11:VAL:HG23	32:39:13:SER:H	1.60	0.67
1:13:896:G:P	7:8I:69:LYS:HZ3	2.18	0.67
15:1H:142:G:H1'	3:F8:37:THR:HG21	1.76	0.67
15:1H:829:G:H21	15:1H:832:A:N6	1.93	0.67
15:1H:2050:C:N4	56:1H:3794:HOH:O	2.26	0.67
11:C5:87:LYS:HG2	11:C5:88:LYS:H	1.60	0.67
15:14:897:G:H2'	15:14:898:A:C8	2.29	0.67
22:H8:19:ARG:NH1	22:H8:84:GLU:O	2.26	0.67
24:4A:23:TYR:HB3	24:4A:67:GLU:HA	1.77	0.67
32:39:66:PRO:O	32:39:67:GLN:HB3	1.94	0.67
1:13:1562:G:H5''	42:6E:102:ARG:HH22	1.60	0.67
1:13:1976:A:OP2	9:8E:118:LYS:NZ	2.28	0.67
8:22:109:PRO:HB2	8:22:115:LEU:HD12	1.77	0.67
9:82:44:VAL:HG22	42:62:16:LEU:HD13	1.76	0.67
15:1H:959:A:H2'	38:88:9:TYR:OH	1.94	0.67
15:14:2136:C:H42	15:14:2172:G:H21	1.41	0.67
19:9A:53:ARG:HA	19:9A:56:THR:OG1	1.95	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:29:65:GLY:HA2	23:29:66:HIS:HB3	1.75	0.67
1:13:667:G:OP1	56:13:2503:HOH:O	2.13	0.67
1:1G:1785:A:H4'	1:1G:1786:C:O5'	1.95	0.67
15:14:2491:A:H4'	15:14:2492:C:H5	1.59	0.67
15:14:2708:A:H2'	15:14:2709:G:H8	1.59	0.67
8:22:153:VAL:HG22	8:22:198:VAL:HG13	1.77	0.66
15:1H:1435:C:H2'	15:1H:1436:C:H6	1.58	0.66
15:1H:1805:C:O2'	15:1H:1820:A:H8	1.69	0.66
15:14:2572:G:H2'	15:14:2573:C:C6	2.30	0.66
24:4A:11:ARG:NH2	28:I5:32:TYR:OH	2.23	0.66
43:E8:88:ARG:NH1	43:E8:94:ASP:OD2	2.28	0.66
15:1H:610:G:OP2	56:1H:3753:HOH:O	2.12	0.66
16:B8:51:ARG:HB2	16:B8:98:LYS:HD3	1.77	0.66
16:B8:99:LEU:HB3	16:B8:101:PHE:CE1	2.30	0.66
15:14:393:U:H5'	15:14:394:A:OP2	1.95	0.66
29:AI:45:VAL:HA	29:AI:62:ILE:HB	1.76	0.66
32:39:7:TYR:HE2	32:39:10:PRO:HG3	1.61	0.66
51:Y4:43:U:H2'	51:Y4:44:U:C6	2.30	0.66
3:B5:43:VAL:HG23	3:B5:51:VAL:HG21	1.76	0.66
10:58:96:GLU:O	10:58:98:VAL:HG12	1.93	0.66
30:78:138:LEU:HD12	30:78:144:GLU:HG3	1.76	0.66
28:I5:13:ARG:HA	28:I5:22:ILE:HB	1.77	0.66
29:AA:41:VAL:HG23	29:AA:44:MET:HG3	1.77	0.66
44:1E:178:ARG:NH1	44:1E:196:LEU:O	2.23	0.66
42:62:69:VAL:HG22	42:62:135:VAL:HG23	1.76	0.66
3:F8:11:PRO:HB3	3:F8:92:LEU:HD21	1.75	0.66
1:13:1691:C:H3'	1:13:1692:G:H2'	1.77	0.66
32:31:8:GLN:H	32:31:8:GLN:CD	1.99	0.66
37:BI:69:GLY:O	37:BI:73:HIS:NE2	2.28	0.66
43:A5:12:ILE:HD13	43:A5:17:VAL:HB	1.77	0.66
44:12:67:THR:HG21	44:12:155:LEU:HD21	1.77	0.66
15:1H:140:A:H8	15:1H:1644:G:H21	1.41	0.66
15:1H:155:C:H42	15:1H:161:G:H1	1.42	0.66
15:1H:1069:A:H62	15:1H:1189:U:H3	1.41	0.66
15:1H:1574:G:H2'	15:1H:1575:G:H8	1.60	0.66
2:A8:11:LYS:HD3	2:A8:91:PRO:HD3	1.77	0.66
1:1G:2165:G:H1	51:Y4:29:G:H21	1.43	0.66
15:1H:2093:U:N3	15:1H:2445:A:H2	1.90	0.66
18:61:131:LYS:HB3	18:61:132:PRO:HA	1.78	0.66
15:14:548:G:H2'	15:14:549:G:H8	1.61	0.66
15:14:2141:G:N2	15:14:2187:G:OP2	2.25	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:39:123:LEU:HA	32:39:192:LEU:O	1.96	0.66
38:88:21:THR:HG23	38:88:22:LYS:H	1.60	0.66
40:41:67:LYS:H	40:41:67:LYS:HE2	1.61	0.66
44:12:114:ARG:NH1	44:12:141:GLU:OE2	2.28	0.66
1:13:1247:C:H5''	1:13:1248:U:H5''	1.78	0.66
4:11:147:LEU:HD13	4:11:155:LEU:HD21	1.77	0.66
9:8E:121:ARG:NH1	9:8E:122:ALA:O	2.27	0.66
11:G8:85:VAL:HG22	11:G8:98:VAL:HB	1.77	0.66
15:14:1469:U:O2'	15:14:1470:G:OP1	2.14	0.66
24:4I:65:LYS:HB2	24:4I:69:GLU:HG2	1.77	0.66
27:C8:105:VAL:HG22	35:D8:45:THR:HG21	1.77	0.66
28:I5:37:SER:OG	28:I5:38:LYS:N	2.27	0.66
1:1G:1759:G:H2'	1:1G:1760:C:H6	1.60	0.66
12:M5:4:MET:HB2	12:M5:61:LEU:HD21	1.78	0.66
15:14:1135:G:H2'	15:14:1137:G:H1'	1.77	0.66
15:14:2895:A:H5'	45:55:96:ARG:HG3	1.78	0.66
23:21:70:ALA:O	23:21:73:GLU:N	2.29	0.66
19:9A:59:SER:HB2	19:9A:62:GLU:H	1.59	0.66
30:35:55:ARG:HG2	30:35:56:SER:N	2.11	0.66
1:13:1176:A:OP1	14:3E:73:ARG:NH2	2.28	0.66
4:11:182:LEU:H	4:11:272:ALA:HB3	1.61	0.66
15:1H:1461:A:H2'	15:1H:1462:G:C8	2.31	0.66
15:1H:2421:U:OP1	56:1H:3757:HOH:O	2.14	0.66
15:14:596:A:OP2	56:14:3663:HOH:O	2.13	0.66
15:14:1346:C:OP2	56:14:3664:HOH:O	2.13	0.66
15:14:1830:U:H2'	15:14:1831:C:C6	2.30	0.66
15:14:2346:G:O3'	31:E5:43:THR:HG22	1.96	0.66
15:14:2603:G:OP1	56:14:3666:HOH:O	2.13	0.66
12:Q8:9:GLY:HA2	12:Q8:12:LYS:HB2	1.77	0.66
14:3E:111:ALA:HB2	14:3E:120:LEU:HD12	1.78	0.66
15:14:1208:U:H2'	15:14:1209:G:H8	1.60	0.66
15:14:2145:G:H2'	15:14:2146:G:H8	1.59	0.66
15:14:2181:G:N7	15:14:2182:G:N2	2.43	0.66
23:21:120:TRP:CE3	23:21:155:LYS:HD3	2.30	0.66
18:69:54:GLN:HA	18:69:57:ARG:HD3	1.78	0.66
22:D5:4:ARG:NH1	22:D5:60:GLU:OE2	2.28	0.66
35:95:6:LYS:H	35:95:37:VAL:HG12	1.60	0.66
40:49:61:ALA:HA	40:49:64:THR:HG23	1.77	0.66
9:8E:45:ALA:O	9:8E:78:LYS:NZ	2.19	0.65
1:1G:1132:C:OP2	13:3A:116:SER:HB3	1.95	0.65
1:1G:1638:A:H4'	29:AA:14:HIS:CE1	2.31	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:1H:810:A:C8	56:1H:3879:HOH:O	2.49	0.65
15:1H:2862:U:OP2	16:B8:95:ARG:NH1	2.28	0.65
15:14:140:A:H8	15:14:1644:G:H21	1.43	0.65
15:14:632:U:H3	15:14:648:A:H2	1.43	0.65
18:69:74:ASN:O	18:69:76:THR:N	2.23	0.65
25:4E:100:VAL:HG12	25:4E:118:ILE:HG22	1.76	0.65
48:1I:5:ARG:HB2	48:1I:73:ASP:HA	1.77	0.65
50:7E:121:ASP:HB2	50:7E:125:ARG:NH2	2.11	0.65
1:1G:1174:C:OP1	14:32:61:LYS:NZ	2.29	0.65
15:1H:1093:A:H1'	15:1H:1095:G:N3	2.12	0.65
15:14:799:A:O3'	56:14:3665:HOH:O	2.13	0.65
15:14:2484:A:H2	15:14:2496:G:H21	1.44	0.65
49:7I:4:ILE:HA	49:7I:20:VAL:O	1.97	0.65
15:1H:1327:A:O2'	45:98:34:ILE:HD11	1.96	0.65
15:1H:2890:G:OP1	16:B8:2:ASN:ND2	2.30	0.65
15:14:882:U:O2	30:35:55:ARG:NH1	2.30	0.65
27:C8:6:THR:OG1	56:C8:301:HOH:O	2.14	0.65
22:D5:94:GLU:HB3	22:D5:96:VAL:HG23	1.78	0.65
41:6A:54:ARG:HG2	41:6A:58:MET:HE2	1.78	0.65
41:6A:87:ILE:HG22	41:6A:88:ARG:H	1.61	0.65
47:51:170:ARG:O	47:51:171:LEU:HD12	1.95	0.65
51:Y4:43:U:H2'	51:Y4:44:U:H6	1.59	0.65
52:X4:18:G:N3	52:X4:18:G:H2'	2.12	0.65
15:1H:781:C:OP2	56:1H:3759:HOH:O	2.15	0.65
15:1H:992:A:OP1	56:1H:3756:HOH:O	2.13	0.65
15:1H:1828:U:H2'	15:1H:1829:C:H6	1.61	0.65
16:B8:58:ASN:C	16:B8:58:ASN:HD22	1.99	0.65
19:9A:22:VAL:HG12	19:9A:56:THR:HA	1.76	0.65
23:29:47:VAL:HG21	23:29:86:PRO:HD2	1.79	0.65
32:39:133:ASN:HA	32:39:162:LEU:HD22	1.76	0.65
1:13:1612:C:H42	1:13:1843:G:H1	1.45	0.65
1:13:1919:U:H2'	1:13:1920:G:C8	2.31	0.65
3:B5:41:ASN:HA	3:B5:44:GLU:HB2	1.79	0.65
15:1H:1299:G:OP2	30:78:21:ARG:NH1	2.30	0.65
15:1H:2787:C:H2'	15:1H:2788:C:C6	2.32	0.65
11:C5:42:VAL:HG13	11:C5:65:ALA:HB3	1.79	0.65
12:M5:32:LEU:HA	12:M5:33:ASN:CG	2.16	0.65
15:14:835:C:O3'	56:14:3668:HOH:O	2.15	0.65
23:21:64:LYS:O	23:21:70:ALA:HB2	1.96	0.65
38:88:110:THR:HG23	38:88:113:GLN:OE1	1.97	0.65
6:2I:54:ARG:HH21	52:V1:39:U:H4'	1.62	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:11:69:ARG:NH2	4:11:128:GLY:O	2.22	0.65
12:Q8:57:ARG:NE	30:78:49:ARG:HG3	2.11	0.65
15:1H:588:G:OP2	56:1H:3758:HOH:O	2.15	0.65
15:14:274:G:OP1	18:69:57:ARG:NH1	2.29	0.65
15:14:612:C:O2	30:35:33:ARG:NH1	2.30	0.65
15:14:1556:A:C4	15:14:1557:A:H1'	2.32	0.65
53:14:3002:8UZ:N	53:14:3002:8UZ:O9	2.28	0.65
16:75:77:PRO:HG2	16:75:80:SER:HB2	1.78	0.65
30:78:6:LEU:HD11	32:31:33:LEU:HB3	1.79	0.65
37:BI:53:LEU:O	37:BI:57:ARG:HD3	1.96	0.65
35:95:2:PHE:H	35:95:42:GLY:HA3	1.62	0.65
39:J8:64:ALA:HA	39:J8:67:ILE:HG13	1.78	0.65
46:K8:26:ARG:HE	3:F8:2:LYS:HG2	1.62	0.65
50:7E:34:GLU:OE1	50:7E:37:ARG:NH1	2.29	0.65
50:72:64:LYS:HG2	50:72:79:VAL:HG21	1.79	0.65
1:13:1046:U:O4	14:3E:2:GLY:N	2.30	0.65
1:13:1235:G:H22	1:13:1260:G:H2'	1.61	0.65
1:13:1576:G:H5'	1:13:1588:A:H61	1.61	0.65
1:13:1741:C:H2'	1:13:1742:C:H6	1.61	0.65
7:8I:56:VAL:HB	7:8I:78:GLU:HB2	1.79	0.65
15:14:53:G:O6	56:14:3660:HOH:O	2.12	0.65
29:AA:79:THR:O	29:AA:79:THR:OG1	2.14	0.65
44:1E:12:GLU:HB3	44:1E:16:HIS:HB2	1.79	0.65
44:1E:165:VAL:HG23	44:1E:166:ASP:H	1.61	0.65
47:59:26:VAL:HG12	47:59:33:LEU:H	1.60	0.65
1:13:1821:U:H2'	1:13:1822:C:C6	2.32	0.65
2:65:107:GLU:O	2:65:110:LEU:HD11	1.97	0.65
11:G8:40:GLU:HB3	11:G8:64:GLU:HG3	1.78	0.65
11:G8:81:LYS:HE3	15:1H:327:C:O5'	1.97	0.65
15:1H:2230:G:H3'	15:1H:2231:G:C4	2.31	0.65
15:1H:2326:A:H1'	40:41:88:ILE:HD12	1.77	0.65
15:14:2346:G:H4'	31:E5:43:THR:H	1.62	0.65
18:69:4:ILE:HG12	18:69:18:VAL:HG22	1.79	0.65
37:BI:97:ALA:O	37:BI:99:LEU:N	2.29	0.65
35:95:85:LYS:HD2	35:95:87:HIS:H	1.61	0.65
44:1E:76:GLN:NE2	44:1E:206:ASP:OD1	2.30	0.65
47:51:10:PRO:O	47:51:12:PRO:HD3	1.96	0.65
48:1I:46:ARG:HB2	48:1I:46:ARG:HH11	1.62	0.65
1:13:1248:U:H3	14:3E:134:ASP:HB2	1.62	0.65
15:14:1350:A:OP1	56:14:3667:HOH:O	2.14	0.65
33:5I:4:LYS:HD3	33:5I:7:ILE:HD11	1.79	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:7E:20:TYR:CE2	50:7E:75:ARG:HD2	2.30	0.65
47:59:76:VAL:HA	47:59:79:VAL:HG22	1.79	0.65
15:1H:1435:C:H2'	15:1H:1436:C:C6	2.31	0.65
12:M5:62:LEU:HB3	12:M5:63:PRO:HD3	1.78	0.65
15:14:2411:G:H4'	39:F5:30:VAL:H	1.61	0.65
15:14:2640:G:O6	56:14:3658:HOH:O	2.11	0.65
23:29:67:PHE:O	23:29:69:LYS:N	2.24	0.65
36:N8:49:CYS:HA	36:N8:56:LYS:HB2	1.79	0.65
1:13:1103:A:H5''	49:7I:80:PHE:HB3	1.79	0.64
8:22:3:ASN:HD22	8:22:3:ASN:H	1.45	0.64
15:1H:2836:A:OP1	23:21:159:HIS:NE2	2.26	0.64
16:B8:58:ASN:ND2	16:B8:58:ASN:O	2.30	0.64
12:M5:29:LYS:HB2	12:M5:44:LYS:HB3	1.79	0.64
15:14:880:G:O2'	30:35:38:GLN:OE1	2.13	0.64
15:14:2409:C:H42	52:V4:76:A:H8	1.46	0.64
23:21:179:GLU:HB3	23:21:181:LEU:HD22	1.78	0.64
23:29:111:ARG:HA	45:55:2:ARG:HH12	1.62	0.64
44:1E:17:PHE:HD1	44:1E:17:PHE:H	1.44	0.64
47:59:41:MET:N	47:59:41:MET:SD	2.70	0.64
1:13:713:C:H2'	1:13:714:G:H8	1.62	0.64
1:13:1975:U:H2'	1:13:1976:A:H8	1.62	0.64
12:Q8:36:LYS:O	12:Q8:40:GLU:HB2	1.97	0.64
12:Q8:57:ARG:NH1	12:Q8:57:ARG:O	2.30	0.64
15:1H:860:U:H2'	30:78:21:ARG:HA	1.79	0.64
47:51:4:ILE:HB	47:51:6:ARG:HG3	1.79	0.64
15:1H:607:G:N7	56:1H:3799:HOH:O	2.30	0.64
15:1H:1106:U:H3	15:1H:1128:A:H61	1.45	0.64
15:1H:1483:A:H61	15:1H:1608:A:N6	1.96	0.64
16:B8:50:ILE:HD11	16:B8:102:ILE:HD11	1.80	0.64
23:21:128:SER:OG	23:21:129:HIS:N	2.28	0.64
22:D5:72:ARG:NH1	26:1J:107:A:OP1	2.30	0.64
37:BI:56:MET:HG3	37:BI:88:VAL:HG21	1.79	0.64
38:88:12:GLN:HG2	38:88:73:PRO:HD2	1.80	0.64
47:51:87:LEU:HB2	47:51:131:VAL:HG12	1.79	0.64
49:7I:8:ARG:HB3	49:7I:28:ARG:NH1	2.11	0.64
49:7A:23:ASP:OD1	49:7A:25:ARG:NH1	2.30	0.64
1:13:1936:G:OP1	24:4I:88:ARG:NH1	2.30	0.64
8:22:141:VAL:HA	8:22:144:SER:HB3	1.80	0.64
11:G8:76:CYS:SG	11:G8:97:ARG:HG2	2.37	0.64
15:1H:64:C:H2'	15:1H:65:C:H6	1.61	0.64
34:5E:6:VAL:HG22	34:5E:90:VAL:HG22	1.79	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:22:94:LEU:HD12	8:22:95:THR:HG23	1.78	0.64
1:1G:1261:A:H1'	1:1G:1262:G:OP2	1.98	0.64
4:19:43:ARG:HD2	4:19:43:ARG:H	1.62	0.64
15:1H:1520:G:H5''	15:1H:1521:A:OP1	1.97	0.64
15:1H:1925:A:H5'	15:1H:1925:A:C8	2.31	0.64
11:C5:47:LYS:NZ	15:14:525:G:H21	1.95	0.64
23:21:57:LYS:HG3	23:21:59:VAL:HG12	1.80	0.64
38:45:79:LEU:H	38:45:79:LEU:HD22	1.62	0.64
46:K8:58:ALA:O	46:K8:62:THR:HG22	1.98	0.64
47:51:54:ARG:HD3	47:51:65:HIS:ND1	2.12	0.64
7:8I:22:LEU:HD11	7:8I:39:SER:HB3	1.79	0.64
1:1G:1456:U:H3	1:1G:1495:A:N6	1.93	0.64
1:1G:1596:G:H3'	1:1G:1597:A:H5''	1.79	0.64
15:1H:1072:G:H3'	15:1H:1073:G:H5''	1.78	0.64
11:C5:87:LYS:H	11:C5:94:LYS:HG2	1.62	0.64
18:69:77:LEU:HD21	18:69:100:ALA:HB1	1.78	0.64
28:M8:40:HIS:CD2	28:M8:45:GLY:HA3	2.32	0.64
25:42:79:GLU:HG3	25:42:93:PRO:HD2	1.80	0.64
1:13:1603:C:O2	56:13:2504:HOH:O	2.14	0.64
5:L5:19:ARG:HD3	15:14:123:G:H5''	1.79	0.64
15:1H:311:C:H2'	15:1H:312:C:H6	1.62	0.64
15:1H:590:C:H4'	56:1H:3778:HOH:O	1.97	0.64
15:1H:1069:A:C8	15:1H:1070:G:H5''	2.30	0.64
15:1H:1558:C:H2'	15:1H:1560:A:C8	2.33	0.64
15:1H:1790:G:OP2	56:1H:3762:HOH:O	2.15	0.64
11:C5:17:SER:O	11:C5:21:LYS:HB2	1.98	0.64
15:14:311:C:H2'	15:14:312:C:C6	2.33	0.64
32:39:79:GLY:HA2	32:39:86:GLY:HA2	1.80	0.64
32:39:157:VAL:HB	32:39:194:MET:HB3	1.80	0.64
38:88:89:ASN:O	38:88:91:GLU:HB2	1.97	0.64
44:1E:101:MET:HA	44:1E:108:ILE:HG21	1.78	0.64
42:62:115:ARG:O	42:62:118:VAL:HG22	1.98	0.64
50:7E:41:ARG:NH1	50:7E:123:GLU:OE1	2.31	0.64
8:2E:83:ARG:HA	8:2E:86:VAL:HG13	1.80	0.64
1:13:1321:U:O2'	1:13:1323:A:N7	2.28	0.64
1:13:1386:U:H2'	1:13:1387:G:O4'	1.98	0.64
2:A8:25:ARG:NH2	26:16:10:U:O3'	2.31	0.64
12:M5:32:LEU:HD12	12:M5:36:LYS:CG	2.28	0.64
37:BA:41:ILE:HD12	37:BA:87:LYS:HE3	1.80	0.64
51:Y4:41:U:H5''	51:Y4:42:U:OP1	1.98	0.64
1:13:863:U:H2'	1:13:864:U:C6	2.33	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:13:1255:U:H2'	1:13:1256:G:C8	2.33	0.64
1:13:2076:U:O2	1:13:2078:C:H5''	1.97	0.64
8:22:21:ARG:HH12	48:1A:12:ASP:HB2	1.61	0.64
1:1G:653:G:H5'	1:1G:939:A:O4'	1.98	0.64
1:1G:1371:G:OP2	41:6A:35:ARG:NH2	2.29	0.64
1:1G:1723:U:H2'	1:1G:1724:C:O4'	1.98	0.64
15:1H:173:C:H42	15:1H:203:A:H61	1.45	0.64
15:1H:239:C:OP1	56:1H:3760:HOH:O	2.15	0.64
15:14:630:C:O2	15:14:706:U:O2'	2.13	0.64
21:68:43:VAL:HG12	21:68:54:GLU:HA	1.80	0.64
24:4A:3:ARG:HA	24:4A:8:GLU:O	1.98	0.64
36:J5:28:PRO:HD2	43:A5:35:ILE:HG23	1.79	0.64
38:45:25:ASP:CB	38:45:102:VAL:H	2.10	0.64
2:A8:88:ASP:OD1	2:A8:90:GLY:N	2.30	0.64
15:1H:1574:G:H2'	15:1H:1575:G:C8	2.32	0.64
11:C5:11:ASP:OD2	11:C5:95:LYS:NZ	2.30	0.64
15:14:685:G:H22	15:14:698:C:N4	1.95	0.64
18:69:77:LEU:HD13	18:69:140:LEU:HD11	1.78	0.64
27:C8:92:ARG:O	27:C8:94:ASN:N	2.31	0.64
24:4A:7:VAL:HG21	40:49:115:ARG:HD3	1.80	0.64
45:55:45:ARG:HA	45:55:95:THR:HG21	1.80	0.64
1:13:1615:U:H4'	1:13:1616:G:O5'	1.97	0.63
8:22:76:VAL:HG21	8:22:103:VAL:HG21	1.79	0.63
1:1G:690:G:N7	56:1G:2407:HOH:O	2.30	0.63
1:1G:1152:A:H61	13:3A:92:ASP:HB2	1.63	0.63
2:65:30:ARG:HG3	2:65:35:ILE:HD12	1.79	0.63
15:1H:1455:U:H2'	15:1H:1456:C:C6	2.32	0.63
15:1H:2713:U:H2'	15:1H:2714:C:C6	2.33	0.63
11:C5:52:SER:HA	11:C5:55:TYR:O	1.97	0.63
15:14:673:A:H2'	15:14:674:G:O4'	1.98	0.63
15:14:1632:C:HO2'	15:14:1635:A:H8	1.45	0.63
15:14:2093:U:N3	15:14:2445:A:H2	1.96	0.63
22:H8:154:ASP:OD1	22:H8:154:ASP:N	2.21	0.63
28:M8:25:TYR:CE1	40:41:2:PRO:HB3	2.33	0.63
26:1J:44:C:N3	40:49:91:ARG:NH1	2.47	0.63
31:E5:21:LEU:HD11	31:E5:41:ARG:NH1	2.13	0.63
40:49:113:ARG:NH2	40:49:139:LEU:O	2.31	0.63
43:A5:86:LEU:HD12	43:A5:87:PRO:HD2	1.79	0.63
1:13:921:C:H3'	1:13:922:G:H5'	1.81	0.63
6:2A:121:PRO:HG2	6:2A:126:ARG:HG3	1.79	0.63
8:22:65:ALA:HA	8:22:100:ALA:HB3	1.79	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:1G:691:U:H2'	1:1G:692:G:C8	2.33	0.63
15:1H:70:A:H2	3:F8:31:HIS:HE1	1.46	0.63
15:1H:1582:C:H2'	15:1H:1583:G:C2	2.33	0.63
15:14:1159:A:H5'	47:59:3:ARG:HD3	1.80	0.63
22:H8:40:ASP:HB3	22:H8:43:GLU:HB2	1.79	0.63
28:I5:40:HIS:CG	28:I5:45:GLY:HA3	2.32	0.63
48:1I:46:ARG:NH2	48:1I:64:GLU:OE1	2.31	0.63
6:2I:22:HIS:HB3	6:2I:29:ILE:HG23	1.79	0.63
52:X1:66:U:H5'	52:X1:67:C:OP2	1.99	0.63
9:8E:48:GLU:N	9:8E:49:PRO:HD2	2.13	0.63
1:1G:1587:A:N3	1:1G:1592:A:O2'	2.29	0.63
15:1H:1235:G:OP2	56:1H:3764:HOH:O	2.15	0.63
30:78:144:GLU:OE2	30:78:144:GLU:N	2.32	0.63
52:V1:9:A:H5''	52:V1:10:G:OP2	1.97	0.63
1:13:2153:G:O2'	1:13:2154:A:N7	2.30	0.63
2:65:55:ALA:HB2	26:1J:119:G:H5'	1.79	0.63
15:1H:543:C:OP1	36:N8:13:LYS:NZ	2.20	0.63
15:1H:2060:G:OP1	56:1H:3761:HOH:O	2.15	0.63
15:1H:2649:G:O6	53:1H:3004:8UZ:N	2.31	0.63
12:M5:62:LEU:HG	15:14:232:G:H5'	1.80	0.63
15:14:1154:G:H2'	15:14:1155:G:C8	2.33	0.63
23:29:49:LEU:HD22	23:29:91:VAL:HG21	1.80	0.63
32:31:67:GLN:HG3	32:31:67:GLN:O	1.98	0.63
41:6I:39:LEU:HD13	41:6I:56:LEU:HB2	1.81	0.63
1:13:713:C:H2'	1:13:714:G:C8	2.34	0.63
9:8E:115:GLY:HA2	48:1I:58:ASP:HB3	1.81	0.63
1:1G:986:C:H1'	1:1G:987:G:C2	2.33	0.63
10:58:33:LEU:HD12	10:58:38:HIS:HD2	1.63	0.63
4:19:181:GLU:HA	4:19:272:ALA:HB1	1.80	0.63
15:1H:681:A:H3'	15:1H:681:A:N3	2.12	0.63
11:C5:83:THR:HG23	15:14:361:C:OP1	1.98	0.63
15:14:1534:G:H2'	15:14:1535:A:C8	2.34	0.63
26:16:17:A:O2'	26:16:112:G:C8	2.52	0.63
22:D5:30:ASN:HD22	22:D5:90:VAL:HB	1.63	0.63
33:5I:59:ALA:HB2	48:1I:64:GLU:HG2	1.80	0.63
36:N8:46:CYS:SG	36:N8:50:GLY:HA2	2.38	0.63
44:1E:61:LEU:HD23	44:1E:68:ILE:HD11	1.80	0.63
1:1G:1808:G:N7	1:1G:1809:G:N2	2.45	0.63
11:G8:49:VAL:HG21	11:G8:55:TYR:CD2	2.33	0.63
12:Q8:36:LYS:HD3	12:Q8:39:LYS:HE3	1.81	0.63
15:1H:1069:A:H3'	15:1H:1070:G:H5''	1.81	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:14:913:G:H1'	15:14:962:C:H42	1.62	0.63
23:21:82:ARG:O	23:21:84:PHE:N	2.32	0.63
32:39:178:PRO:HB2	32:39:201:VAL:HG11	1.80	0.63
1:13:1031:C:O3'	49:7I:28:ARG:NH2	2.32	0.63
4:19:148:GLU:HB2	4:19:151:LYS:HD2	1.80	0.63
15:14:632:U:OP1	32:39:102:PRO:HA	1.99	0.63
15:14:817:G:O2'	15:14:1428:A:N6	2.32	0.63
15:14:2689:G:H4'	21:25:30:ALA:HB2	1.80	0.63
23:29:26:ILE:HB	23:29:182:LEU:HB3	1.79	0.63
11:G8:33:LYS:HD3	11:G8:33:LYS:H	1.64	0.63
12:Q8:49:VAL:HG12	12:Q8:51:ALA:H	1.64	0.63
15:1H:33:U:H4'	15:1H:34:C:OP1	1.97	0.63
15:1H:675:G:OP2	53:1H:3005:8UZ:N3	2.31	0.63
15:1H:1637:C:H2'	15:1H:1638:C:H6	1.63	0.63
15:1H:2772:U:H1'	15:1H:2773:A:H5''	1.81	0.63
11:C5:51:VAL:HA	11:C5:57:GLN:HA	1.81	0.63
15:14:453:G:O6	56:14:3659:HOH:O	2.12	0.63
15:14:1378:U:H5''	15:14:1379:C:H5	1.63	0.63
22:D5:8:TYR:HA	22:D5:62:PRO:HD3	1.81	0.63
28:M8:14:ILE:HG22	28:M8:24:THR:HG22	1.80	0.63
32:39:123:LEU:O	32:39:193:VAL:HA	1.99	0.63
42:6E:15:ASP:OD1	42:6E:44:TYR:OH	2.16	0.63
1:13:1946:A:OP1	29:AI:70:LYS:NZ	2.32	0.63
12:Q8:14:VAL:HG21	12:Q8:21:LYS:NZ	2.12	0.63
14:3E:107:ARG:NH2	14:3E:194:LEU:HD22	2.14	0.63
16:B8:8:LYS:O	16:B8:11:GLU:HB2	1.98	0.63
15:14:1901:A:H2'	15:14:1902:A:C8	2.33	0.63
23:29:11:MET:SD	23:29:24:THR:HG22	2.39	0.63
36:N8:49:CYS:H	36:N8:57:VAL:HG12	1.63	0.63
52:W1:19:G:H3'	52:W1:20:U:C5	2.33	0.63
1:13:951:G:OP2	49:7I:27:LYS:NZ	2.24	0.62
15:1H:555:A:C2	15:1H:2068:C:H4'	2.34	0.62
11:C5:76:CYS:HB2	11:C5:97:ARG:NE	2.13	0.62
19:9I:44:LEU:HD11	19:9I:70:ILE:HG21	1.80	0.62
19:9I:59:SER:OG	19:9I:60:ALA:N	2.32	0.62
32:31:9:ILE:HD13	32:31:123:LEU:HG	1.81	0.62
44:1E:24:TRP:CZ3	44:1E:26:PRO:HA	2.33	0.62
8:2E:26:LYS:HG3	8:2E:27:LYS:NZ	2.14	0.62
52:V1:3:C:H42	52:V1:70:G:H1	1.46	0.62
15:1H:992:A:P	56:1H:3822:HOH:O	2.56	0.62
10:15:47:ALA:HB2	10:15:112:LEU:HD21	1.81	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:B8:24:PRO:HD3	16:B8:52:ILE:HD12	1.81	0.62
32:39:81:PRO:HB3	32:39:87:GLY:O	1.98	0.62
37:BI:97:ALA:HB3	37:BI:99:LEU:HD13	1.79	0.62
41:6I:25:THR:HG21	41:6I:70:LEU:HB2	1.81	0.62
45:55:55:ALA:HB2	45:55:79:LEU:HD13	1.81	0.62
1:13:806:G:H2'	1:13:807:G:H8	1.63	0.62
1:13:807:G:H2'	1:13:808:G:C8	2.33	0.62
2:A8:38:GLN:HG2	2:A8:47:THR:HG21	1.81	0.62
1:1G:986:C:O2'	1:1G:987:G:O5'	2.17	0.62
1:1G:2079:G:H2'	37:BA:39:LYS:HZ2	1.63	0.62
12:Q8:46:ARG:NH2	15:1H:2375:A:OP1	2.33	0.62
15:1H:1625:C:H2'	15:1H:1626:U:H6	1.63	0.62
15:14:1301:G:O4'	27:85:33:ARG:HD3	2.00	0.62
22:D5:53:ILE:HG22	22:D5:71:VAL:HG13	1.82	0.62
48:1I:30:SER:HB2	48:1I:80:LYS:HG3	1.81	0.62
4:11:69:ARG:HH11	4:11:69:ARG:HG3	1.63	0.62
7:8I:67:LYS:HA	7:8I:70:ARG:HH12	1.65	0.62
8:22:73:PRO:HA	8:22:76:VAL:HG13	1.81	0.62
1:1G:1254:G:H2'	1:1G:1255:U:C6	2.34	0.62
1:1G:1760:C:H2'	1:1G:1761:G:H8	1.64	0.62
12:Q8:11:LYS:HE3	12:Q8:61:LEU:HD21	1.81	0.62
12:Q8:50:LEU:HA	12:Q8:53:PRO:HD2	1.81	0.62
15:14:855:C:OP2	30:35:41:ARG:NH2	2.27	0.62
37:BA:26:ASN:HA	37:BA:29:LYS:HG2	1.81	0.62
1:13:799:G:N2	1:13:801:A:H5''	2.15	0.62
9:8E:42:ARG:NH2	9:8E:75:ASP:OD2	2.33	0.62
1:1G:1385:C:H4'	50:72:1:MET:HE1	1.81	0.62
13:3I:56:ALA:HB2	13:3I:70:ILE:HD11	1.80	0.62
14:3E:134:ASP:HB3	14:3E:135:LEU:HD13	1.82	0.62
15:1H:334:G:N3	15:1H:354:G:O2'	2.32	0.62
15:14:2137:G:O2'	15:14:2139:A:N6	2.32	0.62
25:42:150:ARG:O	25:42:154:GLY:HA2	1.99	0.62
47:51:33:LEU:HD21	47:51:136:ILE:HB	1.80	0.62
1:13:796:G:H1	1:13:805:C:H42	1.47	0.62
4:11:50:THR:HB	15:1H:1839:U:O2	2.00	0.62
1:1G:1291:G:N7	53:1G:2202:8UZ:N2	2.48	0.62
11:G8:94:LYS:HA	11:G8:94:LYS:NZ	2.13	0.62
18:61:133:HIS:HB2	18:61:134:PRO:HD2	1.82	0.62
15:14:38:A:H2'	15:14:39:C:C6	2.34	0.62
15:14:312:C:H2'	15:14:313:C:H6	1.65	0.62
15:14:1001:G:O2'	15:14:2289:A:N1	2.33	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:14:1198:G:H2'	15:14:1199:C:C6	2.34	0.62
15:14:2430:G:H4'	30:35:67:MET:N	2.14	0.62
32:31:197:ASP:O	32:31:199:TRP:N	2.32	0.62
34:5E:16:GLN:HA	34:5E:19:LEU:HD12	1.82	0.62
32:39:88:VAL:HG23	32:39:89:VAL:O	2.00	0.62
38:88:52:VAL:HA	38:88:55:VAL:HG13	1.80	0.62
45:98:117:VAL:O	45:98:118:GLU:HB2	1.98	0.62
49:7I:28:ARG:HG2	49:7I:28:ARG:HH11	1.64	0.62
1:13:1319:G:H2'	1:13:1320:G:O4'	2.00	0.62
1:13:1500:C:OP1	50:7E:88:LYS:NZ	2.26	0.62
9:8E:44:VAL:HG22	42:6E:16:LEU:HD13	1.82	0.62
1:1G:2063:G:H2'	1:1G:2064:U:C6	2.35	0.62
11:G8:40:GLU:HB2	11:G8:41:GLY:HA2	1.81	0.62
15:1H:1315:G:O5'	43:E8:15:ARG:NH2	2.32	0.62
15:1H:1635:A:N3	15:1H:1635:A:H5''	2.15	0.62
15:14:2793:G:H5''	15:14:2794:A:H5'	1.80	0.62
29:AA:23:ASN:HA	29:AA:27:GLU:HG3	1.82	0.62
38:45:2:LEU:HD23	38:45:44:ALA:HB1	1.82	0.62
46:K8:14:ARG:HB3	46:K8:15:LYS:HZ2	1.65	0.62
47:51:41:MET:HA	47:51:55:PRO:HD3	1.80	0.62
4:11:112:GLN:H	4:11:115:GLN:NE2	1.98	0.62
12:Q8:57:ARG:HE	30:78:49:ARG:HG3	1.65	0.62
15:1H:327:C:H2'	15:1H:328:U:C6	2.35	0.62
15:1H:682:A:H2	15:1H:701:A:N1	1.97	0.62
15:1H:2407:A:H2	15:1H:2439:C:H42	1.48	0.62
11:C5:84:ARG:HH21	11:C5:95:LYS:HE3	1.65	0.62
24:4A:49:THR:HG22	24:4A:51:ALA:H	1.65	0.62
40:49:11:TYR:OH	40:49:16:ARG:NH1	2.33	0.62
45:98:87:TYR:HE1	45:98:117:VAL:HG12	1.64	0.62
44:12:82:ARG:NH1	44:12:92:TYR:OH	2.33	0.62
47:59:15:VAL:HG12	47:59:29:PRO:HD2	1.81	0.62
1:13:1756:C:H42	1:13:1771:G:H1	1.48	0.62
9:8E:28:VAL:HG22	9:8E:63:ILE:HB	1.82	0.62
1:1G:1723:U:H5''	1:1G:1737:C:O2	1.98	0.62
1:1G:1950:G:H2'	1:1G:1951:A:C8	2.35	0.62
12:Q8:21:LYS:HB3	12:Q8:52:LYS:HB2	1.82	0.62
15:1H:453:G:N7	56:1H:3805:HOH:O	2.31	0.62
14:32:191:ARG:NH1	14:32:200:GLU:OE1	2.33	0.62
15:14:48:A:H5''	15:14:50:G:O4'	2.00	0.62
15:14:1038:A:H8	15:14:1038:A:H5'	1.64	0.62
15:14:1078:G:OP2	38:45:128:LYS:NZ	2.27	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:68:68:GLU:OE2	21:68:78:ARG:NH1	2.33	0.62
21:68:112:MET:HA	21:68:115:VAL:HG13	1.81	0.62
27:C8:93:LYS:O	27:C8:96:ALA:HB2	2.00	0.62
23:29:54:GLN:HB2	23:29:75:VAL:CG2	2.28	0.62
32:31:6:VAL:HG11	32:31:119:ARG:HA	1.81	0.62
40:41:77:ILE:HG22	40:41:82:LEU:HD12	1.80	0.62
37:BA:51:GLU:HA	37:BA:54:LYS:HE3	1.82	0.62
37:BA:69:GLY:O	37:BA:73:HIS:NE2	2.33	0.62
6:2A:108:ILE:H	19:9A:87:ARG:HH12	1.46	0.62
15:1H:2350:A:C8	15:1H:2352:G:C5	2.88	0.62
15:1H:2805:C:H2'	15:1H:2806:A:H5''	1.82	0.62
16:B8:26:ASP:HB3	16:B8:92:GLY:N	2.06	0.62
12:M5:4:MET:CE	15:14:617:G:H21	2.12	0.62
15:14:1069:A:H62	15:14:1189:U:H3	1.48	0.62
15:14:2057:G:H21	23:29:146:THR:HG23	1.63	0.62
32:31:185:ASP:OD1	32:31:188:ARG:NH1	2.23	0.62
35:95:85:LYS:HB3	35:95:87:HIS:N	2.15	0.62
37:BA:33:ILE:O	37:BA:37:SER:OG	2.14	0.62
47:51:46:GLU:HB2	47:51:49:VAL:HG23	1.81	0.62
47:51:154:PRO:HB3	47:51:163:TYR:CZ	2.34	0.62
52:V1:9:A:H2'	52:V1:10:G:N7	2.15	0.62
1:1G:770:A:O2'	1:1G:771:C:O5'	2.16	0.61
15:1H:841:G:H5''	15:1H:842:A:H5'	1.82	0.61
15:1H:2130:C:H2'	15:1H:2131:G:H8	1.65	0.61
15:1H:2160:A:H4'	15:1H:2185:G:H4'	1.82	0.61
15:14:1437:G:H2'	15:14:1438:G:H8	1.65	0.61
24:4I:4:ILE:HG22	24:4I:5:ALA:H	1.64	0.61
19:9A:23:LYS:O	34:52:100:ASN:ND2	2.32	0.61
32:39:25:PRO:C	32:39:27:GLU:H	2.04	0.61
38:88:104:PHE:HE2	38:88:125:LEU:HD11	1.65	0.61
1:1G:1052:A:H62	1:1G:1054:G:H21	1.48	0.61
1:1G:1161:A:N6	1:1G:1833:G:O2'	2.33	0.61
11:G8:9:LYS:HA	11:G8:27:VAL:HG22	1.81	0.61
9:82:99:LEU:HB3	9:82:101:PHE:CE1	2.34	0.61
15:1H:1820:A:H2	15:1H:2621:C:H1'	1.63	0.61
12:M5:32:LEU:HD12	12:M5:36:LYS:HG2	1.82	0.61
27:85:92:ARG:HH22	35:95:10:LYS:HA	1.65	0.61
31:I8:27:GLU:HG3	31:I8:69:PHE:H	1.65	0.61
31:E5:49:LYS:HG3	31:E5:80:HIS:ND1	2.15	0.61
44:1E:124:SER:O	44:1E:127:ILE:HB	1.99	0.61
3:F8:41:ASN:O	3:F8:45:THR:HG23	2.00	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:13:1371:G:OP2	41:6I:35:ARG:NH2	2.34	0.61
1:1G:1912:A:H4'	1:1G:1913:A:O5'	2.00	0.61
1:1G:1915:A:H4'	20:1B:13:ILE:HD13	1.81	0.61
12:Q8:49:VAL:HG21	15:1H:2374:C:H5''	1.82	0.61
21:68:17:ARG:HG2	21:68:17:ARG:HH11	1.66	0.61
16:75:32:TYR:OH	21:25:73:ASP:OD2	2.16	0.61
30:35:124:LYS:HA	30:35:143:GLY:O	1.99	0.61
38:45:25:ASP:HB3	38:45:102:VAL:H	1.63	0.61
38:45:56:ARG:NH2	52:W4:52:G:O2'	2.34	0.61
47:59:89:ILE:HD12	47:59:130:ARG:HA	1.82	0.61
52:X4:2:C:H2'	52:X4:3:C:C6	2.35	0.61
1:13:1023:A:H2'	1:13:1024:A:C8	2.36	0.61
1:1G:804:U:H2'	1:1G:805:C:C6	2.35	0.61
1:1G:2095:U:O2'	53:14:3006:8UZ:N4	2.33	0.61
12:Q8:4:MET:O	12:Q8:59:LYS:HE2	2.00	0.61
15:1H:897:G:H2'	15:1H:898:A:C8	2.35	0.61
15:1H:2302:A:C2	15:1H:2361:A:H2	2.19	0.61
15:1H:2800:C:O2'	23:21:42:ASP:OD1	2.18	0.61
34:5E:62:TRP:CH2	34:5E:64:GLN:HG3	2.35	0.61
30:35:101:VAL:HA	30:35:105:LEU:O	2.00	0.61
36:N8:33:CYS:HB2	36:N8:40:LYS:HD3	1.81	0.61
33:5A:26:ARG:O	33:5A:26:ARG:HG2	2.00	0.61
37:BA:85:MET:HB2	37:BA:104:LEU:HD21	1.81	0.61
44:12:104:ASN:OD1	44:12:107:THR:OG1	2.19	0.61
1:13:653:G:H5'	1:13:939:A:O4'	2.01	0.61
1:13:782:G:H2'	1:13:783:A:H8	1.66	0.61
6:2A:87:THR:O	6:2A:87:THR:OG1	2.12	0.61
4:19:96:HIS:CD2	4:19:102:LYS:HG2	2.35	0.61
12:Q8:2:PRO:HD2	15:1H:716:U:O2	2.01	0.61
12:Q8:28:GLY:HA2	12:Q8:31:HIS:NE2	2.16	0.61
15:1H:798:C:H5''	56:1H:3898:HOH:O	1.99	0.61
11:C5:61:ILE:HG22	11:C5:62:GLU:H	1.65	0.61
17:L8:6:VAL:HG12	17:L8:56:VAL:HG22	1.83	0.61
16:75:91:ARG:NH1	16:75:124:ASP:OD2	2.33	0.61
24:4A:82:MET:SD	24:4A:83:ASP:N	2.73	0.61
28:I5:22:ILE:HG12	28:I5:23:GLU:N	2.15	0.61
34:5E:36:ARG:NH2	34:5E:38:GLU:OE2	2.33	0.61
47:51:153:LYS:HE2	47:51:153:LYS:H	1.66	0.61
52:W1:44:G:H2'	52:W1:45:U:C6	2.36	0.61
52:X1:61:C:H2'	52:X1:62:C:C6	2.32	0.61
1:13:1260:G:O2'	1:13:1261:A:O4'	2.18	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:13:1366:A:H2'	1:13:1367:C:C6	2.35	0.61
9:8E:9:ARG:HB3	9:8E:14:VAL:HG22	1.82	0.61
9:8E:13:ALA:HB2	9:8E:68:GLY:HA3	1.82	0.61
1:1G:1975:U:N3	1:1G:2002:A:H2	1.97	0.61
15:1H:1070:G:N2	15:1H:1071:U:O4	2.32	0.61
15:14:604:G:H2'	15:14:605:C:C6	2.36	0.61
21:25:35:VAL:HG11	21:25:103:ALA:HB3	1.81	0.61
37:BI:56:MET:HG2	37:BI:84:LEU:HD21	1.83	0.61
37:BA:26:ASN:HB2	37:BA:71:THR:HG23	1.81	0.61
44:1E:178:ARG:HG3	50:7E:72:PRO:HA	1.82	0.61
45:98:10:LEU:O	45:98:12:ARG:HG2	1.99	0.61
52:V4:16:U:H2'	52:V4:17:C:H5'	1.82	0.61
1:13:1318:C:C2'	1:13:1319:G:H5'	2.30	0.61
1:13:1638:A:H4'	29:AI:14:HIS:ND1	2.15	0.61
8:22:62:ASP:O	8:22:97:LYS:HB2	2.01	0.61
1:1G:2060:G:OP1	16:75:107:ASP:HB2	2.00	0.61
10:58:4:TYR:OH	10:58:7:LYS:NZ	2.34	0.61
12:Q8:13:ARG:HB2	12:Q8:14:VAL:HG13	1.83	0.61
14:3E:150:GLU:HA	14:3E:153:ARG:HG2	1.83	0.61
15:1H:471:A:H1'	15:1H:1249:C:O4'	2.01	0.61
15:1H:2233:U:O4'	39:J8:52:ARG:NH2	2.34	0.61
29:AA:80:TYR:CZ	29:AA:82:GLY:HA2	2.36	0.61
33:5A:45:ARG:NH1	48:1A:61:GLU:OE2	2.32	0.61
52:V4:21:A:H2'	52:V4:22:G:H5''	1.83	0.61
1:13:1763:U:H4'	1:13:1764:U:H5	1.64	0.61
1:13:1925:C:C5	42:6E:114:ARG:HD3	2.36	0.61
1:1G:1260:G:H5''	1:1G:1261:A:C8	2.35	0.61
1:1G:1757:C:O5'	1:1G:1758:A:H5'	2.01	0.61
15:1H:2488:U:H2'	15:1H:2489:C:H6	1.65	0.61
15:14:975:G:H2'	15:14:976:G:O4'	2.01	0.61
15:14:2409:C:H1'	56:14:3971:HOH:O	2.00	0.61
19:9A:86:VAL:HG12	19:9A:87:ARG:HH11	1.66	0.61
44:12:7:VAL:HG22	44:12:8:LYS:H	1.65	0.61
8:2E:83:ARG:O	8:2E:86:VAL:HG22	2.01	0.61
1:13:1756:C:O2'	1:13:1757:C:H5''	2.01	0.61
1:1G:1723:U:P	1:1G:1736:G:H1	2.23	0.61
1:1G:1945:A:H2'	1:1G:1946:A:H5''	1.83	0.61
15:1H:738:A:N6	56:1H:3817:HOH:O	2.34	0.61
15:1H:930:G:H3'	15:1H:931:G:H5''	1.83	0.61
15:1H:1565:U:H2'	15:1H:1566:G:C8	2.36	0.61
10:15:134:ARG:N	10:15:135:PRO:HD3	2.16	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:14:1311:A:N3	36:J5:10:LYS:NZ	2.33	0.61
27:C8:92:ARG:HD2	35:D8:11:GLN:HB2	1.82	0.61
1:1G:1767:G:H22	1:1G:1771:G:N2	1.98	0.61
4:19:237:GLU:HB2	4:19:239:ARG:N	2.16	0.61
15:1H:100:G:OP1	46:K8:7:ARG:NH2	2.34	0.61
15:14:1072:G:H3'	15:14:1073:G:H5''	1.82	0.61
16:75:88:ILE:HD11	16:75:125:ARG:HH12	1.65	0.61
22:D5:130:PRO:HA	22:D5:133:ILE:HD11	1.81	0.61
23:29:25:VAL:HG12	23:29:26:ILE:H	1.65	0.61
41:6A:16:ALA:HB1	41:6A:21:ASP:HB3	1.83	0.61
50:7E:101:PRO:HG2	50:7E:133:LEU:HD11	1.83	0.61
1:13:813:U:H5''	1:13:849:A:O4'	2.00	0.60
2:65:107:GLU:H	2:65:110:LEU:HD21	1.65	0.60
14:3E:108:LEU:HB3	14:3E:110:PHE:CE1	2.36	0.60
9:82:117:HIS:O	9:82:118:LYS:HB2	2.00	0.60
15:1H:1095:G:H2'	15:1H:1158:G:N1	2.15	0.60
11:C5:48:ALA:HB3	11:C5:59:GLY:HA2	1.83	0.60
28:M8:1:MET:HG3	40:41:98:ARG:HH21	1.66	0.60
29:AI:39:THR:HG22	29:AI:40:ILE:H	1.65	0.60
37:BI:75:ASN:OD1	37:BI:75:ASN:N	2.33	0.60
44:12:198:ASP:OD1	50:72:70:GLN:NE2	2.33	0.60
1:13:994:A:H5'	1:13:994:A:H8	1.66	0.60
4:11:242:ARG:HH21	15:1H:1860:G:H4'	1.66	0.60
12:Q8:47:LYS:HB2	12:Q8:47:LYS:NZ	2.17	0.60
15:1H:673:A:H2'	15:1H:674:G:O4'	2.01	0.60
15:1H:1178:U:O2	23:21:149:ARG:NH1	2.34	0.60
10:15:112:LEU:HD12	15:14:583:G:H5'	1.82	0.60
15:14:666:U:H2'	15:14:667:C:C6	2.36	0.60
25:42:43:LEU:O	25:42:65:ASN:ND2	2.27	0.60
30:78:1:MET:HE3	30:78:2:LYS:H	1.67	0.60
40:49:113:ARG:NH1	40:49:142:PRO:HB3	2.16	0.60
47:51:12:PRO:HD2	47:51:48:GLY:O	2.01	0.60
1:1G:870:U:O2'	49:7A:23:ASP:OD2	2.18	0.60
1:1G:1188:A:OP1	25:42:126:ARG:NH2	2.34	0.60
1:1G:1597:A:OP2	33:5A:41:ARG:NH1	2.34	0.60
10:58:33:LEU:HD12	10:58:38:HIS:CD2	2.35	0.60
15:1H:1514:C:HO2'	15:1H:1577:A:H8	1.50	0.60
15:1H:2571:C:H2'	15:1H:2572:G:O4'	2.01	0.60
16:B8:56:GLY:O	16:B8:59:THR:HG22	2.02	0.60
15:14:2670:G:N2	15:14:2680:A:OP2	2.35	0.60
15:14:2793:G:OP2	15:14:2797:A:O2'	2.15	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:29:30:PRO:HB3	23:29:90:THR:HG22	1.83	0.60
23:29:169:ASN:HD21	23:29:203:LYS:HD3	1.66	0.60
27:85:91:ASP:O	27:85:92:ARG:HG3	2.01	0.60
39:J8:48:LYS:HB3	39:J8:49:VAL:CA	2.31	0.60
37:BA:16:HIS:O	37:BA:19:SER:OG	2.17	0.60
8:2E:57:ILE:HG12	8:2E:66:VAL:HG22	1.83	0.60
52:V4:16:U:H1'	52:V4:60:U:O2	2.02	0.60
1:13:1219:C:H2'	1:13:1220:U:H6	1.66	0.60
1:13:1890:C:H2'	1:13:1891:C:H6	1.66	0.60
15:14:52:A:OP2	56:14:3669:HOH:O	2.16	0.60
15:14:271:C:N4	15:14:273:U:O2	2.34	0.60
15:14:603:A:OP2	56:14:3671:HOH:O	2.16	0.60
26:16:17:A:H5'	26:16:18:G:H8	1.64	0.60
28:M8:6:HIS:CE1	40:41:67:LYS:HE2	2.36	0.60
38:45:59:ARG:O	38:45:60:ARG:HG3	2.01	0.60
47:51:4:ILE:HD13	47:51:4:ILE:H	1.65	0.60
52:V1:49:C:O2	52:V1:65:G:N2	2.18	0.60
2:A8:11:LYS:HD2	2:A8:15:ARG:HH21	1.66	0.60
2:A8:74:ALA:HB1	2:A8:108:GLY:HA3	1.83	0.60
2:A8:106:ARG:CZ	2:A8:107:GLU:HB2	2.31	0.60
1:1G:1576:G:H5'	1:1G:1588:A:H61	1.65	0.60
1:1G:1785:A:N1	1:1G:1805:G:N2	2.44	0.60
12:Q8:34:TRP:CD1	12:Q8:38:GLY:HA3	2.36	0.60
15:1H:2324:A:C5	15:1H:2325:A:H8	2.19	0.60
12:M5:19:SER:HB3	15:14:678:G:OP1	2.02	0.60
14:32:57:ARG:HE	14:32:205:GLU:HB3	1.67	0.60
14:32:176:LEU:HG	14:32:178:VAL:HG13	1.82	0.60
15:14:2806:A:H1'	15:14:2905:G:O2'	2.02	0.60
37:BA:83:ARG:HA	37:BA:86:ARG:HH12	1.65	0.60
1:13:1052:A:C4	1:13:1054:G:H1'	2.37	0.60
1:13:1153:G:H2'	1:13:1154:C:C6	2.36	0.60
1:13:1681:G:N7	1:13:1826:U:H3'	2.16	0.60
1:1G:713:C:H2'	1:1G:714:G:C8	2.36	0.60
15:1H:1587:G:H2'	15:1H:1588:G:H8	1.65	0.60
15:1H:2335:A:N3	15:1H:2335:A:H2'	2.16	0.60
11:C5:17:SER:HB2	11:C5:71:LYS:HD2	1.82	0.60
15:14:1435:C:H2'	15:14:1436:C:H6	1.65	0.60
23:21:101:ARG:HG2	23:21:169:ASN:OD1	2.00	0.60
23:29:53:PRO:HA	23:29:74:PRO:HA	1.82	0.60
30:35:30:THR:HG21	30:35:35:HIS:N	2.17	0.60
8:2E:116:VAL:HG21	8:2E:202:ILE:HD11	1.82	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:13:1953:C:H2'	1:13:1954:C:C6	2.36	0.60
4:11:71:ASP:OD1	4:11:103:ARG:NH2	2.34	0.60
1:1G:782:G:H2'	1:1G:783:A:H8	1.67	0.60
1:1G:1120:G:OP2	14:32:132:ARG:NH2	2.30	0.60
2:65:85:VAL:H	2:65:110:LEU:HB3	1.66	0.60
11:G8:83:THR:HG22	11:G8:84:ARG:HG3	1.83	0.60
11:G8:95:LYS:HE3	11:G8:97:ARG:NH2	2.15	0.60
9:82:9:ARG:HG2	9:82:14:VAL:HG13	1.82	0.60
15:1H:862:U:H2'	15:1H:863:C:C6	2.37	0.60
15:14:295:C:H5'	15:14:296:C:OP2	2.02	0.60
21:68:98:VAL:HG13	21:68:117:LEU:HB3	1.82	0.60
23:29:54:GLN:O	23:29:56:PRO:HD3	2.01	0.60
28:15:31:ILE:HG21	40:49:145:THR:HG22	1.82	0.60
33:5A:29:ARG:HB3	33:5A:31:ARG:H	1.66	0.60
44:1E:73:THR:HG23	44:1E:96:ARG:HH22	1.65	0.60
1:13:986:C:O2'	1:13:987:G:N2	2.35	0.60
1:13:1254:G:H2'	1:13:1255:U:C6	2.37	0.60
1:13:1708:A:H5''	25:4E:16:THR:HG21	1.84	0.60
3:B5:49:VAL:HB	3:B5:83:VAL:HG21	1.84	0.60
1:1G:702:U:H2'	1:1G:703:G:C8	2.37	0.60
1:1G:913:C:H2'	1:1G:914:A:H8	1.67	0.60
2:65:41:ASP:OD1	2:65:44:LYS:HB2	2.01	0.60
12:M5:32:LEU:HD13	12:M5:33:ASN:CB	2.27	0.60
15:14:1788:C:OP1	16:75:96:ARG:NH1	2.33	0.60
15:14:2773:A:N1	47:59:67:LEU:HD23	2.17	0.60
23:21:197:ILE:HD11	23:21:199:ARG:HE	1.66	0.60
21:25:102:VAL:HB	21:25:106:LEU:HD12	1.82	0.60
26:1J:6:C:H42	26:1J:119:G:H1	1.48	0.60
35:95:69:LYS:CG	35:95:86:GLY:HA3	2.30	0.60
42:6E:27:ILE:HD12	42:6E:40:ALA:HA	1.83	0.60
48:1A:6:ILE:HG23	48:1A:98:ILE:HG23	1.83	0.60
1:13:907:G:H5''	1:13:908:C:H5	1.64	0.60
1:13:1661:G:H2'	1:13:1662:G:C8	2.35	0.60
1:1G:1260:G:C3'	1:1G:1261:A:H8	2.14	0.60
1:1G:1281:U:H1'	1:1G:1282:A:C2	2.35	0.60
15:1H:1769:G:H2'	15:1H:1772:G:O6	2.01	0.60
13:3A:36:VAL:O	13:3A:59:ARG:N	2.31	0.60
15:14:2482:C:H2'	15:14:2483:G:O4'	2.02	0.60
23:29:112:GLY:O	23:29:159:HIS:HA	2.02	0.60
45:98:117:VAL:HG22	45:98:118:GLU:H	1.65	0.60
1:13:706:A:H4'	1:13:707:G:H5'	1.83	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:13:964:U:H5'	37:BI:23:ARG:HB2	1.83	0.60
1:13:1741:C:H2'	1:13:1742:C:C6	2.37	0.60
4:11:164:GLN:NE2	4:11:166:GLN:OE1	2.35	0.60
9:8E:42:ARG:HH11	9:8E:71:SER:HB3	1.67	0.60
15:14:1820:A:C2	15:14:2621:C:H1'	2.37	0.60
22:D5:81:ARG:HH22	38:45:135:ASP:HB2	1.66	0.60
1:13:783:A:H2	1:13:861:G:H1	1.50	0.59
1:13:1690:U:H2'	1:13:1691:C:C6	2.37	0.59
1:1G:1154:C:OP1	13:3A:89:ARG:NH2	2.33	0.59
1:1G:1293:G:H22	1:1G:1370:G:H1	1.48	0.59
1:1G:1580:U:H1'	1:1G:1583:U:C5	2.36	0.59
2:65:9:ARG:HG2	15:14:2349:G:H5'	1.84	0.59
15:1H:608:G:N7	56:1H:3799:HOH:O	2.31	0.59
15:1H:1970:G:H2'	15:1H:1971:U:C6	2.37	0.59
15:1H:2346:G:O3'	31:18:43:THR:HG22	2.01	0.59
17:L8:35:ARG:HB3	17:L8:37:LEU:HD21	1.84	0.59
15:14:2295:G:O2'	15:14:2403:A:N1	2.33	0.59
15:14:2639:G:N7	56:14:3709:HOH:O	2.32	0.59
15:14:2698:C:OP1	16:75:53:ARG:NH2	2.34	0.59
18:69:73:GLU:HG3	18:69:136:VAL:HG23	1.84	0.59
38:88:135:ASP:HB2	38:88:138:ASP:OD1	2.02	0.59
44:1E:212:GLN:OE1	44:1E:216:SER:OG	2.20	0.59
42:62:113:GLU:HB2	42:62:119:ARG:HG2	1.83	0.59
49:7I:19:ILE:HB	49:7I:36:ILE:O	2.02	0.59
45:55:51:LEU:HD22	45:55:66:VAL:HG13	1.84	0.59
1:13:1114:G:O2'	1:13:1115:G:OP2	2.20	0.59
1:13:2029:G:C2	1:13:2030:C:H1'	2.37	0.59
8:22:84:ILE:HG12	8:22:88:ARG:HH21	1.67	0.59
1:1G:1771:G:H2'	1:1G:1772:G:C8	2.36	0.59
4:19:237:GLU:HB2	4:19:239:ARG:O	2.02	0.59
15:1H:1769:G:H8	15:1H:1773:A:H62	1.48	0.59
16:B8:93:ARG:CG	16:B8:93:ARG:HH11	2.15	0.59
32:31:9:ILE:HD12	32:31:10:PRO:HD2	1.84	0.59
38:45:19:GLY:O	38:45:98:LYS:HB3	2.02	0.59
47:59:106:THR:O	47:59:106:THR:OG1	2.20	0.59
50:72:29:SER:HB3	50:72:32:LYS:HD2	1.84	0.59
1:13:2042:U:H2'	1:13:2043:G:H8	1.67	0.59
1:1G:674:G:O2'	1:1G:937:U:OP1	2.11	0.59
4:19:61:LEU:HD21	15:14:1619:A:H5'	1.85	0.59
15:1H:930:G:O6	15:1H:931:G:N2	2.32	0.59
15:1H:1946:G:N7	53:1H:3002:8UZ:N1	2.50	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:14:1642:G:H2'	15:14:1643:G:H8	1.66	0.59
28:15:55:ARG:HG3	28:15:56:VAL:H	1.67	0.59
40:41:38:VAL:HG22	40:41:93:THR:HG23	1.82	0.59
1:13:1047:G:H2'	1:13:1048:G:H8	1.67	0.59
1:1G:1098:C:H42	1:1G:1104:G:H1	1.48	0.59
11:G8:97:ARG:CZ	11:G8:104:GLY:HA3	2.32	0.59
4:19:242:ARG:N	4:19:242:ARG:HD3	2.17	0.59
15:1H:1558:C:H3'	15:1H:1559:A:H5''	1.84	0.59
15:14:1812:U:H2'	15:14:1818:A:N6	2.17	0.59
15:14:2083:A:OP1	56:14:3670:HOH:O	2.16	0.59
26:1J:46:G:H1'	26:1J:49:C:H42	1.68	0.59
38:88:89:ASN:HB3	38:88:90:VAL:HG22	1.85	0.59
39:F5:44:PRO:HB2	39:F5:46:LEU:HD13	1.85	0.59
44:1E:163:PHE:HA	44:1E:185:ILE:HG13	1.84	0.59
45:98:57:ARG:HB3	45:98:59:ASP:OD2	2.02	0.59
47:51:150:ALA:O	47:51:153:LYS:NZ	2.30	0.59
47:51:154:PRO:HB3	47:51:163:TYR:CE2	2.38	0.59
48:1I:34:VAL:HG12	48:1I:74:ILE:HG12	1.84	0.59
49:7I:21:VAL:O	49:7I:33:ILE:N	2.28	0.59
4:11:242:ARG:HD2	4:11:242:ARG:N	2.17	0.59
4:19:183:ARG:NH2	15:14:1834:C:OP2	2.35	0.59
15:1H:209:G:O6	56:1H:3767:HOH:O	2.16	0.59
15:1H:1104:G:H4'	15:1H:1134:A:N7	2.17	0.59
15:1H:2005:G:O2'	15:1H:2007:C:OP2	2.15	0.59
15:14:487:U:H2'	15:14:488:A:C8	2.38	0.59
21:25:88:ASN:HB3	21:25:94:ARG:HD3	1.83	0.59
32:39:185:ASP:OD1	32:39:188:ARG:NH2	2.27	0.59
40:41:37:VAL:H	40:41:99:MET:HE3	1.67	0.59
50:7E:7:ALA:HB2	50:7E:85:ARG:HH11	1.67	0.59
1:13:1262:G:H5'	1:13:1263:C:OP2	2.03	0.59
1:13:1456:U:C5	1:13:1495:A:N1	2.71	0.59
1:1G:800:A:H1'	1:1G:985:A:N7	2.17	0.59
1:1G:1440:C:O2'	1:1G:1524:A:N1	2.35	0.59
15:1H:1483:A:H61	15:1H:1608:A:H62	1.50	0.59
15:1H:2877:G:OP1	16:B8:119:LYS:HD2	2.02	0.59
15:1H:2897:U:O2	36:N8:52:TYR:OH	2.19	0.59
16:B8:20:PRO:HG2	16:B8:86:ILE:O	2.02	0.59
13:3A:47:LYS:HG2	13:3A:48:PRO:HD3	1.84	0.59
15:14:1805:C:H1'	15:14:1820:A:C8	2.37	0.59
15:14:1938:A:C6	52:W4:38:A:H5'	2.38	0.59
15:14:2285:G:OP2	56:14:3672:HOH:O	2.17	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:75:8:LYS:HZ1	23:29:9:VAL:HG12	1.68	0.59
22:H8:117:LEU:H	22:H8:117:LEU:HD13	1.68	0.59
37:BI:11:SER:HA	37:BI:13:LEU:HD23	1.83	0.59
39:F5:85:LEU:CA	39:F5:87:PRO:HD2	2.32	0.59
44:12:5:ILE:HA	44:12:221:LEU:HD11	1.84	0.59
1:1G:1106:G:H2'	1:1G:1107:G:C8	2.37	0.59
10:58:132:ALA:O	10:58:134:ARG:NH2	2.36	0.59
12:Q8:31:HIS:ND1	12:Q8:31:HIS:O	2.34	0.59
15:1H:1044:A:H4'	27:C8:92:ARG:CG	2.32	0.59
15:1H:2416:U:H3'	15:1H:2417:C:C6	2.37	0.59
19:9I:53:ARG:HH21	19:9I:60:ALA:N	2.00	0.59
15:14:1159:A:H4'	47:59:3:ARG:HD3	1.84	0.59
15:14:1428:A:H1'	15:14:1429:G:OP1	2.03	0.59
24:4I:7:VAL:HB	40:41:115:ARG:CZ	2.32	0.59
28:M8:6:HIS:CE1	40:41:67:LYS:HZ3	2.21	0.59
24:4A:92:HIS:CD2	24:4A:98:VAL:HG11	2.37	0.59
31:E5:32:ARG:HG2	31:E5:33:ALA:H	1.68	0.59
40:41:11:TYR:HA	40:41:15:VAL:HB	1.84	0.59
38:45:31:ASP:N	38:45:106:VAL:O	2.34	0.59
8:2E:58:GLU:H	8:2E:65:ALA:HB3	1.67	0.59
52:X1:62:C:H2'	52:X1:63:G:C8	2.37	0.59
1:13:1932:G:O2'	1:13:1958:G:N2	2.35	0.59
1:13:1945:A:H1'	29:AI:37:ARG:HH21	1.67	0.59
4:19:32:SER:O	4:19:32:SER:OG	2.21	0.59
12:Q8:54:GLU:HG2	30:78:49:ARG:HA	1.84	0.59
15:1H:666:U:H2'	15:1H:667:C:C6	2.36	0.59
12:M5:30:ARG:NH1	30:35:63:PRO:HB3	2.17	0.59
15:14:2358:C:O2'	15:14:2388:G:O2'	2.20	0.59
24:4A:15:VAL:O	24:4A:19:LEU:HG	2.03	0.59
30:78:120:ALA:HB1	30:78:138:LEU:HD22	1.85	0.59
35:95:35:LEU:HB3	35:95:37:VAL:HG11	1.84	0.59
40:41:138:GLN:HB3	40:41:153:ARG:O	2.03	0.59
15:1H:355:A:HO2'	15:1H:356:A:H8	1.50	0.59
15:1H:2767:G:C2	47:51:3:ARG:HB3	2.38	0.59
15:14:2626:U:H5'	15:14:2626:U:H6	1.68	0.59
21:68:8:LEU:HB2	21:68:19:ILE:HG13	1.85	0.59
22:H8:92:SER:O	22:H8:130:PRO:HG2	2.02	0.59
19:9A:36:ASN:ND2	19:9A:36:ASN:O	2.36	0.59
23:29:33:VAL:H	23:29:89:ASP:CG	2.05	0.59
25:42:102:ALA:HB1	25:42:106:PRO:HG2	1.84	0.59
42:6E:72:ARG:HG3	42:6E:142:GLU:OE1	2.03	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:59:6:ARG:H	47:59:6:ARG:HD2	1.67	0.59
8:2E:76:VAL:HG21	8:2E:103:VAL:HG21	1.84	0.59
1:13:2078:C:H4'	1:13:2079:G:O5'	2.01	0.59
7:8I:59:ILE:HG13	7:8I:71:PHE:HD2	1.68	0.59
15:1H:274:G:OP1	18:61:57:ARG:NH2	2.35	0.59
15:1H:598:G:O2'	15:1H:599:C:H3'	2.03	0.59
15:1H:2152:G:N1	15:1H:2187:G:N3	2.50	0.59
15:1H:2228:U:O2'	15:1H:2229:C:H5'	2.02	0.59
15:1H:2272:U:O2'	15:1H:2273:C:H5'	2.02	0.59
10:15:28:THR:HG21	15:14:1060:U:H5	1.67	0.59
15:14:1272:G:N2	15:14:1275:A:OP2	2.25	0.59
23:29:11:MET:HA	23:29:24:THR:HA	1.85	0.59
25:42:142:LEU:O	25:42:143:ARG:NE	2.36	0.59
30:78:1:MET:HE2	30:78:6:LEU:HD13	1.85	0.59
32:31:160:ASN:OD1	32:31:163:VAL:HG23	2.02	0.59
30:35:30:THR:HG21	30:35:35:HIS:H	1.67	0.59
40:41:166:ASP:N	40:41:166:ASP:OD1	2.35	0.59
47:59:104:GLU:HG3	47:59:114:VAL:HG22	1.85	0.59
1:13:1562:G:H2'	1:13:1563:C:C6	2.38	0.58
1:1G:1265:U:H2'	1:1G:1266:G:C8	2.38	0.58
1:1G:1350:G:H4'	1:1G:1351:A:H5'	1.85	0.58
15:1H:632:U:N3	15:1H:648:A:C2	2.68	0.58
15:1H:1022:C:OP1	56:1H:3769:HOH:O	2.17	0.58
15:1H:2466:A:O2'	52:X1:76:A:H2'	2.03	0.58
15:14:313:C:H2'	15:14:314:A:C8	2.37	0.58
15:14:345:A:OP1	32:39:135:LYS:NZ	2.36	0.58
15:14:1096:A:OP2	15:14:1158:G:N2	2.36	0.58
15:14:1108:U:H4'	15:14:1109:U:H5''	1.84	0.58
22:H8:117:LEU:HD22	22:H8:118:GLN:H	1.68	0.58
23:21:12:THR:OG1	23:21:13:ARG:N	2.35	0.58
25:4E:75:THR:OG1	25:4E:76:ILE:N	2.33	0.58
23:29:59:VAL:HB	23:29:60:ASN:HA	1.85	0.58
43:E8:86:LEU:HD12	43:E8:87:PRO:HD2	1.85	0.58
48:1A:3:LYS:HD2	48:1A:77:PRO:HG3	1.85	0.58
1:1G:873:G:H1'	1:1G:903:A:N1	2.18	0.58
1:1G:1759:G:C8	1:1G:1760:C:H5	2.21	0.58
15:1H:614:C:H2'	15:1H:615:A:C8	2.38	0.58
15:1H:1158:G:O2'	15:1H:1159:A:O5'	2.20	0.58
15:1H:1383:G:N7	56:1H:3807:HOH:O	2.32	0.58
15:1H:1640:G:H2'	15:1H:1641:C:C6	2.37	0.58
13:3A:70:ILE:HD13	13:3A:77:LEU:HD12	1.85	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:14:2546:A:H61	15:14:2677:A:H61	1.51	0.58
22:D5:94:GLU:O	22:D5:130:PRO:HD3	2.03	0.58
44:1E:22:LYS:NZ	44:1E:35:GLU:OE1	2.36	0.58
1:13:1953:C:OP1	20:1F:12:LYS:NZ	2.36	0.58
3:B5:5:TYR:CE1	46:G5:30:ARG:HG3	2.39	0.58
3:B5:63:LYS:H	3:B5:63:LYS:HE2	1.67	0.58
1:1G:1579:U:C2	1:1G:1852:A:H2	2.19	0.58
1:1G:1756:C:N3	1:1G:1767:G:N1	2.51	0.58
1:1G:1850:C:H5''	1:1G:1851:G:H5''	1.86	0.58
15:1H:10:G:H2'	15:1H:11:G:C8	2.38	0.58
15:1H:2704:U:OP2	15:1H:2735:G:N2	2.31	0.58
15:14:1586:C:H2'	15:14:1587:G:C8	2.38	0.58
15:14:2477:U:H2'	15:14:2478:C:C6	2.38	0.58
23:29:134:ILE:HD12	23:29:134:ILE:O	2.04	0.58
24:4A:16:ASP:OD1	24:4A:16:ASP:N	2.36	0.58
29:AA:29:ARG:HH12	29:AA:47:HIS:HA	1.68	0.58
52:X4:2:C:H2'	52:X4:3:C:H6	1.68	0.58
15:1H:327:C:H2'	15:1H:328:U:H6	1.69	0.58
15:1H:2807:C:H42	15:1H:2820:G:N2	2.01	0.58
15:1H:2815:A:H5'	15:1H:2907:U:H1'	1.85	0.58
14:32:98:GLU:OE2	14:32:103:ASN:ND2	2.37	0.58
15:14:425:G:N7	56:14:3708:HOH:O	2.32	0.58
23:29:89:ASP:OD1	23:29:90:THR:N	2.36	0.58
29:AI:5:LEU:HD13	29:AI:10:PHE:CD1	2.38	0.58
36:N8:42:PRO:O	36:N8:44:THR:HG22	2.03	0.58
36:N8:55:ARG:HB2	45:98:33:ARG:NH1	2.14	0.58
4:11:112:GLN:H	4:11:115:GLN:HE22	1.52	0.58
7:8I:55:ASP:HA	7:8I:79:SER:HA	1.85	0.58
8:22:148:GLY:HA3	8:22:172:ARG:H	1.68	0.58
12:Q8:8:LYS:NZ	15:1H:233:U:OP2	2.35	0.58
15:1H:1728:G:H8	15:1H:1728:G:O5'	1.86	0.58
15:1H:2485:G:H5'	38:88:56:ARG:HH21	1.68	0.58
53:1H:3004:8UZ:N	53:1H:3004:8UZ:O9	2.37	0.58
12:M5:22:VAL:HB	12:M5:53:PRO:CB	2.34	0.58
12:M5:62:LEU:HG	15:14:232:G:C5'	2.34	0.58
15:14:1967:C:H4'	52:W4:72:C:OP2	2.02	0.58
19:9A:22:VAL:HG22	19:9A:23:LYS:H	1.68	0.58
25:42:51:VAL:O	25:42:55:VAL:HG23	2.02	0.58
27:85:99:ALA:HB2	27:85:106:PHE:CD1	2.38	0.58
34:5E:70:ASP:OD1	34:5E:70:ASP:N	2.37	0.58
36:N8:40:LYS:HG3	36:N8:46:CYS:HA	1.86	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:58:25:ARG:HH22	15:1H:1191:A:H4'	1.67	0.58
11:G8:82:PRO:HG3	11:G8:97:ARG:HG3	1.85	0.58
15:1H:936:A:H5'	15:1H:937:C:OP1	2.04	0.58
16:B8:64:ARG:HB2	16:B8:73:GLU:HG2	1.86	0.58
11:C5:75:ILE:O	11:C5:76:CYS:HB3	2.02	0.58
14:32:103:ASN:OD1	14:32:114:ARG:NH2	2.31	0.58
15:14:1161:U:OP1	47:59:3:ARG:N	2.27	0.58
15:14:1569:U:H2'	15:14:1570:G:O4'	2.03	0.58
29:AA:20:LEU:HA	29:AA:23:ASN:HB3	1.85	0.58
40:49:4:ASP:CG	40:49:5:VAL:H	2.04	0.58
1:13:901:G:H2'	1:13:902:U:C6	2.38	0.58
9:8E:9:ARG:HD2	9:8E:14:VAL:HG13	1.86	0.58
9:8E:46:ALA:HB2	9:8E:74:ILE:HG23	1.86	0.58
1:1G:1214:G:OP1	7:8A:37:LYS:NZ	2.36	0.58
1:1G:1249:C:H2'	1:1G:1250:A:O4'	2.04	0.58
4:19:10:THR:OG1	4:19:13:ARG:HB2	2.03	0.58
15:1H:1820:A:C2	15:1H:2621:C:H1'	2.39	0.58
15:1H:2126:G:H1	15:1H:2213:C:H42	1.51	0.58
15:1H:2193:G:OP1	15:1H:2193:G:H4'	2.03	0.58
15:1H:2302:A:C2	15:1H:2361:A:C2	2.92	0.58
15:1H:2654:A:H2'	15:1H:2655:G:O4'	2.04	0.58
18:61:95:LYS:NZ	18:61:99:GLU:OE2	2.36	0.58
15:14:4:C:H42	15:14:2911:G:H22	1.51	0.58
15:14:29:U:H2'	15:14:30:G:C8	2.38	0.58
15:14:555:A:N1	15:14:2067:A:H2'	2.19	0.58
15:14:1435:C:H2'	15:14:1436:C:C6	2.38	0.58
28:M8:38:LYS:H	28:M8:38:LYS:HD2	1.69	0.58
29:AI:20:LEU:HA	29:AI:23:ASN:HB2	1.84	0.58
32:39:116:ASP:OD1	32:39:119:ARG:NH2	2.30	0.58
37:BA:49:ALA:HB3	37:BA:100:ILE:HD13	1.86	0.58
42:6E:65:ALA:HB2	42:6E:128:ALA:HB2	1.86	0.58
45:98:33:ARG:NE	45:98:113:LEU:HD21	2.19	0.58
52:V1:8:U:H4'	52:V1:9:A:OP1	2.03	0.58
1:13:1860:G:H2'	1:13:1861:C:C6	2.39	0.58
2:A8:10:ARG:O	2:A8:14:VAL:HG12	2.04	0.58
8:22:181:ASN:OD1	8:22:204:LEU:HB2	2.03	0.58
1:1G:1018:G:OP1	49:7A:3:LYS:NZ	2.35	0.58
1:1G:1063:C:O2'	1:1G:1064:G:N3	2.37	0.58
1:1G:1759:G:H2'	1:1G:1760:C:C6	2.37	0.58
1:1G:1996:G:H5'	9:82:112:LYS:HB3	1.86	0.58
4:19:237:GLU:HG2	4:19:238:GLY:N	2.19	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:1H:70:A:C2	3:F8:31:HIS:HE1	2.22	0.58
15:1H:1760:C:O2'	15:1H:2871:C:N3	2.36	0.58
11:C5:19:LYS:HD2	11:C5:20:TYR:CE1	2.37	0.58
15:14:506:A:N1	15:14:527:G:H4'	2.18	0.58
15:14:661:C:H2'	15:14:662:C:C6	2.38	0.58
15:14:1252:A:H2	15:14:1290:A:N1	2.01	0.58
21:68:17:ARG:HB2	21:68:45:GLU:HG2	1.86	0.58
22:H8:52:SER:O	22:H8:52:SER:OG	2.12	0.58
23:21:15:PHE:HA	23:21:19:ARG:O	2.03	0.58
23:29:57:LYS:N	23:29:58:ARG:HB3	2.19	0.58
35:95:35:LEU:HB3	35:95:37:VAL:CG1	2.34	0.58
51:Y1:35:A:H2'	51:Y1:36:G:O4'	2.03	0.58
1:13:1977:A:C2	1:13:1978:U:C2	2.92	0.58
1:13:2160:U:H1'	51:Y1:36:G:N2	2.19	0.58
8:22:11:ARG:HE	8:22:180:ALA:HB3	1.69	0.58
1:1G:1864:C:O2'	1:1G:1927:G:N2	2.36	0.58
1:1G:1882:G:O2'	1:1G:1885:G:O2'	2.22	0.58
11:G8:91:GLU:HG3	11:G8:92:ASN:HB2	1.84	0.58
15:14:673:A:H8	15:14:2364:G:H21	1.51	0.58
30:35:135:LEU:O	30:35:139:LYS:HG2	2.03	0.58
32:39:78:ILE:HA	32:39:83:PHE:CD2	2.39	0.58
38:45:35:VAL:HG12	38:45:36:ALA:H	1.68	0.58
50:7E:87:SER:HB2	50:7E:93:VAL:CB	2.34	0.58
46:G5:32:LEU:HD12	46:G5:53:LEU:HB3	1.85	0.58
2:A8:106:ARG:HA	2:A8:109:GLY:H	1.68	0.58
9:8E:47:LEU:H	9:8E:47:LEU:HD22	1.68	0.58
1:1G:922:G:OP2	1:1G:922:G:H8	1.86	0.58
1:1G:2074:C:H2'	1:1G:2075:C:O4'	2.04	0.58
4:19:43:ARG:HG2	4:19:43:ARG:HH11	1.69	0.58
14:3E:155:LEU:HB3	14:3E:158:ILE:HG13	1.86	0.58
15:1H:1106:U:H3	15:1H:1128:A:N6	2.02	0.58
15:1H:2329:C:H2'	15:1H:2330:G:H8	1.69	0.58
15:14:1210:C:H1'	35:95:8:GLY:O	2.04	0.58
15:14:1686:C:H2'	15:14:1687:A:C8	2.39	0.58
15:14:2367:A:C2	31:E5:33:ALA:O	2.57	0.58
21:68:25:LEU:HD12	21:68:38:VAL:HG22	1.85	0.58
22:D5:11:GLU:HG3	22:D5:12:GLY:H	1.68	0.58
28:M8:24:THR:OG1	28:M8:25:TYR:N	2.36	0.58
28:M8:39:CYS:SG	28:M8:41:PRO:HD3	2.44	0.58
23:29:89:ASP:CG	23:29:90:THR:H	2.06	0.58
32:31:136:THR:O	32:31:140:LEU:HB2	2.04	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:59:42:ARG:HD2	47:59:53:GLU:HB3	1.86	0.58
52:V4:19:G:O2'	52:V4:57:G:N3	2.32	0.58
1:13:747:G:N2	1:13:967:G:O6	2.37	0.57
1:13:1958:G:OP1	1:13:1958:G:H4'	2.03	0.57
9:82:97:LYS:HB3	9:82:98:PRO:HD3	1.86	0.57
15:1H:1431:G:O6	56:1H:3766:HOH:O	2.16	0.57
15:14:898:A:N1	17:H5:25:ALA:HB2	2.19	0.57
15:14:1479:C:H2'	15:14:1480:U:C6	2.39	0.57
24:4A:19:LEU:HD11	24:4A:34:LEU:HD21	1.85	0.57
30:78:46:LYS:O	30:78:47:ASP:HB3	2.04	0.57
30:35:47:ASP:OD2	30:35:50:ARG:NH1	2.37	0.57
35:95:5:VAL:HB	35:95:37:VAL:CG1	2.34	0.57
40:49:77:ILE:HG22	40:49:82:LEU:HD12	1.86	0.57
1:13:1054:G:O2'	1:13:1069:G:N2	2.36	0.57
1:13:1776:U:H2'	1:13:1777:C:O4'	2.03	0.57
12:Q8:27:THR:OG1	12:Q8:28:GLY:N	2.37	0.57
15:1H:1010:U:OP1	56:1H:3770:HOH:O	2.17	0.57
15:1H:2849:U:H2'	15:1H:2850:G:C8	2.39	0.57
15:14:1461:A:H2'	15:14:1462:G:C8	2.39	0.57
22:H8:73:GLN:HB2	22:H8:87:ASP:HB2	1.86	0.57
26:16:17:A:H3'	26:16:18:G:H5'	1.86	0.57
29:AI:6:LYS:O	29:AI:7:LYS:HB3	2.04	0.57
30:35:19:VAL:HG13	30:35:31:ALA:HB1	1.86	0.57
36:N8:47:PRO:HG3	43:E8:38:TYR:OH	2.04	0.57
40:49:125:PHE:HB3	40:49:166:ASP:CB	2.33	0.57
44:12:54:THR:HG21	44:12:201:ILE:HD11	1.86	0.57
44:12:189:ASP:OD1	44:12:189:ASP:N	2.36	0.57
52:X4:61:C:H2'	52:X4:62:C:H6	1.69	0.57
1:13:1443:A:N7	1:13:1445:A:C4	2.72	0.57
1:13:1974:G:N2	1:13:2002:A:O5'	2.35	0.57
1:13:2019:U:H2'	1:13:2020:G:C8	2.39	0.57
1:1G:793:C:H2'	1:1G:794:C:C6	2.38	0.57
1:1G:913:C:H2'	1:1G:914:A:C8	2.39	0.57
4:19:183:ARG:HG2	4:19:184:LYS:N	2.18	0.57
15:1H:64:C:H2'	15:1H:65:C:C6	2.39	0.57
15:1H:723:G:H1'	32:31:74:ARG:HD3	1.86	0.57
15:1H:2099:U:H2'	15:1H:2100:U:C6	2.38	0.57
15:1H:2134:U:H1'	15:1H:2206:G:N2	2.19	0.57
14:32:61:LYS:HE2	14:32:206:PHE:CE2	2.39	0.57
27:C8:59:ARG:O	27:C8:63:VAL:HG23	2.03	0.57
26:IJ:42:U:O4	28:I5:1:MET:N	2.32	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:5I:21:TYR:OH	33:5I:23:ARG:NH2	2.38	0.57
35:95:5:VAL:HB	35:95:37:VAL:HG11	1.86	0.57
35:95:85:LYS:HD2	35:95:87:HIS:N	2.19	0.57
38:45:12:GLN:HG2	38:45:73:PRO:HD2	1.86	0.57
40:49:61:ALA:HB2	40:49:68:PRO:HD3	1.86	0.57
8:2E:73:PRO:O	8:2E:76:VAL:HG22	2.04	0.57
1:13:1364:C:H2'	1:13:1365:C:H6	1.69	0.57
9:8E:43:ALA:HA	9:8E:74:ILE:HD13	1.85	0.57
2:65:53:SER:HB2	2:65:65:VAL:HG11	1.85	0.57
9:82:77:ILE:O	9:82:81:ILE:HG12	2.03	0.57
15:1H:647:G:H4'	15:1H:648:A:H5''	1.86	0.57
15:1H:1156:U:H2'	15:1H:1157:C:H5'	1.86	0.57
15:1H:1306:C:H4'	32:31:83:PHE:CD1	2.39	0.57
15:1H:1498:G:H1'	15:1H:1577:A:H62	1.69	0.57
15:1H:1872:C:O3'	56:1H:3763:HOH:O	2.17	0.57
15:1H:2342:A:H2'	15:1H:2343:A:C8	2.39	0.57
13:3A:93:LEU:HD12	13:3A:96:VAL:HG11	1.86	0.57
20:1F:12:LYS:O	20:1F:16:GLY:N	2.35	0.57
15:14:1273:C:H4'	35:95:85:LYS:CG	2.30	0.57
15:14:1844:A:H2'	15:14:1845:G:O4'	2.05	0.57
28:M8:18:CYS:HB3	28:M8:39:CYS:HB3	1.86	0.57
44:1E:8:LYS:HE2	44:1E:10:LEU:HB2	1.86	0.57
1:13:940:G:H2'	1:13:941:A:C8	2.40	0.57
1:13:1590:C:OP2	1:13:1591:A:O2'	2.21	0.57
1:13:1756:C:N4	1:13:1771:G:H1	2.02	0.57
1:13:1866:A:H62	1:13:1926:A:H62	1.51	0.57
1:1G:1269:A:N3	50:72:115:SER:HB2	2.19	0.57
1:1G:1419:A:OP1	52:X4:38:A:O2'	2.21	0.57
1:1G:1757:C:N3	1:1G:1767:G:N1	2.53	0.57
1:1G:1853:C:O2'	24:4A:111:LYS:NZ	2.35	0.57
15:1H:2792:A:O2'	53:1H:3004:8UZ:O5	2.23	0.57
11:C5:90:LEU:HB3	11:C5:91:GLU:CA	2.35	0.57
19:9I:26:LEU:O	34:5E:100:ASN:ND2	2.38	0.57
15:14:2831:G:OP2	45:55:42:LYS:NZ	2.38	0.57
21:68:88:ASN:O	21:68:91:LEU:N	2.31	0.57
39:F5:91:LYS:HA	39:F5:91:LYS:NZ	2.20	0.57
48:1A:91:PRO:HB2	48:1A:93:GLY:H	1.70	0.57
6:2I:46:GLY:HA2	6:2I:50:TYR:O	2.03	0.57
8:2E:8:ILE:HG23	8:2E:16:ARG:HG2	1.86	0.57
1:13:1044:C:O3'	14:3E:122:ARG:HD2	2.04	0.57
4:11:112:GLN:OE1	4:11:115:GLN:NE2	2.38	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:8I:67:LYS:O	7:8I:68:ARG:HB3	2.04	0.57
15:1H:38:A:H2'	15:1H:39:C:C6	2.39	0.57
15:1H:894:G:OP2	15:1H:894:G:H8	1.88	0.57
12:M5:22:VAL:HB	12:M5:53:PRO:HB2	1.85	0.57
23:21:105:THR:HG21	23:21:164:ARG:CZ	2.34	0.57
25:4E:37:ARG:HA	25:4E:114:GLY:H	1.68	0.57
39:J8:91:LYS:C	39:J8:93:GLU:H	2.05	0.57
50:7E:39:LEU:HB3	50:7E:45:ILE:HG12	1.86	0.57
50:7E:87:SER:CB	50:7E:93:VAL:H	2.18	0.57
1:13:805:C:H2'	1:13:806:G:C8	2.39	0.57
1:1G:1936:G:OP1	24:4A:88:ARG:NH1	2.38	0.57
14:3E:107:ARG:HH22	14:3E:194:LEU:HD22	1.68	0.57
15:1H:1095:G:H2'	15:1H:1158:G:H1	1.70	0.57
15:1H:1559:A:OP1	15:1H:1560:A:H5'	2.04	0.57
11:C5:71:LYS:HD3	15:14:354:G:OP2	2.05	0.57
24:4I:105:THR:OG1	24:4I:106:ASN:N	2.35	0.57
42:62:15:ASP:OD1	42:62:44:TYR:OH	2.22	0.57
1:1G:1889:C:H42	1:1G:1900:G:H1	1.53	0.57
1:1G:2092:G:O6	56:1G:2402:HOH:O	2.18	0.57
15:1H:1770:A:O2'	15:1H:1771:U:O5'	2.20	0.57
15:1H:2323:G:N1	15:1H:2326:A:H2	2.00	0.57
15:1H:2582:G:H2'	15:1H:2583:C:C6	2.40	0.57
15:1H:2821:U:N3	15:1H:2904:A:N7	2.53	0.57
15:14:1053:C:H2'	15:14:1054:C:H6	1.70	0.57
15:14:1096:A:H2	15:14:1160:G:H21	1.53	0.57
15:14:1319:C:H5''	15:14:1320:G:H5'	1.87	0.57
22:D5:52:SER:O	22:D5:52:SER:OG	2.20	0.57
34:5E:69:GLU:O	34:5E:72:VAL:HG12	2.05	0.57
30:35:138:LEU:HD12	30:35:144:GLU:HG3	1.87	0.57
3:F8:3:THR:HA	3:F8:6:ASP:HB2	1.86	0.57
46:G5:37:PHE:O	46:G5:41:ILE:HG23	2.05	0.57
5:P8:10:ARG:O	5:P8:14:LYS:HB2	2.03	0.57
8:2E:26:LYS:HG3	8:2E:27:LYS:HZ3	1.69	0.57
52:V1:68:C:H2'	52:V1:69:G:C8	2.40	0.57
1:13:650:U:O4	50:7E:105:ARG:HD3	2.05	0.57
1:13:1779:A:O2'	1:13:1780:A:O4'	2.23	0.57
8:22:14:ILE:HG12	8:22:15:THR:H	1.70	0.57
1:1G:1249:C:C2	14:32:135:LEU:HG	2.40	0.57
1:1G:1570:G:O3'	24:4A:109:THR:OG1	2.19	0.57
1:1G:1862:U:O2'	1:1G:1932:G:O5'	2.23	0.57
10:58:130:HIS:HA	10:58:134:ARG:NH1	2.18	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:Q8:21:LYS:HB3	12:Q8:52:LYS:HD2	1.85	0.57
13:3I:33:ARG:HD3	13:3I:62:SER:HB3	1.86	0.57
15:1H:987:G:H5''	15:1H:988:A:OP2	2.05	0.57
15:14:2238:G:H2'	15:14:2239:G:H5'	1.87	0.57
15:14:2321:C:H3'	15:14:2322:G:H5''	1.87	0.57
22:H8:134:PRO:HG3	22:H8:161:VAL:HG11	1.86	0.57
22:D5:74:VAL:H	38:45:139:GLU:HB3	1.70	0.57
28:I5:25:TYR:OH	40:49:4:ASP:OD2	2.22	0.57
39:J8:8:SER:OG	39:J8:10:LYS:HG3	2.05	0.57
44:1E:12:GLU:HG3	44:1E:44:LEU:HD13	1.87	0.57
50:72:99:GLU:OE2	50:72:100:ILE:N	2.31	0.57
1:13:921:C:C2	7:8I:38:ARG:HG3	2.39	0.57
1:13:1883:A:H4'	1:13:1885:G:C4	2.40	0.57
4:11:142:VAL:HG23	4:11:193:VAL:HA	1.85	0.57
4:19:96:HIS:NE2	4:19:102:LYS:HE2	2.20	0.57
12:Q8:9:GLY:H	12:Q8:12:LYS:HG3	1.69	0.57
12:Q8:18:ALA:O	12:Q8:19:SER:OG	2.23	0.57
13:3I:47:LYS:HA	13:3I:49:ASN:H	1.70	0.57
7:8A:83:ASP:OD1	7:8A:84:LEU:N	2.37	0.57
15:1H:279:G:O6	56:1H:3768:HOH:O	2.17	0.57
15:1H:2094:G:H4'	56:1H:3878:HOH:O	2.05	0.57
15:14:2149:G:H1	15:14:2198:A:H62	1.51	0.57
15:14:2149:G:H1	15:14:2198:A:N6	2.03	0.57
38:88:66:ILE:HG22	38:88:67:ARG:N	2.19	0.57
44:12:80:ILE:HD13	44:12:212:GLN:HG2	1.86	0.57
50:7E:95:VAL:HG12	50:7E:99:GLU:HB2	1.86	0.57
1:13:1235:G:N2	1:13:1260:G:H2'	2.19	0.56
1:13:1318:C:H2'	1:13:1319:G:H5'	1.87	0.56
1:13:1996:G:OP2	9:8E:112:LYS:HD2	2.05	0.56
1:1G:1853:C:N4	24:4A:104:ARG:HD2	2.20	0.56
1:1G:1925:C:OP2	42:62:114:ARG:NH2	2.30	0.56
15:1H:2592:A:H4'	36:N8:3:LYS:HD2	1.87	0.56
15:14:932:G:N1	15:14:942:C:O2	2.38	0.56
15:14:1067:U:OP1	15:14:1083:U:O2'	2.17	0.56
30:78:99:LEU:HA	30:78:102:ARG:HD3	1.87	0.56
32:39:18:ARG:HG2	32:39:19:GLU:H	1.70	0.56
45:98:72:ASP:OD2	45:98:75:LEU:HB2	2.05	0.56
1:13:1152:A:N6	13:3I:92:ASP:HB2	2.20	0.56
1:13:1779:A:H5'	48:1I:41:PRO:HA	1.86	0.56
1:13:1918:G:O2'	9:8E:38:GLN:OE1	2.23	0.56
1:1G:1077:C:H2'	1:1G:1078:U:H6	1.69	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:1G:1756:C:H5'	9:82:16:ARG:HH22	1.69	0.56
4:19:202:LYS:HD2	15:14:1854:U:C2	2.40	0.56
15:1H:1582:C:H3'	15:1H:1583:G:C5'	2.34	0.56
15:1H:2485:G:H5'	38:88:56:ARG:NH2	2.20	0.56
11:C5:75:ILE:HG13	11:C5:80:GLY:HA2	1.87	0.56
15:14:593:U:H5'	15:14:992:A:C2	2.40	0.56
15:14:1391:A:H2	15:14:1651:U:N3	2.02	0.56
15:14:2308:C:H2'	15:14:2309:C:H6	1.71	0.56
21:68:7:TYR:CZ	21:68:44:LYS:HG3	2.40	0.56
23:29:76:ARG:HG2	23:29:195:LEU:HD22	1.86	0.56
1:13:1053:A:H4'	1:13:1054:G:O5'	2.04	0.56
1:13:1757:C:H4'	1:13:1758:A:H5'	1.86	0.56
4:11:239:ARG:HG3	15:1H:2606:C:P	2.45	0.56
8:22:8:ILE:O	8:22:11:ARG:N	2.38	0.56
8:22:106:VAL:HB	8:22:109:PRO:HB3	1.87	0.56
1:1G:835:U:O2	7:8A:63:ARG:NH2	2.37	0.56
2:65:21:THR:HG21	15:14:2393:A:O2'	2.04	0.56
11:G8:82:PRO:HB3	11:G8:99:CYS:HB2	1.86	0.56
4:19:42:GLY:O	15:14:1847:G:O2'	2.22	0.56
15:1H:1607:C:OP2	15:1H:1608:A:O2'	2.17	0.56
15:1H:2484:A:H61	15:1H:2496:G:H1'	1.69	0.56
18:61:29:TYR:O	18:61:32:PRO:HD2	2.05	0.56
19:9I:66:LEU:O	19:9I:70:ILE:HG13	2.05	0.56
15:14:673:A:H8	15:14:2364:G:N2	2.03	0.56
15:14:1092:G:O2'	15:14:1159:A:N1	2.39	0.56
15:14:1273:C:O2'	35:95:85:LYS:N	2.29	0.56
15:14:2335:A:N6	15:14:2348:A:H2'	2.21	0.56
23:21:111:ARG:HD2	23:21:160:TYR:CE2	2.39	0.56
23:29:33:VAL:N	23:29:89:ASP:OD2	2.38	0.56
27:85:92:ARG:HG2	35:95:11:GLN:OE1	2.05	0.56
28:I5:12:ALA:HB1	28:I5:29:PRO:HA	1.85	0.56
32:39:155:LEU:HD23	32:39:186:ILE:HD13	1.86	0.56
39:J8:90:ILE:O	39:J8:94:LEU:HB2	2.06	0.56
40:41:17:PRO:HA	40:41:20:ILE:HG13	1.86	0.56
40:41:165:THR:OG1	40:41:168:GLU:HG3	2.05	0.56
37:BA:89:ARG:HH11	37:BA:104:LEU:HB3	1.70	0.56
42:62:70:LYS:HD3	42:62:96:GLN:HB3	1.88	0.56
43:A5:29:LEU:O	43:A5:33:ARG:HG3	2.06	0.56
46:K8:2:LYS:O	46:K8:6:VAL:HG12	2.05	0.56
44:12:204:ASN:HB2	44:12:210:SER:HB3	1.86	0.56
50:7E:121:ASP:OD1	50:7E:121:ASP:N	2.34	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:2I:19:ALA:HB2	6:2I:32:ILE:HG23	1.87	0.56
1:13:806:G:H2'	1:13:807:G:C8	2.41	0.56
1:13:1078:U:H5''	14:3E:155:LEU:HD21	1.86	0.56
1:1G:720:C:H42	1:1G:734:G:H1	1.53	0.56
1:1G:918:C:OP2	7:8A:41:LYS:NZ	2.35	0.56
1:1G:1923:C:O3'	24:4A:13:LYS:NZ	2.29	0.56
15:1H:1131:U:H3'	15:1H:1132:A:H5''	1.87	0.56
15:1H:1478:G:H2'	15:1H:1479:C:C6	2.40	0.56
15:1H:2346:G:H4'	31:I8:43:THR:H	1.70	0.56
17:L8:11:SER:OG	17:L8:13:ILE:HG12	2.06	0.56
15:14:685:G:N2	15:14:698:C:H42	2.01	0.56
18:69:29:TYR:C	18:69:32:PRO:HD2	2.24	0.56
26:16:13:C:O5'	26:16:14:C:H5	1.89	0.56
27:C8:88:ILE:O	27:C8:90:VAL:N	2.39	0.56
27:C8:102:GLU:OE1	35:D8:13:ARG:NH2	2.38	0.56
48:1A:40:LEU:HG	48:1A:41:PRO:HD2	1.88	0.56
1:13:1639:A:H2'	1:13:1640:A:C8	2.40	0.56
14:3E:85:LYS:HG2	14:3E:86:LYS:H	1.70	0.56
15:1H:94:G:O2'	46:K8:48:HIS:HB3	2.05	0.56
16:B8:74:ARG:HD3	16:B8:76:PHE:CZ	2.41	0.56
11:C5:17:SER:HB3	11:C5:71:LYS:HB3	1.88	0.56
11:C5:18:GLY:HA3	15:14:334:G:H4'	1.86	0.56
19:9I:25:THR:HB	19:9I:42:ARG:HH12	1.70	0.56
15:14:686:C:H42	15:14:697:G:N2	2.04	0.56
15:14:2716:C:H3'	15:14:2717:U:C5'	2.26	0.56
28:I5:13:ARG:HG2	28:I5:22:ILE:HG13	1.88	0.56
40:41:171:ALA:O	40:41:175:LEU:HG	2.05	0.56
46:K8:18:PRO:HA	46:K8:21:LEU:HB2	1.88	0.56
44:12:42:ILE:HD11	44:12:202:PRO:HB2	1.87	0.56
1:13:1227:U:H4'	50:7E:94:TYR:CD2	2.40	0.56
2:A8:28:VAL:HG11	2:A8:98:VAL:HG13	1.88	0.56
12:Q8:4:MET:HB2	12:Q8:59:LYS:HD3	1.88	0.56
12:Q8:13:ARG:O	12:Q8:23:VAL:HG23	2.06	0.56
15:1H:311:C:H2'	15:1H:312:C:C6	2.40	0.56
15:1H:1296:A:OP1	32:31:95:ARG:NH2	2.39	0.56
15:1H:2150:G:H21	15:1H:2198:A:N6	2.03	0.56
13:3A:47:LYS:CG	13:3A:48:PRO:HD3	2.34	0.56
14:32:112:VAL:HG12	14:32:116:GLN:OE1	2.05	0.56
15:14:70:A:H5'	15:14:70:A:C8	2.41	0.56
15:14:140:A:C8	15:14:1457:C:H1'	2.40	0.56
15:14:725:A:H8	15:14:2094:G:N2	1.88	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:14:1806:G:N3	56:14:3602:HOH:O	2.33	0.56
15:14:1862:G:OP2	56:14:3673:HOH:O	2.17	0.56
15:14:2489:C:H5'	15:14:2490:C:OP2	2.05	0.56
16:75:62:THR:HB	16:75:75:ILE:HG12	1.88	0.56
25:4E:43:LEU:H	25:4E:65:ASN:ND2	2.04	0.56
23:29:57:LYS:H	23:29:58:ARG:HB3	1.70	0.56
35:95:43:GLU:C	35:95:45:THR:H	2.09	0.56
39:J8:83:GLU:HG2	39:J8:85:LEU:H	1.70	0.56
46:K8:30:ARG:HG3	3:F8:5:TYR:CE2	2.41	0.56
3:F8:27:THR:HB	3:F8:80:ILE:HB	1.87	0.56
52:W1:19:G:H3'	52:W1:20:U:H5	1.69	0.56
1:13:1243:A:H2'	1:13:1244:C:H6	1.71	0.56
1:13:1837:C:N4	1:13:1838:U:O4	2.38	0.56
1:1G:663:U:H2'	1:1G:664:C:C6	2.41	0.56
1:1G:1256:G:H2'	1:1G:1257:G:C8	2.40	0.56
11:G8:68:HIS:CE1	11:G8:70:SER:HB2	2.40	0.56
4:19:273:ARG:O	4:19:273:ARG:HG2	2.06	0.56
15:1H:1150:C:H2'	15:1H:1151:A:C8	2.41	0.56
15:1H:1314:A:H8	15:1H:1314:A:OP1	1.88	0.56
18:61:117:GLU:N	18:61:117:GLU:OE2	2.37	0.56
13:3A:93:LEU:HB2	13:3A:96:VAL:HG21	1.86	0.56
15:14:283:G:N7	56:14:3711:HOH:O	2.33	0.56
15:14:1044:A:N6	15:14:1209:G:C6	2.74	0.56
15:14:2136:C:N3	15:14:2143:U:O2'	2.33	0.56
15:14:2370:C:O3'	31:E5:24:LYS:HE3	2.05	0.56
26:1J:46:G:H1'	26:1J:49:C:N4	2.21	0.56
35:D8:27:ALA:HB3	35:D8:61:VAL:HG11	1.86	0.56
32:39:5:ALA:HB1	32:39:125:LEU:HD21	1.88	0.56
36:J5:38:ALA:HB3	36:J5:48:GLU:HG3	1.87	0.56
37:BA:49:ALA:HA	37:BA:52:ALA:HB3	1.88	0.56
44:1E:189:ASP:HB2	44:1E:205:ASP:HB3	1.87	0.56
44:1E:222:ILE:O	44:1E:226:ARG:HG2	2.05	0.56
43:A5:1:MET:HG3	43:A5:2:GLU:N	2.21	0.56
46:K8:36:ARG:NH2	3:F8:5:TYR:O	2.38	0.56
1:13:710:G:H4'	1:13:711:U:H5'	1.88	0.56
1:13:1366:A:H2'	1:13:1367:C:H6	1.69	0.56
1:13:2148:G:P	6:2I:120:ARG:HH22	2.28	0.56
2:A8:27:SER:HA	2:A8:88:ASP:HB3	1.88	0.56
1:1G:1095:C:H42	1:1G:1107:G:H1	1.54	0.56
1:1G:1456:U:H5''	1:1G:1457:A:OP2	2.06	0.56
1:1G:1878:A:H2'	1:1G:1879:A:C8	2.41	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:3I:89:ARG:CZ	13:3I:91:LYS:HB2	2.36	0.56
15:1H:1158:G:HO2'	15:1H:1159:A:H8	1.53	0.56
15:1H:1828:U:H2'	15:1H:1829:C:C6	2.40	0.56
11:C5:81:LYS:HB2	11:C5:99:CYS:SG	2.46	0.56
15:14:909:U:C2	15:14:2283:A:C8	2.93	0.56
15:14:2704:U:H4'	15:14:2705:C:H5'	1.88	0.56
15:14:2763:G:O6	15:14:2771:C:H5''	2.05	0.56
20:1B:2:GLY:O	20:1B:4:GLY:N	2.39	0.56
24:4A:97:PRO:HB2	24:4A:101:GLN:HG3	1.88	0.56
26:1J:17:A:H1'	26:1J:112:G:N7	2.20	0.56
38:45:38:GLU:HG3	38:45:127:ILE:HG22	1.88	0.56
47:59:89:ILE:HD13	47:59:89:ILE:H	1.71	0.56
1:13:1996:G:H5''	9:8E:112:LYS:HB3	1.88	0.56
6:2A:100:ALA:O	6:2A:102:GLY:N	2.38	0.56
1:1G:1881:C:H5''	48:1A:45:ARG:HH12	1.71	0.56
11:G8:76:CYS:O	11:G8:78:ALA:N	2.37	0.56
15:1H:977:U:H4'	15:1H:978:G:O5'	2.06	0.56
15:1H:1805:C:H1'	15:1H:1820:A:C8	2.41	0.56
14:32:24:GLU:HG2	14:32:25:ARG:H	1.71	0.56
15:14:1127:C:N4	15:14:1136:A:OP1	2.39	0.56
25:4E:153:LYS:HD2	25:4E:154:GLY:O	2.06	0.56
30:78:81:GLN:OE1	30:78:107:LYS:HB2	2.06	0.56
39:F5:86:SER:N	39:F5:87:PRO:HD2	2.20	0.56
43:A5:33:ARG:NH2	43:A5:66:GLU:OE2	2.38	0.56
47:51:20:ALA:HB3	47:51:23:ARG:HG3	1.87	0.56
47:51:137:ASP:O	47:51:141:VAL:HG12	2.06	0.56
47:59:71:LEU:O	47:59:75:ALA:N	2.39	0.56
50:72:86:ILE:HG21	50:72:133:LEU:HG	1.87	0.56
3:B5:67:GLY:C	3:B5:69:TYR:H	2.09	0.56
1:1G:1188:A:H4'	1:1G:1189:U:H5''	1.87	0.56
1:1G:1775:C:H2'	9:82:16:ARG:HD3	1.88	0.56
4:19:14:ARG:NH2	15:14:1743:U:O2'	2.39	0.56
15:1H:276:C:H2'	15:1H:277:C:H6	1.69	0.56
15:1H:1557:A:H4'	15:1H:1558:C:H1'	1.88	0.56
14:32:162:LEU:HD21	14:32:178:VAL:HB	1.88	0.56
15:14:76:C:H5''	46:G5:10:LEU:HD21	1.87	0.56
16:75:50:ILE:HD11	16:75:102:ILE:HD11	1.87	0.56
22:D5:99:TYR:HD2	22:D5:123:ASP:HB3	1.70	0.56
28:M8:9:LEU:HD12	28:M8:27:THR:H	1.71	0.56
24:4A:81:LEU:HD23	24:4A:86:CYS:SG	2.45	0.56
36:N8:16:ARG:HG3	36:N8:17:ASP:N	2.20	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:88:138:ASP:OD1	38:88:138:ASP:N	2.38	0.56
38:45:37:LEU:HD21	38:45:130:LYS:HB2	1.87	0.56
44:1E:7:VAL:HG11	44:1E:11:LEU:HD12	1.88	0.56
44:1E:87:ARG:NH1	44:1E:233:SER:HB2	2.21	0.56
44:1E:212:GLN:O	44:1E:216:SER:OG	2.23	0.56
51:Y1:36:G:H3'	51:Y1:37:G:C8	2.40	0.56
1:13:770:A:O2'	1:13:771:C:O5'	2.20	0.55
1:13:1612:C:N4	1:13:1843:G:H1	2.02	0.55
9:8E:114:TYR:HD2	48:1I:60:ARG:H	1.53	0.55
1:1G:969:C:H4'	1:1G:970:A:H5''	1.87	0.55
1:1G:2106:A:HO2'	15:14:1972:C:HO2'	1.54	0.55
12:Q8:50:LEU:HA	12:Q8:53:PRO:HD3	1.88	0.55
15:1H:1153:U:H2'	15:1H:1154:G:H8	1.71	0.55
11:C5:48:ALA:HB3	11:C5:59:GLY:O	2.05	0.55
12:M5:32:LEU:HA	12:M5:33:ASN:CB	2.35	0.55
15:14:1494:A:H2'	15:14:1494:A:N3	2.21	0.55
15:14:2136:C:H42	15:14:2172:G:N2	2.04	0.55
35:D8:18:LEU:HD22	35:D8:19:LYS:N	2.22	0.55
32:39:103:LYS:HA	32:39:106:ARG:HG3	1.88	0.55
45:98:12:ARG:HD3	45:98:16:HIS:CG	2.41	0.55
50:7E:13:ILE:O	50:7E:17:THR:HG23	2.06	0.55
46:G5:47:ASN:HD22	46:G5:47:ASN:H	1.51	0.55
52:W1:50:U:O2	52:W1:65:G:N2	2.39	0.55
1:13:739:C:H2'	1:13:740:A:C8	2.42	0.55
1:13:769:G:N3	1:13:835:U:H5''	2.22	0.55
1:13:985:A:O2'	1:13:987:G:N7	2.40	0.55
1:13:1017:G:H5''	49:7I:5:ARG:HD2	1.86	0.55
1:13:1168:A:H2'	1:13:1169:G:C8	2.40	0.55
1:13:1683:A:H2'	8:2E:156:ARG:HD2	1.88	0.55
1:1G:957:G:OP2	1:1G:992:G:O2'	2.21	0.55
1:1G:1806:A:OP2	9:82:93:ARG:NH2	2.39	0.55
15:1H:1390:U:O4	3:F8:16:LYS:NZ	2.19	0.55
15:1H:2293:A:OP1	38:88:10:ARG:NH2	2.40	0.55
16:B8:120:ARG:HA	16:B8:123:GLN:HG2	1.88	0.55
19:9I:23:LYS:HE3	34:5E:99:ALA:HB1	1.86	0.55
14:32:4:TYR:HE2	14:32:11:LEU:HD21	1.71	0.55
15:14:556:A:H4'	15:14:557:G:H5'	1.88	0.55
15:14:1061:C:H2'	15:14:1062:U:C6	2.41	0.55
22:H8:63:ASP:OD2	22:H8:65:GLN:NE2	2.36	0.55
47:59:4:ILE:HD12	47:59:7:LEU:HD21	1.89	0.55
47:59:6:ARG:HH11	47:59:6:ARG:N	2.04	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:2E:52:LEU:HD23	8:2E:52:LEU:H	1.69	0.55
1:13:1314:G:O2'	1:13:1315:U:H5'	2.07	0.55
4:11:70:TRP:O	4:11:73:VAL:HG23	2.06	0.55
7:8I:67:LYS:HA	7:8I:70:ARG:NH1	2.21	0.55
1:1G:1513:G:O2'	1:1G:1529:G:O6	2.15	0.55
1:1G:1723:U:OP1	1:1G:1736:G:N2	2.38	0.55
1:1G:1970:G:H2'	1:1G:1971:C:C6	2.41	0.55
10:58:47:ALA:HB2	10:58:112:LEU:HD11	1.88	0.55
15:1H:2302:A:H2	15:1H:2361:A:H2	1.55	0.55
15:14:67:G:H2'	15:14:68:C:C6	2.41	0.55
15:14:312:C:H2'	15:14:313:C:C6	2.42	0.55
15:14:628:A:C8	15:14:629:G:H1'	2.34	0.55
21:68:13:ASN:ND2	21:68:97:ARG:HB2	2.21	0.55
32:39:93:LYS:HD2	32:39:94:PRO:HD3	1.89	0.55
44:12:7:VAL:O	44:12:217:ARG:NH2	2.40	0.55
1:13:1016:U:O3'	49:7I:6:LEU:HB2	2.06	0.55
1:13:1802:G:C6	1:13:1803:A:H2	2.25	0.55
8:22:72:LYS:HZ3	8:22:79:ARG:HH22	1.54	0.55
1:1G:733:C:H2'	1:1G:734:G:H8	1.70	0.55
1:1G:769:G:N3	1:1G:835:U:H5'	2.21	0.55
1:1G:1149:A:N1	1:1G:1165:C:H1'	2.21	0.55
1:1G:1543:U:H2'	1:1G:1544:U:H6	1.72	0.55
1:1G:1782:G:H2'	1:1G:1783:G:C8	2.38	0.55
15:1H:2705:C:OP1	45:98:17:ARG:NH1	2.36	0.55
15:1H:2888:C:O2'	16:B8:5:ALA:HB3	2.06	0.55
11:C5:76:CYS:SG	11:C5:97:ARG:HG3	2.47	0.55
15:14:913:G:C6	15:14:914:C:N4	2.74	0.55
15:14:1478:G:H2'	15:14:1479:C:C6	2.41	0.55
15:14:2319:G:H22	15:14:2327:U:H3	1.55	0.55
24:4I:10:PRO:HB2	24:4I:18:ALA:HB1	1.89	0.55
21:25:18:LYS:HD2	21:25:45:GLU:OE1	2.07	0.55
28:M8:36:CYS:HA	40:41:112:PRO:HB2	1.88	0.55
37:BI:61:SER:O	37:BI:65:LYS:HB2	2.07	0.55
35:95:7:THR:HG23	35:95:22:VAL:HG21	1.88	0.55
39:J8:91:LYS:O	39:J8:93:GLU:N	2.36	0.55
37:BA:83:ARG:HA	37:BA:86:ARG:NH1	2.21	0.55
45:98:29:LEU:HB3	45:98:75:LEU:HD21	1.88	0.55
47:59:152:ARG:HD2	47:59:153:LYS:HG3	1.89	0.55
8:2E:140:ARG:HA	8:2E:143:GLU:HB2	1.88	0.55
6:2A:34:ASP:HB2	6:2A:35:PRO:HD2	1.89	0.55
9:8E:77:ILE:O	9:8E:81:ILE:HG12	2.06	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:1G:1253:C:H2'	1:1G:1254:G:C8	2.42	0.55
10:58:77:GLY:HA3	23:21:152:LYS:HD3	1.89	0.55
13:3I:113:ARG:HH21	13:3I:116:SER:HB2	1.72	0.55
15:1H:1691:A:H2'	15:1H:1692:G:O4'	2.07	0.55
14:32:31:CYS:C	14:32:33:MET:H	2.08	0.55
15:14:1312:U:P	56:14:3634:HOH:O	2.64	0.55
15:14:2819:G:H2'	15:14:2820:G:C8	2.42	0.55
22:H8:52:SER:O	22:H8:53:ILE:HG12	2.06	0.55
23:21:51:PHE:CE2	23:21:52:LEU:HG	2.41	0.55
25:4E:69:VAL:O	25:4E:71:LEU:N	2.39	0.55
21:25:97:ARG:CZ	21:25:99:PHE:HE1	2.18	0.55
32:39:129:PHE:CD2	32:39:163:VAL:HG21	2.42	0.55
44:12:19:HIS:CE1	44:12:206:ASP:HB2	2.42	0.55
45:55:38:VAL:HG12	45:55:42:LYS:HD2	1.86	0.55
8:22:16:ARG:HH12	8:22:181:ASN:ND2	2.04	0.55
8:22:70:VAL:HG12	8:22:72:LYS:N	2.22	0.55
1:1G:724:G:H8	1:1G:724:G:O5'	1.89	0.55
1:1G:987:G:OP1	16:75:43:GLN:NE2	2.40	0.55
1:1G:1256:G:H2'	1:1G:1257:G:H8	1.72	0.55
10:58:97:ARG:HA	10:58:100:GLU:HB2	1.89	0.55
2:65:7:TYR:CE1	2:65:11:LYS:HE2	2.42	0.55
14:3E:89:THR:O	14:3E:92:VAL:N	2.39	0.55
15:1H:496:G:N7	5:P8:39:ARG:NH2	2.51	0.55
15:1H:643:G:OP1	32:31:40:GLN:NE2	2.39	0.55
15:1H:2302:A:H2	15:1H:2361:A:C2	2.24	0.55
15:1H:2323:G:H2	15:1H:2326:A:H2	1.53	0.55
18:61:92:VAL:HG13	18:61:120:ILE:HG23	1.89	0.55
15:14:249:G:O2'	15:14:648:A:O2'	2.13	0.55
15:14:955:U:O2'	38:45:101:ARG:NH2	2.39	0.55
15:14:2724:G:O2'	56:14:3674:HOH:O	2.18	0.55
23:21:39:PRO:HA	23:21:44:TYR:N	2.22	0.55
6:2I:48:ILE:HG13	6:2I:63:LEU:HB3	1.88	0.55
1:13:681:G:O2'	13:3I:118:SER:O	2.18	0.55
1:13:1218:C:OP1	50:7E:32:LYS:NZ	2.40	0.55
1:13:1785:A:H61	1:13:1805:G:H21	1.55	0.55
1:13:1802:G:C6	1:13:1803:A:C2	2.94	0.55
10:58:35:ARG:HD3	10:58:37:LYS:HD2	1.89	0.55
2:65:56:LEU:HB3	2:65:58:LEU:CD2	2.36	0.55
4:19:237:GLU:HG2	4:19:238:GLY:H	1.72	0.55
15:1H:139:A:H8	15:1H:1457:C:HO2'	1.53	0.55
15:1H:2842:C:C2'	15:1H:2843:G:H5''	2.33	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:M5:40:GLU:O	12:M5:43:GLN:N	2.39	0.55
12:M5:61:LEU:HD21	12:M5:62:LEU:HD22	1.89	0.55
15:14:299:G:H2'	15:14:300:G:H4'	1.88	0.55
15:14:990:U:P	30:35:36:LYS:HG3	2.46	0.55
15:14:1067:U:HO2'	15:14:1069:A:H2	1.55	0.55
15:14:1499:A:H5'	15:14:1500:G:OP2	2.07	0.55
22:H8:61:LEU:O	22:H8:64:GLY:HA2	2.06	0.55
17:H5:7:LYS:HB2	17:H5:34:GLU:HG2	1.89	0.55
23:21:32:PRO:HD2	23:21:50:GLY:O	2.07	0.55
25:4E:41:VAL:HG13	25:4E:113:ALA:HB2	1.88	0.55
32:31:135:LYS:HB3	32:31:138:GLU:HG3	1.87	0.55
32:31:136:THR:HG22	32:31:166:ALA:O	2.06	0.55
31:E5:32:ARG:O	31:E5:34:GLY:N	2.34	0.55
44:1E:160:ASP:O	44:1E:183:PRO:HD2	2.06	0.55
44:12:77:ALA:HB2	44:12:211:ILE:HD13	1.88	0.55
46:G5:43:GLN:HG3	46:G5:46:GLN:HE22	1.72	0.55
52:X1:2:C:H2'	52:X1:3:C:H6	1.71	0.55
3:B5:8:ILE:O	46:G5:36:ARG:NH2	2.40	0.55
1:1G:950:G:H1'	1:1G:1237:A:C2	2.42	0.55
15:1H:2165:C:H42	15:1H:2176:G:H1	1.54	0.55
15:1H:2484:A:N3	15:1H:2484:A:H5'	2.22	0.55
15:14:12:U:H2'	15:14:12:U:O2	2.05	0.55
15:14:1534:G:H2'	15:14:1535:A:H8	1.70	0.55
21:25:88:ASN:HD21	21:25:92:GLU:HB2	1.70	0.55
28:M8:5:ILE:HD13	40:41:67:LYS:HD3	1.88	0.55
34:5E:44:GLY:HA2	34:5E:59:TYR:CZ	2.41	0.55
37:BI:53:LEU:HA	37:BI:56:MET:HB3	1.89	0.55
38:88:5:ARG:H	38:88:5:ARG:HD3	1.72	0.55
45:98:104:ARG:NH1	45:98:107:ASP:OD2	2.39	0.55
47:51:10:PRO:HD2	47:51:50:VAL:O	2.07	0.55
1:13:862:C:H2'	1:13:863:U:H6	1.71	0.55
1:13:1254:G:H2'	1:13:1255:U:H6	1.71	0.55
1:13:1421:A:H4'	1:13:1422:U:O5'	2.07	0.55
1:13:1627:G:H1	1:13:1665:C:H42	1.54	0.55
3:B5:63:LYS:H	3:B5:63:LYS:CE	2.19	0.55
1:1G:1097:C:H2'	1:1G:1098:C:C6	2.41	0.55
1:1G:1785:A:H8	1:1G:1786:C:C4	2.25	0.55
1:1G:1932:G:O2'	1:1G:1933:A:H8	1.89	0.55
11:G8:48:ALA:HA	11:G8:60:PHE:CD2	2.42	0.55
15:1H:1625:C:H2'	15:1H:1626:U:C6	2.41	0.55
14:32:24:GLU:N	14:32:24:GLU:OE2	2.40	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:69:102:SER:OG	18:69:103:ARG:N	2.40	0.55
25:42:70:PRO:HB3	25:42:144:THR:HG22	1.89	0.55
26:1J:92:A:H5'	26:1J:93:C:OP2	2.07	0.55
29:AA:27:GLU:HG2	29:AA:47:HIS:NE2	2.21	0.55
38:88:34:LEU:HD23	38:88:104:PHE:HD2	1.72	0.55
38:88:66:ILE:O	38:88:104:PHE:N	2.40	0.55
49:7A:23:ASP:OD1	49:7A:25:ARG:HG3	2.07	0.55
52:V4:72:C:H2'	52:V4:73:A:H5''	1.88	0.55
1:13:1945:A:H5''	29:AI:10:PHE:CD2	2.42	0.55
1:13:2076:U:O2'	1:13:2077:A:C8	2.60	0.55
7:8I:48:GLU:O	7:8I:50:LYS:HG2	2.07	0.55
1:1G:1052:A:C5	1:1G:1054:G:H1'	2.42	0.55
1:1G:1597:A:P	33:5A:41:ARG:HH12	2.30	0.55
15:1H:1569:U:H2'	15:1H:1570:G:O4'	2.07	0.55
15:1H:2224:A:O3'	39:J8:48:LYS:HD3	2.07	0.55
15:1H:2831:G:OP2	45:98:42:LYS:NZ	2.40	0.55
12:M5:51:ALA:N	12:M5:53:PRO:HD3	2.21	0.55
14:32:108:LEU:HD23	14:32:110:PHE:HE1	1.71	0.55
15:14:1520:G:N2	15:14:1571:G:OP2	2.36	0.55
15:14:1719:A:O2'	15:14:2564:G:OP1	2.24	0.55
15:14:1763:U:O2'	15:14:1764:G:H5'	2.07	0.55
15:14:2105:G:O2'	15:14:2106:C:H5'	2.07	0.55
15:14:2277:U:OP1	31:E5:19:LYS:HE3	2.06	0.55
15:14:2568:G:H5''	15:14:2569:U:OP2	2.06	0.55
15:14:2644:A:N3	15:14:2644:A:H2'	2.22	0.55
15:14:2723:G:H5'	45:55:68:ARG:HG2	1.89	0.55
23:21:78:LEU:HG	23:21:79:ARG:HG2	1.88	0.55
24:4I:7:VAL:H	40:41:115:ARG:NH1	2.05	0.55
19:9A:32:ARG:HA	19:9A:69:THR:HG21	1.88	0.55
26:16:82:U:H2'	26:16:83:G:H21	1.72	0.55
34:5E:3:ARG:HB3	34:5E:93:SER:HB2	1.87	0.55
47:59:86:GLU:HB2	47:59:132:ARG:HA	1.87	0.55
1:13:2163:U:H2'	1:13:2164:U:O4'	2.06	0.54
1:1G:843:G:H1'	37:BA:104:LEU:O	2.06	0.54
1:1G:1099:G:N2	1:1G:1102:G:N7	2.55	0.54
12:Q8:9:GLY:O	12:Q8:13:ARG:HG2	2.07	0.54
15:1H:2787:C:H2'	15:1H:2788:C:H6	1.72	0.54
15:14:69:G:H5''	15:14:110:U:O2	2.07	0.54
15:14:1220:G:O2'	15:14:1221:G:N3	2.37	0.54
16:75:51:ARG:HB3	16:75:62:THR:HG23	1.88	0.54
27:C8:112:ARG:NH2	35:D8:47:VAL:HG13	2.22	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:D5:42:VAL:O	22:D5:46:LYS:HG2	2.08	0.54
32:39:7:TYR:CE2	32:39:10:PRO:HG3	2.42	0.54
40:41:118:ARG:HB2	40:41:181:ARG:NH1	2.21	0.54
38:45:21:THR:HG21	38:45:101:ARG:HD2	1.88	0.54
43:E8:57:ASN:O	43:E8:61:ASN:HB2	2.06	0.54
45:55:97:VAL:HB	45:55:114:VAL:HG22	1.90	0.54
6:2I:73:MET:SD	6:2I:102:GLY:HA3	2.48	0.54
52:V1:33:U:H3'	52:V1:34:G:H5''	1.88	0.54
1:13:996:C:H5'	1:13:1030:A:OP2	2.07	0.54
4:11:206:LEU:O	4:11:211:ARG:HD3	2.07	0.54
8:22:11:ARG:NH2	8:22:177:THR:O	2.37	0.54
1:1G:1700:G:C5	1:1G:1701:U:C4	2.96	0.54
1:1G:2050:G:H5''	21:25:48:PRO:HB3	1.89	0.54
1:1G:2156:C:N4	51:Y4:39:U:H3	2.05	0.54
4:19:267:SER:O	4:19:268:ARG:HG2	2.07	0.54
15:1H:689:G:N7	15:1H:695:G:N2	2.49	0.54
15:1H:2083:A:H5''	56:1H:3754:HOH:O	2.07	0.54
15:1H:2487:G:H22	15:1H:2492:C:H5'	1.72	0.54
18:61:98:ALA:HB2	18:61:111:PRO:HB3	1.87	0.54
15:14:4:C:N4	15:14:2911:G:H22	2.05	0.54
15:14:971:C:H2'	15:14:972:C:C6	2.42	0.54
15:14:1053:C:H2'	15:14:1054:C:C6	2.42	0.54
15:14:1252:A:C2	15:14:1290:A:N1	2.75	0.54
15:14:1437:G:H2'	15:14:1438:G:C8	2.42	0.54
15:14:2093:U:N3	15:14:2445:A:C2	2.67	0.54
15:14:2172:G:H2'	15:14:2173:G:H4'	1.89	0.54
27:C8:104:GLN:OE1	27:C8:105:VAL:HG23	2.07	0.54
32:31:167:ALA:HB1	32:31:173:VAL:HG11	1.89	0.54
46:K8:59:ARG:O	46:K8:62:THR:HG23	2.06	0.54
52:X1:64:A:H8	52:X1:64:A:OP2	1.90	0.54
52:V1:8:U:H2'	52:V1:13:C:H41	1.72	0.54
1:13:1696:G:N7	1:13:1722:G:H2'	2.22	0.54
1:1G:950:G:O2'	1:1G:1236:A:N1	2.40	0.54
1:1G:1746:C:OP1	9:82:104:ARG:NH1	2.39	0.54
4:19:208:LYS:HD2	15:14:778:G:C8	2.42	0.54
10:15:28:THR:HG21	15:14:1060:U:C5	2.42	0.54
17:H5:18:ASP:OD1	17:H5:18:ASP:N	2.39	0.54
18:69:90:GLY:O	18:69:121:LYS:HD2	2.07	0.54
32:39:110:LEU:HD21	32:39:181:LEU:HD22	1.89	0.54
40:41:135:LEU:O	40:41:154:GLY:HA3	2.07	0.54
47:51:9:ILE:CG2	47:51:49:VAL:HB	2.33	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:13:1756:C:H5''	9:8E:16:ARG:HH22	1.71	0.54
4:11:101:GLU:OE1	4:11:103:ARG:HD3	2.07	0.54
1:1G:819:A:H2'	1:1G:820:U:C6	2.42	0.54
1:1G:1954:C:H2'	1:1G:1955:C:C6	2.42	0.54
12:Q8:10:ALA:HA	30:78:59:LEU:HD11	1.89	0.54
15:1H:1479:C:H2'	15:1H:1480:U:C6	2.43	0.54
15:1H:1559:A:O2'	15:1H:1561:G:N7	2.39	0.54
15:1H:2232:A:H1'	15:1H:2234:G:C5	2.42	0.54
15:1H:2318:G:O2'	40:41:132:ASN:ND2	2.31	0.54
15:1H:2803:C:H1'	23:21:62:PRO:HG3	1.89	0.54
11:C5:47:LYS:HG2	11:C5:60:PHE:CE2	2.43	0.54
15:14:355:A:H2	15:14:1258:A:HO2'	1.54	0.54
15:14:633:A:H2'	15:14:634:A:C8	2.42	0.54
15:14:1376:C:O3'	45:55:105:ARG:NH2	2.40	0.54
15:14:1770:A:H2'	15:14:1772:G:N2	2.22	0.54
15:14:2079:A:H5''	15:14:2080:C:O5'	2.07	0.54
15:14:2369:G:O2'	31:E5:36:ILE:HG22	2.07	0.54
24:4I:3:ARG:HG2	24:4I:9:ILE:HG12	1.88	0.54
21:25:2:ILE:HD12	21:25:6:THR:HG21	1.89	0.54
40:41:55:LYS:HZ1	40:41:148:MET:HB2	1.73	0.54
40:41:129:GLY:O	40:41:161:THR:HG22	2.07	0.54
43:E8:13:SER:HB3	43:E8:16:LYS:HD2	1.89	0.54
43:E8:36:LEU:HD11	43:E8:47:VAL:HG12	1.88	0.54
39:F5:92:LYS:O	39:F5:94:LEU:N	2.40	0.54
43:A5:92:ARG:NH1	43:A5:93:ALA:O	2.39	0.54
47:51:54:ARG:HE	47:51:62:LYS:HG3	1.71	0.54
44:12:16:HIS:HD2	44:12:210:SER:HA	1.71	0.54
44:12:92:TYR:HE2	44:12:94:ASN:HB2	1.72	0.54
50:7E:87:SER:HB2	50:7E:93:VAL:H	1.71	0.54
47:59:82:GLY:HA3	47:59:135:GLY:O	2.08	0.54
2:A8:42:ASP:C	2:A8:44:LYS:H	2.10	0.54
1:1G:1079:G:H4'	14:32:123:HIS:ND1	2.23	0.54
14:3E:108:LEU:HB3	14:3E:110:PHE:CD1	2.42	0.54
9:82:42:ARG:HA	42:62:16:LEU:HD12	1.89	0.54
15:1H:2078:G:H5'	23:21:144:ARG:O	2.08	0.54
15:14:846:C:P	32:39:62:ARG:HG3	2.48	0.54
15:14:1075:A:C2	15:14:2503:A:H5'	2.42	0.54
15:14:1707:C:H2'	15:14:1708:C:C6	2.42	0.54
15:14:2335:A:H1'	15:14:2336:G:C6	2.42	0.54
22:H8:31:ARG:NH1	22:H8:94:GLU:OE2	2.40	0.54
26:1J:118:G:H5''	26:1J:118:G:H8	1.73	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:31:198:ALA:O	32:31:201:VAL:N	2.40	0.54
7:8I:76:LEU:HD12	7:8I:77:VAL:H	1.72	0.54
1:1G:1253:C:H2'	1:1G:1254:G:H8	1.72	0.54
1:1G:1621:G:H22	1:1G:1671:C:H42	1.56	0.54
2:65:67:ARG:O	2:65:71:ARG:HG2	2.07	0.54
15:1H:632:U:OP1	32:31:102:PRO:HA	2.07	0.54
15:1H:1892:G:H8	15:1H:1892:G:OP2	1.90	0.54
11:C5:82:PRO:HB3	11:C5:99:CYS:HB2	1.88	0.54
14:32:148:VAL:HG12	14:32:152:SER:HB2	1.89	0.54
15:14:315:G:H2'	15:14:316:C:O4'	2.08	0.54
15:14:1236:U:O2'	15:14:1237:A:H5'	2.08	0.54
15:14:1315:G:O5'	43:A5:15:ARG:NH2	2.41	0.54
15:14:1421:U:H2'	15:14:1422:A:O4'	2.07	0.54
15:14:1545:A:H8	15:14:1627:C:O2'	1.90	0.54
15:14:2594:C:O2'	23:29:134:ILE:HD11	2.08	0.54
23:21:59:VAL:HG13	23:21:60:ASN:N	2.22	0.54
31:I8:11:ARG:O	31:I8:14:ARG:NH2	2.40	0.54
32:39:80:ALA:O	32:39:83:PHE:HB2	2.07	0.54
48:1I:40:LEU:HB2	48:1I:69:ASN:HB2	1.89	0.54
1:13:2148:G:OP1	6:2I:120:ARG:NH2	2.41	0.54
8:22:7:PRO:O	8:22:11:ARG:NH1	2.41	0.54
9:8E:79:LEU:HD13	9:8E:83:ARG:HD2	1.88	0.54
10:58:133:GLN:C	10:58:134:ARG:HE	2.11	0.54
9:82:20:ARG:O	9:82:60:ASP:HB2	2.07	0.54
15:1H:271:C:N4	15:1H:273:U:O4'	2.40	0.54
15:1H:666:U:O4	53:1H:3005:8UZ:N1	2.40	0.54
15:1H:1069:A:C8	15:1H:1069:A:H3'	2.43	0.54
15:14:232:G:O2'	15:14:244:G:O6	2.18	0.54
15:14:2662:U:H2'	15:14:2663:C:C6	2.42	0.54
16:75:68:TYR:CE2	21:25:119:PRO:HB2	2.43	0.54
25:4E:76:ILE:HG13	25:4E:93:PRO:HB3	1.89	0.54
26:16:17:A:H1'	26:16:112:G:N9	2.23	0.54
37:BA:51:GLU:HG2	37:BA:54:LYS:NZ	2.22	0.54
38:45:32:TYR:HE2	38:45:133:ARG:HG2	1.72	0.54
49:7I:25:ARG:HG3	49:7I:25:ARG:NH1	2.22	0.54
44:12:210:SER:O	44:12:214:ILE:HG12	2.08	0.54
8:2E:142:MET:SD	8:2E:148:GLY:HA2	2.47	0.54
52:V4:8:U:H4'	52:V4:9:A:OP1	2.08	0.54
1:13:1624:A:H2'	1:13:1625:G:C8	2.43	0.54
8:22:32:LEU:O	8:22:36:ASP:HB2	2.07	0.54
1:1G:1165:C:OP2	56:1G:2403:HOH:O	2.19	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:1G:2075:C:H3'	1:1G:2076:U:H4'	1.89	0.54
12:Q8:35:GLN:C	12:Q8:37:SER:H	2.11	0.54
15:1H:2727:U:H1'	15:1H:2728:A:C8	2.42	0.54
11:C5:39:VAL:O	11:C5:40:GLU:HB2	2.07	0.54
15:14:139:A:H8	15:14:1457:C:HO2'	1.55	0.54
15:14:2262:A:N6	56:14:3734:HOH:O	2.40	0.54
15:14:2567:U:H2'	15:14:2569:U:H5''	1.89	0.54
15:14:2695:C:OP2	23:29:111:ARG:NH2	2.40	0.54
23:29:117:MET:HA	23:29:122:PHE:N	2.23	0.54
23:29:203:LYS:O	23:29:205:ALA:N	2.41	0.54
28:I5:22:ILE:HD13	28:I5:22:ILE:H	1.73	0.54
34:52:24:GLU:OE1	34:52:28:ARG:NH1	2.41	0.54
41:6I:7:GLU:O	41:6I:11:VAL:HG23	2.07	0.54
45:98:13:HIS:CE1	45:98:15:SER:HB2	2.43	0.54
48:1I:3:LYS:N	48:1I:75:ILE:O	2.41	0.54
1:13:921:C:N3	7:8I:39:SER:N	2.50	0.54
1:13:1753:U:H6	1:13:1753:U:H5''	1.73	0.54
1:13:2120:G:C2'	1:13:2121:U:H5'	2.36	0.54
4:11:70:TRP:CD1	4:11:70:TRP:C	2.82	0.54
8:22:131:ARG:O	8:22:135:LYS:HG3	2.07	0.54
1:1G:793:C:H2'	1:1G:794:C:H6	1.73	0.54
1:1G:1755:G:H2'	1:1G:1775:C:H42	1.73	0.54
15:1H:26:G:C6	15:1H:27:G:N1	2.76	0.54
15:1H:417:G:H22	30:78:72:PRO:CD	2.20	0.54
15:1H:992:A:N3	56:1H:3816:HOH:O	2.34	0.54
15:1H:1408:A:C2	15:1H:1421:U:N3	2.74	0.54
15:1H:1639:U:H2'	15:1H:1640:G:C8	2.43	0.54
10:15:35:ARG:HB3	10:15:42:TRP:CZ3	2.42	0.54
15:14:864:C:H2'	15:14:865:C:H6	1.73	0.54
15:14:1306:C:H4'	32:39:83:PHE:CD1	2.42	0.54
15:14:2370:C:H5''	15:14:2371:C:OP2	2.08	0.54
15:14:2522:C:H1'	52:W4:76:A:C8	2.42	0.54
21:68:68:GLU:CD	21:68:68:GLU:H	2.10	0.54
16:75:5:ALA:O	16:75:9:LEU:N	2.38	0.54
16:75:77:PRO:HB3	23:29:13:ARG:HH21	1.73	0.54
23:21:143:ASN:HB2	23:21:147:PRO:HD2	1.90	0.54
25:4E:152:ARG:HB3	50:7E:43:GLY:O	2.08	0.54
22:D5:7:ALA:O	22:D5:8:TYR:CG	2.61	0.54
24:4A:37:THR:O	24:4A:55:ARG:NH2	2.29	0.54
44:1E:69:LEU:HD12	44:1E:70:PHE:H	1.73	0.54
3:F8:1:MET:HG2	3:F8:2:LYS:H	1.73	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:13:703:G:H2'	1:13:704:C:C6	2.43	0.54
1:13:796:G:H1	1:13:805:C:N4	2.06	0.54
1:13:1261:A:H8	1:13:1262:G:C8	2.26	0.54
2:A8:15:ARG:HD2	2:A8:88:ASP:OD2	2.08	0.54
7:8I:32:TYR:HB3	13:3I:7:ILE:HD11	1.90	0.54
9:8E:26:VAL:HB	9:8E:33:PHE:HB2	1.89	0.54
1:1G:1745:G:O3'	9:82:104:ARG:HD2	2.07	0.54
1:1G:1896:A:H5''	1:1G:1897:C:OP2	2.08	0.54
10:15:3:THR:OG1	15:14:1043:C:O2	2.22	0.54
11:C5:60:PHE:HE1	15:14:511:A:C4	2.26	0.54
15:14:2708:A:H2'	15:14:2709:G:C8	2.42	0.54
21:25:63:VAL:HG23	21:25:64:ARG:HG3	1.88	0.54
27:85:112:ARG:HD2	35:95:47:VAL:HG11	1.88	0.54
38:88:25:ASP:H	38:88:102:VAL:HG22	1.73	0.54
40:49:8:LYS:O	40:49:11:TYR:HB3	2.08	0.54
44:12:134:GLU:O	44:12:138:LEU:HG	2.08	0.54
1:13:1275:U:H2'	1:13:1276:C:C6	2.43	0.53
1:13:1375:A:H2'	1:13:1376:C:H6	1.73	0.53
1:13:1495:A:C2	1:13:1497:G:C6	2.97	0.53
1:13:1705:G:N2	1:13:1708:A:OP2	2.38	0.53
9:8E:10:ARG:NE	9:8E:105:ASP:OD2	2.31	0.53
1:1G:1281:U:O2'	1:1G:1282:A:N3	2.37	0.53
1:1G:1579:U:C2	1:1G:1852:A:C2	2.96	0.53
1:1G:1854:A:OP2	24:4A:111:LYS:HD3	2.08	0.53
15:1H:271:C:C4	15:1H:273:U:H5''	2.43	0.53
15:1H:1924:G:H22	15:1H:1927:C:H41	1.55	0.53
15:1H:2514:C:N3	56:1H:3815:HOH:O	2.34	0.53
19:9I:26:LEU:HB3	19:9I:42:ARG:NH2	2.18	0.53
15:14:161:G:H2'	15:14:162:C:C6	2.43	0.53
15:14:330:U:H2'	15:14:331:U:C6	2.42	0.53
15:14:822:U:OP1	56:14:3677:HOH:O	2.19	0.53
15:14:2828:C:H5'	36:J5:29:THR:HG21	1.89	0.53
22:D5:29:TYR:HA	22:D5:33:LEU:O	2.09	0.53
28:M8:46:GLN:HB2	28:M8:48:ARG:HG2	1.89	0.53
30:78:98:GLU:O	30:78:101:VAL:HG22	2.08	0.53
33:5I:24:CYS:HB2	33:5I:40:CYS:HB3	1.89	0.53
42:6E:6:ARG:HB3	42:6E:6:ARG:NH1	2.23	0.53
38:45:69:PHE:CD1	38:45:70:PRO:HD2	2.43	0.53
44:1E:237:ALA:O	44:1E:239:VAL:HG23	2.08	0.53
52:V1:36:A:O2'	52:V1:37:A:OP1	2.22	0.53
52:V1:57:G:H8	52:V1:57:G:O5'	1.91	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:13:1815:A:N6	56:13:2509:HOH:O	2.41	0.53
8:22:18:TRP:H	8:22:18:TRP:HE3	1.56	0.53
1:1G:728:U:O2'	1:1G:729:A:OP1	2.22	0.53
1:1G:788:G:H2'	1:1G:789:A:H8	1.72	0.53
1:1G:833:C:H2'	1:1G:834:U:O4'	2.08	0.53
1:1G:1031:C:H2'	1:1G:1032:G:C8	2.43	0.53
1:1G:1890:C:H5'	1:1G:1891:C:OP2	2.08	0.53
10:58:6:PRO:HG3	10:58:41:ASP:HB2	1.90	0.53
2:65:10:ARG:O	2:65:14:VAL:HG23	2.07	0.53
13:3I:90:VAL:O	13:3I:91:LYS:HB3	2.07	0.53
15:1H:1003:G:OP2	38:88:14:ARG:NH2	2.41	0.53
15:1H:1892:G:H2'	15:1H:1908:G:H22	1.74	0.53
15:1H:2175:U:H2'	15:1H:2176:G:C8	2.43	0.53
10:15:25:ARG:NH1	15:14:1060:U:O2	2.41	0.53
15:14:564:C:H5''	15:14:564:C:H6	1.72	0.53
15:14:1088:C:H2'	15:14:1089:C:C6	2.43	0.53
15:14:2717:U:O2	15:14:2717:U:H2'	2.08	0.53
15:14:2836:A:OP1	23:29:113:PHE:HB2	2.08	0.53
16:75:8:LYS:HB2	16:75:8:LYS:HZ2	1.73	0.53
22:D5:45:ASP:O	22:D5:49:ARG:HG2	2.07	0.53
23:29:51:PHE:O	23:29:52:LEU:HB2	2.08	0.53
28:I5:20:ASN:ND2	28:I5:36:CYS:HB2	2.24	0.53
31:E5:36:ILE:HD11	31:E5:39:ARG:HG2	1.89	0.53
35:95:71:LEU:O	35:95:72:VAL:HG12	2.07	0.53
39:J8:23:LYS:HG2	39:J8:29:GLY:HA3	1.91	0.53
39:F5:14:VAL:HG11	39:F5:39:LYS:HD3	1.91	0.53
52:W1:41:C:H5'	52:W1:42:C:OP2	2.08	0.53
52:X4:44:G:H3'	52:X4:45:U:C6	2.43	0.53
52:V4:9:A:H5''	52:V4:10:G:OP2	2.09	0.53
52:V4:51:U:H2'	52:V4:52:G:C8	2.43	0.53
1:1G:1569:A:H2'	1:1G:1570:G:C8	2.42	0.53
1:1G:1702:G:O2'	1:1G:1729:A:N1	2.30	0.53
12:Q8:21:LYS:HZ1	12:Q8:55:ALA:HB1	1.74	0.53
15:1H:845:C:H2'	15:1H:846:C:C6	2.43	0.53
15:1H:958:A:C5	38:88:13:GLN:HG3	2.44	0.53
15:1H:1587:G:H2'	15:1H:1588:G:C8	2.43	0.53
15:1H:1600:C:H2'	15:1H:1601:C:H6	1.74	0.53
15:1H:1642:G:H2'	15:1H:1643:G:C8	2.43	0.53
15:1H:2287:U:H5''	15:1H:2288:A:OP1	2.08	0.53
15:1H:2421:U:N3	30:78:73:GLY:O	2.30	0.53
15:14:469:U:H2'	15:14:470:G:C8	2.44	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:14:2342:A:H2'	15:14:2343:A:H8	1.73	0.53
24:4I:37:THR:HG23	24:4I:59:TYR:CD2	2.41	0.53
21:25:111:PHE:O	21:25:115:VAL:HG23	2.08	0.53
22:D5:99:TYR:CZ	38:45:141:GLN:HG2	2.41	0.53
23:29:197:ILE:HD11	23:29:199:ARG:HE	1.74	0.53
36:N8:42:PRO:HB2	36:N8:43:HIS:ND1	2.23	0.53
37:BI:67:ALA:HA	37:BI:72:LEU:O	2.08	0.53
34:52:7:ASN:HD22	34:52:7:ASN:N	2.06	0.53
39:J8:3:LYS:HG3	39:J8:46:LEU:HD22	1.89	0.53
52:X4:44:G:H3'	52:X4:45:U:H6	1.74	0.53
1:13:700:C:N4	1:13:994:A:OP2	2.38	0.53
1:13:767:G:H4'	7:8I:3:LYS:HG2	1.90	0.53
1:13:1070:U:OP2	14:3E:36:ARG:NH2	2.42	0.53
1:13:1601:A:OP2	1:13:1990:C:N4	2.38	0.53
1:13:1714:U:H3	1:13:1727:G:H22	1.55	0.53
1:13:1817:G:OP1	8:2E:4:LYS:HA	2.07	0.53
2:A8:38:GLN:HG2	2:A8:47:THR:CG2	2.38	0.53
3:B5:16:LYS:NZ	15:14:1390:U:O4	2.31	0.53
6:2A:121:PRO:HG2	6:2A:126:ARG:CG	2.38	0.53
4:19:49:ILE:HG22	15:14:828:U:OP1	2.09	0.53
15:1H:594:U:C4	15:1H:595:G:C6	2.96	0.53
14:32:178:VAL:O	14:32:179:GLU:HB3	2.09	0.53
26:16:18:G:N2	26:16:71:G:H1'	2.23	0.53
27:C8:33:ARG:O	27:C8:37:GLU:HG3	2.09	0.53
27:85:58:ARG:HA	27:85:61:TRP:CE3	2.44	0.53
32:31:29:ASN:H	32:31:112:MET:CE	2.22	0.53
32:39:117:ARG:O	32:39:120:GLU:HG2	2.07	0.53
34:52:83:ASP:OD1	34:52:83:ASP:N	2.41	0.53
40:49:42:GLY:O	40:49:43:LEU:HD13	2.07	0.53
1:13:1357:A:N7	41:6I:54:ARG:HD2	2.23	0.53
1:13:1597:A:OP2	33:5I:41:ARG:NH1	2.41	0.53
1:13:1913:A:C8	1:13:1914:A:H4'	2.44	0.53
3:B5:43:VAL:HG21	3:B5:81:VAL:HG11	1.90	0.53
8:22:114:PRO:O	8:22:118:GLN:NE2	2.34	0.53
1:1G:797:G:H1	1:1G:804:U:H3	1.56	0.53
15:1H:640:U:O4	32:31:175:THR:HG22	2.08	0.53
15:1H:758:U:H2'	15:1H:759:G:C8	2.43	0.53
15:1H:825:G:H4'	15:1H:826:A:O5'	2.08	0.53
15:1H:1205:A:C8	27:C8:51:LYS:HD2	2.43	0.53
15:1H:1236:U:C4'	35:D8:79:VAL:HG22	2.37	0.53
15:1H:2232:A:O2'	15:1H:2233:U:OP2	2.25	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:14:711:G:H5''	30:35:16:ARG:HG2	1.91	0.53
15:14:2852:G:H5'	45:55:46:GLY:CA	2.39	0.53
22:H8:113:ALA:N	22:H8:114:GLY:HA2	2.24	0.53
23:21:125:GLY:O	56:21:401:HOH:O	2.19	0.53
28:M8:26:SER:HB2	40:41:105:LYS:HD3	1.90	0.53
27:85:49:HIS:HA	27:85:52:ARG:HB2	1.89	0.53
28:I5:54:GLY:O	28:I5:55:ARG:HG2	2.08	0.53
42:6E:111:ARG:HD2	42:6E:123:GLU:HB2	1.89	0.53
47:51:87:LEU:HA	47:51:163:TYR:O	2.09	0.53
45:55:73:VAL:O	45:55:76:VAL:HG12	2.08	0.53
3:F8:3:THR:CB	3:F8:6:ASP:HB2	2.39	0.53
50:72:120:THR:HG23	50:72:123:GLU:H	1.73	0.53
1:13:895:G:O3'	7:8I:69:LYS:NZ	2.39	0.53
1:13:1243:A:H2'	1:13:1244:C:C6	2.44	0.53
1:13:1255:U:C2	1:13:1256:G:C8	2.97	0.53
8:22:122:GLU:OE1	8:22:126:ARG:NH2	2.38	0.53
12:Q8:6:THR:HG23	12:Q8:60:LEU:HD12	1.90	0.53
13:3I:90:VAL:HG12	13:3I:92:ASP:H	1.73	0.53
15:1H:1225:A:H5'	15:1H:1226:C:C5	2.44	0.53
15:1H:2579:A:C2	15:1H:2662:U:H4'	2.43	0.53
15:1H:2750:A:H5''	15:1H:2750:A:H8	1.73	0.53
11:C5:6:HIS:HA	11:C5:84:ARG:NH1	2.24	0.53
19:9I:87:ARG:N	6:2I:108:ILE:O	2.41	0.53
14:32:150:GLU:C	14:32:152:SER:H	2.11	0.53
15:14:870:A:N1	56:14:3713:HOH:O	2.33	0.53
15:14:1124:C:C5	15:14:1125:A:H1'	2.43	0.53
15:14:2735:G:OP2	56:14:3676:HOH:O	2.19	0.53
21:68:93:PRO:HG3	21:68:114:ILE:HG12	1.91	0.53
35:D8:19:LYS:HG3	35:D8:95:LEU:HD23	1.89	0.53
37:BI:38:LYS:HA	37:BI:41:ILE:HD11	1.90	0.53
41:6I:39:LEU:HB3	41:6I:56:LEU:HD12	1.91	0.53
3:F8:1:MET:C	3:F8:3:THR:H	2.10	0.53
1:13:1174:C:O2'	1:13:1178:C:OP1	2.19	0.53
1:13:1253:C:O3'	49:7I:10:GLY:HA2	2.08	0.53
6:2A:57:THR:HG22	6:2A:60:ALA:H	1.73	0.53
1:1G:2125:A:H2	1:1G:2128:G:N1	2.00	0.53
13:3I:102:ARG:HG3	13:3I:120:TYR:HA	1.90	0.53
9:82:16:ARG:HB2	9:82:64:THR:HG23	1.90	0.53
15:1H:1358:G:H4'	5:P8:7:PRO:HB2	1.91	0.53
15:1H:1924:G:H1	15:1H:1927:C:N4	2.07	0.53
53:1H:3004:8UZ:O	53:1H:3004:8UZ:N1	2.41	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:9I:38:GLU:O	19:9I:42:ARG:HG3	2.09	0.53
19:9I:87:ARG:HG3	6:2I:107:SER:HA	1.91	0.53
15:14:2330:G:H2'	15:14:2331:C:H6	1.74	0.53
15:14:2703:U:H1'	15:14:2737:A:N6	2.23	0.53
28:M8:40:HIS:HA	28:M8:44:THR:O	2.08	0.53
29:AI:41:VAL:HB	29:AI:42:PRO:HA	1.91	0.53
30:78:116:GLY:N	30:78:134:ALA:HB2	2.21	0.53
35:D8:8:GLY:O	35:D8:10:LYS:HE3	2.09	0.53
32:39:11:VAL:HG23	32:39:13:SER:N	2.23	0.53
42:6E:138:LYS:HD3	42:6E:139:GLU:HG3	1.91	0.53
39:F5:73:LEU:HD13	39:F5:90:ILE:HG22	1.91	0.53
44:1E:76:GLN:OE1	44:1E:207:ALA:N	2.32	0.53
47:51:4:ILE:HD11	47:51:7:LEU:HD21	1.90	0.53
3:F8:24:GLY:O	3:F8:83:VAL:HG22	2.09	0.53
1:13:1221:G:H2'	1:13:1222:G:H8	1.72	0.53
1:13:1367:C:H2'	1:13:1368:C:H6	1.72	0.53
1:13:2014:G:H2'	1:13:2015:G:H8	1.73	0.53
5:L5:9:ARG:NH1	5:L5:47:ARG:HB3	2.24	0.53
1:1G:1751:A:H4'	48:1A:37:PRO:HD2	1.91	0.53
1:1G:1821:U:H2'	1:1G:1822:C:C6	2.44	0.53
1:1G:2003:A:H4'	42:62:29:LYS:HE3	1.91	0.53
14:3E:90:GLY:O	14:3E:93:PHE:HB3	2.09	0.53
9:82:112:LYS:HA	9:82:119:ALA:CB	2.32	0.53
15:1H:555:A:C2	15:1H:2067:A:H2'	2.44	0.53
15:1H:1258:A:H5'	15:1H:1258:A:C8	2.42	0.53
15:1H:1715:A:H1'	21:68:1:MET:HG3	1.91	0.53
11:C5:14:LEU:HD23	11:C5:15:VAL:N	2.24	0.53
13:3A:34:ARG:HG3	13:3A:35:GLY:N	2.22	0.53
22:H8:85:HIS:CE1	26:16:77:G:H21	2.27	0.53
23:21:116:VAL:O	23:21:117:MET:HB3	2.09	0.53
19:9A:29:PHE:N	19:9A:29:PHE:HD1	2.07	0.53
22:D5:59:LEU:HB2	22:D5:67:LEU:O	2.08	0.53
23:29:101:ARG:CZ	23:29:171:GLU:HB2	2.38	0.53
25:42:152:ARG:O	50:72:64:LYS:NZ	2.38	0.53
26:1J:17:A:O2'	26:1J:18:G:OP1	2.27	0.53
30:35:52:GLU:O	30:35:54:GLY:N	2.39	0.53
37:BA:67:ALA:O	37:BA:73:HIS:ND1	2.42	0.53
44:1E:74:LYS:O	44:1E:78:GLN:HB2	2.09	0.53
8:2E:11:ARG:HE	8:2E:180:ALA:HB3	1.74	0.53
52:W4:50:U:H3	52:W4:64:A:N6	2.06	0.53
1:13:1074:C:H2'	1:13:1075:U:C6	2.43	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:13:1692:G:H1'	1:13:1817:G:H21	1.74	0.53
1:1G:791:A:H2'	1:1G:792:A:O4'	2.08	0.53
1:1G:1626:G:H2'	1:1G:1627:G:H8	1.74	0.53
1:1G:1974:G:N2	1:1G:2001:G:H2'	2.24	0.53
10:58:40:PRO:O	27:C8:64:ARG:HG2	2.09	0.53
11:G8:83:THR:HG23	15:1H:361:C:OP1	2.08	0.53
11:G8:95:LYS:HG2	11:G8:97:ARG:HH22	1.73	0.53
15:1H:1151:A:H3'	15:1H:1152:C:H6	1.73	0.53
15:1H:1253:U:H4'	15:1H:1254:G:OP2	2.09	0.53
16:B8:93:ARG:HH11	16:B8:93:ARG:HG3	1.74	0.53
14:32:189:PRO:HB2	14:32:194:LEU:HD21	1.89	0.53
15:14:647:G:N3	15:14:647:G:H5'	2.24	0.53
15:14:1061:C:H2'	15:14:1062:U:H6	1.74	0.53
15:14:2789:C:OP1	23:29:166:THR:OG1	2.26	0.53
31:I8:38:VAL:HB	31:I8:59:LEU:HD12	1.90	0.53
32:31:39:TRP:CH2	32:31:106:ARG:HD3	2.44	0.53
34:5E:35:ALA:HB1	34:5E:65:VAL:HG21	1.91	0.53
33:5A:23:ARG:HD3	33:5A:29:ARG:O	2.09	0.53
42:6E:18:TYR:HB3	42:6E:59:LEU:HD12	1.89	0.53
8:2E:62:ASP:OD2	8:2E:97:LYS:HG2	2.08	0.53
1:13:888:G:OP2	7:8I:99:SER:HB2	2.09	0.53
8:22:124:ILE:HG12	8:22:130:VAL:HG22	1.90	0.53
9:8E:114:TYR:CE2	48:1I:59:SER:HA	2.44	0.53
15:1H:332:G:N7	56:1H:3810:HOH:O	2.33	0.53
15:1H:910:A:N3	26:16:81:C:O2'	2.39	0.53
15:1H:931:G:H4'	15:1H:931:G:OP1	2.08	0.53
15:1H:2454:A:H5'	15:1H:2454:A:C8	2.44	0.53
15:14:27:G:N2	15:14:539:G:H1'	2.24	0.53
15:14:1102:A:N6	15:14:1152:C:H42	2.06	0.53
15:14:2509:G:H2'	15:14:2510:G:H8	1.74	0.53
25:4E:79:GLU:HG3	25:4E:93:PRO:HD2	1.90	0.53
32:39:29:ASN:HD21	32:39:31:HIS:HB3	1.73	0.53
37:BI:89:ARG:HG3	37:BI:104:LEU:HD22	1.91	0.53
43:E8:14:PRO:HG2	43:E8:78:GLU:HB2	1.90	0.53
44:1E:32:ILE:HG13	44:1E:41:ILE:O	2.08	0.53
44:1E:53:ARG:NH2	44:1E:198:ASP:O	2.41	0.53
42:62:111:ARG:HB3	42:62:113:GLU:HG3	1.90	0.53
47:51:103:LEU:HD21	47:51:105:LEU:HD22	1.91	0.53
48:1I:49:VAL:O	48:1I:60:ARG:HB3	2.09	0.53
52:V1:18:G:H22	52:V1:55:U:H3	1.57	0.53
7:8I:32:TYR:HB3	13:3I:7:ILE:CD1	2.39	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:8E:112:LYS:HA	9:8E:119:ALA:HB2	1.91	0.52
1:1G:1385:C:H2'	1:1G:1386:U:O4'	2.09	0.52
1:1G:1866:A:C4	1:1G:1925:C:N4	2.77	0.52
1:1G:1983:G:H2'	1:1G:1984:A:C8	2.44	0.52
4:19:37:LEU:HA	4:19:38:LYS:HB3	1.90	0.52
13:3I:93:LEU:HB2	13:3I:96:VAL:HG13	1.91	0.52
15:1H:1154:G:H2'	15:1H:1155:G:C8	2.44	0.52
15:1H:2415:G:H2'	15:1H:2416:U:C6	2.40	0.52
15:1H:2828:C:H2'	15:1H:2829:C:H6	1.74	0.52
17:L8:46:ASN:O	17:L8:50:VAL:HG22	2.09	0.52
15:14:519:A:H2'	15:14:520:G:O4'	2.10	0.52
15:14:1162:G:H2'	15:14:1163:G:C8	2.44	0.52
15:14:1483:A:H61	15:14:1608:A:N6	2.04	0.52
15:14:2126:G:H2'	15:14:2127:U:O4'	2.10	0.52
15:14:2510:G:H5''	38:45:82:ARG:HG3	1.91	0.52
15:14:2770:U:H5'	15:14:2771:C:OP2	2.09	0.52
18:69:97:ILE:O	18:69:100:ALA:HB3	2.09	0.52
23:29:65:GLY:C	23:29:68:ALA:HB2	2.29	0.52
24:4A:33:ALA:O	24:4A:37:THR:OG1	2.20	0.52
32:31:179:GLU:OE1	32:31:179:GLU:N	2.40	0.52
34:52:86:ARG:O	34:52:87:ARG:HG2	2.09	0.52
40:49:32:PRO:HB3	40:49:163:ALA:HB2	1.90	0.52
44:1E:201:ILE:HG21	44:1E:214:ILE:HG21	1.91	0.52
3:F8:1:MET:O	3:F8:3:THR:N	2.42	0.52
6:2I:32:ILE:HD12	6:2I:72:ALA:HB2	1.91	0.52
1:13:1598:A:H8	1:13:1598:A:H5''	1.74	0.52
1:13:1867:U:OP2	42:6E:116:ALA:N	2.43	0.52
1:1G:1932:G:H22	1:1G:1958:G:C2'	2.21	0.52
11:G8:62:GLU:O	11:G8:63:LYS:HD2	2.08	0.52
12:Q8:24:ALA:HA	12:Q8:44:LYS:HA	1.92	0.52
15:1H:1408:A:H2	15:1H:1421:U:O4	1.92	0.52
15:1H:1956:U:H5	15:1H:1994:A:N7	2.07	0.52
15:1H:2584:G:O6	53:1H:3003:SUZ:N2	2.42	0.52
15:14:718:G:H2'	15:14:718:G:N3	2.23	0.52
17:H5:4:LEU:O	17:H5:36:VAL:HA	2.08	0.52
18:69:2:LYS:HB2	18:69:39:ALA:HB2	1.91	0.52
18:69:117:GLU:H	18:69:117:GLU:CD	2.12	0.52
19:9A:29:PHE:N	19:9A:29:PHE:CD1	2.77	0.52
23:29:58:ARG:O	23:29:59:VAL:HG22	2.08	0.52
35:95:67:GLY:O	35:95:88:ARG:HD2	2.09	0.52
38:45:4:PRO:HD3	38:45:70:PRO:O	2.08	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:F5:8:SER:HB3	39:F5:66:HIS:CD2	2.44	0.52
45:98:12:ARG:HD3	45:98:16:HIS:CD2	2.44	0.52
49:7I:13:HIS:C	49:7I:15:PRO:HD3	2.29	0.52
44:12:166:ASP:OD2	44:12:169:LYS:HB2	2.09	0.52
44:12:208:ILE:HD12	44:12:239:VAL:HG21	1.91	0.52
47:59:8:PRO:HG2	47:59:69:ARG:HH21	1.74	0.52
1:13:677:G:O2'	1:13:694:C:N4	2.42	0.52
8:22:91:LEU:O	8:22:95:THR:OG1	2.28	0.52
1:1G:1319:G:H2'	1:1G:1320:G:O4'	2.09	0.52
12:Q8:59:LYS:HZ1	12:Q8:60:LEU:HD21	1.74	0.52
15:1H:551:U:H2'	15:1H:552:U:C6	2.43	0.52
15:1H:2330:G:H2'	15:1H:2331:C:C6	2.43	0.52
15:1H:2721:G:H8	15:1H:2721:G:O5'	1.93	0.52
16:B8:6:LEU:HA	16:B8:9:LEU:HB2	1.91	0.52
15:14:237:G:H4'	15:14:414:G:C5	2.45	0.52
15:14:2828:C:H2'	15:14:2829:C:H6	1.73	0.52
15:14:2875:G:H2'	15:14:2876:C:H6	1.74	0.52
28:M8:12:ALA:HB3	28:M8:24:THR:HB	1.91	0.52
29:AI:23:ASN:O	29:AI:28:LYS:NZ	2.43	0.52
25:42:144:THR:HG23	25:42:147:ASP:OD2	2.10	0.52
38:88:22:LYS:HG3	38:88:22:LYS:O	2.09	0.52
39:J8:82:LEU:H	39:J8:82:LEU:HD22	1.74	0.52
44:12:158:LEU:HD22	44:12:182:ILE:HD11	1.90	0.52
6:2I:99:GLN:HA	6:2I:105:VAL:CG1	2.35	0.52
50:72:34:GLU:HB3	50:72:118:VAL:HG21	1.90	0.52
1:13:654:A:H5'	25:4E:101:ILE:HG22	1.90	0.52
1:13:1248:U:N3	14:3E:134:ASP:HB2	2.24	0.52
1:13:1995:C:H5'	48:1I:60:ARG:NH2	2.15	0.52
4:11:17:THR:HG22	4:11:204:ILE:HA	1.91	0.52
1:1G:1050:G:H2'	1:1G:1051:G:O4'	2.08	0.52
1:1G:1344:A:H2'	1:1G:1345:A:C8	2.44	0.52
15:1H:1742:U:H2'	15:1H:1744:C:C5	2.44	0.52
15:1H:1770:A:H8	15:1H:1771:U:C6	2.27	0.52
15:14:1365:U:H2'	15:14:1366:A:C8	2.44	0.52
15:14:1738:U:O2	15:14:1750:A:H5'	2.09	0.52
15:14:2648:G:H2'	15:14:2649:G:O4'	2.08	0.52
17:H5:46:ASN:O	17:H5:50:VAL:HG22	2.09	0.52
23:21:36:ARG:NH1	23:21:85:ASN:OD1	2.43	0.52
29:AA:29:ARG:NH1	29:AA:48:THR:H	2.07	0.52
34:52:25:ILE:HD12	34:52:82:ARG:CD	2.39	0.52
37:BA:74:LYS:HG3	37:BA:75:ASN:H	1.73	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:6E:15:ASP:HB3	42:6E:20:ASP:H	1.73	0.52
42:6E:109:ASN:HA	42:6E:119:ARG:HE	1.75	0.52
50:7E:113:SER:HB3	50:7E:134:ILE:HD11	1.90	0.52
51:Y4:34:G:C6	51:Y4:35:A:C6	2.97	0.52
1:13:705:A:H5''	1:13:706:A:H5''	1.91	0.52
2:A8:26:LEU:HD22	2:A8:87:PHE:HD2	1.73	0.52
1:1G:691:U:H2'	1:1G:692:G:H8	1.73	0.52
1:1G:1731:C:H2'	1:1G:1732:G:O4'	2.09	0.52
1:1G:1785:A:H8	1:1G:1786:C:C5	2.27	0.52
1:1G:1883:A:N6	1:1G:1905:U:OP2	2.42	0.52
13:3I:58:VAL:O	13:3I:65:GLU:HA	2.10	0.52
15:1H:1279:C:H2'	15:1H:1280:G:C8	2.45	0.52
15:1H:1788:C:OP1	16:B8:96:ARG:NH1	2.42	0.52
15:1H:2647:A:O2'	15:1H:2824:G:O2'	2.18	0.52
18:61:110:ASP:HB2	18:61:112:LYS:H	1.73	0.52
15:14:142:G:H2'	15:14:143:C:C6	2.44	0.52
24:4I:13:LYS:O	24:4I:44:ARG:NE	2.42	0.52
22:D5:15:PRO:HA	22:D5:18:LEU:HB2	1.90	0.52
23:29:26:ILE:HG22	23:29:28:ALA:N	2.25	0.52
34:5E:75:LEU:HD22	34:5E:79:LEU:HG	1.91	0.52
38:45:26:TYR:O	38:45:26:TYR:CD1	2.63	0.52
42:62:111:ARG:NH2	42:62:122:HIS:HB3	2.24	0.52
3:F8:84:ALA:HB3	3:F8:87:GLN:OE1	2.09	0.52
8:2E:76:VAL:HG21	8:2E:103:VAL:HG11	1.90	0.52
1:13:1367:C:H2'	1:13:1368:C:C6	2.45	0.52
3:B5:36:LYS:HG2	3:B5:54:VAL:HB	1.92	0.52
4:11:85:ASP:OD2	4:11:88:ARG:NH1	2.37	0.52
1:1G:1546:A:N6	1:1G:2020:G:O6	2.42	0.52
1:1G:1600:A:OP1	33:5A:31:ARG:HD3	2.08	0.52
14:3E:61:LYS:NZ	14:3E:72:GLU:OE2	2.26	0.52
15:1H:1770:A:H8	15:1H:1771:U:H6	1.56	0.52
15:1H:2024:C:H4'	15:1H:2739:C:O2	2.10	0.52
15:14:311:C:H2'	15:14:312:C:H6	1.74	0.52
15:14:1103:G:H22	15:14:1134:A:H5'	1.74	0.52
16:75:68:TYR:HE2	21:25:120:GLU:HB2	1.75	0.52
18:69:79:ILE:O	18:69:143:SER:N	2.35	0.52
27:C8:92:ARG:NE	35:D8:11:GLN:H	2.07	0.52
35:D8:98:GLU:OE1	35:D8:100:ARG:HD3	2.10	0.52
38:88:21:THR:HG23	38:88:22:LYS:N	2.24	0.52
49:7A:22:THR:HA	49:7A:33:ILE:HG13	1.91	0.52
52:V4:67:C:H2'	52:V4:68:C:C6	2.43	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:13:794:C:N3	1:13:808:G:N2	2.56	0.52
1:13:1042:C:O2'	1:13:1250:A:N3	2.32	0.52
1:13:1365:C:OP1	19:9I:72:ARG:NE	2.41	0.52
1:13:1576:G:H2'	1:13:1577:G:O4'	2.09	0.52
1:13:1817:G:H5''	8:2E:176:HIS:CE1	2.45	0.52
1:1G:1647:G:H3'	1:1G:1648:G:H5''	1.92	0.52
1:1G:1877:A:H2	1:1G:1980:G:H21	1.56	0.52
10:58:96:GLU:HG2	10:58:97:ARG:N	2.24	0.52
15:1H:472:C:H4'	32:31:49:ALA:HB2	1.90	0.52
15:1H:724:A:OP1	32:31:63:LYS:HE2	2.10	0.52
15:1H:2077:G:H4'	23:21:143:ASN:O	2.09	0.52
15:1H:2814:A:N7	15:1H:2815:A:N6	2.57	0.52
16:B8:26:ASP:CB	16:B8:92:GLY:H	2.10	0.52
15:14:1023:G:C5	15:14:1024:C:C5	2.98	0.52
15:14:1044:A:H4'	27:85:92:ARG:CZ	2.40	0.52
15:14:2171:C:H4'	15:14:2172:G:C8	2.45	0.52
16:75:8:LYS:NZ	23:29:9:VAL:HG12	2.24	0.52
22:H8:48:PHE:CE1	22:H8:71:VAL:HG11	2.45	0.52
22:H8:59:LEU:O	22:H8:60:GLU:HB2	2.09	0.52
29:AI:51:VAL:O	29:AI:57:HIS:HA	2.09	0.52
37:BI:74:LYS:HB3	37:BI:75:ASN:OD1	2.10	0.52
38:45:32:TYR:CE2	38:45:133:ARG:HG2	2.45	0.52
44:1E:94:ASN:OD1	44:1E:95:GLN:N	2.38	0.52
45:98:45:ARG:O	45:98:48:VAL:HG23	2.10	0.52
48:1A:5:ARG:HD2	48:1A:71:LEU:HD11	1.91	0.52
44:12:7:VAL:HG13	44:12:8:LYS:HG3	1.90	0.52
46:G5:14:ARG:HD2	46:G5:66:GLU:OE1	2.10	0.52
52:X1:69:G:H2'	52:X1:70:G:O4'	2.10	0.52
52:V4:9:A:H4'	52:V4:46:G:H4'	1.92	0.52
1:13:1581:A:C6	1:13:1582:A:C6	2.98	0.52
6:2A:59:TYR:CE2	42:62:149:ARG:HB3	2.44	0.52
8:22:11:ARG:NE	8:22:180:ALA:HB3	2.25	0.52
1:1G:788:G:H1	1:1G:814:C:H42	1.57	0.52
14:3E:141:ARG:HB2	14:3E:141:ARG:CZ	2.39	0.52
15:1H:683:C:H2'	15:1H:684:G:C8	2.44	0.52
15:1H:683:C:H2'	15:1H:684:G:H8	1.75	0.52
15:1H:725:A:H1'	15:1H:2458:C:H1'	1.90	0.52
15:1H:1260:G:N2	15:1H:1285:G:O2'	2.43	0.52
15:1H:1437:G:H2'	15:1H:1438:G:H8	1.74	0.52
15:1H:1557:A:H4'	15:1H:1558:C:C1'	2.40	0.52
15:1H:2063:G:O6	56:1H:3772:HOH:O	2.18	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:14:844:C:O2'	15:14:845:C:H5'	2.10	0.52
15:14:1066:C:H2'	15:14:1067:U:H6	1.74	0.52
15:14:1067:U:H3	15:14:1191:A:H62	1.57	0.52
15:14:2291:G:OP2	38:45:86:GLY:N	2.43	0.52
15:14:2482:C:H4'	38:45:123:HIS:CG	2.45	0.52
24:4A:25:ILE:O	24:4A:29:ARG:HB2	2.10	0.52
30:35:97:PRO:HD3	30:35:112:LEU:HD12	1.91	0.52
38:45:26:TYR:O	38:45:26:TYR:HD1	1.92	0.52
40:49:15:VAL:HG22	40:49:175:LEU:HB3	1.91	0.52
45:98:28:LEU:HD12	45:98:48:VAL:HG11	1.92	0.52
49:7I:51:VAL:HG21	49:7I:74:LEU:HD21	1.92	0.52
49:7A:19:ILE:HB	49:7A:36:ILE:O	2.10	0.52
50:72:51:VAL:HG11	50:72:60:ARG:HE	1.75	0.52
1:13:2160:U:H1'	51:Y1:36:G:H22	1.72	0.52
7:8I:9:VAL:HG21	7:8I:84:LEU:HD12	1.92	0.52
8:22:182:ILE:HG22	8:22:203:PHE:HA	1.90	0.52
1:1G:1883:A:H62	1:1G:1904:C:H3'	1.75	0.52
10:58:46:VAL:CG1	10:58:48:MET:HG3	2.40	0.52
15:1H:1721:U:O5'	15:1H:1721:U:H6	1.92	0.52
15:1H:2417:C:C6	15:1H:2417:C:OP2	2.63	0.52
15:1H:2608:U:H2'	15:1H:2609:C:H6	1.73	0.52
15:1H:2836:A:OP1	23:21:113:PHE:HB2	2.08	0.52
13:3A:82:VAL:N	13:3A:106:ASP:OD2	2.43	0.52
15:14:333:G:C8	15:14:528:A:H1'	2.45	0.52
15:14:553:A:N1	15:14:2640:G:O2'	2.33	0.52
15:14:1341:U:H2'	15:14:1342:C:C6	2.45	0.52
15:14:1828:U:H2'	15:14:1829:C:C6	2.45	0.52
15:14:1924:G:N2	15:14:1927:C:C5	2.78	0.52
15:14:2277:U:O2'	15:14:2278:C:H5'	2.09	0.52
21:68:98:VAL:HG11	21:68:114:ILE:HG23	1.92	0.52
23:29:117:MET:HA	23:29:122:PHE:H	1.74	0.52
25:42:122:GLU:HG2	25:42:131:ILE:HD12	1.92	0.52
28:I5:26:SER:OG	28:I5:28:LYS:O	2.28	0.52
33:5I:23:ARG:NH1	33:5I:30:ALA:HB2	2.25	0.52
29:AA:12:ASP:HB3	29:AA:38:SER:HA	1.92	0.52
37:BI:38:LYS:O	37:BI:41:ILE:HG13	2.09	0.52
46:K8:2:LYS:O	46:K8:5:GLU:HG2	2.10	0.52
48:1A:82:ILE:O	48:1A:86:MET:N	2.43	0.52
44:12:48:MET:HA	44:12:51:LEU:HD12	1.92	0.52
52:X1:2:C:H2'	52:X1:3:C:C6	2.44	0.52
1:13:1054:G:N2	1:13:1069:G:H1'	2.25	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:13:1853:C:H4'	29:AI:80:TYR:OH	2.10	0.52
1:13:1994:C:O3'	48:II:60:ARG:NH2	2.43	0.52
1:13:2144:G:H2'	1:13:2145:U:C6	2.45	0.52
1:1G:1052:A:H62	1:1G:1054:G:N2	2.07	0.52
1:1G:1359:G:C5	1:1G:1360:G:H1'	2.45	0.52
1:1G:1776:U:H2'	1:1G:1777:C:O4'	2.10	0.52
4:19:32:SER:O	4:19:33:LEU:HB2	2.09	0.52
15:1H:1892:G:H1'	15:1H:1909:A:H61	1.73	0.52
15:1H:1902:A:C5	15:1H:1903:G:H1'	2.45	0.52
11:C5:37:VAL:O	11:C5:67:LEU:N	2.41	0.52
13:3A:41:ARG:HH12	13:3A:43:VAL:CG2	2.23	0.52
14:32:13:ARG:C	14:32:15:GLU:H	2.12	0.52
15:14:1465:G:HO2'	15:14:1466:C:H6	1.56	0.52
23:21:63:LEU:HD23	23:21:63:LEU:O	2.10	0.52
23:21:89:ASP:OD1	23:21:90:THR:N	2.43	0.52
23:21:103:ASP:OD1	23:21:201:THR:HG23	2.10	0.52
25:4E:28:PHE:O	25:4E:47:LYS:HA	2.10	0.52
26:16:45:C:P	40:41:67:LYS:HZ1	2.31	0.52
28:M8:49:PHE:H	28:M8:49:PHE:HD2	1.56	0.52
24:4A:22:ILE:HB	24:4A:25:ILE:HG13	1.91	0.52
29:AI:15:LEU:O	29:AI:19:VAL:HG23	2.10	0.52
26:1J:107:A:H2'	26:1J:108:G:O4'	2.10	0.52
26:1J:118:G:H5''	26:1J:118:G:C8	2.45	0.52
27:85:30:LYS:HD3	27:85:30:LYS:N	2.25	0.52
32:31:176:LEU:HG	32:31:180:GLY:HA3	1.91	0.52
32:39:122:LYS:HD2	32:39:191:ARG:CD	2.35	0.52
38:88:32:TYR:O	38:88:105:GLU:HA	2.10	0.52
38:88:133:ARG:O	38:88:134:ARG:HB2	2.10	0.52
39:J8:13:ILE:HD11	39:J8:42:GLN:OE1	2.10	0.52
36:J5:51:TYR:HD1	36:J5:52:TYR:CE2	2.28	0.52
38:45:75:THR:HG22	38:45:89:ASN:O	2.10	0.52
48:1A:32:ALA:HB2	48:1A:81:THR:HG21	1.92	0.52
52:V4:45:U:O2	52:V4:47:U:O2'	2.21	0.52
1:13:668:G:H2'	1:13:669:C:C6	2.45	0.51
3:B5:27:THR:HG22	3:B5:80:ILE:HG22	1.92	0.51
8:22:77:ILE:HA	8:22:84:ILE:HG22	1.92	0.51
8:22:116:VAL:HG21	8:22:202:ILE:HD11	1.91	0.51
1:1G:903:A:C6	1:1G:904:A:C6	2.98	0.51
1:1G:994:A:H5'	1:1G:994:A:C8	2.41	0.51
1:1G:1097:C:H2'	1:1G:1098:C:H6	1.75	0.51
1:1G:1184:C:H2'	1:1G:1185:C:C6	2.44	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:1G:1600:A:H2'	1:1G:1601:A:H5'	1.92	0.51
10:58:75:TYR:HA	10:58:81:GLY:O	2.10	0.51
15:1H:70:A:H2	3:F8:31:HIS:CE1	2.27	0.51
15:1H:272:U:C2	18:61:50:ARG:HG2	2.45	0.51
15:1H:551:U:H4'	15:1H:580:U:H4'	1.92	0.51
15:1H:1291:A:N1	30:78:4:SER:OG	2.37	0.51
15:1H:1620:A:H2'	15:1H:1621:A:C8	2.45	0.51
15:1H:1924:G:H22	15:1H:1927:C:N4	2.08	0.51
17:L8:7:LYS:HG3	17:L8:34:GLU:HG2	1.91	0.51
15:14:1076:A:N6	15:14:1173:G:H2'	2.24	0.51
15:14:1377:G:H2'	15:14:1379:C:C5	2.45	0.51
15:14:2330:G:H2'	15:14:2331:C:C6	2.46	0.51
15:14:2748:G:H3'	15:14:2749:A:O4'	2.10	0.51
17:H5:7:LYS:NZ	17:H5:32:GLN:HG3	2.24	0.51
25:4E:7:GLU:OE2	25:4E:37:ARG:NH2	2.40	0.51
27:C8:88:ILE:O	27:C8:88:ILE:HG22	2.11	0.51
34:5E:3:ARG:NH1	34:5E:38:GLU:OE2	2.44	0.51
30:35:144:GLU:CD	30:35:144:GLU:N	2.61	0.51
32:39:38:ARG:HH21	32:39:99:TYR:HE1	1.58	0.51
34:52:44:GLY:HA2	34:52:59:TYR:CZ	2.45	0.51
40:41:131:TYR:HE2	40:41:133:LEU:HD23	1.75	0.51
45:55:38:VAL:HG22	45:55:112:ALA:HB2	1.91	0.51
1:13:656:A:OP2	25:4E:126:ARG:HD3	2.10	0.51
1:13:1093:A:C6	1:13:1094:C:C4	2.98	0.51
1:13:1692:G:H4'	1:13:1693:U:OP1	2.08	0.51
1:13:1785:A:N6	1:13:1805:G:H21	2.08	0.51
2:A8:3:ARG:HB2	15:1H:2334:G:N7	2.25	0.51
3:B5:60:ARG:HH21	15:14:1360:G:N2	2.07	0.51
4:11:65:ILE:HD11	4:11:67:PHE:CE1	2.45	0.51
1:1G:694:C:H5''	1:1G:1006:U:O4	2.09	0.51
1:1G:734:G:O2'	1:1G:735:U:H5'	2.11	0.51
1:1G:1804:G:OP2	1:1G:1804:G:H8	1.93	0.51
1:1G:1906:A:O2'	1:1G:1908:U:OP2	2.28	0.51
10:15:34:LEU:HD21	10:15:120:LEU:HD13	1.92	0.51
13:3A:71:PRO:O	13:3A:102:ARG:HD3	2.10	0.51
15:14:992:A:N6	56:14:3743:HOH:O	2.42	0.51
15:14:1216:U:C2	15:14:1231:G:N2	2.78	0.51
15:14:2173:G:H2'	15:14:2174:G:H8	1.75	0.51
26:16:75:A:C4	26:16:107:A:C2	2.98	0.51
22:D5:103:ARG:HB3	22:D5:138:GLU:HA	1.91	0.51
28:M8:63:TYR:CB	29:AI:9:VAL:HG21	2.27	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:31:10:PRO:O	32:31:124:LEU:HD12	2.09	0.51
40:49:80:PHE:O	40:49:82:LEU:HB2	2.10	0.51
40:49:135:LEU:HD23	40:49:140:ILE:HD11	1.91	0.51
44:12:48:MET:HA	44:12:51:LEU:HB2	1.92	0.51
44:12:76:GLN:NE2	44:12:206:ASP:OD1	2.43	0.51
52:V1:70:G:H2'	52:V1:71:G:C8	2.45	0.51
1:13:719:G:N3	1:13:720:C:H5'	2.25	0.51
1:13:1254:G:H4'	49:7I:16:HIS:ND1	2.25	0.51
1:13:1933:A:H61	1:13:1958:G:H1'	1.74	0.51
8:22:83:ARG:HG3	8:22:84:ILE:N	2.25	0.51
1:1G:844:U:H2'	1:1G:845:C:H6	1.74	0.51
1:1G:980:C:H2'	1:1G:981:U:C6	2.45	0.51
1:1G:1754:U:O2'	1:1G:1755:G:OP2	2.24	0.51
10:58:23:LEU:HB3	15:1H:1188:C:OP1	2.11	0.51
12:Q8:14:VAL:HG11	12:Q8:21:LYS:HE3	1.92	0.51
12:Q8:49:VAL:O	12:Q8:50:LEU:HB2	2.11	0.51
15:1H:1070:G:H4'	15:1H:1071:U:O5'	2.10	0.51
15:1H:2708:A:H2'	15:1H:2709:G:H8	1.76	0.51
12:M5:61:LEU:HD23	15:14:618:G:H4'	1.91	0.51
18:61:93:THR:HG22	18:61:119:PRO:HB3	1.93	0.51
14:32:14:ARG:HH11	14:32:14:ARG:HG3	1.75	0.51
15:14:2630:U:C2	36:J5:7:PRO:HA	2.45	0.51
15:14:2804:C:O2'	15:14:2822:A:N3	2.42	0.51
22:H8:7:ALA:HB3	22:H8:61:LEU:CB	2.40	0.51
24:4I:19:LEU:HA	24:4I:22:ILE:HD13	1.91	0.51
29:AA:41:VAL:HG12	29:AA:42:PRO:HD2	1.93	0.51
30:35:59:LEU:O	30:35:59:LEU:HD22	2.10	0.51
35:D8:2:PHE:H	35:D8:42:GLY:HA3	1.75	0.51
44:12:178:ARG:NH1	44:12:196:LEU:O	2.43	0.51
46:G5:33:MET:O	46:G5:36:ARG:HB2	2.10	0.51
1:13:878:C:H5''	7:8I:25:ARG:CZ	2.40	0.51
1:13:1676:G:H5''	33:5I:3:ARG:HB3	1.90	0.51
1:13:1974:G:H22	1:13:2002:A:P	2.34	0.51
1:13:2146:G:OP1	6:2I:123:LYS:HE3	2.10	0.51
5:L5:24:THR:O	5:L5:28:ARG:HG3	2.10	0.51
10:58:66:LYS:NZ	15:1H:1070:G:O6	2.43	0.51
2:65:106:ARG:HB3	2:65:112:PHE:O	2.10	0.51
15:1H:1824:C:H5''	15:1H:1825:A:OP1	2.10	0.51
15:1H:1954:G:H4'	15:1H:1955:G:OP1	2.11	0.51
15:14:38:A:H2'	15:14:39:C:H6	1.74	0.51
15:14:1820:A:H1'	15:14:1963:A:N6	2.25	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:14:1873:G:H5''	15:14:1874:G:OP2	2.10	0.51
15:14:2511:C:OP1	38:45:82:ARG:HG2	2.11	0.51
18:69:72:LEU:HD23	18:69:75:LEU:HD13	1.92	0.51
23:29:119:ARG:HG2	23:29:160:TYR:HB2	1.92	0.51
29:AI:51:VAL:HG12	29:AI:52:TYR:H	1.75	0.51
27:85:92:ARG:CZ	35:95:11:GLN:H	2.24	0.51
40:41:33:ARG:O	40:41:162:THR:HG23	2.11	0.51
41:6I:18:PHE:CZ	41:6I:21:ASP:HB2	2.45	0.51
42:6E:132:GLY:O	42:6E:135:VAL:HG23	2.10	0.51
46:K8:2:LYS:HD2	46:K8:5:GLU:OE1	2.10	0.51
48:1A:50:ILE:HD11	48:1A:57:LYS:HG2	1.92	0.51
46:G5:12:GLU:HG3	46:G5:16:LEU:HD23	1.93	0.51
47:59:69:ARG:HH11	47:59:73:ALA:HB2	1.75	0.51
8:2E:152:ILE:HG12	8:2E:167:TRP:HB2	1.92	0.51
52:X4:76:A:OP1	52:X4:76:A:H4'	2.09	0.51
1:13:1048:G:OP1	14:3E:3:ARG:NH1	2.43	0.51
1:13:1104:G:H2'	1:13:1105:G:C8	2.45	0.51
1:13:1640:A:H2'	1:13:1641:G:O4'	2.10	0.51
1:13:1952:C:H2'	1:13:1953:C:H6	1.76	0.51
1:13:2139:G:N1	1:13:2142:A:OP2	2.43	0.51
3:B5:63:LYS:HE2	3:B5:63:LYS:N	2.25	0.51
7:8I:28:PRO:HA	7:8I:35:VAL:HA	1.91	0.51
8:22:73:PRO:O	8:22:76:VAL:HG22	2.11	0.51
1:1G:1583:U:O2	1:1G:1852:A:C5	2.64	0.51
1:1G:1603:C:H5'	1:1G:1604:U:C5	2.45	0.51
1:1G:1870:C:OP1	20:1B:8:THR:HG21	2.10	0.51
53:1G:2202:8UZ:O2	53:1G:2202:8UZ:O7	2.29	0.51
4:19:58:HIS:HD1	4:19:59:LYS:N	2.07	0.51
13:3I:7:ILE:HG21	50:7E:91:ARG:HB2	1.92	0.51
15:1H:1069:A:H8	15:1H:1069:A:H3'	1.75	0.51
15:1H:1563:U:H2'	15:1H:1564:C:C6	2.45	0.51
15:1H:1640:G:H2'	15:1H:1641:C:H6	1.75	0.51
15:1H:2150:G:H21	15:1H:2198:A:H62	1.55	0.51
15:14:122:G:N2	15:14:124:A:O2'	2.43	0.51
15:14:301:A:C4	15:14:302:C:N4	2.79	0.51
15:14:591:U:OP1	30:35:29:LYS:HD2	2.10	0.51
15:14:735:G:N2	15:14:837:A:H61	2.09	0.51
15:14:897:G:H1'	15:14:980:A:H8	1.75	0.51
15:14:1366:A:H2'	15:14:1367:C:C6	2.45	0.51
15:14:1727:A:H8	15:14:1727:A:O5'	1.94	0.51
15:14:2247:U:P	39:F5:40:ARG:HH12	2.32	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:M8:16:CYS:HB3	28:M8:18:CYS:SG	2.51	0.51
30:78:134:ALA:O	30:78:138:LEU:HB2	2.10	0.51
28:I5:16:CYS:HB3	28:I5:36:CYS:HA	1.92	0.51
38:45:58:PHE:HZ	38:45:106:VAL:HG11	1.76	0.51
50:72:104:ARG:HD2	50:72:138:TRP:CE2	2.45	0.51
1:13:1700:G:H2'	1:13:1701:U:C6	2.46	0.51
7:8I:65:ILE:HG21	7:8I:69:LYS:HE2	1.92	0.51
1:1G:1251:A:C8	1:1G:1252:C:C6	2.99	0.51
1:1G:1750:U:O4	1:1G:1751:A:N6	2.44	0.51
12:Q8:31:HIS:CB	12:Q8:34:TRP:HE3	2.20	0.51
13:3I:71:PRO:O	13:3I:102:ARG:HD3	2.11	0.51
9:82:10:ARG:NH1	9:82:105:ASP:OD2	2.43	0.51
15:1H:329:G:H2'	15:1H:330:U:C6	2.46	0.51
15:1H:614:C:H2'	15:1H:615:A:H8	1.75	0.51
14:32:22:LYS:O	14:32:113:SER:HB3	2.10	0.51
15:14:1514:C:HO2'	15:14:1577:A:H8	1.55	0.51
15:14:1574:G:H2'	15:14:1575:G:H8	1.74	0.51
15:14:1761:C:H2'	15:14:1762:C:H6	1.75	0.51
15:14:1866:C:N4	15:14:1867:U:C4	2.79	0.51
15:14:2736:U:N3	15:14:2886:A:H2	1.95	0.51
17:H5:52:HIS:CD2	17:H5:53:LEU:HG	2.45	0.51
24:4A:45:VAL:O	24:4A:48:LEU:HD22	2.11	0.51
39:J8:23:LYS:HB2	52:V1:74:C:H4'	1.92	0.51
39:J8:83:GLU:CD	39:J8:85:LEU:HB2	2.31	0.51
41:6I:25:THR:HG22	41:6I:70:LEU:HD22	1.92	0.51
38:45:11:LYS:NZ	38:45:88:GLY:O	2.25	0.51
40:49:44:GLY:HA2	40:49:88:ILE:HD11	1.92	0.51
47:51:98:LEU:HD12	47:51:102:ALA:O	2.11	0.51
3:F8:3:THR:HB	3:F8:6:ASP:HB2	1.92	0.51
47:59:19:VAL:HG13	47:59:43:VAL:HG23	1.93	0.51
51:Y1:42:U:H4'	51:Y1:43:U:OP2	2.10	0.51
9:8E:4:TYR:CD1	9:8E:88:TYR:HB2	2.46	0.51
1:1G:1756:C:C5'	9:82:16:ARG:HH22	2.23	0.51
1:1G:1786:C:N3	1:1G:1788:G:C8	2.78	0.51
2:65:3:ARG:HE	2:65:4:LEU:H	1.54	0.51
4:19:70:TRP:O	4:19:73:VAL:HG23	2.10	0.51
15:1H:142:G:H1'	3:F8:37:THR:CG2	2.39	0.51
15:1H:712:G:OP1	30:78:16:ARG:HG2	2.10	0.51
15:1H:823:A:H2	15:1H:836:U:HO2'	1.58	0.51
15:1H:1465:G:O2'	15:1H:1466:C:O5'	2.19	0.51
15:1H:1867:U:O2'	15:1H:1994:A:N1	2.37	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:32:190:ASP:O	14:32:194:LEU:HD22	2.11	0.51
15:14:2041:U:H2'	15:14:2042:U:C6	2.46	0.51
15:14:2661:C:H2'	15:14:2662:U:O4'	2.10	0.51
23:21:54:GLN:O	23:21:55:ASN:ND2	2.44	0.51
24:4I:65:LYS:CB	24:4I:69:GLU:HG2	2.41	0.51
26:16:17:A:H1'	26:16:112:G:C8	2.46	0.51
30:35:27:HIS:HB3	30:35:32:THR:CG2	2.41	0.51
30:35:97:PRO:HG3	30:35:112:LEU:HB2	1.93	0.51
37:BA:11:SER:HA	37:BA:13:LEU:H	1.74	0.51
39:F5:85:LEU:O	39:F5:85:LEU:HD12	2.10	0.51
42:62:65:ALA:O	42:62:69:VAL:HG23	2.11	0.51
45:98:79:LEU:HA	45:98:83:ILE:HD12	1.93	0.51
1:13:1130:C:H2'	1:13:1131:G:C8	2.45	0.51
1:13:1453:C:O2'	50:7E:1:MET:HB3	2.10	0.51
1:13:1626:G:C2	1:13:1627:G:H1'	2.46	0.51
1:1G:1063:C:OP1	1:1G:1063:C:H4'	2.11	0.51
4:19:175:LEU:HD12	4:19:185:VAL:HG21	1.92	0.51
15:1H:661:C:H2'	15:1H:662:C:C6	2.46	0.51
15:1H:2485:G:OP1	38:88:56:ARG:NH2	2.42	0.51
17:L8:6:VAL:HG13	17:L8:56:VAL:HG13	1.93	0.51
15:14:67:G:H2'	15:14:68:C:H6	1.76	0.51
15:14:647:G:H4'	15:14:648:A:H5''	1.91	0.51
15:14:675:G:O2'	15:14:2366:G:OP1	2.27	0.51
15:14:1327:A:H2'	15:14:1328:G:C8	2.46	0.51
23:21:30:PRO:HA	23:21:92:THR:HG23	1.93	0.51
23:21:111:ARG:HD2	23:21:160:TYR:CD2	2.45	0.51
23:21:176:ILE:HB	23:21:181:LEU:HB2	1.92	0.51
24:4I:74:VAL:O	24:4I:78:ILE:HG12	2.10	0.51
22:D5:3:TYR:O	22:D5:58:VAL:HG23	2.10	0.51
28:M8:31:ILE:HD12	40:41:142:PRO:HB2	1.93	0.51
23:29:65:GLY:HA3	23:29:68:ALA:HB2	1.92	0.51
37:BI:99:LEU:O	37:BI:100:ILE:HD12	2.11	0.51
42:6E:15:ASP:O	42:6E:19:GLY:HA2	2.11	0.51
47:59:17:VAL:HA	47:59:25:LYS:O	2.10	0.51
1:13:1456:U:H5	1:13:1495:A:N1	2.08	0.51
2:A8:106:ARG:NH2	2:A8:107:GLU:HB2	2.26	0.51
3:B5:55:ASN:HB2	3:B5:80:ILE:HG13	1.92	0.51
8:22:34:LEU:HD13	33:5A:25:VAL:HG11	1.92	0.51
1:1G:753:U:O2'	1:1G:754:G:H5'	2.11	0.51
1:1G:1845:C:OP2	33:5A:9:LYS:NZ	2.30	0.51
11:G8:90:LEU:HA	11:G8:91:GLU:C	2.31	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:3I:93:LEU:HB2	13:3I:96:VAL:CG1	2.41	0.51
14:3E:29:PRO:O	14:3E:30:LYS:HG2	2.10	0.51
15:1H:166:G:O2'	15:1H:167:G:H5'	2.11	0.51
15:1H:174:C:H2'	15:1H:175:U:C6	2.46	0.51
15:1H:2117:U:H5''	18:61:24:GLY:HA3	1.93	0.51
15:1H:2343:A:H2'	15:1H:2344:G:C8	2.46	0.51
17:L8:8:LEU:HB2	17:L8:28:LEU:HD22	1.93	0.51
18:61:8:PRO:HA	18:61:14:ASP:HA	1.92	0.51
19:9I:31:LEU:HD23	34:5E:97:PHE:O	2.11	0.51
15:14:21:A:H2'	15:14:22:C:H6	1.75	0.51
15:14:903:G:H2'	15:14:904:G:C8	2.46	0.51
15:14:1560:A:H2'	15:14:1561:G:C8	2.46	0.51
15:14:1733:C:H2'	15:14:1734:C:C6	2.46	0.51
15:14:2270:G:H21	31:E5:9:SER:H	1.59	0.51
26:16:91:G:C6	26:16:92:A:C6	2.99	0.51
26:16:96:C:H2'	26:16:97:C:H6	1.75	0.51
27:85:8:VAL:HB	27:85:12:ARG:HE	1.74	0.51
31:I8:11:ARG:HG3	31:I8:11:ARG:HH11	1.76	0.51
28:I5:34:GLU:HG2	40:49:113:ARG:HD2	1.91	0.51
35:95:5:VAL:HB	35:95:37:VAL:HB	1.92	0.51
39:J8:60:PHE:HE2	39:J8:91:LYS:HE2	1.75	0.51
40:49:115:ARG:HH21	40:49:137:GLU:CD	2.13	0.51
43:A5:106:ILE:O	43:A5:106:ILE:HG12	2.08	0.51
44:12:92:TYR:CE2	44:12:94:ASN:HB2	2.45	0.51
44:12:185:ILE:CG2	44:12:199:TYR:HB2	2.35	0.51
3:F8:35:THR:O	3:F8:39:ILE:HD12	2.11	0.51
52:V1:3:C:N4	52:V1:70:G:H1	2.08	0.51
1:13:1054:G:H22	1:13:1069:G:H1'	1.76	0.51
1:13:1375:A:H2'	1:13:1376:C:C6	2.45	0.51
9:8E:31:GLN:OE1	9:8E:36:TYR:HB2	2.11	0.51
1:1G:1067:G:OP1	14:32:36:ARG:NH2	2.34	0.51
11:G8:85:VAL:HG23	11:G8:96:ILE:HG22	1.93	0.51
15:1H:1070:G:H22	15:1H:1191:A:H2	1.57	0.51
15:1H:1090:G:H1	15:1H:1161:U:H3	1.59	0.51
15:1H:1454:U:H2'	15:1H:1455:U:H6	1.76	0.51
15:1H:1606:C:H2'	15:1H:1607:C:H6	1.74	0.51
15:1H:1772:G:H2'	15:1H:1773:A:C8	2.46	0.51
18:61:73:GLU:OE2	18:61:137:PRO:HD2	2.10	0.51
13:3A:47:LYS:O	13:3A:49:ASN:N	2.43	0.51
15:14:471:A:H1'	15:14:1249:C:O4'	2.10	0.51
15:14:661:C:H2'	15:14:662:C:H6	1.75	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:69:123:LEU:HD22	18:69:143:SER:HB3	1.93	0.51
28:I5:15:ILE:HD13	28:I5:30:GLU:HG2	1.93	0.51
43:E8:28:SER:O	43:E8:31:GLU:HG3	2.11	0.51
50:7E:109:ILE:HD11	50:7E:111:ILE:HG12	1.93	0.51
47:59:99:VAL:HG13	47:59:100:GLY:H	1.76	0.51
6:2I:33:THR:OG1	6:2I:34:ASP:O	2.27	0.51
50:72:109:ILE:HG12	50:72:110:ALA:N	2.26	0.51
1:13:950:G:H1'	1:13:1237:A:C2	2.46	0.50
1:13:1059:C:H2'	1:13:1060:C:C6	2.46	0.50
1:13:1139:A:P	14:3E:49:ARG:HH22	2.34	0.50
1:13:1853:C:O2'	24:4I:111:LYS:NZ	2.26	0.50
1:13:1994:C:H2'	1:13:1995:C:C6	2.45	0.50
1:13:2121:U:C4	51:Y1:47:U:H5''	2.46	0.50
1:1G:788:G:H2'	1:1G:789:A:C8	2.45	0.50
1:1G:1181:U:H4'	13:3A:86:ARG:HG2	1.93	0.50
1:1G:1754:U:C4	1:1G:1908:U:C6	2.99	0.50
1:1G:1806:A:H2'	1:1G:1807:A:O4'	2.10	0.50
1:1G:1834:G:H2'	1:1G:1835:C:C6	2.46	0.50
1:1G:1942:U:O2'	1:1G:1987:A:N3	2.36	0.50
10:58:13:TRP:O	10:58:134:ARG:HA	2.11	0.50
4:19:134:ARG:NH1	4:19:188:GLU:OE2	2.44	0.50
9:82:99:LEU:HB3	9:82:101:PHE:CD1	2.45	0.50
15:1H:219:A:H4'	15:1H:220:U:O5'	2.11	0.50
15:1H:1074:U:O2'	15:1H:1075:A:O5'	2.22	0.50
15:1H:2060:G:H4'	15:1H:2061:C:OP2	2.10	0.50
15:1H:2151:A:N7	15:1H:2187:G:N2	2.59	0.50
15:14:718:G:N3	15:14:718:G:C2'	2.73	0.50
15:14:1349:U:OP1	56:14:3675:HOH:O	2.18	0.50
15:14:1583:G:H3'	15:14:1584:U:H5''	1.92	0.50
23:21:29:GLY:HA3	23:21:51:PHE:HE1	1.76	0.50
28:M8:62:ARG:HG3	28:M8:63:TYR:N	2.26	0.50
34:52:33:TYR:CE2	34:52:78:GLU:HG3	2.45	0.50
38:88:21:THR:H	38:88:98:LYS:CB	2.23	0.50
35:95:35:LEU:C	35:95:37:VAL:HG13	2.32	0.50
37:BA:50:GLU:HA	37:BA:100:ILE:HG12	1.93	0.50
44:12:55:PHE:HA	44:12:58:ILE:HG12	1.92	0.50
49:7A:25:ARG:HG3	49:7A:25:ARG:HH11	1.76	0.50
52:X1:45:U:H4'	52:X1:46:G:OP1	2.10	0.50
1:13:1159:G:O6	51:Y1:51:U:H1'	2.12	0.50
1:13:1201:A:N3	1:13:1540:G:H1'	2.26	0.50
1:13:1994:C:H2'	1:13:1995:C:H6	1.76	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:11:17:THR:CG2	4:11:204:ILE:HA	2.40	0.50
15:1H:615:A:OP1	32:31:95:ARG:NH1	2.44	0.50
15:1H:654:A:N1	15:1H:663:G:O2'	2.39	0.50
15:1H:796:U:O2	15:1H:2039:A:H1'	2.10	0.50
15:1H:1381:G:N2	15:1H:1658:A:H2'	2.26	0.50
15:1H:2490:C:H4'	15:1H:2491:A:OP1	2.10	0.50
15:1H:2772:U:H4'	15:1H:2773:A:OP1	2.10	0.50
16:B8:107:ASP:O	16:B8:111:ARG:HG2	2.11	0.50
15:14:880:G:N2	30:35:53:GLY:O	2.44	0.50
15:14:2762:U:OP1	47:59:85:LYS:NZ	2.30	0.50
21:68:88:ASN:ND2	21:68:90:GLN:H	2.09	0.50
24:4A:39:ILE:HG21	24:4A:52:GLU:HB3	1.93	0.50
27:85:52:ARG:HA	27:85:55:ARG:HG3	1.92	0.50
34:5E:41:GLU:HB2	34:5E:62:TRP:HB3	1.93	0.50
35:D8:24:LYS:HG3	35:D8:92:THR:HG23	1.93	0.50
39:J8:21:ARG:HH11	39:J8:21:ARG:HG3	1.75	0.50
38:45:26:TYR:CE2	38:45:140:ALA:HB1	2.46	0.50
39:F5:80:LEU:HB3	39:F5:82:LEU:HD11	1.93	0.50
42:62:92:SER:HB3	42:62:95:ARG:H	1.76	0.50
52:V1:16:U:H1'	52:V1:60:U:O2	2.12	0.50
6:2A:119:CYS:HB3	1:1G:1407:G:H1'	1.92	0.50
1:1G:829:G:H2'	1:1G:830:C:C6	2.46	0.50
1:1G:1291:G:O2'	1:1G:1465:G:OP1	2.28	0.50
1:1G:1638:A:H2'	1:1G:1639:A:C8	2.46	0.50
1:1G:2079:G:H1	37:BA:54:LYS:HZ2	1.59	0.50
14:3E:163:GLU:OE2	14:3E:166:LYS:HE3	2.12	0.50
15:1H:155:C:N4	15:1H:161:G:H1	2.08	0.50
15:1H:581:G:H2'	15:1H:582:U:C6	2.47	0.50
15:1H:598:G:OP2	35:D8:78:LYS:NZ	2.41	0.50
15:1H:2828:C:H5'	36:N8:29:THR:HG21	1.94	0.50
16:B8:110:ILE:O	16:B8:110:ILE:HD13	2.11	0.50
11:C5:49:VAL:HA	15:14:511:A:H4'	1.93	0.50
18:61:110:ASP:OD1	18:61:130:TYR:HE1	1.94	0.50
15:14:347:A:OP2	32:39:169:ASN:HB2	2.11	0.50
15:14:1718:A:OP1	21:25:5:GLN:HG3	2.12	0.50
15:14:2601:C:C2'	15:14:2602:A:H5'	2.42	0.50
26:16:93:C:H5'	38:88:18:LYS:HA	1.92	0.50
23:29:4:ILE:HG12	23:29:95:ILE:HD11	1.94	0.50
50:7E:7:ALA:HB2	50:7E:85:ARG:HD2	1.93	0.50
47:59:19:VAL:HG12	47:59:20:ALA:H	1.76	0.50
1:13:663:U:H2'	1:13:664:C:C6	2.46	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:13:782:G:H2'	1:13:783:A:C8	2.44	0.50
1:13:1196:G:H2'	1:13:1197:G:O4'	2.11	0.50
1:13:1271:A:N3	50:7E:113:SER:OG	2.45	0.50
1:13:1495:A:C4	1:13:1497:G:N7	2.80	0.50
1:1G:1071:A:OP2	14:32:8:VAL:HG23	2.12	0.50
1:1G:1870:C:O2	1:1G:1922:G:N2	2.45	0.50
1:1G:1887:C:H3'	1:1G:1887:C:H6	1.77	0.50
1:1G:2136:A:H2'	1:1G:2137:C:C6	2.46	0.50
11:G8:40:GLU:HB3	11:G8:64:GLU:CG	2.42	0.50
15:1H:957:A:H2'	15:1H:960:C:C5	2.47	0.50
15:1H:1830:U:H2'	15:1H:1831:C:C6	2.46	0.50
10:15:25:ARG:HH11	15:14:1060:U:H3	1.59	0.50
10:15:56:ASN:HA	10:15:125:GLY:H	1.77	0.50
16:B8:54:ARG:HA	16:B8:59:THR:HB	1.92	0.50
17:L8:8:LEU:HD13	17:L8:31:LEU:HD23	1.92	0.50
15:14:38:A:H1'	32:39:48:THR:HB	1.93	0.50
15:14:210:G:O2'	15:14:223:A:N3	2.38	0.50
15:14:471:A:H5''	15:14:472:C:OP1	2.11	0.50
15:14:1224:G:H5'	15:14:1225:A:OP1	2.11	0.50
15:14:2136:C:C4	15:14:2143:U:H4'	2.47	0.50
15:14:2816:G:H2'	15:14:2817:C:O4'	2.11	0.50
16:75:51:ARG:HG2	16:75:98:LYS:HD2	1.93	0.50
16:75:107:ASP:OD1	16:75:109:GLU:HB2	2.11	0.50
22:H8:69:THR:HG22	22:H8:90:VAL:HA	1.93	0.50
26:16:96:C:H2'	26:16:97:C:C6	2.47	0.50
22:D5:29:TYR:O	22:D5:89:PHE:HD1	1.94	0.50
28:M8:23:GLU:HG3	40:41:6:ALA:N	2.26	0.50
43:E8:78:GLU:OE1	43:E8:99:ARG:NH1	2.40	0.50
44:1E:141:GLU:HG2	44:1E:145:LEU:HD22	1.92	0.50
52:X1:25:C:H2'	52:X1:26:A:O4'	2.12	0.50
1:13:1303:G:H2'	1:13:1304:A:H8	1.76	0.50
2:65:87:PHE:CZ	2:65:102:ALA:HB2	2.46	0.50
13:3I:38:THR:HG22	13:3I:39:VAL:HG23	1.92	0.50
14:3E:85:LYS:CG	14:3E:86:LYS:H	2.25	0.50
15:1H:1134:A:H1'	15:1H:1151:A:H61	1.75	0.50
15:1H:2704:U:P	15:1H:2735:G:H22	2.35	0.50
20:1F:5:ASP:HB3	20:1F:8:THR:HG23	1.92	0.50
15:14:691:A:H2'	15:14:692:C:C5	2.47	0.50
15:14:2487:G:H3'	15:14:2488:U:C5'	2.41	0.50
15:14:2696:C:H5	15:14:2741:A:N6	1.95	0.50
25:4E:39:GLY:CA	25:4E:71:LEU:HD11	2.42	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:1J:43:U:C4	40:49:70:VAL:HG23	2.46	0.50
30:78:91:PHE:O	30:78:121:LYS:NZ	2.35	0.50
30:35:111:ARG:HG2	30:35:128:HIS:CG	2.46	0.50
36:N8:40:LYS:CE	36:N8:46:CYS:HB3	2.42	0.50
36:J5:36:CYS:SG	36:J5:49:CYS:SG	3.10	0.50
45:98:24:GLN:OE1	45:98:36:THR:HG21	2.11	0.50
52:V1:19:G:O2'	52:V1:57:G:N3	2.40	0.50
1:13:885:U:H4'	1:13:886:C:O5'	2.12	0.50
8:22:15:THR:HG21	8:22:181:ASN:HA	1.93	0.50
1:1G:678:A:H2'	1:1G:679:A:C8	2.45	0.50
1:1G:1753:U:O4	48:1A:5:ARG:NH2	2.44	0.50
1:1G:2162:C:H2'	1:1G:2163:U:C6	2.47	0.50
15:1H:554:C:H4'	15:1H:555:A:O5'	2.11	0.50
15:1H:1606:C:H2'	15:1H:1607:C:C6	2.47	0.50
15:1H:2277:U:H4'	15:1H:2343:A:C2	2.46	0.50
15:1H:2649:G:N7	53:1H:3004:8UZ:N	2.59	0.50
15:1H:2763:G:O6	15:1H:2771:C:H5''	2.12	0.50
18:61:88:ILE:HD11	18:61:122:GLU:O	2.12	0.50
15:14:969:G:H2'	15:14:970:U:H6	1.77	0.50
15:14:1413:G:OP2	39:F5:2:SER:N	2.45	0.50
15:14:2099:U:H2'	15:14:2100:U:C6	2.46	0.50
15:14:2552:U:H2'	15:14:2553:C:C6	2.47	0.50
15:14:2886:A:H8	45:55:6:SER:N	1.89	0.50
21:68:31:LYS:HB3	21:68:32:TYR:CD1	2.46	0.50
22:H8:4:ARG:NH1	22:H8:60:GLU:OE1	2.45	0.50
32:39:13:SER:OG	32:39:15:SER:O	2.29	0.50
40:41:107:LEU:HD21	40:41:178:PHE:CE1	2.47	0.50
42:6E:111:ARG:HB3	42:6E:111:ARG:HH11	1.76	0.50
38:45:25:ASP:HB3	38:45:102:VAL:CG2	2.39	0.50
44:1E:69:LEU:HB3	44:1E:162:ILE:HG22	1.94	0.50
49:7I:71:ARG:O	49:7I:75:ARG:N	2.43	0.50
8:2E:62:ASP:CG	8:2E:97:LYS:HG2	2.32	0.50
1:13:1209:U:H2'	1:13:1210:G:O4'	2.12	0.50
1:13:1260:G:H8	1:13:1261:A:N1	2.10	0.50
11:G8:15:VAL:HG21	11:G8:42:VAL:HG21	1.94	0.50
14:3E:30:LYS:HA	14:3E:35:ARG:HE	1.77	0.50
9:82:105:ASP:OD1	9:82:107:ARG:HD3	2.11	0.50
15:1H:331:U:H2'	15:1H:332:G:O4'	2.12	0.50
15:1H:1583:G:H22	15:1H:1587:G:N2	2.09	0.50
15:1H:1873:G:P	56:1H:3763:HOH:O	2.69	0.50
15:1H:1977:A:C6	21:68:22:ILE:HD12	2.47	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:1H:2641:C:H2'	15:1H:2642:G:O4'	2.12	0.50
11:C5:87:LYS:CB	11:C5:94:LYS:HA	2.40	0.50
15:14:29:U:H2'	15:14:30:G:H8	1.76	0.50
15:14:118:U:OP2	56:14:3678:HOH:O	2.19	0.50
22:H8:8:TYR:HB2	22:H8:38:TYR:CE2	2.47	0.50
22:H8:53:ILE:HG13	22:H8:53:ILE:O	2.11	0.50
22:D5:49:ARG:NH1	38:45:135:ASP:HB3	2.26	0.50
28:M8:59:PHE:HA	28:M8:62:ARG:HG2	1.92	0.50
25:42:70:PRO:O	25:42:77:PRO:HD3	2.12	0.50
36:N8:52:TYR:HD1	36:N8:53:ALA:H	1.58	0.50
38:45:81:VAL:HG23	38:45:82:ARG:N	2.27	0.50
46:K8:32:LEU:HD11	46:K8:54:LYS:HG2	1.93	0.50
46:K8:38:GLN:O	46:K8:41:ILE:HG22	2.11	0.50
47:51:46:GLU:OE1	47:51:51:ARG:NH2	2.43	0.50
48:1I:38:ILE:HG23	48:1I:71:LEU:HB3	1.93	0.50
52:V1:16:U:H2'	52:V1:17:C:H5'	1.93	0.50
52:W4:19:G:H3'	52:W4:20:U:H5	1.76	0.50
1:13:1889:C:H2'	1:13:1890:C:C6	2.46	0.50
1:1G:1104:G:H2'	1:1G:1105:G:C8	2.47	0.50
1:1G:1602:C:H3'	1:1G:1603:C:H5''	1.94	0.50
1:1G:1753:U:H2'	1:1G:1754:U:C5	2.47	0.50
15:1H:2189:C:OP2	15:1H:2191:G:N2	2.45	0.50
15:1H:2323:G:N1	15:1H:2326:A:C2	2.74	0.50
15:1H:2346:G:C4'	31:I8:42:GLY:HA3	2.42	0.50
15:1H:2476:C:H2'	15:1H:2477:U:C6	2.47	0.50
15:1H:2507:U:H2'	15:1H:2508:U:C6	2.47	0.50
15:14:980:A:C5	15:14:981:G:C8	3.00	0.50
15:14:1106:U:H3	15:14:1128:A:H61	1.58	0.50
15:14:1818:A:H4'	15:14:1819:A:O5'	2.12	0.50
15:14:1970:G:H2'	15:14:1971:U:C6	2.47	0.50
15:14:2641:C:H2'	15:14:2642:G:O4'	2.12	0.50
15:14:2727:U:H2'	15:14:2730:G:H5''	1.93	0.50
15:14:2747:G:C6	15:14:2748:G:O6	2.65	0.50
22:H8:163:LEU:HB3	22:H8:165:VAL:H	1.77	0.50
24:4I:49:THR:O	24:4I:53:VAL:HG23	2.12	0.50
22:D5:62:PRO:C	22:D5:64:GLY:H	2.13	0.50
24:4A:50:GLU:O	24:4A:54:VAL:HG23	2.12	0.50
26:1J:41:A:O2'	26:1J:42:U:H5'	2.12	0.50
26:1J:78:G:H2'	26:1J:79:U:O4'	2.12	0.50
30:78:108:LYS:C	30:78:110:TYR:H	2.14	0.50
47:51:4:ILE:HG21	47:51:6:ARG:NH1	2.27	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:1A:33:GLN:HB3	48:1A:75:ILE:HD11	1.94	0.50
50:7E:10:LEU:HD22	50:7E:83:ILE:HD11	1.94	0.50
8:2E:113:ALA:HB3	8:2E:114:PRO:HD3	1.93	0.50
52:V1:18:G:H2'	52:V1:57:G:N2	2.26	0.50
1:13:1700:G:C5	1:13:1701:U:C4	3.00	0.50
1:13:1806:A:H2'	1:13:1807:A:O4'	2.11	0.50
1:1G:661:G:H1'	25:42:19:MET:CE	2.41	0.50
1:1G:1148:C:H2'	1:1G:1149:A:O4'	2.12	0.50
1:1G:1265:U:H2'	1:1G:1266:G:H8	1.74	0.50
1:1G:1608:C:H2'	1:1G:1609:A:C8	2.46	0.50
1:1G:1760:C:H2'	1:1G:1761:G:C8	2.46	0.50
1:1G:2020:G:N2	1:1G:2125:A:H8	2.09	0.50
4:19:85:ASP:HB2	4:19:92:ILE:HD13	1.92	0.50
15:1H:1213:G:H2'	15:1H:1214:U:C6	2.46	0.50
15:1H:1308:G:H2'	15:1H:1309:G:C8	2.47	0.50
15:1H:1314:A:H3'	36:N8:19:ARG:NH1	2.26	0.50
15:1H:1419:C:HO2'	15:1H:1845:G:HO2'	1.60	0.50
15:1H:2644:A:O2'	15:1H:2645:G:H5''	2.12	0.50
10:15:55:VAL:HB	10:15:126:PRO:HA	1.93	0.50
16:B8:50:ILE:HD11	16:B8:102:ILE:CD1	2.42	0.50
17:L8:9:VAL:HG22	17:L8:54:VAL:HA	1.94	0.50
18:61:75:LEU:HD23	18:61:105:HIS:CD2	2.47	0.50
15:14:1044:A:C2	15:14:1045:G:C8	3.00	0.50
15:14:1117:A:H5''	15:14:1118:A:H5''	1.94	0.50
25:4E:113:ALA:O	25:4E:115:VAL:HG23	2.12	0.50
26:16:42:U:H5	28:M8:2:LYS:HG3	1.77	0.50
23:29:33:VAL:HG12	23:29:89:ASP:CB	2.36	0.50
30:35:113:LYS:HA	30:35:129:ALA:O	2.12	0.50
35:D8:10:LYS:NZ	35:D8:23:GLU:OE1	2.45	0.50
38:88:25:ASP:N	38:88:102:VAL:HG22	2.26	0.50
40:41:7:LEU:HB2	40:41:104:GLU:HB2	1.92	0.50
44:1E:77:ALA:HB1	44:1E:165:VAL:HG11	1.93	0.50
48:1I:23:ILE:HA	48:1I:26:ALA:HB3	1.94	0.50
6:2I:21:ILE:HG12	6:2I:30:VAL:HG12	1.93	0.50
52:W1:60:U:H5''	52:W1:61:C:H5	1.77	0.50
52:V4:72:C:C3'	52:V4:73:A:H5''	2.42	0.50
1:13:829:G:C6	1:13:841:G:C6	3.00	0.49
1:13:1187:G:H5''	1:13:1188:A:OP2	2.12	0.49
3:B5:40:LYS:HA	3:B5:51:VAL:HG11	1.93	0.49
4:11:61:LEU:HD22	15:1H:1618:G:H5''	1.93	0.49
4:11:239:ARG:O	4:11:240:ALA:CB	2.59	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:L5:10:ARG:O	5:L5:14:LYS:HB2	2.11	0.49
1:1G:1943:G:H5''	33:5A:17:LYS:NZ	2.27	0.49
1:1G:2071:G:N2	16:75:119:LYS:HB2	2.27	0.49
10:58:7:LYS:HD2	10:58:7:LYS:H	1.77	0.49
4:19:236:GLY:HA2	15:14:2614:G:C8	2.47	0.49
13:3I:66:VAL:HG22	13:3I:67:THR:N	2.27	0.49
14:3E:173:TRP:CZ3	14:3E:193:ASP:HB3	2.47	0.49
15:1H:355:A:O2'	15:1H:356:A:H8	1.95	0.49
15:1H:1126:U:H1'	15:1H:1136:A:C2	2.47	0.49
15:1H:1583:G:N3	15:1H:1583:G:H3'	2.27	0.49
15:1H:2057:G:H21	23:21:146:THR:CG2	2.20	0.49
19:9I:84:LYS:NZ	6:2I:111:ASP:OD2	2.33	0.49
15:14:30:G:H2'	15:14:31:C:C6	2.47	0.49
15:14:50:G:N3	15:14:117:A:C2	2.79	0.49
15:14:2815:A:H5''	15:14:2907:U:H4'	1.94	0.49
22:H8:122:ARG:NH1	38:88:139:GLU:OE2	2.45	0.49
22:D5:69:THR:HG22	22:D5:90:VAL:HG22	1.93	0.49
23:29:1:MET:H2	23:29:84:PHE:HB2	1.77	0.49
36:N8:3:LYS:HB3	36:N8:3:LYS:HZ3	1.72	0.49
38:88:34:LEU:HD23	38:88:104:PHE:CD2	2.46	0.49
38:88:135:ASP:O	38:88:139:GLU:HG3	2.11	0.49
42:62:92:SER:HB3	42:62:94:ARG:HG2	1.93	0.49
48:1A:22:LYS:HD2	48:1A:88:LEU:HD21	1.93	0.49
50:7E:45:ILE:HD12	50:7E:47:GLY:HA2	1.94	0.49
52:V1:18:G:HO2'	52:V1:19:G:P	2.35	0.49
6:2A:84:VAL:HG11	6:2A:95:ILE:HD11	1.94	0.49
1:1G:1053:A:O2'	1:1G:1054:G:OP2	2.26	0.49
1:1G:1626:G:H2'	1:1G:1627:G:C8	2.46	0.49
1:1G:1755:G:H1'	1:1G:1776:U:C2	2.46	0.49
4:19:166:GLN:OE1	4:19:166:GLN:HA	2.12	0.49
9:82:43:ALA:HA	9:82:74:ILE:HD13	1.93	0.49
15:1H:809:G:H4'	15:1H:1810:G:OP1	2.12	0.49
15:1H:1092:G:HO2'	15:1H:1159:A:H61	1.59	0.49
15:1H:1236:U:C2'	15:1H:1237:A:H5'	2.42	0.49
15:1H:2567:U:H2'	15:1H:2569:U:H5''	1.94	0.49
15:1H:2821:U:H5'	15:1H:2903:G:O6	2.11	0.49
10:15:131:GLN:NE2	15:14:6:A:N3	2.60	0.49
13:3A:17:LYS:H	13:3A:17:LYS:HD2	1.76	0.49
15:14:1327:A:H5''	45:55:36:THR:HG22	1.94	0.49
15:14:1556:A:N3	15:14:1557:A:H1'	2.27	0.49
15:14:1898:U:OP1	15:14:2425:G:O2'	2.31	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:14:2163:C:O2	15:14:2179:G:N1	2.45	0.49
21:25:87:ILE:HG23	21:25:91:LEU:HA	1.94	0.49
26:1J:68:A:C6	26:1J:111:C:C6	3.00	0.49
27:85:83:LEU:HD23	27:85:88:ILE:HB	1.93	0.49
27:85:92:ARG:C	27:85:94:ASN:H	2.14	0.49
33:5I:23:ARG:HH11	33:5I:30:ALA:HB2	1.76	0.49
32:39:3:GLU:O	32:39:19:GLU:HB2	2.12	0.49
38:45:43:THR:HA	38:45:94:VAL:HG12	1.94	0.49
40:49:2:PRO:HG2	40:49:4:ASP:HB3	1.93	0.49
44:12:12:GLU:HB3	44:12:213:LEU:HD13	1.93	0.49
44:12:19:HIS:CD2	44:12:20:GLU:HG2	2.48	0.49
3:F8:3:THR:CB	3:F8:4:ALA:HA	2.42	0.49
6:2I:97:ALA:O	6:2I:101:SER:HB3	2.12	0.49
51:Y4:43:U:O2'	51:Y4:44:U:H5'	2.12	0.49
1:13:1569:A:H2'	1:13:1570:G:C8	2.47	0.49
1:13:1587:A:N3	1:13:1592:A:O2'	2.35	0.49
1:13:1792:G:C6	1:13:1793:C:C4	2.99	0.49
1:13:1890:C:H2'	1:13:1891:C:C6	2.47	0.49
4:11:69:ARG:HG3	4:11:69:ARG:NH1	2.26	0.49
7:8I:100:LYS:HB3	7:8I:101:ARG:HH11	1.75	0.49
12:Q8:30:ARG:HB2	12:Q8:30:ARG:NH1	2.28	0.49
15:1H:174:C:H2'	15:1H:175:U:H6	1.76	0.49
15:1H:342:G:N2	15:1H:343:C:O2	2.45	0.49
15:1H:893:C:H2'	15:1H:894:G:O4'	2.11	0.49
18:61:75:LEU:HD23	18:61:105:HIS:CG	2.47	0.49
15:14:34:C:O2'	15:14:35:G:OP1	2.30	0.49
15:14:225:U:H2'	15:14:226:C:C6	2.47	0.49
15:14:899:C:O3'	17:H5:49:LYS:HE2	2.13	0.49
15:14:1552:U:H2'	15:14:1553:C:C6	2.47	0.49
15:14:2107:A:H2'	15:14:2108:G:O4'	2.12	0.49
15:14:2805:C:H2'	15:14:2806:A:C8	2.47	0.49
16:75:87:ASP:N	16:75:87:ASP:OD1	2.45	0.49
26:1J:14:C:OP2	26:1J:14:C:H6	1.95	0.49
32:39:64:ILE:HD11	32:39:75:HIS:HB2	1.92	0.49
52:W1:11:C:H2'	52:W1:12:U:C6	2.47	0.49
1:13:1378:C:H2'	1:13:1379:G:H8	1.78	0.49
4:11:175:LEU:HD12	4:11:185:VAL:HG21	1.94	0.49
7:8I:34:LYS:HG3	50:7E:90:GLY:O	2.12	0.49
7:8I:41:LYS:NZ	7:8I:92:ARG:HH12	2.11	0.49
1:1G:986:C:H1'	1:1G:987:G:N1	2.27	0.49
1:1G:1159:G:O6	51:Y4:51:U:H1'	2.12	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:1G:1905:U:H5'	1:1G:1906:A:C5'	2.42	0.49
2:65:109:GLY:C	2:65:110:LEU:HD13	2.33	0.49
4:19:13:ARG:NH1	15:14:778:G:OP2	2.43	0.49
4:19:50:THR:OG1	15:14:1847:G:H1'	2.12	0.49
12:Q8:4:MET:C	12:Q8:59:LYS:HE2	2.33	0.49
12:Q8:48:PHE:O	12:Q8:52:LYS:HD3	2.12	0.49
14:3E:104:VAL:HG21	14:3E:140:VAL:HG21	1.95	0.49
15:1H:1341:U:H2'	15:1H:1342:C:H6	1.77	0.49
15:1H:1465:G:O2'	15:1H:1466:C:H6	1.95	0.49
15:1H:1892:G:O2'	15:1H:1893:A:H8	1.96	0.49
18:61:31:LEU:HD21	18:61:38:LEU:HG	1.95	0.49
15:14:225:U:H2'	15:14:226:C:H6	1.78	0.49
15:14:868:A:OP2	15:14:1235:G:N2	2.46	0.49
15:14:2313:A:N6	15:14:2333:G:C8	2.79	0.49
21:68:17:ARG:HG2	21:68:17:ARG:NH1	2.26	0.49
18:69:93:THR:O	18:69:97:ILE:HG13	2.12	0.49
22:D5:45:ASP:OD2	22:D5:49:ARG:NE	2.41	0.49
28:M8:23:GLU:HG3	40:41:6:ALA:H	1.77	0.49
33:5I:49:HIS:HD2	8:2E:6:HIS:HB2	1.77	0.49
40:49:7:LEU:HB2	40:49:104:GLU:OE2	2.13	0.49
40:49:15:VAL:HG21	40:49:176:LEU:HD23	1.94	0.49
44:12:100:GLY:N	44:12:176:GLU:OE2	2.35	0.49
50:7E:6:ILE:HB	50:7E:85:ARG:HH12	1.76	0.49
45:55:33:ARG:HD3	45:55:113:LEU:HD12	1.95	0.49
8:2E:76:VAL:O	8:2E:84:ILE:HG13	2.13	0.49
1:13:819:A:H2'	1:13:820:U:H6	1.77	0.49
11:G8:81:LYS:HD2	11:G8:99:CYS:SG	2.52	0.49
11:G8:87:LYS:HB3	11:G8:96:ILE:HD12	1.94	0.49
12:Q8:26:LYS:NZ	15:1H:2375:A:O2'	2.25	0.49
15:1H:854:G:OP2	30:78:41:ARG:HG2	2.13	0.49
15:1H:874:C:O2	30:78:55:ARG:NH2	2.44	0.49
15:1H:1098:A:H1'	15:1H:2767:G:C8	2.48	0.49
15:1H:1768:U:H2'	15:1H:1769:G:O4'	2.13	0.49
15:1H:2417:C:OP2	15:1H:2417:C:H6	1.95	0.49
11:C5:8:LYS:HE3	11:C5:95:LYS:NZ	2.28	0.49
14:32:45:GLN:O	14:32:46:LYS:HG2	2.11	0.49
15:14:219:A:H5'	15:14:220:U:OP1	2.13	0.49
15:14:684:G:H2'	15:14:685:G:O4'	2.12	0.49
15:14:1470:G:C2	15:14:1471:G:C8	3.00	0.49
15:14:1474:G:H2'	15:14:1475:G:C8	2.48	0.49
25:42:110:LEU:HD13	25:42:118:ILE:HG21	1.93	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:78:84:ASN:HA	30:78:115:LEU:O	2.12	0.49
32:31:196:LEU:C	32:31:197:ASP:O	2.49	0.49
30:35:14:LYS:HD3	30:35:16:ARG:HG3	1.95	0.49
44:12:109:SER:HA	44:12:112:VAL:HG23	1.94	0.49
47:59:42:ARG:NH1	47:59:53:GLU:O	2.45	0.49
8:2E:16:ARG:HH11	8:2E:16:ARG:HB2	1.76	0.49
51:Y4:35:A:H8	51:Y4:35:A:OP2	1.95	0.49
1:13:1048:G:H2'	1:13:1049:A:C8	2.48	0.49
1:13:1853:C:OP2	24:4I:103:THR:OG1	2.14	0.49
1:1G:672:A:N6	1:1G:1187:G:O2'	2.41	0.49
1:1G:1025:G:H2'	1:1G:1026:C:C6	2.48	0.49
15:1H:520:G:H2'	15:1H:521:G:O4'	2.13	0.49
15:1H:1718:A:H4'	15:1H:1719:A:O5'	2.11	0.49
14:32:13:ARG:HD2	14:32:38:TYR:O	2.13	0.49
15:14:1029:A:N1	15:14:2052:G:O2'	2.31	0.49
15:14:2579:A:C2	15:14:2662:U:H4'	2.48	0.49
15:14:2735:G:OP2	56:14:3679:HOH:O	2.20	0.49
18:69:125:GLU:OE1	18:69:141:LYS:HG3	2.12	0.49
22:D5:77:ASP:OD2	22:D5:80:ARG:N	2.31	0.49
34:5E:80:ARG:NH1	34:5E:88:VAL:O	2.46	0.49
45:98:107:ASP:HB3	45:98:109:ALA:H	1.78	0.49
46:K8:52:ASP:O	46:K8:56:GLN:HB2	2.12	0.49
8:2E:50:ALA:HB2	8:2E:75:VAL:HB	1.95	0.49
50:72:109:ILE:CG2	50:72:137:VAL:HB	2.42	0.49
52:W4:19:G:H3'	52:W4:20:U:C5	2.47	0.49
1:13:1128:A:H4'	1:13:1129:G:OP1	2.12	0.49
1:13:1586:G:H5'	56:13:2532:HOH:O	2.11	0.49
1:13:1691:C:OP2	1:13:1692:G:O2'	2.25	0.49
1:1G:1048:G:O2'	14:32:116:GLN:HG3	2.13	0.49
1:1G:1374:C:OP1	1:1G:1474:G:O2'	2.30	0.49
1:1G:1614:U:O4	1:1G:1839:U:O2'	2.27	0.49
1:1G:1773:C:H4'	1:1G:1774:A:O5'	2.11	0.49
1:1G:1833:G:C6	1:1G:1834:G:C5	3.01	0.49
1:1G:1856:A:OP1	24:4A:116:THR:HG23	2.13	0.49
1:1G:1865:A:N3	1:1G:1868:G:O2'	2.35	0.49
1:1G:1885:G:H2'	1:1G:1886:C:C6	2.48	0.49
1:1G:1947:C:OP1	29:AA:70:LYS:HE3	2.13	0.49
10:58:97:ARG:H	10:58:100:GLU:HG3	1.78	0.49
11:G8:35:TYR:CE2	11:G8:69:ALA:HB3	2.48	0.49
4:19:37:LEU:HD11	4:19:60:ARG:HB2	1.95	0.49
15:1H:136:G:H1'	3:F8:41:ASN:ND2	2.27	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:1H:613:U:H1'	32:31:90:PHE:CD1	2.47	0.49
15:1H:691:A:C6	15:1H:694:C:N4	2.81	0.49
15:1H:711:G:H5'	30:78:15:ARG:CB	2.38	0.49
15:1H:782:G:N7	56:1H:3785:HOH:O	2.34	0.49
15:1H:1004:A:N1	15:1H:2473:G:H4'	2.27	0.49
15:1H:1528:G:H2'	15:1H:1529:G:H8	1.77	0.49
15:1H:1641:C:O2'	15:1H:1642:G:H5'	2.12	0.49
15:1H:1988:U:OP1	15:1H:1988:U:H6	1.96	0.49
15:1H:2843:G:C5'	15:1H:2843:G:H8	2.25	0.49
15:1H:2850:G:C8	56:1H:3825:HOH:O	2.64	0.49
16:B8:26:ASP:O	16:B8:49:VAL:HG12	2.12	0.49
11:C5:73:ARG:NH2	11:C5:81:LYS:O	2.45	0.49
14:32:118:ARG:HH21	14:32:118:ARG:HB2	1.77	0.49
15:14:70:A:H4'	15:14:71:U:H5''	1.93	0.49
15:14:306:G:O2'	15:14:307:A:O4'	2.29	0.49
15:14:971:C:H2'	15:14:972:C:H6	1.77	0.49
15:14:1228:C:H2'	15:14:1229:C:C6	2.47	0.49
15:14:2153:C:H42	15:14:2185:G:N2	2.11	0.49
15:14:2713:U:H2'	15:14:2714:C:C6	2.47	0.49
25:42:30:ALA:O	25:42:45:PHE:HA	2.12	0.49
30:78:47:ASP:OD1	30:78:49:ARG:HD3	2.13	0.49
33:5I:39:LEU:HD11	33:5I:47:LEU:HD12	1.95	0.49
37:BI:89:ARG:HG3	37:BI:104:LEU:CD2	2.43	0.49
47:51:7:LEU:HD12	47:51:8:PRO:CD	2.43	0.49
48:1A:78:ASN:OD1	48:1A:80:LYS:HB3	2.13	0.49
1:13:1068:U:OP1	14:3E:13:ARG:NH2	2.46	0.49
4:11:13:ARG:HD3	15:1H:777:G:H4'	1.95	0.49
1:1G:1776:U:OP1	9:82:7:THR:HG21	2.13	0.49
12:Q8:23:VAL:HG21	30:78:62:LEU:HD13	1.95	0.49
12:Q8:31:HIS:HB2	12:Q8:34:TRP:CE3	2.40	0.49
15:1H:1910:A:H2'	15:1H:1911:C:O4'	2.12	0.49
15:1H:2608:U:H2'	15:1H:2609:C:C6	2.47	0.49
15:14:507:A:N3	15:14:509:G:H5''	2.27	0.49
15:14:803:C:H2'	15:14:804:C:C6	2.48	0.49
15:14:1479:C:H2'	15:14:1480:U:H6	1.78	0.49
15:14:2579:A:OP1	15:14:2663:C:H4'	2.12	0.49
22:H8:121:HIS:HB3	22:H8:123:ASP:O	2.13	0.49
22:H8:128:VAL:CG2	22:H8:161:VAL:HG12	2.43	0.49
23:21:87:GLU:O	23:21:89:ASP:N	2.42	0.49
23:21:92:THR:O	23:21:95:ILE:HB	2.13	0.49
24:4I:22:ILE:HB	24:4I:25:ILE:HD12	1.95	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:D8:44:LYS:HD2	35:D8:44:LYS:HA	1.62	0.49
32:39:102:PRO:HB2	32:39:105:VAL:HG23	1.93	0.49
38:88:66:ILE:HG22	38:88:67:ARG:H	1.78	0.49
42:62:113:GLU:OE1	42:62:122:HIS:ND1	2.46	0.49
52:W1:68:C:H2'	52:W1:69:G:H8	1.78	0.49
1:13:1130:C:H2'	1:13:1131:G:H8	1.76	0.49
1:1G:1275:U:H2'	1:1G:1276:C:C6	2.48	0.49
1:1G:1753:U:H2'	1:1G:1754:U:C6	2.48	0.49
1:1G:1806:A:H4'	9:82:103:THR:HA	1.94	0.49
15:1H:221:C:O2'	15:1H:222:G:H5'	2.13	0.49
15:1H:605:C:H2'	15:1H:606:C:H6	1.78	0.49
15:1H:875:U:H2'	15:1H:877:U:O4'	2.13	0.49
15:1H:1407:G:O2'	15:1H:1408:A:H5''	2.13	0.49
15:1H:2650:C:H5''	23:21:78:LEU:HB2	1.93	0.49
15:1H:2661:C:H2'	15:1H:2662:U:O4'	2.13	0.49
18:61:40:THR:HB	18:61:43:ASN:H	1.77	0.49
15:14:593:U:H5'	15:14:992:A:N1	2.28	0.49
15:14:1591:G:H3'	15:14:1592:A:H5''	1.95	0.49
26:16:44:C:H4'	40:41:67:LYS:HE3	1.95	0.49
23:29:143:ASN:HB2	23:29:147:PRO:HD2	1.95	0.49
25:42:143:ARG:NH1	50:72:77:GLU:OE2	2.46	0.49
26:1J:23:G:H2'	26:1J:24:U:O4'	2.12	0.49
3:F8:67:GLY:C	3:F8:69:TYR:H	2.16	0.49
50:72:114:THR:OG1	50:72:117:GLY:O	2.23	0.49
52:V4:9:A:H2'	52:V4:10:G:N7	2.28	0.49
52:V4:58:A:H2	52:V4:60:U:C2	2.30	0.49
1:13:903:A:C6	1:13:904:A:C6	3.01	0.49
1:13:1647:G:H3'	1:13:1648:G:H5''	1.95	0.49
8:22:175:LEU:HD21	8:22:201:TYR:HE2	1.78	0.49
1:1G:896:G:H1'	7:8A:16:GLN:OE1	2.12	0.49
1:1G:1264:G:C6	1:1G:1265:U:C4	3.01	0.49
10:58:65:LYS:NZ	15:1H:1069:A:OP2	2.46	0.49
10:58:106:MET:CG	15:1H:1054:C:H1'	2.43	0.49
4:19:75:ILE:HG21	4:19:99:ASP:HB2	1.95	0.49
15:1H:322:C:C2	15:1H:367:G:N2	2.80	0.49
15:1H:1469:U:HO2'	15:1H:1470:G:P	2.36	0.49
15:1H:2638:G:H4'	15:1H:2838:C:O2	2.13	0.49
18:61:64:GLU:O	18:61:68:LEU:N	2.35	0.49
15:14:388:G:H2'	15:14:389:A:H8	1.78	0.49
15:14:866:C:O2'	15:14:888:U:H5''	2.12	0.49
15:14:1583:G:H3'	15:14:1584:U:C5'	2.43	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:14:1890:G:C2'	15:14:1891:G:H5'	2.42	0.49
15:14:1924:G:N2	15:14:1927:C:H5	2.11	0.49
15:14:1970:G:H2'	15:14:1971:U:H6	1.78	0.49
15:14:2703:U:C5	15:14:2736:U:OP2	2.66	0.49
23:21:201:THR:HG22	23:21:202:LYS:N	2.26	0.49
29:AI:13:ASP:HA	29:AI:16:LEU:HB3	1.94	0.49
25:42:36:ASP:OD2	25:42:40:ARG:HG3	2.12	0.49
34:5E:8:ILE:HD11	34:5E:79:LEU:HD13	1.95	0.49
35:D8:52:VAL:HG22	35:D8:55:ALA:HB3	1.95	0.49
32:39:162:LEU:HA	32:39:165:ARG:HG3	1.94	0.49
44:12:77:ALA:O	44:12:81:VAL:HG23	2.12	0.49
44:12:97:TRP:CZ2	44:12:101:MET:HB2	2.48	0.49
6:2I:32:ILE:HD11	6:2I:68:ALA:HB1	1.94	0.49
52:V1:15:G:C6	52:V1:48:C:N4	2.81	0.49
52:V4:9:A:H62	52:V4:23:A:H62	1.61	0.49
1:13:983:C:H2'	1:13:984:U:C6	2.48	0.48
1:13:1038:A:H5'	1:13:1039:C:OP1	2.13	0.48
1:13:1050:G:H2'	1:13:1051:G:O4'	2.13	0.48
1:13:1379:G:N3	41:6I:23:GLY:HA3	2.28	0.48
1:13:1787:U:O4'	1:13:1809:G:N2	2.46	0.48
3:B5:26:TYR:CD2	3:B5:89:ILE:HD12	2.46	0.48
1:1G:1042:C:H2'	1:1G:1043:G:C8	2.48	0.48
1:1G:2027:C:C2	1:1G:2125:A:N6	2.81	0.48
7:8A:56:VAL:O	7:8A:77:VAL:HB	2.13	0.48
15:1H:7:G:H2'	15:1H:8:A:O4'	2.13	0.48
15:1H:880:G:N2	30:78:53:GLY:O	2.45	0.48
15:1H:1445:U:O2	15:1H:1445:U:H2'	2.13	0.48
15:1H:1452:C:H5'	15:1H:1521:A:H1'	1.95	0.48
11:C5:20:TYR:CZ	11:C5:42:VAL:HA	2.47	0.48
12:M5:27:THR:HG23	15:14:2376:A:OP1	2.13	0.48
18:61:72:LEU:HD11	18:61:107:VAL:HG21	1.95	0.48
18:61:110:ASP:OD1	18:61:110:ASP:N	2.46	0.48
15:14:118:U:P	56:14:3678:HOH:O	2.71	0.48
15:14:467:G:H2'	15:14:468:G:C8	2.48	0.48
15:14:1518:C:H2'	15:14:1519:A:C8	2.48	0.48
15:14:2286:G:H2'	15:14:2287:U:C6	2.48	0.48
23:21:197:ILE:HD11	23:21:199:ARG:NE	2.27	0.48
18:69:135:GLU:N	18:69:135:GLU:OE2	2.46	0.48
27:85:91:ASP:C	27:85:93:LYS:H	2.15	0.48
30:35:82:GLY:HA2	30:35:113:LYS:O	2.12	0.48
35:D8:66:ARG:CZ	35:D8:88:ARG:HD3	2.42	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:6I:74:ASP:CG	41:6I:77:ARG:HG2	2.33	0.48
39:F5:12:PRO:HG3	39:F5:43:TYR:HD1	1.78	0.48
45:98:72:ASP:O	45:98:76:VAL:HG23	2.13	0.48
48:1I:6:ILE:HG22	48:1I:98:ILE:HG12	1.95	0.48
8:2E:43:LEU:O	8:2E:47:LEU:HB2	2.13	0.48
52:W4:75:C:H2'	52:W4:76:A:C4	2.48	0.48
1:13:1017:G:OP1	49:7I:5:ARG:HB2	2.13	0.48
3:B5:31:HIS:NE2	15:14:70:A:H2	2.05	0.48
8:22:51:GLY:O	8:22:70:VAL:HG13	2.13	0.48
1:1G:1887:C:OP1	1:1G:1911:C:H4'	2.13	0.48
1:1G:1975:U:H4'	9:82:120:ARG:HD2	1.95	0.48
12:Q8:52:LYS:O	12:Q8:56:GLU:HG2	2.13	0.48
15:1H:48:A:N7	15:1H:118:U:C5	2.67	0.48
15:1H:1365:U:H2'	15:1H:1366:A:C8	2.48	0.48
15:1H:1508:C:H5''	15:1H:1509:G:O4'	2.13	0.48
15:1H:2443:G:N2	30:78:61:ARG:NH2	2.62	0.48
18:61:130:TYR:HA	18:61:131:LYS:HZ2	1.77	0.48
19:9I:28:GLU:HA	34:5E:99:ALA:O	2.13	0.48
15:14:272:U:H3	18:69:50:ARG:NH1	2.11	0.48
15:14:474:G:P	56:14:3751:HOH:O	2.71	0.48
15:14:735:G:H21	15:14:837:A:H61	1.60	0.48
15:14:1089:C:N4	15:14:1162:G:H22	2.09	0.48
15:14:2308:C:H2'	15:14:2309:C:C6	2.48	0.48
15:14:2338:G:H2'	15:14:2339:C:O4'	2.13	0.48
15:14:2483:G:O2'	15:14:2484:A:O4'	2.30	0.48
22:H8:98:MET:O	22:H8:125:LEU:HD12	2.13	0.48
22:H8:111:VAL:HG22	22:H8:145:GLU:HA	1.93	0.48
23:21:35:GLN:HG2	23:21:36:ARG:N	2.27	0.48
24:4I:16:ASP:OD1	24:4I:16:ASP:N	2.44	0.48
21:25:68:GLU:HB3	21:25:78:ARG:HH11	1.77	0.48
22:D5:28:MET:HA	22:D5:88:PHE:O	2.13	0.48
29:AI:18:LYS:HD3	29:AI:31:ILE:HD12	1.96	0.48
34:5E:52:ILE:O	34:5E:55:ASP:HB2	2.13	0.48
38:88:51:ARG:HG3	38:88:66:ILE:HD11	1.95	0.48
38:88:103:MET:HB2	38:88:104:PHE:CD2	2.48	0.48
43:E8:54:ALA:HA	43:E8:57:ASN:HB2	1.95	0.48
43:A5:20:VAL:HG11	43:A5:44:ALA:H	1.77	0.48
3:F8:57:LEU:N	3:F8:57:LEU:HD23	2.28	0.48
47:59:10:PRO:HD3	47:59:50:VAL:O	2.13	0.48
47:59:26:VAL:CG1	47:59:33:LEU:H	2.26	0.48
8:2E:7:PRO:HG2	8:2E:184:TYR:CB	2.43	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:2E:19:GLU:HA	8:2E:54:ARG:HH12	1.76	0.48
52:V4:35:A:H2'	52:V4:36:A:C8	2.48	0.48
1:13:1449:U:H4'	1:13:1450:G:OP2	2.12	0.48
1:13:1501:G:H5'	50:7E:89:PRO:HG2	1.96	0.48
1:13:1598:A:H8	1:13:1598:A:C5'	2.27	0.48
9:8E:49:PRO:O	9:8E:53:VAL:HB	2.13	0.48
1:1G:753:U:H2'	1:1G:754:G:C8	2.48	0.48
1:1G:844:U:O4'	37:BA:103:GLY:HA2	2.13	0.48
1:1G:1816:C:P	48:1A:51:ARG:HH22	2.36	0.48
7:8A:40:LYS:HD3	7:8A:42:TYR:CZ	2.48	0.48
15:1H:69:G:H21	15:1H:70:A:N6	2.12	0.48
15:1H:779:C:H5'	56:1H:3781:HOH:O	2.12	0.48
15:1H:935:C:H2'	15:1H:936:A:H4'	1.95	0.48
15:1H:1207:C:H4'	17:L8:32:GLN:HB2	1.96	0.48
15:1H:2047:U:O2'	15:1H:2632:C:H5'	2.13	0.48
15:1H:2336:G:H5''	15:1H:2337:A:OP2	2.13	0.48
17:L8:21:ALA:O	17:L8:24:LYS:HB3	2.14	0.48
18:61:110:ASP:CB	18:61:112:LYS:H	2.26	0.48
13:3A:54:LYS:HG2	13:3A:75:HIS:CD2	2.47	0.48
15:14:969:G:H4'	15:14:2284:A:C5	2.48	0.48
15:14:1002:C:OP1	38:45:87:LYS:NZ	2.32	0.48
15:14:1059:G:H1	15:14:1199:C:H42	1.60	0.48
15:14:1469:U:HO2'	15:14:1470:G:P	2.34	0.48
15:14:2168:C:H2'	15:14:2169:U:H4'	1.95	0.48
15:14:2419:C:H1'	30:35:67:MET:HE1	1.95	0.48
15:14:2527:C:H5''	15:14:2528:G:OP2	2.14	0.48
15:14:2909:U:H5'	15:14:2910:U:OP2	2.13	0.48
16:75:3:ARG:CG	23:29:9:VAL:HA	2.44	0.48
23:21:49:LEU:HD12	23:21:49:LEU:HA	1.67	0.48
23:29:1:MET:HG3	23:29:200:GLU:OE2	2.13	0.48
29:AI:40:ILE:O	29:AI:41:VAL:HG22	2.13	0.48
25:42:53:LEU:O	25:42:57:LYS:HB2	2.13	0.48
32:31:178:PRO:HB3	32:31:198:ALA:HA	1.94	0.48
29:AA:40:ILE:HA	29:AA:44:MET:SD	2.53	0.48
35:D8:60:GLU:HB2	35:D8:97:LYS:HE2	1.94	0.48
40:41:107:LEU:HD21	40:41:178:PHE:CD1	2.48	0.48
44:1E:21:ARG:HB2	44:1E:39:ILE:HA	1.94	0.48
45:98:100:LEU:HD11	45:98:113:LEU:HB2	1.94	0.48
48:1I:48:THR:HA	48:1I:62:HIS:HB3	1.94	0.48
49:7I:51:VAL:HG21	49:7I:74:LEU:CD2	2.43	0.48
49:7A:21:VAL:HG22	49:7A:33:ILE:HB	1.95	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:13:941:A:H1'	1:13:1194:U:O2	2.13	0.48
1:13:950:G:O2'	1:13:1236:A:N1	2.45	0.48
2:A8:5:THR:HG23	2:A8:8:GLU:OE2	2.12	0.48
6:2A:12:ARG:HH12	6:2A:14:VAL:HG13	1.79	0.48
1:1G:1755:G:H2'	1:1G:1755:G:N3	2.28	0.48
1:1G:2131:G:H2'	1:1G:2132:C:C6	2.48	0.48
10:58:57:ALA:C	10:58:59:LYS:H	2.15	0.48
10:58:96:GLU:C	10:58:98:VAL:N	2.64	0.48
12:Q8:48:PHE:CZ	30:78:62:LEU:HD21	2.48	0.48
9:82:24:GLY:HA2	9:82:59:PHE:O	2.13	0.48
9:82:42:ARG:HH11	9:82:71:SER:HB3	1.78	0.48
15:1H:758:U:H2'	15:1H:759:G:H8	1.77	0.48
15:1H:1252:A:C2	15:1H:1290:A:N1	2.76	0.48
15:1H:1892:G:O2'	15:1H:1893:A:O5'	2.26	0.48
18:61:110:ASP:OD1	18:61:111:PRO:HA	2.13	0.48
15:14:471:A:N7	32:39:45:ARG:HG2	2.29	0.48
15:14:543:C:OP1	36:J5:13:LYS:NZ	2.46	0.48
15:14:717:G:H2'	15:14:719:A:H62	1.77	0.48
15:14:757:C:H42	15:14:772:G:H1	1.59	0.48
15:14:1359:G:O6	56:14:3680:HOH:O	2.20	0.48
15:14:1380:A:HO2'	15:14:1381:G:H8	1.60	0.48
15:14:1560:A:H2'	15:14:1561:G:H8	1.78	0.48
15:14:1656:C:H4'	15:14:1657:A:O5'	2.13	0.48
15:14:1890:G:H2'	15:14:1891:G:H5'	1.94	0.48
15:14:2356:G:H2'	15:14:2357:C:O4'	2.12	0.48
15:14:2425:G:C2	15:14:2426:A:H1'	2.48	0.48
16:75:50:ILE:HD11	16:75:102:ILE:CD1	2.43	0.48
24:4A:65:LYS:HB2	24:4A:69:GLU:OE1	2.14	0.48
35:95:38:LEU:HD23	35:95:40:LEU:O	2.13	0.48
44:1E:35:GLU:OE1	44:1E:38:GLY:HA2	2.14	0.48
42:62:60:LYS:HA	42:62:60:LYS:HD2	1.47	0.48
48:1A:6:ILE:HG13	48:1A:72:VAL:HG23	1.95	0.48
49:7I:5:ARG:HE	49:7I:22:THR:HG21	1.78	0.48
3:F8:31:HIS:CD2	3:F8:33:LYS:HB2	2.49	0.48
6:2I:17:GLY:O	6:2I:80:VAL:HA	2.13	0.48
6:2I:19:ALA:O	6:2I:82:VAL:HA	2.14	0.48
8:2E:136:GLN:HG2	8:2E:140:ARG:NH1	2.29	0.48
1:13:1734:G:H5''	8:2E:172:ARG:HG2	1.95	0.48
2:A8:83:LYS:HE3	2:A8:110:LEU:CD1	2.44	0.48
2:A8:89:ARG:HG3	2:A8:92:TYR:O	2.13	0.48
1:1G:819:A:H2'	1:1G:820:U:H6	1.79	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:1G:1079:G:H4'	14:32:123:HIS:CE1	2.48	0.48
1:1G:1969:C:H1'	9:82:124:GLN:NE2	2.28	0.48
1:1G:2016:C:H2'	1:1G:2017:C:C6	2.48	0.48
11:G8:12:THR:O	11:G8:75:ILE:HB	2.13	0.48
12:Q8:21:LYS:HZ3	12:Q8:55:ALA:HB1	1.77	0.48
12:Q8:34:TRP:O	12:Q8:36:LYS:HG2	2.12	0.48
15:1H:34:C:H4'	15:1H:35:G:OP1	2.14	0.48
15:1H:1153:U:H2'	15:1H:1154:G:C8	2.49	0.48
15:1H:1158:G:O2'	15:1H:1159:A:H8	1.95	0.48
15:1H:1924:G:N2	15:1H:1927:C:H41	2.11	0.48
15:1H:2182:G:O2'	15:1H:2183:A:O5'	2.29	0.48
15:1H:2196:A:O2'	15:1H:2197:U:O5'	2.32	0.48
15:1H:2644:A:H4'	15:1H:2644:A:OP1	2.13	0.48
15:14:163:G:H2'	15:14:164:C:C6	2.49	0.48
15:14:303:A:H2'	15:14:303:A:OP2	2.14	0.48
15:14:598:G:O2'	15:14:599:C:H3'	2.13	0.48
15:14:1544:A:O2'	15:14:1545:A:H5'	2.14	0.48
15:14:1691:A:H2'	15:14:1692:G:O4'	2.14	0.48
15:14:1791:U:H3	15:14:1796:A:H2	1.62	0.48
15:14:2526:U:O2	23:29:139:GLY:HA3	2.13	0.48
15:14:2562:U:OP1	53:14:3003:8UZ:O6	2.31	0.48
16:75:61:PHE:HD1	16:75:61:PHE:H	1.62	0.48
22:H8:116:VAL:HG22	22:H8:146:ILE:HG12	1.95	0.48
24:4I:39:ILE:HD12	24:4I:56:LEU:HD23	1.95	0.48
24:4I:107:ALA:HB3	24:4I:111:LYS:HD2	1.96	0.48
19:9A:22:VAL:O	19:9A:23:LYS:HB3	2.14	0.48
19:9A:32:ARG:HD3	19:9A:65:ILE:HD12	1.96	0.48
26:16:7:C:O2'	26:16:29:C:O2	2.30	0.48
26:16:41:A:C8	28:M8:2:LYS:HE2	2.48	0.48
23:29:120:TRP:CE3	23:29:155:LYS:HD3	2.49	0.48
29:AI:40:ILE:HG22	29:AI:69:HIS:O	2.13	0.48
32:31:7:TYR:O	32:31:21:ALA:HA	2.14	0.48
33:5I:15:LYS:HG2	33:5I:16:PHE:CD2	2.49	0.48
35:95:76:LYS:HD2	35:95:80:GLN:CG	2.42	0.48
40:41:161:THR:HG23	40:41:163:ALA:H	1.78	0.48
41:6I:82:ILE:O	41:6I:86:GLY:N	2.47	0.48
47:51:10:PRO:HG3	47:51:69:ARG:HD3	1.96	0.48
47:51:169:VAL:O	47:51:170:ARG:NE	2.38	0.48
3:F8:36:LYS:HG2	3:F8:54:VAL:HB	1.94	0.48
8:2E:10:PHE:HD2	8:2E:11:ARG:NH1	2.11	0.48
8:2E:19:GLU:HA	8:2E:54:ARG:NH1	2.28	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:13:848:A:O2'	1:13:849:A:H2'	2.13	0.48
1:13:1047:G:H21	14:3E:119:GLN:HE22	1.61	0.48
1:13:1394:G:H5''	1:13:1395:A:OP1	2.14	0.48
1:13:2027:C:C2	1:13:2029:G:C5	3.02	0.48
1:13:2063:G:H2'	1:13:2064:U:C6	2.49	0.48
4:11:46:GLN:C	4:11:48:ARG:H	2.17	0.48
6:2A:107:SER:HA	19:9A:87:ARG:NH2	2.29	0.48
8:22:35:GLU:O	8:22:38:ARG:HG3	2.14	0.48
1:1G:734:G:C2'	1:1G:735:U:H5'	2.43	0.48
1:1G:1843:G:H2'	1:1G:1844:C:H6	1.78	0.48
2:65:74:ALA:HB2	2:65:105:ALA:O	2.14	0.48
7:8A:41:LYS:NZ	7:8A:92:ARG:HH12	2.11	0.48
15:1H:242:G:O2'	15:1H:243:C:H5'	2.13	0.48
15:1H:1191:A:C4	15:1H:1193:G:C8	3.00	0.48
15:1H:1308:G:H2'	15:1H:1309:G:H8	1.79	0.48
15:1H:1434:G:H4'	15:1H:1435:C:OP1	2.13	0.48
15:1H:2777:G:H1'	47:51:143:GLN:OE1	2.14	0.48
12:M5:36:LYS:HD3	12:M5:40:GLU:CD	2.34	0.48
15:14:1084:G:H8	15:14:1084:G:O5'	1.96	0.48
15:14:1113:U:O4	15:14:1121:A:N6	2.47	0.48
15:14:1381:G:N2	15:14:1659:A:C8	2.82	0.48
15:14:2800:C:O5'	15:14:2800:C:H6	1.97	0.48
16:75:16:ARG:CZ	16:75:19:LEU:HD21	2.44	0.48
23:21:9:VAL:HB	23:21:25:VAL:O	2.14	0.48
25:4E:60:TYR:HE1	25:4E:64:ARG:CZ	2.26	0.48
28:M8:4:GLY:C	28:M8:5:ILE:HG13	2.34	0.48
26:1J:82:U:H2'	26:1J:83:G:N2	2.26	0.48
27:85:88:ILE:HG22	27:85:90:VAL:H	1.78	0.48
27:85:91:ASP:O	27:85:93:LYS:N	2.47	0.48
32:31:20:LEU:HG	32:31:21:ALA:N	2.27	0.48
33:5I:23:ARG:HD2	33:5I:28:GLY:O	2.13	0.48
30:35:50:ARG:HH11	30:35:50:ARG:CB	2.24	0.48
37:BA:45:GLN:HA	37:BA:91:LEU:HD22	1.95	0.48
39:F5:34:THR:HG21	39:F5:37:ILE:HG22	1.94	0.48
45:98:21:TYR:OH	45:98:43:GLU:HG2	2.13	0.48
48:1I:27:ALA:O	48:1I:31:GLY:N	2.47	0.48
49:7I:53:VAL:HG13	49:7I:79:VAL:HG22	1.95	0.48
44:12:165:VAL:HG23	44:12:166:ASP:N	2.27	0.48
46:G5:47:ASN:N	46:G5:47:ASN:ND2	2.61	0.48
8:2E:4:LYS:HE3	8:2E:4:LYS:HB3	1.52	0.48
1:13:788:G:H1	1:13:814:C:H42	1.61	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:13:807:G:H2'	1:13:808:G:H8	1.78	0.48
1:13:1532:A:H2'	1:13:1533:C:O4'	2.12	0.48
1:13:1746:C:H1'	1:13:1806:A:C4	2.48	0.48
1:13:1798:G:H2'	1:13:1799:C:C6	2.49	0.48
1:13:1975:U:C2	1:13:1976:A:C8	3.01	0.48
1:1G:706:A:H4'	1:1G:707:G:O5'	2.14	0.48
1:1G:939:A:H2'	1:1G:940:G:O4'	2.14	0.48
1:1G:1465:G:C6	1:1G:1474:G:C6	3.02	0.48
1:1G:1754:U:H4'	1:1G:1755:G:N7	2.28	0.48
11:G8:29:GLU:HB3	11:G8:38:ILE:HG23	1.94	0.48
4:19:70:TRP:CD1	4:19:70:TRP:C	2.87	0.48
15:1H:142:G:H2'	15:1H:143:C:C6	2.48	0.48
15:1H:345:A:H2'	32:31:136:THR:HG21	1.95	0.48
15:1H:2337:A:H2'	15:1H:2338:G:O4'	2.13	0.48
18:61:44:LEU:HD12	18:61:44:LEU:HA	1.70	0.48
15:14:1074:U:O2	15:14:1074:U:H2'	2.12	0.48
15:14:1110:G:OP1	15:14:1112:C:N4	2.47	0.48
15:14:1686:C:P	56:14:3696:HOH:O	2.70	0.48
15:14:2491:A:H4'	15:14:2492:C:C5	2.45	0.48
15:14:2913:C:H2'	15:14:2914:C:H5'	1.96	0.48
22:H8:60:GLU:HB3	22:H8:61:LEU:H	1.36	0.48
23:29:33:VAL:H	23:29:89:ASP:CB	2.27	0.48
29:AI:42:PRO:HD2	29:AI:43:GLU:OE1	2.13	0.48
26:1J:15:A:N1	26:1J:71:G:O2'	2.38	0.48
30:78:31:ALA:O	30:78:32:THR:HB	2.14	0.48
32:31:129:PHE:HB2	32:31:132:VAL:HG13	1.95	0.48
42:6E:45:ASP:O	42:6E:48:LYS:HB3	2.13	0.48
40:49:138:GLN:HB3	40:49:153:ARG:O	2.14	0.48
47:51:4:ILE:O	47:51:4:ILE:HG12	2.13	0.48
44:12:32:ILE:HD11	44:12:40:HIS:CG	2.48	0.48
44:12:55:PHE:HD1	44:12:58:ILE:HG13	1.78	0.48
44:12:131:PRO:HG2	44:12:134:GLU:HB2	1.95	0.48
45:55:21:TYR:OH	45:55:43:GLU:HG2	2.13	0.48
8:2E:113:ALA:N	8:2E:183:ASP:OD2	2.37	0.48
52:W1:52:G:C6	52:W1:63:G:C6	3.02	0.48
52:X1:19:G:H4'	52:X1:20:U:OP2	2.14	0.48
1:13:769:G:N1	1:13:834:U:O2'	2.46	0.48
1:13:826:C:H2'	1:13:827:C:C6	2.49	0.48
4:11:263:ARG:NH2	15:1H:2243:G:OP2	2.47	0.48
8:22:129:ALA:HB3	8:22:132:ARG:HB3	1.96	0.48
9:8E:34:ASN:OD1	9:8E:34:ASN:N	2.46	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:1G:1229:C:H2'	1:1G:1230:C:C6	2.49	0.48
1:1G:1926:A:C2	1:1G:1928:U:C4	3.02	0.48
2:65:40:ILE:HD13	26:1J:10:U:O2'	2.13	0.48
12:Q8:7:HIS:CD2	30:78:50:ARG:HD3	2.49	0.48
12:Q8:28:GLY:O	12:Q8:29:LYS:HB2	2.14	0.48
14:3E:153:ARG:NH1	14:3E:180:GLY:O	2.46	0.48
9:82:65:VAL:HG21	9:82:73:GLN:HB3	1.95	0.48
15:1H:56:C:H2'	15:1H:57:G:O4'	2.14	0.48
15:1H:537:C:H2'	15:1H:538:U:O4'	2.14	0.48
15:1H:627:G:O2'	15:1H:704:A:N6	2.47	0.48
15:1H:900:U:O2'	17:L8:45:GLY:HA3	2.13	0.48
15:1H:1127:C:H2'	15:1H:1128:A:C8	2.49	0.48
15:1H:1155:G:H2'	15:1H:1156:U:H6	1.78	0.48
15:1H:1279:C:H2'	15:1H:1280:G:H8	1.79	0.48
15:1H:2176:G:H2'	15:1H:2177:G:C8	2.49	0.48
16:B8:107:ASP:O	16:B8:110:ILE:HG22	2.14	0.48
15:14:231:A:H5'	15:14:233:U:O4'	2.14	0.48
15:14:1732:G:H2'	15:14:1733:C:C6	2.49	0.48
15:14:1861:C:O2'	15:14:1995:A:N3	2.41	0.48
15:14:2288:A:H2'	15:14:2289:A:C8	2.49	0.48
15:14:2774:A:C2	15:14:2775:G:H1'	2.49	0.48
24:4I:20:THR:HG23	24:4I:26:GLY:HA3	1.95	0.48
25:4E:35:GLY:H	25:4E:112:LEU:HD13	1.78	0.48
25:42:143:ARG:NH1	50:72:77:GLU:OE1	2.41	0.48
26:1J:46:G:H5'	26:1J:47:A:OP1	2.14	0.48
31:I8:23:VAL:HG22	31:I8:38:VAL:HG22	1.95	0.48
28:I5:63:TYR:CE1	29:AA:9:VAL:HG13	2.49	0.48
32:31:32:LEU:HD21	32:31:105:VAL:HG13	1.95	0.48
35:D8:49:THR:O	35:D8:50:PRO:C	2.51	0.48
34:52:76:ALA:O	34:52:80:ARG:HG3	2.14	0.48
38:45:21:THR:HG22	38:45:23:GLY:HA3	1.95	0.48
50:7E:119:LEU:HB3	50:7E:123:GLU:HB2	1.96	0.48
45:55:49:ASP:OD1	45:55:95:THR:HB	2.14	0.48
47:59:30:LYS:HD3	47:59:79:VAL:C	2.34	0.48
52:X4:44:G:OP1	52:X4:44:G:H4'	2.14	0.48
1:13:1524:A:C5	1:13:1525:G:H1'	2.49	0.48
2:A8:9:ARG:HG2	15:1H:2349:G:H5'	1.95	0.48
1:1G:781:A:H1'	1:1G:822:U:C2	2.49	0.48
1:1G:1367:C:H2'	1:1G:1368:C:H6	1.78	0.48
1:1G:1379:G:H1'	41:6A:22:THR:OG1	2.13	0.48
10:58:130:HIS:CA	10:58:134:ARG:HH12	2.22	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:19:201:HIS:O	4:19:204:ILE:HG23	2.13	0.48
12:Q8:34:TRP:HD1	12:Q8:35:GLN:H	1.62	0.48
15:1H:390:G:H2'	15:1H:391:G:H8	1.79	0.48
15:1H:674:G:H21	15:1H:2365:C:H4'	1.79	0.48
15:1H:1252:A:N1	15:1H:1290:A:H2	2.12	0.48
15:1H:2056:A:C6	15:1H:2513:C:H1'	2.48	0.48
15:1H:2463:A:N6	56:1H:3797:HOH:O	2.28	0.48
14:32:39:PRO:O	14:32:44:GLY:HA3	2.14	0.48
15:14:19:C:H2'	15:14:20:C:H6	1.77	0.48
15:14:366:G:H2'	15:14:367:G:O4'	2.13	0.48
15:14:554:C:C5	15:14:2795:U:H2'	2.49	0.48
15:14:1073:G:H8	15:14:1073:G:OP1	1.96	0.48
15:14:2153:C:H42	15:14:2185:G:H22	1.61	0.48
19:9A:41:LYS:O	19:9A:41:LYS:HD3	2.14	0.48
21:25:7:TYR:CE1	21:25:20:MET:HB2	2.49	0.48
24:4A:86:CYS:O	24:4A:89:GLY:N	2.44	0.48
32:39:18:ARG:HG2	32:39:19:GLU:N	2.29	0.48
33:5A:25:VAL:O	33:5A:26:ARG:HB3	2.14	0.48
33:5A:43:CYS:HA	33:5A:46:GLU:HG3	1.95	0.48
40:41:64:THR:HG22	40:41:66:GLN:N	2.27	0.48
43:A5:73:ALA:HB3	43:A5:106:ILE:HD13	1.95	0.48
46:G5:63:VAL:O	46:G5:67:LYS:HG2	2.14	0.48
47:59:19:VAL:O	47:59:25:LYS:HE3	2.14	0.48
49:7A:18:ARG:NH1	49:7A:32:TYR:OH	2.47	0.48
1:13:702:U:H2'	1:13:703:G:C8	2.48	0.48
1:13:1000:U:OP1	18:69:87:LYS:HD2	2.14	0.48
1:13:1104:G:H2'	1:13:1105:G:H8	1.78	0.48
1:13:2153:G:O2'	1:13:2154:A:OP2	2.32	0.48
1:1G:1312:G:C6	1:1G:1313:A:C6	3.02	0.48
1:1G:1398:G:OP2	1:1G:1432:G:O2'	2.28	0.48
1:1G:1398:G:H4'	1:1G:2136:A:H4'	1.96	0.48
1:1G:1665:C:H2'	1:1G:1666:C:C6	2.48	0.48
1:1G:1756:C:H4'	9:82:16:ARG:HH12	1.78	0.48
14:3E:32:ALA:O	14:3E:36:ARG:N	2.24	0.48
14:3E:83:SER:O	14:3E:84:LYS:HG2	2.14	0.48
15:1H:472:C:C4'	32:31:49:ALA:HB2	2.44	0.48
15:1H:604:G:H2'	15:1H:605:C:C6	2.49	0.48
15:1H:1457:C:C2	15:1H:1644:G:N2	2.82	0.48
15:1H:1833:G:H5'	15:1H:1853:A:N6	2.28	0.48
10:15:30:ILE:HG22	10:15:34:LEU:HD22	1.95	0.48
16:B8:74:ARG:HG2	16:B8:74:ARG:NH1	2.20	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:14:933:C:N4	15:14:940:G:O6	2.45	0.48
15:14:2041:U:H2'	15:14:2042:U:H6	1.79	0.48
15:14:2435:C:O5'	15:14:2435:C:H6	1.97	0.48
21:68:16:ALA:HB2	21:68:52:VAL:HG21	1.95	0.48
16:75:64:ARG:HB2	16:75:73:GLU:HG3	1.96	0.48
22:H8:45:ASP:O	22:H8:49:ARG:HG3	2.13	0.48
22:H8:78:LYS:HE3	38:88:22:LYS:HA	1.96	0.48
22:H8:125:LEU:HG	22:H8:164:ALA:CB	2.44	0.48
23:21:78:LEU:HD21	23:21:79:ARG:HE	1.78	0.48
23:21:119:ARG:HB3	23:21:120:TRP:CD1	2.49	0.48
27:C8:61:TRP:O	27:C8:65:ILE:HG13	2.14	0.48
22:D5:52:SER:O	22:D5:53:ILE:HG12	2.14	0.48
28:M8:14:ILE:HG23	28:M8:21:VAL:HB	1.95	0.48
23:29:1:MET:HE2	23:29:200:GLU:HG3	1.95	0.48
23:29:89:ASP:C	23:29:91:VAL:H	2.17	0.48
31:E5:23:VAL:HG12	31:E5:25:ARG:O	2.14	0.48
32:39:29:ASN:HA	32:39:30:PRO:HD3	1.40	0.48
39:F5:50:ARG:HG2	39:F5:59:THR:OG1	2.13	0.48
39:F5:85:LEU:HD13	39:F5:88:LYS:HD2	1.95	0.48
44:1E:21:ARG:O	44:1E:23:ARG:N	2.45	0.48
45:98:29:LEU:HD12	45:98:29:LEU:HA	1.70	0.48
45:98:50:HIS:NE2	45:98:54:LEU:HD11	2.29	0.48
48:1I:48:THR:HG1	48:1I:62:HIS:CG	2.26	0.48
44:12:5:ILE:HB	44:12:221:LEU:HD21	1.94	0.48
49:7A:75:ARG:O	49:7A:78:GLY:N	2.38	0.48
1:13:762:C:OP1	1:13:952:C:O2'	2.25	0.47
3:B5:57:LEU:N	3:B5:57:LEU:HD23	2.29	0.47
4:11:54:ARG:HH11	4:11:54:ARG:HG3	1.77	0.47
7:8I:90:ILE:HA	7:8I:93:GLN:HB3	1.96	0.47
8:22:29:TYR:O	8:22:29:TYR:HD1	1.97	0.47
9:8E:92:TYR:O	9:8E:96:LEU:HB2	2.14	0.47
1:1G:1117:A:H2'	1:1G:1118:C:O4'	2.14	0.47
1:1G:1386:U:H2'	1:1G:1387:G:O4'	2.14	0.47
1:1G:1515:A:O2'	1:1G:2043:G:H4'	2.14	0.47
1:1G:1771:G:H2'	1:1G:1772:G:H8	1.79	0.47
1:1G:1855:C:H2'	1:1G:1856:A:H8	1.79	0.47
1:1G:1974:G:O2'	1:1G:2001:G:O6	2.22	0.47
4:19:89:SER:HB2	4:19:159:ALA:HB2	1.95	0.47
12:Q8:34:TRP:O	12:Q8:36:LYS:N	2.47	0.47
7:8A:21:VAL:HG21	7:8A:59:ILE:HD11	1.96	0.47
15:1H:804:C:H2'	15:1H:805:C:C6	2.49	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:1H:2379:C:H2'	15:1H:2380:G:O4'	2.14	0.47
15:14:640:U:H4'	15:14:641:G:OP1	2.14	0.47
15:14:797:G:C8	43:A5:89:ALA:HB1	2.49	0.47
15:14:920:U:H5'	38:45:69:PHE:CE2	2.49	0.47
15:14:1093:A:H1'	15:14:1095:G:C4	2.48	0.47
15:14:1563:U:H2'	15:14:1564:C:C6	2.49	0.47
15:14:1924:G:O2'	15:14:1925:A:H5''	2.14	0.47
23:29:169:ASN:ND2	23:29:203:LYS:HD3	2.29	0.47
24:4A:11:ARG:O	24:4A:13:LYS:N	2.47	0.47
27:85:92:ARG:NH2	35:95:11:GLN:H	2.12	0.47
32:31:65:TRP:HZ3	32:31:73:ALA:O	1.97	0.47
32:31:117:ARG:HG2	32:31:192:LEU:HB2	1.96	0.47
36:N8:3:LYS:HB3	36:N8:3:LYS:HZ2	1.78	0.47
36:N8:40:LYS:HG3	36:N8:47:PRO:HD2	1.96	0.47
32:39:102:PRO:O	32:39:105:VAL:N	2.44	0.47
40:41:135:LEU:HD23	40:41:140:ILE:HD11	1.96	0.47
45:98:45:ARG:HB3	45:98:46:GLY:H	1.56	0.47
52:V4:33:U:H2'	52:V4:35:A:OP2	2.13	0.47
1:13:1354:G:H2'	1:13:1355:C:H6	1.79	0.47
1:13:1925:C:N4	42:6E:114:ARG:HB3	2.29	0.47
4:11:6:PHE:HE1	4:11:18:VAL:HG23	1.79	0.47
4:11:38:LYS:HE3	15:1H:1403:A:O3'	2.14	0.47
1:1G:1366:A:H2'	1:1G:1367:C:C6	2.48	0.47
1:1G:1905:U:H5'	1:1G:1906:A:H5'	1.96	0.47
2:65:18:ILE:O	2:65:21:THR:HG22	2.14	0.47
7:8A:63:ARG:HG2	7:8A:64:PRO:HD2	1.95	0.47
15:1H:555:A:O2'	15:1H:556:A:H5''	2.14	0.47
15:1H:625:G:H2'	15:1H:626:C:C6	2.49	0.47
15:1H:723:G:C1'	32:31:74:ARG:HD3	2.44	0.47
15:1H:1833:G:H5'	15:1H:1853:A:H61	1.79	0.47
18:61:83:ALA:HB2	18:61:144:VAL:HG23	1.96	0.47
14:32:88:VAL:HG13	25:42:97:GLY:HA3	1.96	0.47
15:14:166:G:O2'	15:14:167:G:H5'	2.14	0.47
15:14:224:C:H2'	15:14:225:U:C6	2.49	0.47
15:14:1117:A:H2	15:14:1142:U:H3	1.61	0.47
15:14:1433:A:N3	15:14:1454:U:H1'	2.28	0.47
15:14:2571:C:H2'	15:14:2572:G:O4'	2.14	0.47
15:14:2731:C:H2'	15:14:2732:U:H6	1.79	0.47
15:14:2821:U:O2'	15:14:2822:A:H5'	2.14	0.47
20:1B:9:ARG:HH21	20:1B:10:ARG:HE	1.63	0.47
26:16:56:G:H2'	26:16:57:U:H6	1.79	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:42:40:ARG:HA	25:42:67:VAL:O	2.14	0.47
28:I5:11:PRO:HA	28:I5:25:TYR:CG	2.49	0.47
37:BI:49:ALA:CB	37:BI:99:LEU:HB3	2.45	0.47
34:52:61:LEU:HD23	34:52:63:TYR:OH	2.14	0.47
35:95:31:ALA:HB3	35:95:61:VAL:HG21	1.94	0.47
36:J5:16:ARG:HG3	36:J5:17:ASP:N	2.29	0.47
42:6E:15:ASP:HB3	42:6E:19:GLY:N	2.29	0.47
38:45:79:LEU:C	38:45:80:GLU:HG2	2.34	0.47
47:51:130:ARG:NH1	47:51:130:ARG:HB3	2.30	0.47
52:V1:36:A:HO2'	52:V1:37:A:P	2.36	0.47
52:W4:2:C:H2'	52:W4:3:C:C6	2.49	0.47
1:13:661:G:H4'	25:4E:24:ARG:NH1	2.28	0.47
1:13:1692:G:H1'	1:13:1817:G:N2	2.30	0.47
2:A8:84:GLN:HG2	2:A8:110:LEU:HD13	1.95	0.47
7:8I:10:VAL:HG12	7:8I:53:LEU:HA	1.95	0.47
7:8I:70:ARG:C	7:8I:71:PHE:HD1	2.18	0.47
9:8E:99:LEU:HD12	9:8E:101:PHE:CZ	2.49	0.47
1:1G:1562:G:OP1	42:62:95:ARG:NH2	2.46	0.47
10:58:32:THR:O	10:58:36:GLY:N	2.47	0.47
2:65:28:VAL:HG11	2:65:98:VAL:HG13	1.95	0.47
14:3E:148:VAL:HG21	14:3E:158:ILE:HG21	1.95	0.47
15:1H:2690:A:OP1	21:68:31:LYS:HB2	2.14	0.47
15:14:255:A:H1'	15:14:256:G:O4'	2.14	0.47
15:14:412:U:H2'	15:14:413:C:H6	1.78	0.47
15:14:1556:A:C2	15:14:1557:A:H1'	2.49	0.47
15:14:1683:G:OP2	56:14:3682:HOH:O	2.20	0.47
15:14:2453:U:O2'	15:14:2455:C:OP1	2.30	0.47
15:14:2513:C:P	56:14:3613:HOH:O	2.66	0.47
15:14:2700:G:O2'	15:14:2742:U:H5	1.98	0.47
23:29:8:LYS:HB3	23:29:193:GLY:H	1.79	0.47
29:AI:24:ALA:O	29:AI:25:LYS:HD2	2.15	0.47
35:D8:49:THR:HG22	35:D8:50:PRO:CD	2.45	0.47
39:J8:48:LYS:HB3	39:J8:49:VAL:HG22	1.97	0.47
44:1E:5:ILE:HB	44:1E:221:LEU:HD23	1.96	0.47
46:K8:14:ARG:HB3	46:K8:15:LYS:NZ	2.28	0.47
44:12:12:GLU:HB3	44:12:213:LEU:HD22	1.96	0.47
44:12:86:GLU:O	44:12:89:GLY:N	2.46	0.47
50:72:44:PHE:HB3	50:72:80:ILE:HG12	1.96	0.47
52:X1:72:C:C4	52:X1:73:A:N7	2.82	0.47
51:Y4:37:G:OP1	51:Y4:37:G:H4'	2.13	0.47
1:13:1233:G:H2'	1:13:1234:U:O4'	2.14	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:8E:89:ASN:O	9:8E:91:ASP:N	2.47	0.47
1:1G:829:G:H2'	1:1G:830:C:H6	1.78	0.47
1:1G:1014:A:C2	1:1G:1015:A:C8	3.03	0.47
1:1G:1700:G:H2'	1:1G:1701:U:C6	2.49	0.47
1:1G:1748:G:H2'	1:1G:1749:U:C6	2.49	0.47
10:58:93:THR:HG22	10:58:94:HIS:ND1	2.30	0.47
15:1H:218:A:C8	15:1H:220:U:H1'	2.50	0.47
15:1H:382:A:H2'	15:1H:383:U:O4'	2.14	0.47
15:1H:390:G:H2'	15:1H:391:G:C8	2.48	0.47
15:1H:800:A:H5'	43:E8:90:ARG:HA	1.95	0.47
16:B8:112:ARG:HA	16:B8:115:ARG:HG2	1.96	0.47
18:61:7:GLU:HA	18:61:15:VAL:HG22	1.96	0.47
15:14:355:A:H2	15:14:1258:A:O2'	1.97	0.47
15:14:797:G:OP2	43:A5:88:ARG:HG3	2.15	0.47
15:14:806:U:H2'	15:14:807:C:O4'	2.14	0.47
15:14:1154:G:H2'	15:14:1155:G:H8	1.77	0.47
15:14:1162:G:H2'	15:14:1163:G:H8	1.79	0.47
15:14:2041:U:O2	36:J5:7:PRO:HG2	2.14	0.47
15:14:2287:U:H5''	15:14:2288:A:OP1	2.14	0.47
16:75:23:ARG:HG3	16:75:120:ARG:NH1	2.29	0.47
16:75:26:ASP:OD1	16:75:120:ARG:NH2	2.47	0.47
22:H8:19:ARG:HH22	26:16:79:U:P	2.38	0.47
19:9A:22:VAL:C	19:9A:24:ALA:H	2.17	0.47
23:29:75:VAL:O	23:29:77:ILE:HG12	2.15	0.47
28:I5:35:VAL:HG12	28:I5:37:SER:H	1.80	0.47
30:35:35:HIS:HB3	30:35:36:LYS:H	1.46	0.47
32:39:183:VAL:O	32:39:187:VAL:HG23	2.13	0.47
37:BI:59:ALA:O	37:BI:63:ILE:HG13	2.13	0.47
35:95:21:ARG:HH21	35:95:91:TYR:CB	2.27	0.47
38:45:25:ASP:CG	38:45:101:ARG:HG3	2.34	0.47
42:62:39:ALA:HA	42:62:42:ILE:HD12	1.96	0.47
45:98:55:ALA:HA	45:98:80:PHE:CZ	2.50	0.47
48:1A:36:GLY:O	48:1A:38:ILE:HG13	2.15	0.47
44:12:72:GLY:C	44:12:74:LYS:H	2.17	0.47
6:2I:12:ARG:HG3	6:2I:13:GLN:N	2.29	0.47
1:13:766:G:N2	1:13:876:C:C2	2.83	0.47
1:13:1194:U:H3'	1:13:1195:G:H2'	1.95	0.47
1:13:1303:G:H2'	1:13:1304:A:C8	2.48	0.47
1:13:1420:G:C6	1:13:1421:A:C2	3.03	0.47
1:13:1805:G:H5''	9:8E:93:ARG:NH2	2.29	0.47
1:13:2039:C:H2'	1:13:2040:C:H6	1.80	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:2A:33:THR:OG1	6:2A:34:ASP:O	2.25	0.47
1:1G:833:C:H1'	1:1G:837:G:N2	2.30	0.47
1:1G:1895:A:H2'	1:1G:1896:A:C8	2.49	0.47
10:58:46:VAL:HG13	10:58:48:MET:HG3	1.96	0.47
4:19:139:GLY:N	4:19:165:ILE:O	2.39	0.47
12:Q8:14:VAL:O	12:Q8:15:LYS:HD3	2.13	0.47
15:1H:1408:A:H2'	15:1H:1409:A:H5'	1.97	0.47
15:1H:1592:A:C2	15:1H:1594:A:C4	3.02	0.47
15:1H:1899:G:N2	15:1H:1902:A:OP2	2.46	0.47
15:1H:2093:U:N3	15:1H:2445:A:C2	2.64	0.47
12:M5:8:LYS:HD3	12:M5:8:LYS:N	2.29	0.47
15:14:70:A:H5'	15:14:70:A:H8	1.77	0.47
15:14:340:G:H2'	15:14:341:C:C6	2.48	0.47
15:14:1246:U:H2'	15:14:1247:U:C6	2.50	0.47
15:14:1938:A:N6	52:W4:38:A:H5'	2.29	0.47
16:75:27:THR:HG23	16:75:90:GLN:HB3	1.96	0.47
22:H8:130:PRO:O	22:H8:133:ILE:HG12	2.14	0.47
23:29:23:VAL:HA	23:29:184:VAL:O	2.13	0.47
23:29:51:PHE:CE2	23:29:52:LEU:HG	2.50	0.47
23:29:68:ALA:O	23:29:69:LYS:C	2.52	0.47
34:52:78:GLU:HA	34:52:81:ILE:HG13	1.97	0.47
35:95:21:ARG:HE	35:95:91:TYR:HB3	1.80	0.47
51:Y1:32:A:H5'	51:Y1:33:G:OP2	2.14	0.47
1:13:697:A:OP2	1:13:698:G:H8	1.97	0.47
1:13:954:A:H2'	1:13:955:C:C6	2.49	0.47
1:13:2002:A:H2'	1:13:2003:A:H5'	1.97	0.47
5:L5:34:ARG:NH1	5:L5:41:ARG:O	2.46	0.47
7:8I:3:LYS:HB2	7:8I:60:ILE:HD11	1.96	0.47
8:22:112:SER:O	8:22:116:VAL:HG23	2.14	0.47
9:8E:42:ARG:NH1	9:8E:71:SER:HB3	2.30	0.47
1:1G:1504:G:H2'	1:1G:1505:C:O4'	2.14	0.47
2:65:42:ASP:O	2:65:43:GLU:HB2	2.14	0.47
15:1H:69:G:H21	15:1H:70:A:H62	1.62	0.47
15:1H:105:C:H2'	15:1H:106:U:H6	1.80	0.47
15:1H:140:A:C8	15:1H:1457:C:H1'	2.50	0.47
15:1H:302:C:H5''	15:1H:303:A:C2	2.50	0.47
15:1H:803:C:H2'	15:1H:804:C:C6	2.49	0.47
15:1H:1096:A:OP2	15:1H:1157:C:N4	2.46	0.47
15:1H:1154:G:H2'	15:1H:1155:G:H8	1.80	0.47
15:1H:1656:C:H4'	15:1H:1657:A:O5'	2.14	0.47
15:1H:1770:A:O2'	15:1H:1771:U:P	2.73	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:32:58:LEU:HD22	14:32:62:GLN:HG2	1.97	0.47
15:14:626:C:O2	15:14:630:C:H4'	2.15	0.47
15:14:888:U:H2'	15:14:889:C:C6	2.49	0.47
15:14:1820:A:H2	15:14:2621:C:H1'	1.76	0.47
15:14:2024:C:H4'	15:14:2739:C:O2	2.14	0.47
15:14:2527:C:H2'	15:14:2528:G:O4'	2.15	0.47
15:14:2803:C:H1'	23:29:62:PRO:HB3	1.95	0.47
23:21:108:SER:HB3	23:21:165:VAL:HG21	1.96	0.47
25:4E:10:MET:HB2	25:4E:32:VAL:HG22	1.96	0.47
23:29:182:LEU:HD12	23:29:183:LEU:H	1.79	0.47
27:85:92:ARG:NH1	35:95:11:GLN:H	2.12	0.47
37:BI:53:LEU:HD22	37:BI:53:LEU:H	1.79	0.47
37:BI:87:LYS:HA	37:BI:87:LYS:HD2	1.48	0.47
37:BA:74:LYS:HZ2	37:BA:74:LYS:HG2	1.58	0.47
42:62:26:PHE:HE1	42:62:30:ILE:HD11	1.80	0.47
43:A5:36:LEU:HD13	43:A5:48:ALA:HA	1.97	0.47
46:K8:28:LYS:HE3	46:K8:56:GLN:NE2	2.30	0.47
44:12:73:THR:HA	44:12:94:ASN:O	2.14	0.47
44:12:97:TRP:CE2	44:12:101:MET:HG3	2.50	0.47
50:72:1:MET:C	50:72:3:THR:H	2.18	0.47
1:13:749:C:H2'	1:13:750:G:O4'	2.15	0.47
1:13:983:C:N3	1:13:989:G:C2	2.82	0.47
1:13:1171:G:H5'	14:3E:41:GLY:HA3	1.96	0.47
1:13:1761:G:H2'	1:13:1762:G:C8	2.50	0.47
1:13:1844:C:OP1	33:5I:9:LYS:NZ	2.33	0.47
3:B5:5:TYR:OH	46:G5:30:ARG:NH1	2.48	0.47
3:B5:44:GLU:OE2	15:14:137:G:N2	2.36	0.47
4:11:259:THR:OG1	15:1H:1832:U:H5'	2.15	0.47
8:22:88:ARG:HB2	8:22:101:LEU:HD12	1.97	0.47
1:1G:849:A:H8	1:1G:850:G:N9	2.12	0.47
1:1G:1272:C:H2'	1:1G:1273:G:H8	1.80	0.47
1:1G:1420:G:C6	1:1G:1421:A:N7	2.83	0.47
1:1G:1432:G:OP1	56:1G:2404:HOH:O	2.20	0.47
1:1G:1683:A:H5''	1:1G:1684:U:OP2	2.14	0.47
1:1G:1770:G:H3'	1:1G:1771:G:C8	2.49	0.47
1:1G:1776:U:O3'	9:82:14:VAL:HG11	2.13	0.47
1:1G:1853:C:H4'	29:AA:80:TYR:OH	2.15	0.47
1:1G:1871:C:H2'	1:1G:1872:A:C8	2.49	0.47
1:1G:2061:A:C6	1:1G:2062:A:C6	3.03	0.47
11:G8:94:LYS:HG3	11:G8:95:LYS:H	1.80	0.47
4:19:70:TRP:CH2	4:19:150:LYS:HA	2.50	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:3E:173:TRP:CD1	14:3E:174:LEU:HG	2.48	0.47
9:82:48:GLU:N	9:82:49:PRO:HD2	2.29	0.47
15:1H:35:G:H2'	15:1H:36:G:O4'	2.14	0.47
15:1H:37:C:H2'	15:1H:38:A:C8	2.50	0.47
15:1H:305:C:C2	15:1H:386:G:C2	3.03	0.47
15:1H:312:C:H2'	15:1H:313:C:H6	1.80	0.47
15:1H:625:G:N2	15:1H:630:C:O3'	2.47	0.47
15:1H:684:G:H2'	15:1H:685:G:O4'	2.15	0.47
15:1H:691:A:N1	15:1H:694:C:N4	2.63	0.47
15:1H:769:C:H2'	15:1H:770:C:C6	2.49	0.47
15:1H:810:A:H8	56:1H:3879:HOH:O	1.92	0.47
15:1H:817:G:O2'	15:1H:1428:A:N6	2.45	0.47
15:1H:896:U:C5	15:1H:980:A:N1	2.83	0.47
15:1H:1044:A:H4'	27:C8:92:ARG:HG2	1.95	0.47
15:1H:1046:C:N4	56:1H:3851:HOH:O	2.47	0.47
15:1H:1655:G:H5''	15:1H:1656:C:OP1	2.14	0.47
15:1H:2061:C:N4	56:1H:3761:HOH:O	2.48	0.47
15:1H:2133:C:H2'	15:1H:2134:U:O4'	2.15	0.47
15:1H:2521:U:H1'	52:W1:76:A:O3'	2.15	0.47
15:1H:2606:C:H2'	15:1H:2607:G:C8	2.49	0.47
15:1H:2615:A:H2'	15:1H:2616:C:C6	2.49	0.47
15:1H:2795:U:O2	15:1H:2795:U:O4'	2.32	0.47
10:15:67:LEU:O	10:15:88:GLU:HG3	2.14	0.47
11:C5:9:LYS:O	11:C5:27:VAL:HB	2.14	0.47
15:14:66:U:H2'	15:14:67:G:C8	2.50	0.47
15:14:336:A:C6	15:14:353:U:C4	3.03	0.47
15:14:349:A:N6	15:14:363:G:O2'	2.46	0.47
15:14:862:U:H2'	15:14:863:C:C6	2.50	0.47
15:14:1169:C:H2'	15:14:1170:G:O4'	2.15	0.47
15:14:1767:G:O2'	15:14:1768:U:H5'	2.15	0.47
15:14:2705:C:OP1	45:55:17:ARG:NH1	2.48	0.47
15:14:2821:U:H5''	15:14:2903:G:O6	2.14	0.47
23:21:116:VAL:HG13	23:21:122:PHE:CD2	2.50	0.47
18:69:29:TYR:O	18:69:32:PRO:HD2	2.15	0.47
25:4E:35:GLY:HA3	25:4E:112:LEU:O	2.14	0.47
25:4E:47:LYS:HE2	25:4E:47:LYS:HB2	1.65	0.47
23:29:69:LYS:HA	23:29:69:LYS:HD2	1.59	0.47
23:29:111:ARG:HD3	23:29:160:TYR:CD2	2.49	0.47
24:4A:3:ARG:HG2	24:4A:9:ILE:HG12	1.97	0.47
24:4A:30:ALA:O	24:4A:34:LEU:HG	2.13	0.47
24:4A:86:CYS:HB2	29:AA:73:GLU:HB3	1.97	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:1J:42:U:N3	26:1J:46:G:OP2	2.46	0.47
27:85:60:LEU:HA	27:85:63:VAL:HG23	1.97	0.47
27:85:68:ALA:O	27:85:71:GLN:HB2	2.15	0.47
32:31:63:LYS:NZ	32:31:75:HIS:O	2.39	0.47
32:31:150:GLY:HA2	32:31:172:TRP:CD2	2.50	0.47
30:35:45:LEU:HD12	30:35:45:LEU:HA	1.76	0.47
37:BI:71:THR:HG22	37:BI:72:LEU:N	2.22	0.47
39:J8:83:GLU:C	39:J8:85:LEU:H	2.17	0.47
40:41:35:GLU:OE1	40:41:36:LYS:N	2.47	0.47
37:BA:67:ALA:HB2	37:BA:77:ALA:HB2	1.95	0.47
38:45:117:ALA:HA	38:45:120:ILE:HB	1.97	0.47
39:F5:49:VAL:CG2	39:F5:67:ILE:HD12	2.44	0.47
40:49:41:GLN:NE2	40:49:154:GLY:O	2.39	0.47
44:1E:231:GLU:HB2	44:1E:232:PRO:HD2	1.97	0.47
42:62:26:PHE:CE1	42:62:30:ILE:HD11	2.50	0.47
45:98:70:LEU:O	45:98:72:ASP:N	2.47	0.47
47:51:149:ARG:NH1	47:51:167:GLU:OE1	2.47	0.47
47:51:154:PRO:HD3	47:51:162:ILE:O	2.15	0.47
50:7E:40:ALA:O	50:7E:43:GLY:N	2.45	0.47
50:72:20:TYR:HA	50:72:65:TYR:CZ	2.50	0.47
50:72:114:THR:OG1	50:72:116:LYS:O	2.33	0.47
1:13:982:C:O2'	1:13:983:C:H5'	2.15	0.47
1:13:1045:U:H2'	1:13:1046:U:C6	2.50	0.47
1:13:1226:G:H1'	1:13:1273:G:N2	2.30	0.47
1:13:2072:A:H4'	1:13:2072:A:OP1	2.14	0.47
1:13:2095:U:O2'	1:13:2096:A:H5'	2.15	0.47
2:A8:17:ARG:NH2	15:1H:2307:C:P	2.86	0.47
2:A8:99:LYS:O	2:A8:103:GLU:HG2	2.13	0.47
4:11:273:ARG:HE	4:11:274:ARG:HG3	1.78	0.47
1:1G:1182:A:C5	1:1G:1183:C:C5	3.03	0.47
1:1G:1932:G:N2	1:1G:1958:G:H2'	2.26	0.47
2:65:54:LEU:HA	2:65:54:LEU:HD12	1.72	0.47
9:82:4:TYR:CZ	9:82:88:TYR:HB3	2.49	0.47
15:1H:606:C:H2'	15:1H:607:G:C8	2.50	0.47
15:1H:639:U:O2	15:1H:639:U:O4'	2.32	0.47
15:1H:707:C:H2'	15:1H:708:C:C6	2.49	0.47
15:1H:992:A:OP2	56:1H:3777:HOH:O	2.21	0.47
15:1H:1543:A:H2'	15:1H:1544:A:H8	1.78	0.47
15:1H:1557:A:H8	15:1H:1557:A:OP2	1.97	0.47
15:1H:2319:G:H22	15:1H:2327:U:H3	1.63	0.47
15:1H:2324:A:C6	15:1H:2325:A:C8	3.03	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:1H:2708:A:H2'	15:1H:2709:G:C8	2.50	0.47
15:1H:2843:G:H5'	15:1H:2843:G:C8	2.49	0.47
18:61:114:LEU:HD12	18:61:114:LEU:N	2.30	0.47
14:32:126:ILE:HG22	14:32:127:THR:N	2.30	0.47
15:14:864:C:H2'	15:14:865:C:C6	2.50	0.47
15:14:2289:A:C5	15:14:2291:G:C8	3.03	0.47
15:14:2703:U:H5	15:14:2736:U:OP2	1.98	0.47
24:4I:15:VAL:HG23	24:4I:43:THR:O	2.15	0.47
20:1B:9:ARG:HG3	20:1B:10:ARG:HG3	1.97	0.47
26:16:90:C:H2'	26:16:91:G:O4'	2.15	0.47
22:D5:28:MET:HG2	22:D5:35:ARG:O	2.14	0.47
26:1J:44:C:O2'	40:49:67:LYS:O	2.18	0.47
34:5E:79:LEU:HD23	34:5E:79:LEU:HA	1.64	0.47
30:35:47:ASP:HB3	30:35:49:ARG:N	2.30	0.47
38:88:29:PHE:N	38:88:105:GLU:OE2	2.40	0.47
35:95:12:TYR:CE1	35:95:22:VAL:HG23	2.49	0.47
35:95:95:LEU:HD13	35:95:97:LYS:HE2	1.96	0.47
40:41:124:SER:HB2	40:41:131:TYR:CE1	2.49	0.47
41:6I:17:ARG:HH11	41:6I:17:ARG:HG3	1.80	0.47
37:BA:50:GLU:CA	37:BA:100:ILE:HG12	2.45	0.47
44:1E:28:PHE:CD2	44:1E:190:THR:HG22	2.49	0.47
45:55:106:GLY:O	45:55:107:ASP:HB3	2.13	0.47
3:F8:24:GLY:CA	3:F8:82:GLN:HE22	2.24	0.47
1:13:695:U:C2	1:13:1002:G:N2	2.83	0.47
1:13:770:A:N3	1:13:904:A:O2'	2.38	0.47
1:13:1038:A:H3'	1:13:1038:A:N3	2.30	0.47
1:13:1288:U:H2'	1:13:1289:G:H8	1.80	0.47
1:13:1803:A:H3'	1:13:1803:A:H8	1.79	0.47
6:2A:20:TYR:CE1	6:2A:83:ILE:HD12	2.49	0.47
1:1G:849:A:C8	1:1G:850:G:H1'	2.50	0.47
1:1G:1037:G:O2'	1:1G:1039:C:OP1	2.23	0.47
1:1G:1086:G:H1	1:1G:1118:C:H42	1.61	0.47
1:1G:1257:G:H2'	1:1G:1258:G:C8	2.49	0.47
1:1G:1752:G:O2'	1:1G:1773:C:C4	2.65	0.47
1:1G:1754:U:H4'	1:1G:1755:G:C5	2.50	0.47
4:19:43:ARG:HH12	15:14:739:G:H21	1.63	0.47
9:82:3:GLN:O	9:82:4:TYR:HD1	1.98	0.47
9:82:4:TYR:CE2	9:82:88:TYR:HB3	2.50	0.47
9:82:110:GLU:OE2	9:82:113:LYS:HE2	2.15	0.47
15:1H:507:A:HO2'	15:1H:509:G:H8	1.61	0.47
15:1H:803:C:H2'	15:1H:804:C:H6	1.79	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:1H:1247:U:H2'	15:1H:1248:C:C6	2.50	0.47
15:1H:1327:A:C5'	45:98:36:THR:HG22	2.45	0.47
15:1H:2323:G:N2	15:1H:2326:A:H2	2.13	0.47
15:1H:2547:G:O2'	15:1H:2672:A:N1	2.47	0.47
15:1H:2748:G:H3'	15:1H:2749:A:O4'	2.15	0.47
10:15:19:GLU:HB2	10:15:56:ASN:HD22	1.80	0.47
15:14:33:U:H4'	15:14:34:C:OP1	2.15	0.47
15:14:1229:C:H2'	15:14:1230:A:C8	2.50	0.47
15:14:1258:A:H5'	15:14:1260:G:O4'	2.15	0.47
15:14:1366:A:H2'	15:14:1367:C:H6	1.80	0.47
15:14:1481:C:H2'	15:14:1482:U:O4'	2.15	0.47
15:14:1728:G:N2	15:14:2014:G:N2	2.59	0.47
15:14:2626:U:H3'	15:14:2626:U:OP2	2.14	0.47
15:14:2769:A:H2'	15:14:2770:U:O4'	2.15	0.47
15:14:2844:G:OP1	23:29:58:ARG:NH1	2.48	0.47
22:H8:10:ARG:HG3	22:H8:36:LYS:HB3	1.96	0.47
23:21:33:VAL:CG1	23:21:89:ASP:HA	2.44	0.47
25:42:126:ARG:HG3	25:42:126:ARG:NH1	2.27	0.47
27:85:92:ARG:CD	27:85:94:ASN:HB3	2.38	0.47
30:35:8:PRO:HB2	30:35:12:ALA:HB3	1.95	0.47
36:N8:40:LYS:HE2	36:N8:47:PRO:HD2	1.97	0.47
32:39:95:ARG:HG3	32:39:97:TYR:CE1	2.50	0.47
41:6I:6:GLU:CD	41:6I:6:GLU:H	2.15	0.47
42:6E:45:ASP:O	42:6E:49:ILE:HG12	2.15	0.47
40:49:129:GLY:O	40:49:161:THR:HB	2.15	0.47
47:59:81:GLU:HG2	47:59:83:TYR:HB2	1.96	0.47
8:2E:78:GLY:HA3	8:2E:83:ARG:HB3	1.96	0.47
8:2E:130:VAL:O	8:2E:134:ILE:HG12	2.14	0.47
52:V4:18:G:H2'	52:V4:57:G:N2	2.30	0.47
1:13:722:G:H2'	1:13:722:G:N3	2.30	0.47
1:13:954:A:H2'	1:13:955:C:H6	1.79	0.47
1:13:1562:G:H2'	1:13:1563:C:H6	1.79	0.47
1:13:1860:G:H2'	1:13:1861:C:H6	1.80	0.47
1:13:2154:A:H8	1:13:2154:A:O5'	1.97	0.47
2:A8:106:ARG:HA	2:A8:109:GLY:N	2.29	0.47
3:B5:59:VAL:HG22	3:B5:76:ARG:HB2	1.97	0.47
1:1G:1252:C:C4	1:1G:1253:C:C5	3.03	0.47
1:1G:1588:A:C2	1:1G:1592:A:C2	3.04	0.47
1:1G:1956:A:H5'	24:4A:29:ARG:HE	1.79	0.47
10:58:63:THR:O	10:58:66:LYS:HG3	2.15	0.47
10:58:131:GLN:NE2	10:58:132:ALA:HB2	2.30	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:G8:87:LYS:CB	11:G8:96:ILE:HD12	2.44	0.47
12:Q8:50:LEU:CA	12:Q8:53:PRO:HD2	2.44	0.47
14:3E:8:VAL:HG13	14:3E:21:LEU:HD12	1.97	0.47
14:3E:28:SER:OG	14:3E:29:PRO:O	2.26	0.47
9:82:5:TYR:OH	9:82:16:ARG:HG2	2.14	0.47
15:1H:162:C:H2'	15:1H:163:G:H8	1.80	0.47
15:1H:647:G:H4'	15:1H:648:A:C5'	2.45	0.47
15:1H:1116:G:H1'	15:1H:1144:A:H1'	1.95	0.47
15:1H:1639:U:H2'	15:1H:1640:G:H8	1.78	0.47
15:1H:2324:A:C5	15:1H:2325:A:C8	3.00	0.47
15:1H:2835:G:H2'	15:1H:2836:A:H5''	1.97	0.47
18:61:40:THR:HG22	18:61:41:GLU:OE1	2.13	0.47
15:14:683:C:H2'	15:14:684:G:C8	2.49	0.47
15:14:809:G:H2'	15:14:810:A:O4'	2.14	0.47
15:14:876:U:O2	15:14:2261:G:H4'	2.15	0.47
15:14:1090:G:C6	15:14:1162:G:N2	2.83	0.47
15:14:1306:C:H4'	32:39:83:PHE:CE1	2.50	0.47
15:14:1381:G:H21	15:14:1659:A:H8	1.62	0.47
15:14:1393:G:O6	56:14:3681:HOH:O	2.20	0.47
15:14:1535:A:H2'	15:14:1536:G:H8	1.80	0.47
15:14:2183:A:H1'	15:14:2184:G:C8	2.50	0.47
15:14:2274:G:H1'	15:14:2442:C:H2'	1.96	0.47
15:14:2477:U:H2'	15:14:2478:C:H6	1.80	0.47
15:14:2510:G:H5'	38:45:81:VAL:O	2.15	0.47
15:14:2660:G:H3'	15:14:2661:C:H5'	1.97	0.47
18:69:72:LEU:HD21	18:69:107:VAL:HG11	1.97	0.47
25:4E:43:LEU:O	25:4E:65:ASN:ND2	2.48	0.47
21:25:2:ILE:HG21	21:25:8:LEU:HD21	1.97	0.47
22:D5:93:ASP:N	22:D5:130:PRO:HG2	2.30	0.47
36:J5:31:VAL:HG13	36:J5:42:PRO:HG3	1.96	0.47
38:45:38:GLU:OE1	38:45:128:LYS:HG3	2.15	0.47
40:49:135:LEU:O	40:49:154:GLY:HA3	2.14	0.47
46:K8:43:GLN:HB2	46:K8:44:LEU:HD23	1.97	0.47
8:2E:9:GLY:HA2	8:2E:12:LEU:HG	1.97	0.47
50:72:103:VAL:HG21	50:72:110:ALA:HB2	1.96	0.47
52:X4:22:G:H2'	52:X4:23:A:C8	2.50	0.47
1:13:1079:G:H4'	14:3E:123:HIS:CD2	2.49	0.46
1:13:1504:G:H2'	1:13:1505:C:O4'	2.16	0.46
1:13:1545:G:C6	1:13:1546:A:C6	3.02	0.46
1:13:1805:G:N2	1:13:1808:G:H8	2.13	0.46
2:A8:59:LYS:HD3	2:A8:60:GLY:N	2.29	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:B5:11:PRO:HD3	46:G5:37:PHE:CD2	2.50	0.46
4:11:132:PRO:HD3	4:11:190:TYR:CZ	2.51	0.46
6:2A:82:VAL:HG13	6:2A:108:ILE:HG23	1.96	0.46
6:2A:107:SER:HA	19:9A:87:ARG:HH22	1.80	0.46
8:22:139:GLN:HA	8:22:139:GLN:OE1	2.15	0.46
1:1G:786:G:H1	1:1G:816:C:H42	1.61	0.46
1:1G:1099:G:C6	1:1G:1101:C:H5'	2.51	0.46
1:1G:1583:U:H3	1:1G:1852:A:H1'	1.79	0.46
1:1G:1856:A:OP2	24:4A:114:ARG:HD3	2.15	0.46
12:Q8:10:ALA:O	12:Q8:14:VAL:HG22	2.15	0.46
9:82:71:SER:HA	9:82:74:ILE:HD12	1.96	0.46
15:1H:545:G:H4'	43:E8:18:ARG:NH1	2.30	0.46
15:1H:605:C:H2'	15:1H:606:C:C6	2.50	0.46
15:1H:608:G:N2	15:1H:1307:C:C2	2.83	0.46
15:1H:1101:C:N4	15:1H:1154:G:H1	2.12	0.46
15:1H:2803:C:O2'	23:21:61:ARG:HB3	2.15	0.46
15:1H:2805:C:H1'	15:1H:2904:A:H2	1.80	0.46
15:1H:2806:A:C2	15:1H:2906:G:H5''	2.50	0.46
12:M5:61:LEU:N	12:M5:61:LEU:CD1	2.77	0.46
15:14:66:U:H2'	15:14:67:G:H8	1.80	0.46
15:14:255:A:C8	15:14:256:G:H1'	2.50	0.46
15:14:402:A:C2	15:14:429:A:C4	3.03	0.46
15:14:823:A:HO2'	15:14:824:G:H8	1.60	0.46
15:14:1203:G:OP1	27:85:58:ARG:HD3	2.16	0.46
15:14:1337:U:C2	15:14:1376:C:O2	2.68	0.46
15:14:2489:C:H3'	15:14:2490:C:C4'	2.44	0.46
15:14:2587:A:OP1	15:14:2589:G:O2'	2.31	0.46
16:75:88:ILE:CD1	16:75:125:ARG:HH12	2.27	0.46
23:21:5:LEU:HB2	23:21:51:PHE:HB2	1.97	0.46
23:21:78:LEU:HA	23:21:79:ARG:HA	1.56	0.46
26:16:43:U:C5	40:41:70:VAL:HG13	2.50	0.46
26:16:62:C:C2	26:16:63:G:C8	3.03	0.46
23:29:37:ARG:O	23:29:45:THR:HA	2.14	0.46
30:35:101:VAL:HG21	30:35:108:LYS:HB2	1.97	0.46
32:39:4:VAL:HA	32:39:19:GLU:HB3	1.97	0.46
44:1E:19:HIS:C	44:1E:19:HIS:ND1	2.68	0.46
47:51:13:LYS:O	47:51:15:VAL:HG13	2.14	0.46
44:12:108:ILE:HD13	44:12:108:ILE:HA	1.69	0.46
3:F8:3:THR:HA	3:F8:6:ASP:OD2	2.16	0.46
6:2I:41:THR:HG22	6:2I:42:TRP:N	2.30	0.46
52:V1:18:G:N2	52:V1:58:A:N7	2.49	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:V1:39:U:H2'	52:V1:40:C:C6	2.50	0.46
52:V1:54:U:H2'	52:V1:55:U:C5	2.50	0.46
52:V4:56:C:H2'	52:V4:57:G:C8	2.50	0.46
1:13:767:G:O3'	7:8I:3:LYS:HE2	2.15	0.46
1:13:1353:G:C2	1:13:1354:G:C8	3.04	0.46
1:13:1420:G:C6	1:13:1421:A:N1	2.83	0.46
2:A8:32:LEU:HD13	26:16:33:C:N4	2.30	0.46
3:B5:25:LYS:HA	3:B5:81:VAL:O	2.15	0.46
4:11:182:LEU:N	4:11:272:ALA:HB3	2.29	0.46
4:11:250:TRP:CD2	15:1H:1839:U:H5''	2.50	0.46
1:1G:1050:G:C2	1:1G:1051:G:H1'	2.51	0.46
1:1G:1932:G:HO2'	1:1G:1933:A:P	2.39	0.46
12:Q8:35:GLN:HG3	12:Q8:38:GLY:N	2.30	0.46
7:8A:45:HIS:O	7:8A:73:VAL:HG12	2.15	0.46
15:1H:239:C:P	56:1H:3760:HOH:O	2.71	0.46
15:1H:342:G:C2	15:1H:343:C:C2	3.03	0.46
15:1H:699:C:C2'	15:1H:700:G:H5'	2.45	0.46
15:1H:831:A:H5'	15:1H:832:A:C2	2.49	0.46
15:1H:1149:U:H2'	15:1H:1150:C:C6	2.50	0.46
15:1H:1408:A:C2	15:1H:1421:U:O4	2.68	0.46
15:1H:1469:U:O2'	15:1H:1470:G:OP1	2.27	0.46
11:C5:68:HIS:HB3	11:C5:71:LYS:HG3	1.96	0.46
18:61:69:LYS:HA	18:61:136:VAL:HB	1.98	0.46
15:14:662:C:O2'	15:14:666:U:OP1	2.27	0.46
15:14:1089:C:H2'	15:14:1090:G:C8	2.45	0.46
15:14:1380:A:O2'	15:14:1381:G:H8	1.97	0.46
20:1B:8:THR:HG22	20:1B:10:ARG:H	1.80	0.46
28:M8:33:VAL:HG13	40:41:113:ARG:HD2	1.97	0.46
28:I5:18:CYS:N	28:I5:19:GLY:HA2	2.29	0.46
32:31:12:LEU:O	32:31:127:GLU:N	2.49	0.46
30:35:126:VAL:HA	30:35:145:PRO:HD2	1.97	0.46
37:BI:30:LYS:HE2	37:BI:80:ARG:HH12	1.80	0.46
38:88:21:THR:H	38:88:98:LYS:HB2	1.79	0.46
44:12:47:THR:HG23	44:12:202:PRO:HG2	1.97	0.46
45:55:87:TYR:HD1	45:55:90:ARG:HD2	1.80	0.46
52:W1:76:A:H5''	52:W1:76:A:H8	1.80	0.46
52:X4:61:C:H2'	52:X4:62:C:C6	2.49	0.46
1:13:769:G:C2	1:13:834:U:O2'	2.69	0.46
1:13:1104:G:H5''	49:7I:81:ARG:CZ	2.45	0.46
1:13:1210:G:N2	1:13:1211:U:C4	2.83	0.46
4:11:37:LEU:HD23	4:11:37:LEU:O	2.15	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:1G:1219:C:H2'	1:1G:1220:U:H6	1.80	0.46
1:1G:1480:C:H2'	1:1G:1481:G:O4'	2.15	0.46
14:3E:80:GLU:O	14:3E:83:SER:HB2	2.15	0.46
15:1H:82:G:N2	15:1H:100:G:H1'	2.30	0.46
15:1H:562:C:O3'	27:C8:53:ARG:NH1	2.49	0.46
15:1H:1159:A:N3	15:1H:1160:G:H1'	2.31	0.46
15:1H:1238:G:OP1	30:78:30:THR:HG23	2.15	0.46
15:1H:1503:A:O2'	15:1H:1504:U:H2'	2.16	0.46
15:1H:2104:U:OP1	39:J8:21:ARG:NH2	2.48	0.46
10:15:128:HIS:HD2	10:15:129:PRO:O	1.98	0.46
16:B8:112:ARG:HB2	16:B8:115:ARG:NH2	2.31	0.46
20:1F:9:ARG:NH1	20:1F:22:ARG:HA	2.31	0.46
15:14:1095:G:H21	15:14:1159:A:H62	1.62	0.46
15:14:1469:U:O2'	15:14:1470:G:P	2.73	0.46
15:14:1525:G:H5'	15:14:1526:C:OP2	2.16	0.46
15:14:1818:A:H4'	15:14:1819:A:C5'	2.46	0.46
15:14:1894:G:H8	15:14:1894:G:O5'	1.97	0.46
22:H8:139:VAL:HG22	22:H8:155:LEU:HD22	1.96	0.46
22:H8:149:SER:HB3	22:H8:170:THR:HG22	1.98	0.46
24:4I:3:ARG:HD3	24:4I:7:VAL:HG13	1.97	0.46
24:4A:57:ARG:HG3	24:4A:61:GLU:OE1	2.16	0.46
25:42:13:ILE:HA	25:42:29:GLY:O	2.15	0.46
32:31:6:VAL:HG21	32:31:119:ARG:HB2	1.96	0.46
29:AA:8:GLY:O	29:AA:10:PHE:HD1	1.98	0.46
29:AA:16:LEU:O	29:AA:19:VAL:HB	2.15	0.46
38:88:37:LEU:HD21	38:88:130:LYS:HE2	1.98	0.46
40:41:127:GLY:HA2	40:41:166:ASP:OD2	2.15	0.46
42:6E:69:VAL:HG22	42:6E:135:VAL:HG13	1.97	0.46
48:1I:32:ALA:CB	48:1I:76:ASN:HB2	2.46	0.46
44:12:52:GLU:HG2	44:12:56:ARG:NH2	2.30	0.46
3:F8:67:GLY:O	3:F8:69:TYR:N	2.48	0.46
50:72:109:ILE:HG12	50:72:110:ALA:H	1.80	0.46
52:V1:18:G:O2'	52:V1:19:G:OP1	2.32	0.46
1:13:1260:G:H8	1:13:1261:A:C2	2.33	0.46
1:13:1578:U:H1'	1:13:1854:A:N6	2.31	0.46
3:B5:53:LYS:HB3	3:B5:82:GLN:HB3	1.97	0.46
5:L5:39:ARG:NH1	15:14:497:G:C6	2.75	0.46
1:1G:876:C:H5'	7:8A:70:ARG:HG2	1.98	0.46
2:65:106:ARG:O	2:65:106:ARG:HD2	2.15	0.46
4:19:239:ARG:HG3	15:14:2606:C:OP1	2.15	0.46
9:82:18:PHE:HD2	9:82:62:TYR:HD2	1.64	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:1H:611:A:OP2	56:1H:3773:HOH:O	2.20	0.46
15:1H:966:A:C5	15:1H:967:G:H1'	2.51	0.46
15:1H:1048:A:H2'	15:1H:1049:A:C8	2.50	0.46
15:1H:1990:C:H2'	15:1H:1991:A:C8	2.51	0.46
12:M5:33:ASN:O	12:M5:34:TRP:HB3	2.15	0.46
12:M5:53:PRO:O	12:M5:56:GLU:HB3	2.15	0.46
15:14:558:C:C5	15:14:2060:G:C2	3.04	0.46
15:14:1457:C:C2	15:14:1644:G:N2	2.84	0.46
15:14:1686:C:H2'	15:14:1687:A:H8	1.79	0.46
15:14:1707:C:H2'	15:14:1708:C:H6	1.80	0.46
15:14:2077:G:O4'	23:29:142:GLY:HA3	2.14	0.46
15:14:2212:G:C6	15:14:2213:C:C4	3.04	0.46
15:14:2290:C:C2	38:45:85:LYS:HE3	2.50	0.46
15:14:2433:A:H2'	15:14:2434:U:O4'	2.15	0.46
15:14:2569:U:H2'	15:14:2570:U:C6	2.51	0.46
15:14:2792:A:OP1	15:14:2792:A:H3'	2.15	0.46
18:69:78:THR:HA	18:69:141:LYS:O	2.15	0.46
27:C8:90:VAL:HG12	27:C8:91:ASP:HA	1.97	0.46
24:4A:4:ILE:HG23	24:4A:5:ALA:H	1.79	0.46
27:85:92:ARG:NH2	35:95:10:LYS:HA	2.29	0.46
32:31:63:LYS:HE3	32:31:67:GLN:HB2	1.96	0.46
35:D8:35:LEU:C	35:D8:37:VAL:H	2.17	0.46
42:6E:6:ARG:HB3	42:6E:6:ARG:HH11	1.81	0.46
39:F5:13:ILE:HG13	39:F5:42:GLN:HG3	1.98	0.46
44:1E:80:ILE:O	44:1E:84:GLU:HG2	2.16	0.46
44:1E:171:ALA:HA	44:1E:174:VAL:HB	1.98	0.46
47:51:129:THR:O	47:51:129:THR:OG1	2.33	0.46
48:1A:32:ALA:HA	48:1A:76:ASN:HB2	1.97	0.46
44:12:167:PRO:O	44:12:171:ALA:N	2.48	0.46
47:59:12:PRO:HG2	47:59:48:GLY:O	2.14	0.46
47:59:119:GLU:OE2	47:59:119:GLU:N	2.31	0.46
1:13:769:G:C2	1:13:837:G:C8	3.03	0.46
1:13:1017:G:O3'	49:7I:5:ARG:NH1	2.47	0.46
1:13:1343:G:H2'	1:13:1344:A:C8	2.50	0.46
1:13:1753:U:O4	48:1I:5:ARG:NE	2.32	0.46
1:13:2004:U:H2'	1:13:2005:A:C8	2.51	0.46
5:L5:22:MET:HA	5:L5:28:ARG:HG2	1.98	0.46
8:22:178:LEU:HB2	1:1G:1740:C:C2	2.51	0.46
9:8E:99:LEU:HD22	9:8E:99:LEU:HA	1.81	0.46
1:1G:713:C:H2'	1:1G:714:G:H8	1.77	0.46
1:1G:744:G:H2'	1:1G:745:C:C6	2.50	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:1G:941:A:H1'	1:1G:1194:U:O2	2.16	0.46
1:1G:1840:A:N6	1:1G:1842:G:N3	2.64	0.46
1:1G:1954:C:H2'	1:1G:1955:C:H6	1.78	0.46
10:58:41:ASP:OD1	10:58:41:ASP:N	2.48	0.46
11:G8:83:THR:HG23	15:1H:361:C:P	2.56	0.46
4:19:236:GLY:HA2	15:14:2614:G:H8	1.80	0.46
12:Q8:35:GLN:C	12:Q8:37:SER:N	2.69	0.46
12:Q8:59:LYS:HZ2	12:Q8:60:LEU:HD21	1.77	0.46
9:82:49:PRO:HD3	9:82:78:LYS:HZ2	1.80	0.46
15:1H:70:A:C2	3:F8:31:HIS:CE1	3.02	0.46
15:1H:96:C:H5''	46:K8:2:LYS:HB2	1.98	0.46
15:1H:237:G:H4'	15:1H:414:G:C5	2.50	0.46
15:1H:1730:U:H2'	15:1H:1731:G:O4'	2.15	0.46
15:1H:2350:A:C8	15:1H:2352:G:N7	2.83	0.46
15:1H:2737:A:H2'	15:1H:2738:G:O4'	2.15	0.46
13:3A:41:ARG:NH1	13:3A:42:THR:O	2.48	0.46
15:14:375:U:H2'	15:14:376:G:O4'	2.15	0.46
15:14:783:A:O2'	15:14:1685:G:H5'	2.15	0.46
15:14:942:C:H3'	15:14:943:U:H5''	1.98	0.46
15:14:1015:G:H2'	15:14:1016:U:O4'	2.15	0.46
15:14:1105:A:H8	15:14:1137:G:H22	1.63	0.46
15:14:1159:A:H4'	47:59:3:ARG:HH11	1.80	0.46
15:14:1238:G:H2'	15:14:1239:G:H8	1.81	0.46
15:14:1436:C:C2	15:14:1437:G:C8	3.03	0.46
15:14:2429:G:H21	30:35:67:MET:CE	2.29	0.46
15:14:2868:C:H2'	15:14:2869:C:H6	1.80	0.46
16:75:132:LYS:HD3	16:75:133:GLU:HB3	1.98	0.46
22:H8:29:TYR:HA	22:H8:33:LEU:O	2.16	0.46
17:H5:23:LEU:HD11	17:H5:53:LEU:HD12	1.97	0.46
18:69:74:ASN:N	18:69:74:ASN:OD1	2.48	0.46
24:4I:94:ARG:HA	24:4I:94:ARG:HD2	1.72	0.46
26:16:13:C:H3'	26:16:14:C:C6	2.49	0.46
22:D5:10:ARG:NH2	22:D5:26:GLY:O	2.48	0.46
23:29:65:GLY:O	23:29:68:ALA:HB2	2.15	0.46
27:85:27:LEU:HB3	27:85:31:SER:HB3	1.96	0.46
30:35:105:LEU:O	30:35:106:LEU:HB3	2.15	0.46
32:39:67:GLN:O	32:39:67:GLN:HG3	2.15	0.46
32:39:83:PHE:O	32:39:85:GLY:N	2.48	0.46
35:95:14:VAL:HB	35:95:96:ILE:HG13	1.97	0.46
35:95:70:ILE:N	35:95:86:GLY:O	2.47	0.46
39:J8:80:LEU:C	39:J8:81:LYS:HD2	2.36	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:6I:57:LEU:HD23	41:6I:57:LEU:HA	1.64	0.46
42:6E:22:LEU:HD23	42:6E:63:LYS:HD2	1.97	0.46
44:12:223:ILE:H	44:12:223:ILE:HG12	1.51	0.46
3:F8:52:VAL:HG23	3:F8:82:GLN:HG3	1.97	0.46
46:G5:15:LYS:HE2	46:G5:67:LYS:NZ	2.31	0.46
6:2I:34:ASP:HB3	6:2I:40:ILE:HD11	1.97	0.46
8:2E:76:VAL:CG2	8:2E:103:VAL:HG21	2.45	0.46
8:2E:108:ASN:HA	8:2E:109:PRO:HD2	1.77	0.46
52:X1:45:U:OP2	52:X1:45:U:H2'	2.16	0.46
52:V4:58:A:O2'	52:V4:59:U:OP1	2.33	0.46
1:13:913:C:C2	1:13:914:A:C8	3.04	0.46
1:13:1370:G:H2'	1:13:1371:G:O4'	2.16	0.46
1:13:1707:G:C6	1:13:1708:A:N6	2.83	0.46
1:13:1712:G:C5	1:13:1713:U:C4	3.04	0.46
2:A8:83:LYS:HB3	2:A8:110:LEU:HD12	1.98	0.46
1:1G:703:G:C6	1:1G:704:C:C4	3.03	0.46
1:1G:962:A:C2	1:1G:974:G:C2	3.03	0.46
1:1G:1281:U:C4	1:1G:1381:G:N3	2.84	0.46
1:1G:1602:C:C5	1:1G:1603:C:C6	3.03	0.46
1:1G:1960:A:H2'	1:1G:1961:G:O4'	2.16	0.46
11:G8:98:VAL:O	11:G8:100:ALA:HB2	2.15	0.46
4:19:228:PRO:HD3	4:19:234:GLY:O	2.15	0.46
15:1H:173:C:N4	15:1H:203:A:H61	2.13	0.46
15:1H:403:C:H2'	15:1H:404:C:C6	2.51	0.46
15:1H:859:U:OP1	56:1H:3774:HOH:O	2.20	0.46
15:1H:1730:U:O2	15:1H:1797:G:H3'	2.15	0.46
15:1H:1772:G:H2'	15:1H:1773:A:H8	1.81	0.46
15:1H:1957:A:H2'	15:1H:1958:G:O4'	2.16	0.46
15:1H:2122:C:H2'	15:1H:2123:U:O4'	2.16	0.46
10:15:47:ALA:O	10:15:119:ARG:NH2	2.47	0.46
10:15:90:MET:HB3	10:15:98:VAL:HG12	1.98	0.46
11:C5:81:LYS:HD2	11:C5:99:CYS:SG	2.56	0.46
19:9I:76:LEU:HD13	19:9I:76:LEU:HA	1.77	0.46
15:14:563:A:H2'	15:14:564:C:C6	2.50	0.46
15:14:675:G:H4'	15:14:2366:G:H5''	1.98	0.46
15:14:912:A:H2'	15:14:913:G:C8	2.51	0.46
15:14:1788:C:H2'	15:14:1789:A:C8	2.51	0.46
22:H8:105:VAL:HG22	22:H8:140:ASP:HB3	1.98	0.46
22:H8:133:ILE:HA	22:H8:134:PRO:HD2	1.74	0.46
26:16:42:U:C5	28:M8:2:LYS:HG3	2.50	0.46
24:4A:2:ALA:HB3	24:4A:9:ILE:HG23	1.98	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:4A:79:LYS:HA	24:4A:82:MET:HB3	1.96	0.46
24:4A:80:ARG:NH1	29:AA:66:MET:HG2	2.31	0.46
24:4A:88:ARG:O	24:4A:92:HIS:HD2	1.98	0.46
32:39:25:PRO:C	32:39:27:GLU:N	2.68	0.46
34:52:21:LEU:O	34:52:21:LEU:HD22	2.15	0.46
38:88:37:LEU:HD11	38:88:130:LYS:HG3	1.97	0.46
40:41:107:LEU:HD11	40:41:178:PHE:CD1	2.50	0.46
40:49:107:LEU:HD21	40:49:178:PHE:CE2	2.51	0.46
44:1E:7:VAL:HG11	44:1E:217:ARG:HH11	1.81	0.46
43:A5:42:ARG:HG2	43:A5:42:ARG:O	2.15	0.46
47:51:51:ARG:HG2	47:51:52:VAL:N	2.31	0.46
44:12:162:ILE:O	44:12:185:ILE:HG12	2.16	0.46
45:55:54:LEU:HD12	45:55:54:LEU:HA	1.72	0.46
47:59:62:LYS:H	47:59:62:LYS:HG3	1.46	0.46
52:X4:18:G:H3'	52:X4:57:G:N2	2.31	0.46
52:V4:9:A:N6	52:V4:23:A:H62	2.14	0.46
1:13:1288:U:H2'	1:13:1289:G:C8	2.51	0.46
1:13:1763:U:H4'	1:13:1764:U:C5	2.47	0.46
1:13:1770:G:H2'	1:13:1771:G:O4'	2.14	0.46
3:B5:84:ALA:HB3	3:B5:87:GLN:NE2	2.31	0.46
4:11:52:ARG:HD3	15:1H:1858:G:OP1	2.16	0.46
5:L5:7:PRO:HB2	15:14:1358:G:H4'	1.98	0.46
1:1G:748:A:C6	1:1G:967:G:C6	3.04	0.46
1:1G:1457:A:H2'	1:1G:1458:G:O4'	2.16	0.46
1:1G:1756:C:H2'	1:1G:1767:G:O6	2.16	0.46
1:1G:2083:A:H2'	1:1G:2084:G:O4'	2.16	0.46
11:G8:35:TYR:CD2	11:G8:69:ALA:HB3	2.50	0.46
4:19:49:ILE:HD11	4:19:52:ARG:HG3	1.97	0.46
14:3E:79:PHE:O	14:3E:83:SER:OG	2.28	0.46
15:1H:137:G:N2	3:F8:44:GLU:OE2	2.30	0.46
15:1H:2277:U:H4'	15:1H:2343:A:H2	1.81	0.46
14:32:149:ALA:O	14:32:153:ARG:NE	2.45	0.46
15:14:674:G:N7	53:14:3005:8UZ:N4	2.64	0.46
15:14:1728:G:C5	15:14:1729:U:C5	3.04	0.46
21:68:105:GLU:HA	21:68:108:GLU:HG3	1.98	0.46
16:75:16:ARG:NH1	16:75:19:LEU:HD21	2.31	0.46
22:H8:30:ASN:ND2	22:H8:90:VAL:HB	2.30	0.46
18:69:61:ARG:HA	18:69:61:ARG:HD2	1.60	0.46
24:4I:49:THR:HB	24:4I:52:GLU:H	1.80	0.46
27:C8:50:ARG:HG2	27:C8:53:ARG:NH2	2.30	0.46
25:42:93:PRO:HG2	50:72:105:ARG:NE	2.31	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:39:49:ALA:O	32:39:92:PRO:HB2	2.16	0.46
32:39:179:GLU:CD	32:39:179:GLU:H	2.19	0.46
35:95:5:VAL:HB	35:95:37:VAL:CB	2.45	0.46
35:95:76:LYS:HD2	35:95:80:GLN:HG2	1.98	0.46
40:41:71:THR:N	40:41:89:GLY:O	2.44	0.46
41:6I:61:GLY:O	41:6I:64:ARG:HB3	2.16	0.46
37:BA:75:ASN:HA	37:BA:78:ALA:HB3	1.98	0.46
42:6E:73:MET:HG2	42:6E:90:GLU:HA	1.97	0.46
40:49:51:ARG:HE	40:49:51:ARG:HB3	1.52	0.46
41:6A:3:ILE:H	41:6A:3:ILE:HD12	1.81	0.46
44:1E:73:THR:CG2	44:1E:96:ARG:HH22	2.28	0.46
44:12:73:THR:HG21	44:12:97:TRP:H	1.81	0.46
44:12:97:TRP:HH2	44:12:176:GLU:CD	2.19	0.46
49:7A:45:THR:O	49:7A:48:TRP:HD1	1.97	0.46
52:W1:73:A:O2'	52:W1:74:C:H4'	2.16	0.46
52:V4:72:C:C2'	52:V4:73:A:H5''	2.46	0.46
1:13:898:G:C6	1:13:899:G:C5	3.04	0.46
1:13:1281:U:C4	1:13:1381:G:N3	2.84	0.46
1:13:1297:G:O2'	41:6I:46:HIS:HB3	2.16	0.46
1:13:1752:G:C2	1:13:1755:G:N2	2.84	0.46
1:13:1929:U:OP2	24:4I:21:TYR:OH	2.17	0.46
1:13:1954:C:OP1	20:1F:21:TYR:HD2	1.99	0.46
1:13:2162:C:O2	51:Y1:33:G:N1	2.49	0.46
2:A8:10:ARG:NH1	15:1H:2310:C:OP1	2.49	0.46
4:11:6:PHE:CE1	4:11:18:VAL:HG23	2.51	0.46
4:11:242:ARG:HD2	4:11:242:ARG:H	1.81	0.46
5:L5:26:GLY:O	5:L5:30:VAL:HG23	2.16	0.46
5:L5:40:TRP:N	5:L5:40:TRP:CD1	2.82	0.46
8:22:199:LYS:HB3	8:22:201:TYR:HE1	1.80	0.46
1:1G:834:U:O2'	1:1G:835:U:O5'	2.30	0.46
1:1G:1014:A:N3	1:1G:1015:A:C8	2.84	0.46
1:1G:1257:G:H2'	1:1G:1258:G:H8	1.80	0.46
1:1G:1446:C:N3	1:1G:2152:G:O6	2.48	0.46
1:1G:1705:G:N2	1:1G:1708:A:OP2	2.47	0.46
10:58:82:LEU:HA	10:58:82:LEU:HD12	1.64	0.46
11:G8:97:ARG:NH1	11:G8:103:GLY:O	2.47	0.46
14:3E:23:GLY:HA2	14:3E:112:VAL:HG22	1.98	0.46
15:1H:606:C:OP1	27:C8:33:ARG:HG3	2.15	0.46
15:1H:1022:C:OP2	15:1H:1022:C:H4'	2.16	0.46
15:1H:1223:U:H4'	15:1H:1224:G:H4'	1.96	0.46
15:1H:1931:G:O6	53:1H:3002:8UZ:N3	2.49	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:1H:2041:U:H1'	36:N8:6:VAL:HG13	1.97	0.46
14:32:120:LEU:HD23	14:32:120:LEU:HA	1.74	0.46
15:14:596:A:H1'	15:14:598:G:H5''	1.97	0.46
15:14:1035:G:O2'	15:14:1048:A:N3	2.46	0.46
15:14:1095:G:N2	15:14:1159:A:H62	2.12	0.46
15:14:1113:U:H3	15:14:1122:G:H1'	1.81	0.46
15:14:1335:A:O2'	15:14:1337:U:OP2	2.26	0.46
15:14:1435:C:C2	15:14:1436:C:C5	3.04	0.46
15:14:2159:A:O2'	15:14:2184:G:N2	2.48	0.46
15:14:2454:A:H5'	15:14:2454:A:C8	2.50	0.46
15:14:2790:C:H2'	15:14:2791:A:O4'	2.15	0.46
22:D5:17:ALA:O	22:D5:20:ARG:HB2	2.15	0.46
23:29:66:HIS:CG	23:29:67:PHE:H	2.33	0.46
24:4A:59:TYR:O	24:4A:63:THR:OG1	2.34	0.46
25:42:47:LYS:HB2	25:42:47:LYS:HE2	1.62	0.46
26:1J:80:A:C2	26:1J:102:A:C4	3.03	0.46
37:BI:29:LYS:O	37:BI:33:ILE:HG12	2.15	0.46
42:6E:90:GLU:H	42:6E:90:GLU:HG3	1.43	0.46
41:6A:74:ASP:OD1	41:6A:76:GLU:HB3	2.16	0.46
43:A5:65:LEU:HD22	43:A5:68:ARG:HG3	1.98	0.46
47:51:80:SER:C	47:51:81:GLU:HG3	2.36	0.46
49:7I:23:ASP:OD1	49:7I:25:ARG:NH1	2.49	0.46
52:X1:18:G:H21	52:X1:58:A:H5'	1.79	0.46
52:V1:56:C:H2'	52:V1:57:G:C8	2.51	0.46
1:13:1593:C:H42	9:8E:128:ARG:C	2.19	0.46
2:A8:25:ARG:NH1	2:A8:42:ASP:OD1	2.48	0.46
6:2A:120:ARG:NH1	1:1G:2147:C:OP1	2.48	0.46
1:1G:1465:G:C6	1:1G:1474:G:C5	3.04	0.46
1:1G:1943:G:N2	1:1G:1946:A:OP2	2.39	0.46
10:58:42:TRP:O	27:C8:64:ARG:HD2	2.15	0.46
2:65:3:ARG:HD2	2:65:3:ARG:HA	1.68	0.46
11:G8:59:GLY:HA2	15:1H:511:A:O2'	2.16	0.46
4:19:202:LYS:HD2	15:14:1854:U:N3	2.31	0.46
4:19:236:GLY:N	15:14:2614:G:OP2	2.49	0.46
15:1H:75:C:HO2'	46:K8:62:THR:HG21	1.81	0.46
15:1H:1564:C:H2'	15:1H:1565:U:H6	1.81	0.46
15:1H:1739:A:H2'	15:1H:1740:A:H8	1.81	0.46
15:1H:2094:G:N2	15:1H:2095:G:H1'	2.31	0.46
15:1H:2713:U:H2'	15:1H:2714:C:H6	1.81	0.46
11:C5:30:VAL:O	11:C5:36:ALA:O	2.34	0.46
15:14:9:U:C4	15:14:2644:A:N6	2.83	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:14:41:C:H2'	15:14:42:G:H8	1.81	0.46
15:14:473:C:OP1	27:85:2:PRO:HA	2.15	0.46
15:14:1214:U:H2'	15:14:1215:C:C6	2.50	0.46
15:14:1258:A:H5''	15:14:1259:U:H3'	1.98	0.46
15:14:1761:C:H2'	15:14:1762:C:C6	2.51	0.46
15:14:2188:C:OP1	15:14:2197:U:H5''	2.16	0.46
15:14:2350:A:C8	15:14:2352:G:C5	3.04	0.46
15:14:2772:U:H4'	15:14:2773:A:OP1	2.13	0.46
26:16:122:A:H2'	26:16:122:A:N3	2.31	0.46
23:29:111:ARG:HA	45:55:2:ARG:NH1	2.29	0.46
26:1J:75:A:C4	26:1J:107:A:C2	3.04	0.46
26:1J:93:C:P	38:45:16:ARG:HH21	2.38	0.46
30:78:47:ASP:OD2	30:78:50:ARG:NH2	2.49	0.46
32:31:149:ASP:OD1	32:31:149:ASP:N	2.27	0.46
32:31:185:ASP:HA	32:31:188:ARG:NH1	2.31	0.46
30:35:2:LYS:HD2	30:35:5:ASP:OD2	2.15	0.46
30:35:88:LEU:HD22	30:35:114:ILE:HD13	1.98	0.46
36:N8:39:MET:C	36:N8:40:LYS:HD2	2.36	0.46
32:39:155:LEU:HD11	32:39:176:LEU:HD22	1.96	0.46
38:88:80:GLU:H	38:88:80:GLU:HG2	1.42	0.46
38:88:109:VAL:HG13	38:88:113:GLN:HB3	1.98	0.46
36:J5:44:THR:HG21	45:55:101:ALA:HA	1.98	0.46
40:41:29:TRP:O	40:41:33:ARG:NH1	2.48	0.46
40:41:67:LYS:HE3	40:41:67:LYS:O	2.16	0.46
40:41:122:PRO:HD3	40:41:181:ARG:HB3	1.96	0.46
43:E8:97:LYS:HE2	43:E8:99:ARG:NH2	2.31	0.46
44:1E:71:VAL:HG23	44:1E:164:VAL:HA	1.97	0.46
3:F8:1:MET:C	3:F8:3:THR:N	2.70	0.46
1:13:980:C:H2'	1:13:981:U:H6	1.80	0.46
1:13:1114:G:H8	1:13:1114:G:O5'	1.99	0.46
1:13:1214:G:N3	1:13:1502:C:H4'	2.30	0.46
1:13:1652:C:H42	1:13:1661:G:H22	1.64	0.46
1:13:2125:A:H2	1:13:2128:G:N1	2.07	0.46
1:1G:786:G:H2'	1:1G:787:G:H8	1.81	0.46
1:1G:794:C:H42	1:1G:807:G:H1	1.63	0.46
1:1G:844:U:H2'	1:1G:845:C:C6	2.50	0.46
1:1G:999:U:H2'	1:1G:1000:U:H6	1.81	0.46
1:1G:1701:U:H2'	1:1G:1702:G:C8	2.51	0.46
1:1G:1746:C:H1'	1:1G:1806:A:C4	2.51	0.46
1:1G:2031:C:H1'	1:1G:2123:A:N1	2.31	0.46
2:65:36:TYR:CD1	2:65:36:TYR:N	2.84	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:Q8:35:GLN:H	12:Q8:35:GLN:HG2	1.58	0.46
12:Q8:47:LYS:HZ1	12:Q8:47:LYS:N	2.14	0.46
7:8A:45:HIS:HB2	7:8A:65:ILE:HD13	1.96	0.46
15:1H:495:G:OP1	5:P8:33:ARG:NH1	2.49	0.46
15:1H:1572:U:C2	15:1H:1573:G:C8	3.03	0.46
15:1H:2417:C:H1'	15:1H:2418:C:H5	1.80	0.46
15:1H:2836:A:P	23:21:159:HIS:HE2	2.37	0.46
14:32:175:SER:OG	14:32:186:LEU:HD21	2.16	0.46
15:14:88:G:OP2	15:14:89:U:O2'	2.28	0.46
15:14:188:C:O2'	15:14:189:A:H5'	2.16	0.46
15:14:958:A:C5	38:45:13:GLN:HG3	2.51	0.46
15:14:2154:C:C4	15:14:2155:U:C2	3.04	0.46
15:14:2277:U:H4'	15:14:2343:A:C2	2.51	0.46
16:75:53:ARG:HG3	16:75:53:ARG:O	2.16	0.46
22:H8:72:ARG:HD3	26:16:106:U:O3'	2.16	0.46
23:21:20:ALA:O	23:21:21:VAL:HB	2.16	0.46
23:21:78:LEU:HG	23:21:79:ARG:CD	2.46	0.46
24:4A:22:ILE:HB	24:4A:25:ILE:CG1	2.46	0.46
25:42:33:VAL:HG11	25:42:109:ILE:HA	1.98	0.46
27:85:88:ILE:HA	35:95:49:THR:O	2.16	0.46
27:85:95:LEU:O	27:85:98:LEU:HG	2.16	0.46
35:D8:29:PRO:HA	35:D8:61:VAL:HG23	1.99	0.46
35:D8:30:GLY:H	35:D8:61:VAL:HG23	1.80	0.46
31:E5:51:VAL:N	31:E5:62:LEU:HD12	2.31	0.46
44:12:23:ARG:NH2	44:12:191:ASP:HB2	2.31	0.46
47:59:7:LEU:HD12	47:59:8:PRO:HD3	1.98	0.46
50:72:1:MET:O	50:72:3:THR:N	2.48	0.46
50:72:81:HIS:HB2	50:72:138:TRP:HE3	1.81	0.46
1:13:785:G:H2'	1:13:786:G:H8	1.81	0.45
1:13:821:G:O2'	1:13:822:U:H6	1.99	0.45
1:13:832:C:H5''	1:13:833:C:OP2	2.16	0.45
1:13:852:G:N2	1:13:853:C:O2	2.49	0.45
1:13:1121:G:H2'	1:13:1122:G:O4'	2.16	0.45
2:A8:5:THR:OG1	2:A8:7:TYR:HB3	2.15	0.45
4:11:125:ILE:HG13	4:11:137:PRO:HD3	1.98	0.45
8:22:33:LEU:O	8:22:36:ASP:N	2.49	0.45
8:22:120:VAL:HA	8:22:123:GLN:HB2	1.97	0.45
1:1G:1755:G:H1'	1:1G:1776:U:N3	2.31	0.45
13:3I:60:LEU:HD12	13:3I:60:LEU:HA	1.71	0.45
15:1H:955:U:O2'	38:88:101:ARG:NH2	2.49	0.45
15:1H:1467:G:H8	15:1H:1467:G:O5'	1.99	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:1H:1577:A:C2	15:1H:1592:A:N1	2.84	0.45
15:1H:2782:G:H2'	15:1H:2782:G:N3	2.31	0.45
11:C5:30:VAL:HG12	11:C5:32:PRO:HD3	1.97	0.45
18:61:92:VAL:HG11	18:61:142:VAL:HG11	1.97	0.45
14:32:30:LYS:HA	14:32:33:MET:O	2.16	0.45
14:32:113:SER:OG	14:32:116:GLN:HB2	2.16	0.45
15:14:29:U:H6	15:14:29:U:O5'	1.99	0.45
15:14:106:U:H2'	15:14:107:G:C8	2.51	0.45
15:14:1515:G:H5'	15:14:1577:A:O2'	2.16	0.45
15:14:1631:G:H2'	15:14:1632:C:O4'	2.15	0.45
15:14:2812:U:H5'	15:14:2813:C:C5	2.41	0.45
16:75:124:ASP:O	16:75:128:GLU:HB2	2.15	0.45
17:H5:6:VAL:HG12	17:H5:56:VAL:HB	1.97	0.45
23:21:182:LEU:HD12	23:21:182:LEU:HA	1.73	0.45
24:4I:15:VAL:HA	24:4I:45:VAL:HG12	1.98	0.45
25:4E:137:GLU:OE1	25:4E:141:GLN:NE2	2.40	0.45
23:29:25:VAL:O	23:29:26:ILE:HG12	2.17	0.45
28:I5:55:ARG:NH1	29:AA:65:ASN:HB3	2.31	0.45
34:5E:21:LEU:O	34:5E:24:GLU:HB3	2.15	0.45
35:D8:16:PRO:HA	35:D8:96:ILE:HG22	1.99	0.45
32:39:155:LEU:HB2	32:39:189:THR:HG21	1.97	0.45
39:J8:92:LYS:CA	39:J8:95:LEU:HB2	2.36	0.45
38:45:16:ARG:HE	38:45:16:ARG:HB2	1.37	0.45
40:49:166:ASP:N	40:49:166:ASP:OD1	2.48	0.45
44:1E:9:GLU:H	44:1E:9:GLU:HG2	1.47	0.45
45:98:17:ARG:HG2	45:98:21:TYR:CE2	2.51	0.45
1:13:1000:U:H2'	1:13:1001:A:C8	2.51	0.45
1:13:1434:C:H2'	1:13:1435:C:H6	1.81	0.45
1:13:1487:A:H2'	1:13:1488:A:C8	2.52	0.45
1:13:1755:G:O2'	1:13:1756:C:H5'	2.16	0.45
8:22:188:LEU:HD12	8:22:190:ARG:CZ	2.46	0.45
1:1G:906:G:H5'	7:8A:64:PRO:O	2.16	0.45
1:1G:962:A:N7	1:1G:969:C:O2'	2.37	0.45
1:1G:963:C:OP2	1:1G:969:C:N4	2.49	0.45
1:1G:1047:G:C2	1:1G:1048:G:C8	3.04	0.45
1:1G:1666:C:H2'	1:1G:1667:C:C6	2.51	0.45
1:1G:1739:A:H2'	1:1G:1740:C:C6	2.51	0.45
1:1G:1951:A:O4'	1:1G:1989:C:H4'	2.16	0.45
10:58:64:GLY:HA3	15:1H:1189:U:C5	2.51	0.45
2:65:34:HIS:NE2	2:65:54:LEU:HD13	2.31	0.45
2:65:109:GLY:O	2:65:110:LEU:HD22	2.16	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:19:80:ALA:HB3	4:19:94:LEU:HB3	1.98	0.45
4:19:210:GLY:HA3	15:14:813:A:H5'	1.98	0.45
12:Q8:12:LYS:HD2	30:78:64:LYS:HE3	1.98	0.45
12:Q8:23:VAL:HG11	12:Q8:48:PHE:HE1	1.80	0.45
12:Q8:32:LEU:HG	12:Q8:33:ASN:H	1.77	0.45
14:3E:63:LYS:O	14:3E:67:ILE:HG13	2.15	0.45
9:82:95:LYS:HB2	9:82:95:LYS:HE2	1.57	0.45
15:1H:11:G:H2'	15:1H:12:U:H5'	1.98	0.45
15:1H:332:G:H21	15:1H:355:A:H62	1.64	0.45
15:1H:471:A:H3'	32:31:45:ARG:HH21	1.81	0.45
15:1H:611:A:P	56:1H:3828:HOH:O	2.73	0.45
15:1H:1707:C:H2'	15:1H:1708:C:C6	2.51	0.45
15:1H:2156:G:H1'	15:1H:2183:A:N6	2.31	0.45
15:1H:2253:G:H2'	15:1H:2253:G:N3	2.31	0.45
15:1H:2409:C:N3	52:V1:76:A:O2'	2.44	0.45
15:1H:2417:C:O2'	15:1H:2418:C:OP2	2.27	0.45
11:C5:54:LYS:C	11:C5:55:TYR:CG	2.90	0.45
14:32:31:CYS:C	14:32:33:MET:N	2.69	0.45
15:14:1592:A:H2'	15:14:1593:C:H3'	1.99	0.45
15:14:2206:G:H2'	15:14:2207:G:O4'	2.17	0.45
15:14:2376:A:N7	56:14:3719:HOH:O	2.36	0.45
15:14:2695:C:H5'	23:29:189:PRO:HA	1.97	0.45
22:H8:4:ARG:HB3	22:H8:58:VAL:CG2	2.46	0.45
25:4E:45:PHE:CE2	25:4E:47:LYS:HD2	2.51	0.45
22:D5:74:VAL:HG13	22:D5:86:VAL:HG23	1.98	0.45
30:35:57:THR:HB	30:35:60:MET:HB2	1.98	0.45
32:39:31:HIS:NE2	32:39:35:GLU:OE1	2.44	0.45
35:95:28:GLU:O	35:95:61:VAL:HG11	2.16	0.45
40:49:56:ALA:O	40:49:60:LEU:HB2	2.16	0.45
44:1E:121:LEU:HA	44:1E:124:SER:OG	2.16	0.45
47:51:3:ARG:HH21	47:51:7:LEU:CD1	2.29	0.45
48:1A:4:ILE:HG12	48:1A:100:THR:HG22	1.98	0.45
48:1A:49:VAL:O	48:1A:60:ARG:HB3	2.16	0.45
45:55:81:ASP:O	45:55:82:GLU:HG2	2.15	0.45
3:F8:12:VAL:HG13	3:F8:27:THR:O	2.15	0.45
5:P8:8:ASN:OD1	5:P8:8:ASN:C	2.54	0.45
47:59:106:THR:HB	47:59:112:PRO:HB3	1.97	0.45
8:2E:36:ASP:O	8:2E:40:ARG:HG3	2.16	0.45
51:Y4:45:U:H5'	51:Y4:46:U:OP1	2.17	0.45
52:V4:10:G:N2	52:V4:26:A:H1'	2.32	0.45
1:13:894:U:OP2	7:8I:67:LYS:NZ	2.39	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:13:1359:G:C5	1:13:1360:G:H1'	2.51	0.45
1:13:1689:G:C4	1:13:1824:G:N2	2.84	0.45
4:11:17:THR:HG22	4:11:205:VAL:H	1.81	0.45
9:8E:59:PHE:HZ	9:8E:88:TYR:CD2	2.34	0.45
9:8E:70:LYS:O	9:8E:74:ILE:HG13	2.16	0.45
9:8E:118:LYS:O	9:8E:119:ALA:HB3	2.16	0.45
1:1G:678:A:C2	1:1G:679:A:C4	3.05	0.45
1:1G:732:C:H2'	1:1G:733:C:C6	2.51	0.45
1:1G:733:C:H2'	1:1G:734:G:C8	2.51	0.45
1:1G:901:G:H2'	1:1G:902:U:C6	2.51	0.45
1:1G:969:C:H2'	1:1G:969:C:O2	2.16	0.45
10:58:13:TRP:O	10:58:135:PRO:HD2	2.17	0.45
2:65:77:ALA:O	2:65:80:LEU:N	2.47	0.45
11:G8:28:LYS:NZ	11:G8:40:GLU:HG3	2.31	0.45
4:19:78:LYS:HA	4:19:115:GLN:O	2.17	0.45
9:82:114:TYR:HE2	48:1A:60:ARG:O	1.99	0.45
15:1H:34:C:OP2	15:1H:34:C:C6	2.57	0.45
15:1H:138:G:N3	15:1H:140:A:N1	2.64	0.45
15:1H:216:G:H21	15:1H:218:A:H2	1.63	0.45
15:1H:566:G:H2'	15:1H:567:C:C6	2.51	0.45
15:1H:1073:G:C4	15:1H:1183:C:H1'	2.52	0.45
15:1H:1778:C:H2'	15:1H:1779:G:O4'	2.16	0.45
11:C5:86:ARG:HG3	11:C5:87:LYS:N	2.31	0.45
18:61:78:THR:O	18:61:78:THR:OG1	2.34	0.45
18:61:131:LYS:HZ3	18:61:131:LYS:HB2	1.82	0.45
20:1F:6:ARG:H	20:1F:6:ARG:HG3	1.43	0.45
15:14:10:G:N7	15:14:2644:A:N6	2.64	0.45
15:14:54:G:O2'	15:14:125:A:N1	2.38	0.45
15:14:324:A:OP2	15:14:324:A:H8	1.98	0.45
15:14:334:G:N3	15:14:354:G:O2'	2.47	0.45
15:14:1158:G:O2'	15:14:1159:A:O4'	2.23	0.45
15:14:1423:G:H2'	15:14:1424:C:O4'	2.16	0.45
15:14:1820:A:P	56:14:3639:HOH:O	2.74	0.45
15:14:2493:A:H2'	15:14:2494:G:O4'	2.16	0.45
15:14:2522:C:O2'	52:W4:75:C:O2	2.33	0.45
16:75:92:GLY:HA2	16:75:116:ALA:HA	1.97	0.45
22:H8:122:ARG:NH2	38:88:139:GLU:HG2	2.28	0.45
25:4E:68:GLU:OE1	25:4E:70:PRO:HG3	2.16	0.45
21:25:106:LEU:HD23	21:25:106:LEU:HA	1.72	0.45
28:I5:49:PHE:HD2	28:I5:50:VAL:HG22	1.81	0.45
32:31:29:ASN:H	32:31:112:MET:HE3	1.81	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:31:32:LEU:CD2	32:31:105:VAL:HG13	2.46	0.45
40:41:37:VAL:HG23	40:41:99:MET:CE	2.46	0.45
38:45:102:VAL:O	38:45:102:VAL:HG12	2.17	0.45
44:12:97:TRP:HZ2	44:12:102:LEU:HD13	1.80	0.45
47:59:24:VAL:HG11	47:59:43:VAL:HG11	1.99	0.45
6:2I:114:VAL:HA	6:2I:115:PRO:HD2	1.85	0.45
52:V1:35:A:H2'	52:V1:36:A:C1'	2.46	0.45
2:A8:27:SER:HA	2:A8:88:ASP:CB	2.47	0.45
4:11:25:THR:HB	4:11:82:ILE:H	1.80	0.45
1:1G:1367:C:H2'	1:1G:1368:C:C6	2.52	0.45
1:1G:1622:C:H2'	1:1G:1623:U:C6	2.51	0.45
11:G8:87:LYS:H	11:G8:94:LYS:CG	2.28	0.45
13:3I:91:LYS:O	13:3I:91:LYS:HG3	2.16	0.45
7:8A:59:ILE:HG22	7:8A:71:PHE:CD2	2.52	0.45
14:3E:153:ARG:HB3	14:3E:181:MET:SD	2.55	0.45
15:1H:26:G:C6	15:1H:27:G:C6	3.05	0.45
15:1H:558:C:C5	15:1H:2060:G:C2	3.04	0.45
15:1H:1449:G:H2'	15:1H:1450:G:C8	2.52	0.45
15:1H:1563:U:H2'	15:1H:1564:C:H6	1.82	0.45
13:3A:60:LEU:HD13	13:3A:60:LEU:HA	1.72	0.45
15:14:981:G:H2'	15:14:982:C:C6	2.52	0.45
15:14:1465:G:O2'	15:14:1466:C:H6	2.00	0.45
15:14:2695:C:O2'	15:14:2696:C:H5'	2.16	0.45
16:75:82:LEU:HD11	23:29:18:ASP:HB3	1.98	0.45
17:H5:23:LEU:HD23	17:H5:28:LEU:HB2	1.98	0.45
24:4I:15:VAL:HG22	24:4I:45:VAL:HG12	1.98	0.45
24:4I:66:LEU:O	24:4I:70:LEU:N	2.45	0.45
24:4I:84:ILE:HG23	24:4I:86:CYS:H	1.81	0.45
22:D5:72:ARG:HD2	22:D5:72:ARG:HA	1.47	0.45
22:D5:132:ASN:OD1	22:D5:132:ASN:N	2.48	0.45
24:4A:81:LEU:HD21	24:4A:88:ARG:NH2	2.32	0.45
27:85:109:LEU:HA	27:85:109:LEU:HD23	1.78	0.45
32:39:124:LEU:HD23	32:39:126:VAL:CG1	2.46	0.45
38:88:24:GLY:HA3	38:88:101:ARG:CD	2.47	0.45
42:6E:92:SER:O	42:6E:96:GLN:HG3	2.16	0.45
38:45:80:GLU:O	38:45:81:VAL:HG22	2.17	0.45
48:1I:89:ASP:N	48:1I:89:ASP:OD1	2.49	0.45
6:2I:79:SER:HA	6:2I:104:GLN:O	2.17	0.45
49:7A:82:GLN:H	49:7A:82:GLN:HG2	1.45	0.45
52:W4:66:U:O4	52:W4:67:C:N4	2.49	0.45
52:V4:9:A:H4'	52:V4:46:G:C4'	2.46	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:V4:19:G:N3	52:V4:19:G:H2'	2.31	0.45
1:13:1803:A:H3'	1:13:1803:A:C8	2.51	0.45
9:8E:42:ARG:HA	42:6E:16:LEU:HD11	1.98	0.45
1:1G:1342:G:H2'	1:1G:1343:G:C8	2.51	0.45
1:1G:1646:G:H2'	1:1G:1647:G:O4'	2.17	0.45
4:19:64:ILE:O	4:19:64:ILE:HG13	2.12	0.45
7:8A:87:LYS:O	7:8A:91:ARG:HG3	2.16	0.45
15:1H:71:U:OP2	46:K8:29:LYS:NZ	2.49	0.45
15:1H:249:G:N2	15:1H:648:A:H8	2.08	0.45
15:1H:709:G:H21	30:78:12:ALA:HA	1.81	0.45
15:1H:1352:G:P	56:1H:3795:HOH:O	2.74	0.45
15:1H:1914:A:O2'	15:1H:2112:G:H5'	2.16	0.45
11:C5:44:ILE:HD11	15:14:526:U:O3'	2.17	0.45
18:61:47:LEU:O	18:61:51:ILE:HG13	2.15	0.45
18:61:104:GLN:HG2	18:61:105:HIS:CE1	2.51	0.45
15:14:70:A:H5''	15:14:72:A:C8	2.50	0.45
15:14:477:A:H3'	56:14:3646:HOH:O	2.15	0.45
15:14:1589:G:H2'	15:14:1590:U:O4'	2.15	0.45
15:14:2700:G:OP2	16:75:51:ARG:NH2	2.50	0.45
15:14:2732:U:O2'	15:14:2733:G:H5'	2.15	0.45
22:H8:79:ARG:HB2	22:H8:80:ARG:NH1	2.31	0.45
23:21:46:ALA:HB2	23:21:82:ARG:HA	1.99	0.45
26:16:113:G:C6	26:16:114:U:C4	3.05	0.45
22:D5:49:ARG:HH12	38:45:135:ASP:HB3	1.80	0.45
25:42:107:ARG:O	25:42:111:GLU:N	2.48	0.45
26:1J:7:C:OP1	26:1J:63:G:O2'	2.27	0.45
26:1J:43:U:O4	40:49:70:VAL:HG23	2.16	0.45
36:N8:36:CYS:SG	36:N8:48:GLU:O	2.71	0.45
32:39:164:ARG:O	32:39:167:ALA:HB3	2.16	0.45
34:52:39:LYS:HB3	34:52:39:LYS:NZ	2.31	0.45
38:45:80:GLU:HB2	38:45:81:VAL:H	1.49	0.45
39:F5:29:GLY:O	39:F5:30:VAL:HG22	2.17	0.45
44:1E:162:ILE:HD11	44:1E:184:VAL:HG13	1.98	0.45
42:62:50:ILE:HD12	42:62:125:MET:HG3	1.99	0.45
45:98:97:VAL:HG22	45:98:114:VAL:HG22	1.99	0.45
43:A5:88:ARG:NH1	43:A5:94:ASP:OD2	2.43	0.45
6:2I:78:GLN:O	6:2I:103:LEU:HA	2.17	0.45
49:7A:9:PHE:HB2	49:7A:16:HIS:O	2.17	0.45
52:W1:14:A:C6	52:W1:22:G:C4	3.05	0.45
52:W1:60:U:H5'	52:W1:61:C:OP2	2.16	0.45
52:V1:23:A:H2'	52:V1:24:G:C8	2.51	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:13:907:G:O2'	7:8I:67:LYS:HB3	2.16	0.45
1:13:1092:A:H2'	1:13:1093:A:C8	2.52	0.45
1:13:1559:C:H2'	1:13:1560:A:O4'	2.17	0.45
1:13:2062:A:H2'	1:13:2063:G:O4'	2.17	0.45
4:11:10:THR:OG1	4:11:13:ARG:HB2	2.17	0.45
4:11:145:VAL:HG11	4:11:175:LEU:HD11	1.98	0.45
4:11:266:SER:OG	15:1H:1834:C:OP1	2.30	0.45
8:22:155:GLY:HA3	8:22:196:LEU:HD13	1.99	0.45
8:22:175:LEU:HD11	8:22:201:TYR:CD2	2.51	0.45
1:1G:960:G:H2'	1:1G:961:C:O4'	2.17	0.45
1:1G:1737:C:H2'	1:1G:1738:A:O4'	2.17	0.45
1:1G:1757:C:C4	1:1G:1767:G:C2	3.05	0.45
1:1G:1840:A:C6	1:1G:1842:G:C4	3.03	0.45
4:19:15:PHE:HE2	15:14:1863:A:N3	2.15	0.45
15:1H:262:A:N1	15:1H:292:G:O2'	2.43	0.45
15:1H:299:G:H8	15:1H:299:G:H3'	1.82	0.45
15:1H:571:G:H8	15:1H:571:G:O5'	2.00	0.45
15:1H:1142:U:HO2'	15:1H:1144:A:P	2.40	0.45
15:1H:1252:A:C2	15:1H:1290:A:C2	3.04	0.45
15:1H:1582:C:C2	15:1H:1583:G:N2	2.84	0.45
15:1H:2324:A:C4	15:1H:2325:A:H8	2.35	0.45
15:1H:2801:C:H2'	15:1H:2802:U:O4'	2.15	0.45
15:1H:2900:U:H2'	15:1H:2901:C:C6	2.51	0.45
16:B8:26:ASP:CB	16:B8:91:ARG:HA	2.47	0.45
16:B8:26:ASP:HB2	16:B8:91:ARG:HA	1.99	0.45
17:L8:7:LYS:H	17:L8:54:VAL:HG23	1.81	0.45
12:M5:59:LYS:HE3	12:M5:59:LYS:HB2	1.45	0.45
15:14:174:C:H2'	15:14:175:U:C6	2.51	0.45
15:14:249:G:C2'	15:14:648:A:O2'	2.65	0.45
15:14:969:G:H2'	15:14:970:U:C6	2.51	0.45
15:14:1252:A:O2'	15:14:1253:U:OP2	2.33	0.45
15:14:1284:G:C6	15:14:1285:G:N1	2.85	0.45
15:14:1317:A:H2'	15:14:1318:A:O4'	2.17	0.45
15:14:2315:G:H2'	15:14:2316:C:C6	2.52	0.45
15:14:2556:A:H4'	15:14:2780:A:N1	2.32	0.45
15:14:2709:G:H2'	15:14:2710:C:H6	1.81	0.45
21:68:64:ARG:O	21:68:82:ASN:HA	2.17	0.45
23:21:70:ALA:O	23:21:71:GLY:C	2.54	0.45
23:21:88:GLY:O	23:21:89:ASP:HB2	2.15	0.45
18:69:112:LYS:HA	18:69:114:LEU:H	1.81	0.45
23:29:103:ASP:OD1	23:29:201:THR:HG23	2.17	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:42:99:GLY:O	25:42:117:ASP:HA	2.16	0.45
30:78:112:LEU:HA	30:78:112:LEU:HD23	1.70	0.45
35:D8:95:LEU:HD12	35:D8:97:LYS:HZ3	1.82	0.45
35:95:58:VAL:HG23	35:95:98:GLU:HB2	1.98	0.45
40:41:56:ALA:HB2	40:41:153:ARG:HE	1.82	0.45
41:6I:15:PHE:CE1	41:6I:84:LYS:HD3	2.52	0.45
41:6I:56:LEU:HA	41:6I:59:MET:HE1	1.98	0.45
47:51:3:ARG:CZ	47:51:3:ARG:HA	2.46	0.45
48:1A:9:ARG:HB2	48:1A:95:GLU:HB3	1.98	0.45
48:1A:9:ARG:HE	48:1A:95:GLU:HG2	1.80	0.45
52:W1:75:C:H2'	52:W1:76:A:C8	2.51	0.45
52:V1:10:G:H2'	52:V1:11:C:C6	2.52	0.45
52:V1:68:C:H2'	52:V1:69:G:H8	1.81	0.45
1:13:864:U:H2'	1:13:865:C:H6	1.81	0.45
1:13:910:C:H2'	1:13:911:A:C8	2.52	0.45
1:13:1169:G:H2'	1:13:1170:G:O4'	2.16	0.45
1:13:1184:C:H2'	1:13:1185:C:C6	2.52	0.45
1:13:1287:G:H2'	1:13:1288:U:H6	1.82	0.45
1:13:1578:U:H1'	1:13:1854:A:H61	1.82	0.45
1:13:1943:G:N2	1:13:1945:A:H3'	2.32	0.45
2:A8:17:ARG:NH2	15:1H:2307:C:OP1	2.34	0.45
8:22:111:LEU:HD11	8:22:144:SER:O	2.17	0.45
9:8E:36:TYR:OH	9:8E:73:GLN:NE2	2.25	0.45
1:1G:865:C:H2'	1:1G:866:C:H6	1.81	0.45
1:1G:1211:U:C2	1:1G:1389:G:C6	3.05	0.45
11:G8:47:LYS:HD3	15:1H:508:A:OP2	2.16	0.45
15:1H:638:G:H2'	15:1H:639:U:O2	2.17	0.45
15:1H:725:A:H2	15:1H:851:A:H61	1.61	0.45
15:1H:1740:A:H2'	15:1H:1741:C:O4'	2.16	0.45
15:1H:1970:G:H2'	15:1H:1971:U:H6	1.79	0.45
15:1H:2152:G:H1	15:1H:2187:G:H1'	1.81	0.45
15:1H:2225:C:P	39:J8:48:LYS:HD3	2.56	0.45
12:M5:55:ALA:O	12:M5:58:ILE:HG22	2.17	0.45
18:61:9:LEU:HD21	18:61:35:LEU:HD13	1.99	0.45
18:61:131:LYS:HB3	18:61:132:PRO:CA	2.46	0.45
15:14:1501:C:H2'	15:14:1502:C:C6	2.52	0.45
15:14:1713:C:H2'	56:14:3605:HOH:O	2.16	0.45
15:14:1776:C:C2'	15:14:1777:C:H5'	2.46	0.45
15:14:1873:G:H2'	15:14:1873:G:N3	2.30	0.45
15:14:2274:G:C1'	15:14:2442:C:H2'	2.47	0.45
15:14:2344:G:H2'	15:14:2345:G:C8	2.51	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:14:2756:A:C6	15:14:2780:A:C8	3.04	0.45
16:75:102:ILE:HD12	16:75:110:ILE:HD13	1.98	0.45
22:H8:58:VAL:O	22:H8:60:GLU:N	2.49	0.45
22:H8:78:LYS:HD2	38:88:21:THR:HG23	1.98	0.45
22:D5:127:LYS:HB3	22:D5:127:LYS:HE2	1.81	0.45
24:4A:84:ILE:HG23	29:AA:74:PHE:CZ	2.52	0.45
27:85:16:LYS:HB3	27:85:16:LYS:HE2	1.52	0.45
32:31:127:GLU:O	32:31:129:PHE:N	2.50	0.45
40:41:76:SER:OG	40:41:84:LYS:N	2.50	0.45
37:BA:73:HIS:C	37:BA:74:LYS:HG2	2.36	0.45
5:P8:12:ARG:HG2	5:P8:46:VAL:HG22	1.98	0.45
8:2E:182:ILE:HG12	8:2E:203:PHE:HD1	1.82	0.45
1:13:749:C:O2'	49:7I:25:ARG:O	2.35	0.45
1:13:777:C:H42	1:13:867:G:H1	1.64	0.45
1:13:1211:U:H2'	1:13:1212:A:C8	2.51	0.45
1:13:2133:U:H2'	1:13:2134:G:C8	2.52	0.45
6:2A:20:TYR:CZ	6:2A:83:ILE:HD12	2.52	0.45
1:1G:897:U:H2'	1:1G:898:G:C8	2.52	0.45
1:1G:1351:A:H2	1:1G:1362:A:H61	1.64	0.45
1:1G:1408:C:H2'	1:1G:1409:A:O4'	2.17	0.45
1:1G:1927:G:HO2'	1:1G:1928:U:P	2.39	0.45
1:1G:2040:C:H2'	1:1G:2041:A:C8	2.52	0.45
1:1G:2091:A:H8	1:1G:2091:A:O5'	1.99	0.45
1:1G:2162:C:H2'	1:1G:2163:U:H6	1.82	0.45
10:58:28:THR:HG21	15:1H:1053:C:O2'	2.17	0.45
15:1H:81:G:N1	15:1H:101:A:OP2	2.31	0.45
15:1H:867:G:H5'	15:1H:888:U:OP1	2.16	0.45
15:1H:876:U:O2	15:1H:2261:G:H4'	2.16	0.45
15:14:615:A:H2'	15:14:616:C:C6	2.52	0.45
15:14:831:A:H5'	15:14:832:A:C2	2.52	0.45
15:14:1450:G:H2'	15:14:1451:C:C6	2.52	0.45
15:14:1585:A:C8	15:14:1586:C:H1'	2.52	0.45
15:14:1732:G:H5'	15:14:1796:A:O2'	2.16	0.45
15:14:2352:G:C2	15:14:2353:G:C8	3.05	0.45
15:14:2777:G:H1'	47:59:143:GLN:OE1	2.15	0.45
16:75:16:ARG:HB3	16:75:18:ASP:OD1	2.16	0.45
26:16:93:C:P	38:88:16:ARG:HH21	2.40	0.45
27:C8:34:LYS:HA	27:C8:34:LYS:HE3	1.97	0.45
30:78:37:GLY:O	30:78:41:ARG:HD2	2.17	0.45
30:35:125:VAL:O	30:35:144:GLU:HB3	2.17	0.45
33:5A:12:ARG:H	33:5A:12:ARG:HG3	1.46	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:88:30:GLY:O	38:88:134:ARG:HD3	2.16	0.45
39:F5:35:THR:OG1	39:F5:35:THR:O	2.35	0.45
40:49:106:LEU:HD23	40:49:107:LEU:HD23	1.99	0.45
44:1E:74:LYS:H	44:1E:74:LYS:HG2	1.38	0.45
44:1E:80:ILE:HD11	44:1E:208:ILE:HG23	1.98	0.45
46:K8:40:SER:C	46:K8:42:GLY:N	2.70	0.45
47:51:3:ARG:NH2	47:51:7:LEU:HD11	2.32	0.45
49:7I:68:ASP:O	49:7I:71:ARG:HG2	2.16	0.45
45:55:2:ARG:O	45:55:5:LYS:HG3	2.17	0.45
49:7A:67:THR:O	49:7A:71:ARG:N	2.50	0.45
52:V4:27:G:H2'	52:V4:28:G:H8	1.81	0.45
1:13:937:U:O2'	1:13:1185:C:O2	2.31	0.45
1:13:1645:G:H2'	1:13:1646:G:O4'	2.17	0.45
1:13:1807:A:OP1	9:8E:103:THR:OG1	2.24	0.45
1:13:2000:U:C4	1:13:2001:G:C5	3.05	0.45
1:13:2007:G:O2'	1:13:2008:U:H5'	2.16	0.45
4:11:52:ARG:HB2	4:11:53:PHE:CD2	2.51	0.45
9:8E:18:PHE:HD2	9:8E:62:TYR:HD2	1.64	0.45
9:8E:114:TYR:H	9:8E:114:TYR:HD1	1.65	0.45
9:8E:114:TYR:N	9:8E:114:TYR:CD1	2.85	0.45
1:1G:1609:A:O2'	29:AA:55:LYS:O	2.34	0.45
1:1G:2000:U:H2'	1:1G:2001:G:O4'	2.17	0.45
10:58:129:PRO:HB3	15:1H:6:A:H4'	1.99	0.45
12:Q8:5:LYS:O	12:Q8:6:THR:C	2.55	0.45
14:3E:43:HIS:ND1	14:3E:46:LYS:HE3	2.32	0.45
14:3E:207:TYR:HA	14:3E:209:ARG:HD3	1.99	0.45
15:1H:552:U:H5'	15:1H:581:G:OP1	2.17	0.45
15:1H:566:G:H2'	15:1H:567:C:H6	1.82	0.45
15:1H:863:C:H4'	15:1H:1273:C:O2	2.17	0.45
15:1H:901:G:H2'	15:1H:902:G:C8	2.51	0.45
15:1H:905:C:H5'	31:I8:27:GLU:CD	2.38	0.45
15:1H:1143:A:H2'	15:1H:1143:A:N3	2.32	0.45
15:1H:1925:A:C8	15:1H:1925:A:C5'	2.99	0.45
15:1H:2128:C:H2'	15:1H:2129:G:C8	2.52	0.45
15:1H:2850:G:N7	56:1H:3825:HOH:O	2.36	0.45
13:3A:53:ARG:HB3	13:3A:69:TYR:HE1	1.82	0.45
13:3A:102:ARG:HE	13:3A:102:ARG:HB3	1.63	0.45
19:9I:48:GLY:O	19:9I:74:ARG:NH2	2.50	0.45
15:14:8:A:H2'	15:14:9:U:C6	2.52	0.45
15:14:208:A:C2	15:14:225:U:H4'	2.52	0.45
15:14:548:G:H2'	15:14:549:G:C8	2.47	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:14:1109:U:H5''	15:14:1110:G:OP2	2.17	0.45
15:14:1135:G:H8	15:14:1135:G:O5'	2.00	0.45
15:14:1663:A:P	56:14:3656:HOH:O	2.74	0.45
15:14:2555:C:O2'	15:14:2756:A:N3	2.49	0.45
15:14:2557:A:N3	15:14:2557:A:H2'	2.32	0.45
22:D5:97:GLU:HB3	22:D5:125:LEU:HD11	1.98	0.45
26:1J:59:A:C2'	26:1J:60:A:H5'	2.47	0.45
30:35:1:MET:H3	32:39:117:ARG:HH12	1.64	0.45
32:39:68:LYS:HG3	32:39:69:HIS:NE2	2.32	0.45
32:39:132:VAL:C	32:39:134:GLY:H	2.19	0.45
32:39:163:VAL:O	32:39:167:ALA:HB2	2.16	0.45
40:41:33:ARG:HB2	40:41:162:THR:HG21	1.98	0.45
43:A5:1:MET:HE3	43:A5:2:GLU:H	1.81	0.45
44:12:72:GLY:HA2	44:12:165:VAL:CG2	2.47	0.45
44:12:195:ASP:O	50:72:74:PRO:HG3	2.16	0.45
6:2I:54:ARG:NH2	52:V1:39:U:H4'	2.31	0.45
52:X4:7:A:H3'	52:X4:8:U:C5'	2.46	0.45
1:13:1952:C:H2'	1:13:1953:C:C6	2.50	0.45
8:22:43:LEU:O	8:22:47:LEU:HB2	2.17	0.45
1:1G:1091:A:N6	1:1G:1110:U:H2'	2.31	0.45
1:1G:1287:G:O6	1:1G:1375:A:N6	2.50	0.45
1:1G:1577:G:H2'	1:1G:1578:U:C6	2.52	0.45
1:1G:1628:A:H3'	1:1G:1628:A:N3	2.32	0.45
1:1G:1747:C:OP1	9:82:83:ARG:NH1	2.50	0.45
12:Q8:50:LEU:C	12:Q8:53:PRO:HD2	2.36	0.45
14:3E:13:ARG:NH1	14:3E:38:TYR:O	2.46	0.45
15:1H:646:G:H5''	15:1H:647:G:OP2	2.16	0.45
15:1H:1647:C:O2'	15:1H:1648:C:H5'	2.17	0.45
15:1H:1803:G:O2'	15:1H:1983:C:OP1	2.19	0.45
15:1H:2181:G:H2'	15:1H:2182:G:C2	2.52	0.45
15:1H:2409:C:N4	52:V1:76:A:C8	2.75	0.45
15:1H:2487:G:N2	15:1H:2492:C:H5'	2.31	0.45
15:1H:2699:U:H1'	21:68:70:LYS:HD2	2.00	0.45
15:1H:2853:C:H2'	15:1H:2854:C:C6	2.52	0.45
13:3A:6:THR:OG1	13:3A:9:GLN:HG3	2.17	0.45
13:3A:41:ARG:HH12	13:3A:43:VAL:HG22	1.82	0.45
15:14:594:U:O2'	15:14:1031:A:N1	2.43	0.45
15:14:674:G:N3	15:14:2365:C:O2'	2.50	0.45
15:14:705:G:H2'	15:14:706:U:O4'	2.17	0.45
15:14:1051:G:N2	15:14:1202:C:C2	2.84	0.45
15:14:2558:G:H2'	15:14:2559:G:C8	2.52	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:14:2592:A:H5''	15:14:2593:G:H5'	1.99	0.45
26:16:42:U:H1'	26:16:47:A:N6	2.32	0.45
28:M8:37:SER:OG	28:M8:43:TYR:HB3	2.16	0.45
24:4A:14:ARG:HE	24:4A:14:ARG:HB3	1.49	0.45
24:4A:16:ASP:HB2	24:4A:31:LYS:HG2	1.99	0.45
25:42:79:GLU:CD	25:42:79:GLU:H	2.19	0.45
26:1J:97:C:H2'	26:1J:98:U:C6	2.52	0.45
38:45:110:THR:HG23	38:45:113:GLN:HB2	1.98	0.45
42:62:152:ALA:O	42:62:155:ARG:HB3	2.17	0.45
47:51:83:TYR:HA	47:51:135:GLY:H	1.82	0.45
48:1A:28:ARG:HB2	48:1A:34:VAL:HG21	1.99	0.45
44:12:209:ARG:HD3	44:12:240:GLN:OE1	2.17	0.45
50:7E:86:ILE:HG12	50:7E:135:CYS:HA	1.98	0.45
3:F8:72:LYS:HE2	3:F8:72:LYS:HB2	1.78	0.45
50:72:41:ARG:HE	50:72:41:ARG:HB2	1.45	0.45
52:V1:2:C:H2'	52:V1:3:C:C6	2.52	0.45
52:X4:48:C:H2'	52:X4:59:U:H1'	1.99	0.45
52:V4:23:A:H2'	52:V4:24:G:H8	1.81	0.45
1:13:741:G:C6	1:13:742:C:C4	3.05	0.44
1:13:899:G:H2'	1:13:900:G:H8	1.82	0.44
1:13:1544:U:H2'	1:13:1545:G:O4'	2.17	0.44
1:13:1773:C:H4'	1:13:1774:A:O5'	2.16	0.44
1:13:1973:A:C8	1:13:1975:U:C2	3.06	0.44
1:1G:767:G:H4'	7:8A:3:LYS:HG2	1.99	0.44
1:1G:1227:U:H4'	50:72:94:TYR:CD2	2.52	0.44
1:1G:1397:A:N3	1:1G:2135:U:O2'	2.47	0.44
1:1G:1853:C:H2'	24:4A:103:THR:HB	1.98	0.44
12:Q8:59:LYS:HD2	12:Q8:60:LEU:HG	1.99	0.44
9:82:53:VAL:HG11	9:82:92:TYR:CE2	2.52	0.44
15:1H:1236:U:H2'	15:1H:1237:A:H5'	1.99	0.44
15:1H:1514:C:O2'	15:1H:1577:A:H8	2.00	0.44
15:1H:2239:G:H4'	15:1H:2241:C:C2	2.52	0.44
15:1H:2358:C:O2'	15:1H:2388:G:O2'	2.27	0.44
15:1H:2579:A:OP1	15:1H:2663:C:H4'	2.17	0.44
15:1H:2756:A:C6	15:1H:2780:A:C8	3.05	0.44
15:1H:2894:C:C2	15:1H:2895:A:C8	3.05	0.44
12:M5:61:LEU:HD23	15:14:618:G:H5'	2.00	0.44
18:61:63:ALA:HA	18:61:66:GLU:HG2	2.00	0.44
15:14:564:C:H5''	15:14:564:C:C6	2.50	0.44
15:14:597:A:H2'	15:14:598:G:O4'	2.18	0.44
15:14:994:G:H2'	15:14:995:G:C8	2.51	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:14:1152:C:H2'	15:14:1153:U:C6	2.51	0.44
15:14:2238:G:C2'	15:14:2239:G:H5'	2.46	0.44
15:14:2898:C:N3	15:14:2899:G:H1'	2.32	0.44
22:H8:44:PHE:CE2	22:H8:86:VAL:HG11	2.51	0.44
23:21:57:LYS:CG	23:21:59:VAL:HG12	2.44	0.44
23:21:69:LYS:C	23:21:71:GLY:H	2.19	0.44
18:69:120:ILE:HG22	18:69:122:GLU:H	1.81	0.44
24:4I:56:LEU:HD22	24:4I:56:LEU:HA	1.74	0.44
19:9A:78:LEU:HA	19:9A:78:LEU:HD23	1.79	0.44
25:4E:121:LYS:HG3	25:4E:122:GLU:N	2.31	0.44
25:4E:145:LYS:O	25:4E:148:VAL:HB	2.17	0.44
28:M8:25:TYR:HE2	40:41:5:VAL:H	1.64	0.44
27:85:91:ASP:C	27:85:93:LYS:N	2.69	0.44
32:31:6:VAL:HG11	32:31:119:ARG:CA	2.47	0.44
37:BI:57:ARG:HE	37:BI:102:GLY:C	2.20	0.44
38:88:33:GLY:HA2	38:88:105:GLU:HA	1.99	0.44
35:95:80:GLN:O	35:95:80:GLN:HG3	2.17	0.44
37:BA:37:SER:O	37:BA:41:ILE:HG23	2.17	0.44
38:45:75:THR:HA	38:45:89:ASN:O	2.17	0.44
44:1E:155:LEU:HD22	44:1E:155:LEU:HA	1.68	0.44
46:K8:42:GLY:O	46:K8:44:LEU:N	2.50	0.44
48:1A:82:ILE:HG22	48:1A:86:MET:SD	2.57	0.44
48:1I:32:ALA:HB3	48:1I:76:ASN:O	2.17	0.44
44:12:71:VAL:HG23	44:12:163:PHE:O	2.17	0.44
47:59:59:ARG:O	47:59:63:SER:OG	2.29	0.44
6:2I:30:VAL:HG21	6:2I:65:ALA:HA	1.99	0.44
6:2I:67:ASP:OD1	6:2I:71:LYS:HE3	2.18	0.44
52:V4:19:G:H5''	52:V4:20:U:C4	2.53	0.44
1:13:1256:G:H2'	1:13:1257:G:C8	2.52	0.44
1:13:1780:A:H4'	48:1I:13:HIS:CD2	2.51	0.44
6:2A:56:GLY:O	6:2A:89:ALA:HB3	2.17	0.44
1:1G:749:C:H2'	1:1G:750:G:O4'	2.18	0.44
1:1G:1067:G:OP1	14:32:38:TYR:OH	2.23	0.44
1:1G:1752:G:O2'	1:1G:1773:C:N4	2.49	0.44
2:65:64:GLU:O	2:65:68:GLN:HG3	2.17	0.44
4:19:210:GLY:CA	15:14:813:A:H5'	2.48	0.44
4:19:242:ARG:NE	15:14:1860:G:H4'	2.15	0.44
4:19:242:ARG:NH2	15:14:1996:A:OP2	2.50	0.44
15:1H:867:G:H4'	15:1H:887:C:O3'	2.17	0.44
15:1H:1201:C:H1'	27:C8:77:SER:HB3	2.00	0.44
15:1H:1682:A:C6	15:1H:1683:G:C6	3.05	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:1H:2356:G:H2'	15:1H:2357:C:C6	2.52	0.44
15:1H:2782:G:H5''	15:1H:2783:C:OP2	2.17	0.44
10:15:96:GLU:H	10:15:96:GLU:CD	2.21	0.44
17:L8:11:SER:HA	17:L8:12:PRO:HD2	1.71	0.44
15:14:601:U:OP1	56:14:3683:HOH:O	2.21	0.44
15:14:751:G:C2	15:14:780:C:C2	3.06	0.44
15:14:1381:G:H5'	15:14:1381:G:C8	2.52	0.44
15:14:2379:C:H2'	15:14:2380:G:O4'	2.16	0.44
22:H8:68:PRO:O	22:H8:91:LEU:HB2	2.17	0.44
17:H5:8:LEU:HD13	17:H5:31:LEU:HD12	1.99	0.44
27:C8:88:ILE:C	27:C8:90:VAL:H	2.19	0.44
23:29:181:LEU:HD12	23:29:181:LEU:HA	1.68	0.44
31:E5:43:THR:O	31:E5:45:PHE:N	2.50	0.44
35:95:43:GLU:HG2	35:95:44:LYS:NZ	2.32	0.44
38:45:19:GLY:O	38:45:99:PRO:HD2	2.18	0.44
40:49:2:PRO:HB2	40:49:3:LEU:H	1.68	0.44
44:1E:69:LEU:HD12	44:1E:70:PHE:N	2.32	0.44
42:62:126:ASP:HB3	42:62:131:LYS:O	2.17	0.44
42:62:146:GLU:O	42:62:149:ARG:HB2	2.17	0.44
45:98:13:HIS:HE1	45:98:15:SER:HB2	1.79	0.44
45:98:29:LEU:HD23	45:98:70:LEU:HD11	1.99	0.44
47:51:86:GLU:HG3	47:51:165:ALA:H	1.81	0.44
48:1I:57:LYS:CG	48:1I:60:ARG:HH12	2.28	0.44
46:G5:25:VAL:HG12	46:G5:60:LEU:HB3	1.99	0.44
47:59:130:ARG:HB3	47:59:131:VAL:H	1.55	0.44
52:X4:53:G:H2'	52:X4:54:U:H6	1.82	0.44
1:13:1044:C:OP2	14:3E:74:GLN:NE2	2.50	0.44
1:13:1356:G:N2	1:13:1359:G:OP2	2.50	0.44
1:13:1604:U:H5	1:13:1605:U:HO2'	1.65	0.44
1:13:1698:U:H2'	1:13:1699:C:H6	1.81	0.44
4:11:148:GLU:HB2	4:11:151:LYS:HE3	1.97	0.44
4:11:172:TYR:HD2	4:11:185:VAL:C	2.21	0.44
1:1G:849:A:H1'	1:1G:850:G:O4'	2.17	0.44
1:1G:1343:G:H2'	1:1G:1344:A:C8	2.52	0.44
1:1G:1883:A:N6	1:1G:1904:C:H3'	2.31	0.44
10:58:99:LEU:HD23	10:58:99:LEU:HA	1.87	0.44
4:19:169:GLU:OE1	4:19:184:LYS:HE2	2.17	0.44
12:Q8:48:PHE:HZ	30:78:62:LEU:HD21	1.82	0.44
13:3I:33:ARG:HH11	13:3I:62:SER:HB3	1.83	0.44
14:3E:15:GLU:OE2	14:3E:59:ARG:NE	2.36	0.44
9:82:42:ARG:HA	42:62:16:LEU:CD1	2.48	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:1H:238:G:H5'	15:1H:240:G:N7	2.32	0.44
15:1H:908:G:H5'	15:1H:2283:A:O2'	2.17	0.44
15:1H:913:G:C6	15:1H:914:C:N4	2.86	0.44
15:1H:1090:G:C6	15:1H:1091:C:C4	3.06	0.44
15:1H:1532:G:C2	15:1H:1556:A:C8	3.05	0.44
15:1H:1739:A:H2'	15:1H:1740:A:C8	2.53	0.44
15:1H:2714:C:H2'	15:1H:2715:C:O4'	2.18	0.44
10:15:62:VAL:HG22	10:15:66:LYS:HD2	1.99	0.44
10:15:112:LEU:O	10:15:115:ARG:HB2	2.17	0.44
15:14:4:C:H42	15:14:2911:G:N2	2.16	0.44
15:14:266:U:H2'	15:14:267:C:C6	2.52	0.44
15:14:1584:U:C4	15:14:1585:A:H2	2.36	0.44
15:14:2709:G:O2'	15:14:2710:C:H5'	2.17	0.44
24:4I:70:LEU:O	24:4I:74:VAL:HG23	2.18	0.44
20:1B:9:ARG:HG3	20:1B:10:ARG:N	2.31	0.44
23:29:101:ARG:NH1	23:29:169:ASN:O	2.48	0.44
24:4A:23:TYR:HE2	24:4A:70:LEU:HD12	1.83	0.44
24:4A:32:GLU:O	24:4A:35:GLU:HG2	2.17	0.44
29:AI:71:LEU:HD23	29:AI:71:LEU:HA	1.82	0.44
26:1J:63:G:C6	26:1J:64:C:C4	3.06	0.44
28:I5:28:LYS:HD2	28:I5:31:ILE:HD11	1.99	0.44
32:3I:11:VAL:HB	32:3I:18:ARG:O	2.17	0.44
29:AA:15:LEU:HA	29:AA:15:LEU:HD23	1.78	0.44
35:D8:34:GLU:HB3	35:D8:58:VAL:HG22	2.00	0.44
31:E5:28:GLY:HA2	31:E5:66:VAL:CG1	2.48	0.44
32:39:123:LEU:HB2	32:39:192:LEU:HB3	2.00	0.44
38:88:104:PHE:O	38:88:105:GLU:HB3	2.18	0.44
41:6I:39:LEU:HD12	41:6I:59:MET:HE1	2.00	0.44
40:49:81:LYS:HA	40:49:81:LYS:HD2	1.62	0.44
42:62:99:LEU:HD22	42:62:103:TRP:CZ2	2.53	0.44
48:1A:78:ASN:OD1	48:1A:81:THR:HG23	2.17	0.44
8:2E:17:ASP:O	8:2E:54:ARG:NH2	2.37	0.44
8:2E:92:ALA:HB2	8:2E:99:VAL:HG22	1.99	0.44
50:72:51:VAL:HG11	50:72:60:ARG:HH21	1.82	0.44
1:13:752:G:H2'	1:13:753:U:C6	2.53	0.44
1:13:752:G:H2'	1:13:753:U:H6	1.82	0.44
1:13:1606:A:H5'	33:5I:3:ARG:HH12	1.81	0.44
1:13:1818:A:H5''	8:2E:4:LYS:NZ	2.33	0.44
1:13:1873:C:C4	1:13:1874:U:C4	3.05	0.44
1:13:1994:C:O2'	48:1I:60:ARG:NH2	2.50	0.44
2:A8:30:ARG:HG2	2:A8:30:ARG:NH1	2.32	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:B5:67:GLY:O	3:B5:69:TYR:N	2.49	0.44
4:11:172:TYR:CD2	4:11:186:HIS:HA	2.52	0.44
1:1G:849:A:N6	1:1G:861:G:O2'	2.50	0.44
1:1G:1054:G:O2'	1:1G:1069:G:N2	2.51	0.44
1:1G:1495:A:C4	1:1G:1497:G:C8	3.05	0.44
1:1G:1552:G:C6	1:1G:1553:C:C4	3.05	0.44
1:1G:1933:A:N6	1:1G:1958:G:H1'	2.31	0.44
12:Q8:31:HIS:CB	12:Q8:34:TRP:CE3	3.00	0.44
12:Q8:57:ARG:O	12:Q8:57:ARG:CZ	2.66	0.44
14:3E:79:PHE:HE1	14:3E:204:ILE:HD12	1.82	0.44
15:1H:538:U:C5	15:1H:539:G:C5	3.05	0.44
15:1H:1048:A:H62	15:1H:1203:G:H2'	1.82	0.44
15:1H:1266:C:H6	15:1H:1266:C:H5''	1.82	0.44
15:1H:2444:G:O6	30:78:61:ARG:NH1	2.51	0.44
12:M5:17:THR:O	12:M5:20:GLY:N	2.43	0.44
12:M5:61:LEU:CD2	12:M5:62:LEU:HD22	2.47	0.44
12:M5:62:LEU:HD23	15:14:232:G:H5''	1.98	0.44
20:1F:10:ARG:HE	20:1F:13:ILE:HD12	1.83	0.44
15:14:574:A:H2'	15:14:575:G:H5'	1.99	0.44
15:14:990:U:OP2	30:35:36:LYS:HG3	2.17	0.44
15:14:1004:A:N6	15:14:1006:A:C2	2.85	0.44
15:14:1203:G:H8	15:14:1203:G:O5'	2.00	0.44
15:14:1724:G:H1'	15:14:1726:A:N6	2.33	0.44
15:14:2103:C:C4	15:14:2104:U:C4	3.05	0.44
15:14:2372:U:OP1	31:E5:20:ARG:HD2	2.17	0.44
15:14:2487:G:H3'	15:14:2488:U:H5'	1.99	0.44
15:14:2743:G:H4'	21:25:70:LYS:HE3	2.00	0.44
17:H5:44:ARG:O	17:H5:48:GLU:HG3	2.17	0.44
23:21:95:ILE:HD13	23:21:95:ILE:HA	1.63	0.44
21:25:13:ASN:HD21	21:25:97:ARG:H	1.62	0.44
24:4A:40:ASN:O	24:4A:43:THR:OG1	2.32	0.44
26:1J:2:A:H2'	26:1J:3:U:C6	2.52	0.44
26:1J:15:A:H2'	26:1J:72:C:O2'	2.18	0.44
30:35:47:ASP:HB3	30:35:49:ARG:H	1.83	0.44
40:41:21:ARG:HG2	40:41:21:ARG:HH11	1.82	0.44
38:45:74:TYR:O	38:45:90:VAL:O	2.34	0.44
40:49:59:GLU:OE2	40:49:153:ARG:NE	2.39	0.44
40:49:124:SER:HB2	40:49:131:TYR:CE1	2.53	0.44
44:1E:130:ARG:H	44:1E:130:ARG:HG2	1.60	0.44
46:G5:10:LEU:HD12	46:G5:10:LEU:HA	1.83	0.44
8:2E:11:ARG:HH21	8:2E:182:ILE:HD12	1.81	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:13:716:G:H2'	1:13:717:C:O4'	2.18	0.44
1:13:1103:A:O2'	49:7I:81:ARG:HA	2.17	0.44
1:13:1244:C:C2	1:13:1245:G:C8	3.06	0.44
1:13:1286:G:C2	1:13:1287:G:C8	3.06	0.44
1:13:1348:C:H1'	19:9I:49:LYS:HG2	1.98	0.44
1:13:1805:G:N2	1:13:1808:G:C8	2.85	0.44
8:22:110:ASN:HB3	8:22:141:VAL:HG13	1.99	0.44
1:1G:661:G:H1'	25:42:19:MET:HE3	1.99	0.44
1:1G:843:G:C6	1:1G:844:U:C4	3.06	0.44
1:1G:1667:C:H3'	1:1G:1668:U:H5''	2.00	0.44
1:1G:1764:U:H5''	1:1G:1765:C:C5	2.52	0.44
12:Q8:31:HIS:O	12:Q8:31:HIS:CG	2.71	0.44
15:1H:299:G:H3'	15:1H:299:G:C8	2.51	0.44
15:1H:312:C:H2'	15:1H:313:C:C6	2.53	0.44
15:1H:557:G:C5	15:1H:2047:U:H5''	2.53	0.44
15:1H:1072:G:C3'	15:1H:1073:G:H5''	2.45	0.44
15:1H:1075:A:C2	15:1H:2503:A:H5'	2.52	0.44
15:1H:1309:G:C6	15:1H:1310:C:C4	3.06	0.44
15:1H:1455:U:H2'	15:1H:1456:C:H6	1.80	0.44
15:1H:1907:C:H2'	15:1H:1908:G:O4'	2.18	0.44
15:1H:2075:C:H2'	15:1H:2076:A:C8	2.53	0.44
15:1H:2306:U:O2'	15:1H:2389:C:O2	2.36	0.44
15:1H:2854:C:H6	15:1H:2854:C:O5'	2.00	0.44
11:C5:96:ILE:HG23	11:C5:102:CYS:O	2.18	0.44
14:32:162:LEU:CD2	14:32:178:VAL:HB	2.48	0.44
14:32:198:VAL:HG23	14:32:200:GLU:N	2.32	0.44
15:14:214:G:H2'	15:14:215:A:O4'	2.17	0.44
15:14:1072:G:C3'	15:14:1073:G:H5''	2.46	0.44
15:14:1108:U:H4'	15:14:1109:U:C5'	2.47	0.44
15:14:1803:G:O2'	15:14:1983:C:OP1	2.27	0.44
15:14:2138:U:OP1	15:14:2139:A:N6	2.51	0.44
15:14:2667:C:H2'	15:14:2668:U:O4'	2.18	0.44
22:H8:93:ASP:OD1	22:H8:93:ASP:N	2.47	0.44
18:69:39:ALA:O	18:69:44:LEU:HD23	2.18	0.44
21:25:108:GLU:H	21:25:108:GLU:HG3	1.61	0.44
22:D5:15:PRO:HB2	22:D5:19:ARG:NH2	2.33	0.44
22:D5:73:GLN:HG2	22:D5:87:ASP:HB2	1.99	0.44
22:D5:84:GLU:OE2	26:1J:79:U:H4'	2.16	0.44
28:M8:13:ARG:O	28:M8:30:GLU:HA	2.17	0.44
23:29:65:GLY:HA3	23:29:68:ALA:CA	2.47	0.44
31:I8:21:LEU:HA	31:I8:21:LEU:HD23	1.79	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:31:162:LEU:HD23	32:31:162:LEU:HA	1.84	0.44
32:31:177:ALA:HB1	32:31:178:PRO:HD2	1.98	0.44
32:39:177:ALA:HB1	32:39:178:PRO:HD2	2.00	0.44
34:52:33:TYR:HE2	34:52:78:GLU:HG3	1.82	0.44
39:J8:76:ARG:HB3	39:J8:94:LEU:HD13	2.00	0.44
39:F5:49:VAL:HG21	39:F5:67:ILE:HD12	2.00	0.44
44:1E:166:ASP:C	44:1E:168:THR:H	2.20	0.44
42:62:111:ARG:NE	42:62:113:GLU:OE2	2.37	0.44
43:A5:19:LEU:O	43:A5:22:ASP:HB2	2.18	0.44
46:K8:39:ALA:O	46:K8:42:GLY:HA2	2.16	0.44
52:X1:67:C:H2'	52:X1:68:C:C6	2.52	0.44
52:W4:51:U:H3	52:W4:63:G:H1	1.66	0.44
1:13:651:U:O2	14:3E:84:LYS:HE3	2.17	0.44
1:13:777:C:H1'	49:7I:63:GLY:HA3	2.00	0.44
1:13:1761:G:H1	1:13:1769:C:H42	1.66	0.44
1:13:2030:C:H2'	1:13:2031:C:O4'	2.18	0.44
2:A8:14:VAL:O	2:A8:18:ILE:HD13	2.18	0.44
2:A8:30:ARG:HG2	2:A8:30:ARG:HH11	1.81	0.44
2:A8:67:ARG:HD3	2:A8:71:ARG:NH2	2.33	0.44
4:11:3:VAL:O	4:11:3:VAL:HG12	2.18	0.44
7:8I:88:TYR:CD1	7:8I:89:LEU:HD22	2.53	0.44
1:1G:1297:G:O4'	41:6A:49:ASP:HB2	2.18	0.44
1:1G:1477:G:C2	1:1G:1478:G:C8	3.06	0.44
1:1G:1590:C:H2'	1:1G:1591:A:N7	2.33	0.44
1:1G:2158:C:H2'	1:1G:2159:C:O4'	2.17	0.44
10:58:42:TRP:HA	10:58:48:MET:CE	2.48	0.44
11:G8:93:GLY:O	11:G8:94:LYS:HB2	2.17	0.44
12:Q8:58:ILE:O	12:Q8:58:ILE:HG22	2.18	0.44
15:1H:479:C:H4'	32:31:52:LYS:HE2	2.00	0.44
15:1H:483:C:N3	15:1H:501:G:H5'	2.32	0.44
15:1H:930:G:N2	15:1H:945:C:H1'	2.33	0.44
15:1H:1361:U:H4'	15:1H:1362:U:O5'	2.18	0.44
15:1H:2416:U:H3'	15:1H:2417:C:H6	1.81	0.44
15:1H:2626:U:H5'	15:1H:2626:U:H6	1.83	0.44
15:1H:2843:G:C5'	15:1H:2843:G:C8	3.00	0.44
10:15:17:ASP:O	10:15:18:ALA:HB3	2.18	0.44
11:C5:76:CYS:HB2	11:C5:97:ARG:CZ	2.47	0.44
11:C5:84:ARG:HE	11:C5:95:LYS:HE3	1.82	0.44
19:9I:23:LYS:O	19:9I:26:LEU:HD22	2.17	0.44
15:14:1718:A:H4'	15:14:1719:A:O5'	2.18	0.44
15:14:1724:G:H5''	15:14:1724:G:C8	2.52	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:14:2101:U:H5''	15:14:2102:A:OP1	2.18	0.44
15:14:2277:U:P	31:E5:19:LYS:HE3	2.57	0.44
15:14:2318:G:O2'	40:49:132:ASN:HB2	2.18	0.44
15:14:2484:A:H2	15:14:2496:G:N2	2.11	0.44
15:14:2590:C:H5'	23:29:143:ASN:O	2.17	0.44
15:14:2745:G:H1'	23:29:187:ALA:HB3	2.00	0.44
16:75:45:PHE:CD2	16:75:74:ARG:HD3	2.53	0.44
22:H8:67:LEU:HA	22:H8:68:PRO:HD3	1.79	0.44
25:42:122:GLU:OE1	25:42:126:ARG:HG2	2.17	0.44
28:I5:55:ARG:HG3	28:I5:56:VAL:N	2.33	0.44
32:31:155:LEU:HD13	32:31:174:VAL:HG22	2.00	0.44
33:5I:48:ALA:HB2	33:5I:53:LEU:HD12	1.98	0.44
36:N8:41:PRO:HD2	36:N8:44:THR:CG2	2.48	0.44
39:J8:81:LYS:HD2	39:J8:81:LYS:N	2.31	0.44
40:49:63:ILE:HD12	40:49:141:PHE:CD2	2.53	0.44
44:1E:18:GLY:N	44:1E:42:ILE:HB	2.31	0.44
44:1E:131:PRO:O	44:1E:135:GLN:HB2	2.18	0.44
47:51:11:VAL:H	47:51:11:VAL:HG22	1.44	0.44
47:51:74:ASN:O	47:51:78:GLY:N	2.51	0.44
44:12:88:ALA:HB2	44:12:219:VAL:HB	1.98	0.44
44:12:144:ARG:HH21	44:12:148:TYR:HD2	1.66	0.44
49:7A:17:TYR:HE2	49:7A:41:PRO:HG3	1.83	0.44
51:Y4:38:U:H2'	51:Y4:39:U:O4'	2.18	0.44
1:13:703:G:C5	1:13:704:C:C4	3.06	0.44
1:13:744:G:H2'	1:13:745:C:C6	2.53	0.44
1:13:1420:G:C5	1:13:1421:A:C2	3.06	0.44
1:13:1723:U:OP1	1:13:1736:G:N2	2.45	0.44
1:13:1746:C:H1'	1:13:1806:A:C5	2.52	0.44
1:13:2027:C:H4'	1:13:2028:C:O5'	2.18	0.44
2:A8:36:TYR:N	2:A8:36:TYR:CD1	2.85	0.44
1:1G:1573:U:H2'	1:1G:1574:G:C8	2.53	0.44
1:1G:1942:U:H2'	1:1G:1943:G:O4'	2.18	0.44
10:58:28:THR:HG23	15:1H:1054:C:H5'	1.99	0.44
4:19:85:ASP:HA	4:19:86:PRO:HD2	1.81	0.44
4:19:168:ARG:NH2	34:52:83:ASP:OD2	2.51	0.44
4:19:208:LYS:HB2	15:14:778:G:C6	2.53	0.44
15:1H:512:C:H2'	15:1H:513:C:C6	2.52	0.44
15:1H:905:C:O4'	31:I8:27:GLU:HB2	2.17	0.44
15:1H:991:G:H5''	15:1H:992:A:H5'	2.00	0.44
15:1H:1302:A:C8	56:1H:3704:HOH:O	2.67	0.44
15:1H:1306:C:H4'	32:31:83:PHE:CE1	2.53	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:1H:2229:C:O2	15:1H:2235:G:C2	2.71	0.44
15:1H:2360:G:H1'	15:1H:2397:G:H5'	2.00	0.44
15:1H:2634:C:O2'	15:1H:2635:C:H5'	2.17	0.44
10:15:20:GLY:HA2	10:15:61:ARG:HG2	2.00	0.44
20:1F:10:ARG:HA	20:1F:13:ILE:HD12	2.00	0.44
15:14:1247:U:H2'	15:14:1248:C:C6	2.53	0.44
15:14:1522:A:H2'	15:14:1523:G:O4'	2.18	0.44
15:14:1848:G:OP2	15:14:1849:A:O2'	2.19	0.44
15:14:1891:G:C6	15:14:1892:G:N1	2.86	0.44
15:14:2306:U:H2'	15:14:2307:C:C6	2.53	0.44
15:14:2307:C:H2'	15:14:2308:C:C6	2.53	0.44
15:14:2901:C:H2'	15:14:2902:C:C6	2.52	0.44
22:H8:8:TYR:HB2	22:H8:38:TYR:CZ	2.52	0.44
24:4I:10:PRO:CB	24:4I:18:ALA:HB1	2.47	0.44
25:4E:60:TYR:CE1	25:4E:64:ARG:CZ	3.01	0.44
22:D5:59:LEU:HB3	22:D5:60:GLU:H	1.50	0.44
23:29:56:PRO:HD2	23:29:58:ARG:CB	2.47	0.44
23:29:89:ASP:O	23:29:91:VAL:N	2.45	0.44
27:85:80:ILE:HD13	27:85:80:ILE:HA	1.78	0.44
28:I5:23:GLU:O	28:I5:25:TYR:HD1	2.00	0.44
34:5E:62:TRP:HH2	34:5E:64:GLN:HG3	1.79	0.44
32:39:51:THR:HG23	32:39:92:PRO:HG2	2.00	0.44
38:88:24:GLY:HA3	38:88:101:ARG:HD2	2.00	0.44
38:45:31:ASP:H	38:45:107:ALA:HB2	1.81	0.44
48:1A:6:ILE:CG2	48:1A:98:ILE:HG23	2.47	0.44
48:1A:9:ARG:O	48:1A:94:VAL:HG13	2.17	0.44
44:12:97:TRP:HZ3	44:12:99:GLY:HA2	1.82	0.44
52:V1:51:U:H2'	52:V1:52:G:C8	2.52	0.44
52:X4:1:G:C6	52:X4:2:C:C4	3.05	0.44
52:V4:14:A:N6	52:V4:22:G:C4	2.86	0.44
1:13:945:U:H2'	1:13:946:G:C8	2.53	0.44
1:13:1074:C:H2'	1:13:1075:U:H6	1.80	0.44
1:13:1172:C:O2'	1:13:1173:G:H5'	2.18	0.44
1:13:1389:G:N2	7:8I:97:SER:OG	2.51	0.44
1:13:1904:C:O2'	1:13:1906:A:H1'	2.17	0.44
2:A8:3:ARG:HH21	2:A8:4:LEU:HD12	1.81	0.44
2:A8:83:LYS:HE3	2:A8:83:LYS:HB3	1.74	0.44
6:2A:54:ARG:O	6:2A:57:THR:HB	2.18	0.44
8:22:12:LEU:HD23	8:22:12:LEU:HA	1.80	0.44
1:1G:1410:A:H5'	1:1G:1411:A:OP2	2.18	0.44
1:1G:1843:G:H5''	33:5A:5:ALA:HB3	2.00	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:65:69:VAL:O	2:65:72:ALA:HB3	2.18	0.44
11:G8:39:VAL:HB	11:G8:42:VAL:CG1	2.48	0.44
11:G8:75:ILE:HD12	11:G8:75:ILE:HA	1.80	0.44
4:19:96:HIS:HD2	4:19:102:LYS:HG2	1.78	0.44
13:3I:89:ARG:NE	13:3I:91:LYS:HB2	2.33	0.44
13:3I:110:VAL:CG2	13:3I:120:TYR:HB3	2.48	0.44
9:82:102:LEU:O	9:82:103:THR:OG1	2.27	0.44
15:1H:314:A:N6	15:1H:376:G:H1'	2.33	0.44
15:1H:363:G:N2	15:1H:364:U:H1'	2.33	0.44
15:1H:859:U:H5''	56:1H:3774:HOH:O	2.17	0.44
15:1H:1048:A:C6	15:1H:1204:A:C8	3.06	0.44
15:1H:1049:A:H2'	15:1H:1050:G:O4'	2.17	0.44
15:1H:1854:U:H4'	15:1H:1855:A:OP2	2.18	0.44
15:1H:2437:A:C5	15:1H:2439:C:C4	3.05	0.44
18:61:56:LYS:O	18:61:60:GLU:HB3	2.17	0.44
15:14:154:G:C2	15:14:163:G:C2	3.06	0.44
15:14:512:C:H2'	15:14:513:C:H6	1.81	0.44
15:14:881:G:N3	30:35:53:GLY:HA3	2.33	0.44
15:14:1892:G:H1'	15:14:1909:A:H62	1.83	0.44
15:14:2022:G:P	56:14:3617:HOH:O	2.69	0.44
15:14:2766:A:OP2	47:59:6:ARG:NH2	2.51	0.44
23:21:195:LEU:HD22	23:21:196:VAL:N	2.33	0.44
26:16:33:C:H4'	40:41:29:TRP:CH2	2.52	0.44
23:29:120:TRP:CD2	23:29:155:LYS:HD3	2.52	0.44
29:AI:15:LEU:O	29:AI:19:VAL:N	2.36	0.44
27:85:98:LEU:HA	27:85:100:VAL:O	2.18	0.44
28:I5:18:CYS:H	28:I5:36:CYS:HB3	1.83	0.44
32:31:127:GLU:OE1	32:31:128:ALA:N	2.51	0.44
29:AA:29:ARG:CZ	29:AA:48:THR:HG23	2.46	0.44
38:88:5:ARG:O	38:88:6:ARG:C	2.56	0.44
35:95:84:LYS:HA	35:95:84:LYS:HD2	1.57	0.44
38:45:72:LYS:HA	38:45:73:PRO:HD3	1.89	0.44
39:F5:85:LEU:HD13	39:F5:88:LYS:HG3	1.99	0.44
39:F5:92:LYS:O	39:F5:93:GLU:C	2.56	0.44
42:62:105:VAL:O	42:62:109:ASN:ND2	2.50	0.44
44:12:7:VAL:O	44:12:217:ARG:CZ	2.65	0.44
44:12:179:LYS:HA	50:72:72:PRO:HG3	2.00	0.44
50:7E:82:HIS:NE2	50:7E:136:GLU:OE2	2.32	0.44
52:V1:20:U:O2'	52:V1:21:A:H5'	2.18	0.44
1:13:898:G:C4	1:13:899:G:C8	3.05	0.44
1:13:911:A:H2'	1:13:912:C:C6	2.53	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:13:1408:C:H2'	1:13:1409:A:O4'	2.18	0.44
2:A8:66:ALA:HA	2:A8:69:VAL:CG1	2.47	0.44
7:8I:45:HIS:CD2	7:8I:65:ILE:HG12	2.53	0.44
8:22:4:LYS:HB2	8:22:4:LYS:HE2	1.73	0.44
1:1G:1057:G:C5	1:1G:1058:C:C4	3.06	0.44
1:1G:1333:A:H5''	1:1G:1334:U:OP2	2.18	0.44
1:1G:1780:A:O3'	48:1A:13:HIS:NE2	2.51	0.44
1:1G:1953:C:OP1	20:1B:12:LYS:NZ	2.49	0.44
2:65:53:SER:HB2	2:65:65:VAL:CG1	2.48	0.44
15:1H:542:A:H1'	15:1H:606:C:H1'	2.00	0.44
15:1H:1044:A:C2	15:1H:1045:G:C8	3.06	0.44
15:1H:1091:C:C4	15:1H:1092:G:N7	2.86	0.44
15:1H:1280:G:H2'	15:1H:1281:G:C8	2.53	0.44
15:1H:1564:C:H2'	15:1H:1565:U:C6	2.53	0.44
15:1H:2476:C:H2'	15:1H:2477:U:H6	1.83	0.44
10:15:28:THR:HG22	10:15:29:LYS:N	2.33	0.44
14:32:64:LEU:HB2	14:32:198:VAL:HG11	1.99	0.44
15:14:629:G:N2	15:14:705:G:O2'	2.51	0.44
15:14:1627:C:H2'	15:14:1628:U:C6	2.53	0.44
19:9A:87:ARG:HB3	19:9A:88:LYS:H	1.43	0.44
21:25:116:SER:OG	21:25:117:LEU:N	2.50	0.44
24:4A:32:GLU:OE2	24:4A:33:ALA:N	2.51	0.44
30:78:101:VAL:HA	30:78:105:LEU:O	2.17	0.44
31:I8:51:VAL:N	31:I8:62:LEU:HD12	2.33	0.44
29:AA:28:LYS:HE3	29:AA:29:ARG:HG3	1.99	0.44
31:E5:12:ASN:HA	31:E5:14:ARG:NH2	2.29	0.44
32:39:135:LYS:HB3	32:39:138:GLU:HG3	1.99	0.44
32:39:140:LEU:HD13	32:39:140:LEU:HA	1.81	0.44
33:5A:21:TYR:HB3	56:5A:201:HOH:O	2.18	0.44
37:BI:40:ALA:HB2	37:BI:55:ILE:HG22	2.00	0.44
40:41:173:LEU:HD13	40:41:178:PHE:CD2	2.53	0.44
40:49:146:TYR:O	40:49:149:VAL:HG22	2.17	0.44
42:62:24:THR:HA	42:62:27:ILE:HG13	2.00	0.44
47:51:9:ILE:O	47:51:11:VAL:N	2.51	0.44
47:51:85:LYS:HD3	47:51:85:LYS:HA	1.79	0.44
50:7E:4:ASP:OD2	50:7E:85:ARG:NH1	2.51	0.44
50:7E:94:TYR:HE1	50:7E:132:GLU:HB2	1.83	0.44
49:7A:40:ASP:HB3	49:7A:48:TRP:HB2	1.99	0.44
52:X1:19:G:C5	52:X1:57:G:N2	2.86	0.44
1:13:1034:A:OP2	49:7I:12:LYS:HD2	2.18	0.43
1:13:1255:U:N3	1:13:1256:G:N7	2.65	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:13:1762:G:H1	1:13:1768:C:N4	2.16	0.43
2:A8:25:ARG:O	2:A8:39:ILE:HA	2.18	0.43
2:A8:42:ASP:C	2:A8:44:LYS:N	2.72	0.43
3:B5:35:THR:OG1	3:B5:38:GLU:HB3	2.17	0.43
4:11:213:ARG:HG3	15:1H:813:A:O4'	2.17	0.43
6:2A:43:SER:OG	6:2A:44:SER:N	2.51	0.43
1:1G:703:G:C5	1:1G:704:C:C4	3.06	0.43
1:1G:1219:C:H2'	1:1G:1220:U:C6	2.52	0.43
1:1G:1372:U:H2'	1:1G:1373:C:C6	2.52	0.43
1:1G:1686:G:H2'	1:1G:1687:C:C6	2.54	0.43
1:1G:2070:G:C8	1:1G:2072:A:C2	3.06	0.43
2:65:35:ILE:HG23	2:65:69:VAL:HG11	2.00	0.43
11:G8:84:ARG:HD2	11:G8:84:ARG:C	2.37	0.43
11:G8:87:LYS:N	11:G8:94:LYS:HG2	2.29	0.43
4:19:43:ARG:HA	4:19:49:ILE:HA	2.00	0.43
4:19:141:VAL:HG23	4:19:162:SER:HB2	2.00	0.43
12:Q8:25:MET:HB3	12:Q8:42:ARG:HB3	2.00	0.43
14:3E:164:ALA:O	14:3E:168:ARG:HG3	2.18	0.43
15:1H:545:G:H4'	43:E8:18:ARG:HH11	1.81	0.43
15:1H:1042:C:OP1	27:C8:53:ARG:NH2	2.51	0.43
15:1H:1327:A:H5''	45:98:36:THR:HG22	1.99	0.43
15:1H:1956:U:C5	15:1H:1994:A:N7	2.86	0.43
15:1H:2185:G:C6	15:1H:2186:C:H1'	2.53	0.43
15:1H:2379:C:H4'	31:I8:56:ASP:OD1	2.18	0.43
19:9I:45:SER:HG	19:9I:47:THR:HG1	1.62	0.43
19:9I:59:SER:N	19:9I:62:GLU:HB2	2.33	0.43
15:14:54:G:C2	15:14:114:C:C2	3.06	0.43
15:14:888:U:H2'	15:14:889:C:H6	1.82	0.43
15:14:1465:G:O2'	15:14:1466:C:P	2.76	0.43
15:14:1538:U:HO2'	15:14:1539:A:H8	1.66	0.43
16:75:68:TYR:CZ	21:25:119:PRO:HB2	2.53	0.43
23:21:101:ARG:NH1	23:21:171:GLU:HB2	2.33	0.43
21:25:115:VAL:HG13	21:25:121:VAL:HG21	1.99	0.43
22:D5:25:PRO:O	22:D5:85:HIS:HA	2.18	0.43
22:D5:102:LEU:HB3	22:D5:104:PHE:CZ	2.53	0.43
23:29:59:VAL:CB	23:29:60:ASN:HA	2.47	0.43
23:29:105:THR:HB	23:29:197:ILE:HG12	1.99	0.43
35:D8:34:GLU:C	35:D8:36:PRO:HD3	2.39	0.43
33:5A:12:ARG:HB2	33:5A:14:PRO:HD3	1.99	0.43
35:95:43:GLU:OE2	35:95:44:LYS:HG2	2.18	0.43
35:95:66:ARG:O	35:95:88:ARG:NH1	2.51	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:J8:85:LEU:HD13	39:J8:85:LEU:HA	1.50	0.43
43:E8:29:LEU:O	43:E8:33:ARG:HG3	2.18	0.43
40:49:21:ARG:HG2	40:49:21:ARG:HH11	1.83	0.43
45:98:34:ILE:HD12	45:98:34:ILE:HA	1.87	0.43
43:A5:20:VAL:O	43:A5:23:LEU:HB2	2.18	0.43
43:A5:41:LYS:O	43:A5:44:ALA:HB2	2.18	0.43
46:K8:42:GLY:C	46:K8:44:LEU:H	2.22	0.43
49:7I:26:ARG:HG2	49:7I:27:LYS:H	1.83	0.43
45:55:53:HIS:HB2	45:55:94:TYR:HE2	1.82	0.43
46:G5:16:LEU:HD12	46:G5:20:GLU:HB3	2.00	0.43
8:2E:17:ASP:HB3	8:2E:21:ARG:HH12	1.83	0.43
52:V4:18:G:HO2'	52:V4:19:G:P	2.41	0.43
52:V4:57:G:H8	52:V4:57:G:O5'	2.00	0.43
1:13:753:U:H2'	1:13:754:G:C8	2.53	0.43
1:13:878:C:O3'	7:8I:25:ARG:NH2	2.51	0.43
1:13:894:U:O2	1:13:916:G:O2'	2.25	0.43
1:13:1146:G:C2	1:13:1160:U:H5'	2.54	0.43
1:13:1301:U:HO2'	1:13:1302:G:C5'	2.31	0.43
1:13:1456:U:C5	1:13:1493:U:C4	3.05	0.43
1:13:1729:A:H4'	1:13:1730:A:O5'	2.18	0.43
4:11:33:LEU:HA	4:11:33:LEU:HD23	1.75	0.43
7:8I:59:ILE:HG13	7:8I:71:PHE:CD2	2.51	0.43
9:8E:48:GLU:HG3	9:8E:78:LYS:HZ1	1.83	0.43
1:1G:695:U:C2	1:1G:1002:G:N2	2.86	0.43
1:1G:744:G:H2'	1:1G:745:C:H6	1.83	0.43
2:65:32:LEU:HD22	26:1J:53:G:O6	2.18	0.43
4:19:14:ARG:NH2	15:14:1745:G:N7	2.66	0.43
4:19:237:GLU:HB2	4:19:239:ARG:CA	2.47	0.43
14:3E:88:VAL:HB	14:3E:91:SER:HB2	2.00	0.43
15:1H:230:G:H1'	15:1H:247:A:H61	1.82	0.43
15:1H:305:C:H2'	15:1H:306:G:O4'	2.18	0.43
15:1H:2385:G:C6	15:1H:2386:G:C6	3.06	0.43
15:1H:2622:G:H2'	15:1H:2623:G:O4'	2.19	0.43
15:1H:2719:C:H2'	15:1H:2720:A:O4'	2.18	0.43
15:1H:2875:G:H2'	15:1H:2876:C:H6	1.83	0.43
10:15:133:GLN:HB3	10:15:135:PRO:HD3	2.00	0.43
16:B8:1:MET:CG	23:21:27:LEU:HD22	2.48	0.43
13:3A:58:VAL:HG11	13:3A:85:ILE:HD11	2.00	0.43
19:9I:85:LEU:HD13	19:9I:85:LEU:HA	1.85	0.43
14:32:126:ILE:HG22	14:32:127:THR:H	1.82	0.43
15:14:186:A:N3	15:14:186:A:H2'	2.34	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:14:1836:A:N1	15:14:1856:G:H1'	2.33	0.43
15:14:2302:A:H2	15:14:2361:A:N1	2.16	0.43
15:14:2419:C:H1'	30:35:67:MET:CE	2.48	0.43
15:14:2875:G:H2'	15:14:2876:C:C6	2.53	0.43
17:H5:12:PRO:O	17:H5:20:LYS:HE3	2.18	0.43
23:21:108:SER:O	23:21:162:ALA:HA	2.18	0.43
24:4I:62:ASN:HA	28:M8:49:PHE:HE1	1.82	0.43
24:4I:88:ARG:HD2	24:4I:98:VAL:HG12	2.00	0.43
21:25:17:ARG:HA	21:25:17:ARG:HD2	1.78	0.43
22:D5:128:VAL:HG22	22:D5:129:SER:H	1.83	0.43
23:29:31:CYS:O	23:29:91:VAL:HG22	2.18	0.43
30:78:122:PRO:HA	30:78:142:GLY:HA3	2.00	0.43
27:85:50:ARG:HH22	35:95:72:VAL:HB	1.83	0.43
29:AA:66:MET:HA	29:AA:67:VAL:O	2.18	0.43
36:N8:55:ARG:HB3	45:98:33:ARG:HH22	1.82	0.43
33:5A:24:CYS:SG	33:5A:25:VAL:N	2.91	0.43
40:41:54:GLU:O	40:41:58:GLN:HB3	2.18	0.43
40:41:56:ALA:HB2	40:41:153:ARG:HH21	1.83	0.43
40:41:96:ARG:O	40:41:97:ASP:HB2	2.19	0.43
41:6I:37:ASN:O	41:6I:41:GLU:HG2	2.18	0.43
41:6A:82:ILE:HD13	41:6A:88:ARG:HB2	1.99	0.43
44:1E:100:GLY:O	44:1E:104:ASN:N	2.44	0.43
47:51:26:VAL:HG21	47:51:75:ALA:HB1	2.00	0.43
44:12:9:GLU:HA	44:12:12:GLU:HG3	2.00	0.43
50:72:105:ARG:HD3	50:72:105:ARG:HA	1.85	0.43
52:W1:37:A:H2'	52:W1:38:A:O4'	2.18	0.43
1:13:1762:G:H1	1:13:1768:C:H42	1.66	0.43
1:13:1852:A:N3	1:13:1852:A:H2'	2.32	0.43
1:13:1949:C:H6	1:13:1949:C:OP1	2.01	0.43
1:1G:1065:G:O5'	1:1G:1065:G:H8	2.01	0.43
1:1G:2120:G:C2'	1:1G:2121:U:H5'	2.48	0.43
2:65:61:ASN:HB3	2:65:64:GLU:HB2	2.01	0.43
4:19:147:LEU:HD23	4:19:147:LEU:HA	1.65	0.43
4:19:182:LEU:H	4:19:272:ALA:HB2	1.83	0.43
4:19:208:LYS:NZ	15:14:778:G:O5'	2.50	0.43
14:3E:120:LEU:HD23	14:3E:120:LEU:HA	1.73	0.43
15:1H:2276:C:C5	31:I8:16:SER:HB3	2.53	0.43
15:1H:2346:G:H4'	31:I8:42:GLY:HA3	1.99	0.43
16:B8:114:LEU:HA	16:B8:114:LEU:HD23	1.52	0.43
18:61:130:TYR:O	18:61:135:GLU:HB2	2.18	0.43
18:61:131:LYS:HZ2	18:61:131:LYS:N	2.16	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:3A:41:ARG:HD2	13:3A:42:THR:H	1.82	0.43
15:14:139:A:H8	15:14:1457:C:O2'	2.01	0.43
15:14:1048:A:C6	15:14:1049:A:C6	3.06	0.43
15:14:2253:G:N3	15:14:2253:G:H2'	2.33	0.43
15:14:2372:U:OP1	31:E5:20:ARG:NH1	2.51	0.43
16:75:18:ASP:OD1	16:75:19:LEU:HG	2.18	0.43
16:75:77:PRO:HB3	23:29:13:ARG:NH2	2.34	0.43
24:4I:113:PRO:O	24:4I:115:LYS:HE2	2.18	0.43
26:16:2:A:OP2	26:16:2:A:C8	2.71	0.43
22:D5:19:ARG:HE	22:D5:19:ARG:HB2	1.53	0.43
27:85:99:ALA:HB2	27:85:106:PHE:CG	2.54	0.43
39:J8:40:ARG:O	39:J8:40:ARG:HG3	2.18	0.43
42:6E:38:LEU:HD22	42:6E:38:LEU:HA	1.67	0.43
38:45:25:ASP:HB3	38:45:102:VAL:N	2.31	0.43
44:1E:193:ASP:OD1	44:1E:196:LEU:HG	2.18	0.43
48:1A:8:LEU:HD13	48:1A:20:ALA:HB2	2.01	0.43
48:1A:48:THR:OG1	48:1A:62:HIS:ND1	2.45	0.43
6:2I:18:ARG:HA	6:2I:81:ASP:H	1.83	0.43
49:7A:43:LYS:HG3	49:7A:48:TRP:CD2	2.53	0.43
8:2E:147:LYS:HD3	8:2E:147:LYS:HA	1.70	0.43
8:2E:173:VAL:O	8:2E:175:LEU:HD12	2.18	0.43
51:Y1:41:U:HO2'	51:Y1:42:U:H5	1.61	0.43
52:V4:51:U:H2'	52:V4:52:G:H8	1.83	0.43
1:13:692:G:O2'	1:13:1006:U:H1'	2.18	0.43
1:13:835:U:O2	7:8I:63:ARG:NH2	2.51	0.43
1:13:911:A:C6	1:13:912:C:C4	3.07	0.43
1:13:1047:G:N3	1:13:1048:G:C8	2.86	0.43
1:13:1479:C:O2	1:13:2162:C:H4'	2.18	0.43
1:13:1608:C:C2	1:13:1848:G:N2	2.87	0.43
1:13:1758:A:O2'	9:8E:3:GLN:NE2	2.51	0.43
1:13:1780:A:C5	1:13:1781:C:C5	3.06	0.43
1:13:1925:C:H4'	1:13:1926:A:C4	2.53	0.43
9:8E:93:ARG:HD2	9:8E:97:LYS:HB3	2.00	0.43
1:1G:1168:A:H2'	1:1G:1169:G:C8	2.53	0.43
1:1G:1756:C:C2	1:1G:1767:G:C6	3.06	0.43
1:1G:1779:A:O2'	1:1G:1780:A:O5'	2.36	0.43
1:1G:1865:A:N7	1:1G:1930:C:H1'	2.34	0.43
2:65:99:LYS:HE2	2:65:103:GLU:OE2	2.18	0.43
11:G8:87:LYS:HB3	11:G8:94:LYS:HG2	1.99	0.43
15:1H:77:A:H2'	15:1H:78:G:H8	1.84	0.43
15:1H:613:U:C2	32:31:90:PHE:CE1	3.07	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:1H:829:G:N2	15:1H:832:A:H62	2.00	0.43
15:1H:1098:A:C8	15:1H:2767:G:C8	3.07	0.43
15:1H:2172:G:H2'	15:1H:2173:G:H4'	2.01	0.43
11:C5:36:ALA:HA	11:C5:67:LEU:O	2.18	0.43
11:C5:45:VAL:HG23	11:C5:47:LYS:HD2	1.99	0.43
14:32:150:GLU:O	14:32:152:SER:N	2.51	0.43
15:14:115:G:C6	15:14:117:A:C6	3.07	0.43
15:14:407:G:N2	39:F5:42:GLN:OE1	2.39	0.43
15:14:553:A:O2'	15:14:2068:C:O2	2.32	0.43
15:14:554:C:N4	15:14:2795:U:OP2	2.39	0.43
15:14:735:G:H4'	15:14:736:C:OP2	2.19	0.43
15:14:999:G:C6	15:14:1013:G:C6	3.06	0.43
15:14:1006:A:C6	15:14:1007:A:N1	2.86	0.43
15:14:1336:A:N7	45:55:106:GLY:HA3	2.33	0.43
15:14:1563:U:O2'	15:14:1564:C:H5'	2.18	0.43
15:14:1662:G:H2'	56:14:3610:HOH:O	2.17	0.43
15:14:2608:U:H2'	15:14:2609:C:C6	2.54	0.43
15:14:2712:G:H2'	15:14:2713:U:O4'	2.18	0.43
22:H8:53:ILE:HG22	22:H8:71:VAL:HG13	2.01	0.43
23:21:14:ILE:HD13	23:21:14:ILE:HA	1.61	0.43
23:21:120:TRP:CD2	23:21:155:LYS:HD3	2.52	0.43
18:69:2:LYS:HB2	18:69:39:ALA:CB	2.48	0.43
26:16:1:A:N7	26:16:2:A:C6	2.87	0.43
26:16:15:A:N1	26:16:71:G:O2'	2.34	0.43
21:25:2:ILE:HG23	21:25:6:THR:HG21	2.01	0.43
21:25:113:LYS:O	21:25:117:LEU:HB2	2.18	0.43
22:D5:19:ARG:HH11	22:D5:84:GLU:HB2	1.82	0.43
25:42:28:PHE:O	25:42:47:LYS:HA	2.18	0.43
25:42:107:ARG:NH2	25:42:108:ALA:HB2	2.33	0.43
27:85:110:VAL:O	27:85:114:LYS:HG2	2.19	0.43
28:I5:56:VAL:HG21	29:AA:42:PRO:HB3	2.01	0.43
35:D8:24:LYS:HA	35:D8:92:THR:HG23	1.99	0.43
31:E5:34:GLY:HA2	31:E5:61:ALA:O	2.18	0.43
40:49:107:LEU:HD11	40:49:178:PHE:CE1	2.54	0.43
44:1E:237:ALA:O	44:1E:239:VAL:N	2.51	0.43
48:1I:5:ARG:NH1	48:1I:99:LYS:HD2	2.33	0.43
44:12:43:ASP:O	44:12:47:THR:OG1	2.36	0.43
44:12:178:ARG:HG3	50:72:72:PRO:HA	2.00	0.43
47:59:73:ALA:O	47:59:76:VAL:HB	2.18	0.43
52:X4:58:A:C6	52:X4:61:C:C2	3.06	0.43
52:X4:69:G:H2'	52:X4:70:G:O4'	2.17	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:13:881:C:H2'	1:13:882:C:C6	2.53	0.43
1:13:887:A:C2	1:13:923:A:C5	3.06	0.43
1:13:897:U:H2'	1:13:898:G:C8	2.52	0.43
1:13:2045:G:C6	1:13:2105:G:C6	3.07	0.43
4:11:176:ARG:O	4:11:176:ARG:HG3	2.15	0.43
1:1G:831:C:H42	1:1G:838:G:H1	1.66	0.43
1:1G:1103:A:C8	1:1G:1104:G:C8	3.07	0.43
11:G8:21:LYS:HE2	11:G8:21:LYS:HB3	1.44	0.43
11:G8:94:LYS:HG3	11:G8:96:ILE:HG13	2.00	0.43
13:3I:82:VAL:HG12	13:3I:106:ASP:OD2	2.18	0.43
7:8A:7:THR:O	7:8A:23:VAL:HG13	2.18	0.43
9:82:119:ALA:O	9:82:120:ARG:HB2	2.18	0.43
15:1H:90:A:C4	15:1H:91:G:C8	3.05	0.43
15:1H:633:A:C4	15:1H:648:A:C6	3.06	0.43
15:1H:1191:A:C4	15:1H:1193:G:N7	2.86	0.43
15:1H:1254:G:C6	15:1H:1255:C:C4	3.07	0.43
15:1H:2048:G:H5'	15:1H:2632:C:H4'	2.01	0.43
15:1H:2323:G:N3	15:1H:2323:G:H2'	2.33	0.43
15:1H:2351:A:H61	31:18:43:THR:HB	1.83	0.43
15:1H:2407:A:H2	15:1H:2439:C:N4	2.14	0.43
11:C5:86:ARG:NE	11:C5:87:LYS:O	2.50	0.43
15:14:829:G:N2	15:14:832:A:H62	2.09	0.43
15:14:900:U:H5''	17:H5:49:LYS:HD2	2.00	0.43
15:14:1401:U:O2	15:14:1620:A:H2	2.00	0.43
15:14:1728:G:N2	15:14:2014:G:H1	2.17	0.43
15:14:1780:G:C2	15:14:1781:G:C8	3.06	0.43
15:14:1925:A:N1	15:14:1995:A:C6	2.86	0.43
15:14:2014:G:H4'	53:14:3006:8UZ:O2	2.18	0.43
15:14:2041:U:H1'	36:J5:6:VAL:HG13	2.01	0.43
15:14:2626:U:C4	36:J5:3:LYS:HG2	2.53	0.43
16:75:80:SER:HA	16:75:81:PRO:HD3	1.76	0.43
16:75:102:ILE:HB	16:75:110:ILE:HD13	1.99	0.43
22:H8:6:LYS:N	22:H8:59:LEU:O	2.51	0.43
22:H8:10:ARG:CZ	22:H8:36:LYS:HG2	2.49	0.43
17:H5:59:VAL:HG12	17:H5:60:GLU:N	2.29	0.43
23:21:51:PHE:O	23:21:74:PRO:HB2	2.19	0.43
26:16:3:U:C6	26:16:4:C:C5	3.06	0.43
26:16:89:G:N2	26:16:92:A:OP2	2.46	0.43
21:25:7:TYR:HE1	21:25:20:MET:CE	2.31	0.43
23:29:81:ILE:HG22	23:29:82:ARG:H	1.83	0.43
30:78:96:THR:H	30:78:99:LEU:HD21	1.84	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:31:24:LEU:HA	32:31:25:PRO:HD2	1.80	0.43
41:6I:47:LYS:H	41:6I:47:LYS:HG2	1.58	0.43
47:51:126:PRO:HG2	47:51:130:ARG:HH12	1.83	0.43
49:7I:28:ARG:NH1	49:7I:28:ARG:HG2	2.32	0.43
49:7I:29:ASP:OD1	49:7I:29:ASP:N	2.51	0.43
44:12:22:LYS:H	44:12:22:LYS:HG3	1.42	0.43
44:12:75:LYS:CA	44:12:78:GLN:HB2	2.34	0.43
47:59:60:ARG:HG2	47:59:64:LEU:HD11	2.00	0.43
49:7A:72:ARG:HH11	49:7A:73:LEU:HD21	1.83	0.43
52:V1:7:A:H5'	52:V1:8:U:OP2	2.18	0.43
52:V1:14:A:C6	52:V1:22:G:C2	3.06	0.43
52:V1:70:G:H2'	52:V1:71:G:H8	1.83	0.43
1:13:1365:C:H2'	1:13:1366:A:C8	2.52	0.43
1:13:1757:C:O2	1:13:1758:A:C5	2.71	0.43
1:13:1899:G:C6	1:13:1900:G:C5	3.06	0.43
1:13:1985:U:H5''	33:5I:33:VAL:O	2.18	0.43
5:L5:47:ARG:NH1	5:L5:47:ARG:HB2	2.34	0.43
9:8E:9:ARG:HD2	9:8E:14:VAL:HG22	2.00	0.43
1:1G:1107:G:H2'	1:1G:1108:A:H8	1.83	0.43
1:1G:1314:G:C2	1:1G:1315:U:C4	3.07	0.43
10:58:60:ILE:H	10:58:60:ILE:HG13	1.57	0.43
2:65:34:HIS:HB2	2:65:36:TYR:CE1	2.54	0.43
12:Q8:31:HIS:C	12:Q8:31:HIS:HD1	2.22	0.43
12:Q8:46:ARG:HH11	12:Q8:46:ARG:HG2	1.83	0.43
12:Q8:49:VAL:HG11	15:1H:2374:C:H4'	2.01	0.43
12:Q8:57:ARG:H	12:Q8:57:ARG:HD3	1.80	0.43
13:3I:42:THR:HA	13:3I:53:ARG:O	2.19	0.43
13:3I:88:GLY:O	13:3I:99:HIS:ND1	2.46	0.43
13:3I:123:LYS:HE2	13:3I:123:LYS:HB3	1.80	0.43
15:1H:77:A:H2'	15:1H:78:G:C8	2.53	0.43
15:1H:917:U:C4	15:1H:918:G:N7	2.87	0.43
15:1H:1512:C:H4'	15:1H:2718:C:O4'	2.19	0.43
15:1H:1914:A:N1	15:1H:2249:G:H1'	2.34	0.43
15:1H:2790:C:H2'	15:1H:2791:A:O4'	2.18	0.43
15:1H:2815:A:H5'	15:1H:2907:U:C1'	2.49	0.43
18:61:68:LEU:O	18:61:71:ILE:HG23	2.18	0.43
15:14:665:G:C5	15:14:678:G:C2	3.07	0.43
15:14:796:U:O2	15:14:2039:A:H1'	2.18	0.43
15:14:946:C:H2'	15:14:947:A:H5'	1.99	0.43
15:14:993:G:H2'	15:14:994:G:H8	1.82	0.43
15:14:1013:G:H2'	15:14:1014:C:H6	1.83	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:14:2286:G:H5''	31:E5:20:ARG:NE	2.33	0.43
15:14:2474:A:C4	15:14:2475:U:C6	3.07	0.43
21:68:2:ILE:HG13	21:68:8:LEU:HD11	2.00	0.43
21:68:120:GLU:OE2	21:68:122:LEU:HD21	2.19	0.43
16:75:91:ARG:HH11	16:75:124:ASP:CG	2.20	0.43
18:69:110:ASP:HA	18:69:111:PRO:HD3	1.74	0.43
24:4I:12:ASN:HB3	24:4I:13:LYS:H	1.50	0.43
20:1B:19:GLY:N	20:1B:22:ARG:O	2.43	0.43
26:16:2:A:N6	26:16:122:A:H61	2.16	0.43
23:29:7:VAL:HG12	23:29:193:GLY:HA2	2.00	0.43
23:29:110:GLY:HA3	23:29:162:ALA:HB2	2.01	0.43
29:AI:55:LYS:HG2	29:AI:56:GLN:HG3	2.00	0.43
30:78:100:LEU:HA	30:78:100:LEU:HD12	1.68	0.43
32:31:201:VAL:O	32:31:205:ARG:HB2	2.18	0.43
36:N8:40:LYS:HE2	36:N8:47:PRO:CD	2.49	0.43
37:BI:49:ALA:HB1	37:BI:99:LEU:HB3	2.00	0.43
38:88:112:GLU:H	38:88:112:GLU:CD	2.22	0.43
39:J8:37:ILE:HD13	39:J8:37:ILE:HG21	1.66	0.43
39:J8:60:PHE:CE2	39:J8:91:LYS:HE2	2.53	0.43
37:BA:29:LYS:HE2	37:BA:29:LYS:HB3	1.65	0.43
40:49:77:ILE:HD11	40:49:79:ASN:HB2	2.00	0.43
43:A5:82:LEU:HD22	43:A5:84:ARG:NH2	2.33	0.43
44:12:20:GLU:HG2	44:12:20:GLU:H	1.46	0.43
47:59:3:ARG:HD2	47:59:4:ILE:HG12	2.00	0.43
6:2I:103:LEU:HA	6:2I:103:LEU:HD12	1.81	0.43
1:13:1182:A:H5''	13:3I:24:VAL:HG21	2.00	0.43
1:13:1255:U:C2	1:13:1256:G:N7	2.87	0.43
1:13:2122:A:H1'	1:13:2143:G:O5'	2.19	0.43
4:11:199:ALA:C	4:11:201:HIS:H	2.22	0.43
1:1G:1138:A:H5''	14:32:55:ALA:HB2	2.00	0.43
1:1G:1621:G:H22	1:1G:1671:C:N4	2.16	0.43
10:58:128:HIS:HE1	10:58:134:ARG:NH1	2.16	0.43
2:65:48:LEU:HA	2:65:48:LEU:HD13	1.79	0.43
2:65:89:ARG:HG3	2:65:92:TYR:O	2.19	0.43
12:Q8:21:LYS:N	12:Q8:52:LYS:HD2	2.34	0.43
12:Q8:52:LYS:HG2	12:Q8:53:PRO:HD3	1.99	0.43
7:8A:99:SER:OG	7:8A:100:LYS:N	2.51	0.43
15:1H:190:U:O2	15:1H:414:G:N2	2.51	0.43
15:1H:325:A:H2'	15:1H:359:C:O2'	2.19	0.43
15:1H:613:U:H2'	15:1H:614:C:H6	1.82	0.43
15:1H:673:A:C8	15:1H:2364:G:N2	2.87	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:1H:735:G:N2	15:1H:837:A:H61	2.17	0.43
15:1H:1273:C:O2'	35:D8:85:LYS:HA	2.19	0.43
15:1H:1368:G:C6	15:1H:1369:C:N4	2.87	0.43
15:1H:2727:U:H2'	15:1H:2730:G:H5''	2.01	0.43
18:61:109:ILE:HB	18:61:130:TYR:CE1	2.54	0.43
13:3A:32:PHE:HE1	13:3A:86:ARG:HG3	1.84	0.43
13:3A:79:GLU:HG2	13:3A:80:HIS:CE1	2.54	0.43
19:9I:31:LEU:HD21	34:5E:97:PHE:HD1	1.83	0.43
14:32:139:ARG:HG3	14:32:139:ARG:NH1	2.25	0.43
15:14:41:C:H2'	15:14:42:G:C8	2.54	0.43
15:14:665:G:C5	15:14:666:U:C4	3.06	0.43
15:14:881:G:H21	30:35:53:GLY:HA3	1.84	0.43
15:14:1003:G:H5''	38:45:77:LYS:HD2	2.00	0.43
15:14:1047:U:O2'	15:14:1048:A:H5'	2.19	0.43
15:14:1118:A:H2'	15:14:1144:A:C2	2.53	0.43
15:14:2146:G:H2'	15:14:2147:U:C6	2.53	0.43
15:14:2375:A:H2'	15:14:2376:A:O4'	2.18	0.43
15:14:2409:C:N4	52:V4:76:A:H8	2.15	0.43
22:H8:48:PHE:HE1	22:H8:71:VAL:HG11	1.84	0.43
30:78:1:MET:CE	30:78:6:LEU:HD13	2.47	0.43
30:78:82:GLY:HA2	30:78:113:LYS:O	2.18	0.43
30:35:85:LEU:HB3	30:35:114:ILE:CD1	2.49	0.43
30:35:146:VAL:HG13	30:35:147:LEU:HB2	2.00	0.43
35:95:37:VAL:HG21	35:95:57:VAL:HG13	2.01	0.43
40:41:20:ILE:O	40:41:24:GLY:N	2.51	0.43
40:41:101:ILE:HD13	40:41:102:PHE:N	2.34	0.43
41:6I:8:LYS:O	41:6I:12:ILE:HG13	2.19	0.43
41:6I:74:ASP:OD1	41:6I:77:ARG:N	2.44	0.43
37:BA:60:GLU:OE2	37:BA:85:MET:HE1	2.19	0.43
48:1A:22:LYS:HE2	48:1A:90:LEU:HD11	2.01	0.43
48:1A:89:ASP:HB2	48:1A:91:PRO:HD3	2.00	0.43
49:7I:74:LEU:HA	49:7I:77:ALA:HB2	2.01	0.43
46:G5:63:VAL:O	46:G5:66:GLU:HG2	2.18	0.43
52:V1:9:A:H62	52:V1:23:A:N6	2.07	0.43
52:V1:62:C:O5'	52:V1:62:C:H6	2.01	0.43
1:13:844:U:C4'	37:BI:103:GLY:HA2	2.49	0.43
1:13:1193:C:O2'	50:7E:91:ARG:NH2	2.46	0.43
1:13:1498:C:H1'	50:7E:15:ASN:HD21	1.83	0.43
1:13:1582:A:C2	1:13:1849:G:O4'	2.72	0.43
1:13:2018:U:H2'	1:13:2019:U:C6	2.54	0.43
6:2A:103:LEU:HD12	6:2A:103:LEU:HA	1.73	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:22:81:GLY:HA2	8:22:85:ARG:NH1	2.34	0.43
8:22:178:LEU:HD23	1:1G:1740:C:C4	2.54	0.43
1:1G:973:G:C2	1:1G:974:G:C8	3.07	0.43
1:1G:1132:C:O2'	1:1G:1133:C:H5'	2.19	0.43
1:1G:1138:A:C8	1:1G:1138:A:H3'	2.53	0.43
1:1G:1310:C:C2	1:1G:1339:G:C2	3.06	0.43
1:1G:1913:A:P	20:1B:25:LYS:HZ1	2.42	0.43
1:1G:1925:C:H2'	42:62:114:ARG:NH1	2.33	0.43
1:1G:1958:G:OP1	1:1G:1958:G:H4'	2.19	0.43
12:Q8:52:LYS:CG	12:Q8:53:PRO:HD3	2.49	0.43
9:82:21:PRO:HA	9:82:59:PHE:HA	2.00	0.43
15:1H:478:G:OP2	56:1H:3780:HOH:O	2.21	0.43
15:1H:606:C:H2'	15:1H:607:G:H8	1.84	0.43
15:1H:638:G:O2'	15:1H:642:A:N1	2.43	0.43
15:1H:1226:C:H1'	15:1H:1227:C:C6	2.54	0.43
15:1H:1288:G:H2'	15:1H:1289:U:O4'	2.19	0.43
15:1H:2182:G:HO2'	15:1H:2183:A:P	2.41	0.43
10:15:120:LEU:HG	10:15:122:VAL:HG23	2.00	0.43
16:B8:36:GLU:HG2	21:68:104:ARG:HD3	2.01	0.43
20:1F:3:LYS:HB2	20:1F:3:LYS:HE3	1.74	0.43
15:14:299:G:H8	15:14:299:G:H3'	1.82	0.43
15:14:512:C:H2'	15:14:513:C:C6	2.54	0.43
15:14:599:C:H1'	15:14:2080:C:C6	2.54	0.43
15:14:699:C:N4	15:14:700:G:O6	2.52	0.43
15:14:740:C:H2'	15:14:741:C:C6	2.53	0.43
15:14:803:C:H2'	15:14:804:C:H6	1.84	0.43
15:14:1239:G:O2'	15:14:1240:G:H5'	2.18	0.43
15:14:1244:C:O4'	15:14:1275:A:C2	2.71	0.43
15:14:1805:C:C1'	15:14:1820:A:H8	2.31	0.43
15:14:2160:A:O2'	15:14:2185:G:H4'	2.19	0.43
15:14:2521:U:C2	15:14:2600:U:O4	2.72	0.43
25:4E:26:PHE:CD1	25:4E:26:PHE:N	2.87	0.43
26:16:13:C:H3'	26:16:14:C:H6	1.84	0.43
27:C8:112:ARG:O	27:C8:115:ALA:HB3	2.18	0.43
22:D5:94:GLU:O	22:D5:129:SER:HA	2.19	0.43
30:78:100:LEU:O	30:78:105:LEU:HD12	2.18	0.43
27:85:97:ASP:OD1	27:85:98:LEU:N	2.52	0.43
32:31:183:VAL:O	32:31:187:VAL:HG23	2.19	0.43
34:5E:72:VAL:CG2	34:5E:90:VAL:HG11	2.49	0.43
30:35:62:LEU:HA	30:35:63:PRO:HD3	1.68	0.43
32:39:40:GLN:O	32:39:43:LYS:HG2	2.19	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:J5:48:GLU:H	36:J5:48:GLU:HG2	1.46	0.43
40:41:173:LEU:O	40:41:178:PHE:HB2	2.18	0.43
37:BA:74:LYS:CG	37:BA:75:ASN:H	2.31	0.43
38:45:43:THR:OG1	38:45:45:GLN:HG2	2.19	0.43
38:45:65:PHE:HB2	38:45:105:GLU:HB2	2.00	0.43
40:49:96:ARG:H	40:49:96:ARG:HG3	1.29	0.43
41:6A:84:LYS:HE2	41:6A:84:LYS:HB2	1.79	0.43
45:98:103:ARG:HD3	45:98:108:GLY:O	2.17	0.43
47:51:7:LEU:H	47:51:7:LEU:HG	1.53	0.43
47:51:40:GLU:OE2	47:51:60:ARG:NH2	2.47	0.43
47:51:80:SER:O	47:51:81:GLU:HG3	2.19	0.43
48:1A:15:THR:HG21	48:1A:92:THR:CG2	2.49	0.43
50:7E:58:TYR:O	50:7E:59:LEU:HD23	2.19	0.43
49:7A:74:LEU:HD12	49:7A:79:VAL:HG21	2.01	0.43
8:2E:84:ILE:HG23	8:2E:101:LEU:HD22	1.99	0.43
1:13:1189:U:H5'	1:13:1195:G:N2	2.33	0.43
1:13:1780:A:C6	1:13:1781:C:C4	3.07	0.43
4:11:133:LEU:HA	4:11:136:ILE:HG13	1.99	0.43
6:2A:85:ARG:NH1	1:1G:1336:C:OP1	2.52	0.43
6:2A:99:GLN:HG2	8:2E:79:ARG:HH21	1.84	0.43
1:1G:849:A:H3'	1:1G:849:A:OP2	2.19	0.43
1:1G:1380:U:H4'	41:6A:24:SER:HA	2.00	0.43
1:1G:1467:G:N2	1:1G:1472:C:C2	2.87	0.43
2:65:102:ALA:HA	2:65:105:ALA:HB3	2.01	0.43
4:19:135:PHE:HZ	14:3E:167:GLY:H	1.67	0.43
12:Q8:44:LYS:HG3	12:Q8:45:GLY:N	2.33	0.43
13:3I:59:ARG:HA	13:3I:65:GLU:HA	2.01	0.43
15:1H:470:G:C4	15:1H:472:C:C5	3.06	0.43
15:1H:710:C:H4'	30:78:13:ASN:OD1	2.17	0.43
15:1H:1226:C:H1'	15:1H:1227:C:H6	1.84	0.43
15:1H:1298:U:OP1	56:1H:3776:HOH:O	2.21	0.43
15:1H:1637:C:H2'	15:1H:1638:C:C6	2.48	0.43
15:1H:2056:A:N3	15:1H:2470:G:O2'	2.44	0.43
15:1H:2661:C:O5'	15:1H:2661:C:H6	2.01	0.43
15:1H:2891:U:O4	56:1H:3779:HOH:O	2.21	0.43
11:C5:8:LYS:NZ	11:C5:95:LYS:HD2	2.34	0.43
15:14:280:G:C6	15:14:281:C:C4	3.06	0.43
15:14:639:U:O2	15:14:639:U:O4'	2.34	0.43
15:14:836:U:P	56:14:3668:HOH:O	2.77	0.43
15:14:1013:G:H2'	15:14:1014:C:C6	2.54	0.43
15:14:1039:C:O2	15:14:1213:G:C2	2.72	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:14:1117:A:H2	15:14:1142:U:N3	2.17	0.43
15:14:1159:A:C5'	47:59:3:ARG:HD3	2.47	0.43
15:14:1242:A:H2'	15:14:1243:G:O4'	2.19	0.43
16:75:99:LEU:HD23	16:75:99:LEU:HA	1.82	0.43
22:H8:45:ASP:OD2	22:H8:49:ARG:NH1	2.39	0.43
26:16:115:G:H2'	26:16:116:C:C6	2.54	0.43
27:C8:8:VAL:HG23	27:C8:11:ARG:HH21	1.84	0.43
27:C8:75:ASN:HB2	27:C8:78:THR:H	1.82	0.43
30:78:100:LEU:HB3	30:78:106:LEU:HB2	1.99	0.43
27:85:92:ARG:HH22	35:95:10:LYS:CA	2.32	0.43
28:I5:34:GLU:HG2	28:I5:34:GLU:H	1.40	0.43
33:5I:55:GLY:HA3	48:1I:11:PHE:HB3	2.00	0.43
41:6I:56:LEU:O	41:6I:60:VAL:HG23	2.19	0.43
42:6E:15:ASP:OD1	42:6E:16:LEU:N	2.52	0.43
38:45:39:PRO:HA	38:45:97:VAL:O	2.19	0.43
44:1E:21:ARG:HG3	44:1E:22:LYS:HE2	2.01	0.43
45:98:4:LEU:HD12	45:98:4:LEU:HA	1.64	0.43
44:12:74:LYS:HD3	44:12:166:ASP:HB2	2.01	0.43
8:2E:21:ARG:H	8:2E:21:ARG:HG2	1.71	0.43
1:13:683:U:O2'	1:13:1129:G:H4'	2.18	0.43
1:13:755:A:H61	1:13:954:A:H1'	1.84	0.43
1:13:850:G:H2'	1:13:851:G:H8	1.83	0.43
1:13:1068:U:H5'	14:3E:41:GLY:HA2	2.01	0.43
1:13:1069:G:C8	1:13:1071:A:C4	3.07	0.43
1:13:1206:G:O2'	1:13:1207:C:H5'	2.19	0.43
1:13:1759:G:H2'	1:13:1760:C:C6	2.54	0.43
1:13:1960:A:H2'	1:13:1961:G:O4'	2.19	0.43
2:A8:17:ARG:NH1	15:1H:2394:G:O2'	2.52	0.43
4:11:211:ARG:HG3	4:11:214:TRP:CE3	2.53	0.43
8:22:95:THR:C	8:22:97:LYS:H	2.21	0.43
1:1G:1283:G:C2	1:1G:1382:A:C4	3.07	0.43
1:1G:1386:U:O2'	1:1G:1502:C:O2	2.36	0.43
1:1G:1735:C:C4	1:1G:1736:G:C8	3.07	0.43
1:1G:1752:G:N2	1:1G:1755:G:N7	2.66	0.43
1:1G:1875:A:N3	9:82:70:LYS:HE3	2.34	0.43
1:1G:1943:G:H4'	33:5A:18:VAL:HG11	2.01	0.43
1:1G:2007:G:OP1	42:62:6:ARG:NH1	2.51	0.43
1:1G:2024:A:H4'	1:1G:2025:C:OP2	2.18	0.43
10:58:112:LEU:HD12	10:58:112:LEU:HA	1.80	0.43
4:19:115:GLN:HE21	4:19:115:GLN:HB3	1.67	0.43
12:Q8:47:LYS:NZ	12:Q8:47:LYS:CB	2.82	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:3E:3:ARG:HG2	14:3E:118:ARG:CZ	2.49	0.43
15:1H:155:C:H5'	15:1H:156:U:OP2	2.18	0.43
15:1H:348:G:C8	32:31:171:PRO:HG3	2.54	0.43
15:1H:365:A:H2'	15:1H:366:G:O4'	2.18	0.43
15:1H:584:G:H22	27:C8:49:HIS:CE1	2.37	0.43
15:1H:883:C:H2'	15:1H:884:A:O4'	2.19	0.43
15:1H:1098:A:C8	15:1H:2767:G:N7	2.87	0.43
15:1H:1131:U:H3'	15:1H:1132:A:C5'	2.48	0.43
15:1H:2391:A:H2'	15:1H:2392:A:O4'	2.17	0.43
16:B8:3:ARG:C	16:B8:5:ALA:N	2.72	0.43
16:B8:3:ARG:CZ	16:B8:6:LEU:HD22	2.49	0.43
18:61:77:LEU:HB2	18:61:140:LEU:HB3	2.00	0.43
18:61:93:THR:H	18:61:96:ASP:HB2	1.84	0.43
15:14:210:G:H5''	15:14:211:A:OP1	2.19	0.43
15:14:300:G:N1	15:14:387:U:C4	2.85	0.43
15:14:606:C:H2'	15:14:607:G:C8	2.54	0.43
15:14:753:G:O2'	15:14:775:G:N1	2.49	0.43
15:14:1297:G:C5	27:85:3:ARG:HB2	2.54	0.43
15:14:1620:A:H2'	15:14:1621:A:C8	2.53	0.43
15:14:1724:G:H5''	15:14:1724:G:H8	1.84	0.43
15:14:1848:G:H2'	15:14:1849:A:C8	2.54	0.43
15:14:2666:C:H42	15:14:2684:G:H1	1.67	0.43
15:14:2763:G:H21	15:14:2773:A:H62	1.64	0.43
26:16:14:C:O2	31:I8:74:ARG:NH1	2.49	0.43
23:29:55:ASN:HA	23:29:56:PRO:HD3	1.72	0.43
30:78:38:GLN:O	30:78:41:ARG:HB2	2.19	0.43
32:31:152:GLU:CD	32:31:191:ARG:HD2	2.39	0.43
30:35:36:LYS:HB3	30:35:36:LYS:HE2	1.78	0.43
35:D8:19:LYS:HA	35:D8:94:LEU:O	2.19	0.43
35:D8:76:LYS:HB2	35:D8:81:TYR:HB3	2.01	0.43
35:95:81:TYR:O	35:95:82:ARG:HG3	2.18	0.43
41:6I:4:THR:OG1	41:6I:7:GLU:HB2	2.18	0.43
37:BA:73:HIS:CB	37:BA:74:LYS:HZ2	2.32	0.43
48:1A:30:SER:HB3	48:1A:84:GLN:OE1	2.18	0.43
49:7I:37:GLY:HA3	49:7I:51:VAL:HA	2.01	0.43
44:12:24:TRP:N	44:12:24:TRP:CD1	2.87	0.43
44:12:64:ARG:HE	44:12:64:ARG:HB3	1.56	0.43
46:G5:13:ALA:HA	46:G5:16:LEU:HD23	2.00	0.43
46:G5:32:LEU:HD11	46:G5:54:LYS:HG3	2.00	0.43
1:13:668:G:H2'	1:13:669:C:H6	1.84	0.42
1:13:702:U:H2'	1:13:703:G:H8	1.84	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:13:1097:C:H2'	1:13:1098:C:H6	1.84	0.42
1:13:1307:U:H2'	1:13:1308:C:C6	2.54	0.42
1:13:1312:G:C6	1:13:1313:A:C6	3.07	0.42
1:13:1750:U:O4	1:13:1751:A:N6	2.52	0.42
1:13:1761:G:H2'	1:13:1762:G:H8	1.84	0.42
1:13:1779:A:N3	48:1I:39:PRO:HG3	2.34	0.42
4:11:38:LYS:HD2	4:11:39:LYS:N	2.34	0.42
4:11:46:GLN:H	4:11:46:GLN:HG3	1.65	0.42
4:11:130:ALA:C	4:11:131:LEU:HD12	2.39	0.42
7:8I:88:TYR:HD1	7:8I:89:LEU:HD22	1.83	0.42
8:22:199:LYS:HB3	8:22:201:TYR:CE1	2.54	0.42
1:1G:774:A:H61	49:7A:25:ARG:NH1	2.16	0.42
1:1G:1396:A:H2'	1:1G:1397:A:O4'	2.19	0.42
1:1G:1570:G:H2'	1:1G:1571:C:O4'	2.19	0.42
1:1G:2030:C:H2'	1:1G:2031:C:O4'	2.18	0.42
2:65:21:THR:HG23	2:65:23:ARG:H	1.84	0.42
15:1H:107:G:H2'	15:1H:108:G:O4'	2.19	0.42
15:1H:231:A:O4'	15:1H:233:U:C6	2.72	0.42
15:1H:573:A:H3'	15:1H:574:A:H8	1.84	0.42
15:1H:2201:A:H2'	15:1H:2202:C:C6	2.54	0.42
15:1H:2477:U:H1'	15:1H:2506:U:O4	2.19	0.42
15:1H:2572:G:H2'	15:1H:2573:C:C6	2.54	0.42
16:B8:61:PHE:CE1	16:B8:76:PHE:HB2	2.54	0.42
11:C5:39:VAL:HG23	11:C5:41:GLY:H	1.84	0.42
11:C5:48:ALA:HB1	11:C5:50:ARG:CZ	2.48	0.42
14:32:112:VAL:HG12	14:32:116:GLN:CD	2.39	0.42
15:14:875:U:H2'	15:14:877:U:O4'	2.18	0.42
15:14:1070:G:C6	15:14:1188:C:C4	3.06	0.42
15:14:1172:C:H2'	15:14:1173:G:O4'	2.18	0.42
22:H8:28:MET:HE3	22:H8:33:LEU:HD21	2.01	0.42
22:H8:53:ILE:HG22	22:H8:71:VAL:HG22	2.00	0.42
23:21:78:LEU:CD2	23:21:79:ARG:HE	2.32	0.42
23:21:81:ILE:HG23	23:21:81:ILE:HD12	1.72	0.42
18:69:68:LEU:O	18:69:72:LEU:HD12	2.19	0.42
26:16:80:A:C2	26:16:102:A:C4	3.06	0.42
33:5I:55:GLY:O	48:1I:65:LEU:HD12	2.19	0.42
33:5A:45:ARG:O	33:5A:49:HIS:ND1	2.32	0.42
37:BI:36:LEU:HA	37:BI:36:LEU:HD13	1.70	0.42
34:52:7:ASN:N	34:52:7:ASN:ND2	2.67	0.42
36:J5:30:LEU:HA	36:J5:42:PRO:HD3	2.00	0.42
40:49:134:GLY:C	40:49:135:LEU:HD12	2.39	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:1E:71:VAL:HA	44:1E:93:VAL:O	2.19	0.42
42:62:97:GLN:HG3	42:62:98:SER:N	2.31	0.42
44:12:163:PHE:HD1	44:12:185:ILE:CG1	2.32	0.42
50:7E:11:THR:HA	50:7E:14:ARG:NH1	2.34	0.42
50:7E:94:TYR:HD1	50:7E:132:GLU:HA	1.83	0.42
49:7A:58:TYR:O	49:7A:62:VAL:HG22	2.18	0.42
1:13:910:C:H2'	1:13:911:A:H8	1.84	0.42
1:13:1250:A:H2'	1:13:1251:A:O4'	2.19	0.42
1:13:1265:U:H5''	7:8I:2:PRO:HG3	2.00	0.42
1:13:1651:C:C2	1:13:1652:C:H5	2.37	0.42
1:13:1685:G:H4'	8:2E:197:GLY:H	1.83	0.42
1:13:1723:U:P	1:13:1736:G:H1	2.42	0.42
1:13:2042:U:H2'	1:13:2043:G:C8	2.49	0.42
4:11:251:GLY:HA3	15:1H:2254:G:H5'	2.00	0.42
1:1G:1099:G:N2	1:1G:1102:G:C8	2.87	0.42
1:1G:1123:G:H8	1:1G:1123:G:O5'	2.02	0.42
1:1G:1248:U:N3	14:32:134:ASP:OD1	2.43	0.42
1:1G:1375:A:H2'	1:1G:1376:C:C6	2.54	0.42
1:1G:1596:G:O3'	33:5A:41:ARG:NH2	2.29	0.42
1:1G:1609:A:H2'	1:1G:1610:G:O4'	2.19	0.42
1:1G:1706:U:H1'	25:42:130:ASN:OD1	2.19	0.42
1:1G:1876:C:O2'	9:82:73:GLN:OE1	2.35	0.42
1:1G:1956:A:H2'	1:1G:1957:U:O4'	2.19	0.42
10:58:15:LEU:HD12	10:58:136:GLU:OE2	2.19	0.42
10:58:106:MET:HG2	15:1H:1054:C:H1'	2.01	0.42
2:65:54:LEU:C	2:65:56:LEU:H	2.20	0.42
2:65:86:ALA:O	2:65:87:PHE:HB2	2.19	0.42
14:3E:24:GLU:H	14:3E:24:GLU:HG2	1.32	0.42
15:1H:40:C:H2'	15:1H:41:C:H6	1.84	0.42
15:1H:306:G:H1'	15:1H:385:G:N2	2.34	0.42
15:1H:1059:G:OP1	27:C8:77:SER:OG	2.37	0.42
15:1H:1543:A:C6	15:1H:1544:A:C6	3.07	0.42
15:1H:1977:A:H8	15:1H:1977:A:O5'	2.02	0.42
15:1H:2594:C:H2'	15:1H:2595:U:O4'	2.20	0.42
15:1H:2884:C:H5''	15:1H:2885:G:OP1	2.19	0.42
12:M5:61:LEU:HD23	15:14:618:G:C5'	2.48	0.42
14:32:14:ARG:HG3	14:32:14:ARG:NH1	2.34	0.42
15:14:295:C:H42	15:14:391:G:H1	1.67	0.42
15:14:960:C:C2	15:14:961:U:C5	3.07	0.42
15:14:2707:C:H1'	15:14:2860:U:H1'	2.01	0.42
24:4I:54:VAL:HA	24:4I:57:ARG:HB3	2.01	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:9A:51:LEU:HA	19:9A:52:PRO:HD2	1.86	0.42
23:29:26:ILE:HG22	23:29:27:LEU:C	2.40	0.42
30:35:61:ARG:H	30:35:61:ARG:HG2	1.20	0.42
35:95:72:VAL:O	35:95:72:VAL:HG13	2.19	0.42
41:6A:24:SER:OG	41:6A:27:VAL:HG23	2.18	0.42
44:12:132:LYS:O	44:12:136:VAL:HG23	2.20	0.42
47:59:20:ALA:HB3	47:59:23:ARG:O	2.19	0.42
8:2E:11:ARG:NH2	8:2E:182:ILE:HD12	2.34	0.42
50:72:19:VAL:HG23	50:72:21:LYS:HB2	2.01	0.42
52:W4:48:C:C2	52:W4:59:U:H1'	2.54	0.42
1:13:684:G:C2	1:13:1038:A:C2	3.06	0.42
1:13:923:A:H2'	1:13:923:A:N3	2.33	0.42
1:13:980:C:H2'	1:13:981:U:C6	2.55	0.42
1:13:1080:A:C4	1:13:1126:A:C2	3.07	0.42
1:13:1626:G:C5	1:13:1627:G:C8	3.07	0.42
1:13:1726:C:C2	1:13:1727:G:C8	3.06	0.42
1:13:1804:G:H8	1:13:1805:G:C4	2.37	0.42
2:A8:26:LEU:HD22	2:A8:87:PHE:CD2	2.52	0.42
8:22:84:ILE:CG1	8:22:88:ARG:HH21	2.30	0.42
9:8E:45:ALA:HB2	42:6E:16:LEU:HD21	2.02	0.42
9:8E:114:TYR:CD2	48:1I:59:SER:HA	2.55	0.42
1:1G:1176:A:H4'	1:1G:1177:G:O5'	2.18	0.42
4:19:5:LYS:HG2	4:19:17:THR:HG22	2.01	0.42
4:19:61:LEU:HD13	4:19:61:LEU:HA	1.67	0.42
4:19:82:ILE:HD12	4:19:93:ALA:HA	2.01	0.42
15:1H:26:G:OP1	43:E8:80:PRO:HB3	2.19	0.42
15:1H:291:G:H2'	15:1H:292:G:O4'	2.19	0.42
15:1H:314:A:N6	15:1H:376:G:O2'	2.52	0.42
15:1H:432:C:O2'	15:1H:433:U:OP2	2.32	0.42
15:1H:597:A:H5'	56:1H:3708:HOH:O	2.19	0.42
15:1H:717:G:H2'	15:1H:719:A:H62	1.84	0.42
15:1H:873:A:H1'	15:1H:2373:G:N7	2.34	0.42
15:1H:910:A:C2	15:1H:965:A:C4	3.07	0.42
15:1H:972:C:H2'	15:1H:973:C:C6	2.55	0.42
15:1H:1204:A:OP1	27:C8:55:ARG:HD3	2.19	0.42
15:1H:1336:A:C5	15:1H:1337:U:C4	3.07	0.42
15:1H:1373:G:C4	15:1H:1377:G:O6	2.72	0.42
15:1H:1461:A:H2'	15:1H:1462:G:H8	1.79	0.42
15:1H:1465:G:HO2'	15:1H:1466:C:P	2.39	0.42
15:1H:1554:C:H2'	15:1H:1555:C:H6	1.83	0.42
15:1H:1924:G:N2	15:1H:1927:C:C5	2.65	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:1H:2106:C:H2'	15:1H:2107:A:H8	1.84	0.42
15:1H:2470:G:H2'	15:1H:2471:C:C6	2.55	0.42
10:15:111:PRO:HA	10:15:114:ARG:NH1	2.33	0.42
18:61:101:LEU:HG	18:61:107:VAL:HB	2.00	0.42
15:14:75:C:H2'	15:14:76:C:H6	1.84	0.42
15:14:234:A:C2	15:14:245:A:C4	3.07	0.42
15:14:240:G:C6	15:14:241:A:C6	3.07	0.42
15:14:254:C:H4'	15:14:457:A:C2	2.55	0.42
15:14:628:A:O4'	15:14:704:A:N6	2.52	0.42
15:14:867:G:H4'	15:14:887:C:O3'	2.19	0.42
15:14:1159:A:O3'	15:14:1160:G:H4'	2.19	0.42
15:14:1161:U:H2'	15:14:1162:G:O4'	2.19	0.42
15:14:1957:A:H2'	15:14:1958:G:O4'	2.19	0.42
15:14:2118:G:N7	15:14:2240:A:H2'	2.34	0.42
15:14:2276:C:C5	31:E5:16:SER:HB3	2.54	0.42
15:14:2306:U:OP1	15:14:2395:C:O2'	2.32	0.42
22:H8:15:PRO:O	22:H8:19:ARG:HB2	2.18	0.42
23:21:31:CYS:HA	23:21:32:PRO:HD3	1.57	0.42
23:21:97:LYS:O	23:21:100:GLU:HG3	2.19	0.42
18:69:78:THR:HG22	18:69:141:LYS:HB3	2.01	0.42
24:4I:7:VAL:H	40:41:115:ARG:HH11	1.65	0.42
19:9A:73:ALA:HB1	19:9A:78:LEU:HB2	2.02	0.42
21:25:26:LYS:HD2	21:25:37:ASP:OD2	2.20	0.42
27:C8:39:LEU:HD23	27:C8:39:LEU:HA	1.86	0.42
27:C8:88:ILE:C	27:C8:90:VAL:N	2.72	0.42
24:4A:5:ALA:HB2	24:4A:22:ILE:HD13	2.00	0.42
30:78:144:GLU:HA	30:78:145:PRO:HD3	1.81	0.42
27:85:74:LEU:HB2	27:85:78:THR:OG1	2.19	0.42
33:5I:6:LEU:HB3	33:5I:23:ARG:HH22	1.84	0.42
30:35:56:SER:O	30:35:61:ARG:HD3	2.19	0.42
31:E5:49:LYS:HG3	31:E5:80:HIS:HB3	2.01	0.42
39:J8:87:PRO:HA	39:J8:90:ILE:HG13	2.02	0.42
42:6E:62:PHE:HA	42:6E:124:LEU:HD22	2.02	0.42
42:62:86:GLN:O	42:62:86:GLN:HG2	2.19	0.42
46:K8:55:ARG:O	46:K8:58:ALA:HB3	2.19	0.42
47:51:136:ILE:HD12	47:51:137:ASP:H	1.84	0.42
50:7E:6:ILE:HD13	50:7E:6:ILE:HA	1.82	0.42
47:59:149:ARG:HD3	47:59:164:TYR:CE1	2.55	0.42
50:72:87:SER:OG	50:72:93:VAL:N	2.28	0.42
52:X4:57:G:H2'	52:X4:58:A:H5'	2.01	0.42
1:13:691:U:H2'	1:13:692:G:C8	2.54	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:13:696:A:H1'	1:13:698:G:C8	2.54	0.42
1:13:884:A:H5''	1:13:885:U:H3'	2.01	0.42
1:13:972:G:H5''	1:13:973:G:H5'	2.01	0.42
1:13:1221:G:H2'	1:13:1222:G:C8	2.53	0.42
4:11:107:ALA:HA	4:11:108:PRO:HD3	1.80	0.42
8:22:84:ILE:O	8:22:88:ARG:HB2	2.19	0.42
1:1G:1348:C:O2'	19:9A:50:ILE:O	2.30	0.42
1:1G:1583:U:N3	1:1G:1852:A:C4	2.87	0.42
1:1G:2020:G:H21	1:1G:2125:A:H8	1.66	0.42
1:1G:2154:A:H2'	1:1G:2155:U:C5	2.54	0.42
11:G8:97:ARG:NH1	11:G8:104:GLY:HA3	2.33	0.42
4:19:77:ALA:HB2	4:19:97:TYR:CD2	2.54	0.42
15:1H:274:G:H21	18:61:50:ARG:HH22	1.68	0.42
15:1H:487:U:H5''	5:P8:40:TRP:CD2	2.54	0.42
15:1H:664:A:H4'	15:1H:665:G:O5'	2.18	0.42
15:1H:685:G:N2	15:1H:698:C:N4	2.68	0.42
15:1H:859:U:O5'	15:1H:859:U:H6	2.02	0.42
15:1H:1026:G:C2	15:1H:1034:C:C2	3.07	0.42
15:1H:1191:A:C5	15:1H:1193:G:C5	3.07	0.42
15:1H:2317:G:C6	15:1H:2330:G:C6	3.07	0.42
15:1H:2421:U:H2'	15:1H:2421:U:OP2	2.20	0.42
15:1H:2550:G:H2'	15:1H:2551:G:H8	1.84	0.42
15:1H:2824:G:N2	15:1H:2903:G:H1'	2.35	0.42
15:1H:2851:G:O6	56:1H:3782:HOH:O	2.22	0.42
10:15:133:GLN:HB3	10:15:134:ARG:H	1.52	0.42
11:C5:83:THR:HG22	11:C5:84:ARG:H	1.84	0.42
17:L8:28:LEU:HD23	17:L8:33:GLN:HG2	2.00	0.42
15:14:1461:A:H2'	15:14:1462:G:H8	1.81	0.42
15:14:1493:G:C2	15:14:1598:C:C2	3.07	0.42
15:14:1828:U:H2'	15:14:1829:C:H6	1.83	0.42
15:14:2239:G:H4'	15:14:2241:C:C2	2.54	0.42
15:14:2259:U:H2'	15:14:2260:U:O4'	2.18	0.42
15:14:2344:G:N2	31:E5:41:ARG:HD3	2.35	0.42
15:14:2460:G:OP1	32:39:74:ARG:NH2	2.53	0.42
21:25:7:TYR:HE1	21:25:20:MET:HE2	1.84	0.42
21:25:47:ILE:HA	21:25:48:PRO:HD3	1.93	0.42
22:D5:19:ARG:NH1	22:D5:84:GLU:HB2	2.34	0.42
28:M8:16:CYS:SG	28:M8:36:CYS:N	2.92	0.42
25:42:11:ILE:HG21	25:42:105:VAL:HG22	2.02	0.42
30:78:2:LYS:NZ	30:78:4:SER:H	2.16	0.42
27:85:90:VAL:HG12	27:85:91:ASP:HA	2.01	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:I8:56:ASP:OD1	31:I8:58:THR:HB	2.17	0.42
33:5I:58:LYS:HB2	33:5I:58:LYS:HE3	1.63	0.42
30:35:128:HIS:HA	30:35:147:LEU:HA	2.02	0.42
32:39:89:VAL:HG12	32:39:90:PHE:H	1.84	0.42
37:BI:30:LYS:HD2	37:BI:30:LYS:HA	1.83	0.42
34:52:22:GLU:O	34:52:26:ILE:HG13	2.19	0.42
38:88:56:ARG:HD2	38:88:56:ARG:HA	1.63	0.42
42:6E:69:VAL:O	42:6E:69:VAL:HG12	2.19	0.42
39:F5:91:LYS:HA	39:F5:91:LYS:HZ3	1.84	0.42
40:49:9:ARG:HG2	40:49:13:GLU:OE2	2.20	0.42
40:49:101:ILE:O	40:49:105:LYS:HG3	2.19	0.42
44:1E:28:PHE:O	44:1E:32:ILE:HG22	2.20	0.42
44:1E:209:ARG:O	44:1E:213:LEU:HD13	2.18	0.42
42:62:54:THR:OG1	42:62:56:GLN:HB2	2.20	0.42
43:A5:84:ARG:HB2	43:A5:96:ILE:HD13	2.02	0.42
46:K8:47:ASN:C	46:K8:49:LYS:H	2.14	0.42
48:1A:21:GLN:NE2	48:1A:25:GLU:OE1	2.52	0.42
44:12:112:VAL:O	44:12:115:LEU:N	2.52	0.42
50:7E:100:ILE:HA	50:7E:101:PRO:HD3	1.91	0.42
8:2E:58:GLU:HB2	8:2E:65:ALA:HB3	2.00	0.42
52:V4:24:G:C6	52:V4:25:C:C4	3.08	0.42
1:1G:980:C:H2'	1:1G:981:U:H6	1.83	0.42
1:1G:1057:G:H1	1:1G:1068:U:H3	1.68	0.42
1:1G:1233:G:H2'	1:1G:1234:U:O4'	2.19	0.42
1:1G:1297:G:O2'	41:6A:46:HIS:HB3	2.18	0.42
11:G8:55:TYR:N	11:G8:56:PRO:HD3	2.34	0.42
4:19:37:LEU:HA	4:19:38:LYS:CB	2.49	0.42
9:82:16:ARG:CZ	9:82:64:THR:HG21	2.48	0.42
15:1H:197:A:H2'	15:1H:198:C:O4'	2.20	0.42
15:1H:230:G:H1'	15:1H:247:A:N6	2.34	0.42
15:1H:735:G:H21	15:1H:837:A:H61	1.68	0.42
15:1H:934:C:H1'	15:1H:939:A:N6	2.33	0.42
15:1H:1135:G:C4	15:1H:1137:G:H1'	2.55	0.42
15:1H:2531:G:C6	15:1H:2532:C:N4	2.87	0.42
15:1H:2828:C:H2'	15:1H:2829:C:C6	2.53	0.42
16:B8:125:ARG:O	16:B8:128:GLU:HB3	2.19	0.42
18:61:62:LYS:HA	18:61:133:HIS:HE2	1.83	0.42
15:14:424:G:H1'	39:F5:42:GLN:HB2	2.01	0.42
15:14:483:C:N3	15:14:501:G:H5'	2.35	0.42
15:14:590:C:H2'	15:14:591:U:O4'	2.19	0.42
15:14:604:G:H2'	15:14:605:C:H6	1.83	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:14:748:A:H2'	15:14:749:G:O4'	2.20	0.42
15:14:1381:G:N2	15:14:1659:A:H8	2.17	0.42
15:14:1860:G:H2'	15:14:1861:C:O4'	2.20	0.42
15:14:2095:G:C6	15:14:2096:A:C5	3.07	0.42
15:14:2447:A:N1	39:F5:35:THR:HG22	2.35	0.42
15:14:2487:G:H1'	15:14:2493:A:H61	1.84	0.42
15:14:2750:A:C8	15:14:2751:G:C8	3.08	0.42
21:68:106:LEU:HD23	21:68:106:LEU:HA	1.71	0.42
16:75:114:LEU:HD23	16:75:114:LEU:HA	1.72	0.42
23:21:78:LEU:C	23:21:79:ARG:HG2	2.39	0.42
22:D5:30:ASN:ND2	22:D5:90:VAL:HB	2.32	0.42
28:M8:9:LEU:HD12	28:M8:27:THR:N	2.33	0.42
29:AI:52:TYR:HE1	29:AI:56:GLN:HA	1.85	0.42
30:78:106:LEU:O	30:78:107:LYS:C	2.58	0.42
27:85:90:VAL:HG21	35:95:40:LEU:HD13	2.01	0.42
27:85:91:ASP:C	27:85:92:ARG:HG3	2.40	0.42
32:31:134:GLY:HA2	32:31:166:ALA:HB2	2.02	0.42
29:AA:66:MET:N	29:AA:67:VAL:HB	2.34	0.42
34:5E:19:LEU:O	34:5E:23:LYS:HB2	2.19	0.42
30:35:27:HIS:HB3	30:35:32:THR:HG23	2.01	0.42
38:88:25:ASP:HA	38:88:100:GLY:O	2.19	0.42
40:41:99:MET:O	40:41:103:LEU:HB2	2.20	0.42
38:45:54:MET:H	38:45:54:MET:HG2	1.51	0.42
39:F5:87:PRO:O	39:F5:90:ILE:N	2.52	0.42
40:49:114:ILE:HG12	40:49:140:ILE:HD13	2.00	0.42
42:62:151:TYR:O	42:62:154:TYR:HB2	2.19	0.42
43:A5:13:SER:HB3	43:A5:16:LYS:HD2	2.01	0.42
47:51:69:ARG:HG3	47:51:70:THR:N	2.34	0.42
49:7I:74:LEU:HA	49:7I:74:LEU:HD23	1.89	0.42
44:12:105:PHE:O	44:12:109:SER:OG	2.24	0.42
46:G5:4:SER:OG	46:G5:5:GLU:OE2	2.32	0.42
46:G5:53:LEU:HD22	46:G5:53:LEU:HA	1.92	0.42
47:59:90:LYS:O	47:59:160:LYS:HA	2.19	0.42
8:2E:3:ASN:C	8:2E:4:LYS:HG2	2.40	0.42
52:W4:8:U:O4'	52:W4:48:C:O2'	2.35	0.42
52:V4:18:G:O2'	52:V4:19:G:OP1	2.35	0.42
1:13:1009:U:C6	18:69:90:GLY:HA3	2.55	0.42
1:13:1278:G:C2	1:13:1279:G:C8	3.08	0.42
1:13:1613:C:N4	1:13:1614:U:O4	2.52	0.42
1:13:1932:G:H8	1:13:1932:G:OP2	2.02	0.42
3:B5:12:VAL:HG13	3:B5:27:THR:O	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:11:50:THR:OG1	15:1H:1847:G:H1'	2.19	0.42
8:22:73:PRO:O	8:22:76:VAL:N	2.46	0.42
8:22:181:ASN:HB3	8:22:205:GLY:O	2.20	0.42
1:1G:650:U:O4	50:72:105:ARG:HD3	2.20	0.42
1:1G:969:C:H4'	1:1G:970:A:C5'	2.50	0.42
1:1G:970:A:C2	1:1G:973:G:C8	3.07	0.42
1:1G:1169:G:H2'	1:1G:1170:G:O4'	2.20	0.42
1:1G:1639:A:N6	1:1G:1640:A:C6	2.88	0.42
1:1G:1906:A:H5''	1:1G:1907:A:P	2.60	0.42
1:1G:2075:C:O2	1:1G:2075:C:H2'	2.20	0.42
4:19:218:ARG:HB3	4:19:219:PRO:HD2	2.02	0.42
14:3E:30:LYS:HA	14:3E:35:ARG:NE	2.33	0.42
15:1H:2043:G:H2'	15:1H:2044:A:O4'	2.19	0.42
15:1H:2698:C:OP1	16:B8:53:ARG:NH2	2.53	0.42
15:1H:2865:G:C6	15:1H:2866:C:C4	3.07	0.42
12:M5:60:LEU:HD23	12:M5:60:LEU:HA	1.77	0.42
18:61:86:THR:HA	18:61:123:LEU:HD13	2.02	0.42
14:32:172:PRO:HB2	14:32:187:ARG:HH12	1.84	0.42
15:14:21:A:O2'	15:14:22:C:H5'	2.20	0.42
15:14:347:A:H5'	15:14:365:A:H1'	2.01	0.42
15:14:664:A:H2'	30:35:117:GLU:OE2	2.19	0.42
15:14:884:A:N6	15:14:885:G:C6	2.87	0.42
15:14:959:A:C5	38:45:9:TYR:CD2	3.08	0.42
15:14:1288:G:H2'	15:14:1289:U:O4'	2.19	0.42
15:14:1454:U:H2'	15:14:1455:U:C6	2.55	0.42
15:14:1998:G:H2'	15:14:1999:C:C6	2.55	0.42
15:14:2430:G:H4'	30:35:67:MET:H	1.83	0.42
15:14:2652:U:C4	15:14:2653:G:C6	3.07	0.42
23:21:59:VAL:HG21	23:21:63:LEU:HD12	2.02	0.42
24:4I:9:ILE:HG22	24:4I:10:PRO:O	2.19	0.42
24:4I:50:GLU:O	24:4I:54:VAL:HG23	2.19	0.42
26:16:81:C:O5'	26:16:81:C:H6	2.03	0.42
21:25:2:ILE:HG13	21:25:8:LEU:HD11	2.02	0.42
28:15:39:CYS:O	28:15:41:PRO:HD3	2.20	0.42
32:31:8:GLN:CD	32:31:8:GLN:N	2.72	0.42
32:31:101:LEU:HD22	32:31:102:PRO:CD	2.45	0.42
32:39:178:PRO:HB2	32:39:201:VAL:CG1	2.48	0.42
40:41:28:VAL:O	40:41:31:VAL:HG13	2.20	0.42
40:41:57:ALA:HB2	40:41:90:LEU:HD21	2.01	0.42
44:1E:7:VAL:HG22	44:1E:217:ARG:HD2	2.01	0.42
47:51:47:GLU:O	47:51:49:VAL:HG22	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:1A:78:ASN:O	48:1A:82:ILE:HG12	2.19	0.42
49:7I:3:LYS:O	49:7I:21:VAL:HA	2.20	0.42
50:72:37:ARG:O	50:72:40:ALA:HB3	2.20	0.42
52:X1:6:G:H2'	52:X1:7:A:C8	2.55	0.42
52:X4:72:C:C4	52:X4:73:A:N7	2.88	0.42
1:13:653:G:H2'	25:4E:119:LEU:HD22	2.01	0.42
1:13:1022:C:H2'	1:13:1023:A:O4'	2.20	0.42
1:13:1577:G:H21	1:13:1854:A:N6	2.14	0.42
1:13:1947:C:H2'	1:13:1948:C:O4'	2.20	0.42
1:13:2151:U:O2	1:13:2153:G:H5''	2.19	0.42
2:A8:58:LEU:HD12	2:A8:65:VAL:HG13	2.00	0.42
6:2A:38:ASN:HA	6:2A:39:PRO:HD3	1.88	0.42
7:8I:44:ALA:HA	7:8I:71:PHE:O	2.20	0.42
8:22:71:ALA:HB2	8:22:109:PRO:HG3	2.02	0.42
1:1G:1157:C:H5'	1:1G:1164:A:C6	2.55	0.42
1:1G:2110:G:H8	1:1G:2110:G:O5'	2.02	0.42
2:65:98:VAL:H	2:65:98:VAL:HG23	1.50	0.42
11:G8:43:ASN:OD1	11:G8:65:ALA:HB3	2.20	0.42
13:3I:110:VAL:HG23	13:3I:120:TYR:HB3	2.00	0.42
15:1H:30:G:H2'	15:1H:31:C:O4'	2.19	0.42
15:1H:676:G:H2'	15:1H:677:C:C6	2.55	0.42
15:1H:701:A:H5''	15:1H:701:A:H8	1.85	0.42
15:1H:885:G:C5	15:1H:886:C:C4	3.08	0.42
15:1H:1205:A:H8	15:1H:1205:A:O5'	2.02	0.42
15:1H:1425:C:N4	15:1H:1426:G:C6	2.87	0.42
15:1H:1524:C:H2'	15:1H:1525:G:C8	2.54	0.42
15:1H:2079:A:H5''	15:1H:2080:C:O5'	2.19	0.42
15:1H:2678:G:C6	15:1H:2679:G:C4	3.08	0.42
15:1H:2878:U:C4	15:1H:2879:U:C4	3.07	0.42
18:61:77:LEU:HD23	18:61:77:LEU:HA	1.80	0.42
15:14:39:C:O2	32:39:46:ARG:NH2	2.44	0.42
15:14:642:A:C4	32:39:180:GLY:HA2	2.55	0.42
15:14:671:A:C2	15:14:673:A:O4'	2.73	0.42
15:14:1483:A:O2'	15:14:1484:G:H5'	2.19	0.42
15:14:1574:G:H2'	15:14:1575:G:C8	2.52	0.42
15:14:1688:C:O2	15:14:2713:U:O2'	2.35	0.42
15:14:2024:C:H5''	15:14:2739:C:O2'	2.20	0.42
25:4E:126:ARG:HG3	25:4E:126:ARG:HH11	1.84	0.42
22:D5:67:LEU:HA	22:D5:68:PRO:HD3	1.66	0.42
26:1J:17:A:H5'	26:1J:18:G:H8	1.84	0.42
32:31:23:ASP:CG	32:31:24:LEU:H	2.23	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:31:152:GLU:HG3	32:31:191:ARG:HD2	2.01	0.42
32:31:155:LEU:CD1	32:31:174:VAL:HG22	2.50	0.42
35:D8:30:GLY:N	35:D8:61:VAL:HG23	2.34	0.42
38:88:79:LEU:HD23	38:88:79:LEU:HA	1.80	0.42
40:49:56:ALA:HA	40:49:59:GLU:HB3	2.01	0.42
44:1E:133:LYS:HD3	44:1E:133:LYS:HA	1.91	0.42
44:12:221:LEU:HA	44:12:224:GLN:HB3	2.02	0.42
50:7E:122:ARG:O	50:7E:126:LYS:HG3	2.19	0.42
8:2E:96:GLY:H	8:2E:97:LYS:HZ3	1.66	0.42
1:13:794:C:N3	1:13:808:G:C2	2.88	0.42
1:13:1048:G:O2'	14:3E:116:GLN:HG3	2.20	0.42
1:13:1131:G:C6	1:13:1132:C:C4	3.07	0.42
1:13:1447:G:O2'	1:13:1448:A:H5'	2.20	0.42
1:13:1487:A:H3'	1:13:1488:A:C8	2.54	0.42
1:13:1599:G:OP1	33:5I:32:SER:N	2.50	0.42
6:2A:117:ASN:ND2	1:1G:1347:G:H5'	2.35	0.42
7:8I:31:LEU:HD12	7:8I:32:TYR:CE1	2.55	0.42
1:1G:907:G:N3	1:1G:907:G:H2'	2.34	0.42
1:1G:1575:U:H4'	1:1G:1587:A:N1	2.33	0.42
1:1G:1693:U:C5	1:1G:1817:G:H1'	2.55	0.42
1:1G:1904:C:O2'	1:1G:1906:A:H1'	2.19	0.42
2:65:110:LEU:HD23	2:65:112:PHE:CE1	2.55	0.42
9:82:41:VAL:HG21	42:62:40:ALA:HB3	2.01	0.42
15:1H:63:A:N3	3:F8:66:LEU:HB2	2.35	0.42
15:1H:779:C:H3'	56:1H:3781:HOH:O	2.19	0.42
15:1H:1103:G:HO2'	15:1H:1134:A:N6	2.18	0.42
15:1H:1824:C:O5'	15:1H:1824:C:H6	2.02	0.42
15:1H:2582:G:H2'	15:1H:2583:C:H6	1.82	0.42
12:M5:15:LYS:HB3	30:35:65:ARG:NH2	2.35	0.42
12:M5:33:ASN:O	15:14:2435:C:OP1	2.38	0.42
18:61:68:LEU:HD12	18:61:68:LEU:HA	1.53	0.42
14:32:101:LEU:HD23	14:32:121:VAL:HG11	2.01	0.42
14:32:162:LEU:HD11	14:32:179:GLU:HA	2.02	0.42
15:14:1759:U:H1'	15:14:2873:A:N3	2.35	0.42
15:14:2761:C:H4'	47:59:142:GLY:O	2.19	0.42
16:75:16:ARG:HB2	16:75:19:LEU:HD11	2.01	0.42
24:4I:57:ARG:HH11	24:4I:57:ARG:HB2	1.85	0.42
28:M8:61:ARG:NH1	28:M8:61:ARG:HB2	2.35	0.42
29:AI:41:VAL:H	29:AI:44:MET:HB2	1.85	0.42
27:85:91:ASP:OD2	27:85:96:ALA:HB2	2.19	0.42
32:31:64:ILE:HG23	32:31:65:TRP:CD1	2.55	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:5E:53:ALA:C	34:5E:54:LYS:HG2	2.40	0.42
35:D8:35:LEU:C	35:D8:37:VAL:N	2.72	0.42
32:39:52:LYS:HB3	32:39:56:GLU:HB2	2.01	0.42
35:95:13:ARG:HG2	35:95:13:ARG:HH11	1.84	0.42
39:F5:8:SER:OG	39:F5:10:LYS:HG3	2.19	0.42
40:49:173:LEU:HD22	40:49:178:PHE:CE1	2.54	0.42
45:98:2:ARG:HB3	45:98:3:HIS:H	1.49	0.42
43:A5:27:LYS:O	43:A5:71:VAL:HG23	2.20	0.42
48:1I:78:ASN:OD1	48:1I:78:ASN:N	2.53	0.42
47:59:94:TYR:CD1	47:59:94:TYR:N	2.87	0.42
50:72:118:VAL:O	50:72:119:LEU:HD23	2.20	0.42
1:13:1262:G:H8	1:13:1262:G:H5'	1.83	0.42
1:13:1297:G:C5	1:13:1298:U:C5	3.07	0.42
1:13:1547:C:H2'	1:13:1548:G:C8	2.55	0.42
1:13:1577:G:H2'	1:13:1578:U:C6	2.55	0.42
1:13:1885:G:O2'	1:13:1886:C:H5'	2.20	0.42
1:13:1932:G:H5'	20:1F:4:GLY:HA3	2.02	0.42
2:A8:14:VAL:HG21	2:A8:89:ARG:HE	1.85	0.42
3:B5:18:TYR:C	3:B5:20:GLY:N	2.72	0.42
7:8I:50:LYS:HG3	7:8I:51:TYR:CE2	2.55	0.42
7:8I:57:VAL:HG21	7:8I:73:VAL:HG13	2.02	0.42
1:1G:1532:A:H2'	1:1G:1533:C:O4'	2.19	0.42
1:1G:1680:U:O2'	1:1G:1683:A:OP2	2.32	0.42
1:1G:1803:A:C6	1:1G:1804:G:C6	3.08	0.42
1:1G:1984:A:C8	1:1G:1985:U:C5	3.08	0.42
10:58:19:GLU:HG3	10:58:59:LYS:HB3	2.02	0.42
10:58:111:PRO:HD2	15:1H:583:G:P	2.59	0.42
4:19:137:PRO:O	4:19:140:THR:OG1	2.38	0.42
12:Q8:49:VAL:HG12	12:Q8:51:ALA:N	2.33	0.42
13:3I:123:LYS:H	13:3I:123:LYS:HG2	1.63	0.42
14:3E:70:ILE:CG2	14:3E:75:PHE:HB2	2.50	0.42
15:1H:162:C:H2'	15:1H:163:G:C8	2.55	0.42
15:1H:1061:C:O2'	15:1H:1062:U:H5'	2.20	0.42
15:1H:1235:G:C5	56:1H:3741:HOH:O	2.67	0.42
15:1H:1643:G:H2'	15:1H:1644:G:O4'	2.19	0.42
15:1H:2546:A:H5'	47:51:157:TYR:CE1	2.55	0.42
15:1H:2627:C:OP2	36:N8:3:LYS:HE3	2.20	0.42
15:1H:2630:U:H2'	15:1H:2631:C:H6	1.84	0.42
15:1H:2651:U:OP1	23:21:79:ARG:HB3	2.19	0.42
18:61:60:GLU:O	18:61:63:ALA:HB3	2.19	0.42
14:32:81:GLU:OE2	14:32:139:ARG:NH2	2.53	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:1F:9:ARG:HH11	20:1F:22:ARG:HA	1.84	0.42
15:14:11:G:H22	15:14:2642:G:H5''	1.85	0.42
15:14:295:C:H6	15:14:295:C:H5''	1.84	0.42
15:14:966:A:C5	15:14:967:G:H1'	2.54	0.42
15:14:1458:C:H2'	15:14:1459:G:O4'	2.19	0.42
15:14:1498:G:O2'	15:14:1578:A:N1	2.43	0.42
15:14:1649:C:O2'	15:14:1650:G:H5'	2.20	0.42
15:14:1852:U:H4'	15:14:1855:A:H1'	2.02	0.42
15:14:1970:G:C4	15:14:1971:U:C5	3.08	0.42
15:14:2404:G:H5''	15:14:2405:U:O4'	2.20	0.42
15:14:2416:U:H2'	15:14:2417:C:H5''	2.01	0.42
15:14:2463:A:N1	56:14:3720:HOH:O	2.37	0.42
15:14:2663:C:H2'	15:14:2664:U:C6	2.55	0.42
15:14:2762:U:H2'	15:14:2763:G:H5'	2.00	0.42
16:75:108:ARG:HA	16:75:111:ARG:HG3	2.01	0.42
23:29:31:CYS:HB2	23:29:91:VAL:HG23	2.02	0.42
26:1J:33:C:H4'	40:49:29:TRP:CH2	2.55	0.42
30:78:50:ARG:HH21	30:78:50:ARG:CG	2.23	0.42
28:I5:55:ARG:CG	28:I5:56:VAL:H	2.28	0.42
37:BI:55:ILE:HD13	37:BI:55:ILE:HA	1.87	0.42
35:95:44:LYS:O	35:95:45:THR:HG22	2.20	0.42
42:6E:26:PHE:CE2	42:6E:30:ILE:HD11	2.54	0.42
43:E8:29:LEU:HD21	43:E8:33:ARG:NH2	2.35	0.42
44:1E:189:ASP:OD1	44:1E:190:THR:N	2.46	0.42
42:62:26:PHE:O	42:62:30:ILE:HG13	2.19	0.42
42:62:63:LYS:HG3	42:62:64:GLN:N	2.35	0.42
42:62:124:LEU:HD23	42:62:124:LEU:HA	1.79	0.42
45:98:67:LEU:HD13	45:98:67:LEU:HA	1.90	0.42
43:A5:70:TYR:HD1	43:A5:108:GLY:O	2.03	0.42
46:K8:47:ASN:HB2	46:K8:50:ILE:HD11	2.02	0.42
49:7I:26:ARG:HD2	49:7I:31:LYS:O	2.20	0.42
49:7I:43:LYS:HA	49:7I:48:TRP:HB2	2.02	0.42
8:2E:59:ARG:HA	8:2E:63:ASN:O	2.20	0.42
50:72:111:ILE:C	50:72:112:LEU:HD23	2.40	0.42
1:13:1059:C:O2'	1:13:1169:G:H1'	2.20	0.42
1:13:1281:U:HO2'	1:13:1282:A:P	2.43	0.42
1:13:1292:A:N7	53:13:2202:8UZ:O7	2.53	0.42
1:13:1734:G:C6	1:13:1735:C:C4	3.08	0.42
1:13:2043:G:C6	1:13:2109:G:C6	3.08	0.42
2:A8:26:LEU:HD12	2:A8:39:ILE:HD11	2.01	0.42
6:2A:26:ASN:OD1	1:1G:1321:U:H5	2.03	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:2A:50:TYR:HB3	6:2A:55:LYS:HG2	2.01	0.42
9:8E:18:PHE:CD2	9:8E:62:TYR:HD2	2.38	0.42
9:8E:48:GLU:N	9:8E:49:PRO:CD	2.82	0.42
1:1G:1254:G:C4	1:1G:1255:U:C5	3.08	0.42
1:1G:1599:G:P	33:5A:31:ARG:HG2	2.60	0.42
1:1G:1762:G:C2	1:1G:1763:U:H1'	2.55	0.42
1:1G:1849:G:H2'	1:1G:1850:C:O4'	2.20	0.42
12:Q8:29:LYS:O	12:Q8:30:ARG:NH1	2.53	0.42
12:Q8:46:ARG:NH2	12:Q8:48:PHE:HA	2.35	0.42
13:3I:85:ILE:HA	13:3I:85:ILE:HD13	1.55	0.42
9:82:95:LYS:HZ1	9:82:96:LEU:HD13	1.85	0.42
15:1H:14:A:O5'	15:1H:14:A:H8	2.02	0.42
15:1H:1333:A:H5''	15:1H:1334:G:OP2	2.20	0.42
15:1H:1431:G:O2'	15:1H:1432:C:H5'	2.20	0.42
15:1H:1470:G:O5'	15:1H:1470:G:H8	2.03	0.42
15:1H:1868:U:H4'	15:1H:1994:A:C6	2.55	0.42
15:1H:2302:A:N6	15:1H:2359:U:N3	2.60	0.42
15:1H:2367:A:N6	15:1H:2380:G:O2'	2.52	0.42
15:1H:2421:U:P	56:1H:3757:HOH:O	2.78	0.42
15:1H:2676:G:H2'	15:1H:2677:A:C8	2.54	0.42
15:1H:2750:A:H5''	15:1H:2750:A:C8	2.53	0.42
15:1H:2821:U:O2'	15:1H:2822:A:H5'	2.20	0.42
10:15:104:LYS:HA	10:15:107:LEU:HD12	2.01	0.42
10:15:114:ARG:NH1	15:14:555:A:OP2	2.43	0.42
11:C5:15:VAL:O	11:C5:21:LYS:HA	2.20	0.42
14:32:28:SER:HA	14:32:29:PRO:HA	1.87	0.42
14:32:160:GLN:O	14:32:163:GLU:HB2	2.20	0.42
15:14:67:G:C6	15:14:68:C:C4	3.08	0.42
15:14:769:C:H2'	15:14:770:C:C6	2.55	0.42
15:14:893:C:C5	15:14:894:G:C6	3.08	0.42
15:14:897:G:C1'	15:14:980:A:H8	2.33	0.42
15:14:2313:A:H2'	15:14:2314:G:O4'	2.20	0.42
15:14:2429:G:H21	30:35:67:MET:HE1	1.84	0.42
16:75:3:ARG:HG2	16:75:4:GLY:H	1.84	0.42
22:H8:19:ARG:NH1	22:H8:84:GLU:HB2	2.35	0.42
25:4E:41:VAL:HG23	25:4E:67:VAL:CG1	2.50	0.42
24:4A:40:ASN:HA	24:4A:41:PRO:HD2	1.90	0.42
24:4A:60:VAL:HG13	24:4A:64:TRP:HE1	1.84	0.42
26:1J:12:C:C4	26:1J:13:C:C5	3.08	0.42
32:31:39:TRP:O	32:31:43:LYS:HG2	2.20	0.42
33:5I:47:LEU:HA	33:5I:50:LYS:HG3	2.02	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:39:121:GLY:O	32:39:122:LYS:HD3	2.20	0.42
35:95:80:GLN:C	35:95:81:TYR:CD1	2.93	0.42
42:6E:13:GLN:HA	42:6E:14:PRO:HD3	1.95	0.42
38:45:42:ILE:HD13	38:45:97:VAL:HB	2.02	0.42
49:7I:82:GLN:H	49:7I:82:GLN:HG2	1.67	0.42
44:12:220:ASP:O	44:12:224:GLN:N	2.50	0.42
50:7E:27:PRO:HG3	50:7E:58:TYR:CE2	2.54	0.42
45:55:25:ALA:O	45:55:29:LEU:HB2	2.20	0.42
3:F8:31:HIS:HA	3:F8:32:PRO:HD3	1.92	0.42
50:72:85:ARG:O	50:72:86:ILE:HD13	2.19	0.42
52:V1:14:A:N6	52:V1:22:G:C5	2.88	0.42
52:V1:58:A:H2	52:V1:60:U:C2	2.38	0.42
51:Y4:50:U:C4	51:Y4:51:U:C4	3.07	0.42
52:W4:18:G:O2'	52:W4:57:G:N2	2.52	0.42
1:13:1057:G:H2'	1:13:1058:C:C6	2.55	0.41
1:13:1322:G:H2'	1:13:1323:A:C8	2.55	0.41
1:13:1347:G:N2	19:9I:82:THR:HG23	2.35	0.41
1:13:1463:C:C2	1:13:1476:G:C2	3.08	0.41
1:13:2015:G:C6	1:13:2016:C:N4	2.88	0.41
2:A8:76:LYS:O	2:A8:79:ALA:HB3	2.20	0.41
9:8E:21:PRO:HA	9:8E:59:PHE:HA	2.01	0.41
9:8E:42:ARG:HE	9:8E:42:ARG:HB2	1.48	0.41
1:1G:1022:C:H2'	1:1G:1023:A:O4'	2.19	0.41
1:1G:1632:C:O2	1:1G:1646:G:N2	2.53	0.41
1:1G:2050:G:H2'	1:1G:2051:G:H8	1.85	0.41
10:58:28:THR:HG22	10:58:29:LYS:N	2.35	0.41
10:58:66:LYS:O	10:58:70:LYS:HB3	2.20	0.41
4:19:271:ILE:HD13	4:19:271:ILE:N	2.35	0.41
13:3I:114:LYS:HE2	13:3I:125:PRO:HG3	2.02	0.41
14:3E:175:SER:O	14:3E:183:GLY:HA2	2.20	0.41
15:1H:350:G:O2'	15:1H:351:G:H5'	2.21	0.41
15:1H:571:G:C8	15:1H:571:G:H3'	2.55	0.41
15:1H:589:C:H2'	15:1H:590:C:O4'	2.20	0.41
15:1H:1074:U:H4'	15:1H:1075:A:OP1	2.20	0.41
15:1H:1243:G:O2'	15:1H:1275:A:N1	2.45	0.41
15:1H:2313:A:H2'	15:1H:2314:G:O4'	2.20	0.41
15:1H:2392:A:H2'	15:1H:2393:A:C8	2.55	0.41
15:1H:2693:C:H2'	15:1H:2694:A:O4'	2.20	0.41
15:1H:2732:U:O2'	15:1H:2733:G:H5'	2.20	0.41
15:1H:2867:G:H2'	15:1H:2868:C:C6	2.55	0.41
16:B8:88:ILE:HG13	16:B8:88:ILE:O	2.19	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:M5:7:HIS:ND1	12:M5:7:HIS:O	2.52	0.41
15:14:644:G:H2'	15:14:645:C:O4'	2.20	0.41
15:14:956:C:O2'	15:14:957:A:H5'	2.20	0.41
15:14:1208:U:O2'	15:14:1209:G:H5'	2.20	0.41
15:14:1585:A:N7	15:14:1586:C:H1'	2.35	0.41
15:14:2057:G:H21	23:29:146:THR:CG2	2.31	0.41
15:14:2606:C:H2'	15:14:2607:G:C8	2.55	0.41
15:14:2803:C:H1'	23:29:62:PRO:HG3	2.02	0.41
15:14:2874:G:H2'	15:14:2875:G:O4'	2.20	0.41
22:H8:16:SER:O	22:H8:20:ARG:NH1	2.52	0.41
19:9A:65:ILE:HD13	19:9A:65:ILE:HG21	1.87	0.41
24:4A:14:ARG:HA	24:4A:43:THR:O	2.19	0.41
25:42:76:ILE:CG2	25:42:77:PRO:HD2	2.50	0.41
25:42:113:ALA:HB3	25:42:115:VAL:HG23	2.02	0.41
25:42:140:ARG:CZ	25:42:140:ARG:HB2	2.50	0.41
25:42:145:LYS:HE2	25:42:145:LYS:HB3	1.68	0.41
30:35:46:LYS:HE2	30:35:46:LYS:HB3	1.93	0.41
31:E5:32:ARG:CG	31:E5:33:ALA:H	2.30	0.41
36:N8:32:PRO:O	36:N8:34:PRO:HD3	2.20	0.41
35:95:70:ILE:O	35:95:70:ILE:HG22	2.20	0.41
39:J8:30:VAL:HG11	52:V1:76:A:H5''	2.02	0.41
40:41:131:TYR:O	40:41:159:VAL:HG22	2.20	0.41
38:45:110:THR:HG23	38:45:113:GLN:OE1	2.20	0.41
39:F5:64:ALA:HA	39:F5:67:ILE:HG12	2.02	0.41
45:98:1:MET:O	45:98:1:MET:HG2	2.20	0.41
47:51:86:GLU:HG3	47:51:165:ALA:N	2.35	0.41
48:11:99:LYS:HB3	48:11:99:LYS:HE2	1.79	0.41
49:7I:43:LYS:HA	49:7I:48:TRP:CB	2.50	0.41
45:55:107:ASP:C	45:55:107:ASP:OD1	2.57	0.41
8:2E:150:LYS:HE2	8:2E:152:ILE:HD11	2.01	0.41
50:72:44:PHE:HA	50:72:79:VAL:HG12	2.02	0.41
52:W1:19:G:H3'	52:W1:20:U:C6	2.55	0.41
52:W1:31:A:H2'	52:W1:32:U:O4'	2.20	0.41
52:X1:1:G:C4	52:X1:2:C:C5	3.08	0.41
52:X4:22:G:H2'	52:X4:23:A:H8	1.83	0.41
52:V4:67:C:H2'	52:V4:68:C:H6	1.85	0.41
1:13:810:U:O2'	1:13:811:A:H5'	2.20	0.41
1:13:1059:C:H1'	1:13:1169:G:O2'	2.19	0.41
1:13:1191:C:H1'	13:3I:15:ARG:HB3	2.02	0.41
1:13:1482:A:H2'	1:13:1483:A:O4'	2.19	0.41
1:13:1570:G:H2'	1:13:1571:C:C6	2.55	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:13:1599:G:C8	1:13:1985:U:C2	3.07	0.41
1:13:2070:G:C8	1:13:2072:A:C2	3.08	0.41
3:B5:67:GLY:C	3:B5:69:TYR:N	2.72	0.41
1:1G:938:G:N2	1:1G:941:A:OP2	2.41	0.41
1:1G:1181:U:O4	1:1G:1182:A:N6	2.54	0.41
1:1G:1365:C:OP2	19:9A:68:LYS:HE2	2.20	0.41
1:1G:1436:A:H2'	1:1G:1437:C:C6	2.55	0.41
1:1G:1927:G:O2'	1:1G:1930:C:N4	2.54	0.41
1:1G:2002:A:H2'	1:1G:2003:A:H5'	2.02	0.41
13:3I:102:ARG:HE	13:3I:102:ARG:HB3	1.70	0.41
9:82:70:LYS:O	9:82:74:ILE:HG13	2.20	0.41
15:1H:267:C:H2'	15:1H:268:C:C6	2.54	0.41
15:1H:322:C:H2'	15:1H:323:G:O4'	2.20	0.41
15:1H:612:C:OP2	30:78:21:ARG:NH2	2.52	0.41
15:1H:1284:G:C6	15:1H:1285:G:N1	2.89	0.41
15:1H:1552:U:H2'	15:1H:1553:C:H6	1.85	0.41
15:1H:2722:G:O3'	45:98:68:ARG:HG2	2.20	0.41
10:15:70:LYS:HE2	10:15:72:TYR:CZ	2.55	0.41
16:B8:125:ARG:NH1	16:B8:125:ARG:HB2	2.35	0.41
11:C5:47:LYS:HG2	11:C5:60:PHE:CZ	2.56	0.41
11:C5:48:ALA:HB1	11:C5:50:ARG:NE	2.36	0.41
14:32:60:GLU:HG2	14:32:202:LEU:HB2	2.02	0.41
15:14:254:C:O2'	15:14:255:A:H2'	2.21	0.41
15:14:398:G:H4'	15:14:399:A:OP2	2.20	0.41
15:14:417:G:H8	15:14:417:G:O5'	2.04	0.41
15:14:502:G:C6	15:14:537:C:N4	2.88	0.41
15:14:654:A:H4'	15:14:655:G:OP1	2.20	0.41
15:14:910:A:C2	15:14:965:A:C4	3.08	0.41
15:14:981:G:H2'	15:14:982:C:H6	1.85	0.41
15:14:1006:A:C6	15:14:1007:A:C6	3.08	0.41
15:14:1498:G:H1'	15:14:1577:A:H62	1.85	0.41
15:14:1689:U:H2'	15:14:1690:C:H5'	2.02	0.41
15:14:1982:C:H2'	15:14:1983:C:C6	2.55	0.41
15:14:2057:G:O2'	23:29:145:LYS:HE3	2.20	0.41
15:14:2288:A:H2'	15:14:2289:A:H8	1.85	0.41
15:14:2325:A:H62	40:49:79:ASN:CB	2.34	0.41
15:14:2668:U:O2'	47:59:110:SER:HB2	2.20	0.41
15:14:2699:U:H1'	21:25:70:LYS:HD3	2.02	0.41
21:68:11:ALA:HB3	21:68:85:VAL:HG23	2.02	0.41
22:H8:93:ASP:C	22:H8:94:GLU:HG2	2.41	0.41
18:69:54:GLN:HA	18:69:57:ARG:HB2	2.02	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:25:4:PRO:O	21:25:5:GLN:CB	2.69	0.41
21:25:13:ASN:ND2	21:25:97:ARG:HB2	2.36	0.41
22:D5:24:LEU:HD12	22:D5:25:PRO:O	2.20	0.41
22:D5:164:ALA:O	22:D5:165:VAL:HG13	2.21	0.41
28:M8:37:SER:O	28:M8:41:PRO:HD2	2.19	0.41
26:1J:5:C:H2'	26:1J:6:C:C6	2.55	0.41
26:1J:93:C:H5''	26:1J:93:C:H6	1.85	0.41
30:78:36:LYS:O	30:78:40:SER:HB3	2.19	0.41
32:31:34:TRP:CE3	32:31:35:GLU:HG2	2.55	0.41
31:E5:25:ARG:HD3	31:E5:25:ARG:HA	1.89	0.41
39:J8:48:LYS:HB3	39:J8:49:VAL:CG2	2.51	0.41
43:E8:64:MET:O	43:E8:65:LEU:HB2	2.21	0.41
40:49:145:THR:O	40:49:146:TYR:HB3	2.18	0.41
44:1E:204:ASN:HD21	44:1E:207:ALA:HB3	1.85	0.41
47:51:18:GLU:HB2	47:51:25:LYS:HB2	2.02	0.41
44:12:222:ILE:O	44:12:226:ARG:HB2	2.20	0.41
50:7E:1:MET:HB3	50:7E:2:LEU:H	1.69	0.41
8:2E:135:LYS:O	8:2E:138:VAL:HG12	2.20	0.41
52:W1:19:G:H4'	52:W1:20:U:OP2	2.21	0.41
52:W1:63:G:H2'	52:W1:64:A:C8	2.55	0.41
52:X1:67:C:H2'	52:X1:68:C:H6	1.84	0.41
52:W4:47:U:H3'	52:W4:48:C:H5'	2.01	0.41
52:X4:7:A:H3'	52:X4:8:U:H5'	2.03	0.41
1:13:800:A:H1'	1:13:985:A:C8	2.55	0.41
1:13:980:C:OP2	21:68:97:ARG:HD3	2.21	0.41
1:13:1312:G:H2'	1:13:1313:A:C8	2.55	0.41
1:13:1315:U:O4	1:13:1332:G:H1'	2.20	0.41
1:13:1320:G:N2	1:13:1325:A:OP2	2.52	0.41
1:13:1803:A:C2	1:13:1804:G:C6	3.07	0.41
1:13:1954:C:H2'	1:13:1955:C:C6	2.55	0.41
1:13:2088:C:H2'	1:13:2089:C:O4'	2.21	0.41
7:8I:65:ILE:CG2	7:8I:69:LYS:HE2	2.50	0.41
8:22:11:ARG:CZ	8:22:182:ILE:HD11	2.50	0.41
9:8E:89:ASN:C	9:8E:91:ASP:H	2.23	0.41
1:1G:846:C:H2'	1:1G:847:A:H5''	2.00	0.41
1:1G:1048:G:C2	1:1G:1077:C:C2	3.08	0.41
1:1G:1377:C:H4'	1:1G:1378:C:O5'	2.20	0.41
1:1G:1614:U:O2	1:1G:1616:G:H8	2.03	0.41
1:1G:1697:C:O2'	1:1G:1819:C:H1'	2.19	0.41
1:1G:1902:A:H2'	1:1G:1903:G:O4'	2.20	0.41
10:58:94:HIS:C	10:58:95:PRO:O	2.57	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:65:46:VAL:HG12	2:65:48:LEU:HD22	2.02	0.41
2:65:110:LEU:HD23	2:65:112:PHE:CZ	2.55	0.41
14:3E:107:ARG:HA	14:3E:107:ARG:HD2	1.82	0.41
14:3E:135:LEU:HA	14:3E:136:PRO:HD2	1.82	0.41
9:82:7:THR:O	9:82:83:ARG:HD2	2.20	0.41
15:1H:448:C:H2'	15:1H:449:C:O4'	2.21	0.41
15:1H:554:C:OP2	15:1H:2795:U:C5	2.73	0.41
15:1H:958:A:N7	38:88:13:GLN:HG3	2.34	0.41
15:1H:1174:A:H4'	15:1H:1175:A:O5'	2.20	0.41
15:1H:1407:G:N2	15:1H:1421:U:C5	2.88	0.41
15:1H:1584:U:O2	15:1H:1584:U:H2'	2.19	0.41
15:1H:1861:C:C2'	15:1H:1862:G:H5'	2.51	0.41
15:1H:1901:A:H2'	15:1H:1902:A:H8	1.80	0.41
15:1H:2883:C:H6	15:1H:2883:C:O5'	2.03	0.41
18:61:122:GLU:HB3	18:61:126:TYR:OH	2.20	0.41
13:3A:58:VAL:O	13:3A:65:GLU:HA	2.20	0.41
15:14:262:A:N1	15:14:292:G:O2'	2.43	0.41
15:14:739:G:H2'	15:14:740:C:C6	2.55	0.41
15:14:916:C:N4	15:14:917:U:O4	2.54	0.41
15:14:1221:G:H2'	15:14:1223:U:H5''	2.01	0.41
15:14:1393:G:H4'	15:14:1433:A:C5	2.55	0.41
15:14:1431:G:H2'	15:14:1432:C:O4'	2.20	0.41
15:14:1704:A:H1'	15:14:2836:A:H5'	2.02	0.41
15:14:2159:A:C2	15:14:2184:G:H1'	2.56	0.41
15:14:2246:C:H2'	15:14:2247:U:O4'	2.19	0.41
15:14:2286:G:H2'	15:14:2287:U:H6	1.84	0.41
15:14:2442:C:H5''	15:14:2443:G:OP1	2.20	0.41
15:14:2671:U:H3	15:14:2680:A:H2	1.65	0.41
15:14:2889:G:H4'	16:75:2:ASN:H	1.83	0.41
26:16:3:U:H5	26:16:4:C:N4	2.18	0.41
26:16:47:A:P	40:41:96:ARG:HH12	2.43	0.41
22:D5:23:LYS:HB3	22:D5:38:TYR:CD1	2.55	0.41
28:M8:46:GLN:H	28:M8:46:GLN:HG3	1.38	0.41
23:29:119:ARG:CG	23:29:160:TYR:HB2	2.49	0.41
24:4A:3:ARG:HB2	28:I5:34:GLU:CD	2.40	0.41
24:4A:65:LYS:HG3	24:4A:70:LEU:HD23	2.02	0.41
32:39:5:ALA:HB1	32:39:125:LEU:CD2	2.50	0.41
40:41:107:LEU:HD23	40:41:107:LEU:HA	1.82	0.41
37:BA:17:ARG:O	37:BA:21:LYS:HG3	2.20	0.41
38:45:60:ARG:HD2	38:45:60:ARG:O	2.20	0.41
43:E8:92:ARG:NH1	43:E8:94:ASP:OD1	2.54	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:49:78:SER:HB2	52:X4:56:C:O2	2.20	0.41
44:1E:73:THR:HB	44:1E:170:GLU:OE2	2.20	0.41
44:1E:161:ALA:HA	44:1E:182:ILE:HG23	2.01	0.41
47:51:86:GLU:HG3	47:51:165:ALA:HB3	2.02	0.41
44:12:163:PHE:HD1	44:12:185:ILE:HG13	1.85	0.41
5:P8:25:PRO:HB3	5:P8:28:ARG:NH2	2.35	0.41
47:59:144:VAL:O	47:59:148:ILE:HG12	2.20	0.41
6:2I:73:MET:HA	6:2I:77:MET:HB3	2.03	0.41
49:7A:70:ALA:O	49:7A:74:LEU:HD23	2.20	0.41
8:2E:15:THR:HB	8:2E:16:ARG:H	1.64	0.41
8:2E:24:ALA:HB1	8:2E:28:GLN:HB2	2.01	0.41
8:2E:175:LEU:HD21	8:2E:201:TYR:CE1	2.55	0.41
52:V1:13:C:C2'	52:V1:14:A:H5'	2.50	0.41
52:V4:19:G:H5''	52:V4:20:U:C5	2.55	0.41
1:13:685:G:C6	1:13:686:C:C4	3.08	0.41
1:13:718:C:H6	1:13:718:C:O5'	2.03	0.41
1:13:906:G:O2'	7:8I:67:LYS:N	2.54	0.41
1:13:1085:G:C6	1:13:1086:G:C6	3.08	0.41
1:13:1088:A:OP2	1:13:1115:G:N1	2.43	0.41
1:13:1146:G:N3	1:13:1160:U:H5'	2.35	0.41
1:13:1731:C:H2'	1:13:1732:G:O4'	2.20	0.41
1:13:1974:G:N2	1:13:2001:G:H2'	2.36	0.41
7:8I:18:THR:CG2	7:8I:69:LYS:HD2	2.51	0.41
8:22:70:VAL:HG12	8:22:71:ALA:N	2.35	0.41
1:1G:786:G:N3	1:1G:787:G:C8	2.88	0.41
1:1G:1030:A:N3	1:1G:1030:A:H2'	2.34	0.41
1:1G:1162:A:O2'	1:1G:1163:U:H5''	2.21	0.41
1:1G:1229:C:H2'	1:1G:1230:C:H6	1.85	0.41
1:1G:1302:G:O3'	34:52:87:ARG:NH2	2.54	0.41
1:1G:1885:G:O2'	1:1G:1886:C:O4'	2.38	0.41
12:Q8:35:GLN:O	12:Q8:37:SER:N	2.50	0.41
7:8A:31:LEU:HD22	7:8A:31:LEU:HA	1.76	0.41
15:1H:11:G:H2'	15:1H:11:G:N3	2.35	0.41
15:1H:17:G:H2'	15:1H:18:C:C6	2.55	0.41
15:1H:287:C:O2'	15:1H:288:G:H5'	2.20	0.41
15:1H:434:G:H3'	15:1H:435:G:H5''	2.03	0.41
15:1H:486:G:O2'	5:P8:39:ARG:HD3	2.21	0.41
15:1H:829:G:H8	15:1H:829:G:O5'	2.04	0.41
15:1H:1009:G:H2'	15:1H:1010:U:C6	2.54	0.41
15:1H:1409:A:H2'	15:1H:1410:G:O4'	2.20	0.41
15:1H:1510:A:OP2	15:1H:1510:A:H4'	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:1H:1630:A:H5'	15:1H:1631:G:OP2	2.20	0.41
15:1H:2810:C:N4	15:1H:2817:C:H1'	2.35	0.41
15:1H:2890:G:H2'	15:1H:2891:U:O4'	2.20	0.41
18:61:88:ILE:HB	18:61:90:GLY:O	2.20	0.41
19:9I:73:ALA:HB3	19:9I:79:LEU:HD12	2.02	0.41
15:14:299:G:H3'	15:14:299:G:C8	2.55	0.41
15:14:631:U:H4'	15:14:707:C:H4'	2.02	0.41
15:14:1208:U:H2'	15:14:1209:G:C8	2.49	0.41
15:14:1273:C:H4'	35:95:85:LYS:HA	2.02	0.41
15:14:2290:C:H6	15:14:2290:C:H5'	1.84	0.41
15:14:2365:C:H2'	15:14:2366:G:O4'	2.20	0.41
15:14:2528:G:N2	23:29:143:ASN:HD21	2.19	0.41
21:68:71:ARG:NH2	21:68:77:ILE:HG21	2.36	0.41
23:21:91:VAL:HG13	23:21:95:ILE:HG13	2.02	0.41
23:29:73:GLU:HA	23:29:74:PRO:HD2	1.85	0.41
29:AI:22:LEU:O	29:AI:28:LYS:NZ	2.37	0.41
26:1J:113:G:C6	26:1J:114:U:C4	3.08	0.41
30:35:144:GLU:HA	30:35:145:PRO:HD3	1.92	0.41
32:39:29:ASN:O	32:39:112:MET:HE2	2.19	0.41
38:88:41:TRP:CD1	38:88:96:VAL:HG22	2.55	0.41
37:BA:82:SER:O	37:BA:86:ARG:HB2	2.19	0.41
43:A5:45:TYR:CZ	43:A5:49:LYS:HE3	2.56	0.41
49:7I:26:ARG:HG2	49:7I:27:LYS:N	2.34	0.41
44:12:61:LEU:HD23	44:12:68:ILE:HD11	2.03	0.41
44:12:168:THR:HG21	44:12:191:ASP:O	2.20	0.41
3:F8:3:THR:HA	3:F8:6:ASP:CB	2.51	0.41
50:72:20:TYR:HA	50:72:65:TYR:CE2	2.56	0.41
1:13:1130:C:H1'	1:13:1178:C:H1'	2.02	0.41
1:13:1374:C:OP1	1:13:1474:G:O2'	2.28	0.41
1:13:1624:A:H4'	15:14:2162:C:OP1	2.20	0.41
1:13:1775:C:O2'	9:8E:16:ARG:HD3	2.21	0.41
1:13:1805:G:H5''	9:8E:93:ARG:HH21	1.86	0.41
1:13:1856:A:H2'	1:13:1857:C:C6	2.55	0.41
3:B5:49:VAL:HB	3:B5:83:VAL:CG2	2.49	0.41
7:8I:86:GLU:O	7:8I:90:ILE:HG12	2.20	0.41
1:1G:731:U:H2'	1:1G:732:C:C6	2.55	0.41
1:1G:897:U:H3	1:1G:911:A:H61	1.68	0.41
1:1G:1115:G:O2'	1:1G:1116:U:P	2.78	0.41
1:1G:1639:A:C6	1:1G:1640:A:C6	3.09	0.41
1:1G:1999:G:OP1	9:82:11:LYS:HB3	2.20	0.41
1:1G:2069:G:H8	1:1G:2069:G:O5'	2.04	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:58:12:ARG:HG2	10:58:13:TRP:N	2.35	0.41
2:65:84:GLN:HB2	2:65:110:LEU:N	2.35	0.41
4:19:93:ALA:HB3	4:19:105:ILE:CG2	2.46	0.41
4:19:117:VAL:O	4:19:118:VAL:HB	2.20	0.41
12:Q8:29:LYS:CD	12:Q8:29:LYS:N	2.84	0.41
12:Q8:57:ARG:HG3	30:78:49:ARG:HE	1.85	0.41
14:3E:154:ASN:CG	14:3E:155:LEU:H	2.22	0.41
9:82:63:ILE:HD11	9:82:81:ILE:HD11	2.00	0.41
15:1H:398:G:H4'	15:1H:399:A:OP2	2.21	0.41
15:1H:1140:C:H2'	15:1H:1141:G:H5'	2.02	0.41
15:1H:1635:A:H3'	15:1H:1636:A:H8	1.85	0.41
15:1H:1925:A:N1	15:1H:1995:A:C6	2.88	0.41
15:1H:2139:A:N3	15:1H:2139:A:H2'	2.35	0.41
15:1H:2695:C:H5'	23:21:189:PRO:HA	2.01	0.41
16:B8:26:ASP:HB2	16:B8:90:GLN:O	2.20	0.41
15:14:57:G:C2	15:14:69:G:C6	3.08	0.41
15:14:488:A:H3'	15:14:489:C:H6	1.86	0.41
15:14:1273:C:C3'	35:95:85:LYS:HA	2.50	0.41
15:14:1488:A:H2'	15:14:1489:G:O4'	2.20	0.41
15:14:2637:C:H5'	23:29:159:HIS:ND1	2.36	0.41
21:68:88:ASN:ND2	21:68:90:GLN:OE1	2.54	0.41
23:21:32:PRO:O	23:21:34:VAL:HG12	2.20	0.41
24:4I:36:LYS:HD2	24:4I:36:LYS:HA	1.91	0.41
27:C8:110:VAL:O	27:C8:113:ALA:HB3	2.21	0.41
25:42:143:ARG:HD3	25:42:143:ARG:HA	1.80	0.41
26:1J:15:A:O2'	26:1J:17:A:OP2	2.38	0.41
30:78:27:HIS:O	30:78:31:ALA:HA	2.19	0.41
32:31:64:ILE:HD13	32:31:64:ILE:HA	1.82	0.41
33:5I:21:TYR:HE2	33:5I:23:ARG:NE	2.17	0.41
40:49:111:LEU:HD22	40:49:117:PHE:CZ	2.55	0.41
44:1E:187:LEU:HD23	44:1E:201:ILE:HG22	2.02	0.41
47:51:16:SER:O	47:51:26:VAL:O	2.39	0.41
44:12:132:LYS:HA	44:12:135:GLN:NE2	2.35	0.41
50:7E:77:GLU:OE2	50:7E:81:HIS:NE2	2.54	0.41
8:2E:12:LEU:HD23	8:2E:12:LEU:HA	1.70	0.41
50:72:109:ILE:HG22	50:72:137:VAL:HB	2.02	0.41
52:W1:21:A:C5	52:W1:46:G:C6	3.09	0.41
52:X4:8:U:O4'	52:X4:48:C:O2'	2.33	0.41
52:V4:13:C:H2'	52:V4:14:A:H5'	2.01	0.41
1:13:891:A:H4'	1:13:892:G:C5'	2.50	0.41
1:13:1024:A:H5''	1:13:1025:G:OP2	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:13:1037:G:O2'	1:13:1039:C:OP1	2.25	0.41
1:13:1491:C:H2'	1:13:1492:G:O4'	2.20	0.41
1:13:1571:C:O2'	1:13:1572:A:H5'	2.21	0.41
1:13:1590:C:H4'	9:8E:125:TYR:HE1	1.85	0.41
1:13:1698:U:H2'	1:13:1699:C:C6	2.55	0.41
1:13:1875:A:N3	9:8E:70:LYS:HE2	2.36	0.41
1:13:1965:G:C6	1:13:1966:A:C6	3.09	0.41
1:13:2138:C:O2'	1:13:2139:G:H5'	2.20	0.41
8:22:65:ALA:HA	8:22:100:ALA:CB	2.47	0.41
1:1G:683:U:H2'	1:1G:684:G:O4'	2.21	0.41
1:1G:747:G:OP1	1:1G:967:G:N2	2.50	0.41
1:1G:987:G:H2'	1:1G:988:G:O4'	2.21	0.41
1:1G:1081:A:H5''	1:1G:1082:C:OP2	2.19	0.41
1:1G:1459:G:H2'	1:1G:1460:U:O4'	2.20	0.41
1:1G:1482:A:H2'	1:1G:1483:A:O4'	2.21	0.41
1:1G:1600:A:C8	1:1G:1850:C:C4	3.09	0.41
1:1G:1701:U:H2'	1:1G:1702:G:H8	1.85	0.41
1:1G:1717:G:C6	1:1G:1718:U:C4	3.09	0.41
1:1G:1830:C:H2'	1:1G:1831:A:O4'	2.21	0.41
1:1G:1974:G:C5	9:82:107:ARG:NH2	2.89	0.41
1:1G:2002:A:C5	1:1G:2003:A:C8	3.09	0.41
14:3E:108:LEU:HB3	14:3E:110:PHE:HE1	1.84	0.41
15:1H:307:A:C4	15:1H:384:A:C2	3.09	0.41
15:1H:1172:C:H2'	15:1H:1173:G:O4'	2.20	0.41
15:1H:1236:U:O2'	15:1H:1237:A:H5'	2.19	0.41
15:1H:1408:A:C2	15:1H:1421:U:C4	3.08	0.41
15:1H:1420:G:HO2'	15:1H:1421:U:H6	1.66	0.41
10:15:25:ARG:HA	15:14:1060:U:O4	2.20	0.41
16:B8:94:ALA:HB1	16:B8:99:LEU:HD21	2.02	0.41
12:M5:58:ILE:HG23	30:35:49:ARG:HD2	2.02	0.41
18:61:132:PRO:O	18:61:133:HIS:ND1	2.54	0.41
20:1F:3:LYS:HG2	20:1F:14:TRP:CD1	2.55	0.41
15:14:35:G:H1'	15:14:482:A:C4	2.55	0.41
15:14:229:U:O2'	15:14:230:G:H5'	2.21	0.41
15:14:507:A:H4'	15:14:508:A:OP1	2.20	0.41
15:14:873:A:H1'	15:14:2373:G:N7	2.34	0.41
15:14:1512:C:H4'	15:14:2718:C:H5'	2.03	0.41
15:14:1532:G:C2	15:14:1533:G:C8	3.09	0.41
15:14:1535:A:H2'	15:14:1536:G:C8	2.54	0.41
15:14:2495:C:H2'	15:14:2496:G:H5'	2.01	0.41
15:14:2824:G:OP1	23:29:61:ARG:HB3	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:H8:40:ASP:OD2	22:H8:43:GLU:N	2.37	0.41
23:21:67:PHE:C	23:21:69:LYS:H	2.23	0.41
23:21:116:VAL:HG13	23:21:122:PHE:CG	2.55	0.41
24:4I:31:LYS:HE2	24:4I:31:LYS:HB2	1.90	0.41
24:4I:82:MET:C	24:4I:84:ILE:H	2.24	0.41
27:C8:26:GLY:O	27:C8:30:LYS:HG2	2.21	0.41
30:78:32:THR:HG22	30:78:32:THR:O	2.21	0.41
35:D8:22:VAL:HG12	35:D8:23:GLU:O	2.19	0.41
36:N8:39:MET:O	36:N8:40:LYS:HD2	2.20	0.41
33:5A:55:GLY:O	48:1A:65:LEU:HD12	2.21	0.41
34:52:44:GLY:HA2	34:52:59:TYR:CE1	2.56	0.41
38:88:66:ILE:O	38:88:67:ARG:CB	2.69	0.41
41:6I:39:LEU:HA	41:6I:39:LEU:HD23	1.82	0.41
38:45:50:ALA:O	38:45:53:ALA:HB3	2.21	0.41
38:45:77:LYS:HE3	38:45:86:GLY:O	2.21	0.41
43:E8:88:ARG:HB3	43:E8:92:ARG:HB3	2.03	0.41
39:F5:73:LEU:HD23	39:F5:73:LEU:HA	1.63	0.41
44:1E:169:LYS:HD3	44:1E:169:LYS:HA	1.89	0.41
49:7I:83:GLU:HB3	49:7I:84:ALA:H	1.63	0.41
44:12:55:PHE:HA	44:12:58:ILE:CG1	2.51	0.41
44:12:142:LEU:HA	44:12:145:LEU:HB2	2.03	0.41
44:12:165:VAL:HG23	44:12:166:ASP:H	1.85	0.41
44:12:215:LEU:O	44:12:219:VAL:HG13	2.20	0.41
46:G5:53:LEU:O	46:G5:57:ILE:HG13	2.21	0.41
47:59:58:GLU:HB2	47:59:61:HIS:CE1	2.56	0.41
6:2I:31:THR:HA	6:2I:42:TRP:HA	2.03	0.41
8:2E:23:TYR:CD1	8:2E:24:ALA:N	2.89	0.41
52:V1:54:U:H2'	52:V1:55:U:C6	2.55	0.41
51:Y4:44:U:H2'	51:Y4:45:U:O5'	2.20	0.41
1:13:741:G:C5	1:13:742:C:C5	3.08	0.41
1:13:787:G:H2'	1:13:788:G:H8	1.85	0.41
1:13:884:A:H4'	1:13:885:U:H3'	2.03	0.41
1:13:1900:G:H5'	1:13:1901:G:OP2	2.21	0.41
1:13:2015:G:H2'	1:13:2016:C:C6	2.56	0.41
3:B5:64:LYS:HE2	3:B5:73:ARG:NH2	2.35	0.41
4:11:77:ALA:HB2	4:11:97:TYR:HA	2.02	0.41
8:22:3:ASN:H	8:22:3:ASN:ND2	2.14	0.41
9:8E:26:VAL:HG13	9:8E:61:ALA:HB3	2.02	0.41
1:1G:882:C:C2	1:1G:927:G:C2	3.08	0.41
1:1G:914:A:H1'	7:8A:16:GLN:NE2	2.35	0.41
1:1G:1081:A:H3'	1:1G:1082:C:C6	2.56	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:1G:1292:A:H2'	1:1G:1293:G:O4'	2.20	0.41
1:1G:1411:A:O3'	1:1G:2138:C:H4'	2.21	0.41
1:1G:1447:G:O2'	1:1G:1448:A:H5'	2.21	0.41
1:1G:1590:C:H5''	1:1G:1591:A:OP2	2.21	0.41
10:58:63:THR:OG1	15:1H:1189:U:H6	2.03	0.41
11:G8:89:PHE:HD1	11:G8:90:LEU:N	2.19	0.41
4:19:16:MET:HE1	4:19:208:LYS:HG2	2.02	0.41
4:19:235:GLY:O	4:19:237:GLU:HB3	2.20	0.41
4:19:237:GLU:CB	4:19:239:ARG:N	2.84	0.41
7:8A:28:PRO:HA	7:8A:35:VAL:HA	2.03	0.41
15:1H:509:G:C4	15:1H:534:A:C2	3.09	0.41
15:1H:781:C:H3'	56:1H:3745:HOH:O	2.19	0.41
15:1H:1155:G:H2'	15:1H:1156:U:C6	2.56	0.41
15:1H:1317:A:H2'	15:1H:1318:A:O4'	2.20	0.41
15:1H:1350:A:H2	15:1H:1675:G:N3	2.18	0.41
15:1H:1702:A:C2	15:1H:2031:C:N3	2.89	0.41
15:1H:1817:A:H5'	15:1H:2623:G:H4'	2.01	0.41
15:1H:1898:U:H5''	15:1H:2425:G:O2'	2.20	0.41
15:1H:2568:G:H5''	15:1H:2569:U:OP2	2.21	0.41
15:1H:2879:U:C2	15:1H:2881:A:H1'	2.56	0.41
16:B8:102:ILE:HB	16:B8:110:ILE:HG12	2.02	0.41
16:B8:105:LEU:HD12	16:B8:105:LEU:HA	1.70	0.41
11:C5:39:VAL:HG23	11:C5:41:GLY:N	2.36	0.41
13:3A:89:ARG:HD2	13:3A:91:LYS:HA	2.03	0.41
15:14:347:A:H5'	15:14:365:A:C1'	2.50	0.41
15:14:730:G:H2'	15:14:731:G:O4'	2.20	0.41
15:14:766:G:H2'	15:14:767:A:O4'	2.20	0.41
15:14:1023:G:C2	15:14:1038:A:C8	3.09	0.41
15:14:1069:A:H8	15:14:1069:A:H3'	1.86	0.41
15:14:1406:U:H2'	15:14:1407:G:O4'	2.20	0.41
15:14:2167:C:H2'	15:14:2168:C:C6	2.56	0.41
15:14:2558:G:N3	15:14:2781:A:H2'	2.36	0.41
22:H8:79:ARG:NH2	26:16:94:C:H5''	2.35	0.41
17:H5:52:HIS:HD2	17:H5:53:LEU:HG	1.83	0.41
23:21:50:GLY:HA2	23:21:76:ARG:O	2.21	0.41
25:4E:18:ARG:HG3	25:4E:25:ARG:O	2.20	0.41
20:1B:2:GLY:O	20:1B:5:ASP:N	2.30	0.41
21:25:71:ARG:HH22	21:25:122:LEU:C	2.24	0.41
22:D5:18:LEU:HD13	22:D5:23:LYS:HB2	2.02	0.41
23:29:119:ARG:HG2	23:29:160:TYR:CG	2.56	0.41
24:4A:97:PRO:HA	24:4A:110:ARG:HD3	2.03	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:1J:17:A:H1'	26:1J:112:G:C4	2.54	0.41
34:52:11:ASN:O	34:52:14:LEU:HD22	2.20	0.41
34:52:54:LYS:HB2	34:52:54:LYS:NZ	2.36	0.41
44:12:91:PRO:HG3	44:12:154:LEU:HB2	2.03	0.41
44:12:127:ILE:HG23	44:12:135:GLN:OE1	2.20	0.41
6:2I:17:GLY:HA3	6:2I:77:MET:CE	2.51	0.41
49:7A:40:ASP:HA	49:7A:41:PRO:HD2	1.86	0.41
52:X4:72:C:C2	52:X4:73:A:C8	3.08	0.41
1:13:1088:A:C4	1:13:1117:A:C2	3.09	0.41
1:13:1495:A:C5	1:13:1497:G:C8	3.08	0.41
1:13:1560:A:C2	1:13:2007:G:O6	2.74	0.41
1:13:1947:C:H42	29:AI:36:ARG:HG3	1.85	0.41
1:13:1969:C:H4'	9:8E:125:TYR:HB3	2.03	0.41
4:11:118:VAL:HG22	4:11:119:ALA:N	2.36	0.41
7:8I:43:LEU:HD12	7:8I:68:ARG:HG2	2.03	0.41
9:8E:110:GLU:HG2	9:8E:111:ARG:N	2.36	0.41
1:1G:1431:A:H2'	1:1G:1432:G:O4'	2.21	0.41
1:1G:1454:G:O2'	50:72:12:ARG:NH1	2.53	0.41
1:1G:1571:C:P	24:4A:109:THR:HG1	2.44	0.41
1:1G:1755:G:H1'	1:1G:1776:U:O2	2.21	0.41
10:58:106:MET:HG3	15:1H:1054:C:H1'	2.02	0.41
2:65:52:SER:O	2:65:56:LEU:HB2	2.20	0.41
12:Q8:57:ARG:CD	30:78:49:ARG:HG3	2.51	0.41
7:8A:34:LYS:HD3	7:8A:36:ILE:HG22	2.02	0.41
7:8A:89:LEU:HD13	7:8A:89:LEU:HA	1.97	0.41
14:3E:147:ALA:HB2	14:3E:182:LYS:HB3	2.02	0.41
15:1H:378:G:H2'	15:1H:379:G:H8	1.86	0.41
15:1H:558:C:OP1	15:1H:586:G:N2	2.54	0.41
15:1H:1023:G:H1'	15:1H:1038:A:C2	2.56	0.41
15:1H:1269:C:H2'	15:1H:1270:C:C6	2.54	0.41
15:1H:1465:G:HO2'	15:1H:1466:C:H6	1.69	0.41
15:1H:1584:U:C2	15:1H:1586:C:O2	2.74	0.41
15:1H:2044:A:N7	36:N8:9:LYS:HE3	2.36	0.41
15:1H:2419:C:O3'	30:78:77:ARG:NH2	2.53	0.41
15:1H:2518:A:H4'	15:1H:2519:U:OP1	2.20	0.41
15:1H:2705:C:H6	15:1H:2705:C:OP2	2.03	0.41
15:1H:2742:U:H6	21:68:67:LYS:HZ3	1.69	0.41
16:B8:74:ARG:HD3	16:B8:76:PHE:HZ	1.84	0.41
16:B8:102:ILE:HB	16:B8:110:ILE:CG1	2.51	0.41
14:32:146:ILE:HD12	14:32:146:ILE:H	1.86	0.41
15:14:658:A:H2'	15:14:659:A:O4'	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:14:787:G:C6	15:14:788:G:C2	3.09	0.41
15:14:868:A:P	15:14:1235:G:H22	2.43	0.41
15:14:879:G:H4'	15:14:880:G:OP2	2.21	0.41
15:14:882:U:H2'	15:14:883:C:C6	2.56	0.41
15:14:1503:A:C4	15:14:2717:U:C5	3.09	0.41
15:14:2643:C:O2	53:14:3004:8UZ:O9	2.39	0.41
15:14:2901:C:H2'	15:14:2902:C:H6	1.86	0.41
23:21:78:LEU:HG	23:21:79:ARG:CG	2.49	0.41
23:21:117:MET:HB2	23:21:122:PHE:O	2.21	0.41
25:4E:68:GLU:O	25:4E:70:PRO:HD3	2.21	0.41
28:M8:37:SER:OG	28:M8:44:THR:N	2.46	0.41
28:M8:52:THR:O	28:M8:53:GLU:HB2	2.21	0.41
23:29:1:MET:CE	23:29:200:GLU:HG3	2.50	0.41
24:4A:19:LEU:HG	24:4A:19:LEU:H	1.73	0.41
24:4A:66:LEU:HA	24:4A:70:LEU:HB2	2.02	0.41
25:42:78:HIS:CD2	50:72:107:LEU:HD13	2.56	0.41
32:31:201:VAL:O	32:31:205:ARG:N	2.54	0.41
35:D8:48:GLY:C	35:D8:49:THR:O	2.56	0.41
40:41:14:GLU:HA	40:41:17:PRO:HG2	2.01	0.41
43:E8:24:ILE:HA	43:E8:27:LYS:HG3	2.01	0.41
44:1E:172:ILE:H	44:1E:172:ILE:HG13	1.48	0.41
44:1E:194:PRO:O	44:1E:196:LEU:N	2.47	0.41
42:62:15:ASP:O	42:62:19:GLY:HA2	2.21	0.41
43:A5:65:LEU:HD13	43:A5:68:ARG:CD	2.47	0.41
48:1I:7:LYS:N	48:1I:97:GLU:O	2.53	0.41
49:7I:1:MET:SD	49:7I:1:MET:N	2.81	0.41
44:12:67:THR:HA	44:12:90:MET:SD	2.61	0.41
47:59:103:LEU:HD23	47:59:103:LEU:H	1.85	0.41
50:72:14:ARG:O	50:72:17:THR:HG22	2.21	0.41
52:X1:18:G:H1'	52:X1:58:A:C2	2.56	0.41
52:V1:75:C:O2'	52:V1:76:A:H2	2.04	0.41
52:W4:65:G:OP2	52:W4:65:G:H8	2.03	0.41
52:W4:66:U:C4	52:W4:67:C:N4	2.89	0.41
1:13:705:A:N3	1:13:705:A:H2'	2.35	0.41
1:13:762:C:OP1	1:13:953:C:H5'	2.21	0.41
1:13:1174:C:H2'	1:13:1175:G:O4'	2.21	0.41
1:13:1280:C:H2'	1:13:1281:U:C6	2.55	0.41
1:13:1348:C:O2'	19:9I:49:LYS:HB3	2.20	0.41
1:13:1685:G:H2'	1:13:1686:G:O4'	2.21	0.41
1:13:1732:G:O5'	44:1E:111:ARG:HD2	2.20	0.41
1:13:1785:A:O2'	1:13:1786:C:H5''	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:13:1951:A:H2'	1:13:1952:C:O4'	2.21	0.41
1:13:2027:C:C2	1:13:2125:A:N6	2.88	0.41
3:B5:26:TYR:HB3	3:B5:92:LEU:HD22	2.02	0.41
3:B5:27:THR:HA	3:B5:79:ALA:O	2.21	0.41
3:B5:34:ALA:HA	3:B5:38:GLU:OE2	2.21	0.41
8:22:50:ALA:HB1	8:22:70:VAL:HG11	2.03	0.41
9:8E:4:TYR:CE1	9:8E:88:TYR:HB2	2.55	0.41
9:8E:14:VAL:O	9:8E:65:VAL:HG23	2.21	0.41
1:1G:688:G:N3	1:1G:1251:A:H2	2.18	0.41
1:1G:841:G:C6	1:1G:842:U:O4	2.73	0.41
1:1G:849:A:N1	1:1G:862:C:H4'	2.36	0.41
1:1G:865:C:H2'	1:1G:866:C:C6	2.56	0.41
1:1G:964:U:H2'	1:1G:965:G:O4'	2.20	0.41
1:1G:999:U:H2'	1:1G:1000:U:C6	2.55	0.41
1:1G:1052:A:N7	1:1G:1054:G:N3	2.69	0.41
1:1G:1059:C:H2'	1:1G:1060:C:C6	2.55	0.41
1:1G:1134:G:H2'	1:1G:1134:G:N3	2.36	0.41
1:1G:1757:C:C2	1:1G:1767:G:N1	2.89	0.41
1:1G:1871:C:H2'	1:1G:1872:A:H8	1.86	0.41
1:1G:1950:G:H4'	1:1G:1990:C:C2	2.56	0.41
1:1G:1974:G:C8	9:82:107:ARG:HB3	2.55	0.41
1:1G:2061:A:N6	1:1G:2062:A:C6	2.89	0.41
10:58:133:GLN:OE1	10:58:133:GLN:N	2.52	0.41
2:65:36:TYR:OH	26:1J:30:C:OP1	2.30	0.41
11:G8:101:LYS:HB2	11:G8:101:LYS:HE3	1.95	0.41
4:19:41:GLY:HA3	4:19:43:ARG:CD	2.51	0.41
12:Q8:42:ARG:H	12:Q8:42:ARG:HG2	1.68	0.41
14:3E:108:LEU:CD1	14:3E:174:LEU:HD13	2.50	0.41
9:82:36:TYR:OH	9:82:73:GLN:NE2	2.49	0.41
15:1H:37:C:H2'	15:1H:38:A:H8	1.86	0.41
15:1H:140:A:H8	15:1H:1457:C:H1'	1.85	0.41
15:1H:151:C:H2'	15:1H:152:G:H8	1.85	0.41
15:1H:332:G:N2	15:1H:334:G:H3'	2.35	0.41
15:1H:519:A:H2'	15:1H:520:G:O4'	2.21	0.41
15:1H:557:G:O4'	15:1H:557:G:N3	2.52	0.41
15:1H:610:G:P	56:1H:3753:HOH:O	2.76	0.41
15:1H:720:C:OP1	30:78:42:SER:O	2.38	0.41
15:1H:1022:C:P	56:1H:3769:HOH:O	2.78	0.41
15:1H:1051:G:N2	15:1H:1202:C:C2	2.88	0.41
15:1H:1229:C:O2'	15:1H:1230:A:H5'	2.21	0.41
15:1H:1436:C:C2	15:1H:1437:G:C8	3.09	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:1H:1578:A:N6	15:1H:1591:G:O2'	2.40	0.41
15:1H:1738:U:O2	15:1H:1750:A:H8	2.04	0.41
15:1H:1947:G:H2'	15:1H:1948:U:C6	2.56	0.41
15:1H:1997:A:H2'	15:1H:1998:G:H8	1.85	0.41
15:1H:2053:U:H2'	15:1H:2054:G:O4'	2.20	0.41
15:1H:2078:G:OP1	23:21:144:ARG:HG3	2.21	0.41
15:1H:2153:C:N4	15:1H:2185:G:O6	2.53	0.41
15:1H:2533:A:H5'	15:1H:2533:A:C8	2.56	0.41
15:1H:2540:G:C2	15:1H:2554:C:C2	3.09	0.41
16:B8:113:LYS:HD2	16:B8:113:LYS:HA	1.90	0.41
11:C5:17:SER:CB	11:C5:71:LYS:HD2	2.48	0.41
11:C5:104:GLY:HA2	11:C5:105:ALA:HA	1.80	0.41
13:3A:27:LEU:O	13:3A:28:LYS:HB3	2.21	0.41
13:3A:124:LYS:HA	13:3A:125:PRO:HD3	1.81	0.41
19:9I:47:THR:O	19:9I:83:GLU:N	2.51	0.41
14:32:7:PRO:HB2	14:32:10:ARG:HD2	2.03	0.41
14:32:192:GLU:H	14:32:192:GLU:HG3	1.69	0.41
15:14:39:C:H2'	15:14:40:C:C6	2.56	0.41
15:14:208:A:H2	15:14:225:U:H4'	1.86	0.41
15:14:410:G:N2	15:14:421:C:C2	2.89	0.41
15:14:551:U:H2'	15:14:552:U:C6	2.55	0.41
15:14:605:C:H2'	15:14:606:C:H6	1.86	0.41
15:14:632:U:O2	15:14:648:A:N1	2.54	0.41
15:14:720:C:OP1	30:35:42:SER:O	2.39	0.41
15:14:829:G:C2	15:14:831:A:C2	3.08	0.41
15:14:1025:G:O2'	15:14:1026:G:H5'	2.21	0.41
15:14:1067:U:O2'	15:14:1069:A:H2	2.04	0.41
15:14:1165:G:H2'	15:14:1166:C:C6	2.56	0.41
15:14:1349:U:C2	15:14:1675:G:C6	3.09	0.41
15:14:1518:C:H2'	15:14:1519:A:H8	1.86	0.41
15:14:1523:G:H2'	15:14:1524:C:O4'	2.20	0.41
15:14:1545:A:C8	15:14:1627:C:O2'	2.71	0.41
15:14:1805:C:H1'	15:14:1820:A:H8	1.83	0.41
15:14:1929:G:H2'	15:14:1930:C:O4'	2.21	0.41
15:14:2276:C:H1'	15:14:2403:A:N3	2.36	0.41
15:14:2487:G:H1	15:14:2492:C:P	2.43	0.41
15:14:2521:U:H1'	52:W4:76:A:O3'	2.21	0.41
15:14:2630:U:N1	36:J5:7:PRO:HA	2.36	0.41
15:14:2662:U:H2'	15:14:2663:C:H6	1.85	0.41
15:14:2833:A:C4	45:55:4:LEU:HD11	2.55	0.41
15:14:2882:G:H2'	15:14:2883:C:O4'	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:75:56:GLY:O	16:75:59:THR:HG22	2.21	0.41
17:H5:4:LEU:HD23	17:H5:4:LEU:HA	1.88	0.41
23:21:81:ILE:HG22	23:21:81:ILE:O	2.21	0.41
23:21:107:THR:O	23:21:190:GLY:HA2	2.21	0.41
23:21:170:LEU:HD21	23:21:187:ALA:HB3	2.02	0.41
18:69:40:THR:O	18:69:44:LEU:HB2	2.21	0.41
25:42:118:ILE:HG12	25:42:119:LEU:N	2.36	0.41
26:1J:15:A:H5''	26:1J:17:A:C6	2.55	0.41
30:78:47:ASP:HA	30:78:48:PRO:HD3	1.66	0.41
29:AA:18:LYS:O	29:AA:22:LEU:HB3	2.20	0.41
29:AA:28:LYS:CG	29:AA:29:ARG:H	2.34	0.41
29:AA:78:ARG:HD3	29:AA:78:ARG:N	2.25	0.41
34:5E:21:LEU:HD12	34:5E:21:LEU:HA	1.87	0.41
34:5E:55:ASP:HA	34:5E:56:PRO:HD2	1.72	0.41
34:5E:86:ARG:H	34:5E:86:ARG:HG2	1.56	0.41
35:D8:12:TYR:CD1	35:D8:12:TYR:N	2.88	0.41
35:D8:45:THR:OG1	35:D8:45:THR:O	2.39	0.41
36:N8:30:LEU:HD23	36:N8:41:PRO:HA	2.03	0.41
36:N8:40:LYS:HZ3	36:N8:46:CYS:HB3	1.82	0.41
37:BI:35:THR:O	37:BI:38:LYS:HB2	2.21	0.41
37:BI:63:ILE:HG22	37:BI:77:ALA:HB1	2.02	0.41
35:95:14:VAL:HA	35:95:18:LEU:HD22	2.03	0.41
35:95:62:LEU:CD2	35:95:95:LEU:HB2	2.51	0.41
35:95:80:GLN:HE22	35:95:82:ARG:CZ	2.32	0.41
37:BA:72:LEU:O	37:BA:73:HIS:HB2	2.21	0.41
38:45:55:VAL:HG11	52:W4:53:G:H5''	2.01	0.41
40:49:111:LEU:HA	40:49:111:LEU:HD23	1.84	0.41
43:A5:82:LEU:HD22	43:A5:84:ARG:HH21	1.86	0.41
47:51:3:ARG:HH21	47:51:7:LEU:HD11	1.83	0.41
47:51:54:ARG:NE	47:51:62:LYS:HG3	2.36	0.41
47:51:86:GLU:O	47:51:131:VAL:O	2.38	0.41
44:12:233:SER:HB2	44:12:234:PRO:HD2	2.03	0.41
50:7E:120:THR:OG1	50:7E:123:GLU:HG3	2.20	0.41
45:55:100:LEU:HD23	45:55:100:LEU:HA	1.71	0.41
47:59:11:VAL:HB	47:59:13:LYS:HE2	2.03	0.41
47:59:117:PRO:HA	47:59:118:PRO:HD2	1.94	0.41
6:2I:23:ALA:HB2	6:2I:28:THR:HG23	2.03	0.41
8:2E:16:ARG:HD2	8:2E:54:ARG:HH21	1.85	0.41
50:72:2:LEU:C	50:72:4:ASP:H	2.24	0.41
52:X1:23:A:H2'	52:X1:24:G:O4'	2.21	0.41
52:V1:33:U:H4'	52:V1:33:U:OP1	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:W4:74:C:C4	52:W4:75:C:C2	3.09	0.41
52:V4:31:A:C6	52:V4:32:U:C2	3.09	0.41
52:V4:34:G:OP1	52:V4:34:G:H3'	2.21	0.41
52:V4:45:U:O2'	52:V4:47:U:O2	2.39	0.41
1:13:720:C:C2'	1:13:721:G:H5''	2.51	0.41
1:13:904:A:OP2	37:BI:79:ARG:NH1	2.54	0.41
1:13:1312:G:C6	1:13:1313:A:C5	3.09	0.41
1:13:1455:C:H4'	50:7E:12:ARG:HG3	2.02	0.41
1:13:1562:G:C6	1:13:1563:C:N4	2.89	0.41
1:13:1796:A:N1	1:13:1797:A:C2	2.88	0.41
1:13:1893:G:N2	1:13:1897:C:N3	2.69	0.41
1:13:1939:G:H5'	29:AI:6:LYS:HD2	2.03	0.41
1:13:1987:A:H2'	1:13:1988:G:O4'	2.21	0.41
3:B5:57:LEU:HD21	3:B5:78:LYS:HD2	2.02	0.41
4:11:182:LEU:HA	4:11:182:LEU:HD23	1.72	0.41
1:1G:1075:U:H2'	1:1G:1076:C:C6	2.56	0.41
1:1G:1087:G:O6	1:1G:1115:G:H2'	2.21	0.41
1:1G:1443:A:H2'	1:1G:1445:A:C5'	2.51	0.41
1:1G:2014:G:C2	1:1G:2015:G:C8	3.08	0.41
10:58:85:ILE:HA	10:58:86:PRO:HD3	1.91	0.41
2:65:15:ARG:NE	2:65:88:ASP:OD2	2.46	0.41
4:19:42:GLY:HA3	4:19:51:VAL:O	2.21	0.41
4:19:50:THR:HB	15:14:1839:U:O2	2.21	0.41
4:19:242:ARG:HH22	15:14:1996:A:P	2.44	0.41
12:Q8:6:THR:O	12:Q8:8:LYS:HD3	2.21	0.41
14:3E:155:LEU:HD23	14:3E:155:LEU:HA	1.70	0.41
14:3E:155:LEU:O	14:3E:158:ILE:N	2.52	0.41
15:1H:807:C:O2	15:1H:2006:A:H2	2.04	0.41
15:1H:1221:G:H8	15:1H:1221:G:OP2	2.04	0.41
15:1H:1865:G:H2'	15:1H:1866:C:C6	2.56	0.41
15:1H:2187:G:H2'	15:1H:2188:C:C6	2.56	0.41
15:1H:2405:U:O2'	15:1H:2406:G:H5'	2.21	0.41
15:1H:2630:U:H2'	15:1H:2631:C:C6	2.56	0.41
15:1H:2649:G:C6	53:1H:3004:8UZ:N	2.89	0.41
15:1H:2873:A:N7	15:1H:2874:G:H1'	2.36	0.41
15:14:16:G:O2'	15:14:17:G:H5'	2.21	0.41
15:14:115:G:N1	15:14:117:A:N6	2.69	0.41
15:14:211:A:N6	15:14:255:A:C8	2.89	0.41
15:14:314:A:H2'	15:14:314:A:N3	2.36	0.41
15:14:471:A:C6	32:39:45:ARG:HD2	2.56	0.41
15:14:606:C:H2'	15:14:607:G:H8	1.85	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:14:608:G:OP2	27:85:10:ARG:HD2	2.21	0.41
15:14:848:G:C6	15:14:849:A:C6	3.08	0.41
15:14:1096:A:C5	15:14:1159:A:H2	2.39	0.41
15:14:1632:C:O2'	15:14:1635:A:H8	2.03	0.41
15:14:2792:A:H4'	15:14:2794:A:OP1	2.21	0.41
15:14:2885:G:C4	15:14:2886:A:C2	3.09	0.41
24:4I:71:ARG:HA	24:4I:74:VAL:HB	2.03	0.41
25:4E:79:GLU:CD	25:4E:79:GLU:H	2.23	0.41
20:1B:6:ARG:HD3	20:1B:15:ARG:CZ	2.51	0.41
21:25:28:SER:OG	21:25:29:ASN:N	2.54	0.41
27:C8:5:LYS:H	27:C8:5:LYS:HG3	1.48	0.41
24:4A:37:THR:HB	24:4A:39:ILE:HD11	2.03	0.41
25:42:90:VAL:O	25:42:120:THR:HA	2.21	0.41
26:1J:25:G:C2	26:1J:26:G:O6	2.74	0.41
26:1J:92:A:H3'	26:1J:93:C:O4'	2.21	0.41
30:78:125:VAL:O	30:78:144:GLU:HB2	2.21	0.41
27:85:72:HIS:CE1	27:85:107:ALA:HA	2.56	0.41
32:31:140:LEU:HA	32:31:140:LEU:HD12	1.73	0.41
30:35:115:LEU:HD23	30:35:131:SER:HB2	2.02	0.41
38:88:18:LYS:HE2	38:88:18:LYS:HB2	1.87	0.41
39:J8:58:ILE:HG23	39:J8:87:PRO:HG3	2.03	0.41
39:J8:87:PRO:O	39:J8:88:LYS:C	2.58	0.41
43:E8:107:LEU:HD12	43:E8:107:LEU:HA	1.87	0.41
43:A5:88:ARG:HB3	43:A5:92:ARG:HB3	2.02	0.41
48:1A:15:THR:HG21	48:1A:92:THR:HG21	2.02	0.41
48:1I:90:LEU:N	48:1I:91:PRO:HD3	2.36	0.41
49:7I:27:LYS:HE3	49:7I:27:LYS:HB2	1.91	0.41
45:55:57:ARG:HE	45:55:59:ASP:CG	2.24	0.41
47:59:4:ILE:HG12	47:59:4:ILE:H	1.60	0.41
47:59:111:HIS:HA	47:59:112:PRO:HD2	1.91	0.41
8:2E:42:LEU:HD13	8:2E:42:LEU:HA	1.91	0.41
50:72:125:ARG:HE	50:72:125:ARG:HB2	1.46	0.41
1:13:721:G:C5	1:13:722:G:H1'	2.56	0.40
1:13:912:C:H2'	1:13:913:C:H6	1.86	0.40
1:13:1152:A:H61	13:3I:92:ASP:CB	2.32	0.40
1:13:1313:A:O2'	6:2I:38:ASN:HB3	2.21	0.40
5:L5:27:GLY:O	5:L5:30:VAL:HB	2.22	0.40
7:8I:45:HIS:HB3	7:8I:72:ARG:HG2	2.03	0.40
8:22:124:ILE:O	8:22:127:ARG:N	2.45	0.40
9:8E:60:ASP:OD1	9:8E:60:ASP:N	2.54	0.40
1:1G:1103:A:H4'	49:7A:80:PHE:O	2.21	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:1G:1413:C:C2	1:1G:1428:G:N2	2.89	0.40
1:1G:1745:G:H5'	1:1G:1746:C:OP2	2.21	0.40
10:58:23:LEU:HD12	10:58:23:LEU:HA	1.68	0.40
10:58:28:THR:O	10:58:31:ALA:HB3	2.21	0.40
4:19:105:ILE:HG23	4:19:106:ILE:O	2.19	0.40
13:3I:53:ARG:NH1	13:3I:92:ASP:HB3	2.36	0.40
14:3E:106:TYR:CE2	14:3E:107:ARG:HD3	2.56	0.40
14:3E:170:VAL:HG13	14:3E:171:GLY:O	2.22	0.40
15:1H:767:A:H5''	15:1H:768:C:OP2	2.20	0.40
15:1H:905:C:H2'	15:1H:906:C:H6	1.86	0.40
15:1H:1036:A:O5'	15:1H:1036:A:H8	2.03	0.40
15:1H:1528:G:H2'	15:1H:1529:G:C8	2.55	0.40
15:1H:1941:A:H2'	15:1H:1942:U:O4'	2.21	0.40
15:1H:2000:G:C2	15:1H:2001:U:C2	3.09	0.40
15:1H:2065:C:H2'	15:1H:2066:U:O4'	2.20	0.40
15:1H:2311:U:H4'	15:1H:2312:C:OP1	2.21	0.40
15:1H:2710:C:H2'	15:1H:2711:U:C6	2.56	0.40
10:15:15:LEU:HG	10:15:134:ARG:HG3	2.02	0.40
15:14:332:G:N2	15:14:334:G:H3'	2.35	0.40
15:14:555:A:C3'	15:14:556:A:H5''	2.51	0.40
15:14:769:C:H2'	15:14:770:C:H6	1.86	0.40
15:14:813:A:N1	15:14:1823:A:O2'	2.50	0.40
15:14:836:U:P	56:14:3707:HOH:O	2.79	0.40
15:14:1101:C:H42	15:14:1154:G:H1	1.69	0.40
15:14:1198:G:C2	15:14:1199:C:C4	3.08	0.40
15:14:1591:G:H3'	15:14:1592:A:C5'	2.51	0.40
15:14:1919:C:C2'	15:14:1920:C:H5'	2.51	0.40
15:14:1977:A:C2	21:25:22:ILE:HG23	2.56	0.40
15:14:2286:G:C5	15:14:2287:U:C5	3.08	0.40
15:14:2541:G:H5'	15:14:2758:C:O2'	2.20	0.40
16:75:50:ILE:HD12	16:75:50:ILE:HA	1.71	0.40
18:69:2:LYS:H	18:69:2:LYS:HG2	1.53	0.40
18:69:140:LEU:HD12	18:69:140:LEU:HA	1.74	0.40
19:9A:74:ARG:HB3	19:9A:81:PHE:CE1	2.56	0.40
26:16:29:C:H6	26:16:29:C:H5''	1.86	0.40
27:C8:93:LYS:H	27:C8:93:LYS:HG3	1.65	0.40
28:M8:17:GLY:H	28:M8:35:VAL:HA	1.86	0.40
26:1J:16:U:OP2	26:1J:72:C:O2'	2.33	0.40
27:85:102:GLU:HB3	27:85:105:VAL:HG13	2.03	0.40
28:I5:37:SER:HB2	40:49:108:ASN:O	2.20	0.40
32:31:112:MET:HE3	32:31:112:MET:HB3	1.97	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:35:147:LEU:HD23	30:35:148:LEU:O	2.22	0.40
35:D8:62:LEU:HA	35:D8:62:LEU:HD12	1.64	0.40
36:J5:52:TYR:CD1	36:J5:53:ALA:N	2.89	0.40
40:41:47:LYS:HE3	40:41:47:LYS:HB2	1.89	0.40
40:41:82:LEU:HD23	40:41:82:LEU:HA	1.80	0.40
41:6I:47:LYS:HB3	41:6I:47:LYS:NZ	2.36	0.40
38:45:34:LEU:HD12	38:45:34:LEU:HA	1.83	0.40
41:6A:43:LEU:HD23	41:6A:43:LEU:HA	1.76	0.40
44:12:24:TRP:H	44:12:24:TRP:HD1	1.69	0.40
46:G5:9:GLN:NE2	46:G5:60:LEU:HD13	2.35	0.40
6:2I:41:THR:HG21	6:2I:71:LYS:HD3	2.03	0.40
49:7A:72:ARG:HH11	49:7A:73:LEU:CD2	2.34	0.40
52:V4:23:A:H2'	52:V4:24:G:C8	2.56	0.40
1:13:691:U:O5'	1:13:691:U:H6	2.04	0.40
1:13:733:C:N4	1:13:734:G:O6	2.54	0.40
1:13:919:G:N2	7:8I:95:TYR:HB3	2.36	0.40
1:13:970:A:C2	1:13:973:G:C4	3.09	0.40
1:13:1047:G:H5''	14:3E:5:ILE:HG12	2.04	0.40
1:13:1581:A:C6	1:13:1582:A:N1	2.89	0.40
1:13:1626:G:N1	1:13:1627:G:H1'	2.36	0.40
1:13:1889:C:C2	1:13:1890:C:C5	3.09	0.40
1:13:2127:G:OP1	1:13:2130:A:H4'	2.20	0.40
3:B5:31:HIS:HA	3:B5:32:PRO:HD3	1.81	0.40
1:1G:1016:U:OP1	49:7A:69:THR:OG1	2.25	0.40
1:1G:1153:G:H2'	1:1G:1154:C:C6	2.55	0.40
1:1G:1426:C:O2'	1:1G:1427:G:H5'	2.20	0.40
1:1G:1700:G:C6	1:1G:1701:U:C4	3.08	0.40
1:1G:1829:G:N2	33:5A:46:GLU:OE1	2.53	0.40
10:58:120:LEU:HD22	10:58:121:LYS:N	2.37	0.40
12:Q8:57:ARG:HA	12:Q8:58:ILE:C	2.41	0.40
15:1H:936:A:OP1	24:4I:93:ARG:HD3	2.20	0.40
15:1H:993:G:OP1	56:1H:3777:HOH:O	2.22	0.40
15:1H:1076:A:N6	15:1H:1173:G:H2'	2.35	0.40
15:1H:1547:C:O4'	15:1H:1627:C:H4'	2.21	0.40
15:1H:1755:G:C6	15:1H:1756:U:C4	3.08	0.40
15:1H:1988:U:OP1	15:1H:1988:U:C6	2.74	0.40
15:1H:2169:U:H1'	15:1H:2173:G:N2	2.35	0.40
15:1H:2634:C:H4'	23:21:151:TYR:O	2.22	0.40
15:1H:2698:C:H4'	23:21:13:ARG:NH2	2.35	0.40
15:1H:2706:C:O3'	15:1H:2884:C:H4'	2.21	0.40
15:1H:2720:A:H2	45:98:64:ARG:HH11	1.69	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:9I:59:SER:H	19:9I:62:GLU:HB2	1.87	0.40
15:14:10:G:H3'	15:14:11:G:H8	1.86	0.40
15:14:920:U:OP1	38:45:5:ARG:HG3	2.20	0.40
15:14:1073:G:C4	15:14:1183:C:H1'	2.55	0.40
15:14:1457:C:H2'	15:14:1458:C:C6	2.56	0.40
15:14:1531:U:H5'	15:14:1532:G:P	2.61	0.40
15:14:2297:G:H4'	15:14:2404:G:O2'	2.21	0.40
24:4I:80:ARG:NH1	29:AI:65:ASN:O	2.54	0.40
19:9A:86:VAL:HG12	19:9A:87:ARG:NH1	2.34	0.40
22:D5:28:MET:O	22:D5:34:ASN:HA	2.21	0.40
23:29:65:GLY:CA	23:29:68:ALA:HB2	2.50	0.40
24:4A:10:PRO:HG2	24:4A:45:VAL:HG21	2.03	0.40
29:AI:18:LYS:HG2	29:AI:22:LEU:HD13	2.02	0.40
26:1J:80:A:H2'	26:1J:81:C:O4'	2.20	0.40
30:78:147:LEU:HD12	30:78:147:LEU:HA	1.93	0.40
28:I5:5:ILE:HD12	40:49:67:LYS:HE3	2.02	0.40
30:35:147:LEU:CG	30:35:148:LEU:H	2.34	0.40
31:E5:21:LEU:HD11	31:E5:41:ARG:HH11	1.83	0.40
32:39:63:LYS:NZ	32:39:67:GLN:HB2	2.37	0.40
38:45:25:ASP:HA	38:45:67:ARG:NH1	2.37	0.40
38:45:35:VAL:HG12	38:45:36:ALA:N	2.34	0.40
43:E8:90:ARG:HH11	43:E8:90:ARG:HD2	1.62	0.40
40:49:20:ILE:HG23	40:49:25:TYR:HB2	2.02	0.40
40:49:89:GLY:O	40:49:90:LEU:HD23	2.21	0.40
44:1E:163:PHE:CD1	44:1E:185:ILE:HG13	2.57	0.40
45:98:42:LYS:HA	45:98:45:ARG:HD3	2.03	0.40
48:1I:62:HIS:H	48:1I:62:HIS:CD2	2.38	0.40
48:1I:78:ASN:HB2	48:1I:81:THR:H	1.86	0.40
52:V1:7:A:N6	52:V1:49:C:C4	2.89	0.40
1:13:799:G:C2	1:13:801:A:H5''	2.56	0.40
1:13:1523:A:H2'	1:13:1524:A:O4'	2.21	0.40
3:B5:39:ILE:O	3:B5:43:VAL:HG22	2.21	0.40
4:11:224:ALA:N	15:1H:1860:G:OP1	2.48	0.40
5:L5:17:GLY:O	5:L5:20:ALA:HB3	2.22	0.40
1:1G:1493:U:H4'	1:1G:1494:U:H5''	2.03	0.40
1:1G:1544:U:O2	25:42:19:MET:HB3	2.21	0.40
1:1G:1918:G:H2'	1:1G:1919:U:C6	2.56	0.40
1:1G:2156:C:N4	1:1G:2157:A:C6	2.90	0.40
15:1H:476:U:C4	15:1H:608:G:H1'	2.56	0.40
15:1H:734:A:H1'	15:1H:737:U:O4	2.20	0.40
15:1H:784:A:N7	15:1H:810:A:H2	2.20	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:1H:1098:A:C8	15:1H:2767:G:C5	3.09	0.40
15:1H:1239:G:OP1	30:78:32:THR:HG23	2.22	0.40
15:1H:1461:A:C6	15:1H:1462:G:C6	3.09	0.40
15:1H:2631:C:H2'	15:1H:2632:C:H6	1.85	0.40
10:15:32:THR:HG22	10:15:37:LYS:CB	2.51	0.40
19:9I:37:VAL:O	19:9I:41:LYS:N	2.33	0.40
15:14:163:G:H2'	15:14:164:C:H6	1.86	0.40
15:14:676:G:C6	15:14:677:C:C4	3.09	0.40
15:14:798:C:O2	15:14:1667:A:H2'	2.21	0.40
15:14:957:A:H2'	15:14:960:C:C5	2.56	0.40
15:14:1237:A:O3'	30:35:34:GLY:HA2	2.22	0.40
15:14:1629:A:H2'	15:14:1630:A:C8	2.56	0.40
15:14:2128:C:H2'	15:14:2129:G:H8	1.82	0.40
22:H8:105:VAL:O	22:H8:140:ASP:HA	2.21	0.40
17:H5:17:LYS:HA	17:H5:17:LYS:HD2	1.97	0.40
26:16:17:A:HO2'	26:16:112:G:H8	1.58	0.40
22:D5:39:VAL:HG21	22:D5:44:PHE:HB2	2.03	0.40
28:M8:23:GLU:HB2	40:41:6:ALA:HB3	2.02	0.40
23:29:6:GLY:HA2	23:29:51:PHE:CZ	2.56	0.40
23:29:57:LYS:HE2	23:29:57:LYS:HB3	1.96	0.40
29:AI:50:ALA:HA	29:AI:58:VAL:O	2.21	0.40
30:35:85:LEU:HB3	30:35:114:ILE:HD11	2.04	0.40
30:35:106:LEU:O	30:35:106:LEU:HG	2.20	0.40
32:39:4:VAL:HG13	32:39:19:GLU:CD	2.41	0.40
32:39:143:ALA:O	32:39:148:LEU:HB2	2.21	0.40
35:95:80:GLN:HE22	35:95:82:ARG:NH2	2.20	0.40
40:41:34:LEU:HD22	40:41:34:LEU:HA	1.76	0.40
37:BA:18:GLN:O	37:BA:22:ARG:HB2	2.21	0.40
38:45:63:LYS:HG2	38:45:65:PHE:CE2	2.56	0.40
43:E8:36:LEU:HD23	43:E8:36:LEU:HA	1.90	0.40
44:1E:24:TRP:CE3	44:1E:26:PRO:HA	2.56	0.40
48:1I:76:ASN:HA	48:1I:77:PRO:HD2	1.86	0.40
44:12:10:LEU:HA	44:12:13:ALA:HB2	2.03	0.40
44:12:70:PHE:O	44:12:93:VAL:N	2.39	0.40
44:12:72:GLY:HA2	44:12:165:VAL:HG21	2.04	0.40
52:X4:24:G:C5	52:X4:25:C:C4	3.09	0.40
1:13:844:U:O4'	37:BI:103:GLY:HA2	2.21	0.40
1:13:1018:G:OP1	49:7I:3:LYS:HD2	2.21	0.40
1:13:1032:G:C5	1:13:1033:G:C8	3.10	0.40
1:13:1352:U:O4	1:13:2160:U:H4'	2.22	0.40
1:13:1354:G:C4	1:13:1355:C:C5	3.09	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:13:1357:A:C5	41:6I:54:ARG:HD2	2.57	0.40
1:13:1602:C:N4	56:13:2521:HOH:O	2.54	0.40
1:13:1971:C:O2'	1:13:1972:U:H5'	2.21	0.40
1:13:1989:C:H2'	1:13:1990:C:H5''	2.04	0.40
2:A8:2:ALA:HA	2:A8:3:ARG:HA	1.87	0.40
4:11:2:ALA:HB1	4:11:200:ASP:OD2	2.21	0.40
8:22:29:TYR:OH	33:5A:54:PRO:HD2	2.22	0.40
8:22:91:LEU:O	8:22:94:LEU:HG	2.22	0.40
1:1G:1106:G:C2	1:1G:1107:G:C5	3.08	0.40
1:1G:1477:G:N1	1:1G:1478:G:N7	2.69	0.40
1:1G:1803:A:O2'	1:1G:1804:G:H5'	2.22	0.40
1:1G:1815:A:O3'	33:5A:58:LYS:HE3	2.21	0.40
14:3E:194:LEU:HD12	14:3E:194:LEU:HA	1.62	0.40
9:82:3:GLN:HG2	9:82:20:ARG:HG2	2.02	0.40
15:1H:104:C:H2'	15:1H:105:C:C6	2.57	0.40
15:1H:296:C:H2'	15:1H:297:U:C6	2.57	0.40
15:1H:339:A:O2'	15:1H:340:G:H5'	2.22	0.40
15:1H:538:U:O4	15:1H:539:G:N1	2.55	0.40
15:1H:627:G:N2	15:1H:704:A:C8	2.80	0.40
15:1H:628:A:C8	15:1H:704:A:N1	2.89	0.40
15:1H:1098:A:H2'	15:1H:1099:G:C8	2.56	0.40
15:1H:2367:A:C4	15:1H:2381:A:C2	3.10	0.40
15:1H:2653:G:OP2	23:21:82:ARG:NH2	2.55	0.40
15:1H:2867:G:C2	15:1H:2877:G:C2	3.10	0.40
11:C5:47:LYS:HZ1	15:14:525:G:H21	1.65	0.40
11:C5:75:ILE:CG2	11:C5:76:CYS:N	2.84	0.40
14:32:168:ARG:HD3	14:32:169:LYS:N	2.36	0.40
15:14:9:U:O4	15:14:2644:A:C6	2.75	0.40
15:14:635:G:N2	15:14:646:G:H1'	2.36	0.40
15:14:860:U:O4	30:35:21:ARG:NH2	2.54	0.40
15:14:876:U:H4'	15:14:877:U:C6	2.56	0.40
15:14:1260:G:O2'	15:14:1284:G:O6	2.39	0.40
15:14:1686:C:OP2	56:14:3685:HOH:O	2.22	0.40
15:14:2286:G:C6	15:14:2287:U:C4	3.10	0.40
15:14:2535:C:H41	15:14:2557:A:H62	1.70	0.40
15:14:2681:C:H3'	15:14:2682:C:C6	2.56	0.40
15:14:2868:C:H2'	15:14:2869:C:C6	2.56	0.40
22:H8:151:HIS:H	22:H8:154:ASP:CG	2.22	0.40
18:69:116:LEU:HD13	18:69:128:LEU:HD11	2.02	0.40
24:4I:62:ASN:HA	28:M8:49:PHE:CE1	2.57	0.40
24:4I:97:PRO:HB3	24:4I:101:GLN:OE1	2.20	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:4E:20:GLN:HG2	25:4E:21:ALA:H	1.87	0.40
24:4A:102:ARG:O	24:4A:107:ALA:HB2	2.21	0.40
25:42:89:ILE:HG21	25:42:135:THR:HA	2.03	0.40
34:5E:68:PRO:HG2	34:5E:71:ARG:HG3	2.03	0.40
31:E5:37:LEU:HG	31:E5:60:PHE:HA	2.02	0.40
36:N8:49:CYS:H	36:N8:57:VAL:CG1	2.32	0.40
32:39:32:LEU:CD1	32:39:105:VAL:HG13	2.48	0.40
34:52:5:GLU:HA	34:52:63:TYR:O	2.21	0.40
45:98:98:LEU:HD23	45:98:98:LEU:HA	1.81	0.40
44:12:6:THR:HG21	44:12:217:ARG:HB3	2.03	0.40
51:Y1:31:A:H4'	51:Y1:32:A:OP2	2.21	0.40
52:V4:38:A:H5'	52:V4:39:U:OP2	2.21	0.40
1:13:788:G:H1	1:13:814:C:N4	2.20	0.40
1:13:788:G:N2	1:13:789:A:C5	2.90	0.40
1:13:1149:A:N1	1:13:1165:C:H1'	2.36	0.40
1:13:1315:U:HO2'	1:13:1316:A:H8	1.66	0.40
1:13:1364:C:O2'	1:13:1365:C:H5'	2.22	0.40
2:A8:9:ARG:HH11	2:A8:9:ARG:HD2	1.77	0.40
7:8I:29:HIS:CD2	13:3I:11:VAL:HG13	2.56	0.40
7:8I:70:ARG:O	7:8I:71:PHE:HD1	2.05	0.40
9:8E:87:GLN:O	9:8E:90:PRO:HD3	2.21	0.40
1:1G:849:A:N6	1:1G:862:C:H5'	2.36	0.40
1:1G:913:C:C2	1:1G:914:A:C8	3.09	0.40
1:1G:1209:U:H2'	1:1G:1210:G:O4'	2.21	0.40
1:1G:1255:U:H2'	1:1G:1256:G:H8	1.85	0.40
1:1G:1900:G:C5	1:1G:1901:G:C5	3.09	0.40
2:65:106:ARG:O	2:65:107:GLU:CD	2.60	0.40
11:G8:33:LYS:HE2	11:G8:33:LYS:HB2	1.98	0.40
4:19:88:ARG:NH2	15:14:1851:G:OP1	2.37	0.40
4:19:130:ALA:HA	4:19:192:THR:HA	2.02	0.40
4:19:208:LYS:HB2	15:14:778:G:C5	2.56	0.40
13:3I:84:LEU:HD23	13:3I:101:VAL:HG21	2.04	0.40
14:3E:100:ARG:NH1	14:3E:137:SER:HA	2.37	0.40
15:1H:85:C:O2'	15:1H:102:U:O2'	2.26	0.40
15:1H:243:C:H2'	15:1H:244:G:O4'	2.20	0.40
15:1H:674:G:H5''	53:1H:3005:8UZ:N3	2.37	0.40
15:1H:823:A:H2	15:1H:836:U:O2'	2.05	0.40
15:1H:1159:A:H5'	47:51:3:ARG:CD	2.51	0.40
15:1H:1365:U:H2'	15:1H:1366:A:H8	1.86	0.40
15:1H:1397:G:C2	15:1H:1648:C:N3	2.89	0.40
15:1H:2027:G:H2'	15:1H:2028:G:C8	2.56	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:1H:2521:U:C2	15:1H:2600:U:O4	2.75	0.40
15:1H:2590:C:O2'	15:1H:2593:G:N7	2.48	0.40
15:1H:2632:C:H2'	15:1H:2633:G:O4'	2.21	0.40
15:1H:2679:G:H8	15:1H:2679:G:O5'	2.04	0.40
16:B8:42:ILE:HD12	16:B8:42:ILE:H	1.86	0.40
11:C5:6:HIS:HE1	11:C5:69:ALA:O	2.04	0.40
18:61:5:LEU:HA	18:61:5:LEU:HD23	1.81	0.40
18:61:9:LEU:HD13	18:61:9:LEU:HA	1.92	0.40
13:3A:86:ARG:HB2	13:3A:101:VAL:CG2	2.52	0.40
15:14:4:C:HO2'	15:14:5:A:P	2.43	0.40
15:14:239:C:H4'	15:14:240:G:O5'	2.22	0.40
15:14:979:G:H4'	15:14:980:A:O5'	2.22	0.40
15:14:1099:G:H8	15:14:1099:G:OP2	2.04	0.40
15:14:1191:A:C8	15:14:1193:G:N7	2.90	0.40
15:14:1572:U:C2	15:14:1573:G:C8	3.10	0.40
15:14:1805:C:C1'	15:14:1820:A:C8	3.04	0.40
15:14:2069:C:C2	15:14:2640:G:N2	2.90	0.40
15:14:2289:A:C6	15:14:2291:G:C8	3.09	0.40
15:14:2709:G:C4	15:14:2710:C:C5	3.08	0.40
15:14:2770:U:H5''	15:14:2770:U:H6	1.86	0.40
23:21:105:THR:HG22	23:21:106:GLY:N	2.30	0.40
25:4E:79:GLU:OE2	50:7E:105:ARG:HG2	2.22	0.40
26:16:2:A:N6	26:16:122:A:N6	2.68	0.40
23:29:16:ARG:HE	23:29:16:ARG:HB3	1.71	0.40
29:AI:41:VAL:HG21	29:AI:67:VAL:HA	2.03	0.40
32:31:68:LYS:C	32:31:70:THR:H	2.25	0.40
30:35:97:PRO:O	30:35:98:GLU:HB3	2.22	0.40
35:D8:35:LEU:HB2	35:D8:37:VAL:HG23	2.03	0.40
35:D8:64:HIS:CG	35:D8:92:THR:HG22	2.56	0.40
41:6I:10:LYS:O	41:6I:14:GLU:HB2	2.21	0.40
38:45:3:MET:HG3	38:45:4:PRO:O	2.21	0.40
38:45:58:PHE:HB3	38:45:113:GLN:NE2	2.37	0.40
39:F5:18:ILE:HG12	39:F5:37:ILE:HB	2.04	0.40
40:49:180:PHE:O	40:49:182:LYS:HG3	2.22	0.40
41:6A:4:THR:OG1	41:6A:7:GLU:HG2	2.22	0.40
43:A5:15:ARG:HH11	43:A5:15:ARG:HD3	1.78	0.40
3:F8:92:LEU:HD23	3:F8:92:LEU:HA	1.88	0.40
47:59:88:LEU:HD13	47:59:164:TYR:O	2.21	0.40
8:2E:150:LYS:HD3	8:2E:152:ILE:HG13	2.03	0.40
52:V1:25:C:C4	52:V1:26:A:C8	3.10	0.40
52:V1:29:G:H1	52:V1:41:C:H42	1.69	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:X4:1:G:C6	52:X4:73:A:C6	3.09	0.40

There are no symmetry-related clashes.

## 5.3 Torsion angles [i](#)

### 5.3.1 Protein backbone [i](#)

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

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

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
2	65	109/112 (97%)	87 (80%)	19 (17%)	3 (3%)	5	26
2	A8	109/112 (97%)	94 (86%)	14 (13%)	1 (1%)	17	53
3	B5	90/96 (94%)	80 (89%)	7 (8%)	3 (3%)	4	22
3	F8	92/96 (96%)	84 (91%)	6 (6%)	2 (2%)	6	32
4	11	271/276 (98%)	255 (94%)	11 (4%)	5 (2%)	8	37
4	19	271/276 (98%)	252 (93%)	15 (6%)	4 (2%)	10	41
5	L5	45/49 (92%)	43 (96%)	2 (4%)	0	100	100
5	P8	45/49 (92%)	41 (91%)	3 (7%)	1 (2%)	6	32
6	2A	114/129 (88%)	103 (90%)	9 (8%)	2 (2%)	8	37
6	2I	114/129 (88%)	102 (90%)	10 (9%)	2 (2%)	8	37
7	8A	97/105 (92%)	93 (96%)	4 (4%)	0	100	100
7	8I	98/105 (93%)	93 (95%)	5 (5%)	0	100	100
8	22	204/239 (85%)	181 (89%)	22 (11%)	1 (0%)	29	65
8	2E	203/239 (85%)	184 (91%)	18 (9%)	1 (0%)	29	65
9	82	122/128 (95%)	113 (93%)	8 (7%)	1 (1%)	19	55
9	8E	125/128 (98%)	106 (85%)	19 (15%)	0	100	100
10	15	136/140 (97%)	126 (93%)	9 (7%)	1 (1%)	22	59
10	58	136/140 (97%)	117 (86%)	15 (11%)	4 (3%)	4	25
11	C5	102/110 (93%)	75 (74%)	22 (22%)	5 (5%)	2	14

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
11	G8	101/110 (92%)	78 (77%)	18 (18%)	5 (5%)	2	14
12	M5	62/65 (95%)	53 (86%)	8 (13%)	1 (2%)	9	40
12	Q8	58/65 (89%)	39 (67%)	14 (24%)	5 (9%)	1	4
13	3A	123/132 (93%)	107 (87%)	13 (11%)	3 (2%)	6	30
13	3I	120/132 (91%)	103 (86%)	17 (14%)	0	100	100
14	32	206/209 (99%)	179 (87%)	25 (12%)	2 (1%)	15	51
14	3E	206/209 (99%)	193 (94%)	12 (6%)	1 (0%)	29	65
16	75	135/146 (92%)	120 (89%)	13 (10%)	2 (2%)	10	41
16	B8	127/146 (87%)	120 (94%)	7 (6%)	0	100	100
17	H5	57/60 (95%)	54 (95%)	3 (5%)	0	100	100
17	L8	55/60 (92%)	50 (91%)	4 (7%)	1 (2%)	8	37
18	61	144/148 (97%)	121 (84%)	20 (14%)	3 (2%)	7	33
18	69	144/148 (97%)	113 (78%)	26 (18%)	5 (4%)	3	21
19	9A	67/88 (76%)	63 (94%)	4 (6%)	0	100	100
19	9I	65/88 (74%)	62 (95%)	2 (3%)	1 (2%)	10	41
20	1B	23/27 (85%)	22 (96%)	1 (4%)	0	100	100
20	1F	21/27 (78%)	20 (95%)	1 (5%)	0	100	100
21	25	120/122 (98%)	113 (94%)	7 (6%)	0	100	100
21	68	120/122 (98%)	115 (96%)	4 (3%)	1 (1%)	19	55
22	D5	129/206 (63%)	104 (81%)	22 (17%)	3 (2%)	6	31
22	H8	169/206 (82%)	139 (82%)	22 (13%)	8 (5%)	2	15
23	21	203/206 (98%)	163 (80%)	32 (16%)	8 (4%)	3	19
23	29	203/206 (98%)	161 (79%)	31 (15%)	11 (5%)	2	12
24	4A	114/126 (90%)	94 (82%)	17 (15%)	3 (3%)	5	28
24	4I	114/126 (90%)	95 (83%)	18 (16%)	1 (1%)	17	53
25	42	149/162 (92%)	143 (96%)	6 (4%)	0	100	100
25	4E	149/162 (92%)	140 (94%)	8 (5%)	1 (1%)	22	59
27	85	115/118 (98%)	105 (91%)	10 (9%)	0	100	100
27	C8	115/118 (98%)	107 (93%)	4 (4%)	4 (4%)	3	21
28	I5	61/71 (86%)	42 (69%)	16 (26%)	3 (5%)	2	14
28	M8	64/71 (90%)	49 (77%)	14 (22%)	1 (2%)	9	40

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
29	AA	76/93 (82%)	62 (82%)	12 (16%)	2 (3%)	5	28
29	AI	78/93 (84%)	67 (86%)	6 (8%)	5 (6%)	1	9
30	35	148/150 (99%)	115 (78%)	27 (18%)	6 (4%)	3	18
30	78	145/150 (97%)	117 (81%)	23 (16%)	5 (3%)	3	21
31	E5	82/85 (96%)	74 (90%)	5 (6%)	3 (4%)	3	19
31	I8	81/85 (95%)	78 (96%)	3 (4%)	0	100	100
32	31	200/210 (95%)	182 (91%)	16 (8%)	2 (1%)	15	51
32	39	206/210 (98%)	165 (80%)	33 (16%)	8 (4%)	3	19
33	5A	56/61 (92%)	47 (84%)	8 (14%)	1 (2%)	8	37
33	5I	58/61 (95%)	50 (86%)	6 (10%)	2 (3%)	3	21
34	52	99/101 (98%)	95 (96%)	4 (4%)	0	100	100
34	5E	99/101 (98%)	94 (95%)	5 (5%)	0	100	100
35	95	99/101 (98%)	76 (77%)	20 (20%)	3 (3%)	4	24
35	D8	99/101 (98%)	92 (93%)	6 (6%)	1 (1%)	15	51
36	J5	54/60 (90%)	48 (89%)	6 (11%)	0	100	100
36	N8	53/60 (88%)	42 (79%)	9 (17%)	2 (4%)	3	19
37	BA	97/106 (92%)	84 (87%)	11 (11%)	2 (2%)	7	33
37	BI	97/106 (92%)	82 (84%)	15 (16%)	0	100	100
38	45	138/141 (98%)	111 (80%)	25 (18%)	2 (1%)	11	43
38	88	139/141 (99%)	120 (86%)	14 (10%)	5 (4%)	3	20
39	F5	92/98 (94%)	86 (94%)	5 (5%)	1 (1%)	14	48
39	J8	93/98 (95%)	84 (90%)	7 (8%)	2 (2%)	6	32
40	41	179/182 (98%)	162 (90%)	14 (8%)	3 (2%)	9	38
40	49	179/182 (98%)	156 (87%)	21 (12%)	2 (1%)	14	48
41	6A	86/89 (97%)	80 (93%)	6 (7%)	0	100	100
41	6I	86/89 (97%)	82 (95%)	4 (5%)	0	100	100
42	62	143/156 (92%)	133 (93%)	10 (7%)	0	100	100
42	6E	140/156 (90%)	131 (94%)	8 (6%)	1 (1%)	22	59
43	A5	111/113 (98%)	103 (93%)	7 (6%)	1 (1%)	17	53
43	E8	110/113 (97%)	103 (94%)	7 (6%)	0	100	100
44	12	235/256 (92%)	197 (84%)	35 (15%)	3 (1%)	12	44

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
44	1E	235/256 (92%)	196 (83%)	36 (15%)	3 (1%)	12	44
45	55	115/118 (98%)	106 (92%)	7 (6%)	2 (2%)	9	38
45	98	116/118 (98%)	102 (88%)	11 (10%)	3 (3%)	5	28
46	G5	65/72 (90%)	59 (91%)	4 (6%)	2 (3%)	4	23
46	K8	66/72 (92%)	63 (96%)	1 (2%)	2 (3%)	4	24
47	51	172/180 (96%)	149 (87%)	17 (10%)	6 (4%)	3	21
47	59	168/180 (93%)	128 (76%)	36 (21%)	4 (2%)	6	30
48	1A	97/105 (92%)	92 (95%)	5 (5%)	0	100	100
48	1I	97/105 (92%)	89 (92%)	8 (8%)	0	100	100
49	7A	82/88 (93%)	77 (94%)	5 (6%)	0	100	100
49	7I	82/88 (93%)	78 (95%)	4 (5%)	0	100	100
50	72	136/138 (99%)	125 (92%)	9 (7%)	2 (2%)	10	41
50	7E	136/138 (99%)	127 (93%)	8 (6%)	1 (1%)	22	59
All	All	11147/11946 (93%)	9805 (88%)	1146 (10%)	196 (2%)	8	37

All (196) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
6	2A	48	ILE
12	Q8	31	HIS
14	3E	31	CYS
9	82	118	LYS
11	C5	29	GLU
12	M5	63	PRO
16	75	107	ASP
23	21	83	ASP
18	69	75	LEU
27	C8	89	GLU
22	D5	53	ILE
23	29	25	VAL
23	29	59	VAL
30	78	57	THR
28	I5	5	ILE
29	AA	11	VAL
31	E5	33	ALA
37	BA	73	HIS
38	45	27	VAL

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
38	45	81	VAL
39	F5	30	VAL
46	K8	47	ASN
46	K8	48	HIS
45	55	107	ASP
46	G5	48	HIS
10	58	127	ASP
4	19	33	LEU
17	L8	54	VAL
13	3A	18	VAL
19	9I	22	VAL
22	H8	6	LYS
22	H8	60	GLU
22	H8	165	VAL
27	C8	93	LYS
22	D5	165	VAL
23	29	81	ILE
30	35	6	LEU
30	35	35	HIS
30	35	57	THR
31	E5	44	ARG
36	N8	41	PRO
36	N8	42	PRO
32	39	84	VAL
32	39	128	ALA
33	5A	29	ARG
38	88	90	VAL
35	95	45	THR
39	J8	75	GLU
47	51	168	PRO
47	51	169	VAL
44	12	7	VAL
50	7E	86	ILE
3	B5	68	ARG
4	11	240	ALA
11	G8	40	GLU
11	G8	54	LYS
12	Q8	50	LEU
23	21	118	LYS
18	69	111	PRO
24	4I	83	ASP
23	29	26	ILE

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
23	29	51	PHE
23	29	90	THR
24	4A	12	ASN
29	AI	67	VAL
32	39	124	LEU
32	39	167	ALA
38	88	21	THR
38	88	66	ILE
45	98	11	ASN
47	51	83	TYR
47	51	167	GLU
3	F8	2	LYS
46	G5	47	ASN
47	59	131	VAL
2	A8	4	LEU
4	11	122	ASP
6	2A	101	SER
10	58	97	ARG
2	65	87	PHE
4	19	273	ARG
18	61	12	LEU
18	61	133	HIS
18	61	145	VAL
16	75	2	ASN
22	H8	59	LEU
23	21	21	VAL
23	21	56	PRO
23	21	82	ARG
18	69	117	GLU
18	69	145	VAL
22	D5	161	VAL
23	29	9	VAL
30	78	12	ALA
30	78	42	SER
31	E5	9	SER
32	39	26	ALA
38	88	6	ARG
40	41	97	ASP
40	41	98	ARG
40	49	47	LYS
43	A5	93	ALA
47	51	85	LYS

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
3	F8	68	ARG
47	59	92	ILE
50	72	73	ASP
4	11	237	GLU
2	65	83	LYS
2	65	111	GLU
11	G8	76	CYS
12	Q8	6	THR
10	15	128	HIS
11	C5	17	SER
11	C5	94	LYS
14	32	32	ALA
14	32	63	LYS
21	68	97	ARG
22	H8	81	ARG
23	21	54	GLN
23	21	55	ASN
23	29	68	ALA
29	AI	7	LYS
28	I5	24	THR
32	31	130	ALA
33	5I	13	THR
32	39	11	VAL
35	95	71	LEU
39	J8	76	ARG
40	41	5	VAL
42	6E	152	ALA
45	98	4	LEU
45	98	45	ARG
44	12	154	LEU
45	55	3	HIS
6	2I	82	VAL
8	2E	4	LYS
3	B5	44	GLU
4	11	3	VAL
10	58	22	THR
10	58	128	HIS
11	G8	81	LYS
4	19	3	VAL
12	Q8	30	ARG
11	C5	20	TYR
13	3A	47	LYS

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
23	21	72	VAL
25	4E	115	VAL
29	AI	23	ASN
32	31	197	ASP
33	5I	14	PRO
32	39	25	PRO
37	BA	49	ALA
44	1E	165	VAL
44	1E	230	VAL
6	2I	91	ARG
50	72	2	LEU
23	29	77	ILE
24	4A	95	GLY
30	78	7	ARG
28	I5	33	VAL
35	D8	49	THR
44	1E	239	VAL
5	P8	46	VAL
22	H8	141	VAL
18	69	144	VAL
27	C8	88	ILE
27	C8	90	VAL
23	29	91	VAL
30	78	95	VAL
30	35	7	ARG
30	35	34	GLY
30	35	62	LEU
32	39	89	VAL
35	95	72	VAL
47	51	127	GLU
3	B5	51	VAL
8	22	130	VAL
11	G8	77	PRO
4	19	118	VAL
12	Q8	58	ILE
13	3A	96	VAL
22	H8	53	ILE
28	M8	5	ILE
23	29	62	PRO
24	4A	84	ILE
29	AI	9	VAL
29	AI	41	VAL

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Mol	Chain	Res	Type
29	AA	67	VAL
38	88	27	VAL
40	49	5	VAL
44	12	39	ILE
47	59	4	ILE
4	11	123	ALA
11	C5	3	VAL
22	H8	62	PRO
47	59	36	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	65	87/88 (99%)	65 (75%)	22 (25%)	0	2
2	A8	87/88 (99%)	56 (64%)	31 (36%)	0	0
3	B5	74/78 (95%)	62 (84%)	12 (16%)	2	10
3	F8	76/78 (97%)	60 (79%)	16 (21%)	1	5
4	11	215/218 (99%)	167 (78%)	48 (22%)	1	4
4	19	214/218 (98%)	170 (79%)	44 (21%)	1	5
5	L5	40/42 (95%)	34 (85%)	6 (15%)	3	13
5	P8	40/42 (95%)	30 (75%)	10 (25%)	0	2
6	2A	88/99 (89%)	72 (82%)	16 (18%)	1	8
6	2I	88/99 (89%)	71 (81%)	17 (19%)	1	7
7	8A	94/97 (97%)	82 (87%)	12 (13%)	4	18
7	8I	95/97 (98%)	77 (81%)	18 (19%)	1	7
8	22	160/188 (85%)	122 (76%)	38 (24%)	0	3
8	2E	159/188 (85%)	120 (76%)	39 (24%)	0	2
9	82	95/99 (96%)	79 (83%)	16 (17%)	2	9
9	8E	98/99 (99%)	73 (74%)	25 (26%)	0	2
10	15	117/119 (98%)	94 (80%)	23 (20%)	1	6

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
10	58	117/119 (98%)	90 (77%)	27 (23%)	1	3
11	C5	85/91 (93%)	65 (76%)	20 (24%)	1	3
11	G8	84/91 (92%)	61 (73%)	23 (27%)	0	1
12	M5	54/55 (98%)	40 (74%)	14 (26%)	0	2
12	Q8	50/55 (91%)	32 (64%)	18 (36%)	0	0
13	3A	104/109 (95%)	83 (80%)	21 (20%)	1	6
13	3I	103/109 (94%)	85 (82%)	18 (18%)	2	9
14	32	180/181 (99%)	148 (82%)	32 (18%)	2	8
14	3E	180/181 (99%)	147 (82%)	33 (18%)	1	8
16	75	120/127 (94%)	83 (69%)	37 (31%)	0	1
16	B8	115/127 (91%)	80 (70%)	35 (30%)	0	1
17	H5	51/52 (98%)	41 (80%)	10 (20%)	1	7
17	L8	49/52 (94%)	38 (78%)	11 (22%)	1	4
18	61	122/124 (98%)	92 (75%)	30 (25%)	0	2
18	69	122/124 (98%)	93 (76%)	29 (24%)	0	3
19	9A	60/77 (78%)	46 (77%)	14 (23%)	1	3
19	9I	59/77 (77%)	43 (73%)	16 (27%)	0	1
20	1B	20/22 (91%)	18 (90%)	2 (10%)	7	28
20	1F	18/22 (82%)	14 (78%)	4 (22%)	1	4
21	25	100/100 (100%)	76 (76%)	24 (24%)	0	3
21	68	100/100 (100%)	83 (83%)	17 (17%)	2	9
22	D5	125/179 (70%)	98 (78%)	27 (22%)	1	5
22	H8	152/179 (85%)	121 (80%)	31 (20%)	1	5
23	21	165/166 (99%)	120 (73%)	45 (27%)	0	1
23	29	165/166 (99%)	123 (74%)	42 (26%)	0	2
24	4A	94/101 (93%)	74 (79%)	20 (21%)	1	5
24	4I	94/101 (93%)	74 (79%)	20 (21%)	1	5
25	42	116/123 (94%)	94 (81%)	22 (19%)	1	7
25	4E	116/123 (94%)	91 (78%)	25 (22%)	1	5
27	85	93/94 (99%)	75 (81%)	18 (19%)	1	7
27	C8	93/94 (99%)	76 (82%)	17 (18%)	1	8

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
28	I5	57/63 (90%)	46 (81%)	11 (19%)	1	7
28	M8	59/63 (94%)	45 (76%)	14 (24%)	1	3
29	AA	67/80 (84%)	52 (78%)	15 (22%)	1	4
29	AI	70/80 (88%)	48 (69%)	22 (31%)	0	0
30	35	116/116 (100%)	81 (70%)	35 (30%)	0	1
30	78	114/116 (98%)	85 (75%)	29 (25%)	0	2
31	E5	62/67 (92%)	51 (82%)	11 (18%)	2	8
31	I8	66/67 (98%)	57 (86%)	9 (14%)	3	16
32	31	161/166 (97%)	128 (80%)	33 (20%)	1	5
32	39	165/166 (99%)	118 (72%)	47 (28%)	0	1
33	5A	48/50 (96%)	36 (75%)	12 (25%)	0	2
33	5I	49/50 (98%)	37 (76%)	12 (24%)	0	2
34	52	90/90 (100%)	74 (82%)	16 (18%)	2	8
34	5E	90/90 (100%)	75 (83%)	15 (17%)	2	9
35	95	82/82 (100%)	62 (76%)	20 (24%)	0	2
35	D8	82/82 (100%)	60 (73%)	22 (27%)	0	1
36	J5	48/52 (92%)	39 (81%)	9 (19%)	1	7
36	N8	48/52 (92%)	38 (79%)	10 (21%)	1	5
37	BA	76/82 (93%)	66 (87%)	10 (13%)	4	17
37	BI	76/82 (93%)	61 (80%)	15 (20%)	1	6
38	45	110/111 (99%)	87 (79%)	23 (21%)	1	5
38	88	111/111 (100%)	88 (79%)	23 (21%)	1	5
39	F5	79/83 (95%)	59 (75%)	20 (25%)	0	2
39	J8	80/83 (96%)	62 (78%)	18 (22%)	1	4
40	41	155/156 (99%)	124 (80%)	31 (20%)	1	6
40	49	155/156 (99%)	127 (82%)	28 (18%)	1	8
41	6A	79/80 (99%)	66 (84%)	13 (16%)	2	10
41	6I	79/80 (99%)	66 (84%)	13 (16%)	2	10
42	62	121/127 (95%)	93 (77%)	28 (23%)	1	3
42	6E	118/127 (93%)	99 (84%)	19 (16%)	2	10
43	A5	92/92 (100%)	72 (78%)	20 (22%)	1	5

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
43	E8	91/92 (99%)	71 (78%)	20 (22%)	1	4
44	12	205/220 (93%)	166 (81%)	39 (19%)	1	7
44	1E	205/220 (93%)	151 (74%)	54 (26%)	0	2
45	55	100/101 (99%)	75 (75%)	25 (25%)	0	2
45	98	101/101 (100%)	81 (80%)	20 (20%)	1	6
46	G5	63/67 (94%)	51 (81%)	12 (19%)	1	7
46	K8	64/67 (96%)	44 (69%)	20 (31%)	0	0
47	51	145/148 (98%)	110 (76%)	35 (24%)	0	2
47	59	142/148 (96%)	106 (75%)	36 (25%)	0	2
48	1A	89/92 (97%)	69 (78%)	20 (22%)	1	4
48	1I	89/92 (97%)	66 (74%)	23 (26%)	0	2
49	7A	72/74 (97%)	63 (88%)	9 (12%)	4	19
49	7I	72/74 (97%)	57 (79%)	15 (21%)	1	5
50	72	119/119 (100%)	101 (85%)	18 (15%)	3	13
50	7E	119/119 (100%)	96 (81%)	23 (19%)	1	7
All	All	9414/9894 (95%)	7347 (78%)	2067 (22%)	1	4

All (2067) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
2	A8	4	LEU
2	A8	5	THR
2	A8	8	GLU
2	A8	12	PHE
2	A8	14	VAL
2	A8	15	ARG
2	A8	17	ARG
2	A8	19	LYS
2	A8	24	LEU
2	A8	30	ARG
2	A8	35	ILE
2	A8	36	TYR
2	A8	38	GLN
2	A8	42	ASP
2	A8	43	GLU
2	A8	46	VAL
2	A8	49	VAL

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
2	A8	50	SER
2	A8	54	LEU
2	A8	56	LEU
2	A8	58	LEU
2	A8	69	VAL
2	A8	73	LEU
2	A8	83	LYS
2	A8	89	ARG
2	A8	101	LEU
2	A8	103	GLU
2	A8	106	ARG
2	A8	107	GLU
2	A8	111	GLU
2	A8	112	PHE
3	B5	3	THR
3	B5	35	THR
3	B5	38	GLU
3	B5	45	THR
3	B5	48	LYS
3	B5	59	VAL
3	B5	60	ARG
3	B5	63	LYS
3	B5	66	LEU
3	B5	75	ASP
3	B5	88	LYS
3	B5	93	GLU
4	11	4	LYS
4	11	17	THR
4	11	20	ASP
4	11	27	THR
4	11	35	LYS
4	11	37	LEU
4	11	40	THR
4	11	54	ARG
4	11	61	LEU
4	11	64	ILE
4	11	65	ILE
4	11	91	ARG
4	11	94	LEU
4	11	103	ARG
4	11	105	ILE
4	11	106	ILE

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
4	11	112	GLN
4	11	113	VAL
4	11	117	VAL
4	11	126	GLN
4	11	131	LEU
4	11	136	ILE
4	11	140	THR
4	11	141	VAL
4	11	142	VAL
4	11	155	LEU
4	11	162	SER
4	11	165	ILE
4	11	169	GLU
4	11	173	VAL
4	11	174	ILE
4	11	176	ARG
4	11	192	THR
4	11	193	VAL
4	11	200	ASP
4	11	206	LEU
4	11	217	ARG
4	11	218	ARG
4	11	221	VAL
4	11	226	MET
4	11	229	VAL
4	11	237	GLU
4	11	257	LEU
4	11	261	LYS
4	11	262	ARG
4	11	263	ARG
4	11	271	ILE
4	11	273	ARG
5	L5	1	MET
5	L5	4	THR
5	L5	32	LYS
5	L5	33	ARG
5	L5	36	GLN
5	L5	43	THR
6	2A	12	ARG
6	2A	14	VAL
6	2A	29	ILE
6	2A	30	VAL

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
6	2A	33	THR
6	2A	63	LEU
6	2A	79	SER
6	2A	80	VAL
6	2A	87	THR
6	2A	95	ILE
6	2A	98	LEU
6	2A	103	LEU
6	2A	105	VAL
6	2A	114	VAL
6	2A	116	HIS
6	2A	124	LYS
7	8I	6	LEU
7	8I	12	SER
7	8I	14	LYS
7	8I	19	VAL
7	8I	25	ARG
7	8I	27	PHE
7	8I	31	LEU
7	8I	38	ARG
7	8I	45	HIS
7	8I	48	GLU
7	8I	52	LYS
7	8I	60	ILE
7	8I	68	ARG
7	8I	74	LEU
7	8I	78	GLU
7	8I	89	LEU
7	8I	92	ARG
7	8I	101	ARG
8	22	3	ASN
8	22	4	LYS
8	22	5	ILE
8	22	11	ARG
8	22	16	ARG
8	22	18	TRP
8	22	20	SER
8	22	21	ARG
8	22	22	TRP
8	22	26	LYS
8	22	29	TYR
8	22	36	ASP

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
8	22	40	ARG
8	22	42	LEU
8	22	47	LEU
8	22	54	ARG
8	22	76	VAL
8	22	83	ARG
8	22	84	ILE
8	22	86	VAL
8	22	101	LEU
8	22	104	GLN
8	22	107	GLN
8	22	118	GLN
8	22	119	ARG
8	22	120	VAL
8	22	131	ARG
8	22	141	VAL
8	22	154	SER
8	22	166	GLU
8	22	167	TRP
8	22	182	ILE
8	22	191	THR
8	22	192	THR
8	22	193	TYR
8	22	196	LEU
8	22	198	VAL
8	22	207	VAL
9	8E	7	THR
9	8E	9	ARG
9	8E	10	ARG
9	8E	20	ARG
9	8E	25	LYS
9	8E	34	ASN
9	8E	38	GLN
9	8E	40	LEU
9	8E	42	ARG
9	8E	44	VAL
9	8E	47	LEU
9	8E	70	LYS
9	8E	79	LEU
9	8E	86	VAL
9	8E	91	ASP
9	8E	92	TYR

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
9	8E	93	ARG
9	8E	95	LYS
9	8E	99	LEU
9	8E	105	ASP
9	8E	108	VAL
9	8E	112	LYS
9	8E	113	LYS
9	8E	114	TYR
9	8E	121	ARG
10	58	2	LYS
10	58	5	VAL
10	58	7	LYS
10	58	10	GLU
10	58	32	THR
10	58	33	LEU
10	58	34	LEU
10	58	35	ARG
10	58	43	THR
10	58	58	ASP
10	58	60	ILE
10	58	62	VAL
10	58	65	LYS
10	58	67	LEU
10	58	69	GLN
10	58	87	LEU
10	58	89	LYS
10	58	90	MET
10	58	96	GLU
10	58	99	LEU
10	58	106	MET
10	58	120	LEU
10	58	127	ASP
10	58	130	HIS
10	58	131	GLN
10	58	134	ARG
10	58	137	LYS
2	65	3	ARG
2	65	12	PHE
2	65	17	ARG
2	65	23	ARG
2	65	24	LEU
2	65	27	SER

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
2	65	36	TYR
2	65	44	LYS
2	65	48	LEU
2	65	50	SER
2	65	56	LEU
2	65	58	LEU
2	65	64	GLU
2	65	73	LEU
2	65	83	LYS
2	65	84	GLN
2	65	88	ASP
2	65	101	LEU
2	65	106	ARG
2	65	107	GLU
2	65	110	LEU
2	65	112	PHE
11	G8	4	LYS
11	G8	6	HIS
11	G8	21	LYS
11	G8	24	VAL
11	G8	33	LYS
11	G8	38	ILE
11	G8	39	VAL
11	G8	40	GLU
11	G8	42	VAL
11	G8	46	LYS
11	G8	54	LYS
11	G8	55	TYR
11	G8	57	GLN
11	G8	63	LYS
11	G8	64	GLU
11	G8	70	SER
11	G8	71	LYS
11	G8	79	CYS
11	G8	84	ARG
11	G8	85	VAL
11	G8	86	ARG
11	G8	91	GLU
11	G8	97	ARG
4	19	28	GLU
4	19	37	LEU
4	19	38	LYS

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
4	19	39	LYS
4	19	43	ARG
4	19	49	ILE
4	19	61	LEU
4	19	64	ILE
4	19	65	ILE
4	19	78	LYS
4	19	82	ILE
4	19	88	ARG
4	19	94	LEU
4	19	105	ILE
4	19	111	LEU
4	19	113	VAL
4	19	116	GLN
4	19	140	THR
4	19	141	VAL
4	19	147	LEU
4	19	154	LYS
4	19	166	GLN
4	19	182	LEU
4	19	183	ARG
4	19	192	THR
4	19	193	VAL
4	19	200	ASP
4	19	204	ILE
4	19	211	ARG
4	19	212	SER
4	19	218	ARG
4	19	232	PRO
4	19	237	GLU
4	19	242	ARG
4	19	244	ARG
4	19	255	LYS
4	19	257	LEU
4	19	260	ARG
4	19	262	ARG
4	19	263	ARG
4	19	266	SER
4	19	270	ILE
4	19	271	ILE
4	19	273	ARG
12	Q8	6	THR

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
12	Q8	25	MET
12	Q8	27	THR
12	Q8	29	LYS
12	Q8	31	HIS
12	Q8	32	LEU
12	Q8	35	GLN
12	Q8	42	ARG
12	Q8	43	GLN
12	Q8	44	LYS
12	Q8	46	ARG
12	Q8	47	LYS
12	Q8	48	PHE
12	Q8	54	GLU
12	Q8	56	GLU
12	Q8	57	ARG
12	Q8	60	LEU
12	Q8	61	LEU
13	3I	7	ILE
13	3I	20	LYS
13	3I	33	ARG
13	3I	38	THR
13	3I	57	LYS
13	3I	60	LEU
13	3I	81	SER
13	3I	83	VAL
13	3I	91	LYS
13	3I	92	ASP
13	3I	96	VAL
13	3I	102	ARG
13	3I	104	VAL
13	3I	114	LYS
13	3I	116	SER
13	3I	123	LYS
13	3I	124	LYS
13	3I	126	LYS
7	8A	12	SER
7	8A	31	LEU
7	8A	49	GLU
7	8A	60	ILE
7	8A	63	ARG
7	8A	67	LYS
7	8A	68	ARG

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
7	8A	70	ARG
7	8A	79	SER
7	8A	81	ARG
7	8A	89	LEU
7	8A	92	ARG
14	3E	3	ARG
14	3E	5	ILE
14	3E	8	VAL
14	3E	9	CYS
14	3E	10	ARG
14	3E	15	GLU
14	3E	19	LEU
14	3E	24	GLU
14	3E	26	CYS
14	3E	28	SER
14	3E	49	ARG
14	3E	53	ASP
14	3E	58	LEU
14	3E	59	ARG
14	3E	61	LYS
14	3E	96	LEU
14	3E	122	ARG
14	3E	127	THR
14	3E	134	ASP
14	3E	135	LEU
14	3E	137	SER
14	3E	141	ARG
14	3E	152	SER
14	3E	155	LEU
14	3E	156	GLU
14	3E	170	VAL
14	3E	177	ASP
14	3E	179	GLU
14	3E	184	LYS
14	3E	188	LEU
14	3E	193	ASP
14	3E	208	SER
14	3E	209	ARG
9	82	7	THR
9	82	38	GLN
9	82	40	LEU
9	82	44	VAL

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
9	82	64	THR
9	82	88	TYR
9	82	95	LYS
9	82	96	LEU
9	82	99	LEU
9	82	104	ARG
9	82	110	GLU
9	82	113	LYS
9	82	114	TYR
9	82	117	HIS
9	82	118	LYS
9	82	125	TYR
10	15	5	VAL
10	15	9	VAL
10	15	28	THR
10	15	32	THR
10	15	33	LEU
10	15	34	LEU
10	15	42	TRP
10	15	46	VAL
10	15	48	MET
10	15	58	ASP
10	15	68	GLU
10	15	74	ARG
10	15	76	SER
10	15	85	ILE
10	15	93	THR
10	15	98	VAL
10	15	99	LEU
10	15	101	HIS
10	15	106	MET
10	15	112	LEU
10	15	127	ASP
10	15	130	HIS
10	15	133	GLN
16	B8	1	MET
16	B8	9	LEU
16	B8	13	ARG
16	B8	15	VAL
16	B8	16	ARG
16	B8	23	ARG
16	B8	27	THR

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
16	B8	30	VAL
16	B8	38	ASN
16	B8	42	ILE
16	B8	49	VAL
16	B8	50	ILE
16	B8	55	ASN
16	B8	57	PHE
16	B8	58	ASN
16	B8	59	THR
16	B8	62	THR
16	B8	64	ARG
16	B8	65	LYS
16	B8	74	ARG
16	B8	86	ILE
16	B8	88	ILE
16	B8	89	VAL
16	B8	93	ARG
16	B8	96	ARG
16	B8	99	LEU
16	B8	102	ILE
16	B8	105	LEU
16	B8	108	ARG
16	B8	110	ILE
16	B8	111	ARG
16	B8	112	ARG
16	B8	113	LYS
16	B8	118	ARG
16	B8	129	ARG
11	C5	3	VAL
11	C5	19	LYS
11	C5	23	ARG
11	C5	31	LEU
11	C5	37	VAL
11	C5	40	GLU
11	C5	43	ASN
11	C5	50	ARG
11	C5	55	TYR
11	C5	60	PHE
11	C5	61	ILE
11	C5	62	GLU
11	C5	63	LYS
11	C5	85	VAL

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
11	C5	86	ARG
11	C5	90	LEU
11	C5	91	GLU
11	C5	94	LYS
11	C5	97	ARG
11	C5	98	VAL
17	L8	3	ARG
17	L8	4	LEU
17	L8	6	VAL
17	L8	8	LEU
17	L8	30	ARG
17	L8	31	LEU
17	L8	33	GLN
17	L8	37	LEU
17	L8	40	THR
17	L8	44	ARG
17	L8	55	ARG
12	M5	6	THR
12	M5	11	LYS
12	M5	15	LYS
12	M5	27	THR
12	M5	30	ARG
12	M5	31	HIS
12	M5	32	LEU
12	M5	33	ASN
12	M5	34	TRP
12	M5	46	ARG
12	M5	52	LYS
12	M5	61	LEU
12	M5	62	LEU
12	M5	64	TYR
18	61	7	GLU
18	61	38	LEU
18	61	41	GLU
18	61	44	LEU
18	61	48	GLU
18	61	50	ARG
18	61	60	GLU
18	61	64	GLU
18	61	67	ARG
18	61	70	GLU
18	61	71	ILE

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
18	61	72	LEU
18	61	78	THR
18	61	79	ILE
18	61	82	ARG
18	61	86	THR
18	61	92	VAL
18	61	95	LYS
18	61	102	SER
18	61	110	ASP
18	61	114	LEU
18	61	118	LYS
18	61	120	ILE
18	61	122	GLU
18	61	131	LYS
18	61	135	GLU
18	61	136	VAL
18	61	139	GLN
18	61	140	LEU
18	61	142	VAL
13	3A	17	LYS
13	3A	19	ARG
13	3A	23	LYS
13	3A	33	ARG
13	3A	34	ARG
13	3A	39	VAL
13	3A	41	ARG
13	3A	54	LYS
13	3A	55	VAL
13	3A	57	LYS
13	3A	60	LEU
13	3A	64	TYR
13	3A	80	HIS
13	3A	84	LEU
13	3A	89	ARG
13	3A	91	LYS
13	3A	93	LEU
13	3A	102	ARG
13	3A	111	LYS
13	3A	122	THR
13	3A	126	LYS
19	9I	25	THR
19	9I	26	LEU

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
19	9I	32	ARG
19	9I	44	LEU
19	9I	46	GLU
19	9I	49	LYS
19	9I	54	ARG
19	9I	55	ARG
19	9I	56	THR
19	9I	58	LEU
19	9I	68	LYS
19	9I	76	LEU
19	9I	82	THR
19	9I	85	LEU
19	9I	86	VAL
19	9I	87	ARG
14	32	3	ARG
14	32	5	ILE
14	32	8	VAL
14	32	13	ARG
14	32	24	GLU
14	32	28	SER
14	32	30	LYS
14	32	36	ARG
14	32	50	ARG
14	32	58	LEU
14	32	59	ARG
14	32	61	LYS
14	32	71	SER
14	32	73	ARG
14	32	81	GLU
14	32	83	SER
14	32	93	PHE
14	32	108	LEU
14	32	118	ARG
14	32	122	ARG
14	32	135	LEU
14	32	137	SER
14	32	145	GLU
14	32	150	GLU
14	32	163	GLU
14	32	168	ARG
14	32	176	LEU
14	32	178	VAL

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
14	32	187	ARG
14	32	191	ARG
14	32	198	VAL
14	32	200	GLU
20	1F	9	ARG
20	1F	10	ARG
20	1F	12	LYS
20	1F	24	ARG
21	68	9	GLU
21	68	17	ARG
21	68	20	MET
21	68	23	ARG
21	68	24	VAL
21	68	28	SER
21	68	29	ASN
21	68	32	TYR
21	68	38	VAL
21	68	47	ILE
21	68	53	LYS
21	68	66	LYS
21	68	94	ARG
21	68	98	VAL
21	68	109	LYS
21	68	112	MET
21	68	115	VAL
16	75	6	LEU
16	75	8	LYS
16	75	10	VAL
16	75	12	SER
16	75	13	ARG
16	75	15	VAL
16	75	19	LEU
16	75	21	GLU
16	75	23	ARG
16	75	24	PRO
16	75	27	THR
16	75	30	VAL
16	75	36	GLU
16	75	38	ASN
16	75	41	ARG
16	75	49	VAL
16	75	50	ILE

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
16	75	51	ARG
16	75	54	ARG
16	75	55	ASN
16	75	57	PHE
16	75	62	THR
16	75	64	ARG
16	75	66	VAL
16	75	74	ARG
16	75	80	SER
16	75	86	ILE
16	75	93	ARG
16	75	96	ARG
16	75	106	SER
16	75	108	ARG
16	75	112	ARG
16	75	120	ARG
16	75	124	ASP
16	75	125	ARG
16	75	132	LYS
16	75	134	GLU
22	H8	1	MET
22	H8	4	ARG
22	H8	11	GLU
22	H8	16	SER
22	H8	19	ARG
22	H8	23	LYS
22	H8	35	ARG
22	H8	37	VAL
22	H8	42	VAL
22	H8	60	GLU
22	H8	61	LEU
22	H8	71	VAL
22	H8	72	ARG
22	H8	76	LEU
22	H8	86	VAL
22	H8	91	LEU
22	H8	94	GLU
22	H8	96	VAL
22	H8	105	VAL
22	H8	112	ARG
22	H8	116	VAL
22	H8	117	LEU

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
22	H8	129	SER
22	H8	132	ASN
22	H8	145	GLU
22	H8	148	ASP
22	H8	151	HIS
22	H8	154	ASP
22	H8	161	VAL
22	H8	166	SER
22	H8	169	GLU
17	H5	5	LYS
17	H5	8	LEU
17	H5	17	LYS
17	H5	24	LYS
17	H5	30	ARG
17	H5	37	LEU
17	H5	38	GLU
17	H5	40	THR
17	H5	56	VAL
17	H5	57	GLU
23	21	12	THR
23	21	13	ARG
23	21	14	ILE
23	21	16	ARG
23	21	25	VAL
23	21	26	ILE
23	21	27	LEU
23	21	34	VAL
23	21	41	LYS
23	21	42	ASP
23	21	47	VAL
23	21	54	GLN
23	21	55	ASN
23	21	57	LYS
23	21	63	LEU
23	21	64	LYS
23	21	69	LYS
23	21	75	VAL
23	21	76	ARG
23	21	77	ILE
23	21	78	LEU
23	21	79	ARG
23	21	82	ARG

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
23	21	87	GLU
23	21	90	THR
23	21	92	THR
23	21	93	VAL
23	21	95	ILE
23	21	101	ARG
23	21	111	ARG
23	21	113	PHE
23	21	117	MET
23	21	119	ARG
23	21	138	PRO
23	21	146	THR
23	21	149	ARG
23	21	152	LYS
23	21	164	ARG
23	21	175	VAL
23	21	181	LEU
23	21	195	LEU
23	21	196	VAL
23	21	197	ILE
23	21	202	LYS
23	21	203	LYS
18	69	1	MET
18	69	6	LEU
18	69	9	LEU
18	69	21	VAL
18	69	37	VAL
18	69	44	LEU
18	69	47	LEU
18	69	58	LEU
18	69	67	ARG
18	69	68	LEU
18	69	69	LYS
18	69	74	ASN
18	69	75	LEU
18	69	77	LEU
18	69	81	VAL
18	69	85	GLU
18	69	86	THR
18	69	87	LYS
18	69	101	LEU
18	69	109	ILE

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
18	69	114	LEU
18	69	117	GLU
18	69	122	GLU
18	69	123	LEU
18	69	129	THR
18	69	131	LYS
18	69	133	HIS
18	69	135	GLU
18	69	136	VAL
24	4I	19	LEU
24	4I	31	LYS
24	4I	32	GLU
24	4I	34	LEU
24	4I	44	ARG
24	4I	48	LEU
24	4I	49	THR
24	4I	50	GLU
24	4I	56	LEU
24	4I	57	ARG
24	4I	64	TRP
24	4I	67	GLU
24	4I	70	LEU
24	4I	94	ARG
24	4I	102	ARG
24	4I	105	THR
24	4I	106	ASN
24	4I	108	ARG
24	4I	115	LYS
24	4I	117	VAL
19	9A	25	THR
19	9A	26	LEU
19	9A	29	PHE
19	9A	36	ASN
19	9A	42	ARG
19	9A	44	LEU
19	9A	47	THR
19	9A	53	ARG
19	9A	54	ARG
19	9A	65	ILE
19	9A	79	LEU
19	9A	84	LYS
19	9A	86	VAL

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
19	9A	87	ARG
25	4E	5	ASP
25	4E	10	MET
25	4E	18	ARG
25	4E	25	ARG
25	4E	27	ARG
25	4E	31	LEU
25	4E	41	VAL
25	4E	47	LYS
25	4E	51	VAL
25	4E	60	TYR
25	4E	64	ARG
25	4E	65	ASN
25	4E	68	GLU
25	4E	71	LEU
25	4E	72	GLN
25	4E	75	THR
25	4E	80	ILE
25	4E	81	GLU
25	4E	89	ILE
25	4E	91	LEU
25	4E	100	VAL
25	4E	116	THR
25	4E	152	ARG
25	4E	153	LYS
25	4E	155	GLU
20	1B	9	ARG
20	1B	24	ARG
21	25	3	GLN
21	25	8	LEU
21	25	9	GLU
21	25	28	SER
21	25	32	TYR
21	25	35	VAL
21	25	38	VAL
21	25	42	SER
21	25	47	ILE
21	25	49	ARG
21	25	66	LYS
21	25	70	LYS
21	25	73	ASP
21	25	78	ARG

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
21	25	82	ASN
21	25	86	ILE
21	25	87	ILE
21	25	91	LEU
21	25	94	ARG
21	25	96	THR
21	25	104	ARG
21	25	108	GLU
21	25	113	LYS
21	25	117	LEU
27	C8	5	LYS
27	C8	13	LYS
27	C8	31	SER
27	C8	34	LYS
27	C8	52	ARG
27	C8	60	LEU
27	C8	74	LEU
27	C8	77	SER
27	C8	78	THR
27	C8	83	LEU
27	C8	85	LYS
27	C8	89	GLU
27	C8	92	ARG
27	C8	94	ASN
27	C8	97	ASP
27	C8	104	GLN
27	C8	108	GLU
22	D5	2	GLU
22	D5	18	LEU
22	D5	19	ARG
22	D5	24	LEU
22	D5	31	ARG
22	D5	32	HIS
22	D5	41	LEU
22	D5	59	LEU
22	D5	63	ASP
22	D5	70	LEU
22	D5	71	VAL
22	D5	72	ARG
22	D5	74	VAL
22	D5	76	LEU
22	D5	77	ASP

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
22	D5	82	ARG
22	D5	93	ASP
22	D5	122	ARG
22	D5	129	SER
22	D5	132	ASN
22	D5	133	ILE
22	D5	139	VAL
22	D5	157	LEU
22	D5	161	VAL
22	D5	162	GLU
22	D5	165	VAL
22	D5	168	GLU
28	M8	5	ILE
28	M8	10	VAL
28	M8	15	ILE
28	M8	27	THR
28	M8	31	ILE
28	M8	38	LYS
28	M8	42	PHE
28	M8	46	GLN
28	M8	47	GLN
28	M8	48	ARG
28	M8	49	PHE
28	M8	51	ASP
28	M8	55	ARG
28	M8	63	TYR
23	29	1	MET
23	29	4	ILE
23	29	5	LEU
23	29	7	VAL
23	29	12	THR
23	29	16	ARG
23	29	23	VAL
23	29	27	LEU
23	29	37	ARG
23	29	41	LYS
23	29	45	THR
23	29	48	GLN
23	29	54	GLN
23	29	60	ASN
23	29	63	LEU
23	29	64	LYS

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
23	29	67	PHE
23	29	75	VAL
23	29	76	ARG
23	29	77	ILE
23	29	78	LEU
23	29	79	ARG
23	29	82	ARG
23	29	87	GLU
23	29	90	THR
23	29	97	LYS
23	29	107	THR
23	29	111	ARG
23	29	116	VAL
23	29	117	MET
23	29	119	ARG
23	29	144	ARG
23	29	146	THR
23	29	154	LYS
23	29	170	LEU
23	29	175	VAL
23	29	180	ASN
23	29	181	LEU
23	29	188	VAL
23	29	200	GLU
23	29	201	THR
23	29	203	LYS
24	4A	4	ILE
24	4A	7	VAL
24	4A	11	ARG
24	4A	14	ARG
24	4A	37	THR
24	4A	39	ILE
24	4A	47	ASP
24	4A	48	LEU
24	4A	63	THR
24	4A	64	TRP
24	4A	66	LEU
24	4A	69	GLU
24	4A	77	ASN
24	4A	79	LYS
24	4A	82	MET
24	4A	94	ARG

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
24	4A	101	GLN
24	4A	108	ARG
24	4A	115	LYS
24	4A	117	VAL
29	AI	5	LEU
29	AI	6	LYS
29	AI	7	LYS
29	AI	11	VAL
29	AI	17	GLU
29	AI	21	GLU
29	AI	23	ASN
29	AI	25	LYS
29	AI	27	GLU
29	AI	29	ARG
29	AI	30	LEU
29	AI	32	LYS
29	AI	33	THR
29	AI	37	ARG
29	AI	43	GLU
29	AI	48	THR
29	AI	56	GLN
29	AI	58	VAL
29	AI	61	TYR
29	AI	64	GLU
29	AI	67	VAL
29	AI	71	LEU
25	42	10	MET
25	42	12	LEU
25	42	16	THR
25	42	20	GLN
25	42	26	PHE
25	42	31	LEU
25	42	32	VAL
25	42	41	VAL
25	42	47	LYS
25	42	51	VAL
25	42	68	GLU
25	42	72	GLN
25	42	73	ASN
25	42	75	THR
25	42	78	HIS
25	42	79	GLU

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
25	42	83	GLU
25	42	87	SER
25	42	91	LEU
25	42	101	ILE
25	42	143	ARG
25	42	144	THR
30	78	2	LYS
30	78	6	LEU
30	78	7	ARG
30	78	15	ARG
30	78	40	SER
30	78	41	ARG
30	78	45	LEU
30	78	46	LYS
30	78	49	ARG
30	78	50	ARG
30	78	57	THR
30	78	65	ARG
30	78	76	LYS
30	78	77	ARG
30	78	79	ARG
30	78	99	LEU
30	78	100	LEU
30	78	105	LEU
30	78	106	LEU
30	78	111	ARG
30	78	112	LEU
30	78	115	LEU
30	78	119	GLU
30	78	126	VAL
30	78	135	LEU
30	78	138	LEU
30	78	144	GLU
30	78	146	VAL
30	78	147	LEU
27	85	5	LYS
27	85	12	ARG
27	85	15	LYS
27	85	17	ILE
27	85	20	LEU
27	85	30	LYS
27	85	52	ARG

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
27	85	55	ARG
27	85	63	VAL
27	85	70	ARG
27	85	74	LEU
27	85	83	LEU
27	85	92	ARG
27	85	95	LEU
27	85	97	ASP
27	85	100	VAL
27	85	101	ARG
27	85	105	VAL
31	I8	5	LYS
31	I8	9	SER
31	I8	10	THR
31	I8	36	ILE
31	I8	41	ARG
31	I8	59	LEU
31	I8	67	VAL
31	I8	74	ARG
31	I8	84	LEU
28	I5	18	CYS
28	I5	21	VAL
28	I5	22	ILE
28	I5	27	THR
28	I5	34	GLU
28	I5	43	TYR
28	I5	46	GLN
28	I5	49	PHE
28	I5	51	ASP
28	I5	60	GLN
28	I5	62	ARG
32	31	7	TYR
32	31	8	GLN
32	31	9	ILE
32	31	17	ARG
32	31	20	LEU
32	31	24	LEU
32	31	33	LEU
32	31	43	LYS
32	31	48	THR
32	31	57	VAL
32	31	64	ILE

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
32	31	74	ARG
32	31	78	ILE
32	31	82	ILE
32	31	93	LYS
32	31	101	LEU
32	31	108	LYS
32	31	116	ASP
32	31	117	ARG
32	31	119	ARG
32	31	127	GLU
32	31	145	GLU
32	31	149	ASP
32	31	158	THR
32	31	161	GLU
32	31	170	LEU
32	31	174	VAL
32	31	175	THR
32	31	181	LEU
32	31	188	ARG
32	31	191	ARG
32	31	192	LEU
32	31	205	ARG
33	5I	3	ARG
33	5I	12	ARG
33	5I	18	VAL
33	5I	22	THR
33	5I	29	ARG
33	5I	32	SER
33	5I	33	VAL
33	5I	40	CYS
33	5I	41	ARG
33	5I	44	LEU
33	5I	46	GLU
33	5I	50	LYS
29	AA	11	VAL
29	AA	20	LEU
29	AA	23	ASN
29	AA	25	LYS
29	AA	28	LYS
29	AA	29	ARG
29	AA	39	THR
29	AA	41	VAL

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
29	AA	51	VAL
29	AA	63	THR
29	AA	66	MET
29	AA	77	THR
29	AA	78	ARG
29	AA	79	THR
29	AA	83	HIS
34	5E	15	ASP
34	5E	17	SER
34	5E	21	LEU
34	5E	23	LYS
34	5E	24	GLU
34	5E	39	LYS
34	5E	43	LEU
34	5E	45	LEU
34	5E	57	GLN
34	5E	64	GLN
34	5E	65	VAL
34	5E	75	LEU
34	5E	81	ILE
34	5E	86	ARG
34	5E	92	LYS
30	35	2	LYS
30	35	4	SER
30	35	6	LEU
30	35	19	VAL
30	35	21	ARG
30	35	27	HIS
30	35	30	THR
30	35	36	LYS
30	35	41	ARG
30	35	42	SER
30	35	45	LEU
30	35	50	ARG
30	35	55	ARG
30	35	57	THR
30	35	59	LEU
30	35	61	ARG
30	35	65	ARG
30	35	67	MET
30	35	74	GLU
30	35	75	ILE

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
30	35	81	GLN
30	35	83	VAL
30	35	85	LEU
30	35	88	LEU
30	35	91	PHE
30	35	92	GLU
30	35	105	LEU
30	35	112	LEU
30	35	114	ILE
30	35	125	VAL
30	35	138	LEU
30	35	144	GLU
30	35	146	VAL
30	35	147	LEU
30	35	149	GLU
35	D8	5	VAL
35	D8	6	LYS
35	D8	12	TYR
35	D8	18	LEU
35	D8	20	LEU
35	D8	32	THR
35	D8	33	VAL
35	D8	35	LEU
35	D8	40	LEU
35	D8	44	LYS
35	D8	47	VAL
35	D8	49	THR
35	D8	51	VAL
35	D8	57	VAL
35	D8	62	LEU
35	D8	64	HIS
35	D8	72	VAL
35	D8	73	SER
35	D8	78	LYS
35	D8	79	VAL
35	D8	89	GLN
35	D8	98	GLU
31	E5	9	SER
31	E5	11	ARG
31	E5	12	ASN
31	E5	14	ARG
31	E5	36	ILE

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
31	E5	43	THR
31	E5	46	LYS
31	E5	49	LYS
31	E5	68	GLU
31	E5	70	GLN
31	E5	82	ARG
36	N8	3	LYS
36	N8	16	ARG
36	N8	23	HIS
36	N8	29	THR
36	N8	36	CYS
36	N8	37	LYS
36	N8	40	LYS
36	N8	49	CYS
36	N8	52	TYR
36	N8	56	LYS
32	39	2	LYS
32	39	4	VAL
32	39	7	TYR
32	39	8	GLN
32	39	13	SER
32	39	20	LEU
32	39	23	ASP
32	39	24	LEU
32	39	29	ASN
32	39	32	LEU
32	39	33	LEU
32	39	36	VAL
32	39	53	THR
32	39	57	VAL
32	39	62	ARG
32	39	66	PRO
32	39	67	GLN
32	39	68	LYS
32	39	70	THR
32	39	74	ARG
32	39	78	ILE
32	39	82	ILE
32	39	83	PHE
32	39	100	THR
32	39	108	LYS
32	39	110	LEU

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
32	39	112	MET
32	39	123	LEU
32	39	124	LEU
32	39	127	GLU
32	39	140	LEU
32	39	145	GLU
32	39	153	SER
32	39	162	LEU
32	39	165	ARG
32	39	169	ASN
32	39	175	THR
32	39	181	LEU
32	39	183	VAL
32	39	190	GLU
32	39	191	ARG
32	39	192	LEU
32	39	193	VAL
32	39	194	MET
32	39	196	LEU
32	39	201	VAL
32	39	205	ARG
33	5A	12	ARG
33	5A	17	LYS
33	5A	18	VAL
33	5A	22	THR
33	5A	26	ARG
33	5A	27	CYS
33	5A	31	ARG
33	5A	32	SER
33	5A	33	VAL
33	5A	44	LEU
33	5A	46	GLU
33	5A	58	LYS
37	BI	13	LEU
37	BI	17	ARG
37	BI	24	LEU
37	BI	36	LEU
37	BI	41	ILE
37	BI	51	GLU
37	BI	56	MET
37	BI	57	ARG
37	BI	65	LYS

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
37	BI	72	LEU
37	BI	73	HIS
37	BI	75	ASN
37	BI	87	LYS
37	BI	100	ILE
37	BI	104	LEU
34	52	2	ARG
34	52	3	ARG
34	52	14	LEU
34	52	16	GLN
34	52	21	LEU
34	52	27	GLN
34	52	28	ARG
34	52	39	LYS
34	52	40	VAL
34	52	45	LEU
34	52	46	ARG
34	52	54	LYS
34	52	57	GLN
34	52	72	VAL
34	52	93	SER
34	52	98	LEU
38	88	3	MET
38	88	5	ARG
38	88	6	ARG
38	88	10	ARG
38	88	11	LYS
38	88	25	ASP
38	88	26	TYR
38	88	35	VAL
38	88	45	GLN
38	88	51	ARG
38	88	56	ARG
38	88	58	PHE
38	88	59	ARG
38	88	67	ARG
38	88	79	LEU
38	88	80	GLU
38	88	81	VAL
38	88	102	VAL
38	88	103	MET
38	88	109	VAL

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
38	88	110	THR
38	88	112	GLU
38	88	138	ASP
35	95	1	MET
35	95	7	THR
35	95	15	GLU
35	95	19	LYS
35	95	38	LEU
35	95	40	LEU
35	95	43	GLU
35	95	47	VAL
35	95	49	THR
35	95	62	LEU
35	95	66	ARG
35	95	71	LEU
35	95	76	LYS
35	95	80	GLN
35	95	82	ARG
35	95	83	ARG
35	95	84	LYS
35	95	85	LYS
35	95	91	TYR
35	95	95	LEU
39	J8	19	GLN
39	J8	21	ARG
39	J8	26	ARG
39	J8	30	VAL
39	J8	33	LYS
39	J8	41	ARG
39	J8	48	LYS
39	J8	52	ARG
39	J8	69	LYS
39	J8	73	LEU
39	J8	74	VAL
39	J8	78	LYS
39	J8	80	LEU
39	J8	81	LYS
39	J8	82	LEU
39	J8	90	ILE
39	J8	91	LYS
39	J8	93	GLU
36	J5	16	ARG

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
36	J5	21	SER
36	J5	23	HIS
36	J5	29	THR
36	J5	33	CYS
36	J5	35	GLU
36	J5	44	THR
36	J5	48	GLU
36	J5	55	ARG
40	41	14	GLU
40	41	20	ILE
40	41	22	ARG
40	41	26	GLN
40	41	28	VAL
40	41	31	VAL
40	41	34	LEU
40	41	43	LEU
40	41	45	GLU
40	41	53	LEU
40	41	58	GLN
40	41	63	ILE
40	41	67	LYS
40	41	70	VAL
40	41	76	SER
40	41	77	ILE
40	41	80	PHE
40	41	82	LEU
40	41	83	ARG
40	41	86	MET
40	41	90	LEU
40	41	91	ARG
40	41	94	LEU
40	41	96	ARG
40	41	97	ASP
40	41	98	ARG
40	41	101	ILE
40	41	128	ARG
40	41	161	THR
40	41	162	THR
40	41	166	ASP
41	6I	3	ILE
41	6I	10	LYS
41	6I	24	SER

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
41	6I	38	ARG
41	6I	39	LEU
41	6I	47	LYS
41	6I	54	ARG
41	6I	59	MET
41	6I	66	LEU
41	6I	78	TYR
41	6I	82	ILE
41	6I	87	ILE
41	6I	88	ARG
37	BA	10	LEU
37	BA	11	SER
37	BA	22	ARG
37	BA	39	LYS
37	BA	48	LYS
37	BA	53	LEU
37	BA	61	SER
37	BA	74	LYS
37	BA	84	LEU
37	BA	99	LEU
42	6E	8	GLU
42	6E	32	ARG
42	6E	38	LEU
42	6E	45	ASP
42	6E	54	THR
42	6E	56	GLN
42	6E	89	MET
42	6E	90	GLU
42	6E	91	VAL
42	6E	104	LEU
42	6E	111	ARG
42	6E	113	GLU
42	6E	115	ARG
42	6E	120	ILE
42	6E	135	VAL
42	6E	137	LYS
42	6E	138	LYS
42	6E	139	GLU
42	6E	143	ARG
38	45	2	LEU
38	45	3	MET
38	45	5	ARG

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
38	45	16	ARG
38	45	17	LEU
38	45	22	LYS
38	45	45	GLN
38	45	54	MET
38	45	58	PHE
38	45	59	ARG
38	45	60	ARG
38	45	75	THR
38	45	79	LEU
38	45	80	GLU
38	45	85	LYS
38	45	90	VAL
38	45	105	GLU
38	45	106	VAL
38	45	110	THR
38	45	112	GLU
38	45	132	VAL
38	45	134	ARG
38	45	138	ASP
43	E8	4	LYS
43	E8	11	ARG
43	E8	17	VAL
43	E8	19	LEU
43	E8	20	VAL
43	E8	24	ILE
43	E8	28	SER
43	E8	31	GLU
43	E8	51	LEU
43	E8	62	HIS
43	E8	63	ASP
43	E8	67	ASP
43	E8	69	LEU
43	E8	76	VAL
43	E8	88	ARG
43	E8	92	ARG
43	E8	96	ILE
43	E8	97	LYS
43	E8	100	THR
43	E8	107	LEU
39	F5	4	VAL
39	F5	11	ARG

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
39	F5	14	VAL
39	F5	19	GLN
39	F5	21	ARG
39	F5	37	ILE
39	F5	38	SER
39	F5	42	GLN
39	F5	52	ARG
39	F5	56	GLN
39	F5	62	VAL
39	F5	72	GLU
39	F5	76	ARG
39	F5	78	LYS
39	F5	80	LEU
39	F5	82	LEU
39	F5	83	GLU
39	F5	85	LEU
39	F5	89	GLU
39	F5	92	LYS
40	49	7	LEU
40	49	9	ARG
40	49	13	GLU
40	49	28	VAL
40	49	33	ARG
40	49	53	LEU
40	49	59	GLU
40	49	63	ILE
40	49	64	THR
40	49	67	LYS
40	49	71	THR
40	49	80	PHE
40	49	82	LEU
40	49	96	ARG
40	49	97	ASP
40	49	105	LYS
40	49	109	VAL
40	49	114	ILE
40	49	115	ARG
40	49	118	ARG
40	49	130	ASN
40	49	133	LEU
40	49	152	LEU
40	49	153	ARG

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
40	49	159	VAL
40	49	165	THR
40	49	167	GLU
40	49	173	LEU
41	6A	3	ILE
41	6A	6	GLU
41	6A	24	SER
41	6A	26	GLU
41	6A	31	LEU
41	6A	35	ARG
41	6A	39	LEU
41	6A	48	LYS
41	6A	66	LEU
41	6A	82	ILE
41	6A	83	GLU
41	6A	87	ILE
41	6A	88	ARG
44	1E	5	ILE
44	1E	7	VAL
44	1E	8	LYS
44	1E	9	GLU
44	1E	11	LEU
44	1E	12	GLU
44	1E	15	VAL
44	1E	16	HIS
44	1E	17	PHE
44	1E	19	HIS
44	1E	24	TRP
44	1E	35	GLU
44	1E	37	ASN
44	1E	39	ILE
44	1E	40	HIS
44	1E	42	ILE
44	1E	48	MET
44	1E	59	GLU
44	1E	60	ASP
44	1E	67	THR
44	1E	71	VAL
44	1E	73	THR
44	1E	74	LYS
44	1E	75	LYS
44	1E	78	GLN

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
44	1E	91	PRO
44	1E	96	ARG
44	1E	113	HIS
44	1E	121	LEU
44	1E	130	ARG
44	1E	144	ARG
44	1E	145	LEU
44	1E	153	ARG
44	1E	155	LEU
44	1E	162	ILE
44	1E	163	PHE
44	1E	165	VAL
44	1E	172	ILE
44	1E	178	ARG
44	1E	187	LEU
44	1E	193	ASP
44	1E	195	ASP
44	1E	196	LEU
44	1E	197	VAL
44	1E	205	ASP
44	1E	215	LEU
44	1E	217	ARG
44	1E	223	ILE
44	1E	224	GLN
44	1E	229	VAL
44	1E	230	VAL
44	1E	231	GLU
44	1E	233	SER
44	1E	240	GLN
42	62	5	ARG
42	62	6	ARG
42	62	8	GLU
42	62	9	VAL
42	62	11	GLN
42	62	20	ASP
42	62	24	THR
42	62	27	ILE
42	62	35	LYS
42	62	36	LYS
42	62	45	ASP
42	62	54	THR
42	62	59	LEU

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
42	62	60	LYS
42	62	63	LYS
42	62	73	MET
42	62	85	TYR
42	62	92	SER
42	62	94	ARG
42	62	97	GLN
42	62	104	LEU
42	62	114	ARG
42	62	115	ARG
42	62	135	VAL
42	62	140	ASP
42	62	146	GLU
42	62	149	ARG
42	62	154	TYR
45	98	4	LEU
45	98	10	LEU
45	98	18	LEU
45	98	24	GLN
45	98	28	LEU
45	98	29	LEU
45	98	44	LEU
45	98	45	ARG
45	98	48	VAL
45	98	59	ASP
45	98	65	LEU
45	98	67	LEU
45	98	79	LEU
45	98	91	GLN
45	98	95	THR
45	98	102	GLU
45	98	105	ARG
45	98	114	VAL
45	98	117	VAL
45	98	118	GLU
43	A5	11	ARG
43	A5	23	LEU
43	A5	27	LYS
43	A5	37	ARG
43	A5	39	THR
43	A5	51	LEU
43	A5	52	GLU

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
43	A5	59	VAL
43	A5	65	LEU
43	A5	70	TYR
43	A5	76	VAL
43	A5	82	LEU
43	A5	88	ARG
43	A5	90	ARG
43	A5	95	ILE
43	A5	96	ILE
43	A5	100	THR
43	A5	106	ILE
43	A5	107	LEU
43	A5	110	LYS
46	K8	3	LEU
46	K8	6	VAL
46	K8	8	LYS
46	K8	15	LYS
46	K8	16	LEU
46	K8	17	SER
46	K8	32	LEU
46	K8	40	SER
46	K8	41	ILE
46	K8	44	LEU
46	K8	45	SER
46	K8	46	GLN
46	K8	47	ASN
46	K8	48	HIS
46	K8	50	ILE
46	K8	51	ARG
46	K8	53	LEU
46	K8	55	ARG
46	K8	62	THR
46	K8	67	LYS
47	51	3	ARG
47	51	4	ILE
47	51	7	LEU
47	51	11	VAL
47	51	13	LYS
47	51	23	ARG
47	51	24	VAL
47	51	33	LEU
47	51	40	GLU

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
47	51	41	MET
47	51	45	VAL
47	51	50	VAL
47	51	52	VAL
47	51	57	ASP
47	51	69	ARG
47	51	71	LEU
47	51	80	SER
47	51	83	TYR
47	51	84	SER
47	51	88	LEU
47	51	92	ILE
47	51	95	ARG
47	51	101	ARG
47	51	103	LEU
47	51	107	VAL
47	51	116	GLU
47	51	129	THR
47	51	131	VAL
47	51	134	SER
47	51	139	GLN
47	51	153	LYS
47	51	155	SER
47	51	160	LYS
47	51	169	VAL
47	51	170	ARG
48	1A	6	ILE
48	1A	13	HIS
48	1A	17	ASP
48	1A	22	LYS
48	1A	23	ILE
48	1A	24	VAL
48	1A	34	VAL
48	1A	43	ARG
48	1A	55	LYS
48	1A	57	LYS
48	1A	58	ASP
48	1A	59	SER
48	1A	60	ARG
48	1A	65	LEU
48	1A	70	ARG
48	1A	72	VAL

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
48	1A	79	ARG
48	1A	89	ASP
48	1A	96	ILE
48	1A	98	ILE
48	1I	5	ARG
48	1I	16	LEU
48	1I	29	ARG
48	1I	34	VAL
48	1I	35	SER
48	1I	40	LEU
48	1I	43	ARG
48	1I	45	ARG
48	1I	46	ARG
48	1I	55	LYS
48	1I	58	ASP
48	1I	62	HIS
48	1I	70	ARG
48	1I	75	ILE
48	1I	78	ASN
48	1I	83	GLU
48	1I	88	LEU
48	1I	90	LEU
48	1I	92	THR
48	1I	94	VAL
48	1I	96	ILE
48	1I	100	THR
48	1I	101	VAL
49	7I	1	MET
49	7I	2	VAL
49	7I	8	ARG
49	7I	11	SER
49	7I	18	ARG
49	7I	20	VAL
49	7I	46	PRO
49	7I	50	LYS
49	7I	54	GLU
49	7I	61	SER
49	7I	67	THR
49	7I	69	THR
49	7I	72	ARG
49	7I	82	GLN
49	7I	83	GLU

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
44	12	5	ILE
44	12	12	GLU
44	12	15	VAL
44	12	17	PHE
44	12	22	LYS
44	12	24	TRP
44	12	31	TYR
44	12	42	ILE
44	12	44	LEU
44	12	55	PHE
44	12	56	ARG
44	12	58	ILE
44	12	69	LEU
44	12	71	VAL
44	12	75	LYS
44	12	80	ILE
44	12	83	MET
44	12	94	ASN
44	12	107	THR
44	12	108	ILE
44	12	110	GLN
44	12	122	PHE
44	12	130	ARG
44	12	139	LYS
44	12	142	LEU
44	12	143	GLU
44	12	144	ARG
44	12	155	LEU
44	12	172	ILE
44	12	185	ILE
44	12	189	ASP
44	12	191	ASP
44	12	196	LEU
44	12	201	ILE
44	12	205	ASP
44	12	209	ARG
44	12	213	LEU
44	12	219	VAL
44	12	223	ILE
50	7E	1	MET
50	7E	2	LEU
50	7E	26	VAL

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
50	7E	30	ARG
50	7E	32	LYS
50	7E	35	ILE
50	7E	60	ARG
50	7E	63	LEU
50	7E	68	ARG
50	7E	80	ILE
50	7E	84	ARG
50	7E	85	ARG
50	7E	88	LYS
50	7E	91	ARG
50	7E	95	VAL
50	7E	99	GLU
50	7E	102	ARG
50	7E	109	ILE
50	7E	113	SER
50	7E	121	ASP
50	7E	122	ARG
50	7E	129	VAL
50	7E	137	VAL
45	55	6	SER
45	55	15	SER
45	55	18	LEU
45	55	24	GLN
45	55	27	SER
45	55	28	LEU
45	55	29	LEU
45	55	35	THR
45	55	44	LEU
45	55	56	LYS
45	55	57	ARG
45	55	59	ASP
45	55	63	ARG
45	55	65	LEU
45	55	68	ARG
45	55	75	LEU
45	55	76	VAL
45	55	79	LEU
45	55	81	ASP
45	55	91	GLN
45	55	95	THR
45	55	97	VAL

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
45	55	113	LEU
45	55	117	VAL
45	55	118	GLU
3	F8	2	LYS
3	F8	12	VAL
3	F8	15	GLU
3	F8	23	GLU
3	F8	27	THR
3	F8	33	LYS
3	F8	38	GLU
3	F8	45	THR
3	F8	49	VAL
3	F8	63	LYS
3	F8	70	LEU
3	F8	72	LYS
3	F8	73	ARG
3	F8	76	ARG
3	F8	80	ILE
3	F8	81	VAL
46	G5	6	VAL
46	G5	15	LYS
46	G5	16	LEU
46	G5	24	LEU
46	G5	34	GLU
46	G5	44	LEU
46	G5	47	ASN
46	G5	48	HIS
46	G5	53	LEU
46	G5	55	ARG
46	G5	60	LEU
46	G5	70	GLN
5	P8	4	THR
5	P8	8	ASN
5	P8	14	LYS
5	P8	23	ARG
5	P8	24	THR
5	P8	29	LYS
5	P8	32	LYS
5	P8	41	ARG
5	P8	43	THR
5	P8	46	VAL
47	59	4	ILE

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
47	59	6	ARG
47	59	7	LEU
47	59	11	VAL
47	59	24	VAL
47	59	27	LYS
47	59	32	GLU
47	59	33	LEU
47	59	41	MET
47	59	43	VAL
47	59	44	VAL
47	59	45	VAL
47	59	52	VAL
47	59	62	LYS
47	59	67	LEU
47	59	68	THR
47	59	69	ARG
47	59	74	ASN
47	59	83	TYR
47	59	84	SER
47	59	86	GLU
47	59	89	ILE
47	59	94	TYR
47	59	98	LEU
47	59	101	ARG
47	59	105	LEU
47	59	106	THR
47	59	127	GLU
47	59	129	THR
47	59	139	GLN
47	59	143	GLN
47	59	147	ASN
47	59	152	ARG
47	59	157	TYR
47	59	158	HIS
47	59	167	GLU
6	2I	14	VAL
6	2I	18	ARG
6	2I	28	THR
6	2I	30	VAL
6	2I	31	THR
6	2I	32	ILE
6	2I	48	ILE

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
6	2I	51	LYS
6	2I	54	ARG
6	2I	83	ILE
6	2I	84	VAL
6	2I	103	LEU
6	2I	105	VAL
6	2I	106	LYS
6	2I	109	VAL
6	2I	114	VAL
6	2I	117	ASN
49	7A	1	MET
49	7A	2	VAL
49	7A	8	ARG
49	7A	21	VAL
49	7A	25	ARG
49	7A	45	THR
49	7A	55	ARG
49	7A	67	THR
49	7A	82	GLN
8	2E	3	ASN
8	2E	4	LYS
8	2E	5	ILE
8	2E	14	ILE
8	2E	16	ARG
8	2E	17	ASP
8	2E	21	ARG
8	2E	29	TYR
8	2E	30	ARG
8	2E	34	LEU
8	2E	36	ASP
8	2E	45	LYS
8	2E	63	ASN
8	2E	79	ARG
8	2E	82	GLU
8	2E	83	ARG
8	2E	99	VAL
8	2E	102	ASN
8	2E	108	ASN
8	2E	116	VAL
8	2E	127	ARG
8	2E	128	PHE
8	2E	132	ARG

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
8	2E	134	ILE
8	2E	136	GLN
8	2E	138	VAL
8	2E	150	LYS
8	2E	151	VAL
8	2E	154	SER
8	2E	165	THR
8	2E	166	GLU
8	2E	167	TRP
8	2E	174	PRO
8	2E	178	LEU
8	2E	179	ARG
8	2E	188	LEU
8	2E	190	ARG
8	2E	192	THR
8	2E	202	ILE
50	72	2	LEU
50	72	17	THR
50	72	18	ARG
50	72	30	ARG
50	72	41	ARG
50	72	52	ASP
50	72	73	ASP
50	72	82	HIS
50	72	84	ARG
50	72	87	SER
50	72	91	ARG
50	72	92	ARG
50	72	97	VAL
50	72	99	GLU
50	72	100	ILE
50	72	107	LEU
50	72	120	THR
50	72	125	ARG

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (22) such sidechains are listed below:

<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
4	11	115	GLN
2	65	34	HIS
14	3E	119	GLN
18	61	105	HIS

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Mol	Chain	Res	Type
14	32	161	ASN
21	68	88	ASN
21	68	90	GLN
24	4A	92	HIS
33	5I	49	HIS
30	35	81	GLN
32	39	29	ASN
34	52	73	ASN
38	45	123	HIS
45	98	13	HIS
43	A5	60	ASN
46	K8	48	HIS
48	1I	13	HIS
3	F8	31	HIS
3	F8	82	GLN
46	G5	46	GLN
47	59	61	HIS
50	72	70	GLN

### 5.3.3 RNA [i](#)

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
1	13	1506/1522 (98%)	326 (21%)	33 (2%)
1	1G	1512/1522 (99%)	324 (21%)	34 (2%)
15	14	2908/2917 (99%)	659 (22%)	40 (1%)
15	1H	2911/2917 (99%)	616 (21%)	56 (1%)
26	16	121/122 (99%)	29 (23%)	3 (2%)
26	1J	121/122 (99%)	35 (28%)	3 (2%)
51	Y1	24/25 (96%)	10 (41%)	2 (8%)
51	Y4	24/25 (96%)	11 (45%)	0
52	V1	75/76 (98%)	35 (46%)	7 (9%)
52	V4	75/76 (98%)	36 (48%)	5 (6%)
52	W1	75/76 (98%)	20 (26%)	0
52	W4	75/76 (98%)	22 (29%)	0
52	X1	75/76 (98%)	22 (29%)	2 (2%)
52	X4	75/76 (98%)	19 (25%)	3 (4%)
All	All	9577/9628 (99%)	2164 (22%)	188 (1%)

All (2164) RNA backbone outliers are listed below:

Mol	Chain	Res	Type
1	13	651	U
1	13	652	G
1	13	653	G
1	13	654	A
1	13	678	A
1	13	685	G
1	13	693	C
1	13	694	C
1	13	696	A
1	13	697	A
1	13	700	C
1	13	705	A
1	13	707	G
1	13	711	U
1	13	712	G
1	13	713	C
1	13	719	G
1	13	720	C
1	13	721	G
1	13	723	G
1	13	733	C
1	13	740	A
1	13	754	G
1	13	755	A
1	13	760	C
1	13	771	C
1	13	777	C
1	13	782	G
1	13	783	A
1	13	784	G
1	13	801	A
1	13	804	U
1	13	809	C
1	13	811	A
1	13	812	A
1	13	813	U
1	13	814	C
1	13	822	U
1	13	832	C
1	13	834	U
1	13	835	U
1	13	836	G
1	13	837	G

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
1	13	847	A
1	13	848	A
1	13	851	G
1	13	853	C
1	13	854	U
1	13	855	U
1	13	856	U
1	13	858	C
1	13	863	U
1	13	868	G
1	13	874	C
1	13	882	C
1	13	884	A
1	13	885	U
1	13	886	C
1	13	888	G
1	13	892	G
1	13	897	U
1	13	903	A
1	13	907	G
1	13	908	C
1	13	912	C
1	13	922	G
1	13	930	G
1	13	957	G
1	13	958	G
1	13	962	A
1	13	969	C
1	13	970	A
1	13	973	G
1	13	983	C
1	13	985	A
1	13	986	C
1	13	987	G
1	13	988	G
1	13	993	C
1	13	994	A
1	13	995	G
1	13	997	A
1	13	1008	U
1	13	1013	C
1	13	1014	A

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
1	13	1024	A
1	13	1025	G
1	13	1031	C
1	13	1038	A
1	13	1039	C
1	13	1047	G
1	13	1053	A
1	13	1054	G
1	13	1055	A
1	13	1064	G
1	13	1065	G
1	13	1070	U
1	13	1071	A
1	13	1081	A
1	13	1100	A
1	13	1101	C
1	13	1102	G
1	13	1114	G
1	13	1115	G
1	13	1117	A
1	13	1126	A
1	13	1127	U
1	13	1133	C
1	13	1134	G
1	13	1137	C
1	13	1138	A
1	13	1140	C
1	13	1147	C
1	13	1148	C
1	13	1156	G
1	13	1160	U
1	13	1161	A
1	13	1162	A
1	13	1165	C
1	13	1176	A
1	13	1188	A
1	13	1190	U
1	13	1201	A
1	13	1202	A
1	13	1205	G
1	13	1206	G
1	13	1221	G

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
1	13	1225	C
1	13	1246	G
1	13	1247	C
1	13	1248	U
1	13	1252	C
1	13	1257	G
1	13	1259	G
1	13	1260	G
1	13	1261	A
1	13	1262	G
1	13	1268	G
1	13	1282	A
1	13	1294	A
1	13	1319	G
1	13	1331	A
1	13	1333	A
1	13	1352	U
1	13	1353	G
1	13	1357	A
1	13	1358	A
1	13	1376	C
1	13	1378	C
1	13	1382	A
1	13	1384	G
1	13	1401	U
1	13	1403	G
1	13	1406	A
1	13	1421	A
1	13	1422	U
1	13	1423	A
1	13	1444	A
1	13	1446	C
1	13	1457	A
1	13	1468	U
1	13	1469	C
1	13	1470	U
1	13	1471	C
1	13	1481	G
1	13	1482	A
1	13	1487	A
1	13	1493	U
1	13	1514	U

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
1	13	1525	G
1	13	1537	A
1	13	1538	A
1	13	1539	G
1	13	1548	G
1	13	1549	G
1	13	1550	G
1	13	1557	C
1	13	1558	A
1	13	1563	C
1	13	1583	U
1	13	1591	A
1	13	1592	A
1	13	1594	G
1	13	1597	A
1	13	1598	A
1	13	1599	G
1	13	1600	A
1	13	1606	A
1	13	1616	G
1	13	1628	A
1	13	1630	C
1	13	1631	C
1	13	1632	C
1	13	1633	G
1	13	1641	G
1	13	1644	U
1	13	1645	G
1	13	1647	G
1	13	1648	G
1	13	1649	U
1	13	1650	G
1	13	1652	C
1	13	1655	G
1	13	1659	G
1	13	1668	U
1	13	1670	G
1	13	1672	A
1	13	1674	A
1	13	1693	U
1	13	1694	C
1	13	1695	A

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
1	13	1709	G
1	13	1722	G
1	13	1723	U
1	13	1729	A
1	13	1752	G
1	13	1753	U
1	13	1754	U
1	13	1755	G
1	13	1757	C
1	13	1758	A
1	13	1759	G
1	13	1760	C
1	13	1764	U
1	13	1765	C
1	13	1766	G
1	13	1767	G
1	13	1774	A
1	13	1780	A
1	13	1782	G
1	13	1785	A
1	13	1786	C
1	13	1787	U
1	13	1789	C
1	13	1804	G
1	13	1805	G
1	13	1808	G
1	13	1817	G
1	13	1820	G
1	13	1823	U
1	13	1824	G
1	13	1828	A
1	13	1840	A
1	13	1841	C
1	13	1845	C
1	13	1852	A
1	13	1853	C
1	13	1854	A
1	13	1865	A
1	13	1867	U
1	13	1868	G
1	13	1880	G
1	13	1883	A

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
1	13	1884	U
1	13	1885	G
1	13	1894	C
1	13	1897	C
1	13	1900	G
1	13	1905	U
1	13	1906	A
1	13	1907	A
1	13	1909	C
1	13	1913	A
1	13	1914	A
1	13	1926	A
1	13	1927	G
1	13	1929	U
1	13	1930	C
1	13	1932	G
1	13	1947	C
1	13	1949	C
1	13	1950	G
1	13	1958	G
1	13	1963	C
1	13	1964	G
1	13	1965	G
1	13	1967	A
1	13	1973	A
1	13	1974	G
1	13	1977	A
1	13	1980	G
1	13	1985	U
1	13	1986	C
1	13	1987	A
1	13	1990	C
1	13	1991	A
1	13	1998	G
1	13	2009	U
1	13	2010	C
1	13	2025	C
1	13	2044	G
1	13	2047	G
1	13	2070	G
1	13	2071	G
1	13	2072	A

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
1	13	2073	G
1	13	2075	C
1	13	2076	U
1	13	2077	A
1	13	2078	C
1	13	2079	G
1	13	2080	G
1	13	2083	A
1	13	2090	G
1	13	2092	G
1	13	2110	G
1	13	2115	A
1	13	2120	G
1	13	2121	U
1	13	2122	A
1	13	2126	A
1	13	2127	G
1	13	2128	G
1	13	2129	U
1	13	2139	G
1	13	2140	G
1	13	2142	A
1	13	2152	G
1	13	2153	G
1	13	2154	A
1	13	2157	A
1	13	2158	C
1	13	2159	C
1	13	2160	U
1	13	2161	C
1	13	2164	U
1	1G	651	U
1	1G	653	G
1	1G	655	G
1	1G	668	G
1	1G	677	G
1	1G	678	A
1	1G	685	G
1	1G	690	G
1	1G	693	C
1	1G	694	C
1	1G	696	A

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
1	1G	697	A
1	1G	700	C
1	1G	721	G
1	1G	722	G
1	1G	723	G
1	1G	724	G
1	1G	729	A
1	1G	730	C
1	1G	732	C
1	1G	735	U
1	1G	736	G
1	1G	739	C
1	1G	740	A
1	1G	747	G
1	1G	754	G
1	1G	755	A
1	1G	760	C
1	1G	771	C
1	1G	784	G
1	1G	796	G
1	1G	803	C
1	1G	809	C
1	1G	813	U
1	1G	814	C
1	1G	822	U
1	1G	832	C
1	1G	834	U
1	1G	835	U
1	1G	836	G
1	1G	840	U
1	1G	847	A
1	1G	849	A
1	1G	850	G
1	1G	856	U
1	1G	857	G
1	1G	872	G
1	1G	888	G
1	1G	891	A
1	1G	892	G
1	1G	907	G
1	1G	908	C
1	1G	911	A

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
1	1G	915	A
1	1G	916	G
1	1G	922	G
1	1G	930	G
1	1G	949	C
1	1G	962	A
1	1G	969	C
1	1G	970	A
1	1G	973	G
1	1G	986	C
1	1G	987	G
1	1G	988	G
1	1G	991	G
1	1G	992	G
1	1G	993	C
1	1G	994	A
1	1G	995	G
1	1G	1004	A
1	1G	1008	U
1	1G	1013	C
1	1G	1015	A
1	1G	1025	G
1	1G	1029	G
1	1G	1033	G
1	1G	1038	A
1	1G	1039	C
1	1G	1045	U
1	1G	1047	G
1	1G	1052	A
1	1G	1053	A
1	1G	1054	G
1	1G	1062	U
1	1G	1063	C
1	1G	1064	G
1	1G	1065	G
1	1G	1070	U
1	1G	1071	A
1	1G	1080	A
1	1G	1081	A
1	1G	1092	A
1	1G	1101	C
1	1G	1102	G

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
1	1G	1105	G
1	1G	1114	G
1	1G	1115	G
1	1G	1116	U
1	1G	1126	A
1	1G	1127	U
1	1G	1134	G
1	1G	1138	A
1	1G	1139	A
1	1G	1140	C
1	1G	1142	C
1	1G	1146	G
1	1G	1147	C
1	1G	1150	G
1	1G	1156	G
1	1G	1158	G
1	1G	1159	G
1	1G	1160	U
1	1G	1161	A
1	1G	1162	A
1	1G	1174	C
1	1G	1176	A
1	1G	1188	A
1	1G	1190	U
1	1G	1201	A
1	1G	1202	A
1	1G	1205	G
1	1G	1206	G
1	1G	1210	G
1	1G	1225	C
1	1G	1247	C
1	1G	1259	G
1	1G	1260	G
1	1G	1261	A
1	1G	1262	G
1	1G	1280	C
1	1G	1282	A
1	1G	1289	G
1	1G	1294	A
1	1G	1300	G
1	1G	1317	G
1	1G	1331	A

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
1	1G	1333	A
1	1G	1351	A
1	1G	1352	U
1	1G	1353	G
1	1G	1360	G
1	1G	1378	C
1	1G	1384	G
1	1G	1389	G
1	1G	1405	G
1	1G	1406	A
1	1G	1407	G
1	1G	1421	A
1	1G	1423	A
1	1G	1431	A
1	1G	1442	U
1	1G	1445	A
1	1G	1446	C
1	1G	1450	G
1	1G	1456	U
1	1G	1457	A
1	1G	1463	C
1	1G	1468	U
1	1G	1469	C
1	1G	1470	U
1	1G	1471	C
1	1G	1476	G
1	1G	1482	A
1	1G	1496	A
1	1G	1510	G
1	1G	1537	A
1	1G	1549	G
1	1G	1550	G
1	1G	1557	C
1	1G	1558	A
1	1G	1581	A
1	1G	1583	U
1	1G	1584	U
1	1G	1585	C
1	1G	1589	G
1	1G	1591	A
1	1G	1592	A
1	1G	1594	G

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
1	1G	1597	A
1	1G	1598	A
1	1G	1599	G
1	1G	1600	A
1	1G	1601	A
1	1G	1603	C
1	1G	1605	U
1	1G	1614	U
1	1G	1615	U
1	1G	1616	G
1	1G	1619	A
1	1G	1628	A
1	1G	1630	C
1	1G	1633	G
1	1G	1640	A
1	1G	1643	C
1	1G	1645	G
1	1G	1648	G
1	1G	1649	U
1	1G	1650	G
1	1G	1652	C
1	1G	1654	C
1	1G	1655	G
1	1G	1656	C
1	1G	1657	G
1	1G	1659	G
1	1G	1666	C
1	1G	1668	U
1	1G	1681	G
1	1G	1682	C
1	1G	1683	A
1	1G	1684	U
1	1G	1692	G
1	1G	1699	C
1	1G	1709	G
1	1G	1722	G
1	1G	1723	U
1	1G	1724	C
1	1G	1729	A
1	1G	1746	C
1	1G	1752	G
1	1G	1753	U

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
1	1G	1755	G
1	1G	1756	C
1	1G	1757	C
1	1G	1758	A
1	1G	1759	G
1	1G	1765	C
1	1G	1766	G
1	1G	1767	G
1	1G	1768	C
1	1G	1773	C
1	1G	1774	A
1	1G	1775	C
1	1G	1782	G
1	1G	1785	A
1	1G	1786	C
1	1G	1787	U
1	1G	1788	G
1	1G	1804	G
1	1G	1805	G
1	1G	1808	G
1	1G	1809	G
1	1G	1810	A
1	1G	1811	G
1	1G	1815	A
1	1G	1823	U
1	1G	1824	G
1	1G	1826	U
1	1G	1828	A
1	1G	1829	G
1	1G	1839	U
1	1G	1840	A
1	1G	1841	C
1	1G	1845	C
1	1G	1852	A
1	1G	1854	A
1	1G	1863	A
1	1G	1865	A
1	1G	1868	G
1	1G	1882	G
1	1G	1884	U
1	1G	1885	G
1	1G	1887	C

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
1	1G	1890	C
1	1G	1896	A
1	1G	1902	A
1	1G	1905	U
1	1G	1906	A
1	1G	1907	A
1	1G	1908	U
1	1G	1913	A
1	1G	1914	A
1	1G	1915	A
1	1G	1916	A
1	1G	1924	C
1	1G	1925	C
1	1G	1926	A
1	1G	1928	U
1	1G	1932	G
1	1G	1933	A
1	1G	1939	G
1	1G	1944	C
1	1G	1947	C
1	1G	1949	C
1	1G	1950	G
1	1G	1958	G
1	1G	1962	C
1	1G	1963	C
1	1G	1973	A
1	1G	1974	G
1	1G	1975	U
1	1G	1980	G
1	1G	1990	C
1	1G	1992	U
1	1G	1996	G
1	1G	2007	G
1	1G	2025	C
1	1G	2026	A
1	1G	2047	G
1	1G	2070	G
1	1G	2071	G
1	1G	2072	A
1	1G	2073	G
1	1G	2075	C
1	1G	2076	U

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
1	1G	2077	A
1	1G	2078	C
1	1G	2110	G
1	1G	2115	A
1	1G	2122	A
1	1G	2125	A
1	1G	2126	A
1	1G	2127	G
1	1G	2128	G
1	1G	2129	U
1	1G	2130	A
1	1G	2140	G
1	1G	2142	A
1	1G	2143	G
1	1G	2152	G
1	1G	2153	G
1	1G	2156	C
1	1G	2161	C
1	1G	2164	U
15	1H	2	G
15	1H	4	C
15	1H	8	A
15	1H	9	U
15	1H	10	G
15	1H	12	U
15	1H	27	G
15	1H	34	C
15	1H	45	C
15	1H	60	G
15	1H	70	A
15	1H	73	A
15	1H	74	G
15	1H	84	G
15	1H	93	G
15	1H	100	G
15	1H	116	A
15	1H	117	A
15	1H	118	U
15	1H	123	G
15	1H	155	C
15	1H	158	U
15	1H	159	U

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
15	1H	161	G
15	1H	171	A
15	1H	178	G
15	1H	186	A
15	1H	189	A
15	1H	191	C
15	1H	204	G
15	1H	205	G
15	1H	206	A
15	1H	211	A
15	1H	212	A
15	1H	213	A
15	1H	218	A
15	1H	219	A
15	1H	223	A
15	1H	238	G
15	1H	240	G
15	1H	251	G
15	1H	271	C
15	1H	273	U
15	1H	274	G
15	1H	276	C
15	1H	288	G
15	1H	289	U
15	1H	290	G
15	1H	297	U
15	1H	299	G
15	1H	300	G
15	1H	303	A
15	1H	324	A
15	1H	336	A
15	1H	349	A
15	1H	354	G
15	1H	355	A
15	1H	377	G
15	1H	382	A
15	1H	388	G
15	1H	395	C
15	1H	400	G
15	1H	408	U
15	1H	414	G
15	1H	424	G

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
15	1H	433	U
15	1H	434	G
15	1H	435	G
15	1H	439	G
15	1H	440	A
15	1H	457	A
15	1H	471	A
15	1H	472	C
15	1H	476	U
15	1H	485	A
15	1H	491	G
15	1H	498	A
15	1H	499	A
15	1H	509	G
15	1H	518	G
15	1H	528	A
15	1H	531	U
15	1H	532	A
15	1H	535	G
15	1H	536	C
15	1H	555	A
15	1H	556	A
15	1H	557	G
15	1H	558	C
15	1H	559	A
15	1H	560	G
15	1H	572	C
15	1H	573	A
15	1H	576	G
15	1H	581	G
15	1H	588	G
15	1H	589	C
15	1H	598	G
15	1H	600	A
15	1H	602	G
15	1H	609	C
15	1H	611	A
15	1H	612	C
15	1H	613	U
15	1H	628	A
15	1H	632	U
15	1H	635	G

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
15	1H	639	U
15	1H	640	U
15	1H	641	G
15	1H	643	G
15	1H	648	A
15	1H	649	G
15	1H	654	A
15	1H	659	A
15	1H	664	A
15	1H	672	C
15	1H	673	A
15	1H	675	G
15	1H	683	C
15	1H	687	C
15	1H	689	G
15	1H	690	C
15	1H	692	C
15	1H	694	C
15	1H	695	G
15	1H	696	G
15	1H	700	G
15	1H	713	C
15	1H	734	A
15	1H	735	G
15	1H	738	A
15	1H	751	G
15	1H	766	G
15	1H	772	G
15	1H	779	C
15	1H	801	A
15	1H	802	C
15	1H	811	U
15	1H	813	A
15	1H	814	G
15	1H	825	G
15	1H	831	A
15	1H	833	A
15	1H	834	G
15	1H	839	C
15	1H	841	G
15	1H	854	G
15	1H	861	C

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
15	1H	876	U
15	1H	877	U
15	1H	885	G
15	1H	894	G
15	1H	895	C
15	1H	909	U
15	1H	915	A
15	1H	926	U
15	1H	927	A
15	1H	931	G
15	1H	932	G
15	1H	933	C
15	1H	934	C
15	1H	936	A
15	1H	937	C
15	1H	939	A
15	1H	940	G
15	1H	941	C
15	1H	942	C
15	1H	943	U
15	1H	944	A
15	1H	958	A
15	1H	965	A
15	1H	974	A
15	1H	979	G
15	1H	985	G
15	1H	987	G
15	1H	988	A
15	1H	993	G
15	1H	1004	A
15	1H	1006	A
15	1H	1008	C
15	1H	1021	G
15	1H	1022	C
15	1H	1031	A
15	1H	1038	A
15	1H	1044	A
15	1H	1051	G
15	1H	1059	G
15	1H	1060	U
15	1H	1061	C
15	1H	1068	A

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
15	1H	1070	G
15	1H	1071	U
15	1H	1073	G
15	1H	1074	U
15	1H	1075	A
15	1H	1078	G
15	1H	1081	U
15	1H	1082	G
15	1H	1086	C
15	1H	1087	G
15	1H	1089	C
15	1H	1094	A
15	1H	1095	G
15	1H	1103	G
15	1H	1105	A
15	1H	1108	U
15	1H	1109	U
15	1H	1110	G
15	1H	1111	G
15	1H	1112	C
15	1H	1114	U
15	1H	1116	G
15	1H	1118	A
15	1H	1119	G
15	1H	1120	C
15	1H	1122	G
15	1H	1124	C
15	1H	1125	A
15	1H	1126	U
15	1H	1127	C
15	1H	1129	U
15	1H	1130	U
15	1H	1131	U
15	1H	1132	A
15	1H	1133	A
15	1H	1134	A
15	1H	1135	G
15	1H	1136	A
15	1H	1138	U
15	1H	1141	G
15	1H	1143	A
15	1H	1144	A

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
15	1H	1145	U
15	1H	1152	C
15	1H	1158	G
15	1H	1159	A
15	1H	1160	G
15	1H	1177	A
15	1H	1178	U
15	1H	1183	C
15	1H	1184	G
15	1H	1187	G
15	1H	1190	U
15	1H	1191	A
15	1H	1192	A
15	1H	1200	G
15	1H	1218	G
15	1H	1221	G
15	1H	1222	A
15	1H	1223	U
15	1H	1224	G
15	1H	1225	A
15	1H	1226	C
15	1H	1227	C
15	1H	1243	G
15	1H	1252	A
15	1H	1253	U
15	1H	1259	U
15	1H	1268	A
15	1H	1273	C
15	1H	1286	A
15	1H	1293	G
15	1H	1301	G
15	1H	1302	A
15	1H	1305	G
15	1H	1314	A
15	1H	1320	G
15	1H	1321	A
15	1H	1322	U
15	1H	1325	A
15	1H	1333	A
15	1H	1349	U
15	1H	1350	A
15	1H	1352	G

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
15	1H	1362	U
15	1H	1363	C
15	1H	1377	G
15	1H	1387	G
15	1H	1390	U
15	1H	1391	A
15	1H	1394	C
15	1H	1401	U
15	1H	1408	A
15	1H	1409	A
15	1H	1414	A
15	1H	1419	C
15	1H	1428	A
15	1H	1429	G
15	1H	1433	A
15	1H	1434	G
15	1H	1435	C
15	1H	1440	U
15	1H	1444	A
15	1H	1465	G
15	1H	1466	C
15	1H	1469	U
15	1H	1470	G
15	1H	1476	A
15	1H	1477	C
15	1H	1486	C
15	1H	1494	A
15	1H	1499	A
15	1H	1500	G
15	1H	1505	G
15	1H	1508	C
15	1H	1509	G
15	1H	1510	A
15	1H	1511	G
15	1H	1517	C
15	1H	1521	A
15	1H	1528	G
15	1H	1532	G
15	1H	1542	C
15	1H	1543	A
15	1H	1546	U
15	1H	1557	A

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
15	1H	1559	A
15	1H	1560	A
15	1H	1566	G
15	1H	1574	G
15	1H	1583	G
15	1H	1584	U
15	1H	1585	A
15	1H	1586	C
15	1H	1587	G
15	1H	1592	A
15	1H	1594	A
15	1H	1597	C
15	1H	1598	C
15	1H	1604	A
15	1H	1608	A
15	1H	1609	G
15	1H	1610	G
15	1H	1619	A
15	1H	1627	C
15	1H	1628	U
15	1H	1630	A
15	1H	1634	C
15	1H	1635	A
15	1H	1636	A
15	1H	1642	G
15	1H	1643	G
15	1H	1655	G
15	1H	1657	A
15	1H	1658	A
15	1H	1659	A
15	1H	1666	C
15	1H	1678	U
15	1H	1684	A
15	1H	1689	U
15	1H	1698	C
15	1H	1701	G
15	1H	1704	A
15	1H	1724	G
15	1H	1725	C
15	1H	1728	G
15	1H	1769	G
15	1H	1770	A

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
15	1H	1771	U
15	1H	1772	G
15	1H	1773	A
15	1H	1790	G
15	1H	1792	G
15	1H	1794	A
15	1H	1796	A
15	1H	1797	G
15	1H	1798	G
15	1H	1807	A
15	1H	1810	G
15	1H	1820	A
15	1H	1825	A
15	1H	1833	G
15	1H	1834	C
15	1H	1835	G
15	1H	1836	A
15	1H	1845	G
15	1H	1850	G
15	1H	1853	A
15	1H	1863	A
15	1H	1869	G
15	1H	1881	A
15	1H	1892	G
15	1H	1893	A
15	1H	1894	G
15	1H	1902	A
15	1H	1903	G
15	1H	1914	A
15	1H	1921	G
15	1H	1925	A
15	1H	1926	A
15	1H	1928	G
15	1H	1931	G
15	1H	1938	A
15	1H	1939	C
15	1H	1944	A
15	1H	1954	G
15	1H	1955	G
15	1H	1956	U
15	1H	1963	A
15	1H	1980	U

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
15	1H	1988	U
15	1H	1992	C
15	1H	1994	A
15	1H	1995	A
15	1H	1996	A
15	1H	1997	A
15	1H	2007	C
15	1H	2011	A
15	1H	2018	U
15	1H	2045	A
15	1H	2046	C
15	1H	2048	G
15	1H	2056	A
15	1H	2058	A
15	1H	2068	C
15	1H	2079	A
15	1H	2080	C
15	1H	2081	G
15	1H	2085	A
15	1H	2086	G
15	1H	2087	A
15	1H	2088	C
15	1H	2094	G
15	1H	2095	G
15	1H	2122	C
15	1H	2124	U
15	1H	2133	C
15	1H	2136	C
15	1H	2137	G
15	1H	2138	U
15	1H	2139	A
15	1H	2140	G
15	1H	2141	G
15	1H	2143	U
15	1H	2144	A
15	1H	2147	U
15	1H	2150	G
15	1H	2151	A
15	1H	2152	G
15	1H	2153	C
15	1H	2154	C
15	1H	2156	G

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
15	1H	2157	U
15	1H	2158	G
15	1H	2159	A
15	1H	2160	A
15	1H	2161	C
15	1H	2164	C
15	1H	2170	C
15	1H	2172	G
15	1H	2173	G
15	1H	2179	G
15	1H	2182	G
15	1H	2183	A
15	1H	2187	G
15	1H	2190	G
15	1H	2191	G
15	1H	2192	U
15	1H	2193	G
15	1H	2195	A
15	1H	2196	A
15	1H	2198	A
15	1H	2199	C
15	1H	2201	A
15	1H	2206	G
15	1H	2215	G
15	1H	2220	C
15	1H	2223	A
15	1H	2230	G
15	1H	2231	G
15	1H	2232	A
15	1H	2233	U
15	1H	2234	G
15	1H	2240	A
15	1H	2241	C
15	1H	2242	A
15	1H	2253	G
15	1H	2254	G
15	1H	2267	G
15	1H	2269	C
15	1H	2282	A
15	1H	2286	G
15	1H	2288	A
15	1H	2290	C

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
15	1H	2293	A
15	1H	2295	G
15	1H	2298	C
15	1H	2300	C
15	1H	2302	A
15	1H	2303	A
15	1H	2320	A
15	1H	2322	G
15	1H	2323	G
15	1H	2325	A
15	1H	2327	U
15	1H	2329	C
15	1H	2335	A
15	1H	2336	G
15	1H	2340	G
15	1H	2349	G
15	1H	2350	A
15	1H	2351	A
15	1H	2352	G
15	1H	2361	A
15	1H	2362	C
15	1H	2365	C
15	1H	2367	A
15	1H	2392	A
15	1H	2394	G
15	1H	2398	G
15	1H	2400	C
15	1H	2411	G
15	1H	2417	C
15	1H	2421	U
15	1H	2425	G
15	1H	2438	U
15	1H	2439	C
15	1H	2440	A
15	1H	2444	G
15	1H	2445	A
15	1H	2449	A
15	1H	2450	A
15	1H	2454	A
15	1H	2455	C
15	1H	2456	C
15	1H	2463	A

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
15	1H	2464	U
15	1H	2479	C
15	1H	2483	G
15	1H	2484	A
15	1H	2490	C
15	1H	2491	A
15	1H	2493	A
15	1H	2497	G
15	1H	2507	U
15	1H	2517	G
15	1H	2519	U
15	1H	2520	G
15	1H	2533	A
15	1H	2535	C
15	1H	2544	G
15	1H	2568	G
15	1H	2569	U
15	1H	2581	A
15	1H	2582	G
15	1H	2588	C
15	1H	2597	G
15	1H	2614	G
15	1H	2616	C
15	1H	2617	A
15	1H	2624	U
15	1H	2626	U
15	1H	2627	C
15	1H	2630	U
15	1H	2644	A
15	1H	2649	G
15	1H	2651	U
15	1H	2656	G
15	1H	2669	A
15	1H	2672	A
15	1H	2676	G
15	1H	2680	A
15	1H	2681	C
15	1H	2686	A
15	1H	2688	G
15	1H	2693	C
15	1H	2704	U
15	1H	2705	C

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
15	1H	2717	U
15	1H	2718	C
15	1H	2722	G
15	1H	2728	A
15	1H	2729	A
15	1H	2730	G
15	1H	2742	U
15	1H	2749	A
15	1H	2750	A
15	1H	2764	A
15	1H	2773	A
15	1H	2774	A
15	1H	2780	A
15	1H	2781	A
15	1H	2782	G
15	1H	2794	A
15	1H	2795	U
15	1H	2796	G
15	1H	2797	A
15	1H	2805	C
15	1H	2806	A
15	1H	2807	C
15	1H	2809	G
15	1H	2810	C
15	1H	2811	G
15	1H	2812	U
15	1H	2813	C
15	1H	2814	A
15	1H	2815	A
15	1H	2817	C
15	1H	2820	G
15	1H	2821	U
15	1H	2833	A
15	1H	2834	A
15	1H	2836	A
15	1H	2843	G
15	1H	2846	G
15	1H	2847	G
15	1H	2848	A
15	1H	2885	G
15	1H	2892	C
15	1H	2903	G

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
15	1H	2904	A
15	1H	2905	G
15	1H	2907	U
15	1H	2911	G
15	1H	2914	C
15	14	3	U
15	14	4	C
15	14	5	A
15	14	6	A
15	14	9	U
15	14	10	G
15	14	11	G
15	14	13	A
15	14	14	A
15	14	15	G
15	14	34	C
15	14	35	G
15	14	36	G
15	14	45	C
15	14	48	A
15	14	49	U
15	14	50	G
15	14	57	G
15	14	60	G
15	14	63	A
15	14	70	A
15	14	71	U
15	14	73	A
15	14	74	G
15	14	81	G
15	14	82	G
15	14	91	G
15	14	92	C
15	14	94	G
15	14	98	U
15	14	100	G
15	14	116	A
15	14	117	A
15	14	118	U
15	14	123	G
15	14	127	C
15	14	137	G

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
15	14	138	G
15	14	154	G
15	14	155	C
15	14	156	U
15	14	157	U
15	14	161	G
15	14	162	C
15	14	163	G
15	14	165	G
15	14	171	A
15	14	172	A
15	14	173	C
15	14	186	A
15	14	189	A
15	14	195	G
15	14	204	G
15	14	205	G
15	14	206	A
15	14	211	A
15	14	212	A
15	14	215	A
15	14	219	A
15	14	223	A
15	14	238	G
15	14	239	C
15	14	240	G
15	14	262	A
15	14	271	C
15	14	272	U
15	14	273	U
15	14	275	U
15	14	288	G
15	14	289	U
15	14	290	G
15	14	295	C
15	14	296	C
15	14	297	U
15	14	299	G
15	14	300	G
15	14	301	A
15	14	302	C
15	14	303	A

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
15	14	304	C
15	14	308	A
15	14	314	A
15	14	324	A
15	14	336	A
15	14	349	A
15	14	354	G
15	14	355	A
15	14	377	G
15	14	388	G
15	14	393	U
15	14	394	A
15	14	400	G
15	14	414	G
15	14	422	A
15	14	423	U
15	14	424	G
15	14	433	U
15	14	434	G
15	14	439	G
15	14	440	A
15	14	457	A
15	14	471	A
15	14	472	C
15	14	476	U
15	14	480	G
15	14	482	A
15	14	483	C
15	14	485	A
15	14	498	A
15	14	499	A
15	14	508	A
15	14	509	G
15	14	525	G
15	14	528	A
15	14	531	U
15	14	532	A
15	14	536	C
15	14	555	A
15	14	556	A
15	14	557	G
15	14	558	C

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
15	14	559	A
15	14	560	G
15	14	581	G
15	14	588	G
15	14	593	U
15	14	598	G
15	14	600	A
15	14	628	A
15	14	632	U
15	14	635	G
15	14	639	U
15	14	640	U
15	14	641	G
15	14	643	G
15	14	648	A
15	14	649	G
15	14	654	A
15	14	664	A
15	14	671	A
15	14	672	C
15	14	673	A
15	14	675	G
15	14	678	G
15	14	681	A
15	14	689	G
15	14	690	C
15	14	693	G
15	14	695	G
15	14	699	C
15	14	701	A
15	14	717	G
15	14	718	G
15	14	735	G
15	14	757	C
15	14	758	U
15	14	766	G
15	14	770	C
15	14	771	A
15	14	775	G
15	14	779	C
15	14	801	A
15	14	802	C

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
15	14	811	U
15	14	813	A
15	14	819	G
15	14	820	G
15	14	824	G
15	14	825	G
15	14	828	U
15	14	831	A
15	14	832	A
15	14	833	A
15	14	834	G
15	14	841	G
15	14	842	A
15	14	846	C
15	14	854	G
15	14	861	C
15	14	868	A
15	14	869	A
15	14	876	U
15	14	877	U
15	14	879	G
15	14	881	G
15	14	889	C
15	14	895	C
15	14	908	G
15	14	914	C
15	14	915	A
15	14	932	G
15	14	935	C
15	14	937	C
15	14	938	C
15	14	939	A
15	14	943	U
15	14	944	A
15	14	945	C
15	14	952	C
15	14	958	A
15	14	962	C
15	14	965	A
15	14	974	A
15	14	979	G
15	14	980	A

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
15	14	985	G
15	14	988	A
15	14	992	A
15	14	993	G
15	14	1008	C
15	14	1017	C
15	14	1021	G
15	14	1027	G
15	14	1028	A
15	14	1031	A
15	14	1037	G
15	14	1038	A
15	14	1039	C
15	14	1044	A
15	14	1058	A
15	14	1060	U
15	14	1061	C
15	14	1070	G
15	14	1071	U
15	14	1073	G
15	14	1074	U
15	14	1082	G
15	14	1085	G
15	14	1092	G
15	14	1093	A
15	14	1094	A
15	14	1095	G
15	14	1096	A
15	14	1099	G
15	14	1102	A
15	14	1105	A
15	14	1108	U
15	14	1109	U
15	14	1112	C
15	14	1113	U
15	14	1114	U
15	14	1115	A
15	14	1116	G
15	14	1118	A
15	14	1119	G
15	14	1121	A
15	14	1125	A

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
15	14	1127	C
15	14	1130	U
15	14	1131	U
15	14	1133	A
15	14	1134	A
15	14	1135	G
15	14	1136	A
15	14	1138	U
15	14	1139	G
15	14	1143	A
15	14	1144	A
15	14	1145	U
15	14	1147	G
15	14	1153	U
15	14	1158	G
15	14	1159	A
15	14	1160	G
15	14	1170	G
15	14	1177	A
15	14	1178	U
15	14	1183	C
15	14	1184	G
15	14	1187	G
15	14	1192	A
15	14	1200	G
15	14	1204	A
15	14	1219	G
15	14	1220	G
15	14	1222	A
15	14	1223	U
15	14	1225	A
15	14	1226	C
15	14	1234	G
15	14	1246	U
15	14	1252	A
15	14	1253	U
15	14	1268	A
15	14	1278	G
15	14	1293	G
15	14	1297	G
15	14	1298	U
15	14	1302	A

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
15	14	1305	G
15	14	1311	A
15	14	1312	U
15	14	1320	G
15	14	1321	A
15	14	1324	A
15	14	1333	A
15	14	1338	C
15	14	1349	U
15	14	1350	A
15	14	1362	U
15	14	1370	A
15	14	1378	U
15	14	1381	G
15	14	1394	C
15	14	1398	A
15	14	1401	U
15	14	1408	A
15	14	1409	A
15	14	1414	A
15	14	1417	G
15	14	1418	G
15	14	1419	C
15	14	1422	A
15	14	1426	G
15	14	1428	A
15	14	1429	G
15	14	1433	A
15	14	1434	G
15	14	1435	C
15	14	1455	U
15	14	1456	C
15	14	1457	C
15	14	1465	G
15	14	1466	C
15	14	1468	A
15	14	1469	U
15	14	1470	G
15	14	1477	C
15	14	1484	G
15	14	1486	C
15	14	1494	A

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
15	14	1495	C
15	14	1499	A
15	14	1500	G
15	14	1504	U
15	14	1505	G
15	14	1508	C
15	14	1510	A
15	14	1511	G
15	14	1517	C
15	14	1521	A
15	14	1525	G
15	14	1528	G
15	14	1529	G
15	14	1530	G
15	14	1531	U
15	14	1532	G
15	14	1539	A
15	14	1542	C
15	14	1546	U
15	14	1557	A
15	14	1558	C
15	14	1559	A
15	14	1571	G
15	14	1572	U
15	14	1582	C
15	14	1583	G
15	14	1584	U
15	14	1586	C
15	14	1592	A
15	14	1593	C
15	14	1604	A
15	14	1608	A
15	14	1609	G
15	14	1610	G
15	14	1616	A
15	14	1619	A
15	14	1623	G
15	14	1628	U
15	14	1632	C
15	14	1634	C
15	14	1635	A
15	14	1636	A

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
15	14	1637	C
15	14	1643	G
15	14	1646	A
15	14	1647	C
15	14	1657	A
15	14	1658	A
15	14	1659	A
15	14	1665	A
15	14	1668	G
15	14	1674	C
15	14	1690	C
15	14	1697	G
15	14	1698	C
15	14	1704	A
15	14	1724	G
15	14	1728	G
15	14	1746	G
15	14	1750	A
15	14	1751	A
15	14	1753	G
15	14	1766	G
15	14	1770	A
15	14	1771	U
15	14	1772	G
15	14	1773	A
15	14	1775	C
15	14	1776	C
15	14	1779	G
15	14	1796	A
15	14	1797	G
15	14	1798	G
15	14	1807	A
15	14	1814	A
15	14	1816	C
15	14	1825	A
15	14	1834	C
15	14	1835	G
15	14	1836	A
15	14	1850	G
15	14	1863	A
15	14	1873	G
15	14	1881	A

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
15	14	1892	G
15	14	1894	G
15	14	1903	G
15	14	1909	A
15	14	1913	G
15	14	1914	A
15	14	1920	C
15	14	1925	A
15	14	1931	G
15	14	1933	C
15	14	1934	C
15	14	1954	G
15	14	1955	G
15	14	1956	U
15	14	1961	A
15	14	1962	A
15	14	1963	A
15	14	1980	U
15	14	1988	U
15	14	1992	C
15	14	1995	A
15	14	1996	A
15	14	1997	A
15	14	2018	U
15	14	2045	A
15	14	2048	G
15	14	2056	A
15	14	2057	G
15	14	2058	A
15	14	2068	C
15	14	2076	A
15	14	2080	C
15	14	2081	G
15	14	2085	A
15	14	2086	G
15	14	2087	A
15	14	2088	C
15	14	2094	G
15	14	2095	G
15	14	2107	A
15	14	2118	G
15	14	2124	U

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
15	14	2125	G
15	14	2133	C
15	14	2136	C
15	14	2137	G
15	14	2138	U
15	14	2139	A
15	14	2140	G
15	14	2141	G
15	14	2142	A
15	14	2144	A
15	14	2145	G
15	14	2147	U
15	14	2148	G
15	14	2149	G
15	14	2150	G
15	14	2151	A
15	14	2152	G
15	14	2154	C
15	14	2156	G
15	14	2157	U
15	14	2158	G
15	14	2161	C
15	14	2162	C
15	14	2163	C
15	14	2164	C
15	14	2165	C
15	14	2169	U
15	14	2170	C
15	14	2171	C
15	14	2172	G
15	14	2173	G
15	14	2176	G
15	14	2177	G
15	14	2180	G
15	14	2182	G
15	14	2183	A
15	14	2185	G
15	14	2186	C
15	14	2187	G
15	14	2189	C
15	14	2191	G
15	14	2192	U

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
15	14	2193	G
15	14	2194	A
15	14	2196	A
15	14	2198	A
15	14	2199	C
15	14	2207	G
15	14	2214	U
15	14	2216	G
15	14	2217	G
15	14	2223	A
15	14	2230	G
15	14	2231	G
15	14	2232	A
15	14	2234	G
15	14	2240	A
15	14	2241	C
15	14	2243	G
15	14	2250	G
15	14	2254	G
15	14	2283	A
15	14	2288	A
15	14	2290	C
15	14	2291	G
15	14	2293	A
15	14	2295	G
15	14	2298	C
15	14	2302	A
15	14	2303	A
15	14	2313	A
15	14	2320	A
15	14	2322	G
15	14	2323	G
15	14	2324	A
15	14	2325	A
15	14	2326	A
15	14	2332	C
15	14	2333	G
15	14	2336	G
15	14	2340	G
15	14	2341	C
15	14	2342	A
15	14	2349	G

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
15	14	2351	A
15	14	2354	G
15	14	2361	A
15	14	2362	C
15	14	2365	C
15	14	2370	C
15	14	2398	G
15	14	2400	C
15	14	2403	A
15	14	2411	G
15	14	2416	U
15	14	2417	C
15	14	2418	C
15	14	2421	U
15	14	2426	A
15	14	2429	G
15	14	2437	A
15	14	2444	G
15	14	2445	A
15	14	2446	U
15	14	2450	A
15	14	2454	A
15	14	2455	C
15	14	2456	C
15	14	2460	G
15	14	2463	A
15	14	2484	A
15	14	2485	G
15	14	2488	U
15	14	2490	C
15	14	2491	A
15	14	2492	C
15	14	2497	G
15	14	2504	G
15	14	2509	G
15	14	2510	G
15	14	2517	G
15	14	2519	U
15	14	2520	G
15	14	2533	A
15	14	2544	G
15	14	2547	G

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
15	14	2558	G
15	14	2564	G
15	14	2569	U
15	14	2570	U
15	14	2579	A
15	14	2581	A
15	14	2582	G
15	14	2584	G
15	14	2588	C
15	14	2600	U
15	14	2602	A
15	14	2617	A
15	14	2624	U
15	14	2626	U
15	14	2627	C
15	14	2630	U
15	14	2636	A
15	14	2645	G
15	14	2651	U
15	14	2661	C
15	14	2675	A
15	14	2680	A
15	14	2682	C
15	14	2688	G
15	14	2704	U
15	14	2705	C
15	14	2717	U
15	14	2718	C
15	14	2722	G
15	14	2728	A
15	14	2729	A
15	14	2742	U
15	14	2745	G
15	14	2749	A
15	14	2755	U
15	14	2760	G
15	14	2766	A
15	14	2767	G
15	14	2768	C
15	14	2770	U
15	14	2773	A
15	14	2774	A

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
15	14	2777	G
15	14	2778	G
15	14	2781	A
15	14	2792	A
15	14	2793	G
15	14	2794	A
15	14	2795	U
15	14	2805	C
15	14	2806	A
15	14	2807	C
15	14	2809	G
15	14	2812	U
15	14	2813	C
15	14	2814	A
15	14	2820	G
15	14	2831	G
15	14	2833	A
15	14	2834	A
15	14	2846	G
15	14	2847	G
15	14	2848	A
15	14	2849	U
15	14	2862	U
15	14	2873	A
15	14	2879	U
15	14	2885	G
15	14	2892	C
15	14	2902	C
15	14	2904	A
15	14	2906	G
15	14	2908	C
15	14	2910	U
15	14	2911	G
15	14	2912	A
26	16	2	A
26	16	3	U
26	16	4	C
26	16	10	U
26	16	11	G
26	16	15	A
26	16	17	A
26	16	18	G

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
26	16	27	A
26	16	28	A
26	16	33	C
26	16	35	G
26	16	42	U
26	16	44	C
26	16	46	G
26	16	47	A
26	16	54	A
26	16	58	G
26	16	60	A
26	16	67	C
26	16	68	A
26	16	75	A
26	16	76	U
26	16	83	G
26	16	86	C
26	16	108	G
26	16	109	G
26	16	112	G
26	16	122	A
26	1J	2	A
26	1J	10	U
26	1J	11	G
26	1J	15	A
26	1J	17	A
26	1J	18	G
26	1J	25	G
26	1J	27	A
26	1J	28	A
26	1J	32	C
26	1J	42	U
26	1J	44	C
26	1J	47	A
26	1J	48	A
26	1J	49	C
26	1J	52	G
26	1J	54	A
26	1J	55	A
26	1J	58	G
26	1J	60	A
26	1J	61	A

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
26	1J	63	G
26	1J	75	A
26	1J	83	G
26	1J	84	G
26	1J	86	C
26	1J	87	G
26	1J	90	C
26	1J	91	G
26	1J	92	A
26	1J	93	C
26	1J	95	G
26	1J	102	A
26	1J	111	C
26	1J	112	G
51	Y1	30	C
51	Y1	31	A
51	Y1	32	A
51	Y1	33	G
51	Y1	36	G
51	Y1	37	G
51	Y1	38	U
51	Y1	41	U
51	Y1	42	U
51	Y1	43	U
52	W1	7	A
52	W1	9	A
52	W1	10	G
52	W1	11	C
52	W1	16	U
52	W1	18	G
52	W1	19	G
52	W1	22	G
52	W1	33	U
52	W1	34	G
52	W1	41	C
52	W1	44	G
52	W1	47	U
52	W1	48	C
52	W1	49	C
52	W1	61	C
52	W1	70	G
52	W1	73	A

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
52	W1	74	C
52	W1	76	A
52	X1	2	C
52	X1	7	A
52	X1	8	U
52	X1	13	C
52	X1	17	C
52	X1	18	G
52	X1	22	G
52	X1	30	G
52	X1	31	A
52	X1	37	A
52	X1	38	A
52	X1	41	C
52	X1	44	G
52	X1	45	U
52	X1	46	G
52	X1	58	A
52	X1	64	A
52	X1	65	G
52	X1	66	U
52	X1	68	C
52	X1	72	C
52	X1	76	A
52	V1	2	C
52	V1	3	C
52	V1	8	U
52	V1	9	A
52	V1	10	G
52	V1	13	C
52	V1	14	A
52	V1	17	C
52	V1	19	G
52	V1	21	A
52	V1	22	G
52	V1	26	A
52	V1	30	G
52	V1	33	U
52	V1	34	G
52	V1	35	A
52	V1	36	A
52	V1	37	A

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
52	V1	42	C
52	V1	45	U
52	V1	46	G
52	V1	47	U
52	V1	48	C
52	V1	49	C
52	V1	52	G
52	V1	55	U
52	V1	56	C
52	V1	58	A
52	V1	59	U
52	V1	60	U
52	V1	61	C
52	V1	66	U
52	V1	72	C
52	V1	73	A
52	V1	76	A
51	Y4	31	A
51	Y4	35	A
51	Y4	37	G
51	Y4	38	U
51	Y4	41	U
51	Y4	42	U
51	Y4	43	U
51	Y4	44	U
51	Y4	45	U
51	Y4	51	U
51	Y4	52	U
52	W4	14	A
52	W4	16	U
52	W4	17	C
52	W4	18	G
52	W4	19	G
52	W4	20	U
52	W4	21	A
52	W4	22	G
52	W4	26	A
52	W4	40	C
52	W4	41	C
52	W4	47	U
52	W4	49	C
52	W4	64	A

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
52	W4	65	G
52	W4	68	C
52	W4	70	G
52	W4	72	C
52	W4	73	A
52	W4	74	C
52	W4	75	C
52	W4	76	A
52	X4	8	U
52	X4	17	C
52	X4	18	G
52	X4	19	G
52	X4	20	U
52	X4	21	A
52	X4	22	G
52	X4	37	A
52	X4	43	C
52	X4	44	G
52	X4	45	U
52	X4	46	G
52	X4	48	C
52	X4	58	A
52	X4	61	C
52	X4	68	C
52	X4	71	G
52	X4	74	C
52	X4	76	A
52	V4	3	C
52	V4	8	U
52	V4	9	A
52	V4	10	G
52	V4	14	A
52	V4	16	U
52	V4	17	C
52	V4	19	G
52	V4	21	A
52	V4	22	G
52	V4	26	A
52	V4	29	G
52	V4	31	A
52	V4	32	U
52	V4	33	U

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
52	V4	34	G
52	V4	35	A
52	V4	37	A
52	V4	38	A
52	V4	42	C
52	V4	43	C
52	V4	44	G
52	V4	45	U
52	V4	46	G
52	V4	47	U
52	V4	48	C
52	V4	49	C
52	V4	55	U
52	V4	56	C
52	V4	58	A
52	V4	59	U
52	V4	60	U
52	V4	61	C
52	V4	66	U
52	V4	67	C
52	V4	73	A

All (188) RNA pucker outliers are listed below:

<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
1	13	651	U
1	13	696	A
1	13	754	G
1	13	821	G
1	13	885	U
1	13	907	G
1	13	1053	A
1	13	1054	G
1	13	1069	G
1	13	1070	U
1	13	1114	G
1	13	1189	U
1	13	1377	C
1	13	1422	U
1	13	1615	U
1	13	1649	U
1	13	1651	C

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
1	13	1692	G
1	13	1693	U
1	13	1757	C
1	13	1773	C
1	13	1779	A
1	13	1804	G
1	13	1867	U
1	13	1912	A
1	13	1927	G
1	13	1929	U
1	13	1963	C
1	13	2071	G
1	13	2078	C
1	13	2079	G
1	13	2121	U
1	13	2127	G
1	1G	728	U
1	1G	754	G
1	1G	849	A
1	1G	891	A
1	1G	907	G
1	1G	915	A
1	1G	968	A
1	1G	986	C
1	1G	1053	A
1	1G	1070	U
1	1G	1115	G
1	1G	1138	A
1	1G	1189	U
1	1G	1261	A
1	1G	1316	A
1	1G	1352	U
1	1G	1377	C
1	1G	1441	C
1	1G	1536	A
1	1G	1615	U
1	1G	1649	U
1	1G	1681	G
1	1G	1682	C
1	1G	1722	G
1	1G	1756	C
1	1G	1773	C

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
1	1G	1785	A
1	1G	1912	A
1	1G	1925	C
1	1G	1927	G
1	1G	1973	A
1	1G	2024	A
1	1G	2025	C
1	1G	2121	U
15	1H	33	U
15	1H	185	A
15	1H	186	A
15	1H	218	A
15	1H	239	C
15	1H	288	G
15	1H	432	C
15	1H	484	C
15	1H	535	G
15	1H	612	C
15	1H	640	U
15	1H	654	A
15	1H	734	A
15	1H	801	A
15	1H	813	A
15	1H	894	G
15	1H	908	G
15	1H	1021	G
15	1H	1070	G
15	1H	1074	U
15	1H	1108	U
15	1H	1109	U
15	1H	1133	A
15	1H	1158	G
15	1H	1226	C
15	1H	1324	A
15	1H	1361	U
15	1H	1427	A
15	1H	1445	U
15	1H	1469	U
15	1H	1608	A
15	1H	1657	A
15	1H	1658	A
15	1H	1770	A

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
15	1H	1791	U
15	1H	1796	A
15	1H	1833	G
15	1H	1892	G
15	1H	1925	A
15	1H	2087	A
15	1H	2182	G
15	1H	2197	U
15	1H	2230	G
15	1H	2231	G
15	1H	2290	C
15	1H	2350	A
15	1H	2361	A
15	1H	2366	G
15	1H	2454	A
15	1H	2463	A
15	1H	2490	C
15	1H	2496	G
15	1H	2581	A
15	1H	2626	U
15	1H	2704	U
15	1H	2772	U
15	14	4	C
15	14	34	C
15	14	48	A
15	14	126	C
15	14	185	A
15	14	186	A
15	14	303	A
15	14	335	A
15	14	640	U
15	14	734	A
15	14	801	A
15	14	813	A
15	14	876	U
15	14	1070	G
15	14	1133	A
15	14	1335	A
15	14	1428	A
15	14	1445	U
15	14	1465	G
15	14	1469	U

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
15	14	1608	A
15	14	1657	A
15	14	1658	A
15	14	2087	A
15	14	2230	G
15	14	2240	A
15	14	2290	C
15	14	2350	A
15	14	2417	C
15	14	2421	U
15	14	2443	G
15	14	2454	A
15	14	2557	A
15	14	2626	U
15	14	2644	A
15	14	2704	U
15	14	2772	U
15	14	2792	A
15	14	2846	G
15	14	2872	G
26	16	2	A
26	16	46	G
26	16	111	C
26	1J	17	A
26	1J	54	A
26	1J	90	C
51	Y1	31	A
51	Y1	36	G
52	X1	20	U
52	X1	45	U
52	V1	2	C
52	V1	8	U
52	V1	18	G
52	V1	34	G
52	V1	36	A
52	V1	58	A
52	V1	60	U
52	X4	18	G
52	X4	43	C
52	X4	48	C
52	V4	8	U
52	V4	18	G

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Mol	Chain	Res	Type
52	V4	45	U
52	V4	58	A
52	V4	60	U

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

There are no non-standard protein/DNA/RNA residues in this entry.

## 5.5 Carbohydrates [i](#)

There are no monosaccharides in this entry.

## 5.6 Ligand geometry [i](#)

Of 1789 ligands modelled in this entry, 1776 are monoatomic - leaving 13 for Mogul analysis.

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

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	$\# Z  > 2$	Counts	RMSZ	$\# Z  > 2$
53	8UZ	14	3006	-	35,35,35	0.19	0	49,52,52	0.95	1 (2%)
53	8UZ	1G	2202	54	35,35,35	0.18	0	49,52,52	0.70	1 (2%)
53	8UZ	1H	3003	-	35,35,35	0.30	0	49,52,52	0.77	1 (2%)
53	8UZ	1H	3004	-	35,35,35	0.57	0	49,52,52	1.53	7 (14%)
53	8UZ	1H	3005	-	35,35,35	0.32	0	49,52,52	1.39	8 (16%)
53	8UZ	1G	2201	-	35,35,35	0.23	0	49,52,52	0.72	1 (2%)
53	8UZ	14	3003	-	35,35,35	0.29	0	49,52,52	1.57	5 (10%)
53	8UZ	13	2201	-	35,35,35	0.21	0	49,52,52	0.83	0
53	8UZ	14	3005	-	35,35,35	0.45	0	49,52,52	0.91	1 (2%)
53	8UZ	14	3002	-	35,35,35	0.26	0	49,52,52	0.94	2 (4%)
53	8UZ	13	2202	54	35,35,35	0.22	0	49,52,52	0.83	2 (4%)
53	8UZ	1H	3002	-	35,35,35	0.21	0	49,52,52	0.88	2 (4%)
53	8UZ	14	3004	-	35,35,35	0.24	0	49,52,52	0.74	2 (4%)

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
53	8UZ	14	3006	-	-	4/12/72/72	0/3/3/3
53	8UZ	1G	2202	54	-	3/12/72/72	0/3/3/3
53	8UZ	1H	3003	-	-	6/12/72/72	0/3/3/3
53	8UZ	1H	3004	-	-	6/12/72/72	0/3/3/3
53	8UZ	1H	3005	-	-	6/12/72/72	0/3/3/3
53	8UZ	1G	2201	-	-	5/12/72/72	0/3/3/3
53	8UZ	14	3003	-	-	8/12/72/72	0/3/3/3
53	8UZ	13	2201	-	-	3/12/72/72	0/3/3/3
53	8UZ	14	3005	-	-	3/12/72/72	0/3/3/3
53	8UZ	14	3002	-	-	2/12/72/72	0/3/3/3
53	8UZ	13	2202	54	-	1/12/72/72	0/3/3/3
53	8UZ	1H	3002	-	-	3/12/72/72	0/3/3/3
53	8UZ	14	3004	-	-	6/12/72/72	0/3/3/3

There are no bond length outliers.

All (33) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
53	14	3003	8UZ	C14-C13-C12	-5.68	98.72	111.06
53	1H	3004	8UZ	O1-C2-C15	4.89	116.64	108.22
53	14	3003	8UZ	C2-C15-N4	4.54	118.38	110.20
53	1H	3005	8UZ	C14-C13-C12	-4.16	102.03	111.06
53	14	3003	8UZ	C9-C14-C13	-3.82	105.26	110.40
53	14	3006	8UZ	C9-C14-C13	-3.38	105.86	110.40
53	1G	2202	8UZ	C2-C15-N4	3.22	116.01	110.20
53	1H	3004	8UZ	C2-C15-N4	3.18	115.94	110.20
53	1H	3004	8UZ	C9-C14-C13	-3.18	106.13	110.40
53	13	2202	8UZ	C2-C15-N4	3.17	115.92	110.20
53	14	3005	8UZ	C6-C5-C4	-3.13	104.75	111.18
53	1H	3004	8UZ	O1-C3-C4	3.06	116.47	109.18
53	1H	3005	8UZ	C12-C13-N3	3.03	117.27	111.05
53	14	3003	8UZ	O1-C2-C15	3.03	113.44	108.22
53	1H	3004	8UZ	O3-C8-C7	3.02	115.31	107.28
53	1H	3004	8UZ	C17-C16-C15	2.91	116.08	111.07
53	1H	3005	8UZ	O1-C2-C15	2.75	112.95	108.22

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
53	1H	3005	8UZ	C2-C15-N4	2.74	115.14	110.20
53	14	3004	8UZ	C14-C13-C12	-2.68	105.23	111.06
53	1H	3002	8UZ	C14-C13-C12	-2.64	105.33	111.06
53	14	3003	8UZ	O3-C8-C3	2.50	113.83	107.48
53	1H	3005	8UZ	C9-C14-C13	-2.47	107.08	110.40
53	1H	3004	8UZ	C8-C3-C4	-2.42	106.64	111.16
53	1H	3003	8UZ	C2-C15-N4	2.41	114.54	110.20
53	13	2202	8UZ	C14-C13-C12	-2.29	106.08	111.06
53	14	3002	8UZ	O1-C3-C8	2.29	113.29	107.48
53	14	3004	8UZ	C2-C15-N4	2.25	114.26	110.20
53	1H	3005	8UZ	O3-C8-C3	2.23	113.15	107.48
53	1H	3005	8UZ	O1-C3-C4	-2.20	103.94	109.18
53	14	3002	8UZ	C6-C5-C4	2.13	115.55	111.18
53	1H	3002	8UZ	C9-C14-C13	-2.07	107.61	110.40
53	1H	3005	8UZ	O6-C12-C13	2.06	113.91	110.22
53	1G	2201	8UZ	C9-C14-C13	-2.02	107.69	110.40

There are no chirality outliers.

All (56) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
53	13	2201	8UZ	N-C-C1-C17
53	13	2201	8UZ	N-C-C1-O
53	1G	2201	8UZ	N-C-C1-C17
53	1G	2201	8UZ	N-C-C1-O
53	1G	2202	8UZ	N-C-C1-C17
53	1G	2202	8UZ	N-C-C1-O
53	1H	3003	8UZ	N-C-C1-C17
53	1H	3003	8UZ	N-C-C1-O
53	14	3003	8UZ	C15-C2-O1-C3
53	14	3006	8UZ	C15-C2-O1-C3
53	14	3003	8UZ	O4-C9-O3-C8
53	14	3003	8UZ	O-C2-O1-C3
53	14	3005	8UZ	O4-C9-O3-C8
53	1H	3005	8UZ	O4-C9-O3-C8
53	14	3006	8UZ	O-C2-O1-C3
53	14	3005	8UZ	C14-C9-O3-C8
53	1H	3004	8UZ	O4-C9-O3-C8
53	1H	3005	8UZ	C14-C9-O3-C8
53	14	3003	8UZ	C14-C9-O3-C8
53	1H	3003	8UZ	O-C2-O1-C3
53	1H	3004	8UZ	O4-C10-C11-O5

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Mol	Chain	Res	Type	Atoms
53	1H	3005	8UZ	O4-C10-C11-O5
53	14	3004	8UZ	O-C2-O1-C3
53	14	3006	8UZ	O4-C10-C11-O5
53	1H	3005	8UZ	C12-C10-C11-O5
53	14	3004	8UZ	O4-C10-C11-O5
53	1H	3004	8UZ	C12-C10-C11-O5
53	14	3002	8UZ	N-C-C1-C17
53	1G	2202	8UZ	C15-C2-O1-C3
53	14	3003	8UZ	C3-C8-O3-C9
53	1H	3003	8UZ	O4-C9-O3-C8
53	14	3003	8UZ	C8-C3-O1-C2
53	14	3003	8UZ	C7-C8-O3-C9
53	1H	3002	8UZ	O4-C10-C11-O5
53	1H	3004	8UZ	N-C-C1-O
53	14	3002	8UZ	N-C-C1-O
53	14	3003	8UZ	N-C-C1-O
53	14	3004	8UZ	N-C-C1-O
53	1H	3003	8UZ	C14-C9-O3-C8
53	1H	3004	8UZ	N-C-C1-C17
53	1H	3004	8UZ	C8-C3-O1-C2
53	14	3006	8UZ	C8-C3-O1-C2
53	14	3004	8UZ	C14-C9-O3-C8
53	1H	3005	8UZ	C3-C8-O3-C9
53	13	2201	8UZ	C12-C10-C11-O5
53	1H	3005	8UZ	C7-C8-O3-C9
53	14	3004	8UZ	O4-C9-O3-C8
53	1G	2201	8UZ	C7-C8-O3-C9
53	14	3005	8UZ	O-C2-O1-C3
53	1G	2201	8UZ	C3-C8-O3-C9
53	1H	3002	8UZ	C3-C8-O3-C9
53	1G	2201	8UZ	C8-C3-O1-C2
53	13	2202	8UZ	N-C-C1-C17
53	14	3004	8UZ	N-C-C1-C17
53	1H	3002	8UZ	C7-C8-O3-C9
53	1H	3003	8UZ	C12-C10-C11-O5

There are no ring outliers.

12 monomers are involved in 26 short contacts:

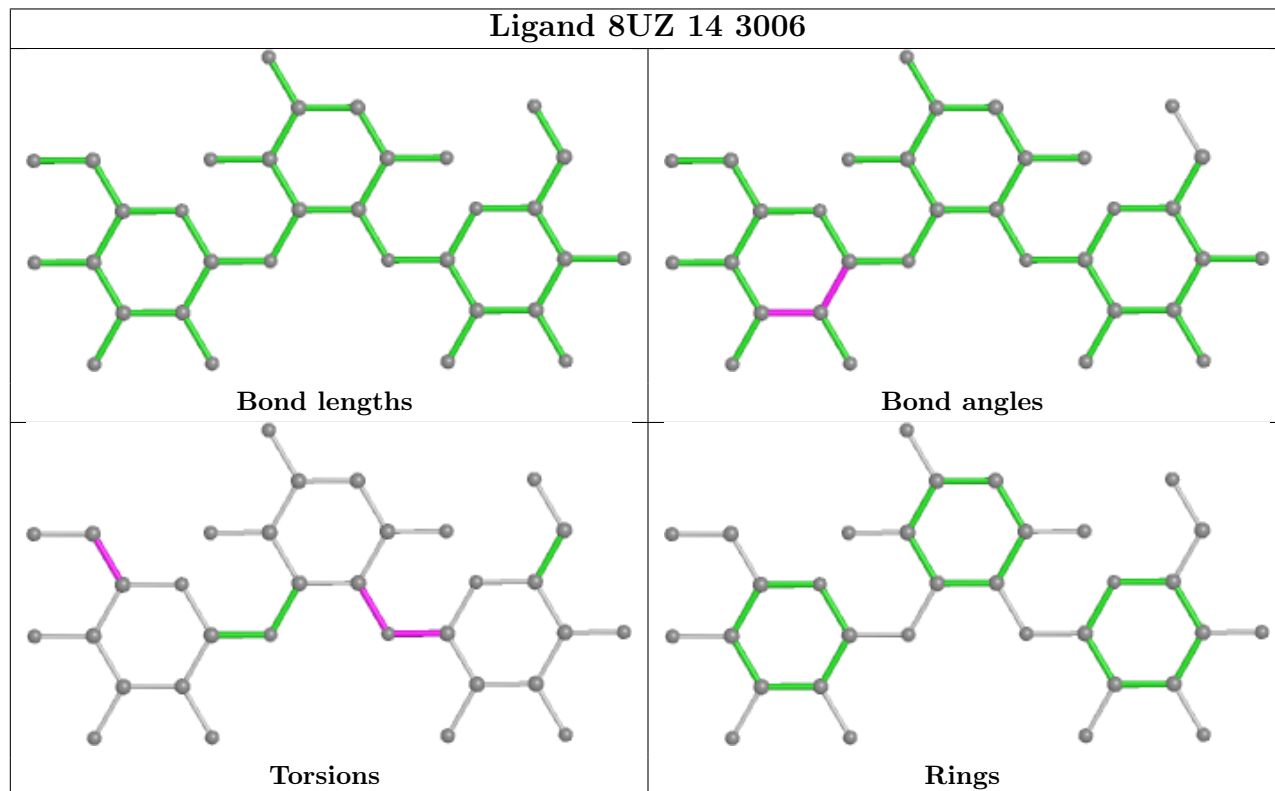
Mol	Chain	Res	Type	Clashes	Symm-Clashes
53	14	3006	8UZ	2	0
53	1G	2202	8UZ	2	0

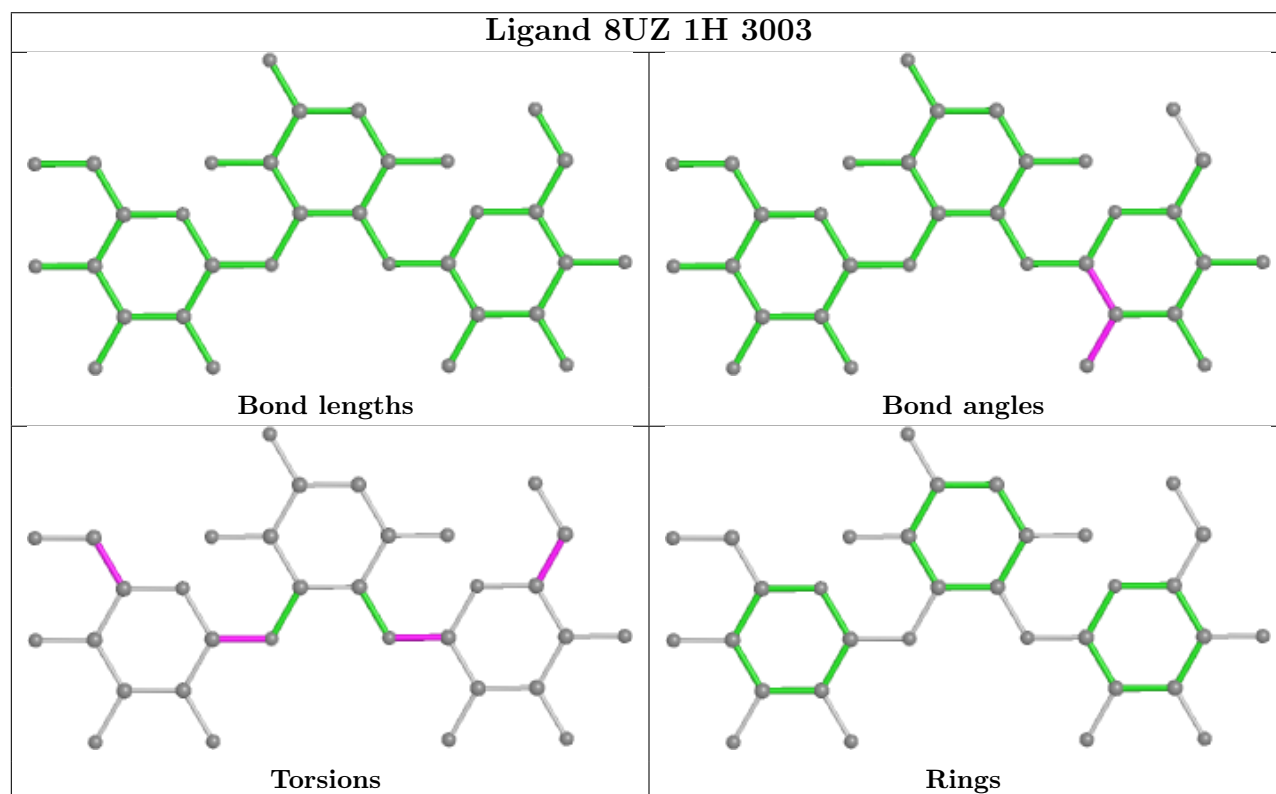
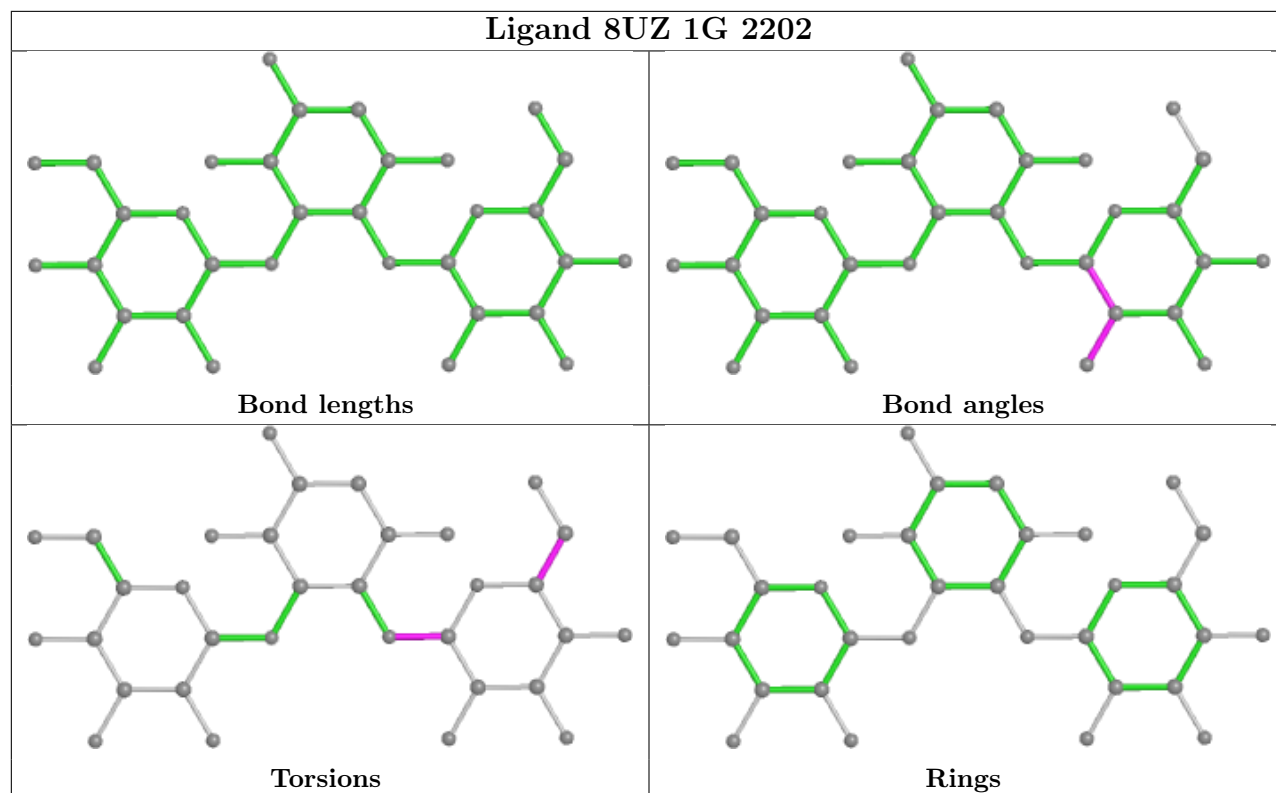
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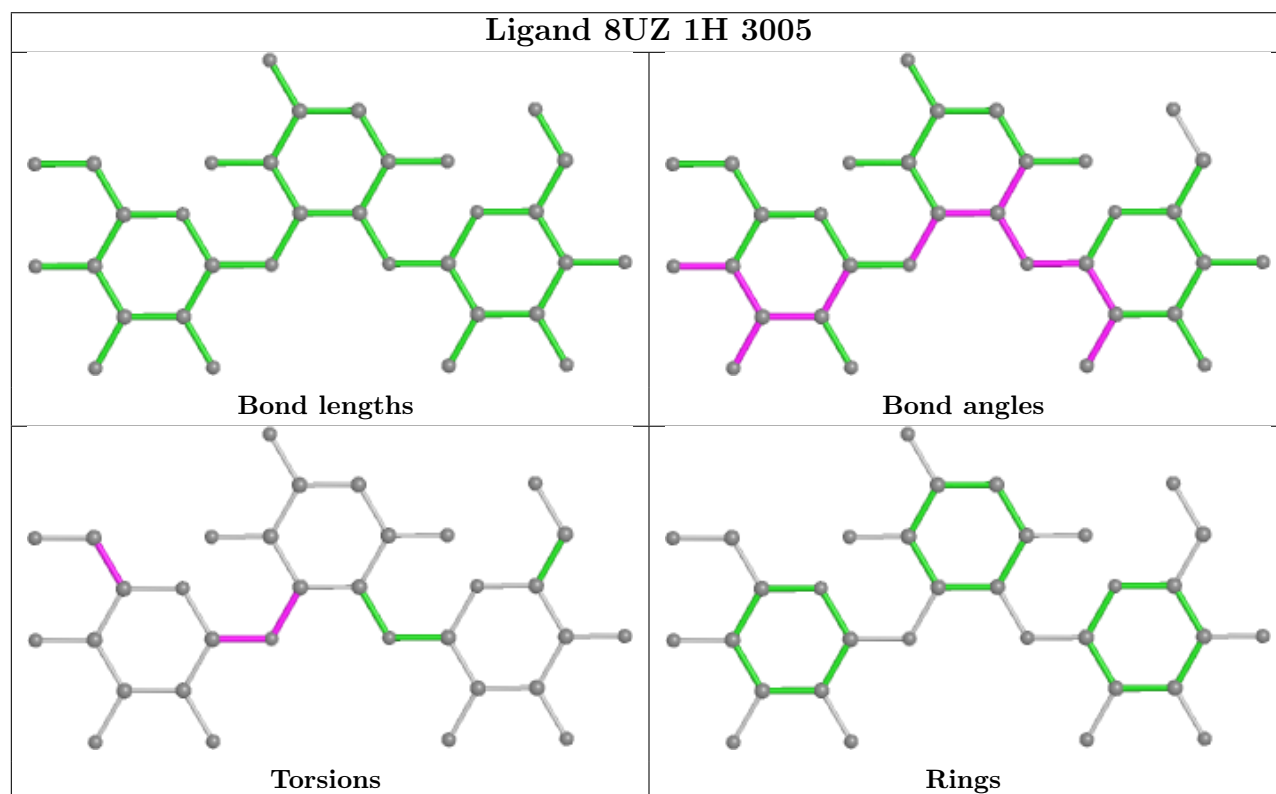
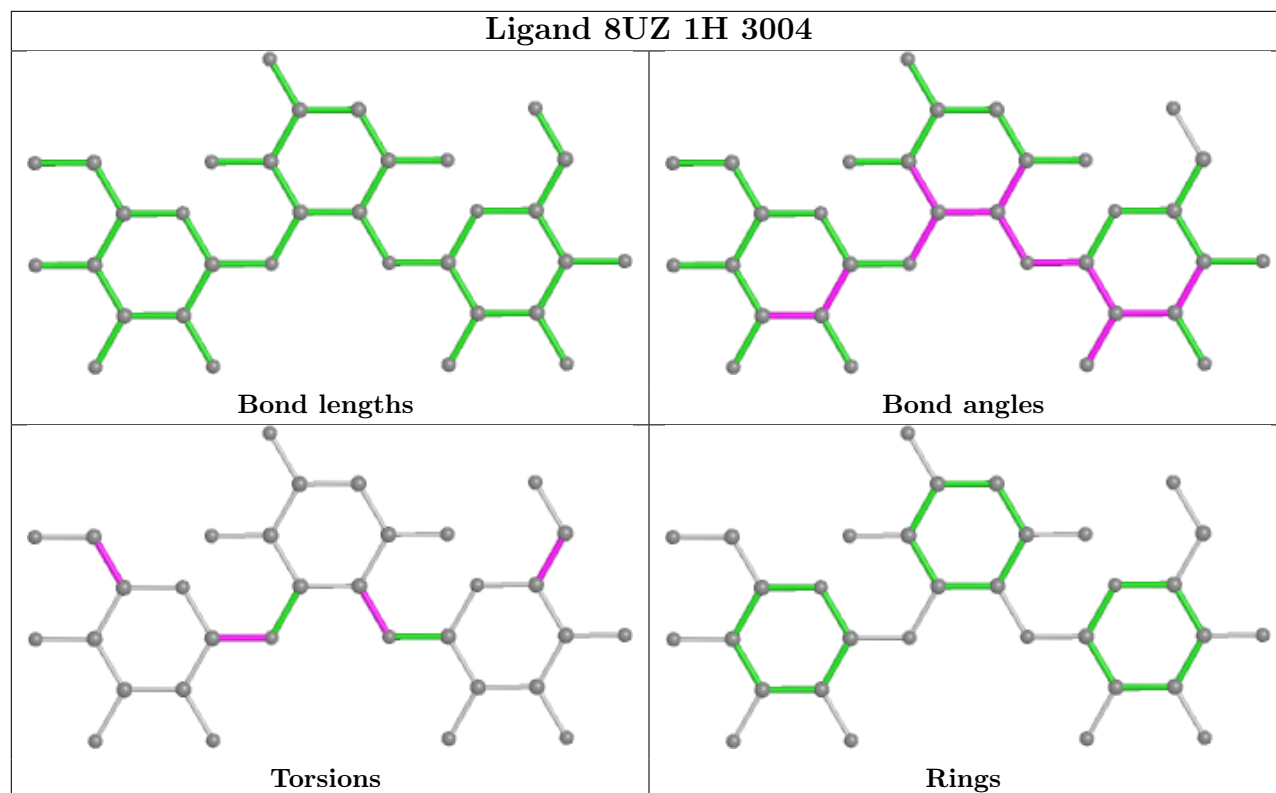
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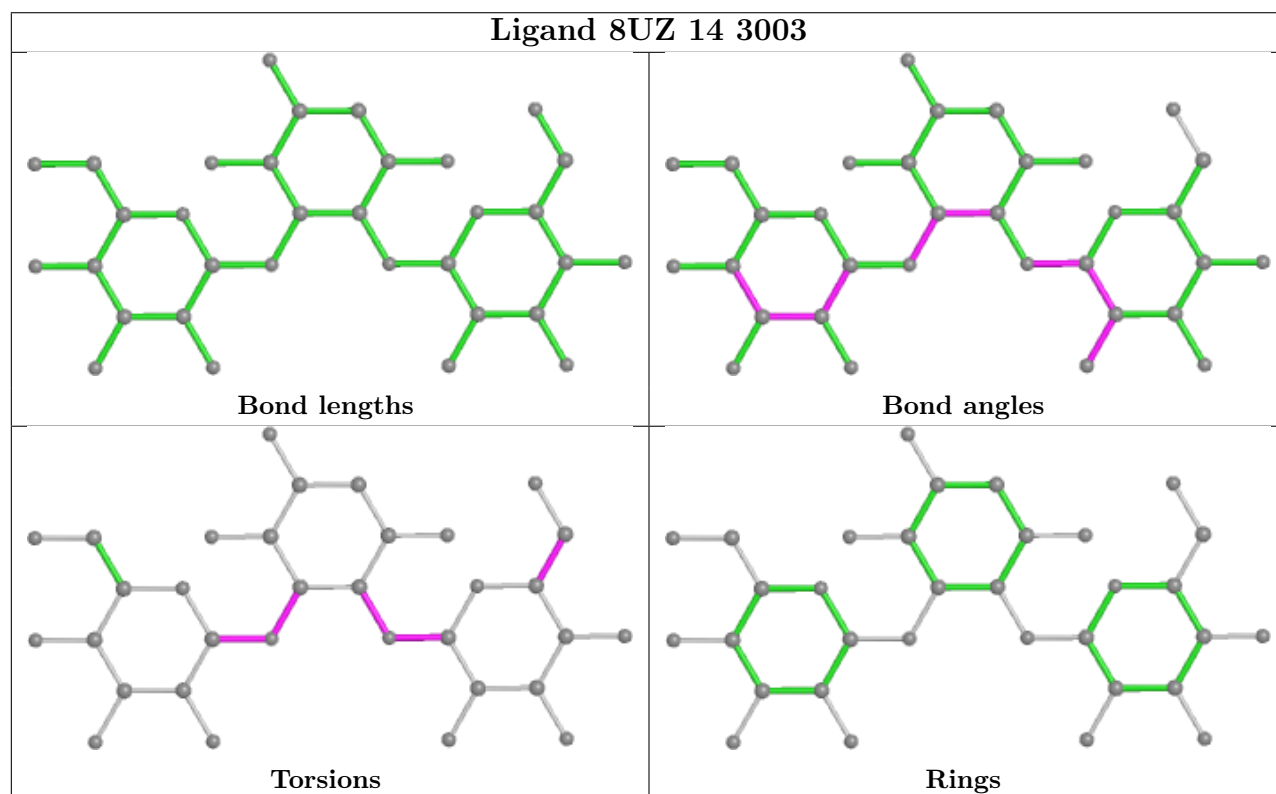
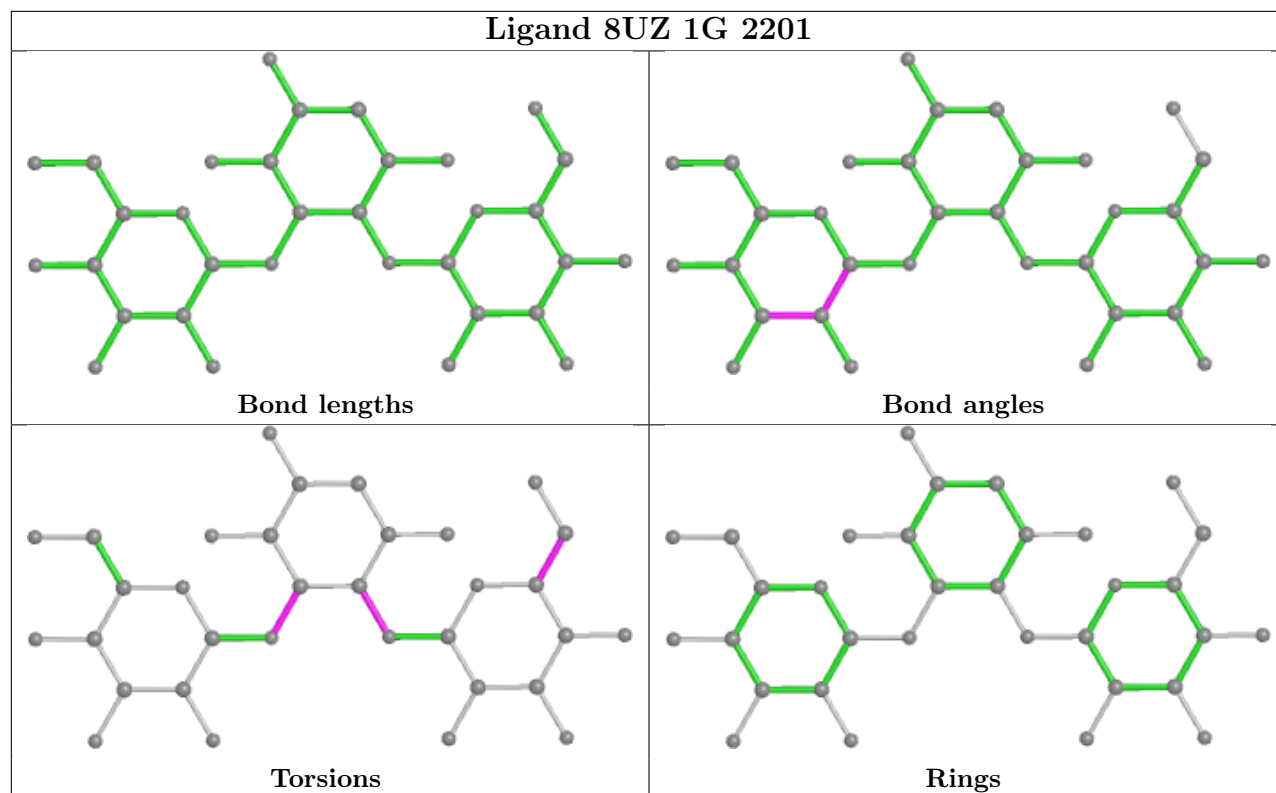
Mol	Chain	Res	Type	Clashes	Symm-Clashes
53	1H	3003	8UZ	1	0
53	1H	3004	8UZ	7	0
53	1H	3005	8UZ	4	0
53	1G	2201	8UZ	1	0
53	14	3003	8UZ	1	0
53	14	3005	8UZ	1	0
53	14	3002	8UZ	2	0
53	13	2202	8UZ	1	0
53	1H	3002	8UZ	2	0
53	14	3004	8UZ	2	0

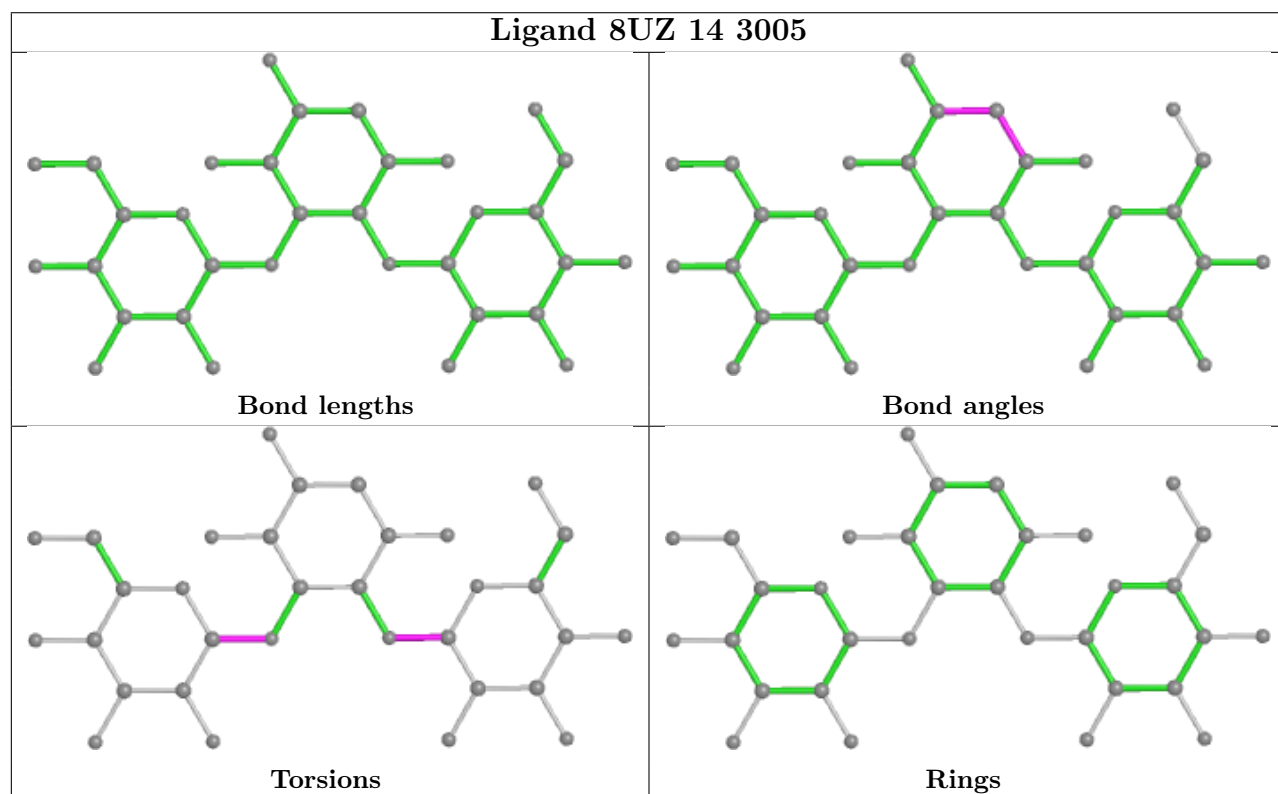
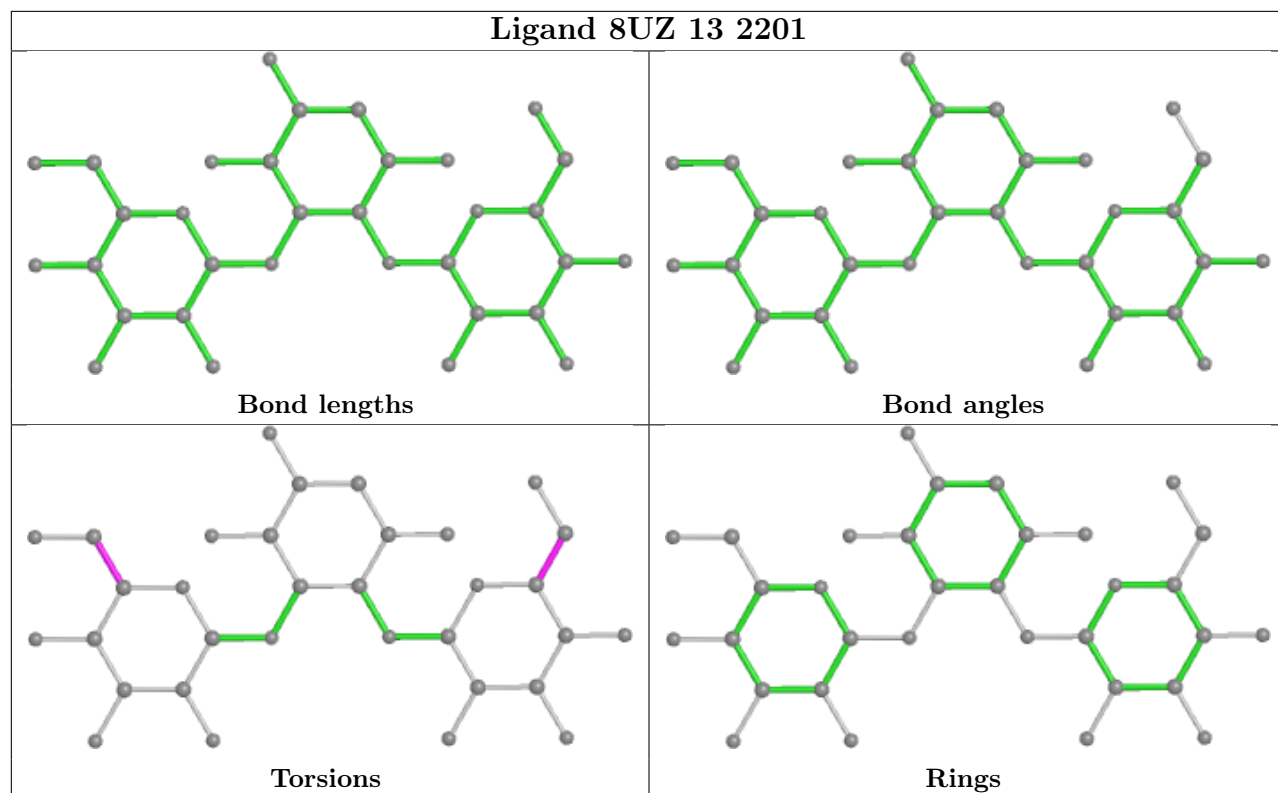
The following is a two-dimensional graphical depiction of Mogul quality analysis of bond lengths, bond angles, torsion angles, and ring geometry for all instances of the Ligand of Interest. In addition, ligands with molecular weight > 250 and outliers as shown on the validation Tables will also be included. For torsion angles, if less than 5% of the Mogul distribution of torsion angles is within 10 degrees of the torsion angle in question, then that torsion angle is considered an outlier. Any bond that is central to one or more torsion angles identified as an outlier by Mogul will be highlighted in the graph. For rings, the root-mean-square deviation (RMSD) between the ring in question and similar rings identified by Mogul is calculated over all ring torsion angles. If the average RMSD is greater than 60 degrees and the minimal RMSD between the ring in question and any Mogul-identified rings is also greater than 60 degrees, then that ring is considered an outlier. The outliers are highlighted in purple. The color gray indicates Mogul did not find sufficient equivalents in the CSD to analyse the geometry.

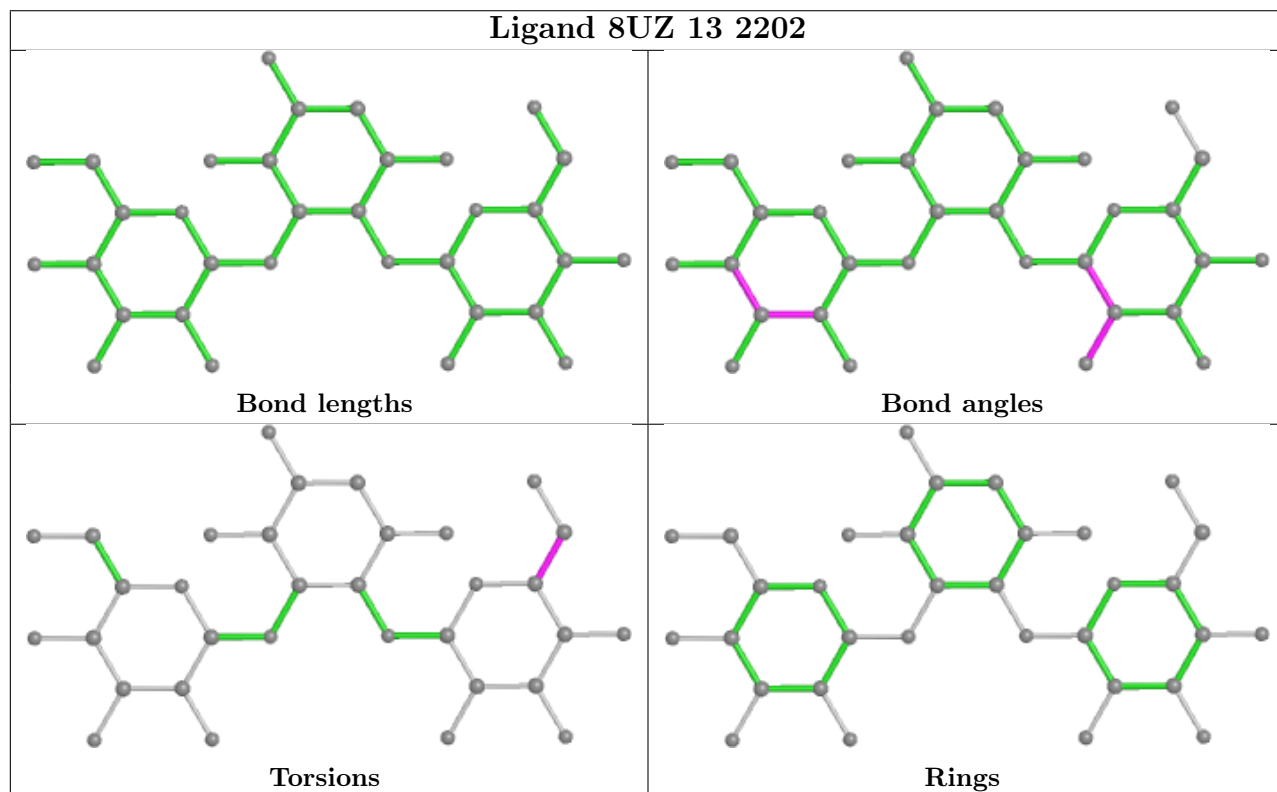
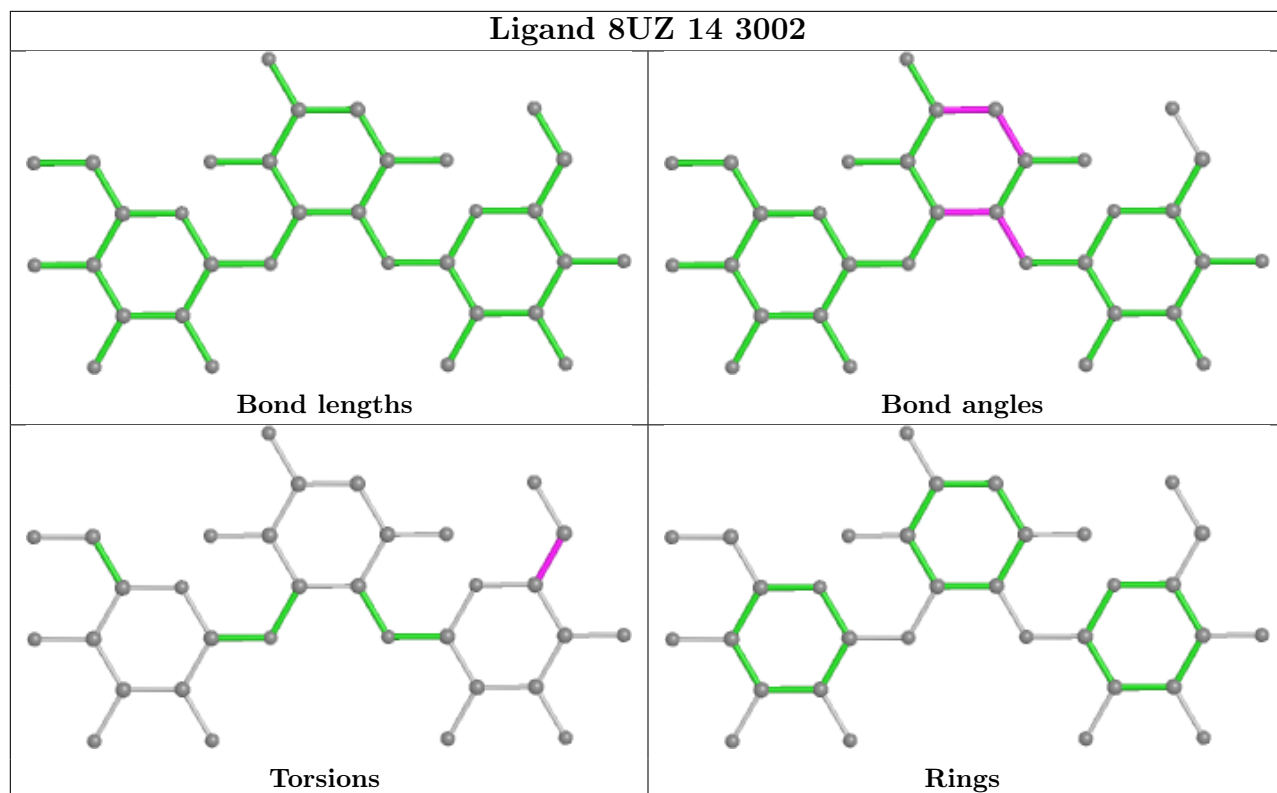


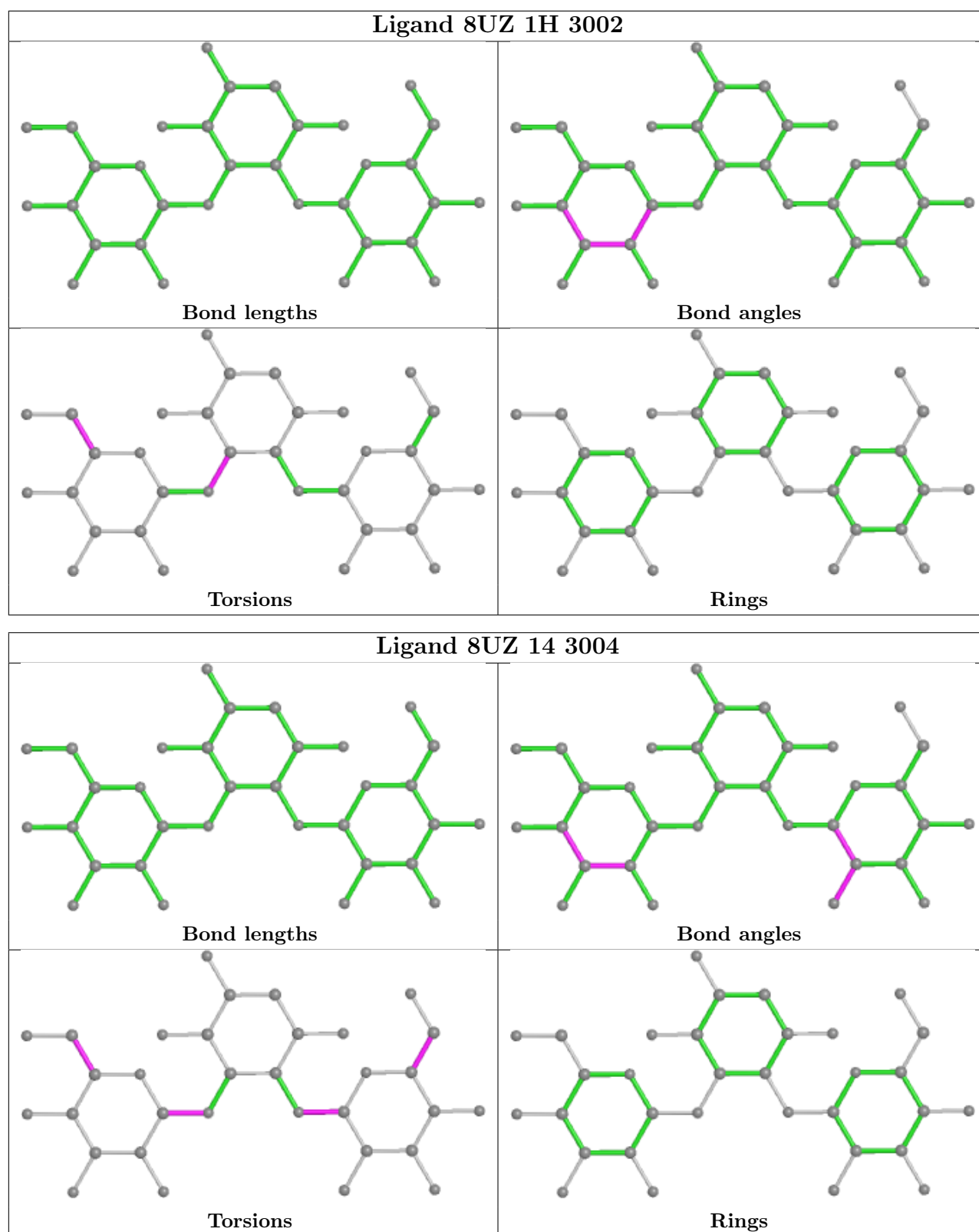












## 5.7 Other polymers [i](#)

There are no such residues in this entry.



## 5.8 Polymer linkage issues

There are no chain breaks in this entry.

## 6 Fit of model and data i

### 6.1 Protein, DNA and RNA chains i

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<sup>th</sup> 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 <sup>2</sup> )	Q<0.9
1	13	1508/1522 (99%)	0.50	113 (7%) 14 7	50, 86, 147, 226	0
1	1G	1513/1522 (99%)	0.42	127 (8%) 11 5	59, 93, 138, 228	0
2	65	111/112 (99%)	0.57	7 (6%) 20 10	76, 84, 90, 93	0
2	A8	111/112 (99%)	0.36	1 (0%) 84 75	63, 71, 78, 80	0
3	B5	92/96 (95%)	0.30	0 100 100	61, 70, 80, 82	0
3	F8	94/96 (97%)	0.08	0 100 100	48, 54, 63, 64	0
4	11	273/276 (98%)	0.29	5 (1%) 68 55	39, 52, 59, 65	0
4	19	273/276 (98%)	0.35	8 (2%) 51 35	46, 60, 67, 73	0
5	L5	47/49 (95%)	0.52	1 (2%) 63 49	48, 51, 56, 61	0
5	P8	47/49 (95%)	-0.09	0 100 100	40, 42, 47, 52	0
6	2A	116/129 (89%)	0.61	7 (6%) 21 11	72, 92, 102, 113	0
6	2I	116/129 (89%)	0.72	9 (7%) 13 6	61, 87, 97, 117	0
7	8A	99/105 (94%)	0.15	1 (1%) 82 73	78, 86, 93, 95	0
7	8I	100/105 (95%)	-0.10	1 (1%) 82 73	72, 87, 91, 93	0
8	22	206/239 (86%)	0.60	27 (13%) 3 2	102, 114, 136, 139	0
8	2E	205/239 (85%)	0.48	24 (11%) 4 2	78, 92, 115, 119	0
9	82	124/128 (96%)	1.72	48 (38%) 0 0	92, 130, 138, 140	0
9	8E	127/128 (99%)	2.21	66 (51%) 0 0	72, 121, 129, 131	0
10	15	138/140 (98%)	1.60	52 (37%) 0 0	61, 83, 99, 115	0
10	58	138/140 (98%)	0.26	0 100 100	51, 65, 91, 102	0
11	C5	104/110 (94%)	1.09	20 (19%) 1 0	76, 85, 104, 111	0
11	G8	103/110 (93%)	0.15	1 (0%) 82 73	63, 71, 88, 90	0
12	M5	64/65 (98%)	2.47	36 (56%) 0 0	58, 65, 77, 84	0
12	Q8	60/65 (92%)	1.52	16 (26%) 0 0	45, 53, 65, 68	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å <sup>2</sup> )	Q<0.9
13	3A	125/132 (94%)	0.39	8 (6%) 19 10	74, 77, 88, 119	0
13	3I	122/132 (92%)	0.31	3 (2%) 57 42	60, 64, 71, 83	0
14	32	208/209 (99%)	0.51	10 (4%) 30 17	84, 93, 103, 107	0
14	3E	208/209 (99%)	0.41	9 (4%) 35 21	76, 87, 97, 103	0
15	14	2909/2917 (99%)	0.42	130 (4%) 33 19	46, 70, 190, 252	0
15	1H	2912/2917 (99%)	0.36	76 (2%) 56 40	36, 58, 166, 235	0
16	75	137/146 (93%)	0.49	7 (5%) 28 15	67, 76, 115, 139	0
16	B8	129/146 (88%)	0.48	5 (3%) 39 24	61, 69, 87, 97	0
17	H5	59/60 (98%)	1.59	22 (37%) 0 0	68, 80, 110, 116	0
17	L8	57/60 (95%)	0.37	0 100 100	52, 59, 67, 73	0
18	61	146/148 (98%)	0.07	3 (2%) 63 49	66, 101, 117, 119	0
18	69	146/148 (98%)	0.11	5 (3%) 45 28	74, 101, 123, 125	0
19	9A	69/88 (78%)	0.26	1 (1%) 75 63	80, 89, 98, 109	0
19	9I	67/88 (76%)	-0.00	0 100 100	76, 83, 91, 97	0
20	1B	25/27 (92%)	7.93	25 (100%) 0 0	106, 115, 120, 123	0
20	1F	23/27 (85%)	5.10	22 (95%) 0 0	95, 99, 101, 101	0
21	25	122/122 (100%)	1.04	24 (19%) 1 0	58, 69, 78, 80	0
21	68	122/122 (100%)	0.31	1 (0%) 86 78	49, 59, 68, 73	0
22	D5	135/206 (65%)	1.16	29 (21%) 0 0	86, 106, 122, 123	0
22	H8	171/206 (83%)	0.27	6 (3%) 44 27	70, 90, 145, 150	0
23	21	205/206 (99%)	0.65	9 (4%) 34 20	44, 66, 87, 92	0
23	29	205/206 (99%)	1.51	76 (37%) 0 0	52, 74, 99, 106	0
24	4A	116/126 (92%)	1.00	27 (23%) 0 0	96, 122, 128, 130	0
24	4I	116/126 (92%)	0.85	22 (18%) 1 0	80, 111, 116, 120	0
25	42	151/162 (93%)	0.15	2 (1%) 77 66	85, 95, 104, 115	0
25	4E	151/162 (93%)	0.29	9 (5%) 21 11	70, 79, 90, 106	0
26	16	122/122 (100%)	-0.13	0 100 100	57, 73, 87, 127	0
26	1J	122/122 (100%)	-0.09	1 (0%) 86 78	76, 89, 103, 127	0
27	85	117/118 (99%)	0.76	9 (7%) 13 6	57, 80, 98, 105	0
27	C8	117/118 (99%)	0.47	11 (9%) 8 4	44, 59, 73, 79	0
28	I5	63/71 (88%)	3.73	53 (84%) 0 0	106, 139, 146, 148	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å <sup>2</sup> )	Q<0.9
28	M8	66/71 (92%)	1.86	21 (31%) 0 0	92, 123, 130, 132	0
29	AA	78/93 (83%)	1.06	16 (20%) 1 0	103, 130, 142, 143	0
29	AI	80/93 (86%)	1.05	19 (23%) 0 0	84, 107, 117, 119	0
30	35	150/150 (100%)	1.16	29 (19%) 1 0	52, 78, 101, 114	0
30	78	147/150 (98%)	0.27	8 (5%) 25 13	39, 63, 77, 81	0
31	E5	84/85 (98%)	1.35	26 (30%) 0 0	61, 70, 80, 86	0
31	I8	83/85 (97%)	1.12	11 (13%) 3 2	48, 56, 63, 70	0
32	31	202/210 (96%)	-0.01	0 100 100	39, 62, 78, 88	0
32	39	208/210 (99%)	0.05	0 100 100	49, 81, 107, 117	0
33	5A	58/61 (95%)	2.66	40 (68%) 0 0	104, 111, 124, 125	0
33	5I	60/61 (98%)	2.39	34 (56%) 0 0	82, 90, 97, 99	0
34	52	101/101 (100%)	-0.10	0 100 100	76, 82, 92, 102	0
34	5E	101/101 (100%)	0.07	1 (0%) 82 73	75, 81, 90, 95	0
35	95	101/101 (100%)	0.37	10 (9%) 7 4	54, 93, 98, 100	0
35	D8	101/101 (100%)	0.03	2 (1%) 65 50	44, 73, 80, 83	0
36	J5	56/60 (93%)	0.21	0 100 100	51, 73, 89, 90	0
36	N8	55/60 (91%)	0.51	1 (1%) 68 55	42, 69, 89, 92	0
37	BA	99/106 (93%)	1.95	48 (48%) 0 0	80, 93, 104, 110	0
37	BI	99/106 (93%)	1.96	52 (52%) 0 0	92, 104, 114, 117	0
38	45	140/141 (99%)	1.69	51 (36%) 0 0	59, 82, 98, 109	0
38	88	141/141 (100%)	1.24	25 (17%) 1 1	46, 65, 80, 96	0
39	F5	94/98 (95%)	1.28	21 (22%) 0 0	52, 67, 93, 96	0
39	J8	95/98 (96%)	0.89	16 (16%) 1 1	43, 59, 84, 89	0
40	41	181/182 (99%)	0.01	4 (2%) 62 47	74, 93, 111, 117	0
40	49	181/182 (99%)	0.21	9 (4%) 28 15	95, 112, 126, 130	0
41	6A	88/89 (98%)	0.02	1 (1%) 80 70	75, 88, 95, 96	0
41	6I	88/89 (98%)	0.24	1 (1%) 80 70	68, 82, 88, 89	0
42	62	147/156 (94%)	0.73	25 (17%) 1 1	101, 108, 114, 118	0
42	6E	144/156 (92%)	0.30	10 (6%) 16 9	93, 103, 111, 115	0
43	A5	113/113 (100%)	0.54	0 100 100	51, 62, 80, 107	0
43	E8	112/113 (99%)	0.75	6 (5%) 25 13	45, 56, 69, 86	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å <sup>2</sup> )	Q<0.9
44	12	237/256 (92%)	0.83	41 (17%) 1 1	112, 130, 142, 146	0
44	1E	237/256 (92%)	0.01	5 (2%) 63 49	94, 115, 131, 137	0
45	55	117/118 (99%)	1.16	28 (23%) 0 0	56, 66, 73, 79	0
45	98	118/118 (100%)	0.58	5 (4%) 36 21	52, 62, 70, 73	0
46	G5	67/72 (93%)	0.02	0 100 100	74, 81, 87, 89	0
46	K8	68/72 (94%)	0.06	0 100 100	55, 61, 65, 70	0
47	51	174/180 (96%)	0.03	6 (3%) 45 28	76, 88, 95, 107	0
47	59	170/180 (94%)	1.57	54 (31%) 0 0	128, 154, 172, 179	0
48	1A	99/105 (94%)	1.42	31 (31%) 0 0	97, 130, 139, 140	0
48	1I	99/105 (94%)	1.15	35 (35%) 0 0	77, 118, 132, 133	0
49	7A	84/88 (95%)	1.91	37 (44%) 0 0	79, 86, 98, 121	0
49	7I	84/88 (95%)	2.24	46 (54%) 0 0	83, 94, 109, 127	0
50	72	138/138 (100%)	0.00	2 (1%) 75 63	82, 97, 108, 114	0
50	7E	138/138 (100%)	0.71	23 (16%) 1 1	74, 87, 92, 97	0
51	Y1	25/25 (100%)	2.67	13 (52%) 0 0	63, 122, 175, 182	0
51	Y4	25/25 (100%)	3.60	15 (60%) 0 0	77, 133, 170, 175	0
52	V1	76/76 (100%)	1.75	27 (35%) 0 0	55, 173, 208, 211	0
52	V4	76/76 (100%)	1.02	14 (18%) 1 0	63, 178, 211, 214	0
52	W1	76/76 (100%)	1.33	13 (17%) 1 1	54, 144, 162, 164	0
52	W4	76/76 (100%)	1.47	20 (26%) 0 0	67, 155, 168, 170	0
52	X1	76/76 (100%)	0.30	5 (6%) 18 10	51, 92, 105, 112	0
52	X4	76/76 (100%)	0.02	1 (1%) 77 66	59, 103, 119, 125	0
All	All	20935/21574 (97%)	0.59	2083 (9%) 7 4	36, 80, 140, 252	0

All (2083) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
20	1B	26	LYS	16.7
20	1B	25	LYS	14.4
20	1B	24	ARG	13.0
52	V4	17	C	12.8
52	W4	71	G	12.7
20	1B	18	TYR	12.3
30	35	150	ALA	12.1

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Mol	Chain	Res	Type	RSRZ
20	1B	9	ARG	11.8
52	W1	71	G	11.6
1	1G	1913	A	11.2
20	1B	22	ARG	10.0
47	59	169	VAL	9.9
15	14	1141	G	9.8
47	59	96	ALA	9.7
1	13	1913	A	9.6
15	14	2192	U	9.3
52	V1	17	C	9.2
6	2A	11	LYS	9.1
15	14	2138	U	9.0
9	8E	36	TYR	8.8
51	Y4	33	G	8.8
6	2I	12	ARG	8.7
20	1F	14	TRP	8.6
15	1H	2150	G	8.6
20	1B	17	THR	8.6
47	59	170	ARG	8.4
47	59	168	PRO	8.4
51	Y4	32	A	8.3
9	82	110	GLU	8.2
52	W4	72	C	8.1
20	1B	23	PRO	8.1
48	1A	47	PHE	8.1
51	Y1	38	U	8.0
51	Y4	34	G	8.0
52	W4	70	G	8.0
20	1B	14	TRP	7.9
47	59	95	ARG	7.9
20	1F	17	THR	7.9
20	1F	18	TYR	7.8
51	Y4	37	G	7.7
52	W1	72	C	7.7
30	35	149	GLU	7.7
28	I5	24	THR	7.6
47	59	94	TYR	7.6
20	1B	16	GLY	7.5
20	1B	5	ASP	7.5
47	59	105	LEU	7.5
48	1A	46	ARG	7.5
51	Y1	37	G	7.5

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Mol	Chain	Res	Type	RSRZ
20	1B	13	ILE	7.5
9	82	36	TYR	7.5
1	1G	2162	C	7.4
47	59	155	SER	7.4
20	1F	24	ARG	7.3
28	I5	44	THR	7.2
20	1B	21	TYR	7.2
28	I5	18	CYS	7.1
20	1B	8	THR	7.1
1	13	1658	A	7.1
20	1B	15	ARG	7.1
20	1F	13	ILE	7.1
33	5A	61	TRP	7.1
52	W1	3	C	7.1
28	I5	36	CYS	7.0
6	2I	11	LYS	7.0
47	59	93	GLY	7.0
51	Y4	38	U	6.9
37	BI	18	GLN	6.9
52	W1	70	G	6.8
51	Y4	36	G	6.8
8	2E	193	TYR	6.8
28	I5	46	GLN	6.8
1	13	1657	G	6.8
1	1G	1914	A	6.8
28	I5	39	CYS	6.7
49	7I	22	THR	6.7
51	Y4	40	U	6.7
9	8E	15	ALA	6.7
15	14	1140	C	6.7
47	59	128	PRO	6.7
15	14	2137	G	6.7
49	7I	32	TYR	6.6
15	1H	1143	A	6.6
51	Y4	39	U	6.6
33	5A	38	GLY	6.6
9	82	66	ARG	6.6
12	M5	63	PRO	6.5
40	41	2	PRO	6.5
9	82	70	LYS	6.5
24	4A	102	ARG	6.4
1	13	1661	G	6.4

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
28	M8	52	THR	6.4
20	1B	6	ARG	6.3
29	AA	84	GLY	6.3
33	5I	13	THR	6.3
28	I5	50	VAL	6.3
9	8E	126	SER	6.3
9	82	117	HIS	6.3
15	1H	2170	C	6.3
9	82	120	ARG	6.2
9	82	109	VAL	6.2
29	AA	83	HIS	6.2
1	1G	1915	A	6.2
9	8E	117	HIS	6.2
42	62	4	ARG	6.1
52	V4	36	A	6.1
47	59	153	LYS	6.1
37	BA	9	ASN	6.1
28	I5	11	PRO	6.1
28	I5	25	TYR	6.1
48	1A	62	HIS	6.1
33	5A	39	LEU	6.1
49	7I	23	ASP	6.1
52	V1	34	G	6.1
9	8E	14	VAL	6.1
9	82	111	ARG	6.0
38	45	33	GLY	6.0
28	M8	5	ILE	6.0
9	8E	66	ARG	6.0
15	14	1147	G	6.0
20	1B	10	ARG	6.0
42	62	2	ALA	6.0
20	1F	15	ARG	6.0
1	1G	2161	C	6.0
48	1A	65	LEU	5.9
52	V1	5	G	5.9
20	1B	2	GLY	5.9
11	C5	47	LYS	5.9
24	4A	101	GLN	5.9
12	M5	65	GLU	5.9
20	1F	21	TYR	5.9
51	Y1	35	A	5.9
20	1B	12	LYS	5.8

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
9	8E	37	PHE	5.8
1	13	1914	A	5.8
49	7I	30	GLY	5.8
9	8E	65	VAL	5.8
28	I5	12	ALA	5.8
15	14	1143	A	5.8
49	7A	9	PHE	5.8
1	13	1660	G	5.8
33	5A	37	PHE	5.8
6	2A	12	ARG	5.8
15	14	1148	C	5.7
1	13	1659	G	5.7
12	M5	64	TYR	5.7
20	1F	6	ARG	5.7
15	14	2911	G	5.7
9	8E	115	GLY	5.7
20	1F	20	LYS	5.7
20	1F	3	LYS	5.7
49	7I	6	LEU	5.6
13	3A	129	ALA	5.6
10	15	51	PHE	5.6
15	14	2492	C	5.6
45	55	69	ASP	5.6
13	3A	128	ALA	5.6
1	13	2164	U	5.6
49	7I	7	ALA	5.6
51	Y1	36	G	5.6
28	I5	27	THR	5.6
28	M8	58	ARG	5.5
11	C5	49	VAL	5.5
44	12	129	GLU	5.5
51	Y4	30	C	5.5
38	45	37	LEU	5.5
47	59	89	ILE	5.5
29	AA	80	TYR	5.5
52	V1	16	U	5.5
28	M8	65	ASP	5.4
9	82	119	ALA	5.4
6	2A	13	GLN	5.4
1	1G	2165	G	5.4
24	4A	88	ARG	5.4
12	Q8	48	PHE	5.4

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Mol	Chain	Res	Type	RSRZ
15	14	1132	A	5.4
15	14	2171	C	5.3
20	1B	11	GLY	5.3
9	82	114	TYR	5.3
38	45	104	PHE	5.3
15	14	2912	A	5.3
28	M8	66	SER	5.3
33	5I	18	VAL	5.3
20	1F	2	GLY	5.3
28	I5	19	GLY	5.3
15	14	1125	A	5.2
17	H5	29	ARG	5.2
48	1I	46	ARG	5.2
28	I5	37	SER	5.2
9	8E	17	VAL	5.2
28	I5	10	VAL	5.2
24	4A	92	HIS	5.2
20	1F	23	PRO	5.2
28	I5	60	GLN	5.2
52	V1	35	A	5.2
11	C5	50	ARG	5.2
33	5A	35	ARG	5.2
49	7I	28	ARG	5.2
49	7I	4	ILE	5.2
1	13	2161	C	5.1
1	13	1980	G	5.1
9	82	118	LYS	5.1
44	12	134	GLU	5.1
28	I5	45	GLY	5.1
1	1G	1981	C	5.1
38	45	32	TYR	5.1
11	C5	59	GLY	5.1
29	AA	82	GLY	5.1
24	4A	98	VAL	5.1
9	82	123	PRO	5.1
20	1F	22	ARG	5.1
28	I5	5	ILE	5.1
51	Y4	31	A	5.1
20	1B	20	LYS	5.1
15	1H	2171	C	5.1
1	1G	1980	G	5.1
24	4I	100	GLY	5.1

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Mol	Chain	Res	Type	RSRZ
15	1H	1123	C	5.1
37	BA	72	LEU	5.0
24	4I	102	ARG	5.0
1	13	2163	U	5.0
49	7I	1	MET	5.0
49	7I	29	ASP	5.0
9	8E	110	GLU	5.0
9	82	115	GLY	5.0
12	M5	34	TRP	5.0
47	59	4	ILE	5.0
20	1B	19	GLY	5.0
15	14	2142	A	4.9
50	7E	1	MET	4.9
28	I5	51	ASP	4.9
33	5I	8	GLU	4.9
48	1A	10	GLY	4.9
23	29	159	HIS	4.9
2	65	108	GLY	4.9
24	4A	27	LYS	4.9
15	14	219	A	4.9
12	M5	32	LEU	4.9
28	M8	4	GLY	4.9
51	Y4	35	A	4.9
49	7A	27	LYS	4.8
9	8E	9	ARG	4.8
1	13	1979	C	4.8
1	13	2162	C	4.8
21	25	1	MET	4.8
1	1G	2160	U	4.8
23	29	205	ALA	4.8
14	32	23	GLY	4.8
15	1H	691	A	4.8
33	5I	17	LYS	4.8
52	W4	3	C	4.8
29	AI	38	SER	4.8
33	5I	7	ILE	4.8
49	7A	29	ASP	4.8
44	12	131	PRO	4.8
28	I5	33	VAL	4.8
47	59	164	TYR	4.8
1	13	1030	A	4.8
15	14	2141	G	4.7

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Mol	Chain	Res	Type	RSRZ
15	14	1103	G	4.7
9	8E	4	TYR	4.7
9	8E	118	LYS	4.7
52	V1	36	A	4.7
15	14	2491	A	4.7
15	14	2914	C	4.7
9	8E	8	GLY	4.7
29	AA	78	ARG	4.7
1	1G	1876	C	4.7
15	1H	690	C	4.7
37	BI	72	LEU	4.7
12	M5	35	GLN	4.7
49	7A	28	ARG	4.7
51	Y1	39	U	4.7
28	I5	22	ILE	4.7
9	82	113	LYS	4.7
9	82	29	ASN	4.7
9	82	12	GLU	4.7
8	22	178	LEU	4.7
33	5A	34	TYR	4.7
48	1I	48	THR	4.6
51	Y4	42	U	4.6
9	82	71	SER	4.6
20	1B	7	ARG	4.6
49	7A	6	LEU	4.6
1	1G	1019	G	4.6
9	82	65	VAL	4.6
52	W4	73	A	4.6
48	1I	60	ARG	4.6
49	7I	17	TYR	4.6
20	1F	9	ARG	4.6
15	14	2193	G	4.6
49	7I	9	PHE	4.6
24	4I	96	LEU	4.6
28	I5	59	PHE	4.6
18	69	11	ASN	4.5
9	82	106	ALA	4.5
21	25	32	TYR	4.5
1	13	1876	C	4.5
11	C5	48	ALA	4.5
48	1I	47	PHE	4.5
20	1F	16	GLY	4.5

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
9	82	72	GLY	4.5
52	V4	6	G	4.5
20	1F	12	LYS	4.5
18	61	146	ALA	4.4
42	62	86	GLN	4.4
48	1A	59	SER	4.4
47	59	90	LYS	4.4
49	7A	1	MET	4.4
48	1A	64	GLU	4.4
8	22	10	PHE	4.4
15	14	1113	U	4.4
48	1A	50	ILE	4.4
23	29	104	VAL	4.4
47	59	107	VAL	4.4
47	59	87	LEU	4.4
9	82	14	VAL	4.4
1	13	751	G	4.4
15	1H	944	A	4.4
15	1H	2164	C	4.4
33	5A	22	THR	4.4
33	5I	2	ALA	4.4
35	95	73	SER	4.4
18	61	113	ARG	4.4
39	F5	93	GLU	4.4
49	7I	39	TYR	4.4
49	7A	19	ILE	4.4
49	7A	7	ALA	4.4
28	I5	43	TYR	4.3
15	1H	2491	A	4.3
1	1G	1743	C	4.3
10	15	116	LEU	4.3
24	4I	98	VAL	4.3
15	14	2816	G	4.3
28	I5	20	ASN	4.3
8	2E	164	ARG	4.3
20	1F	10	ARG	4.3
15	14	2191	G	4.3
49	7I	2	VAL	4.3
29	AA	9	VAL	4.3
1	13	1952	C	4.3
11	C5	2	ARG	4.3
1	1G	1878	A	4.3

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
6	2I	13	GLN	4.3
15	1H	692	C	4.3
24	4A	87	TYR	4.3
28	I5	40	HIS	4.3
1	13	1953	C	4.3
1	1G	1018	G	4.3
33	5I	33	VAL	4.3
37	BA	57	ARG	4.3
9	8E	33	PHE	4.3
48	1I	7	LYS	4.2
52	W4	1	G	4.2
15	1H	2814	A	4.2
30	35	148	LEU	4.2
23	29	158	GLY	4.2
39	J8	92	LYS	4.2
1	1G	1720	A	4.2
9	82	108	VAL	4.2
49	7I	66	PRO	4.2
49	7A	24	ALA	4.2
10	15	72	TYR	4.2
48	1A	49	VAL	4.2
22	D5	51	ALA	4.2
52	V1	6	G	4.2
37	BA	10	LEU	4.2
37	BA	13	LEU	4.2
9	82	37	PHE	4.2
48	1A	63	PHE	4.2
15	14	1126	U	4.2
1	1G	1875	A	4.2
1	1G	1953	C	4.2
28	M8	59	PHE	4.2
9	8E	123	PRO	4.2
15	1H	2192	U	4.2
15	14	2163	C	4.2
52	W1	73	A	4.2
45	55	68	ARG	4.2
44	12	133	LYS	4.2
17	H5	53	LEU	4.2
49	7I	8	ARG	4.2
50	7E	25	ASP	4.2
24	4I	25	ILE	4.2
9	82	121	ARG	4.2

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
38	45	105	GLU	4.2
15	14	2910	U	4.1
37	BI	22	ARG	4.1
20	1B	3	LYS	4.1
28	I5	9	LEU	4.1
52	V1	71	G	4.1
28	I5	7	PRO	4.1
30	35	110	TYR	4.1
15	14	5	A	4.1
49	7I	31	LYS	4.1
52	V1	20	U	4.1
47	59	159	GLU	4.1
1	1G	706	A	4.1
22	D5	50	GLN	4.1
37	BA	12	ALA	4.1
13	3A	19	ARG	4.1
10	15	109	LYS	4.1
52	W4	4	C	4.1
47	59	106	THR	4.1
15	14	1139	G	4.1
52	V4	5	G	4.1
48	1A	61	GLU	4.1
9	8E	19	LEU	4.1
17	H5	30	ARG	4.1
21	25	28	SER	4.1
27	C8	117	GLN	4.1
9	82	69	GLY	4.1
17	H5	28	LEU	4.1
33	5I	12	ARG	4.1
49	7A	32	TYR	4.1
45	55	70	LEU	4.1
9	82	30	GLY	4.1
12	M5	21	LYS	4.1
15	14	1150	C	4.1
28	I5	38	LYS	4.1
39	J8	23	LYS	4.0
49	7I	35	LYS	4.0
10	15	73	THR	4.0
35	D8	36	PRO	4.0
45	55	9	LYS	4.0
15	14	1120	C	4.0
15	1H	2169	U	4.0

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
21	25	65	THR	4.0
24	4A	97	PRO	4.0
49	7I	18	ARG	4.0
23	29	188	VAL	4.0
12	Q8	34	TRP	4.0
15	14	4	C	4.0
15	14	1142	U	4.0
52	V1	12	U	4.0
12	M5	61	LEU	4.0
29	AA	71	LEU	4.0
44	12	146	GLN	4.0
1	13	2160	U	4.0
47	59	154	PRO	4.0
9	8E	119	ALA	4.0
28	I5	47	GLN	4.0
40	41	26	GLN	4.0
15	14	2136	C	4.0
12	M5	29	LYS	4.0
15	1H	936	A	4.0
24	4A	103	THR	4.0
49	7I	11	SER	4.0
34	5E	101	ALA	4.0
47	59	88	LEU	4.0
48	1I	8	LEU	4.0
1	1G	1912	A	4.0
10	15	84	LYS	4.0
1	1G	747	G	4.0
15	14	2186	C	3.9
48	1A	48	THR	3.9
15	1H	2151	A	3.9
11	C5	46	LYS	3.9
15	14	1116	G	3.9
33	5A	33	VAL	3.9
15	1H	1125	A	3.9
9	82	13	ALA	3.9
1	13	1654	C	3.9
1	13	1019	G	3.9
9	8E	18	PHE	3.9
15	14	1138	U	3.9
45	55	21	TYR	3.9
10	15	34	LEU	3.9
11	C5	58	GLY	3.9

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Mol	Chain	Res	Type	RSRZ
12	Q8	27	THR	3.9
33	5I	22	THR	3.9
1	1G	1813	G	3.9
8	2E	161	GLU	3.9
33	5A	29	ARG	3.9
37	BI	80	ARG	3.9
47	59	103	LEU	3.9
15	1H	2172	G	3.9
44	12	96	ARG	3.9
33	5A	56	VAL	3.9
42	62	7	ALA	3.9
17	H5	26	LEU	3.9
45	55	10	LEU	3.9
9	8E	31	GLN	3.9
37	BA	99	LEU	3.9
49	7A	59	TRP	3.9
15	1H	2811	G	3.9
33	5I	37	PHE	3.9
1	1G	2163	U	3.9
15	1H	2492	C	3.9
1	1G	750	G	3.9
13	3A	20	LYS	3.9
52	W1	69	G	3.9
24	4I	103	THR	3.8
37	BI	14	LYS	3.8
9	8E	29	ASN	3.8
10	15	12	ARG	3.8
42	6E	5	ARG	3.8
8	2E	153	VAL	3.8
1	1G	1975	U	3.8
9	82	64	THR	3.8
9	8E	127	LYS	3.8
47	59	100	GLY	3.8
52	V1	31	A	3.8
37	BI	62	LEU	3.8
33	5I	10	ALA	3.8
8	2E	166	GLU	3.8
37	BI	33	ILE	3.8
49	7I	59	TRP	3.8
48	1A	11	PHE	3.8
49	7A	26	ARG	3.8
9	82	11	LYS	3.8

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
15	14	2139	A	3.8
38	88	90	VAL	3.8
9	82	73	GLN	3.8
33	5A	36	PHE	3.8
11	C5	44	ILE	3.8
52	W4	69	G	3.8
22	D5	96	VAL	3.8
47	59	115	VAL	3.8
49	7I	21	VAL	3.8
1	1G	1916	A	3.8
24	4A	99	ARG	3.8
16	B8	1	MET	3.8
52	X1	1	G	3.8
1	13	1624	A	3.8
9	8E	121	ARG	3.7
9	82	107	ARG	3.7
37	BA	63	ILE	3.7
11	C5	63	LYS	3.7
24	4A	117	VAL	3.7
12	M5	56	GLU	3.7
28	M8	3	GLU	3.7
37	BA	103	GLY	3.7
12	M5	24	ALA	3.7
10	15	8	GLN	3.7
52	V1	4	C	3.7
9	8E	116	LYS	3.7
47	59	109	PHE	3.7
49	7A	18	ARG	3.7
49	7I	24	ALA	3.7
48	1I	57	LYS	3.7
49	7A	31	LYS	3.7
52	V1	70	G	3.7
1	1G	1352	U	3.7
8	22	206	GLU	3.7
33	5A	30	ALA	3.7
49	7A	20	VAL	3.7
28	I5	26	SER	3.7
33	5I	31	ARG	3.7
42	62	5	ARG	3.7
9	8E	28	VAL	3.7
9	82	116	LYS	3.7
37	BA	68	LYS	3.7

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Mol	Chain	Res	Type	RSRZ
38	88	60	ARG	3.7
15	1H	2816	G	3.7
37	BA	55	ILE	3.7
22	D5	95	PRO	3.7
15	1H	2145	G	3.7
29	AI	76	PRO	3.7
37	BI	79	ARG	3.7
40	49	34	LEU	3.7
42	62	37	ASN	3.7
49	7I	27	LYS	3.7
15	14	691	A	3.7
9	82	75	ASP	3.7
48	1A	55	LYS	3.7
10	15	119	ARG	3.7
48	1I	66	ARG	3.7
10	15	118	LYS	3.7
21	25	2	ILE	3.7
15	1H	2148	G	3.6
33	5A	53	LEU	3.6
39	F5	10	LYS	3.6
24	4I	97	PRO	3.6
9	8E	63	ILE	3.6
1	13	1989	C	3.6
1	13	1990	C	3.6
29	AA	53	ASN	3.6
15	14	2172	G	3.6
9	8E	35	GLU	3.6
15	14	1115	A	3.6
47	51	171	LEU	3.6
47	59	113	VAL	3.6
15	14	2161	C	3.6
37	BA	75	ASN	3.6
47	59	157	TYR	3.6
49	7A	17	TYR	3.6
52	V1	33	U	3.6
29	AI	71	LEU	3.6
45	55	13	HIS	3.6
49	7A	25	ARG	3.6
38	88	104	PHE	3.6
31	E5	12	ASN	3.6
1	13	1915	A	3.6
1	1G	1557	C	3.6

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
33	5I	21	TYR	3.6
48	1A	66	ARG	3.6
44	12	137	ARG	3.6
15	14	1	G	3.6
49	7I	25	ARG	3.6
29	AA	79	THR	3.6
1	13	1625	G	3.6
14	32	133	VAL	3.6
28	I5	53	GLU	3.6
33	5A	44	LEU	3.6
23	29	197	ILE	3.6
12	M5	53	PRO	3.6
17	H5	15	TYR	3.6
1	1G	1998	G	3.6
8	22	6	HIS	3.6
47	59	129	THR	3.6
9	82	112	LYS	3.5
10	15	104	LYS	3.5
15	14	2144	A	3.5
38	45	7	MET	3.5
9	8E	40	LEU	3.5
31	E5	22	GLY	3.5
1	1G	751	G	3.5
33	5A	60	SER	3.5
38	45	38	GLU	3.5
9	8E	73	GLN	3.5
47	59	165	ALA	3.5
1	13	1981	C	3.5
37	BA	85	MET	3.5
9	8E	106	ALA	3.5
1	1G	746	G	3.5
1	1G	972	G	3.5
12	M5	23	VAL	3.5
28	I5	52	THR	3.5
49	7I	33	ILE	3.5
37	BA	26	ASN	3.5
1	13	746	G	3.5
12	M5	46	ARG	3.5
48	1A	60	ARG	3.5
33	5I	4	LYS	3.5
1	13	1916	A	3.5
42	62	38	LEU	3.5

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Mol	Chain	Res	Type	RSRZ
28	I5	49	PHE	3.5
1	13	1656	C	3.5
37	BA	8	ARG	3.5
48	1A	45	ARG	3.5
37	BA	33	ILE	3.5
51	Y1	40	U	3.5
10	15	133	GLN	3.5
33	5A	23	ARG	3.5
38	45	12	GLN	3.5
1	13	1896	A	3.5
13	3I	19	ARG	3.5
25	4E	24	ARG	3.5
48	1I	5	ARG	3.5
52	V4	12	U	3.5
28	M8	62	ARG	3.5
48	1I	10	GLY	3.5
38	45	74	TYR	3.5
47	59	110	SER	3.5
48	1I	49	VAL	3.5
10	15	115	ARG	3.5
52	W1	4	C	3.4
9	8E	111	ARG	3.4
37	BI	68	LYS	3.4
31	I8	6	GLY	3.4
8	22	176	HIS	3.4
21	25	33	ALA	3.4
14	32	134	ASP	3.4
20	1F	19	GLY	3.4
1	13	1017	G	3.4
1	1G	1661	G	3.4
49	7I	34	GLU	3.4
9	8E	114	TYR	3.4
18	69	12	LEU	3.4
15	14	1131	U	3.4
1	1G	1556	G	3.4
52	W4	5	G	3.4
37	BI	41	ILE	3.4
8	22	179	ARG	3.4
22	D5	79	ARG	3.4
28	I5	13	ARG	3.4
24	4A	7	VAL	3.4
44	12	149	LEU	3.4

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
37	BI	9	ASN	3.4
12	M5	12	LYS	3.4
15	1H	1107	G	3.4
28	I5	8	LYS	3.4
37	BI	70	SER	3.4
6	2A	126	ARG	3.4
20	1B	4	GLY	3.4
33	5A	58	LYS	3.4
38	88	33	GLY	3.4
15	14	1151	A	3.4
39	J8	27	GLU	3.4
1	13	750	G	3.4
9	82	125	TYR	3.4
15	1H	1	G	3.4
52	V1	3	C	3.4
12	Q8	35	GLN	3.4
33	5I	29	ARG	3.4
48	1I	62	HIS	3.4
1	1G	1996	G	3.4
11	C5	45	VAL	3.4
9	82	124	GLN	3.4
30	35	30	THR	3.4
44	12	122	PHE	3.4
47	59	148	ILE	3.4
15	1H	1585	A	3.4
23	29	185	LYS	3.4
38	45	106	VAL	3.4
33	5I	34	TYR	3.4
1	13	1912	A	3.4
22	D5	1	MET	3.4
24	4A	4	ILE	3.4
1	13	1910	G	3.4
1	1G	1744	C	3.4
28	M8	54	GLY	3.4
9	8E	7	THR	3.4
48	1I	59	SER	3.4
28	M8	55	ARG	3.4
39	J8	26	ARG	3.4
48	1A	40	LEU	3.3
44	12	70	PHE	3.3
24	4I	101	GLN	3.3
1	13	1887	C	3.3

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Mol	Chain	Res	Type	RSRZ
25	4E	21	ALA	3.3
1	13	1951	A	3.3
29	AA	81	ARG	3.3
9	8E	120	ARG	3.3
9	8E	30	GLY	3.3
1	13	1875	A	3.3
1	13	1879	A	3.3
9	8E	70	LYS	3.3
33	5A	31	ARG	3.3
9	82	15	ALA	3.3
37	BA	20	LEU	3.3
44	12	165	VAL	3.3
29	AI	74	PHE	3.3
49	7A	8	ARG	3.3
15	14	1149	U	3.3
1	1G	1030	A	3.3
49	7I	65	GLN	3.3
15	1H	2204	C	3.3
22	H8	113	ALA	3.3
23	29	77	ILE	3.3
10	15	37	LYS	3.3
10	15	9	VAL	3.3
23	29	116	VAL	3.3
48	1A	54	PHE	3.3
51	Y1	34	G	3.3
10	15	85	ILE	3.3
28	I5	14	ILE	3.3
44	12	116	GLU	3.3
1	1G	1995	C	3.3
14	3E	138	TYR	3.3
47	59	131	VAL	3.3
1	13	1895	A	3.3
23	21	205	ALA	3.3
37	BA	60	GLU	3.3
29	AI	37	ARG	3.3
49	7A	10	GLY	3.3
15	1H	2173	G	3.3
1	1G	1952	C	3.3
52	V4	16	U	3.3
45	55	47	PHE	3.3
31	E5	41	ARG	3.3
49	7A	37	GLY	3.3

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
10	15	44	PRO	3.3
39	F5	91	LYS	3.3
12	M5	20	GLY	3.3
6	2A	123	LYS	3.3
31	I8	5	LYS	3.3
44	12	71	VAL	3.3
9	8E	122	ALA	3.2
15	1H	2203	C	3.2
24	4A	110	ARG	3.2
1	1G	1877	A	3.2
8	22	180	ALA	3.2
15	1H	1142	U	3.2
26	1J	90	C	3.2
30	35	65	ARG	3.2
47	59	114	VAL	3.2
1	13	1996	G	3.2
20	1F	4	GLY	3.2
4	19	38	LYS	3.2
23	29	105	THR	3.2
44	12	101	MET	3.2
33	5A	26	ARG	3.2
37	BI	23	ARG	3.2
39	J8	24	ALA	3.2
14	3E	137	SER	3.2
10	15	10	GLU	3.2
47	59	167	GLU	3.2
10	15	1	MET	3.2
9	82	10	ARG	3.2
10	15	36	GLY	3.2
50	7E	83	ILE	3.2
23	29	122	PHE	3.2
33	5I	36	PHE	3.2
38	45	102	VAL	3.2
15	14	2135	G	3.2
12	M5	60	LEU	3.2
15	1H	2813	C	3.2
13	3A	15	ARG	3.2
1	13	1823	U	3.2
15	14	2812	U	3.2
23	29	186	GLY	3.2
37	BA	104	LEU	3.2
38	45	34	LEU	3.2

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Mol	Chain	Res	Type	RSRZ
15	1H	1121	A	3.2
49	7I	3	LYS	3.2
52	V1	62	C	3.2
1	1G	2164	U	3.2
23	29	2	LYS	3.2
27	85	47	TYR	3.2
1	1G	1999	G	3.2
13	3A	127	GLU	3.2
15	1H	2206	G	3.2
23	29	76	ARG	3.2
50	7E	18	ARG	3.2
21	25	29	ASN	3.2
37	BI	71	THR	3.2
43	E8	111	HIS	3.2
44	12	19	HIS	3.2
25	42	24	ARG	3.2
28	M8	53	GLU	3.2
33	5A	54	PRO	3.2
39	F5	95	LEU	3.2
12	M5	59	LYS	3.2
35	95	74	LYS	3.2
52	V4	34	G	3.2
15	14	1146	A	3.2
30	35	18	ARG	3.2
52	W4	76	A	3.2
44	12	140	HIS	3.2
33	5I	61	TRP	3.2
33	5I	32	SER	3.2
48	1A	44	VAL	3.2
37	BA	64	ASP	3.2
48	1I	58	ASP	3.2
33	5A	25	VAL	3.1
24	4I	87	TYR	3.1
15	14	2195	A	3.1
1	1G	1742	C	3.1
37	BA	66	ALA	3.1
33	5A	57	ARG	3.1
37	BI	55	ILE	3.1
15	14	2140	G	3.1
51	Y1	43	U	3.1
52	W4	45	U	3.1
47	51	170	ARG	3.1

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
38	45	130	LYS	3.1
15	1H	2165	C	3.1
1	13	1988	G	3.1
1	13	1999	G	3.1
12	M5	31	HIS	3.1
15	14	1135	G	3.1
22	D5	52	SER	3.1
49	7A	11	SER	3.1
33	5I	30	ALA	3.1
31	I8	57	PHE	3.1
1	13	952	C	3.1
39	F5	21	ARG	3.1
49	7A	5	ARG	3.1
1	13	871	G	3.1
15	14	10	G	3.1
31	I8	2	ALA	3.1
33	5A	11	LYS	3.1
23	29	3	GLY	3.1
37	BI	69	GLY	3.1
24	4I	104	ARG	3.1
38	88	1	MET	3.1
15	14	2167	C	3.1
14	32	135	LEU	3.1
30	35	45	LEU	3.1
21	25	22	ILE	3.1
24	4A	100	GLY	3.1
38	45	10	ARG	3.1
12	M5	22	VAL	3.1
37	BI	16	HIS	3.1
33	5A	32	SER	3.1
2	65	2	ALA	3.1
37	BA	23	ARG	3.1
24	4A	96	LEU	3.1
44	12	97	TRP	3.1
15	1H	1586	C	3.1
48	1I	71	LEU	3.1
28	M8	63	TYR	3.1
37	BA	70	SER	3.1
42	62	41	ARG	3.1
38	45	91	GLU	3.1
12	M5	30	ARG	3.1
24	4A	91	ARG	3.1

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
30	35	79	ARG	3.1
33	5I	39	LEU	3.0
52	V1	69	G	3.0
52	V4	19	G	3.0
39	F5	15	ALA	3.0
52	V1	72	C	3.0
9	8E	75	ASP	3.0
38	88	106	VAL	3.0
23	29	204	ALA	3.0
37	BI	76	ALA	3.0
31	E5	13	GLY	3.0
37	BI	103	GLY	3.0
37	BA	16	HIS	3.0
47	51	173	PRO	3.0
1	1G	1854	A	3.0
1	1G	2154	A	3.0
8	2E	154	SER	3.0
14	32	122	ARG	3.0
15	1H	2199	C	3.0
15	14	692	C	3.0
28	I5	48	ARG	3.0
29	AI	56	GLN	3.0
9	8E	64	THR	3.0
9	8E	125	TYR	3.0
33	5A	55	GLY	3.0
21	25	40	VAL	3.0
23	29	136	ARG	3.0
48	1I	69	ASN	3.0
15	14	2815	A	3.0
15	14	2143	U	3.0
23	29	125	GLY	3.0
47	59	163	TYR	3.0
21	25	26	LYS	3.0
42	6E	35	LYS	3.0
48	1I	54	PHE	3.0
23	29	187	ALA	3.0
45	55	17	ARG	3.0
1	13	1018	G	3.0
1	1G	1721	A	3.0
15	1H	2812	U	3.0
10	15	46	VAL	3.0
22	D5	46	LYS	3.0

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
10	15	50	ASP	3.0
31	I8	8	GLY	3.0
37	BA	71	THR	3.0
30	35	19	VAL	3.0
15	14	11	G	3.0
38	88	59	ARG	3.0
44	12	152	PHE	3.0
9	8E	112	LYS	3.0
27	C8	21	ALA	3.0
1	13	1020	C	3.0
38	45	73	PRO	3.0
42	6E	86	GLN	3.0
51	Y4	41	U	3.0
33	5A	47	LEU	3.0
37	BI	91	LEU	3.0
40	49	3	LEU	3.0
6	2A	25	TYR	3.0
49	7A	4	ILE	3.0
11	C5	84	ARG	3.0
23	29	79	ARG	3.0
28	I5	58	ARG	3.0
38	45	65	PHE	3.0
23	29	1	MET	3.0
45	55	8	ARG	3.0
17	H5	11	SER	3.0
9	8E	6	GLY	2.9
17	H5	12	PRO	3.0
49	7A	33	ILE	2.9
42	62	33	ASP	2.9
1	13	709	C	2.9
15	14	937	C	2.9
49	7I	26	ARG	2.9
1	13	747	G	2.9
1	13	951	G	2.9
4	11	274	ARG	2.9
28	M8	57	GLU	2.9
33	5I	41	ARG	2.9
37	BI	45	GLN	2.9
44	12	130	ARG	2.9
15	14	2164	C	2.9
23	29	137	HIS	2.9
11	C5	65	ALA	2.9

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
20	1F	5	ASP	2.9
23	29	106	GLY	2.9
37	BI	27	LYS	2.9
11	C5	53	PRO	2.9
28	I5	41	PRO	2.9
40	49	2	PRO	2.9
15	1H	2914	C	2.9
40	49	25	TYR	2.9
10	15	7	LYS	2.9
1	1G	1972	U	2.9
33	5A	59	ALA	2.9
44	12	114	ARG	2.9
1	1G	1555	C	2.9
15	1H	2200	C	2.9
15	1H	2213	C	2.9
30	35	106	LEU	2.9
37	BA	24	LEU	2.9
22	H8	121	HIS	2.9
48	1A	69	ASN	2.9
15	14	2148	G	2.9
8	2E	196	LEU	2.9
14	3E	135	LEU	2.9
22	D5	5	LEU	2.9
44	12	115	LEU	2.9
15	1H	2142	A	2.9
39	J8	32	LYS	2.9
22	D5	91	LEU	2.9
1	1G	1029	G	2.9
23	29	160	TYR	2.9
11	C5	29	GLU	2.9
51	Y1	41	U	2.9
48	1I	43	ARG	2.9
49	7I	48	TRP	2.9
23	29	141	ILE	2.9
37	BI	29	LYS	2.9
14	32	110	PHE	2.9
37	BI	42	GLN	2.9
15	14	2813	C	2.9
22	D5	97	GLU	2.9
47	59	101	ARG	2.9
1	13	1599	G	2.9
8	22	177	THR	2.9

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
12	M5	11	LYS	2.9
47	59	92	ILE	2.9
49	7I	19	ILE	2.9
31	E5	42	GLY	2.9
21	25	37	ASP	2.9
33	5A	41	ARG	2.9
48	1I	50	ILE	2.8
21	25	3	GLN	2.8
29	AA	77	THR	2.8
37	BA	15	ARG	2.8
25	4E	155	GLU	2.8
37	BA	76	ALA	2.8
50	7E	84	ARG	2.8
42	62	42	ILE	2.8
23	29	113	PHE	2.8
42	62	32	ARG	2.8
8	2E	4	LYS	2.8
8	2E	26	LYS	2.8
45	55	5	LYS	2.8
15	14	1586	C	2.8
30	78	57	THR	2.8
38	88	32	TYR	2.8
17	H5	31	LEU	2.8
29	AI	40	ILE	2.8
15	1H	1144	A	2.8
15	1H	2912	A	2.8
15	14	2194	A	2.8
48	1I	45	ARG	2.8
24	4A	111	LYS	2.8
37	BA	29	LYS	2.8
38	88	76	LYS	2.8
15	14	7	G	2.8
15	14	2190	G	2.8
10	15	113	GLY	2.8
49	7A	30	GLY	2.8
45	55	12	ARG	2.8
38	45	103	MET	2.8
47	59	111	HIS	2.8
49	7A	16	HIS	2.8
1	1G	1810	A	2.8
42	62	85	TYR	2.8
50	7E	15	ASN	2.8

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
1	13	1851	G	2.8
23	29	107	THR	2.8
12	Q8	23	VAL	2.8
30	35	125	VAL	2.8
33	5I	25	VAL	2.8
23	29	70	ALA	2.8
47	59	44	VAL	2.8
52	W4	66	U	2.8
9	82	122	ALA	2.8
38	88	10	ARG	2.8
38	45	133	ARG	2.8
9	8E	26	VAL	2.8
23	29	108	SER	2.8
9	8E	74	ILE	2.8
23	29	198	VAL	2.8
28	I5	42	PHE	2.8
1	1G	2002	A	2.8
15	14	1094	A	2.8
38	88	41	TRP	2.8
44	12	110	GLN	2.8
1	1G	1694	C	2.8
1	1G	1979	C	2.8
9	82	28	VAL	2.8
45	55	14	SER	2.8
52	W4	2	C	2.8
23	29	163	GLU	2.8
29	AI	69	HIS	2.8
15	14	1145	U	2.8
37	BA	59	ALA	2.8
38	45	40	ALA	2.8
48	1I	6	ILE	2.8
1	1G	1741	C	2.8
22	D5	162	GLU	2.8
48	1I	9	ARG	2.8
51	Y1	33	G	2.8
38	45	75	THR	2.8
31	I8	7	LEU	2.8
37	BA	18	GLN	2.8
12	Q8	13	ARG	2.8
22	D5	57	ILE	2.8
12	Q8	25	MET	2.8
23	21	204	ALA	2.8

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
24	4A	24	GLY	2.8
31	E5	46	LYS	2.8
1	1G	1862	U	2.8
15	14	2909	U	2.8
1	1G	1976	A	2.8
52	V1	14	A	2.8
39	J8	28	GLY	2.8
10	15	98	VAL	2.8
23	29	126	PRO	2.8
47	59	85	LYS	2.8
14	3E	21	LEU	2.7
44	12	69	LEU	2.7
29	AI	70	LYS	2.7
37	BI	87	LYS	2.7
45	55	80	PHE	2.7
49	7I	10	GLY	2.7
10	15	43	THR	2.7
1	1G	1027	C	2.7
8	22	26	LYS	2.7
28	M8	61	ARG	2.7
37	BI	15	ARG	2.7
1	1G	1660	G	2.7
22	D5	3	TYR	2.7
29	AI	72	GLY	2.7
33	5I	11	LYS	2.7
31	E5	76	GLY	2.7
52	W1	2	C	2.7
9	8E	71	SER	2.7
52	V4	20	U	2.7
13	3A	21	LYS	2.7
15	14	2173	G	2.7
37	BI	48	LYS	2.7
15	14	1118	A	2.7
42	62	156	TRP	2.7
9	8E	5	TYR	2.7
37	BI	59	ALA	2.7
38	45	35	VAL	2.7
22	D5	82	ARG	2.7
33	5I	23	ARG	2.7
37	BI	21	LYS	2.7
39	F5	92	LYS	2.7
9	8E	102	LEU	2.7

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
10	15	41	ASP	2.7
48	1A	58	ASP	2.7
15	14	2187	G	2.7
9	8E	16	ARG	2.7
1	1G	1997	C	2.7
15	1H	1906	C	2.7
15	14	2278	C	2.7
52	W4	16	U	2.7
30	35	67	MET	2.7
23	29	120	TRP	2.7
29	AI	39	THR	2.7
44	12	14	GLY	2.7
8	2E	163	ALA	2.7
31	E5	11	ARG	2.7
31	E5	20	ARG	2.7
33	5I	35	ARG	2.7
52	V1	7	A	2.7
44	12	135	GLN	2.7
1	13	1822	C	2.7
1	1G	1740	C	2.7
10	15	80	GLY	2.7
12	Q8	9	GLY	2.7
8	2E	156	ARG	2.7
24	4I	31	LYS	2.7
37	BI	17	ARG	2.7
39	J8	21	ARG	2.7
50	7E	61	VAL	2.7
8	22	2	GLY	2.7
31	E5	45	PHE	2.7
37	BA	17	ARG	2.7
42	62	34	GLY	2.7
44	12	150	SER	2.7
49	7I	5	ARG	2.7
52	W4	44	G	2.7
8	22	15	THR	2.7
11	C5	64	GLU	2.7
47	59	162	ILE	2.7
30	35	59	LEU	2.7
10	15	74	ARG	2.7
17	H5	32	GLN	2.7
30	35	51	PHE	2.7
1	1G	2076	U	2.7

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Mol	Chain	Res	Type	RSRZ
1	1G	1989	C	2.7
15	1H	937	C	2.7
15	14	1127	C	2.7
44	12	139	LYS	2.7
45	55	22	ARG	2.7
24	4A	85	GLY	2.7
45	98	13	HIS	2.7
23	29	123	ALA	2.7
1	13	1598	A	2.7
12	M5	6	THR	2.7
15	14	3	U	2.7
1	1G	948	C	2.7
12	M5	48	PHE	2.7
51	Y4	29	G	2.7
52	V1	19	G	2.7
39	F5	3	LYS	2.6
49	7A	39	TYR	2.6
24	4A	114	ARG	2.6
38	88	2	LEU	2.6
10	15	117	PHE	2.6
24	4I	105	THR	2.6
50	7E	17	THR	2.6
31	E5	40	GLN	2.6
33	5A	51	GLY	2.6
37	BI	51	GLU	2.6
1	13	776	C	2.6
10	15	11	PRO	2.6
38	88	68	ILE	2.6
52	W4	67	C	2.6
15	14	2185	G	2.6
45	55	15	SER	2.6
24	4I	77	ASN	2.6
9	8E	41	VAL	2.6
39	F5	28	GLY	2.6
50	7E	24	THR	2.6
9	8E	113	LYS	2.6
52	V1	32	U	2.6
42	62	94	ARG	2.6
9	82	76	ALA	2.6
23	29	131	ALA	2.6
27	85	24	TYR	2.6
38	45	17	LEU	2.6

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
42	62	16	LEU	2.6
48	1A	53	PRO	2.6
1	1G	1031	C	2.6
1	1G	1971	C	2.6
1	13	1626	G	2.6
10	15	52	VAL	2.6
15	1H	2211	G	2.6
28	I5	57	GLU	2.6
39	F5	23	LYS	2.6
9	8E	10	ARG	2.6
23	29	191	PRO	2.6
35	95	81	TYR	2.6
9	82	67	GLY	2.6
38	45	98	LYS	2.6
52	V1	13	C	2.6
18	69	35	LEU	2.6
31	E5	10	THR	2.6
1	1G	947	G	2.6
8	2E	195	VAL	2.6
31	E5	77	ARG	2.6
33	5I	28	GLY	2.6
2	A8	2	ALA	2.6
15	14	1114	U	2.6
9	8E	109	VAL	2.6
10	15	48	MET	2.6
15	1H	2137	G	2.6
15	1H	2212	G	2.6
30	78	71	VAL	2.6
52	X4	1	G	2.6
12	Q8	21	LYS	2.6
1	13	1994	C	2.6
2	65	5	THR	2.6
9	8E	128	ARG	2.6
24	4I	114	ARG	2.6
33	5I	3	ARG	2.6
38	45	60	ARG	2.6
41	6A	2	PRO	2.6
2	65	60	GLY	2.6
28	I5	56	VAL	2.6
40	41	164	GLU	2.6
49	7I	20	VAL	2.6
12	M5	8	LYS	2.6

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
31	E5	9	SER	2.6
37	BI	20	LEU	2.6
45	55	4	LEU	2.6
49	7A	73	LEU	2.6
1	13	1993	G	2.6
14	3E	134	ASP	2.6
15	14	1107	G	2.6
48	1A	51	ARG	2.6
49	7A	68	ASP	2.6
23	29	115	GLY	2.6
48	1I	95	GLU	2.6
12	M5	44	LYS	2.6
30	35	64	LYS	2.6
12	M5	41	ILE	2.6
38	88	17	LEU	2.6
39	F5	26	ARG	2.6
47	59	152	ARG	2.6
37	BI	28	ALA	2.6
8	22	174	PRO	2.6
29	AI	77	THR	2.6
35	95	76	LYS	2.6
15	14	1124	C	2.6
31	E5	75	LEU	2.6
49	7I	38	TYR	2.6
12	M5	54	GLU	2.6
28	I5	23	GLU	2.6
29	AI	73	GLU	2.6
38	45	112	GLU	2.6
50	7E	21	LYS	2.6
8	22	30	ARG	2.6
14	3E	131	ARG	2.6
33	5A	12	ARG	2.6
33	5A	7	ILE	2.6
15	1H	2193	G	2.6
15	1H	2815	A	2.6
52	W4	23	A	2.6
1	1G	2155	U	2.6
39	J8	96	LYS	2.6
42	62	8	GLU	2.6
22	H8	141	VAL	2.6
24	4I	99	ARG	2.6
25	4E	19	MET	2.6

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
31	E5	21	LEU	2.6
28	I5	4	GLY	2.5
52	V1	37	A	2.5
1	13	1897	C	2.5
1	13	1950	G	2.5
1	1G	1829	G	2.5
1	1G	1917	G	2.5
1	1G	1982	G	2.5
15	1H	2141	G	2.5
37	BI	60	GLU	2.5
47	59	53	GLU	2.5
23	29	124	GLY	2.5
47	59	108	GLY	2.5
1	13	706	A	2.5
30	78	62	LEU	2.5
49	7A	23	ASP	2.5
50	7E	10	LEU	2.5
1	13	2159	C	2.5
8	22	7	PRO	2.5
15	1H	2186	C	2.5
11	C5	60	PHE	2.5
35	95	36	PRO	2.5
48	1I	4	ILE	2.5
7	8A	32	TYR	2.5
9	8E	42	ARG	2.5
38	45	113	GLN	2.5
44	12	128	GLU	2.5
49	7I	67	THR	2.5
11	C5	3	VAL	2.5
23	29	7	VAL	2.5
10	15	107	LEU	2.5
28	M8	51	ASP	2.5
29	AI	31	ILE	2.5
30	35	78	PRO	2.5
37	BA	22	ARG	2.5
42	6E	32	ARG	2.5
15	14	2696	C	2.5
14	32	149	ALA	2.5
30	35	58	THR	2.5
35	95	91	TYR	2.5
45	55	11	ASN	2.5
10	15	42	TRP	2.5

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Mol	Chain	Res	Type	RSRZ
22	D5	56	VAL	2.5
9	8E	77	ILE	2.5
15	14	2704	U	2.5
47	59	55	PRO	2.5
12	Q8	49	VAL	2.5
14	32	167	GLY	2.5
17	H5	19	GLN	2.5
25	4E	154	GLY	2.5
38	45	36	ALA	2.5
39	J8	25	LYS	2.5
44	12	155	LEU	2.5
1	13	1356	G	2.5
1	1G	1811	G	2.5
23	29	4	ILE	2.5
29	AI	49	ILE	2.5
20	1F	11	GLY	2.5
23	29	184	VAL	2.5
52	W1	66	U	2.5
31	I8	43	THR	2.5
38	45	68	ILE	2.5
12	M5	3	LYS	2.5
12	M5	36	LYS	2.5
28	I5	29	PRO	2.5
12	Q8	7	HIS	2.5
14	3E	3	ARG	2.5
15	14	2166	G	2.5
24	4A	104	ARG	2.5
31	E5	39	ARG	2.5
37	BA	83	ARG	2.5
52	W1	65	G	2.5
1	13	1995	C	2.5
9	82	35	GLU	2.5
39	F5	33	LYS	2.5
8	2E	160	ALA	2.5
38	45	132	VAL	2.5
44	1E	138	LEU	2.5
12	M5	7	HIS	2.5
1	1G	1874	U	2.5
1	1G	2152	G	2.5
22	D5	2	GLU	2.5
23	29	24	THR	2.5
49	7A	35	LYS	2.5

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
1	1G	1896	A	2.5
1	1G	2077	A	2.5
15	14	1100	C	2.5
40	49	139	LEU	2.5
39	F5	8	SER	2.5
14	3E	24	GLU	2.5
25	4E	18	ARG	2.5
1	1G	1814	G	2.5
15	1H	2190	G	2.5
15	14	1104	G	2.5
38	88	79	LEU	2.5
37	BA	58	LYS	2.5
15	1H	1124	C	2.5
15	14	2170	C	2.5
21	25	69	ILE	2.5
49	7A	48	TRP	2.5
10	15	112	LEU	2.5
12	M5	9	GLY	2.5
23	29	8	LYS	2.5
50	7E	63	LEU	2.5
13	3I	94	PRO	2.5
8	2E	157	ILE	2.5
42	6E	33	ASP	2.5
22	H8	149	SER	2.5
8	2E	167	TRP	2.4
15	1H	4	C	2.4
15	14	2490	C	2.4
15	14	2705	C	2.4
12	M5	47	LYS	2.4
22	D5	102	LEU	2.4
23	29	69	LYS	2.4
30	78	59	LEU	2.4
21	25	34	THR	2.4
27	C8	4	ALA	2.4
9	82	31	GLN	2.4
30	78	61	ARG	2.4
30	35	47	ASP	2.4
38	88	91	GLU	2.4
30	35	25	SER	2.4
48	1A	56	HIS	2.4
17	H5	10	LYS	2.4
21	25	109	LYS	2.4

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
37	BA	87	LYS	2.4
15	1H	2149	G	2.4
23	21	190	GLY	2.4
28	I5	54	GLY	2.4
39	J8	30	VAL	2.4
15	14	2408	A	2.4
23	29	51	PHE	2.4
31	E5	2	ALA	2.4
38	45	80	GLU	2.4
23	29	133	LYS	2.4
27	C8	14	HIS	2.4
30	35	62	LEU	2.4
20	1F	7	ARG	2.4
27	85	40	PHE	2.4
37	BI	83	ARG	2.4
40	41	25	TYR	2.4
44	1E	122	PHE	2.4
1	13	1021	G	2.4
23	29	134	ILE	2.4
1	13	1877	A	2.4
15	1H	1146	A	2.4
15	14	2147	U	2.4
31	I8	40	GLN	2.4
49	7I	49	LEU	2.4
6	2I	42	TRP	2.4
12	M5	13	ARG	2.4
14	3E	110	PHE	2.4
23	29	140	SER	2.4
9	8E	43	ALA	2.4
37	BI	30	LYS	2.4
37	BA	27	LYS	2.4
38	88	66	ILE	2.4
38	45	131	ILE	2.4
44	1E	27	LYS	2.4
42	6E	11	GLN	2.4
1	13	949	C	2.4
37	BA	62	LEU	2.4
51	Y1	42	U	2.4
15	1H	556	A	2.4
52	V1	63	G	2.4
31	I8	69	PHE	2.4
44	12	163	PHE	2.4

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
37	BI	34	LYS	2.4
49	7I	64	ALA	2.4
10	15	45	ASN	2.4
35	95	83	ARG	2.4
38	88	12	GLN	2.4
42	62	3	ARG	2.4
48	1A	41	PRO	2.4
50	7E	59	LEU	2.4
1	13	1884	U	2.4
23	29	135	HIS	2.4
52	W1	17	C	2.4
10	15	13	TRP	2.4
23	21	151	TYR	2.4
1	1G	1745	G	2.4
15	14	2146	G	2.4
37	BI	63	ILE	2.4
2	65	3	ARG	2.4
21	25	23	ARG	2.4
24	4I	91	ARG	2.4
38	45	6	ARG	2.4
42	62	6	ARG	2.4
45	55	71	GLN	2.4
48	1I	70	ARG	2.4
16	75	35	LYS	2.4
37	BI	38	LYS	2.4
42	62	36	LYS	2.4
8	2E	201	TYR	2.4
31	E5	55	ARG	2.4
33	5I	26	ARG	2.4
25	4E	20	GLN	2.4
15	1H	2191	G	2.4
23	29	96	PHE	2.4
49	7I	41	PRO	2.4
7	8I	32	TYR	2.4
28	I5	63	TYR	2.4
29	AI	83	HIS	2.4
44	12	143	GLU	2.4
15	1H	2161	C	2.4
33	5A	52	GLN	2.4
1	13	1967	A	2.4
15	14	2403	A	2.4
45	55	39	PRO	2.4

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
8	2E	189	ALA	2.4
12	Q8	6	THR	2.4
18	69	10	GLU	2.4
29	AI	80	TYR	2.4
31	E5	14	ARG	2.4
33	5A	21	TYR	2.4
37	BA	25	ARG	2.4
47	59	156	ALA	2.4
1	1G	871	G	2.4
38	88	77	LYS	2.4
9	8E	3	GLN	2.4
43	E8	105	VAL	2.4
8	22	184	TYR	2.4
52	X1	38	A	2.4
21	25	25	LEU	2.4
43	E8	112	GLY	2.4
48	1I	101	VAL	2.4
42	62	76	ARG	2.4
1	13	1031	C	2.4
9	8E	62	TYR	2.4
15	1H	2210	C	2.4
22	D5	55	HIS	2.4
24	4A	90	LEU	2.4
6	2I	120	ARG	2.3
10	15	110	GLY	2.3
44	12	112	VAL	2.3
49	7I	42	ARG	2.3
47	59	41	MET	2.3
2	65	33	LYS	2.3
17	H5	5	LYS	2.3
47	51	172	LYS	2.3
10	15	47	ALA	2.3
15	14	2174	G	2.3
23	29	81	ILE	2.3
11	C5	43	ASN	2.3
38	88	34	LEU	2.3
15	14	1166	C	2.3
24	4I	92	HIS	2.3
33	5I	19	ARG	2.3
48	1A	67	THR	2.3
10	15	81	GLY	2.3
33	5A	50	LYS	2.3

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Mol	Chain	Res	Type	RSRZ
1	13	1907	A	2.3
47	59	86	GLU	2.3
9	8E	76	ALA	2.3
10	15	108	PRO	2.3
30	35	50	ARG	2.3
1	1G	1626	G	2.3
33	5I	38	GLY	2.3
33	5A	40	CYS	2.3
39	F5	32	LYS	2.3
49	7A	12	LYS	2.3
15	1H	2133	C	2.3
52	V1	61	C	2.3
1	13	1984	A	2.3
25	4E	25	ARG	2.3
49	7I	36	ILE	2.3
1	13	1992	U	2.3
6	2I	14	VAL	2.3
8	2E	27	LYS	2.3
15	14	2134	U	2.3
8	2E	194	GLY	2.3
23	29	10	GLY	2.3
24	4I	27	LYS	2.3
42	62	105	VAL	2.3
47	59	99	VAL	2.3
48	1A	34	VAL	2.3
47	59	158	HIS	2.3
45	55	24	GLN	2.3
49	7I	68	ASP	2.3
1	1G	1655	G	2.3
38	45	66	ILE	2.3
42	6E	12	LEU	2.3
49	7A	64	ALA	2.3
51	Y4	28	G	2.3
1	13	1617	A	2.3
22	D5	48	PHE	2.3
47	59	112	PRO	2.3
48	1I	44	VAL	2.3
37	BA	79	ARG	2.3
10	15	87	LEU	2.3
29	AI	12	ASP	2.3
14	32	146	ILE	2.3
37	BA	30	LYS	2.3

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
39	F5	18	ILE	2.3
50	7E	58	TYR	2.3
50	72	2	LEU	2.3
1	1G	2159	C	2.3
1	13	1860	G	2.3
15	14	1122	G	2.3
23	29	189	PRO	2.3
37	BI	88	VAL	2.3
38	45	99	PRO	2.3
39	F5	65	SER	2.3
28	I5	61	ARG	2.3
12	Q8	33	ASN	2.3
17	H5	33	GLN	2.3
21	25	31	LYS	2.3
8	22	29	TYR	2.3
9	82	105	ASP	2.3
23	29	49	LEU	2.3
27	C8	22	LYS	2.3
28	M8	12	ALA	2.3
50	7E	13	ILE	2.3
25	4E	23	GLY	2.3
22	D5	81	ARG	2.3
1	1G	776	C	2.3
28	I5	6	HIS	2.3
45	55	40	LYS	2.3
1	13	1475	G	2.3
41	6I	62	GLN	2.3
37	BA	41	ILE	2.3
44	12	118	LEU	2.3
1	1G	1951	A	2.3
15	1H	1704	A	2.3
15	14	6	A	2.3
51	Y1	32	A	2.3
23	29	119	ARG	2.3
16	75	1	MET	2.3
24	4I	111	LYS	2.3
15	14	1152	C	2.3
23	29	5	LEU	2.3
33	5I	6	LEU	2.3
45	55	65	LEU	2.3
10	15	75	TYR	2.3
23	29	114	ALA	2.3

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Mol	Chain	Res	Type	RSRZ
1	13	933	G	2.3
1	1G	1659	G	2.3
12	Q8	52	LYS	2.3
15	14	2145	G	2.3
48	1I	64	GLU	2.3
31	E5	47	PRO	2.3
27	85	60	LEU	2.3
2	65	37	ALA	2.3
23	29	111	ARG	2.3
24	4I	94	ARG	2.3
28	I5	21	VAL	2.3
44	1E	96	ARG	2.3
4	19	40	THR	2.3
11	G8	92	ASN	2.3
15	14	2739	C	2.3
30	35	28	GLY	2.3
47	59	57	ASP	2.3
1	1G	1663	A	2.3
1	1G	1695	A	2.3
15	14	1137	G	2.3
15	14	2160	A	2.3
23	29	195	LEU	2.3
22	D5	80	ARG	2.3
29	AA	51	VAL	2.3
39	J8	33	LYS	2.3
43	E8	74	ALA	2.3
17	H5	27	GLY	2.3
1	1G	1777	C	2.3
40	49	27	ASN	2.3
42	6E	37	ASN	2.3
10	15	99	LEU	2.3
42	62	10	ARG	2.3
49	7I	15	PRO	2.3
18	69	22	LYS	2.3
1	13	748	A	2.3
1	1G	1598	A	2.3
44	1E	15	VAL	2.3
1	13	1574	G	2.2
1	1G	1356	G	2.2
5	L5	1	MET	2.2
44	12	23	ARG	2.2
1	1G	1563	C	2.2

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
21	68	22	ILE	2.2
37	BI	65	LYS	2.2
38	45	22	LYS	2.2
38	45	63	LYS	2.2
27	85	63	VAL	2.2
31	E5	38	VAL	2.2
35	95	75	PHE	2.2
16	B8	92	GLY	2.2
29	AA	69	HIS	2.2
38	45	92	GLY	2.2
1	1G	1476	G	2.2
1	1G	2079	G	2.2
30	35	60	MET	2.2
31	E5	56	ASP	2.2
17	H5	47	VAL	2.2
23	29	22	PRO	2.2
38	45	39	PRO	2.2
48	1I	11	PHE	2.2
15	1H	2817	C	2.2
23	29	54	GLN	2.2
50	72	70	GLN	2.2
10	15	134	ARG	2.2
16	B8	111	ARG	2.2
23	29	129	HIS	2.2
37	BA	73	HIS	2.2
28	I5	28	LYS	2.2
45	55	20	LEU	2.2
16	75	52	ILE	2.2
23	29	196	VAL	2.2
1	1G	1693	U	2.2
15	14	9	U	2.2
15	14	2496	G	2.2
15	14	2724	G	2.2
37	BA	14	LYS	2.2
1	1G	1881	C	2.2
1	1G	1948	C	2.2
15	14	1088	C	2.2
15	14	2908	C	2.2
37	BI	19	SER	2.2
28	M8	31	ILE	2.2
1	1G	705	A	2.2
16	75	100	TYR	2.2

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
23	21	111	ARG	2.2
22	D5	21	ALA	2.2
29	AA	70	LYS	2.2
30	35	68	GLN	2.2
37	BA	106	ALA	2.2
38	88	36	ALA	2.2
52	W1	76	A	2.2
1	13	1016	U	2.2
8	22	87	LEU	2.2
1	1G	1910	G	2.2
37	BA	61	SER	2.2
40	49	23	PHE	2.2
17	H5	54	VAL	2.2
45	98	8	ARG	2.2
23	21	153	GLY	2.2
24	4A	95	GLY	2.2
30	78	70	GLN	2.2
6	2I	119	CYS	2.2
8	22	142	MET	2.2
50	7E	6	ILE	2.2
1	1G	949	C	2.2
45	55	7	GLY	2.2
52	W4	65	G	2.2
27	85	44	ASN	2.2
36	N8	5	PRO	2.2
45	98	10	LEU	2.2
1	1G	1658	A	2.2
8	22	4	LYS	2.2
9	8E	59	PHE	2.2
10	15	38	HIS	2.2
17	H5	35	ARG	2.2
44	12	105	PHE	2.2
15	1H	2195	A	2.2
38	45	64	ILE	2.2
23	29	161	GLY	2.2
33	5A	10	ALA	2.2
1	13	1249	C	2.2
4	11	206	LEU	2.2
4	19	182	LEU	2.2
15	14	1112	C	2.2
22	D5	125	LEU	2.2
29	AA	76	PRO	2.2

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
1	13	1478	G	2.2
1	1G	1662	G	2.2
17	H5	55	ARG	2.2
22	D5	72	ARG	2.2
27	C8	25	TRP	2.2
1	13	854	U	2.2
1	13	1874	U	2.2
47	59	127	GLU	2.2
50	7E	23	SER	2.2
52	W4	47	U	2.2
1	13	1663	A	2.2
1	1G	1739	A	2.2
15	14	2198	A	2.2
44	12	138	LEU	2.2
50	7E	16	ALA	2.2
37	BI	8	ARG	2.2
38	45	45	GLN	2.2
38	45	71	ASP	2.2
39	J8	20	ARG	2.2
1	13	1911	C	2.2
22	D5	137	ILE	2.2
39	F5	66	HIS	2.2
43	E8	24	ILE	2.2
1	13	1998	G	2.2
1	1G	1360	G	2.2
1	1G	1492	G	2.2
15	14	216	G	2.2
21	25	42	SER	2.2
23	29	78	LEU	2.2
23	29	157	ALA	2.2
33	5I	9	LYS	2.2
38	45	125	LEU	2.2
52	V4	60	U	2.2
28	I5	30	GLU	2.2
38	88	7	MET	2.2
1	1G	2132	C	2.2
31	E5	72	ARG	2.2
10	15	82	LEU	2.2
37	BI	24	LEU	2.2
35	D8	73	SER	2.2
1	13	1970	G	2.2
1	1G	707	G	2.2

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
15	14	2028	G	2.2
22	H8	104	PHE	2.2
22	H8	148	ASP	2.2
38	45	109	VAL	2.2
1	13	1888	A	2.2
1	1G	748	A	2.2
4	11	55	GLY	2.2
9	8E	93	ARG	2.2
19	9A	88	LYS	2.2
23	21	154	LYS	2.2
37	BI	86	ARG	2.2
9	8E	47	LEU	2.1
23	29	151	TYR	2.1
1	1G	1911	C	2.1
15	1H	2132	C	2.1
15	1H	2417	C	2.1
8	22	172	ARG	2.1
23	29	154	LYS	2.1
45	98	17	ARG	2.1
48	1I	61	GLU	2.1
15	14	240	G	2.1
28	M8	39	CYS	2.1
10	15	33	LEU	2.1
16	75	104	ASN	2.1
27	C8	18	LEU	2.1
27	C8	27	LEU	2.1
33	5A	6	LEU	2.1
1	1G	969	C	2.1
15	14	2913	C	2.1
37	BA	65	LYS	2.1
38	45	94	VAL	2.1
48	1I	72	VAL	2.1
49	7A	21	VAL	2.1
49	7A	41	PRO	2.1
52	W4	74	C	2.1
1	13	1623	U	2.1
9	8E	32	ASP	2.1
21	25	91	LEU	2.1
8	2E	192	THR	2.1
8	2E	200	ALA	2.1
23	21	159	HIS	2.1
24	4A	94	ARG	2.1

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
33	5A	17	LYS	2.1
48	1A	70	ARG	2.1
45	55	66	VAL	2.1
1	13	1455	C	2.1
1	13	1941	C	2.1
15	1H	2205	U	2.1
23	29	103	ASP	2.1
31	E5	71	ASP	2.1
8	22	21	ARG	2.1
28	I5	55	ARG	2.1
37	BI	66	ALA	2.1
4	19	270	ILE	2.1
23	29	165	VAL	2.1
44	12	136	VAL	2.1
4	19	177	LEU	2.1
15	1H	1116	G	2.1
52	V1	65	G	2.1
52	V4	57	G	2.1
1	13	775	C	2.1
1	13	963	C	2.1
1	1G	1654	C	2.1
1	1G	1656	C	2.1
6	2I	123	LYS	2.1
12	M5	5	LYS	2.1
28	M8	42	PHE	2.1
39	J8	91	LYS	2.1
43	E8	92	ARG	2.1
13	3I	90	VAL	2.1
13	3A	18	VAL	2.1
24	4A	25	ILE	2.1
28	I5	35	VAL	2.1
50	7E	136	GLU	2.1
16	75	48	ILE	2.1
21	25	27	GLY	2.1
23	21	106	GLY	2.1
30	35	66	GLY	2.1
38	45	15	GLY	2.1
27	C8	2	PRO	2.1
38	88	78	PRO	2.1
1	13	1987	A	2.1
15	1H	2144	A	2.1
1	1G	1032	G	2.1

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
15	14	1111	G	2.1
15	14	2169	U	2.1
15	14	2406	G	2.1
27	85	17	ILE	2.1
38	45	27	VAL	2.1
48	1I	56	HIS	2.1
1	1G	749	C	2.1
48	1I	97	GLU	2.1
33	5A	13	THR	2.1
12	Q8	12	LYS	2.1
30	35	108	LYS	2.1
39	F5	94	LEU	2.1
14	32	111	ALA	2.1
25	42	81	GLU	2.1
31	I8	15	ASP	2.1
38	45	114	ALA	2.1
1	13	774	A	2.1
1	13	1985	U	2.1
1	1G	774	A	2.1
8	22	39	ILE	2.1
27	85	72	HIS	2.1
31	I8	38	VAL	2.1
1	13	744	G	2.1
1	1G	1625	G	2.1
10	15	83	LYS	2.1
15	1H	2134	U	2.1
1	1G	1947	C	2.1
15	1H	2166	G	2.1
15	14	2297	G	2.1
44	12	132	LYS	2.1
22	D5	136	PHE	2.1
39	J8	17	SER	2.1
42	62	154	TYR	2.1
38	88	96	VAL	2.1
42	62	27	ILE	2.1
1	13	856	U	2.1
1	13	1683	A	2.1
8	22	28	GLN	2.1
23	29	117	MET	2.1
37	BI	85	MET	2.1
40	49	26	GLN	2.1
51	Y1	52	U	2.1

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
52	X1	39	U	2.1
1	13	707	G	2.1
1	13	1474	G	2.1
1	13	1564	G	2.1
1	13	1873	C	2.1
1	1G	1737	C	2.1
15	14	1123	C	2.1
15	14	2695	C	2.1
30	35	31	ALA	2.1
23	29	150	VAL	2.1
37	BI	39	LYS	2.1
39	F5	61	ARG	2.1
50	7E	14	ARG	2.1
4	11	210	GLY	2.1
8	2E	178	LEU	2.1
12	Q8	31	HIS	2.1
33	5A	49	HIS	2.1
47	51	174	GLY	2.1
1	13	1968	U	2.1
1	1G	1028	U	2.1
48	1I	42	THR	2.1
52	V4	37	A	2.1
1	13	1026	C	2.1
8	22	64	VAL	2.1
37	BI	25	ARG	2.1
50	7E	80	ILE	2.1
1	1G	973	G	2.1
15	1H	2187	G	2.1
15	14	2184	G	2.1
15	14	2404	G	2.1
15	14	2885	G	2.1
22	D5	163	LEU	2.1
17	H5	52	HIS	2.1
42	6E	103	TRP	2.1
9	8E	78	LYS	2.1
9	82	9	ARG	2.1
50	7E	56	LYS	2.1
38	45	93	TYR	2.1
45	55	19	ALA	2.1
52	V4	32	U	2.1
48	1A	72	VAL	2.1
9	82	39	GLY	2.1

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Mol	Chain	Res	Type	RSRZ
15	1H	1796	A	2.1
37	BA	84	LEU	2.1
38	88	47	ILE	2.1
48	1A	38	ILE	2.1
23	29	6	GLY	2.1
52	X1	31	A	2.1
15	14	2189	C	2.1
16	75	22	PHE	2.0
4	19	262	ARG	2.0
23	29	109	LYS	2.0
1	1G	967	G	2.0
1	1G	1359	G	2.0
21	25	108	GLU	2.0
44	12	111	ARG	2.0
1	1G	2000	U	2.0
38	45	96	VAL	2.0
42	6E	87	VAL	2.0
50	7E	137	VAL	2.0
48	1I	65	LEU	2.0
52	W1	45	U	2.0
23	29	190	GLY	2.0
15	14	959	A	2.0
27	C8	16	LYS	2.0
39	F5	2	SER	2.0
44	12	106	LYS	2.0
45	55	50	HIS	2.0
47	59	3	ARG	2.0
29	AA	52	TYR	2.0
33	5I	20	ALA	2.0
1	13	1983	G	2.0
4	11	236	GLY	2.0
4	19	155	LEU	2.0
16	B8	104	ASN	2.0
18	61	111	PRO	2.0
8	22	199	LYS	2.0
15	14	693	G	2.0
15	14	2748	G	2.0
24	4A	26	GLY	2.0
40	49	36	LYS	2.0
11	C5	5	MET	2.0
27	C8	31	SER	2.0
30	35	70	GLN	2.0

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
49	7I	16	HIS	2.0
1	1G	903	A	2.0
52	V4	35	A	2.0
1	1G	1853	C	2.0
15	1H	2130	C	2.0
15	14	2276	C	2.0
39	F5	37	ILE	2.0
47	51	156	ALA	2.0
12	M5	2	PRO	2.0
27	85	64	ARG	2.0
37	BI	101	GLY	2.0
1	13	1664	G	2.0
8	2E	162	GLN	2.0
10	15	76	SER	2.0
15	14	2689	G	2.0
8	22	173	VAL	2.0
17	H5	6	VAL	2.0
29	AI	61	TYR	2.0
37	BI	64	ASP	2.0
38	45	97	VAL	2.0
8	22	14	ILE	2.0
17	H5	23	LEU	2.0
21	25	77	ILE	2.0
8	2E	155	GLY	2.0
39	J8	22	GLY	2.0
1	13	1757	C	2.0
1	13	1853	C	2.0
1	13	1986	C	2.0
1	1G	1252	C	2.0
1	1G	1622	C	2.0
1	1G	1954	C	2.0
9	82	33	PHE	2.0
4	19	161	THR	2.0
6	2A	117	ASN	2.0
15	14	690	C	2.0
23	29	11	MET	2.0
45	98	1	MET	2.0
49	7I	14	ASN	2.0
30	78	50	ARG	2.0
30	78	110	TYR	2.0
31	E5	4	LYS	2.0
52	X1	32	U	2.0

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Mol	Chain	Res	Type	RSRZ
6	2I	50	TYR	2.0
21	25	75	SER	2.0
16	B8	50	ILE	2.0
22	D5	49	ARG	2.0
24	4I	5	ALA	2.0
24	4I	81	LEU	2.0
35	95	38	LEU	2.0
37	BI	36	LEU	2.0
49	7A	38	TYR	2.0
15	14	2125	G	2.0
1	1G	1444	A	2.0
1	1G	1738	A	2.0
28	M8	30	GLU	2.0
1	13	1651	C	2.0
9	8E	124	GLN	2.0
15	1H	2136	C	2.0
35	95	72	VAL	2.0
44	12	144	ARG	2.0

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

There are no non-standard protein/DNA/RNA residues in this entry.

## 6.3 Carbohydrates [i](#)

There are no monosaccharides in this entry.

## 6.4 Ligands [i](#)

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

Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å <sup>2</sup> )	Q<0.9
54	MG	13	2367	1/1	0.01	0.31	92,92,92,92	0
54	MG	1H	3611	1/1	0.18	0.46	47,47,47,47	0
54	MG	88	205	1/1	0.27	0.24	124,124,124,124	0
54	MG	14	3471	1/1	0.28	0.68	57,57,57,57	0
54	MG	1G	2263	1/1	0.31	0.45	65,65,65,65	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å <sup>2</sup> )	Q<0.9
54	MG	1G	2312	1/1	0.32	0.25	101,101,101,101	0
54	MG	1H	3363	1/1	0.36	0.26	67,67,67,67	0
54	MG	13	2307	1/1	0.38	0.33	89,89,89,89	0
54	MG	14	3519	1/1	0.40	0.38	64,64,64,64	0
54	MG	X1	108	1/1	0.40	0.21	77,77,77,77	0
54	MG	14	3512	1/1	0.42	0.33	69,69,69,69	0
54	MG	1G	2372	1/1	0.42	0.21	85,85,85,85	0
54	MG	14	3458	1/1	0.44	0.45	94,94,94,94	0
54	MG	1G	2307	1/1	0.46	0.50	82,82,82,82	0
54	MG	1G	2317	1/1	0.47	0.28	78,78,78,78	0
54	MG	1G	2358	1/1	0.49	0.33	94,94,94,94	0
54	MG	1G	2378	1/1	0.49	0.29	96,96,96,96	0
54	MG	14	3361	1/1	0.49	0.41	66,66,66,66	0
54	MG	1G	2212	1/1	0.50	0.09	112,112,112,112	0
54	MG	14	3509	1/1	0.50	0.45	72,72,72,72	0
54	MG	14	3401	1/1	0.52	0.25	73,73,73,73	0
54	MG	31	302	1/1	0.52	0.26	68,68,68,68	0
54	MG	13	2214	1/1	0.54	0.20	98,98,98,98	0
54	MG	14	3405	1/1	0.56	0.23	78,78,78,78	0
54	MG	Y4	101	1/1	0.56	0.20	83,83,83,83	0
54	MG	13	2374	1/1	0.58	0.29	86,86,86,86	0
54	MG	1H	3095	1/1	0.58	0.20	58,58,58,58	0
54	MG	1H	3639	1/1	0.58	0.40	72,72,72,72	0
54	MG	14	3012	1/1	0.58	0.13	53,53,53,53	0
54	MG	1H	3468	1/1	0.59	0.58	47,47,47,47	0
54	MG	14	3402	1/1	0.59	0.50	72,72,72,72	0
54	MG	1G	2355	1/1	0.59	0.21	76,76,76,76	0
54	MG	1G	2287	1/1	0.59	0.27	86,86,86,86	0
54	MG	1H	3291	1/1	0.59	0.23	76,76,76,76	0
54	MG	1G	2327	1/1	0.59	0.23	100,100,100,100	0
54	MG	14	3195	1/1	0.60	0.29	71,71,71,71	0
54	MG	1H	3591	1/1	0.60	0.26	68,68,68,68	0
54	MG	14	3490	1/1	0.61	0.36	71,71,71,71	0
54	MG	14	3494	1/1	0.61	0.24	91,91,91,91	0
54	MG	14	3054	1/1	0.61	0.17	60,60,60,60	0
54	MG	1H	3621	1/1	0.62	0.81	50,50,50,50	0
54	MG	14	3352	1/1	0.62	0.23	87,87,87,87	0
54	MG	E5	202	1/1	0.62	0.31	77,77,77,77	0
54	MG	13	2318	1/1	0.63	0.24	86,86,86,86	0
54	MG	13	2346	1/1	0.63	0.47	59,59,59,59	0
54	MG	1G	2319	1/1	0.63	0.35	68,68,68,68	0
54	MG	W4	104	1/1	0.63	0.20	124,124,124,124	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors( $\text{\AA}^2$ )	Q<0.9
54	MG	1G	2308	1/1	0.64	0.23	79,79,79,79	0
54	MG	14	3554	1/1	0.64	0.25	91,91,91,91	0
54	MG	13	2231	1/1	0.64	0.20	74,74,74,74	0
54	MG	1H	3633	1/1	0.64	0.25	74,74,74,74	0
54	MG	1H	3472	1/1	0.65	0.24	56,56,56,56	0
54	MG	1H	3492	1/1	0.65	0.50	66,66,66,66	0
54	MG	14	3061	1/1	0.65	0.14	54,54,54,54	0
54	MG	1H	3576	1/1	0.65	0.52	55,55,55,55	0
54	MG	14	3281	1/1	0.65	0.29	70,70,70,70	0
54	MG	1G	2268	1/1	0.65	0.51	109,109,109,109	0
54	MG	14	3459	1/1	0.66	0.57	59,59,59,59	0
54	MG	16	204	1/1	0.66	0.31	72,72,72,72	0
54	MG	13	2287	1/1	0.66	0.21	91,91,91,91	0
54	MG	1H	3488	1/1	0.66	0.28	50,50,50,50	0
54	MG	13	2302	1/1	0.66	0.55	75,75,75,75	0
54	MG	14	3095	1/1	0.66	0.12	93,93,93,93	0
54	MG	1H	3527	1/1	0.66	0.34	50,50,50,50	0
54	MG	13	2330	1/1	0.66	0.19	78,78,78,78	0
54	MG	1H	3403	1/1	0.67	0.36	54,54,54,54	0
54	MG	1H	3516	1/1	0.67	0.26	52,52,52,52	0
54	MG	14	3559	1/1	0.67	0.15	75,75,75,75	0
54	MG	1H	3088	1/1	0.67	0.18	52,52,52,52	0
54	MG	14	3344	1/1	0.67	0.69	81,81,81,81	0
54	MG	14	3451	1/1	0.68	0.34	51,51,51,51	0
54	MG	1H	3632	1/1	0.68	0.46	74,74,74,74	0
54	MG	1H	3427	1/1	0.68	0.29	46,46,46,46	0
54	MG	13	2353	1/1	0.68	0.11	76,76,76,76	0
54	MG	13	2381	1/1	0.68	0.40	82,82,82,82	0
54	MG	1H	3475	1/1	0.68	0.30	60,60,60,60	0
54	MG	1H	3087	1/1	0.68	0.22	45,45,45,45	0
54	MG	13	2390	1/1	0.68	0.40	117,117,117,117	0
54	MG	14	3180	1/1	0.68	0.45	75,75,75,75	0
54	MG	1H	3414	1/1	0.69	0.20	60,60,60,60	0
54	MG	13	2383	1/1	0.69	0.29	77,77,77,77	0
54	MG	13	2384	1/1	0.69	0.40	75,75,75,75	0
54	MG	14	3399	1/1	0.69	0.26	79,79,79,79	0
54	MG	14	3549	1/1	0.69	0.42	70,70,70,70	0
54	MG	1H	3586	1/1	0.69	0.36	69,69,69,69	0
54	MG	1G	2315	1/1	0.69	0.27	76,76,76,76	0
54	MG	16	203	1/1	0.69	0.24	69,69,69,69	0
54	MG	13	2361	1/1	0.69	0.64	81,81,81,81	0
54	MG	29	303	1/1	0.69	0.44	57,57,57,57	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors( $\text{\AA}^2$ )	Q<0.9
54	MG	1G	2377	1/1	0.69	0.41	92,92,92,92	0
54	MG	1H	3624	1/1	0.69	0.29	61,61,61,61	0
54	MG	13	2355	1/1	0.69	0.35	72,72,72,72	0
54	MG	14	3282	1/1	0.69	0.22	64,64,64,64	0
54	MG	14	3481	1/1	0.69	0.45	78,78,78,78	0
54	MG	14	3342	1/1	0.69	0.14	75,75,75,75	0
54	MG	13	2310	1/1	0.70	0.20	80,80,80,80	0
54	MG	13	2332	1/1	0.70	0.28	85,85,85,85	0
54	MG	14	3503	1/1	0.70	0.46	62,62,62,62	0
54	MG	14	3080	1/1	0.70	0.16	70,70,70,70	0
54	MG	1H	3013	1/1	0.70	0.15	55,55,55,55	0
54	MG	1G	2373	1/1	0.70	0.22	89,89,89,89	0
54	MG	1H	3380	1/1	0.70	0.23	62,62,62,62	0
54	MG	14	3367	1/1	0.70	0.29	55,55,55,55	0
54	MG	14	3257	1/1	0.70	0.58	72,72,72,72	0
54	MG	X4	104	1/1	0.70	0.15	86,86,86,86	0
54	MG	13	2234	1/1	0.71	0.25	89,89,89,89	0
54	MG	14	3387	1/1	0.71	0.47	73,73,73,73	0
54	MG	1G	2389	1/1	0.71	0.33	105,105,105,105	0
54	MG	1H	3484	1/1	0.71	0.33	42,42,42,42	0
54	MG	1G	2272	1/1	0.71	0.26	72,72,72,72	0
54	MG	1H	3630	1/1	0.71	0.44	76,76,76,76	0
54	MG	14	3410	1/1	0.71	0.40	71,71,71,71	0
54	MG	1H	3385	1/1	0.71	0.28	74,74,74,74	0
54	MG	13	2375	1/1	0.71	0.24	78,78,78,78	0
54	MG	14	3318	1/1	0.71	0.21	63,63,63,63	0
54	MG	14	3463	1/1	0.71	0.31	71,71,71,71	0
54	MG	14	3466	1/1	0.71	0.17	80,80,80,80	0
54	MG	13	2363	1/1	0.71	0.23	74,74,74,74	0
54	MG	1H	3536	1/1	0.71	0.26	50,50,50,50	0
54	MG	14	3489	1/1	0.71	0.64	71,71,71,71	0
54	MG	13	2279	1/1	0.71	0.20	58,58,58,58	0
54	MG	1H	3281	1/1	0.71	0.21	66,66,66,66	0
54	MG	1H	3652	1/1	0.72	0.38	90,90,90,90	0
54	MG	14	3407	1/1	0.72	0.64	62,62,62,62	0
54	MG	X1	106	1/1	0.72	0.33	88,88,88,88	0
54	MG	1G	2366	1/1	0.72	0.25	71,71,71,71	0
54	MG	1H	3334	1/1	0.72	0.67	78,78,78,78	0
54	MG	W4	103	1/1	0.72	0.23	90,90,90,90	0
54	MG	14	3358	1/1	0.72	0.44	71,71,71,71	0
54	MG	1H	3412	1/1	0.72	0.22	86,86,86,86	0
54	MG	14	3127	1/1	0.73	0.33	49,49,49,49	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors( $\text{\AA}^2$ )	Q<0.9
54	MG	13	2210	1/1	0.73	0.10	89,89,89,89	0
54	MG	1H	3612	1/1	0.73	0.28	56,56,56,56	0
54	MG	1J	213	1/1	0.73	0.26	86,86,86,86	0
54	MG	14	3253	1/1	0.73	0.59	89,89,89,89	0
54	MG	1H	3491	1/1	0.73	0.29	66,66,66,66	0
54	MG	14	3370	1/1	0.73	0.48	58,58,58,58	0
54	MG	BA	201	1/1	0.73	1.01	85,85,85,85	0
54	MG	P8	101	1/1	0.73	0.48	52,52,52,52	0
54	MG	1H	3571	1/1	0.73	0.30	67,67,67,67	0
54	MG	14	3092	1/1	0.73	0.46	66,66,66,66	0
54	MG	1H	3628	1/1	0.73	0.60	68,68,68,68	0
54	MG	14	3096	1/1	0.73	0.25	51,51,51,51	0
54	MG	14	3585	1/1	0.73	0.48	57,57,57,57	0
54	MG	14	3586	1/1	0.73	0.25	77,77,77,77	0
54	MG	1G	2285	1/1	0.74	0.25	80,80,80,80	0
54	MG	14	3460	1/1	0.74	0.33	69,69,69,69	0
54	MG	1G	2252	1/1	0.74	0.48	84,84,84,84	0
54	MG	14	3316	1/1	0.74	0.21	116,116,116,116	0
54	MG	13	2213	1/1	0.74	0.39	68,68,68,68	0
54	MG	13	2322	1/1	0.74	0.12	91,91,91,91	0
54	MG	1H	3606	1/1	0.74	0.34	63,63,63,63	0
54	MG	1G	2309	1/1	0.74	0.21	92,92,92,92	0
54	MG	1H	3318	1/1	0.74	0.35	52,52,52,52	0
54	MG	1G	2356	1/1	0.74	0.25	99,99,99,99	0
54	MG	13	2327	1/1	0.74	0.16	78,78,78,78	0
54	MG	1G	2253	1/1	0.75	0.68	85,85,85,85	0
54	MG	14	3513	1/1	0.75	0.39	71,71,71,71	0
54	MG	1H	3344	1/1	0.75	0.65	67,67,67,67	0
54	MG	39	301	1/1	0.75	0.29	59,59,59,59	0
54	MG	14	3468	1/1	0.75	0.22	71,71,71,71	0
54	MG	1H	3044	1/1	0.75	0.10	54,54,54,54	0
54	MG	1H	3647	1/1	0.75	0.28	56,56,56,56	0
54	MG	7A	101	1/1	0.75	0.61	72,72,72,72	0
54	MG	14	3440	1/1	0.75	0.64	78,78,78,78	0
54	MG	13	2323	1/1	0.75	0.31	69,69,69,69	0
54	MG	14	3394	1/1	0.75	0.34	58,58,58,58	0
54	MG	14	3350	1/1	0.75	0.36	61,61,61,61	0
54	MG	1G	2344	1/1	0.75	0.12	82,82,82,82	0
54	MG	1J	210	1/1	0.75	0.14	77,77,77,77	0
54	MG	1G	2354	1/1	0.76	0.46	74,74,74,74	0
54	MG	14	3058	1/1	0.76	0.24	75,75,75,75	0
54	MG	13	2341	1/1	0.76	0.95	80,80,80,80	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors( $\text{\AA}^2$ )	Q<0.9
54	MG	5I	102	1/1	0.76	0.40	81,81,81,81	0
54	MG	14	3066	1/1	0.76	0.23	55,55,55,55	0
54	MG	1H	3526	1/1	0.76	0.26	57,57,57,57	0
54	MG	1G	2375	1/1	0.76	0.27	79,79,79,79	0
54	MG	1G	2277	1/1	0.76	0.56	87,87,87,87	0
54	MG	45	202	1/1	0.76	0.34	62,62,62,62	0
54	MG	55	203	1/1	0.76	0.24	56,56,56,56	0
54	MG	1H	3549	1/1	0.76	0.34	57,57,57,57	0
54	MG	13	2235	1/1	0.76	0.16	82,82,82,82	0
54	MG	1H	3574	1/1	0.76	0.35	74,74,74,74	0
54	MG	1H	3479	1/1	0.76	0.32	63,63,63,63	0
54	MG	1H	3148	1/1	0.76	0.42	61,61,61,61	0
54	MG	14	3256	1/1	0.76	0.40	58,58,58,58	0
54	MG	1G	2382	1/1	0.76	0.42	75,75,75,75	0
54	MG	X4	103	1/1	0.76	0.46	109,109,109,109	0
54	MG	1G	2316	1/1	0.76	0.33	82,82,82,82	0
54	MG	14	3320	1/1	0.77	0.46	79,79,79,79	0
54	MG	1H	3085	1/1	0.77	0.39	65,65,65,65	0
54	MG	14	3200	1/1	0.77	0.29	53,53,53,53	0
54	MG	14	3223	1/1	0.77	0.29	74,74,74,74	0
54	MG	14	3413	1/1	0.77	0.36	71,71,71,71	0
54	MG	1G	2246	1/1	0.77	0.30	70,70,70,70	0
54	MG	13	2395	1/1	0.77	0.38	89,89,89,89	0
54	MG	1H	3407	1/1	0.77	0.47	58,58,58,58	0
54	MG	14	3530	1/1	0.77	0.21	76,76,76,76	0
54	MG	1G	2286	1/1	0.77	0.40	85,85,85,85	0
54	MG	98	202	1/1	0.77	0.36	60,60,60,60	0
54	MG	14	3550	1/1	0.77	0.39	69,69,69,69	0
54	MG	1H	3336	1/1	0.77	0.22	60,60,60,60	0
54	MG	14	3283	1/1	0.77	0.30	67,67,67,67	0
54	MG	14	3561	1/1	0.77	0.12	74,74,74,74	0
54	MG	14	3296	1/1	0.77	0.38	57,57,57,57	0
54	MG	14	3397	1/1	0.77	0.23	78,78,78,78	0
54	MG	14	3590	1/1	0.77	0.32	80,80,80,80	0
54	MG	1H	3142	1/1	0.77	0.58	72,72,72,72	0
54	MG	13	2313	1/1	0.77	0.19	74,74,74,74	0
54	MG	25	202	1/1	0.77	0.33	74,74,74,74	0
54	MG	14	3240	1/1	0.78	0.33	66,66,66,66	0
54	MG	1H	3631	1/1	0.78	0.41	88,88,88,88	0
54	MG	11	303	1/1	0.78	0.25	48,48,48,48	0
54	MG	1G	2385	1/1	0.78	0.17	88,88,88,88	0
54	MG	1H	3543	1/1	0.78	0.20	56,56,56,56	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors( $\text{\AA}^2$ )	Q<0.9
54	MG	1H	3645	1/1	0.78	0.27	64,64,64,64	0
54	MG	14	3414	1/1	0.78	0.30	65,65,65,65	0
54	MG	14	3431	1/1	0.78	0.33	67,67,67,67	0
54	MG	14	3439	1/1	0.78	0.23	78,78,78,78	0
54	MG	1H	3168	1/1	0.78	0.23	39,39,39,39	0
54	MG	14	3446	1/1	0.78	0.31	69,69,69,69	0
54	MG	14	3295	1/1	0.78	0.28	63,63,63,63	0
54	MG	1H	3219	1/1	0.78	0.35	48,48,48,48	0
54	MG	1H	3573	1/1	0.78	0.44	78,78,78,78	0
54	MG	1J	214	1/1	0.78	0.27	80,80,80,80	0
54	MG	1H	3280	1/1	0.78	0.27	50,50,50,50	0
54	MG	14	3462	1/1	0.78	0.22	92,92,92,92	0
54	MG	1G	2362	1/1	0.78	0.24	97,97,97,97	0
54	MG	14	3325	1/1	0.78	0.30	75,75,75,75	0
54	MG	13	2316	1/1	0.78	0.25	72,72,72,72	0
54	MG	14	3064	1/1	0.78	0.13	63,63,63,63	0
54	MG	1H	3588	1/1	0.78	0.22	52,52,52,52	0
54	MG	1H	3303	1/1	0.78	0.53	60,60,60,60	0
54	MG	1H	3598	1/1	0.78	0.46	50,50,50,50	0
54	MG	1H	3041	1/1	0.78	0.23	47,47,47,47	0
54	MG	1G	2330	1/1	0.78	0.58	95,95,95,95	0
54	MG	1H	3057	1/1	0.78	0.10	48,48,48,48	0
54	MG	1G	2313	1/1	0.78	0.19	66,66,66,66	0
54	MG	1G	2229	1/1	0.78	0.21	89,89,89,89	0
54	MG	13	2351	1/1	0.78	0.22	58,58,58,58	0
54	MG	13	2396	1/1	0.78	0.38	120,120,120,120	0
54	MG	X4	101	1/1	0.78	0.40	91,91,91,91	0
54	MG	14	3534	1/1	0.78	0.32	71,71,71,71	0
54	MG	14	3536	1/1	0.78	0.43	82,82,82,82	0
54	MG	14	3574	1/1	0.79	0.49	73,73,73,73	0
54	MG	14	3452	1/1	0.79	0.16	76,76,76,76	0
54	MG	13	2328	1/1	0.79	0.41	74,74,74,74	0
54	MG	1H	3235	1/1	0.79	0.12	44,44,44,44	0
54	MG	1H	3248	1/1	0.79	0.17	53,53,53,53	0
54	MG	1H	3395	1/1	0.79	0.55	79,79,79,79	0
54	MG	13	2387	1/1	0.79	0.32	64,64,64,64	0
54	MG	14	3464	1/1	0.79	0.25	74,74,74,74	0
54	MG	1G	2228	1/1	0.79	0.33	75,75,75,75	0
54	MG	13	2291	1/1	0.79	0.20	60,60,60,60	0
54	MG	1H	3297	1/1	0.79	0.24	57,57,57,57	0
54	MG	1H	3301	1/1	0.79	0.51	74,74,74,74	0
54	MG	14	3236	1/1	0.79	0.24	59,59,59,59	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors( $\text{\AA}^2$ )	Q<0.9
54	MG	1H	3569	1/1	0.79	1.34	60,60,60,60	0
54	MG	1H	3437	1/1	0.79	0.22	53,53,53,53	0
54	MG	14	3499	1/1	0.79	0.36	69,69,69,69	0
54	MG	1H	3439	1/1	0.79	0.28	43,43,43,43	0
54	MG	13	2391	1/1	0.79	0.25	78,78,78,78	0
54	MG	14	3263	1/1	0.79	0.16	49,49,49,49	0
54	MG	1H	3469	1/1	0.79	0.30	73,73,73,73	0
54	MG	13	2331	1/1	0.79	0.23	65,65,65,65	0
54	MG	14	3056	1/1	0.79	0.30	74,74,74,74	0
54	MG	1G	2374	1/1	0.79	0.26	70,70,70,70	0
54	MG	1H	3477	1/1	0.79	0.24	66,66,66,66	0
54	MG	14	3538	1/1	0.79	0.58	78,78,78,78	0
54	MG	14	3312	1/1	0.79	0.14	66,66,66,66	0
54	MG	13	2264	1/1	0.79	0.45	76,76,76,76	0
54	MG	1H	3212	1/1	0.79	0.23	55,55,55,55	0
54	MG	14	3074	1/1	0.79	0.16	77,77,77,77	0
54	MG	14	3323	1/1	0.79	0.68	84,84,84,84	0
54	MG	1G	2293	1/1	0.80	0.47	85,85,85,85	0
54	MG	14	3383	1/1	0.80	0.26	52,52,52,52	0
54	MG	14	3465	1/1	0.80	0.20	76,76,76,76	0
54	MG	1H	3377	1/1	0.80	0.18	63,63,63,63	0
54	MG	1H	3636	1/1	0.80	0.39	72,72,72,72	0
54	MG	1H	3010	1/1	0.80	0.10	51,51,51,51	0
54	MG	14	3300	1/1	0.80	0.61	73,73,73,73	0
54	MG	1H	3467	1/1	0.80	0.32	51,51,51,51	0
54	MG	13	2268	1/1	0.80	0.29	58,58,58,58	0
54	MG	14	3491	1/1	0.80	0.17	62,62,62,62	0
54	MG	13	2393	1/1	0.80	0.24	63,63,63,63	0
54	MG	15	201	1/1	0.80	0.31	75,75,75,75	0
54	MG	13	2292	1/1	0.80	0.23	116,116,116,116	0
54	MG	14	3228	1/1	0.80	0.28	65,65,65,65	0
54	MG	1H	3545	1/1	0.80	0.22	54,54,54,54	0
54	MG	1H	3616	1/1	0.80	0.32	60,60,60,60	0
54	MG	14	3346	1/1	0.80	0.12	92,92,92,92	0
54	MG	14	3521	1/1	0.80	0.17	57,57,57,57	0
54	MG	1G	2342	1/1	0.80	0.14	76,76,76,76	0
54	MG	1H	3408	1/1	0.80	0.28	38,38,38,38	0
54	MG	14	3449	1/1	0.80	0.15	52,52,52,52	0
54	MG	14	3354	1/1	0.80	0.19	66,66,66,66	0
54	MG	14	3545	1/1	0.80	0.32	83,83,83,83	0
54	MG	14	3356	1/1	0.80	0.23	62,62,62,62	0
54	MG	1H	3082	1/1	0.80	0.27	61,61,61,61	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors( $\text{\AA}^2$ )	Q<0.9
54	MG	1H	3348	1/1	0.80	0.20	56,56,56,56	0
54	MG	14	3558	1/1	0.80	0.26	71,71,71,71	0
54	MG	14	3363	1/1	0.80	0.33	75,75,75,75	0
54	MG	1H	3424	1/1	0.80	0.29	50,50,50,50	0
54	MG	14	3568	1/1	0.80	0.20	71,71,71,71	0
54	MG	1H	3428	1/1	0.81	0.27	50,50,50,50	0
54	MG	14	3337	1/1	0.81	0.58	76,76,76,76	0
54	MG	1H	3533	1/1	0.81	0.32	43,43,43,43	0
54	MG	14	3115	1/1	0.81	0.18	47,47,47,47	0
54	MG	14	3562	1/1	0.81	0.16	69,69,69,69	0
54	MG	14	3565	1/1	0.81	0.26	68,68,68,68	0
54	MG	1H	3360	1/1	0.81	0.22	65,65,65,65	0
54	MG	1H	3542	1/1	0.81	0.27	46,46,46,46	0
54	MG	1G	2288	1/1	0.81	0.25	79,79,79,79	0
54	MG	1H	3371	1/1	0.81	0.51	59,59,59,59	0
54	MG	14	3211	1/1	0.81	0.16	56,56,56,56	0
54	MG	4I	201	1/1	0.81	0.20	84,84,84,84	0
54	MG	1H	3548	1/1	0.81	0.25	51,51,51,51	0
54	MG	14	3360	1/1	0.81	0.48	70,70,70,70	0
54	MG	13	2256	1/1	0.81	0.21	59,59,59,59	0
54	MG	13	2324	1/1	0.81	0.35	78,78,78,78	0
54	MG	14	3478	1/1	0.81	0.23	89,89,89,89	0
54	MG	13	2342	1/1	0.81	0.21	69,69,69,69	0
54	MG	1H	3390	1/1	0.81	0.20	58,58,58,58	0
54	MG	1G	2323	1/1	0.81	0.24	80,80,80,80	0
54	MG	13	2359	1/1	0.81	0.42	81,81,81,81	0
54	MG	1H	3581	1/1	0.81	0.33	63,63,63,63	0
54	MG	14	3265	1/1	0.81	0.79	85,85,85,85	0
54	MG	14	3398	1/1	0.81	0.18	72,72,72,72	0
54	MG	41	202	1/1	0.81	0.33	83,83,83,83	0
54	MG	14	3505	1/1	0.81	0.21	65,65,65,65	0
54	MG	14	3042	1/1	0.81	0.08	65,65,65,65	0
54	MG	1H	3332	1/1	0.81	0.23	52,52,52,52	0
54	MG	1G	2383	1/1	0.81	0.29	78,78,78,78	0
54	MG	13	2236	1/1	0.81	0.14	64,64,64,64	0
54	MG	1H	3249	1/1	0.81	0.36	65,65,65,65	0
54	MG	1H	3605	1/1	0.81	0.26	66,66,66,66	0
54	MG	14	3303	1/1	0.81	0.19	68,68,68,68	0
54	MG	1H	3496	1/1	0.81	0.42	55,55,55,55	0
54	MG	14	3069	1/1	0.81	0.11	76,76,76,76	0
54	MG	1H	3511	1/1	0.81	0.49	64,64,64,64	0
54	MG	14	3547	1/1	0.81	0.62	52,52,52,52	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å <sup>2</sup> )	Q<0.9
54	MG	1G	2215	1/1	0.81	0.14	78,78,78,78	0
54	MG	1H	3355	1/1	0.81	0.24	66,66,66,66	0
54	MG	1H	3444	1/1	0.82	0.18	79,79,79,79	0
54	MG	13	2209	1/1	0.82	0.08	75,75,75,75	0
54	MG	14	3516	1/1	0.82	0.17	78,78,78,78	0
54	MG	14	3124	1/1	0.82	0.16	50,50,50,50	0
54	MG	1H	3594	1/1	0.82	0.42	51,51,51,51	0
54	MG	14	3130	1/1	0.82	0.23	64,64,64,64	0
54	MG	14	3381	1/1	0.82	0.28	62,62,62,62	0
54	MG	14	3169	1/1	0.82	0.17	64,64,64,64	0
54	MG	1G	2369	1/1	0.82	0.27	87,87,87,87	0
54	MG	14	3540	1/1	0.82	0.17	61,61,61,61	0
54	MG	14	3392	1/1	0.82	0.36	78,78,78,78	0
54	MG	14	3190	1/1	0.82	0.40	53,53,53,53	0
54	MG	13	2284	1/1	0.82	0.28	69,69,69,69	0
54	MG	1G	2210	1/1	0.82	0.26	72,72,72,72	0
54	MG	14	3208	1/1	0.82	0.62	68,68,68,68	0
54	MG	13	2278	1/1	0.82	0.30	68,68,68,68	0
54	MG	1H	3342	1/1	0.82	0.21	45,45,45,45	0
54	MG	13	2317	1/1	0.82	0.33	71,71,71,71	0
54	MG	14	3406	1/1	0.82	0.25	72,72,72,72	0
54	MG	14	3233	1/1	0.82	0.20	72,72,72,72	0
54	MG	1H	3125	1/1	0.82	0.27	43,43,43,43	0
54	MG	13	2385	1/1	0.82	0.26	75,75,75,75	0
54	MG	13	2344	1/1	0.82	0.16	50,50,50,50	0
54	MG	1H	3157	1/1	0.82	0.52	43,43,43,43	0
54	MG	14	3436	1/1	0.82	0.19	72,72,72,72	0
54	MG	21	303	1/1	0.82	0.16	76,76,76,76	0
54	MG	1G	2339	1/1	0.82	0.48	78,78,78,78	0
54	MG	1H	3501	1/1	0.82	0.19	52,52,52,52	0
54	MG	1H	3188	1/1	0.82	0.26	41,41,41,41	0
54	MG	1G	2295	1/1	0.82	0.23	91,91,91,91	0
54	MG	1H	3218	1/1	0.82	0.18	40,40,40,40	0
54	MG	1J	204	1/1	0.82	0.27	67,67,67,67	0
54	MG	1G	2296	1/1	0.82	0.25	78,78,78,78	0
54	MG	1H	3226	1/1	0.82	0.26	48,48,48,48	0
54	MG	1H	3396	1/1	0.82	0.26	78,78,78,78	0
54	MG	1H	3660	1/1	0.82	0.15	59,59,59,59	0
54	MG	13	2290	1/1	0.82	0.39	63,63,63,63	0
54	MG	5E	201	1/1	0.82	0.21	69,69,69,69	0
54	MG	35	201	1/1	0.82	0.19	64,64,64,64	0
54	MG	32	303	1/1	0.82	0.40	77,77,77,77	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors( $\text{\AA}^2$ )	Q<0.9
54	MG	1H	3406	1/1	0.82	0.34	67,67,67,67	0
54	MG	14	3015	1/1	0.82	0.26	60,60,60,60	0
54	MG	13	2371	1/1	0.82	0.41	89,89,89,89	0
54	MG	14	3321	1/1	0.82	0.27	73,73,73,73	0
54	MG	13	2373	1/1	0.82	0.37	88,88,88,88	0
54	MG	14	3475	1/1	0.82	0.33	66,66,66,66	0
54	MG	1H	3276	1/1	0.82	0.34	61,61,61,61	0
54	MG	1H	3562	1/1	0.82	0.24	73,73,73,73	0
54	MG	1H	3567	1/1	0.82	0.33	57,57,57,57	0
54	MG	X1	103	1/1	0.82	0.21	91,91,91,91	0
54	MG	X1	105	1/1	0.82	0.44	97,97,97,97	0
54	MG	1H	3014	1/1	0.82	0.09	63,63,63,63	0
54	MG	13	2394	1/1	0.82	0.51	87,87,87,87	0
54	MG	1H	3283	1/1	0.82	0.49	77,77,77,77	0
54	MG	13	2320	1/1	0.82	0.18	86,86,86,86	0
54	MG	1H	3046	1/1	0.82	0.20	39,39,39,39	0
54	MG	1H	3056	1/1	0.82	0.09	41,41,41,41	0
54	MG	1H	3441	1/1	0.82	0.21	60,60,60,60	0
54	MG	14	3510	1/1	0.82	0.14	65,65,65,65	0
54	MG	13	2362	1/1	0.83	0.18	81,81,81,81	0
54	MG	1H	3417	1/1	0.83	0.21	57,57,57,57	0
54	MG	14	3324	1/1	0.83	0.14	56,56,56,56	0
54	MG	14	3504	1/1	0.83	0.64	75,75,75,75	0
54	MG	1H	3423	1/1	0.83	0.24	55,55,55,55	0
54	MG	14	3329	1/1	0.83	0.42	90,90,90,90	0
54	MG	1J	203	1/1	0.83	0.37	75,75,75,75	0
54	MG	1H	3143	1/1	0.83	0.28	66,66,66,66	0
54	MG	1J	207	1/1	0.83	0.13	86,86,86,86	0
54	MG	14	3430	1/1	0.83	0.17	60,60,60,60	0
54	MG	1J	212	1/1	0.83	0.11	91,91,91,91	0
54	MG	1H	3626	1/1	0.83	0.25	59,59,59,59	0
54	MG	1H	3319	1/1	0.83	0.21	69,69,69,69	0
54	MG	1G	2203	1/1	0.83	0.37	73,73,73,73	0
54	MG	14	3246	1/1	0.83	0.67	80,80,80,80	0
54	MG	14	3251	1/1	0.83	0.30	61,61,61,61	0
54	MG	1G	2328	1/1	0.83	0.28	74,74,74,74	0
54	MG	1H	3391	1/1	0.83	0.27	51,51,51,51	0
54	MG	14	3077	1/1	0.83	0.25	60,60,60,60	0
54	MG	88	204	1/1	0.83	0.27	81,81,81,81	0
54	MG	1H	3393	1/1	0.83	0.33	54,54,54,54	0
54	MG	14	3544	1/1	0.83	0.56	61,61,61,61	0
54	MG	1H	3523	1/1	0.83	0.21	45,45,45,45	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors( $\text{\AA}^2$ )	Q<0.9
54	MG	1H	3165	1/1	0.83	0.30	47,47,47,47	0
54	MG	14	3364	1/1	0.83	0.26	55,55,55,55	0
54	MG	13	2297	1/1	0.83	0.44	95,95,95,95	0
54	MG	13	2211	1/1	0.83	0.06	69,69,69,69	0
54	MG	1H	3592	1/1	0.83	0.19	63,63,63,63	0
54	MG	W1	102	1/1	0.83	0.10	75,75,75,75	0
54	MG	1H	3653	1/1	0.83	0.38	86,86,86,86	0
54	MG	1H	3655	1/1	0.83	0.28	66,66,66,66	0
54	MG	1H	3206	1/1	0.83	0.19	52,52,52,52	0
54	MG	14	3563	1/1	0.83	0.14	70,70,70,70	0
54	MG	14	3309	1/1	0.83	0.31	70,70,70,70	0
54	MG	14	3310	1/1	0.83	0.38	91,91,91,91	0
54	MG	1H	3539	1/1	0.83	0.31	55,55,55,55	0
54	MG	1G	2364	1/1	0.83	0.13	88,88,88,88	0
54	MG	13	2399	1/1	0.83	0.24	75,75,75,75	0
54	MG	A8	201	1/1	0.83	0.20	57,57,57,57	0
54	MG	13	2397	1/1	0.84	0.24	77,77,77,77	0
54	MG	13	2298	1/1	0.84	0.33	86,86,86,86	0
54	MG	14	3572	1/1	0.84	0.20	63,63,63,63	0
54	MG	1G	2346	1/1	0.84	0.15	73,73,73,73	0
54	MG	14	3576	1/1	0.84	0.30	65,65,65,65	0
54	MG	1H	3379	1/1	0.84	0.53	56,56,56,56	0
54	MG	14	3225	1/1	0.84	0.40	70,70,70,70	0
54	MG	1G	2379	1/1	0.84	0.21	78,78,78,78	0
54	MG	14	3592	1/1	0.84	0.38	77,77,77,77	0
54	MG	1H	3471	1/1	0.84	0.59	55,55,55,55	0
54	MG	1G	2349	1/1	0.84	0.31	67,67,67,67	0
54	MG	1H	3386	1/1	0.84	0.44	61,61,61,61	0
54	MG	14	3479	1/1	0.84	0.45	65,65,65,65	0
54	MG	25	201	1/1	0.84	0.26	83,83,83,83	0
54	MG	1H	3387	1/1	0.84	0.34	66,66,66,66	0
54	MG	1H	3287	1/1	0.84	0.15	64,64,64,64	0
54	MG	14	3020	1/1	0.84	0.12	49,49,49,49	0
54	MG	1G	2240	1/1	0.84	0.52	86,86,86,86	0
54	MG	14	3493	1/1	0.84	0.19	50,50,50,50	0
54	MG	1H	3589	1/1	0.84	0.33	62,62,62,62	0
54	MG	14	3258	1/1	0.84	0.21	60,60,60,60	0
54	MG	1H	3296	1/1	0.84	0.65	82,82,82,82	0
54	MG	1H	3394	1/1	0.84	0.27	54,54,54,54	0
54	MG	13	2263	1/1	0.84	0.21	81,81,81,81	0
54	MG	14	3508	1/1	0.84	0.34	58,58,58,58	0
54	MG	1G	2247	1/1	0.84	0.41	76,76,76,76	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors( $\text{\AA}^2$ )	Q<0.9
54	MG	13	2282	1/1	0.84	0.24	64,64,64,64	0
54	MG	1H	3505	1/1	0.84	0.21	70,70,70,70	0
54	MG	1H	3011	1/1	0.84	0.08	76,76,76,76	0
54	MG	52	201	1/1	0.84	0.25	71,71,71,71	0
54	MG	14	3075	1/1	0.84	0.29	56,56,56,56	0
54	MG	13	2270	1/1	0.84	0.20	66,66,66,66	0
54	MG	1G	2325	1/1	0.84	0.31	76,76,76,76	0
54	MG	14	3524	1/1	0.84	0.17	68,68,68,68	0
54	MG	14	3084	1/1	0.84	0.08	60,60,60,60	0
54	MG	1G	2365	1/1	0.84	0.34	62,62,62,62	0
54	MG	14	3314	1/1	0.84	0.43	67,67,67,67	0
54	MG	1G	2326	1/1	0.84	0.24	91,91,91,91	0
54	MG	1H	3340	1/1	0.84	0.24	61,61,61,61	0
54	MG	13	2296	1/1	0.84	0.23	64,64,64,64	0
54	MG	1H	3050	1/1	0.84	0.12	42,42,42,42	0
54	MG	1H	3540	1/1	0.84	0.19	56,56,56,56	0
54	MG	13	2370	1/1	0.84	0.43	92,92,92,92	0
54	MG	1H	3350	1/1	0.84	0.44	56,56,56,56	0
54	MG	14	3172	1/1	0.84	0.56	63,63,63,63	0
54	MG	13	2246	1/1	0.84	0.32	64,64,64,64	0
54	MG	14	3456	1/1	0.84	0.35	78,78,78,78	0
54	MG	1H	3638	1/1	0.84	0.46	78,78,78,78	0
54	MG	14	3343	1/1	0.84	0.22	56,56,56,56	0
54	MG	1G	2273	1/1	0.84	0.23	70,70,70,70	0
54	MG	X4	105	1/1	0.84	0.24	79,79,79,79	0
54	MG	14	3221	1/1	0.85	0.32	53,53,53,53	0
54	MG	1H	3398	1/1	0.85	0.77	61,61,61,61	0
54	MG	1H	3486	1/1	0.85	0.14	59,59,59,59	0
54	MG	13	2366	1/1	0.85	0.18	62,62,62,62	0
54	MG	14	3579	1/1	0.85	0.29	51,51,51,51	0
54	MG	1G	2329	1/1	0.85	0.32	67,67,67,67	0
54	MG	14	3470	1/1	0.85	0.17	85,85,85,85	0
54	MG	14	3019	1/1	0.85	0.11	48,48,48,48	0
54	MG	14	3474	1/1	0.85	0.50	63,63,63,63	0
54	MG	13	2283	1/1	0.85	0.22	61,61,61,61	0
54	MG	21	304	1/1	0.85	0.24	63,63,63,63	0
54	MG	14	3030	1/1	0.85	0.12	53,53,53,53	0
54	MG	1H	3289	1/1	0.85	0.39	52,52,52,52	0
54	MG	13	2266	1/1	0.85	0.12	87,87,87,87	0
54	MG	16	209	1/1	0.85	0.17	58,58,58,58	0
54	MG	14	3254	1/1	0.85	0.65	92,92,92,92	0
54	MG	1H	3593	1/1	0.85	0.29	55,55,55,55	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors( $\text{\AA}^2$ )	Q<0.9
54	MG	1H	3361	1/1	0.85	0.32	61,61,61,61	0
54	MG	1H	3210	1/1	0.85	0.20	52,52,52,52	0
54	MG	1H	3603	1/1	0.85	0.23	49,49,49,49	0
54	MG	1G	2340	1/1	0.85	0.29	79,79,79,79	0
54	MG	1H	3376	1/1	0.85	0.27	52,52,52,52	0
54	MG	1H	3525	1/1	0.85	0.20	51,51,51,51	0
54	MG	1H	3426	1/1	0.85	0.21	49,49,49,49	0
54	MG	14	3286	1/1	0.85	0.41	90,90,90,90	0
54	MG	14	3287	1/1	0.85	0.18	64,64,64,64	0
54	MG	1H	3299	1/1	0.85	0.21	56,56,56,56	0
54	MG	1H	3529	1/1	0.85	0.27	54,54,54,54	0
54	MG	1H	3378	1/1	0.85	0.35	50,50,50,50	0
54	MG	14	3301	1/1	0.85	0.17	62,62,62,62	0
54	MG	14	3409	1/1	0.85	0.25	65,65,65,65	0
54	MG	1H	3534	1/1	0.85	0.14	45,45,45,45	0
54	MG	13	2343	1/1	0.85	0.19	72,72,72,72	0
54	MG	13	2222	1/1	0.85	0.15	79,79,79,79	0
54	MG	14	3421	1/1	0.85	0.25	73,73,73,73	0
54	MG	14	3535	1/1	0.85	0.26	77,77,77,77	0
54	MG	14	3428	1/1	0.85	0.23	52,52,52,52	0
54	MG	1H	3384	1/1	0.85	0.21	62,62,62,62	0
54	MG	14	3122	1/1	0.85	0.11	66,66,66,66	0
54	MG	1H	3442	1/1	0.85	0.20	53,53,53,53	0
54	MG	13	2227	1/1	0.85	0.34	57,57,57,57	0
54	MG	1H	3461	1/1	0.85	0.33	61,61,61,61	0
54	MG	X1	101	1/1	0.85	0.37	95,95,95,95	0
54	MG	1G	2305	1/1	0.85	0.49	85,85,85,85	0
54	MG	1H	3321	1/1	0.85	0.17	51,51,51,51	0
54	MG	14	3551	1/1	0.85	0.60	78,78,78,78	0
54	MG	1H	3325	1/1	0.85	0.35	65,65,65,65	0
54	MG	1H	3243	1/1	0.85	0.25	57,57,57,57	0
54	MG	1H	3034	1/1	0.85	0.10	54,54,54,54	0
54	MG	1G	2233	1/1	0.85	0.38	67,67,67,67	0
54	MG	13	2326	1/1	0.85	0.30	86,86,86,86	0
54	MG	13	2392	1/1	0.85	0.23	64,64,64,64	0
54	MG	14	3212	1/1	0.85	0.17	53,53,53,53	0
54	MG	14	3566	1/1	0.85	0.12	66,66,66,66	0
54	MG	1G	2301	1/1	0.86	0.47	77,77,77,77	0
54	MG	1H	3341	1/1	0.86	0.22	55,55,55,55	0
54	MG	1G	2337	1/1	0.86	0.22	91,91,91,91	0
54	MG	1G	2254	1/1	0.86	0.49	65,65,65,65	0
54	MG	1H	3257	1/1	0.86	0.32	49,49,49,49	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors( $\text{\AA}^2$ )	Q<0.9
54	MG	1H	3262	1/1	0.86	0.48	75,75,75,75	0
54	MG	1H	3354	1/1	0.86	0.27	46,46,46,46	0
54	MG	14	3573	1/1	0.86	0.18	59,59,59,59	0
54	MG	1H	3265	1/1	0.86	0.18	62,62,62,62	0
54	MG	1H	3532	1/1	0.86	0.31	51,51,51,51	0
54	MG	1H	3358	1/1	0.86	0.16	52,52,52,52	0
54	MG	14	3583	1/1	0.86	0.42	69,69,69,69	0
54	MG	1H	3271	1/1	0.86	0.33	58,58,58,58	0
54	MG	1H	3432	1/1	0.86	0.57	51,51,51,51	0
54	MG	14	3178	1/1	0.86	0.75	77,77,77,77	0
54	MG	1H	3634	1/1	0.86	0.47	66,66,66,66	0
54	MG	14	3341	1/1	0.86	0.26	71,71,71,71	0
54	MG	13	2261	1/1	0.86	0.34	66,66,66,66	0
54	MG	1G	2264	1/1	0.86	0.45	95,95,95,95	0
54	MG	13	2325	1/1	0.86	0.21	64,64,64,64	0
54	MG	1G	2381	1/1	0.86	0.22	75,75,75,75	0
54	MG	14	3209	1/1	0.86	0.59	62,62,62,62	0
54	MG	16	214	1/1	0.86	0.44	68,68,68,68	0
54	MG	14	3210	1/1	0.86	0.56	66,66,66,66	0
54	MG	1H	3286	1/1	0.86	0.78	84,84,84,84	0
54	MG	25	203	1/1	0.86	0.47	66,66,66,66	0
54	MG	14	3483	1/1	0.86	0.23	52,52,52,52	0
54	MG	1H	3457	1/1	0.86	0.71	49,49,49,49	0
54	MG	14	3219	1/1	0.86	0.22	57,57,57,57	0
54	MG	1G	2227	1/1	0.86	0.12	74,74,74,74	0
54	MG	1H	3560	1/1	0.86	0.14	66,66,66,66	0
54	MG	13	2315	1/1	0.86	0.24	73,73,73,73	0
54	MG	1H	3563	1/1	0.86	0.30	71,71,71,71	0
54	MG	14	3365	1/1	0.86	0.24	62,62,62,62	0
54	MG	1G	2275	1/1	0.86	0.17	87,87,87,87	0
54	MG	14	3234	1/1	0.86	0.61	85,85,85,85	0
54	MG	13	2226	1/1	0.86	0.19	89,89,89,89	0
54	MG	8A	201	1/1	0.86	0.16	88,88,88,88	0
54	MG	14	3242	1/1	0.86	0.41	62,62,62,62	0
54	MG	14	3243	1/1	0.86	0.20	67,67,67,67	0
54	MG	1G	2230	1/1	0.86	0.20	64,64,64,64	0
54	MG	14	3396	1/1	0.86	0.31	63,63,63,63	0
54	MG	14	3517	1/1	0.86	0.20	59,59,59,59	0
54	MG	J8	101	1/1	0.86	0.24	52,52,52,52	0
54	MG	13	2288	1/1	0.86	0.36	73,73,73,73	0
54	MG	14	3023	1/1	0.86	0.38	65,65,65,65	0
54	MG	1G	2360	1/1	0.86	0.29	83,83,83,83	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors( $\text{\AA}^2$ )	Q<0.9
54	MG	14	3525	1/1	0.86	0.21	68,68,68,68	0
54	MG	14	3034	1/1	0.86	0.12	55,55,55,55	0
54	MG	14	3038	1/1	0.86	0.14	57,57,57,57	0
54	MG	1H	3317	1/1	0.86	0.21	61,61,61,61	0
54	MG	13	2299	1/1	0.86	0.19	83,83,83,83	0
53	8UZ	1H	3003	33/33	0.86	0.62	54,54,54,54	33
54	MG	14	3271	1/1	0.86	0.27	60,60,60,60	0
54	MG	1H	3035	1/1	0.86	0.17	55,55,55,55	0
54	MG	1H	3489	1/1	0.86	0.67	54,54,54,54	0
54	MG	14	3546	1/1	0.86	0.21	71,71,71,71	0
54	MG	8I	201	1/1	0.86	0.14	77,77,77,77	0
53	8UZ	14	3003	33/33	0.86	0.81	64,64,64,64	33
54	MG	14	3067	1/1	0.86	0.18	60,60,60,60	0
54	MG	1H	3495	1/1	0.86	0.27	55,55,55,55	0
54	MG	13	2204	1/1	0.86	0.07	66,66,66,66	0
54	MG	1G	2298	1/1	0.86	0.33	92,92,92,92	0
54	MG	1H	3504	1/1	0.86	0.18	58,58,58,58	0
54	MG	14	3328	1/1	0.87	0.67	67,67,67,67	0
54	MG	14	3415	1/1	0.87	0.14	52,52,52,52	0
54	MG	1G	2367	1/1	0.87	0.18	101,101,101,101	0
54	MG	14	3094	1/1	0.87	0.29	58,58,58,58	0
54	MG	16	205	1/1	0.87	0.42	60,60,60,60	0
54	MG	1H	3162	1/1	0.87	0.29	39,39,39,39	0
54	MG	1G	2242	1/1	0.87	0.59	79,79,79,79	0
54	MG	1H	3300	1/1	0.87	0.50	84,84,84,84	0
54	MG	14	3518	1/1	0.87	0.12	61,61,61,61	0
54	MG	14	3121	1/1	0.87	0.13	68,68,68,68	0
54	MG	29	301	1/1	0.87	0.16	58,58,58,58	0
54	MG	32	304	1/1	0.87	0.33	86,86,86,86	0
54	MG	1H	3389	1/1	0.87	0.24	47,47,47,47	0
54	MG	14	3448	1/1	0.87	0.17	63,63,63,63	0
54	MG	1H	3166	1/1	0.87	0.37	46,46,46,46	0
54	MG	1J	208	1/1	0.87	0.30	75,75,75,75	0
54	MG	14	3450	1/1	0.87	0.24	61,61,61,61	0
54	MG	1H	3546	1/1	0.87	0.21	59,59,59,59	0
54	MG	14	3355	1/1	0.87	0.35	55,55,55,55	0
54	MG	14	3455	1/1	0.87	0.45	86,86,86,86	0
54	MG	78	203	1/1	0.87	0.26	51,51,51,51	0
54	MG	13	2272	1/1	0.87	0.18	61,61,61,61	0
54	MG	14	3170	1/1	0.87	0.38	42,42,42,42	0
54	MG	13	2245	1/1	0.87	0.12	56,56,56,56	0
54	MG	14	3174	1/1	0.87	0.26	46,46,46,46	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors( $\text{\AA}^2$ )	Q<0.9
54	MG	1H	3618	1/1	0.87	0.33	54,54,54,54	0
54	MG	13	2388	1/1	0.87	0.16	63,63,63,63	0
54	MG	14	3187	1/1	0.87	0.16	53,53,53,53	0
53	8UZ	14	3006	33/33	0.87	0.28	68,68,68,68	33
54	MG	1H	3131	1/1	0.87	0.26	53,53,53,53	0
54	MG	1H	3454	1/1	0.87	0.19	69,69,69,69	0
54	MG	1H	3132	1/1	0.87	0.55	68,68,68,68	0
54	MG	1H	3458	1/1	0.87	0.42	60,60,60,60	0
54	MG	1H	3572	1/1	0.87	0.28	57,57,57,57	0
54	MG	14	3308	1/1	0.87	0.29	66,66,66,66	0
54	MG	14	3476	1/1	0.87	0.36	62,62,62,62	0
54	MG	1H	3374	1/1	0.87	0.26	48,48,48,48	0
54	MG	1H	3463	1/1	0.87	0.29	48,48,48,48	0
54	MG	1H	3285	1/1	0.87	0.68	74,74,74,74	0
54	MG	14	3068	1/1	0.87	0.07	53,53,53,53	0
54	MG	1H	3137	1/1	0.87	0.20	53,53,53,53	0
54	MG	1G	2292	1/1	0.87	0.35	73,73,73,73	0
54	MG	14	3578	1/1	0.87	0.29	46,46,46,46	0
54	MG	14	3403	1/1	0.87	0.27	62,62,62,62	0
53	8UZ	14	3005	33/33	0.87	0.22	82,82,82,82	0
54	MG	14	3584	1/1	0.87	0.33	59,59,59,59	0
54	MG	1G	2335	1/1	0.87	0.52	78,78,78,78	0
54	MG	14	3322	1/1	0.87	0.24	64,64,64,64	0
54	MG	1H	3474	1/1	0.87	0.19	63,63,63,63	0
54	MG	1H	3383	1/1	0.87	0.36	62,62,62,62	0
54	MG	14	3238	1/1	0.87	0.26	53,53,53,53	0
54	MG	1G	2255	1/1	0.88	0.37	68,68,68,68	0
54	MG	14	3472	1/1	0.88	0.26	61,61,61,61	0
54	MG	1H	3339	1/1	0.88	0.67	72,72,72,72	0
54	MG	1H	3086	1/1	0.88	0.28	55,55,55,55	0
54	MG	14	3366	1/1	0.88	0.99	57,57,57,57	0
54	MG	14	3261	1/1	0.88	0.36	45,45,45,45	0
54	MG	1H	3642	1/1	0.88	0.40	61,61,61,61	0
54	MG	14	3595	1/1	0.88	0.36	68,68,68,68	0
54	MG	14	3377	1/1	0.88	0.27	55,55,55,55	0
54	MG	14	3380	1/1	0.88	0.29	71,71,71,71	0
54	MG	14	3488	1/1	0.88	0.27	64,64,64,64	0
54	MG	1G	2318	1/1	0.88	0.46	76,76,76,76	0
54	MG	1H	3483	1/1	0.88	0.26	53,53,53,53	0
54	MG	14	3276	1/1	0.88	0.71	63,63,63,63	0
54	MG	1H	3260	1/1	0.88	0.28	42,42,42,42	0
54	MG	1H	3343	1/1	0.88	0.23	46,46,46,46	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors( $\text{\AA}^2$ )	Q<0.9
54	MG	1G	2350	1/1	0.88	0.23	81,81,81,81	0
54	MG	1G	2262	1/1	0.88	0.20	89,89,89,89	0
54	MG	1G	2322	1/1	0.88	0.36	75,75,75,75	0
54	MG	14	3292	1/1	0.88	0.40	77,77,77,77	0
54	MG	14	3400	1/1	0.88	0.64	79,79,79,79	0
54	MG	1J	202	1/1	0.88	0.12	86,86,86,86	0
54	MG	1H	3577	1/1	0.88	0.24	71,71,71,71	0
54	MG	1H	3352	1/1	0.88	0.27	70,70,70,70	0
54	MG	13	2349	1/1	0.88	0.35	57,57,57,57	0
54	MG	2A	201	1/1	0.88	0.17	80,80,80,80	0
54	MG	3E	302	1/1	0.88	0.53	92,92,92,92	0
54	MG	14	3306	1/1	0.88	0.29	53,53,53,53	0
54	MG	1H	3138	1/1	0.88	0.41	54,54,54,54	0
54	MG	14	3192	1/1	0.88	0.58	82,82,82,82	0
54	MG	14	3412	1/1	0.88	0.12	81,81,81,81	0
54	MG	31	301	1/1	0.88	0.10	42,42,42,42	0
54	MG	14	3523	1/1	0.88	0.32	62,62,62,62	0
54	MG	3E	303	1/1	0.88	0.33	87,87,87,87	0
54	MG	13	2389	1/1	0.88	0.19	75,75,75,75	0
54	MG	1H	3431	1/1	0.88	0.32	48,48,48,48	0
54	MG	1G	2271	1/1	0.88	0.19	64,64,64,64	0
54	MG	13	2306	1/1	0.88	0.43	81,81,81,81	0
54	MG	14	3044	1/1	0.88	0.08	51,51,51,51	0
54	MG	14	3047	1/1	0.88	0.07	58,58,58,58	0
54	MG	14	3435	1/1	0.88	0.58	72,72,72,72	0
54	MG	14	3213	1/1	0.88	0.33	52,52,52,52	0
54	MG	14	3214	1/1	0.88	0.34	51,51,51,51	0
53	8UZ	1H	3005	33/33	0.88	0.19	70,70,70,70	0
54	MG	13	2244	1/1	0.88	0.19	53,53,53,53	0
54	MG	14	3222	1/1	0.88	0.19	58,58,58,58	0
54	MG	1G	2333	1/1	0.88	0.36	76,76,76,76	0
54	MG	1H	3039	1/1	0.88	0.12	62,62,62,62	0
54	MG	14	3339	1/1	0.88	0.24	53,53,53,53	0
54	MG	14	3062	1/1	0.88	0.26	55,55,55,55	0
54	MG	1G	2276	1/1	0.88	0.36	67,67,67,67	0
54	MG	13	2277	1/1	0.88	0.12	73,73,73,73	0
54	MG	1G	2281	1/1	0.88	0.26	78,78,78,78	0
54	MG	1G	2216	1/1	0.88	0.08	80,80,80,80	0
54	MG	11	301	1/1	0.88	0.30	38,38,38,38	0
54	MG	11	302	1/1	0.88	0.79	51,51,51,51	0
54	MG	1H	3225	1/1	0.88	0.11	58,58,58,58	0
54	MG	1H	3062	1/1	0.88	0.32	57,57,57,57	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å <sup>2</sup> )	Q<0.9
54	MG	14	3250	1/1	0.88	0.26	74,74,74,74	0
54	MG	1H	3067	1/1	0.88	0.05	53,53,53,53	0
54	MG	1G	2345	1/1	0.88	0.41	84,84,84,84	0
54	MG	1H	3473	1/1	0.88	0.37	55,55,55,55	0
54	MG	13	2275	1/1	0.89	0.12	81,81,81,81	0
54	MG	14	3331	1/1	0.89	0.35	62,62,62,62	0
54	MG	1G	2387	1/1	0.89	0.35	58,58,58,58	0
54	MG	1H	3565	1/1	0.89	0.23	49,49,49,49	0
54	MG	14	3461	1/1	0.89	0.20	61,61,61,61	0
54	MG	14	3009	1/1	0.89	0.11	51,51,51,51	0
54	MG	14	3582	1/1	0.89	0.08	77,77,77,77	0
54	MG	1G	2361	1/1	0.89	0.27	101,101,101,101	0
54	MG	1H	3304	1/1	0.89	0.25	82,82,82,82	0
54	MG	1H	3307	1/1	0.89	0.24	36,36,36,36	0
54	MG	1G	2390	1/1	0.89	0.36	70,70,70,70	0
54	MG	1G	2249	1/1	0.89	0.30	69,69,69,69	0
54	MG	13	2285	1/1	0.89	0.33	82,82,82,82	0
54	MG	13	2205	1/1	0.89	0.07	70,70,70,70	0
54	MG	14	3229	1/1	0.89	0.25	67,67,67,67	0
54	MG	14	3231	1/1	0.89	0.52	67,67,67,67	0
54	MG	1H	3246	1/1	0.89	0.47	51,51,51,51	0
54	MG	1H	3578	1/1	0.89	0.55	59,59,59,59	0
54	MG	1H	3329	1/1	0.89	0.47	57,57,57,57	0
53	8UZ	14	3004	33/33	0.89	0.24	87,87,87,87	0
54	MG	13	2300	1/1	0.89	0.13	81,81,81,81	0
54	MG	16	211	1/1	0.89	0.30	64,64,64,64	0
54	MG	14	3055	1/1	0.89	0.10	67,67,67,67	0
54	MG	1H	3254	1/1	0.89	0.21	52,52,52,52	0
54	MG	1G	2259	1/1	0.89	0.20	87,87,87,87	0
54	MG	1G	2371	1/1	0.89	0.33	86,86,86,86	0
54	MG	14	3371	1/1	0.89	0.46	68,68,68,68	0
54	MG	1H	3033	1/1	0.89	0.09	55,55,55,55	0
54	MG	1H	3264	1/1	0.89	0.27	62,62,62,62	0
54	MG	1G	2343	1/1	0.89	0.24	79,79,79,79	0
54	MG	1H	3266	1/1	0.89	0.25	51,51,51,51	0
54	MG	1H	3268	1/1	0.89	0.25	77,77,77,77	0
54	MG	13	2347	1/1	0.89	0.27	62,62,62,62	0
54	MG	14	3260	1/1	0.89	0.23	48,48,48,48	0
54	MG	1J	211	1/1	0.89	0.21	81,81,81,81	0
54	MG	14	3395	1/1	0.89	0.65	80,80,80,80	0
54	MG	14	3071	1/1	0.89	0.09	93,93,93,93	0
54	MG	1H	3608	1/1	0.89	0.24	66,66,66,66	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors( $\text{\AA}^2$ )	Q<0.9
54	MG	1H	3515	1/1	0.89	0.13	59,59,59,59	0
54	MG	14	3270	1/1	0.89	0.40	53,53,53,53	0
54	MG	1H	3425	1/1	0.89	0.53	64,64,64,64	0
54	MG	14	3079	1/1	0.89	0.21	59,59,59,59	0
54	MG	1H	3272	1/1	0.89	0.16	54,54,54,54	0
54	MG	1H	3145	1/1	0.89	0.44	50,50,50,50	0
54	MG	35	202	1/1	0.89	0.27	61,61,61,61	0
54	MG	13	2252	1/1	0.89	0.40	72,72,72,72	0
54	MG	1H	3622	1/1	0.89	0.19	49,49,49,49	0
54	MG	1H	3430	1/1	0.89	0.16	52,52,52,52	0
54	MG	1H	3528	1/1	0.89	0.21	51,51,51,51	0
54	MG	14	3532	1/1	0.89	0.22	63,63,63,63	0
54	MG	13	2254	1/1	0.89	0.18	59,59,59,59	0
54	MG	14	3118	1/1	0.89	0.30	44,44,44,44	0
54	MG	1H	3042	1/1	0.89	0.07	55,55,55,55	0
54	MG	1H	3433	1/1	0.89	0.26	57,57,57,57	0
54	MG	13	2321	1/1	0.89	0.24	84,84,84,84	0
54	MG	51	201	1/1	0.89	0.48	74,74,74,74	0
54	MG	1G	2235	1/1	0.89	0.32	70,70,70,70	0
54	MG	1H	3369	1/1	0.89	0.17	63,63,63,63	0
54	MG	13	2273	1/1	0.89	0.33	63,63,63,63	0
54	MG	1H	3181	1/1	0.89	0.20	55,55,55,55	0
54	MG	W1	103	1/1	0.89	0.18	80,80,80,80	0
54	MG	1G	2302	1/1	0.89	0.49	85,85,85,85	0
54	MG	1H	3640	1/1	0.89	0.68	73,73,73,73	0
54	MG	1H	3641	1/1	0.89	0.20	52,52,52,52	0
54	MG	1H	3295	1/1	0.89	0.30	49,49,49,49	0
54	MG	14	3443	1/1	0.89	0.21	65,65,65,65	0
54	MG	1H	3644	1/1	0.89	0.34	59,59,59,59	0
54	MG	1H	3205	1/1	0.89	0.18	45,45,45,45	0
54	MG	13	2334	1/1	0.89	0.34	73,73,73,73	0
54	MG	1G	2209	1/1	0.89	0.23	75,75,75,75	0
54	MG	1H	3553	1/1	0.89	0.41	52,52,52,52	0
54	MG	1H	3559	1/1	0.89	0.14	55,55,55,55	0
54	MG	1H	3382	1/1	0.89	0.39	94,94,94,94	0
54	MG	14	3272	1/1	0.90	0.19	82,82,82,82	0
54	MG	13	2257	1/1	0.90	0.44	68,68,68,68	0
54	MG	14	3280	1/1	0.90	0.19	49,49,49,49	0
54	MG	1H	3619	1/1	0.90	0.56	50,50,50,50	0
54	MG	13	2289	1/1	0.90	0.29	71,71,71,71	0
54	MG	1H	3347	1/1	0.90	0.31	45,45,45,45	0
54	MG	1G	2214	1/1	0.90	0.11	81,81,81,81	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors( $\text{\AA}^2$ )	Q<0.9
54	MG	1H	3625	1/1	0.90	0.29	64,64,64,64	0
54	MG	13	2345	1/1	0.90	0.12	66,66,66,66	0
54	MG	1H	3627	1/1	0.90	0.24	65,65,65,65	0
54	MG	14	3569	1/1	0.90	0.21	74,74,74,74	0
54	MG	1H	3351	1/1	0.90	0.40	55,55,55,55	0
54	MG	1H	3164	1/1	0.90	0.29	45,45,45,45	0
54	MG	14	3438	1/1	0.90	0.20	67,67,67,67	0
54	MG	13	2295	1/1	0.90	0.21	113,113,113,113	0
54	MG	1G	2289	1/1	0.90	0.55	90,90,90,90	0
54	MG	1G	2291	1/1	0.90	0.36	91,91,91,91	0
54	MG	1G	2221	1/1	0.90	0.10	74,74,74,74	0
54	MG	14	3128	1/1	0.90	0.12	74,74,74,74	0
54	MG	1H	3538	1/1	0.90	0.39	81,81,81,81	0
54	MG	14	3145	1/1	0.90	0.30	54,54,54,54	0
54	MG	14	3168	1/1	0.90	0.29	57,57,57,57	0
54	MG	1G	2224	1/1	0.90	0.32	78,78,78,78	0
54	MG	14	3317	1/1	0.90	0.21	68,68,68,68	0
54	MG	1H	3434	1/1	0.90	0.20	45,45,45,45	0
54	MG	75	201	1/1	0.90	0.17	57,57,57,57	0
54	MG	1H	3362	1/1	0.90	0.44	60,60,60,60	0
54	MG	1H	3060	1/1	0.90	0.24	49,49,49,49	0
54	MG	1H	3544	1/1	0.90	0.11	63,63,63,63	0
54	MG	1H	3643	1/1	0.90	0.44	68,68,68,68	0
54	MG	14	3183	1/1	0.90	0.65	69,69,69,69	0
54	MG	1H	3440	1/1	0.90	0.21	62,62,62,62	0
54	MG	1H	3367	1/1	0.90	0.57	83,83,83,83	0
54	MG	16	210	1/1	0.90	0.14	61,61,61,61	0
54	MG	13	2335	1/1	0.90	0.25	59,59,59,59	0
54	MG	16	212	1/1	0.90	0.12	73,73,73,73	0
54	MG	1H	3651	1/1	0.90	0.33	57,57,57,57	0
54	MG	14	3333	1/1	0.90	0.29	67,67,67,67	0
54	MG	14	3198	1/1	0.90	0.40	74,74,74,74	0
54	MG	13	2380	1/1	0.90	0.21	65,65,65,65	0
54	MG	14	3204	1/1	0.90	0.18	51,51,51,51	0
54	MG	1H	3373	1/1	0.90	0.31	57,57,57,57	0
54	MG	1H	3071	1/1	0.90	0.30	71,71,71,71	0
54	MG	11	304	1/1	0.90	0.20	35,35,35,35	0
54	MG	13	2348	1/1	0.90	0.17	63,63,63,63	0
54	MG	13	2364	1/1	0.90	0.22	75,75,75,75	0
54	MG	1G	2332	1/1	0.90	0.19	74,74,74,74	0
54	MG	1H	3234	1/1	0.90	0.24	40,40,40,40	0
54	MG	13	2308	1/1	0.90	0.15	62,62,62,62	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors( $\text{\AA}^2$ )	Q<0.9
54	MG	1H	3238	1/1	0.90	0.73	59,59,59,59	0
54	MG	1H	3306	1/1	0.90	0.21	40,40,40,40	0
54	MG	1H	3093	1/1	0.90	0.18	40,40,40,40	0
54	MG	1H	3309	1/1	0.90	0.26	38,38,38,38	0
54	MG	14	3027	1/1	0.90	0.15	51,51,51,51	0
54	MG	1H	3245	1/1	0.90	0.32	37,37,37,37	0
54	MG	1H	3006	1/1	0.90	0.10	40,40,40,40	0
54	MG	1H	3247	1/1	0.90	0.52	55,55,55,55	0
54	MG	1G	2206	1/1	0.90	0.14	84,84,84,84	0
54	MG	14	3369	1/1	0.90	0.26	49,49,49,49	0
54	MG	14	3235	1/1	0.90	0.69	68,68,68,68	0
54	MG	14	3043	1/1	0.90	0.17	60,60,60,60	0
54	MG	14	3511	1/1	0.90	0.14	68,68,68,68	0
54	MG	14	3372	1/1	0.90	0.84	57,57,57,57	0
54	MG	14	3373	1/1	0.90	0.17	72,72,72,72	0
54	MG	1G	2336	1/1	0.90	0.31	76,76,76,76	0
54	MG	14	3045	1/1	0.90	0.26	76,76,76,76	0
54	MG	1G	2368	1/1	0.90	0.27	88,88,88,88	0
54	MG	1H	3256	1/1	0.90	0.33	77,77,77,77	0
54	MG	1G	2207	1/1	0.90	0.11	78,78,78,78	0
54	MG	14	3388	1/1	0.90	0.21	70,70,70,70	0
54	MG	1H	3397	1/1	0.90	0.36	62,62,62,62	0
54	MG	1H	3335	1/1	0.90	0.20	51,51,51,51	0
54	MG	14	3526	1/1	0.90	0.23	52,52,52,52	0
54	MG	1H	3399	1/1	0.90	0.20	59,59,59,59	0
54	MG	1H	3402	1/1	0.90	0.26	45,45,45,45	0
54	MG	14	3533	1/1	0.90	0.20	78,78,78,78	0
54	MG	1H	3499	1/1	0.90	0.44	49,49,49,49	0
54	MG	14	3065	1/1	0.90	0.23	65,65,65,65	0
54	MG	1H	3258	1/1	0.90	0.38	55,55,55,55	0
54	MG	1H	3029	1/1	0.90	0.16	43,43,43,43	0
54	MG	1H	3139	1/1	0.90	0.16	46,46,46,46	0
54	MG	14	3262	1/1	0.90	0.33	49,49,49,49	0
54	MG	1G	2243	1/1	0.90	0.47	78,78,78,78	0
54	MG	1H	3512	1/1	0.90	0.42	55,55,55,55	0
54	MG	1H	3613	1/1	0.90	0.62	68,68,68,68	0
53	8UZ	1H	3004	33/33	0.90	0.20	75,75,75,75	0
54	MG	14	3408	1/1	0.90	0.20	57,57,57,57	0
54	MG	14	3437	1/1	0.91	0.55	87,87,87,87	0
54	MG	13	2398	1/1	0.91	0.19	76,76,76,76	0
54	MG	14	3564	1/1	0.91	0.12	62,62,62,62	0
54	MG	13	2311	1/1	0.91	0.34	54,54,54,54	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors( $\text{\AA}^2$ )	Q<0.9
54	MG	1H	3597	1/1	0.91	0.28	42,42,42,42	0
54	MG	14	3567	1/1	0.91	0.09	60,60,60,60	0
54	MG	14	3442	1/1	0.91	0.15	64,64,64,64	0
54	MG	13	2301	1/1	0.91	0.14	75,75,75,75	0
54	MG	1H	3601	1/1	0.91	0.37	56,56,56,56	0
54	MG	13	2333	1/1	0.91	0.12	89,89,89,89	0
54	MG	14	3037	1/1	0.91	0.10	53,53,53,53	0
54	MG	14	3575	1/1	0.91	0.55	65,65,65,65	0
54	MG	13	2271	1/1	0.91	0.42	69,69,69,69	0
54	MG	14	3332	1/1	0.91	0.10	57,57,57,57	0
54	MG	1H	3158	1/1	0.91	0.24	59,59,59,59	0
54	MG	14	3580	1/1	0.91	0.25	61,61,61,61	0
54	MG	1H	3607	1/1	0.91	0.17	66,66,66,66	0
54	MG	1H	3054	1/1	0.91	0.13	50,50,50,50	0
54	MG	1G	2386	1/1	0.91	0.27	72,72,72,72	0
54	MG	13	2305	1/1	0.91	0.34	49,49,49,49	0
54	MG	13	2337	1/1	0.91	0.34	75,75,75,75	0
54	MG	14	3589	1/1	0.91	0.19	57,57,57,57	0
54	MG	1G	2310	1/1	0.91	0.18	71,71,71,71	0
54	MG	1H	3173	1/1	0.91	0.39	42,42,42,42	0
54	MG	14	3348	1/1	0.91	0.20	68,68,68,68	0
54	MG	1H	3064	1/1	0.91	0.14	68,68,68,68	0
54	MG	1H	3620	1/1	0.91	0.21	60,60,60,60	0
54	MG	1H	3470	1/1	0.91	0.21	50,50,50,50	0
54	MG	13	2340	1/1	0.91	0.24	92,92,92,92	0
54	MG	1H	3346	1/1	0.91	0.16	52,52,52,52	0
54	MG	13	2354	1/1	0.91	0.35	62,62,62,62	0
54	MG	1H	3081	1/1	0.91	0.09	70,70,70,70	0
54	MG	14	3241	1/1	0.91	0.49	65,65,65,65	0
54	MG	14	3362	1/1	0.91	0.37	63,63,63,63	0
54	MG	13	2228	1/1	0.91	0.26	56,56,56,56	0
54	MG	13	2376	1/1	0.91	0.20	84,84,84,84	0
54	MG	1H	3629	1/1	0.91	0.50	80,80,80,80	0
54	MG	14	3480	1/1	0.91	0.17	65,65,65,65	0
54	MG	1H	3556	1/1	0.91	0.34	71,71,71,71	0
54	MG	1H	3558	1/1	0.91	0.51	57,57,57,57	0
54	MG	14	3486	1/1	0.91	0.19	51,51,51,51	0
54	MG	13	2237	1/1	0.91	0.16	65,65,65,65	0
54	MG	1G	2236	1/1	0.91	0.31	77,77,77,77	0
54	MG	1H	3561	1/1	0.91	0.24	51,51,51,51	0
54	MG	1G	2294	1/1	0.91	0.26	71,71,71,71	0
54	MG	1J	205	1/1	0.91	0.31	72,72,72,72	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors( $\text{\AA}^2$ )	Q<0.9
54	MG	1H	3357	1/1	0.91	0.35	56,56,56,56	0
54	MG	14	3376	1/1	0.91	0.19	53,53,53,53	0
54	MG	1J	209	1/1	0.91	0.10	77,77,77,77	0
54	MG	1H	3413	1/1	0.91	0.27	59,59,59,59	0
54	MG	14	3500	1/1	0.91	0.19	67,67,67,67	0
54	MG	1H	3292	1/1	0.91	0.14	47,47,47,47	0
54	MG	1G	2321	1/1	0.91	0.24	70,70,70,70	0
54	MG	14	3112	1/1	0.91	0.20	53,53,53,53	0
54	MG	14	3385	1/1	0.91	0.15	49,49,49,49	0
54	MG	I8	101	1/1	0.91	0.13	50,50,50,50	0
54	MG	14	3386	1/1	0.91	0.44	75,75,75,75	0
54	MG	1H	3570	1/1	0.91	0.16	57,57,57,57	0
54	MG	31	304	1/1	0.91	0.41	41,41,41,41	0
54	MG	14	3267	1/1	0.91	0.28	65,65,65,65	0
54	MG	14	3268	1/1	0.91	0.20	49,49,49,49	0
54	MG	1H	3229	1/1	0.91	0.13	53,53,53,53	0
54	MG	1H	3494	1/1	0.91	0.23	53,53,53,53	0
54	MG	D8	201	1/1	0.91	0.46	48,48,48,48	0
54	MG	1H	3233	1/1	0.91	0.16	42,42,42,42	0
54	MG	N8	101	1/1	0.91	0.23	55,55,55,55	0
54	MG	1H	3025	1/1	0.91	0.15	48,48,48,48	0
54	MG	13	2280	1/1	0.91	0.29	58,58,58,58	0
54	MG	1H	3237	1/1	0.91	0.15	62,62,62,62	0
54	MG	1H	3129	1/1	0.91	0.30	60,60,60,60	0
54	MG	14	3134	1/1	0.91	0.37	52,52,52,52	0
54	MG	14	3143	1/1	0.91	0.15	52,52,52,52	0
54	MG	1H	3130	1/1	0.91	0.23	36,36,36,36	0
54	MG	14	3404	1/1	0.91	0.37	71,71,71,71	0
54	MG	49	201	1/1	0.91	0.14	95,95,95,95	0
54	MG	14	3149	1/1	0.91	0.35	56,56,56,56	0
54	MG	14	3154	1/1	0.91	0.31	54,54,54,54	0
54	MG	1H	3584	1/1	0.91	0.28	49,49,49,49	0
54	MG	13	2217	1/1	0.91	0.19	69,69,69,69	0
54	MG	B8	201	1/1	0.91	0.20	69,69,69,69	0
54	MG	C5	202	1/1	0.91	0.62	90,90,90,90	0
54	MG	32	302	1/1	0.91	0.49	95,95,95,95	0
54	MG	14	3541	1/1	0.91	0.25	48,48,48,48	0
54	MG	1H	3587	1/1	0.91	0.26	61,61,61,61	0
54	MG	1G	2347	1/1	0.91	0.25	65,65,65,65	0
54	MG	14	3007	1/1	0.91	0.50	63,63,63,63	0
54	MG	1G	2348	1/1	0.91	0.44	67,67,67,67	0
54	MG	14	3424	1/1	0.91	0.28	55,55,55,55	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors( $\text{\AA}^2$ )	Q<0.9
54	MG	14	3426	1/1	0.91	0.30	53,53,53,53	0
54	MG	14	3010	1/1	0.91	0.12	55,55,55,55	0
54	MG	1H	3037	1/1	0.91	0.08	51,51,51,51	0
54	MG	X4	102	1/1	0.91	0.10	107,107,107,107	0
54	MG	1G	2324	1/1	0.91	0.08	79,79,79,79	0
54	MG	14	3016	1/1	0.91	0.13	50,50,50,50	0
54	MG	14	3199	1/1	0.91	0.27	75,75,75,75	0
54	MG	14	3382	1/1	0.92	0.46	70,70,70,70	0
54	MG	1H	3375	1/1	0.92	0.64	53,53,53,53	0
54	MG	14	3384	1/1	0.92	0.15	56,56,56,56	0
54	MG	1H	3063	1/1	0.92	0.10	51,51,51,51	0
54	MG	14	3033	1/1	0.92	0.12	65,65,65,65	0
54	MG	1H	3579	1/1	0.92	0.20	51,51,51,51	0
54	MG	1H	3288	1/1	0.92	0.20	62,62,62,62	0
53	8UZ	1H	3002	33/33	0.92	0.35	68,68,68,68	0
54	MG	14	3041	1/1	0.92	0.09	60,60,60,60	0
54	MG	1H	3585	1/1	0.92	0.51	65,65,65,65	0
54	MG	1H	3176	1/1	0.92	0.47	53,53,53,53	0
54	MG	14	3244	1/1	0.92	0.23	83,83,83,83	0
54	MG	1H	3180	1/1	0.92	0.32	56,56,56,56	0
54	MG	14	3560	1/1	0.92	0.29	56,56,56,56	0
54	MG	19	301	1/1	0.92	0.28	43,43,43,43	0
54	MG	1H	3068	1/1	0.92	0.17	72,72,72,72	0
54	MG	14	3049	1/1	0.92	0.11	83,83,83,83	0
54	MG	14	3052	1/1	0.92	0.05	70,70,70,70	0
54	MG	14	3255	1/1	0.92	0.26	63,63,63,63	0
54	MG	14	3053	1/1	0.92	0.08	51,51,51,51	0
54	MG	1H	3198	1/1	0.92	0.28	48,48,48,48	0
54	MG	1H	3069	1/1	0.92	0.08	65,65,65,65	0
54	MG	1H	3070	1/1	0.92	0.23	46,46,46,46	0
54	MG	13	2293	1/1	0.92	0.08	63,63,63,63	0
54	MG	1H	3596	1/1	0.92	0.18	45,45,45,45	0
54	MG	1H	3072	1/1	0.92	0.34	48,48,48,48	0
54	MG	1H	3075	1/1	0.92	0.09	58,58,58,58	0
54	MG	1H	3493	1/1	0.92	0.17	55,55,55,55	0
54	MG	1G	2225	1/1	0.92	0.42	77,77,77,77	0
54	MG	1G	2248	1/1	0.92	0.41	61,61,61,61	0
54	MG	1H	3083	1/1	0.92	0.14	62,62,62,62	0
54	MG	1H	3315	1/1	0.92	0.38	73,73,73,73	0
54	MG	14	3425	1/1	0.92	0.26	55,55,55,55	0
54	MG	14	3275	1/1	0.92	0.21	55,55,55,55	0
54	MG	13	2352	1/1	0.92	0.32	63,63,63,63	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors( $\text{\AA}^2$ )	Q<0.9
54	MG	14	3279	1/1	0.92	0.12	55,55,55,55	0
54	MG	1H	3610	1/1	0.92	0.27	48,48,48,48	0
54	MG	1G	2279	1/1	0.92	0.24	67,67,67,67	0
54	MG	1G	2338	1/1	0.92	0.39	80,80,80,80	0
54	MG	1H	3509	1/1	0.92	0.57	56,56,56,56	0
54	MG	1G	2250	1/1	0.92	0.36	71,71,71,71	0
54	MG	13	2312	1/1	0.92	0.10	86,86,86,86	0
54	MG	14	3290	1/1	0.92	0.18	48,48,48,48	0
54	MG	14	3085	1/1	0.92	0.30	57,57,57,57	0
54	MG	16	201	1/1	0.92	0.15	72,72,72,72	0
54	MG	1H	3514	1/1	0.92	0.15	62,62,62,62	0
54	MG	1H	3328	1/1	0.92	0.25	52,52,52,52	0
54	MG	14	3298	1/1	0.92	0.32	63,63,63,63	0
54	MG	16	208	1/1	0.92	0.47	59,59,59,59	0
54	MG	1H	3015	1/1	0.92	0.16	48,48,48,48	0
54	MG	1H	3519	1/1	0.92	0.29	50,50,50,50	0
54	MG	1H	3522	1/1	0.92	0.24	49,49,49,49	0
54	MG	14	3114	1/1	0.92	0.23	63,63,63,63	0
54	MG	1H	3105	1/1	0.92	0.28	46,46,46,46	0
54	MG	1H	3244	1/1	0.92	0.24	63,63,63,63	0
54	MG	1H	3410	1/1	0.92	0.40	48,48,48,48	0
54	MG	13	2265	1/1	0.92	0.28	57,57,57,57	0
54	MG	13	2372	1/1	0.92	0.18	93,93,93,93	0
54	MG	1H	3337	1/1	0.92	0.21	45,45,45,45	0
54	MG	1G	2231	1/1	0.92	0.33	61,61,61,61	0
54	MG	1H	3420	1/1	0.92	0.38	61,61,61,61	0
54	MG	14	3131	1/1	0.92	0.21	70,70,70,70	0
54	MG	1H	3422	1/1	0.92	0.19	57,57,57,57	0
54	MG	1H	3535	1/1	0.92	0.47	63,63,63,63	0
54	MG	1H	3635	1/1	0.92	0.19	54,54,54,54	0
54	MG	14	3148	1/1	0.92	0.26	62,62,62,62	0
54	MG	1G	2256	1/1	0.92	0.21	74,74,74,74	0
54	MG	14	3327	1/1	0.92	0.31	71,71,71,71	0
54	MG	1G	2257	1/1	0.92	0.22	73,73,73,73	0
54	MG	1H	3133	1/1	0.92	0.34	65,65,65,65	0
54	MG	1H	3255	1/1	0.92	0.31	56,56,56,56	0
54	MG	78	202	1/1	0.92	0.14	47,47,47,47	0
54	MG	13	2258	1/1	0.92	0.17	89,89,89,89	0
54	MG	1H	3038	1/1	0.92	0.08	52,52,52,52	0
54	MG	14	3334	1/1	0.92	0.30	83,83,83,83	0
54	MG	13	2274	1/1	0.92	0.16	52,52,52,52	0
54	MG	13	2233	1/1	0.92	0.23	94,94,94,94	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors( $\text{\AA}^2$ )	Q<0.9
54	MG	14	3484	1/1	0.92	0.17	59,59,59,59	0
54	MG	1H	3261	1/1	0.92	0.18	43,43,43,43	0
54	MG	1G	2380	1/1	0.92	0.27	77,77,77,77	0
54	MG	14	3186	1/1	0.92	0.40	55,55,55,55	0
54	MG	1H	3648	1/1	0.92	0.37	61,61,61,61	0
54	MG	1H	3649	1/1	0.92	0.19	51,51,51,51	0
54	MG	1G	2237	1/1	0.92	0.27	78,78,78,78	0
54	MG	1H	3551	1/1	0.92	0.23	62,62,62,62	0
54	MG	14	3351	1/1	0.92	0.13	80,80,80,80	0
54	MG	88	202	1/1	0.92	0.27	59,59,59,59	0
54	MG	1H	3353	1/1	0.92	0.43	58,58,58,58	0
54	MG	14	3353	1/1	0.92	0.43	74,74,74,74	0
54	MG	1H	3147	1/1	0.92	0.27	57,57,57,57	0
54	MG	41	201	1/1	0.92	0.13	76,76,76,76	0
54	MG	1H	3658	1/1	0.92	0.68	43,43,43,43	0
54	MG	1G	2351	1/1	0.92	0.12	78,78,78,78	0
54	MG	45	201	1/1	0.92	0.16	63,63,63,63	0
54	MG	14	3205	1/1	0.92	0.20	51,51,51,51	0
54	MG	1G	2266	1/1	0.92	0.36	76,76,76,76	0
54	MG	6A	101	1/1	0.92	0.55	89,89,89,89	0
54	MG	1H	3270	1/1	0.92	0.33	65,65,65,65	0
54	MG	1H	3359	1/1	0.92	0.23	53,53,53,53	0
54	MG	1G	2384	1/1	0.92	0.26	66,66,66,66	0
54	MG	1H	3455	1/1	0.92	0.39	40,40,40,40	0
54	MG	1H	3160	1/1	0.92	0.43	54,54,54,54	0
54	MG	Y1	101	1/1	0.92	0.17	69,69,69,69	0
54	MG	1H	3566	1/1	0.92	0.12	66,66,66,66	0
54	MG	14	3216	1/1	0.92	0.20	55,55,55,55	0
54	MG	14	3368	1/1	0.92	0.36	60,60,60,60	0
54	MG	14	3522	1/1	0.92	0.18	58,58,58,58	0
54	MG	14	3218	1/1	0.92	0.10	56,56,56,56	0
54	MG	1H	3273	1/1	0.92	0.37	63,63,63,63	0
54	MG	13	2229	1/1	0.92	0.13	78,78,78,78	0
54	MG	X1	109	1/1	0.92	0.29	79,79,79,79	0
54	MG	1H	3462	1/1	0.92	0.14	55,55,55,55	0
54	MG	1H	3163	1/1	0.92	0.30	57,57,57,57	0
54	MG	14	3374	1/1	0.92	0.41	78,78,78,78	0
54	MG	1G	2270	1/1	0.92	0.38	83,83,83,83	0
54	MG	1G	2357	1/1	0.92	0.24	96,96,96,96	0
54	MG	13	2338	1/1	0.92	0.17	82,82,82,82	0
54	MG	1H	3167	1/1	0.92	0.46	34,34,34,34	0
54	MG	14	3537	1/1	0.92	0.22	71,71,71,71	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors( $\text{\AA}^2$ )	Q<0.9
55	ZN	G8	201	1/1	0.92	0.14	105,105,105,105	0
54	MG	1H	3154	1/1	0.93	0.61	47,47,47,47	0
54	MG	14	3206	1/1	0.93	0.27	65,65,65,65	0
54	MG	14	3445	1/1	0.93	1.19	63,63,63,63	0
54	MG	14	3207	1/1	0.93	0.34	56,56,56,56	0
54	MG	13	2286	1/1	0.93	0.36	65,65,65,65	0
54	MG	14	3330	1/1	0.93	0.19	49,49,49,49	0
54	MG	13	2336	1/1	0.93	0.33	57,57,57,57	0
54	MG	1H	3614	1/1	0.93	0.59	77,77,77,77	0
54	MG	1H	3615	1/1	0.93	0.31	64,64,64,64	0
54	MG	1H	3312	1/1	0.93	0.16	45,45,45,45	0
54	MG	14	3335	1/1	0.93	0.13	64,64,64,64	0
54	MG	1H	3537	1/1	0.93	0.32	85,85,85,85	0
54	MG	1G	2376	1/1	0.93	0.15	92,92,92,92	0
54	MG	1G	2331	1/1	0.93	0.22	92,92,92,92	0
54	MG	1H	3456	1/1	0.93	0.14	55,55,55,55	0
54	MG	1H	3541	1/1	0.93	0.29	49,49,49,49	0
54	MG	68	201	1/1	0.93	0.23	65,65,65,65	0
54	MG	13	2212	1/1	0.93	0.08	91,91,91,91	0
54	MG	1H	3021	1/1	0.93	0.11	44,44,44,44	0
54	MG	1H	3460	1/1	0.93	0.14	57,57,57,57	0
54	MG	1G	2314	1/1	0.93	0.23	96,96,96,96	0
54	MG	14	3227	1/1	0.93	0.47	55,55,55,55	0
54	MG	1H	3324	1/1	0.93	0.24	56,56,56,56	0
54	MG	1G	2222	1/1	0.93	0.24	74,74,74,74	0
54	MG	1H	3326	1/1	0.93	0.50	73,73,73,73	0
54	MG	1H	3031	1/1	0.93	0.34	56,56,56,56	0
54	MG	1G	2205	1/1	0.93	0.18	79,79,79,79	0
54	MG	14	3070	1/1	0.93	0.24	74,74,74,74	0
54	MG	1H	3084	1/1	0.93	0.29	54,54,54,54	0
54	MG	14	3072	1/1	0.93	0.12	51,51,51,51	0
54	MG	16	213	1/1	0.93	0.21	68,68,68,68	0
54	MG	14	3073	1/1	0.93	0.14	86,86,86,86	0
54	MG	1H	3333	1/1	0.93	0.24	56,56,56,56	0
54	MG	1G	2359	1/1	0.93	0.25	102,102,102,102	0
54	MG	13	2259	1/1	0.93	0.14	80,80,80,80	0
54	MG	B5	101	1/1	0.93	0.51	68,68,68,68	0
54	MG	1H	3186	1/1	0.93	0.25	43,43,43,43	0
54	MG	1G	2258	1/1	0.93	0.15	86,86,86,86	0
54	MG	1H	3190	1/1	0.93	0.15	37,37,37,37	0
54	MG	14	3089	1/1	0.93	0.07	56,56,56,56	0
54	MG	1H	3481	1/1	0.93	0.27	47,47,47,47	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors( $\text{\AA}^2$ )	Q<0.9
54	MG	1H	3482	1/1	0.93	0.28	50,50,50,50	0
54	MG	1H	3091	1/1	0.93	0.14	43,43,43,43	0
54	MG	1G	2320	1/1	0.93	0.27	71,71,71,71	0
54	MG	14	3502	1/1	0.93	0.12	50,50,50,50	0
54	MG	14	3375	1/1	0.93	0.07	58,58,58,58	0
54	MG	14	3098	1/1	0.93	0.28	56,56,56,56	0
54	MG	13	2260	1/1	0.93	0.35	58,58,58,58	0
54	MG	1H	3207	1/1	0.93	0.39	47,47,47,47	0
54	MG	1G	2388	1/1	0.93	0.14	106,106,106,106	0
54	MG	1H	3490	1/1	0.93	0.61	91,91,91,91	0
54	MG	1G	2261	1/1	0.93	0.22	99,99,99,99	0
54	MG	I8	103	1/1	0.93	0.92	52,52,52,52	0
54	MG	1H	3213	1/1	0.93	0.24	40,40,40,40	0
54	MG	1H	3349	1/1	0.93	0.30	74,74,74,74	0
54	MG	1H	3045	1/1	0.93	0.19	46,46,46,46	0
54	MG	1G	2280	1/1	0.93	0.23	76,76,76,76	0
54	MG	14	3129	1/1	0.93	0.45	49,49,49,49	0
54	MG	14	3274	1/1	0.93	0.35	71,71,71,71	0
54	MG	1H	3583	1/1	0.93	0.25	49,49,49,49	0
54	MG	G8	202	1/1	0.93	0.56	52,52,52,52	0
54	MG	E5	201	1/1	0.93	0.16	51,51,51,51	0
54	MG	13	2230	1/1	0.93	0.23	79,79,79,79	0
54	MG	14	3136	1/1	0.93	0.32	45,45,45,45	0
54	MG	14	3137	1/1	0.93	0.30	53,53,53,53	0
54	MG	14	3139	1/1	0.93	0.24	49,49,49,49	0
54	MG	1H	3419	1/1	0.93	0.25	48,48,48,48	0
54	MG	14	3285	1/1	0.93	0.14	49,49,49,49	0
54	MG	3I	201	1/1	0.93	0.13	66,66,66,66	0
54	MG	14	3147	1/1	0.93	0.37	63,63,63,63	0
54	MG	1H	3421	1/1	0.93	0.18	47,47,47,47	0
54	MG	1H	3230	1/1	0.93	0.52	61,61,61,61	0
54	MG	1H	3356	1/1	0.93	0.25	53,53,53,53	0
54	MG	14	3155	1/1	0.93	0.25	56,56,56,56	0
54	MG	14	3539	1/1	0.93	0.29	64,64,64,64	0
54	MG	14	3297	1/1	0.93	0.20	61,61,61,61	0
54	MG	14	3164	1/1	0.93	0.18	52,52,52,52	0
54	MG	1H	3294	1/1	0.93	0.20	45,45,45,45	0
54	MG	98	203	1/1	0.93	0.19	57,57,57,57	0
54	MG	1G	2283	1/1	0.93	0.41	71,71,71,71	0
54	MG	55	201	1/1	0.93	0.36	58,58,58,58	0
54	MG	55	202	1/1	0.93	0.63	65,65,65,65	0
54	MG	1H	3058	1/1	0.93	0.15	62,62,62,62	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors( $\text{\AA}^2$ )	Q<0.9
54	MG	1H	3595	1/1	0.93	0.24	49,49,49,49	0
54	MG	1G	2284	1/1	0.93	0.13	75,75,75,75	0
54	MG	14	3417	1/1	0.93	0.40	66,66,66,66	0
54	MG	14	3419	1/1	0.93	0.42	50,50,50,50	0
54	MG	14	3552	1/1	0.93	0.20	58,58,58,58	0
54	MG	1H	3061	1/1	0.93	0.05	43,43,43,43	0
54	MG	X1	102	1/1	0.93	0.32	79,79,79,79	0
54	MG	14	3557	1/1	0.93	0.20	65,65,65,65	0
54	MG	14	3022	1/1	0.93	0.08	57,57,57,57	0
54	MG	1H	3429	1/1	0.93	0.43	54,54,54,54	0
54	MG	14	3024	1/1	0.93	0.19	57,57,57,57	0
54	MG	13	2262	1/1	0.93	0.36	56,56,56,56	0
54	MG	1H	3001	1/1	0.93	0.33	35,35,35,35	0
54	MG	1H	3364	1/1	0.93	0.15	72,72,72,72	0
54	MG	14	3319	1/1	0.93	0.23	65,65,65,65	0
53	8UZ	14	3002	33/33	0.93	0.32	77,77,77,77	0
54	MG	14	3035	1/1	0.93	0.12	49,49,49,49	0
54	MG	1H	3368	1/1	0.93	0.29	64,64,64,64	0
54	MG	1H	3066	1/1	0.93	0.13	77,77,77,77	0
54	MG	1H	3305	1/1	0.93	0.24	51,51,51,51	0
54	MG	14	3441	1/1	0.93	0.15	58,58,58,58	0
54	MG	13	2225	1/1	0.94	0.26	72,72,72,72	0
54	MG	13	2218	1/1	0.94	0.18	60,60,60,60	0
54	MG	1H	3051	1/1	0.94	0.15	42,42,42,42	0
54	MG	1H	3267	1/1	0.94	0.12	49,49,49,49	0
54	MG	1H	3476	1/1	0.94	0.21	57,57,57,57	0
54	MG	14	3553	1/1	0.94	0.16	75,75,75,75	0
54	MG	14	3097	1/1	0.94	0.43	45,45,45,45	0
54	MG	14	3555	1/1	0.94	0.12	79,79,79,79	0
54	MG	1G	2341	1/1	0.94	0.31	65,65,65,65	0
54	MG	14	3264	1/1	0.94	0.20	56,56,56,56	0
54	MG	14	3107	1/1	0.94	0.41	46,46,46,46	0
54	MG	14	3109	1/1	0.94	0.22	70,70,70,70	0
54	MG	14	3110	1/1	0.94	0.28	58,58,58,58	0
54	MG	1H	3115	1/1	0.94	0.41	35,35,35,35	0
54	MG	1H	3564	1/1	0.94	0.13	46,46,46,46	0
54	MG	1H	3116	1/1	0.94	0.27	40,40,40,40	0
54	MG	14	3116	1/1	0.94	0.18	52,52,52,52	0
54	MG	1H	3195	1/1	0.94	0.59	47,47,47,47	0
54	MG	14	3120	1/1	0.94	0.22	73,73,73,73	0
54	MG	14	3278	1/1	0.94	0.32	46,46,46,46	0
54	MG	1H	3119	1/1	0.94	0.43	44,44,44,44	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors( $\text{\AA}^2$ )	Q<0.9
54	MG	1H	3120	1/1	0.94	0.28	40,40,40,40	0
54	MG	1H	3485	1/1	0.94	0.51	57,57,57,57	0
54	MG	1H	3278	1/1	0.94	0.16	52,52,52,52	0
54	MG	1G	2239	1/1	0.94	0.24	89,89,89,89	0
54	MG	14	3423	1/1	0.94	0.15	64,64,64,64	0
54	MG	14	3284	1/1	0.94	0.30	50,50,50,50	0
54	MG	13	2382	1/1	0.94	0.19	71,71,71,71	0
54	MG	1G	2265	1/1	0.94	0.14	86,86,86,86	0
54	MG	13	2339	1/1	0.94	0.15	58,58,58,58	0
54	MG	14	3429	1/1	0.94	0.30	61,61,61,61	0
54	MG	14	3289	1/1	0.94	0.24	57,57,57,57	0
54	MG	14	3132	1/1	0.94	0.33	47,47,47,47	0
54	MG	14	3433	1/1	0.94	0.60	65,65,65,65	0
54	MG	14	3588	1/1	0.94	0.37	63,63,63,63	0
54	MG	1H	3415	1/1	0.94	0.53	62,62,62,62	0
54	MG	1H	3008	1/1	0.94	0.12	44,44,44,44	0
54	MG	1H	3418	1/1	0.94	0.20	56,56,56,56	0
54	MG	14	3593	1/1	0.94	0.30	80,80,80,80	0
54	MG	1H	3217	1/1	0.94	0.24	52,52,52,52	0
54	MG	1H	3582	1/1	0.94	0.17	50,50,50,50	0
54	MG	68	202	1/1	0.94	0.15	62,62,62,62	0
54	MG	1G	2267	1/1	0.94	0.15	87,87,87,87	0
54	MG	1H	3134	1/1	0.94	0.22	69,69,69,69	0
54	MG	1H	3223	1/1	0.94	0.41	52,52,52,52	0
54	MG	1H	3502	1/1	0.94	0.13	59,59,59,59	0
54	MG	14	3150	1/1	0.94	0.48	55,55,55,55	0
54	MG	14	3151	1/1	0.94	0.47	45,45,45,45	0
54	MG	1H	3503	1/1	0.94	0.52	73,73,73,73	0
54	MG	13	2368	1/1	0.94	0.20	59,59,59,59	0
54	MG	16	207	1/1	0.94	0.45	52,52,52,52	0
54	MG	14	3313	1/1	0.94	0.17	77,77,77,77	0
53	8UZ	13	2202	33/33	0.94	0.23	74,74,74,74	0
54	MG	14	3165	1/1	0.94	0.50	47,47,47,47	0
54	MG	14	3453	1/1	0.94	0.32	64,64,64,64	0
54	MG	13	2386	1/1	0.94	0.25	75,75,75,75	0
54	MG	14	3021	1/1	0.94	0.11	54,54,54,54	0
54	MG	14	3457	1/1	0.94	0.16	52,52,52,52	0
54	MG	13	2358	1/1	0.94	0.23	85,85,85,85	0
54	MG	1H	3232	1/1	0.94	0.16	42,42,42,42	0
54	MG	1H	3513	1/1	0.94	0.73	45,45,45,45	0
54	MG	14	3026	1/1	0.94	0.09	54,54,54,54	0
54	MG	13	2314	1/1	0.94	0.31	75,75,75,75	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors( $\text{\AA}^2$ )	Q<0.9
54	MG	29	304	1/1	0.94	0.52	55,55,55,55	0
54	MG	14	3181	1/1	0.94	0.49	68,68,68,68	0
54	MG	14	3028	1/1	0.94	0.08	53,53,53,53	0
54	MG	14	3326	1/1	0.94	0.42	68,68,68,68	0
54	MG	14	3185	1/1	0.94	0.44	44,44,44,44	0
54	MG	14	3467	1/1	0.94	0.17	63,63,63,63	0
54	MG	13	2360	1/1	0.94	0.38	82,82,82,82	0
54	MG	13	2281	1/1	0.94	0.27	70,70,70,70	0
54	MG	14	3189	1/1	0.94	0.29	51,51,51,51	0
54	MG	1H	3517	1/1	0.94	0.13	41,41,41,41	0
54	MG	1H	3600	1/1	0.94	0.41	59,59,59,59	0
54	MG	1H	3518	1/1	0.94	0.18	56,56,56,56	0
54	MG	1H	3602	1/1	0.94	0.23	55,55,55,55	0
54	MG	1H	3302	1/1	0.94	0.38	44,44,44,44	0
54	MG	14	3336	1/1	0.94	0.19	53,53,53,53	0
54	MG	1H	3521	1/1	0.94	0.18	44,44,44,44	0
54	MG	13	2350	1/1	0.94	0.22	55,55,55,55	0
54	MG	14	3340	1/1	0.94	0.12	59,59,59,59	0
54	MG	1H	3153	1/1	0.94	0.20	46,46,46,46	0
54	MG	14	3485	1/1	0.94	0.17	50,50,50,50	0
54	MG	1H	3242	1/1	0.94	0.29	38,38,38,38	0
54	MG	1H	3436	1/1	0.94	0.40	78,78,78,78	0
54	MG	13	2303	1/1	0.94	0.14	62,62,62,62	0
54	MG	14	3345	1/1	0.94	0.14	66,66,66,66	0
54	MG	14	3051	1/1	0.94	0.11	75,75,75,75	0
54	MG	14	3492	1/1	0.94	0.12	63,63,63,63	0
54	MG	13	2377	1/1	0.94	0.27	78,78,78,78	0
54	MG	1H	3079	1/1	0.94	0.13	65,65,65,65	0
54	MG	1H	3530	1/1	0.94	0.29	45,45,45,45	0
54	MG	1H	3159	1/1	0.94	0.23	65,65,65,65	0
54	MG	88	201	1/1	0.94	0.18	63,63,63,63	0
54	MG	1H	3080	1/1	0.94	0.05	49,49,49,49	0
54	MG	14	3215	1/1	0.94	0.51	65,65,65,65	0
54	MG	13	2378	1/1	0.94	0.35	66,66,66,66	0
54	MG	1H	3448	1/1	0.94	0.21	56,56,56,56	0
54	MG	14	3506	1/1	0.94	0.17	57,57,57,57	0
54	MG	14	3507	1/1	0.94	0.19	53,53,53,53	0
54	MG	1G	2334	1/1	0.94	0.79	76,76,76,76	0
54	MG	14	3220	1/1	0.94	0.18	63,63,63,63	0
54	MG	14	3063	1/1	0.94	0.19	55,55,55,55	0
54	MG	1H	3252	1/1	0.94	0.15	50,50,50,50	0
54	MG	1G	2282	1/1	0.94	0.15	71,71,71,71	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors( $\text{\AA}^2$ )	Q<0.9
54	MG	14	3224	1/1	0.94	0.34	66,66,66,66	0
54	MG	1H	3623	1/1	0.94	0.19	51,51,51,51	0
54	MG	1H	3323	1/1	0.94	0.48	66,66,66,66	0
54	MG	1G	2232	1/1	0.94	0.26	60,60,60,60	0
54	MG	1H	3459	1/1	0.94	0.13	57,57,57,57	0
54	MG	14	3520	1/1	0.94	0.13	72,72,72,72	0
54	MG	14	3230	1/1	0.94	0.28	54,54,54,54	0
54	MG	1G	2363	1/1	0.94	0.20	85,85,85,85	0
54	MG	13	2379	1/1	0.94	0.17	56,56,56,56	0
54	MG	W1	101	1/1	0.94	0.23	72,72,72,72	0
54	MG	1H	3327	1/1	0.94	0.23	60,60,60,60	0
54	MG	1G	2391	1/1	0.94	0.19	61,61,61,61	0
54	MG	1H	3388	1/1	0.94	0.27	57,57,57,57	0
54	MG	14	3237	1/1	0.94	0.45	58,58,58,58	0
54	MG	1H	3547	1/1	0.94	0.73	54,54,54,54	0
54	MG	X1	104	1/1	0.94	0.48	82,82,82,82	0
54	MG	14	3076	1/1	0.94	0.37	61,61,61,61	0
54	MG	1H	3169	1/1	0.94	0.26	36,36,36,36	0
54	MG	X1	107	1/1	0.94	0.16	89,89,89,89	0
54	MG	14	3078	1/1	0.94	0.50	61,61,61,61	0
54	MG	1H	3330	1/1	0.94	0.28	51,51,51,51	0
54	MG	1G	2208	1/1	0.94	0.08	78,78,78,78	0
54	MG	W4	101	1/1	0.94	0.12	89,89,89,89	0
54	MG	14	3081	1/1	0.94	0.33	61,61,61,61	0
54	MG	14	3247	1/1	0.94	0.27	55,55,55,55	0
54	MG	14	3082	1/1	0.94	0.10	68,68,68,68	0
54	MG	1H	3175	1/1	0.94	0.41	53,53,53,53	0
54	MG	14	3542	1/1	0.94	0.35	47,47,47,47	0
54	MG	1H	3637	1/1	0.94	0.21	57,57,57,57	0
54	MG	14	3087	1/1	0.94	0.10	73,73,73,73	0
54	MG	14	3088	1/1	0.94	0.12	59,59,59,59	0
54	MG	14	3013	1/1	0.95	0.10	49,49,49,49	0
54	MG	14	3581	1/1	0.95	0.26	55,55,55,55	0
54	MG	14	3014	1/1	0.95	0.13	60,60,60,60	0
54	MG	1H	3524	1/1	0.95	0.16	57,57,57,57	0
54	MG	1H	3189	1/1	0.95	0.15	40,40,40,40	0
54	MG	13	2356	1/1	0.95	0.13	64,64,64,64	0
54	MG	1G	2274	1/1	0.95	0.23	56,56,56,56	0
54	MG	1H	3026	1/1	0.95	0.12	49,49,49,49	0
54	MG	13	2357	1/1	0.95	0.07	86,86,86,86	0
54	MG	14	3469	1/1	0.95	0.26	66,66,66,66	0
54	MG	14	3591	1/1	0.95	0.23	51,51,51,51	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors( $\text{\AA}^2$ )	Q<0.9
54	MG	1G	2218	1/1	0.95	0.41	59,59,59,59	0
54	MG	1H	3604	1/1	0.95	0.09	65,65,65,65	0
54	MG	1G	2238	1/1	0.95	0.22	72,72,72,72	0
54	MG	14	3473	1/1	0.95	0.21	65,65,65,65	0
54	MG	1H	3209	1/1	0.95	0.19	39,39,39,39	0
54	MG	14	3259	1/1	0.95	0.22	47,47,47,47	0
54	MG	1G	2297	1/1	0.95	0.17	68,68,68,68	0
54	MG	14	3477	1/1	0.95	0.55	62,62,62,62	0
54	MG	14	3029	1/1	0.95	0.16	56,56,56,56	0
54	MG	1H	3211	1/1	0.95	0.20	47,47,47,47	0
54	MG	1H	3392	1/1	0.95	0.31	60,60,60,60	0
54	MG	1H	3464	1/1	0.95	0.38	62,62,62,62	0
54	MG	14	3141	1/1	0.95	0.21	55,55,55,55	0
54	MG	1H	3465	1/1	0.95	0.20	43,43,43,43	0
54	MG	14	3036	1/1	0.95	0.18	59,59,59,59	0
54	MG	14	3269	1/1	0.95	0.34	50,50,50,50	0
54	MG	1H	3141	1/1	0.95	0.24	45,45,45,45	0
54	MG	13	2329	1/1	0.95	0.18	59,59,59,59	0
54	MG	14	3378	1/1	0.95	0.11	73,73,73,73	0
54	MG	1H	3274	1/1	0.95	0.50	57,57,57,57	0
54	MG	1H	3214	1/1	0.95	0.43	37,37,37,37	0
54	MG	1H	3617	1/1	0.95	0.09	46,46,46,46	0
54	MG	13	2223	1/1	0.95	0.32	51,51,51,51	0
54	MG	58	201	1/1	0.95	0.47	82,82,82,82	0
54	MG	C8	201	1/1	0.95	0.44	50,50,50,50	0
54	MG	14	3156	1/1	0.95	0.34	63,63,63,63	0
54	MG	14	3161	1/1	0.95	0.36	61,61,61,61	0
54	MG	1H	3146	1/1	0.95	0.38	45,45,45,45	0
54	MG	29	305	1/1	0.95	0.25	67,67,67,67	0
54	MG	42	201	1/1	0.95	0.27	99,99,99,99	0
54	MG	1J	201	1/1	0.95	0.16	90,90,90,90	0
54	MG	14	3048	1/1	0.95	0.19	53,53,53,53	0
54	MG	14	3389	1/1	0.95	0.35	51,51,51,51	0
54	MG	1H	3400	1/1	0.95	0.49	73,73,73,73	0
54	MG	14	3050	1/1	0.95	0.13	70,70,70,70	0
54	MG	1J	206	1/1	0.95	0.25	82,82,82,82	0
54	MG	13	2304	1/1	0.95	0.37	56,56,56,56	0
54	MG	1H	3224	1/1	0.95	0.20	47,47,47,47	0
54	MG	1H	3404	1/1	0.95	0.56	68,68,68,68	0
54	MG	1G	2303	1/1	0.95	0.15	80,80,80,80	0
54	MG	1G	2304	1/1	0.95	0.14	82,82,82,82	0
54	MG	1H	3554	1/1	0.95	0.14	64,64,64,64	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors( $\text{\AA}^2$ )	Q<0.9
54	MG	14	3514	1/1	0.95	0.46	97,97,97,97	0
54	MG	14	3515	1/1	0.95	0.13	76,76,76,76	0
54	MG	78	201	1/1	0.95	0.15	44,44,44,44	0
54	MG	14	3293	1/1	0.95	0.21	52,52,52,52	0
54	MG	1H	3227	1/1	0.95	0.41	46,46,46,46	0
54	MG	14	3059	1/1	0.95	0.05	55,55,55,55	0
54	MG	1H	3409	1/1	0.95	0.26	67,67,67,67	0
54	MG	1H	3228	1/1	0.95	0.36	45,45,45,45	0
53	8UZ	1G	2202	33/33	0.95	0.25	83,83,83,83	0
54	MG	31	303	1/1	0.95	0.12	47,47,47,47	0
53	8UZ	13	2201	33/33	0.95	0.28	63,63,63,63	0
54	MG	14	3191	1/1	0.95	0.35	57,57,57,57	0
54	MG	14	3304	1/1	0.95	0.24	48,48,48,48	0
54	MG	1H	3293	1/1	0.95	0.12	38,38,38,38	0
54	MG	13	2249	1/1	0.95	0.33	66,66,66,66	0
54	MG	14	3528	1/1	0.95	0.34	61,61,61,61	0
54	MG	D8	202	1/1	0.95	0.45	72,72,72,72	0
54	MG	1H	3416	1/1	0.95	0.43	36,36,36,36	0
54	MG	14	3531	1/1	0.95	0.12	66,66,66,66	0
54	MG	1H	3047	1/1	0.95	0.08	48,48,48,48	0
54	MG	1G	2353	1/1	0.95	0.13	73,73,73,73	0
54	MG	1H	3090	1/1	0.95	0.09	42,42,42,42	0
53	8UZ	1G	2201	33/33	0.95	0.21	74,74,74,74	0
54	MG	1H	3092	1/1	0.95	0.07	54,54,54,54	0
54	MG	88	203	1/1	0.95	0.29	48,48,48,48	0
54	MG	1H	3053	1/1	0.95	0.11	40,40,40,40	0
54	MG	1H	3497	1/1	0.95	0.21	55,55,55,55	0
54	MG	13	2365	1/1	0.95	0.41	68,68,68,68	0
54	MG	1H	3500	1/1	0.95	0.21	54,54,54,54	0
54	MG	14	3427	1/1	0.95	0.20	57,57,57,57	0
54	MG	1H	3575	1/1	0.95	0.70	60,60,60,60	0
54	MG	14	3543	1/1	0.95	0.21	52,52,52,52	0
54	MG	1H	3646	1/1	0.95	0.20	47,47,47,47	0
54	MG	1H	3009	1/1	0.95	0.18	46,46,46,46	0
54	MG	13	2232	1/1	0.95	0.14	75,75,75,75	0
54	MG	14	3432	1/1	0.95	0.32	58,58,58,58	0
54	MG	1G	2213	1/1	0.95	0.15	68,68,68,68	0
54	MG	14	3434	1/1	0.95	0.16	46,46,46,46	0
54	MG	1H	3171	1/1	0.95	0.30	38,38,38,38	0
54	MG	14	3083	1/1	0.95	0.13	54,54,54,54	0
54	MG	1H	3366	1/1	0.95	0.21	53,53,53,53	0
54	MG	1H	3118	1/1	0.95	0.27	48,48,48,48	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors( $\text{\AA}^2$ )	Q<0.9
54	MG	14	3086	1/1	0.95	0.11	55,55,55,55	0
54	MG	14	3556	1/1	0.95	0.18	56,56,56,56	0
54	MG	1H	3012	1/1	0.95	0.16	44,44,44,44	0
54	MG	1H	3310	1/1	0.95	0.13	37,37,37,37	0
54	MG	1H	3370	1/1	0.95	0.22	56,56,56,56	0
54	MG	14	3090	1/1	0.95	0.15	56,56,56,56	0
54	MG	1H	3311	1/1	0.95	0.14	42,42,42,42	0
54	MG	13	2242	1/1	0.95	0.29	61,61,61,61	0
54	MG	14	3447	1/1	0.95	0.20	58,58,58,58	0
54	MG	1H	3253	1/1	0.95	0.17	51,51,51,51	0
54	MG	1H	3316	1/1	0.95	0.14	44,44,44,44	0
54	MG	1H	3590	1/1	0.95	0.31	61,61,61,61	0
54	MG	1H	3178	1/1	0.95	0.36	48,48,48,48	0
54	MG	14	3099	1/1	0.95	0.33	52,52,52,52	0
54	MG	14	3103	1/1	0.95	0.28	49,49,49,49	0
54	MG	14	3571	1/1	0.95	0.27	63,63,63,63	0
54	MG	14	3454	1/1	0.95	0.15	64,64,64,64	0
54	MG	14	3105	1/1	0.95	0.24	48,48,48,48	0
54	MG	1H	3123	1/1	0.95	0.25	47,47,47,47	0
54	MG	14	3008	1/1	0.95	0.15	49,49,49,49	0
54	MG	1G	2290	1/1	0.95	0.17	73,73,73,73	0
54	MG	14	3577	1/1	0.95	0.16	54,54,54,54	0
54	MG	1G	2234	1/1	0.95	0.28	72,72,72,72	0
54	MG	1H	3020	1/1	0.95	0.14	44,44,44,44	0
54	MG	13	2319	1/1	0.96	0.68	68,68,68,68	0
54	MG	1H	3024	1/1	0.96	0.17	43,43,43,43	0
54	MG	1H	3187	1/1	0.96	0.15	42,42,42,42	0
54	MG	1H	3365	1/1	0.96	0.29	58,58,58,58	0
54	MG	1H	3650	1/1	0.96	0.19	56,56,56,56	0
54	MG	13	2294	1/1	0.96	0.14	72,72,72,72	0
54	MG	1G	2220	1/1	0.96	0.11	72,72,72,72	0
54	MG	1H	3580	1/1	0.96	0.32	43,43,43,43	0
54	MG	1H	3654	1/1	0.96	0.48	51,51,51,51	0
54	MG	1H	3308	1/1	0.96	0.32	40,40,40,40	0
54	MG	1H	3656	1/1	0.96	0.24	44,44,44,44	0
54	MG	1H	3657	1/1	0.96	1.34	47,47,47,47	0
54	MG	1H	3507	1/1	0.96	0.24	40,40,40,40	0
54	MG	1G	2306	1/1	0.96	0.44	61,61,61,61	0
54	MG	14	3338	1/1	0.96	0.17	65,65,65,65	0
54	MG	1H	3191	1/1	0.96	0.40	35,35,35,35	0
54	MG	14	3594	1/1	0.96	0.34	51,51,51,51	0
54	MG	1H	3192	1/1	0.96	0.32	34,34,34,34	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors( $\text{\AA}^2$ )	Q<0.9
54	MG	1H	3194	1/1	0.96	0.33	53,53,53,53	0
54	MG	1H	3314	1/1	0.96	0.39	42,42,42,42	0
54	MG	14	3091	1/1	0.96	0.14	56,56,56,56	0
54	MG	21	302	1/1	0.96	0.16	50,50,50,50	0
54	MG	1H	3144	1/1	0.96	0.39	65,65,65,65	0
54	MG	1H	3196	1/1	0.96	0.23	39,39,39,39	0
54	MG	14	3001	1/1	0.96	0.10	48,48,48,48	0
54	MG	4E	201	1/1	0.96	0.29	81,81,81,81	0
54	MG	14	3347	1/1	0.96	0.34	64,64,64,64	0
54	MG	16	202	1/1	0.96	0.36	66,66,66,66	0
54	MG	14	3226	1/1	0.96	0.51	67,67,67,67	0
54	MG	14	3349	1/1	0.96	0.09	82,82,82,82	0
54	MG	13	2251	1/1	0.96	0.18	67,67,67,67	0
54	MG	1H	3201	1/1	0.96	0.37	42,42,42,42	0
54	MG	1H	3202	1/1	0.96	0.38	34,34,34,34	0
54	MG	1H	3520	1/1	0.96	0.17	53,53,53,53	0
54	MG	1H	3203	1/1	0.96	0.19	43,43,43,43	0
54	MG	1H	3446	1/1	0.96	0.30	61,61,61,61	0
54	MG	14	3106	1/1	0.96	0.40	49,49,49,49	0
54	MG	1H	3447	1/1	0.96	0.23	55,55,55,55	0
54	MG	14	3108	1/1	0.96	0.16	52,52,52,52	0
54	MG	1H	3322	1/1	0.96	0.33	57,57,57,57	0
54	MG	1H	3450	1/1	0.96	0.21	60,60,60,60	0
54	MG	14	3487	1/1	0.96	0.16	45,45,45,45	0
54	MG	14	3239	1/1	0.96	0.25	62,62,62,62	0
54	MG	14	3017	1/1	0.96	0.07	50,50,50,50	0
54	MG	1H	3451	1/1	0.96	0.17	46,46,46,46	0
54	MG	1H	3204	1/1	0.96	0.26	42,42,42,42	0
54	MG	1H	3032	1/1	0.96	0.16	53,53,53,53	0
54	MG	14	3117	1/1	0.96	0.22	69,69,69,69	0
54	MG	13	2221	1/1	0.96	0.24	72,72,72,72	0
54	MG	14	3497	1/1	0.96	0.22	55,55,55,55	0
54	MG	1G	2251	1/1	0.96	0.28	71,71,71,71	0
54	MG	14	3249	1/1	0.96	0.46	66,66,66,66	0
54	MG	1H	3531	1/1	0.96	0.29	45,45,45,45	0
54	MG	1H	3151	1/1	0.96	0.29	51,51,51,51	0
54	MG	14	3252	1/1	0.96	0.23	56,56,56,56	0
54	MG	14	3123	1/1	0.96	0.43	45,45,45,45	0
54	MG	1G	2223	1/1	0.96	0.20	72,72,72,72	0
54	MG	14	3125	1/1	0.96	0.22	63,63,63,63	0
54	MG	14	3126	1/1	0.96	0.34	53,53,53,53	0
54	MG	1H	3269	1/1	0.96	0.62	48,48,48,48	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors( $\text{\AA}^2$ )	Q<0.9
54	MG	1H	3609	1/1	0.96	0.33	45,45,45,45	0
54	MG	1H	3097	1/1	0.96	0.34	42,42,42,42	0
54	MG	1H	3331	1/1	0.96	0.29	84,84,84,84	0
54	MG	1H	3155	1/1	0.96	0.21	39,39,39,39	0
54	MG	1H	3156	1/1	0.96	0.27	63,63,63,63	0
54	MG	1H	3101	1/1	0.96	0.32	38,38,38,38	0
54	MG	I8	102	1/1	0.96	0.21	45,45,45,45	0
54	MG	14	3135	1/1	0.96	0.38	47,47,47,47	0
54	MG	1H	3104	1/1	0.96	0.30	50,50,50,50	0
54	MG	1H	3275	1/1	0.96	0.51	54,54,54,54	0
54	MG	14	3390	1/1	0.96	0.13	53,53,53,53	0
54	MG	14	3138	1/1	0.96	0.26	56,56,56,56	0
54	MG	14	3393	1/1	0.96	0.82	57,57,57,57	0
54	MG	14	3039	1/1	0.96	0.11	53,53,53,53	0
54	MG	14	3040	1/1	0.96	0.07	54,54,54,54	0
54	MG	1H	3065	1/1	0.96	0.10	56,56,56,56	0
54	MG	14	3144	1/1	0.96	0.29	54,54,54,54	0
54	MG	1H	3338	1/1	0.96	0.16	57,57,57,57	0
54	MG	1H	3277	1/1	0.96	0.31	53,53,53,53	0
54	MG	14	3529	1/1	0.96	0.21	61,61,61,61	0
54	MG	1H	3036	1/1	0.96	0.12	47,47,47,47	0
54	MG	14	3277	1/1	0.96	0.14	54,54,54,54	0
54	MG	1H	3220	1/1	0.96	0.32	44,44,44,44	0
54	MG	14	3046	1/1	0.96	0.12	51,51,51,51	0
54	MG	1G	2311	1/1	0.96	0.47	62,62,62,62	0
54	MG	1H	3007	1/1	0.96	0.12	46,46,46,46	0
54	MG	1H	3405	1/1	0.96	0.32	63,63,63,63	0
54	MG	1H	3550	1/1	0.96	0.18	58,58,58,58	0
54	MG	14	3157	1/1	0.96	0.28	57,57,57,57	0
54	MG	13	2203	1/1	0.96	0.20	90,90,90,90	0
54	MG	14	3163	1/1	0.96	0.27	57,57,57,57	0
54	MG	14	3411	1/1	0.96	0.38	77,77,77,77	0
54	MG	1H	3552	1/1	0.96	0.18	49,49,49,49	0
54	MG	1G	2211	1/1	0.96	0.10	69,69,69,69	0
54	MG	14	3166	1/1	0.96	0.39	49,49,49,49	0
54	MG	14	3291	1/1	0.96	0.14	69,69,69,69	0
54	MG	14	3167	1/1	0.96	0.23	54,54,54,54	0
54	MG	13	2255	1/1	0.96	0.14	70,70,70,70	0
54	MG	14	3548	1/1	0.96	0.14	55,55,55,55	0
54	MG	13	2269	1/1	0.96	0.31	70,70,70,70	0
54	MG	14	3422	1/1	0.96	0.34	50,50,50,50	0
54	MG	1H	3073	1/1	0.96	0.09	40,40,40,40	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors( $\text{\AA}^2$ )	Q<0.9
54	MG	14	3057	1/1	0.96	0.06	55,55,55,55	0
54	MG	1H	3411	1/1	0.96	0.15	52,52,52,52	0
54	MG	14	3299	1/1	0.96	0.12	69,69,69,69	0
54	MG	14	3175	1/1	0.96	0.32	58,58,58,58	0
54	MG	14	3176	1/1	0.96	0.64	63,63,63,63	0
54	MG	14	3177	1/1	0.96	0.51	52,52,52,52	0
54	MG	1G	2299	1/1	0.96	0.22	96,96,96,96	0
54	MG	14	3060	1/1	0.96	0.12	59,59,59,59	0
54	MG	14	3307	1/1	0.96	0.28	58,58,58,58	0
54	MG	1G	2300	1/1	0.96	0.23	91,91,91,91	0
54	MG	1G	2352	1/1	0.96	0.19	79,79,79,79	0
54	MG	1H	3174	1/1	0.96	0.29	51,51,51,51	0
54	MG	13	2208	1/1	0.96	0.08	84,84,84,84	0
54	MG	1H	3236	1/1	0.96	0.71	79,79,79,79	0
54	MG	13	2250	1/1	0.96	0.30	74,74,74,74	0
54	MG	14	3315	1/1	0.96	0.17	55,55,55,55	0
54	MG	1H	3298	1/1	0.96	0.39	46,46,46,46	0
54	MG	W4	102	1/1	0.96	0.08	88,88,88,88	0
54	MG	1H	3136	1/1	0.96	0.09	48,48,48,48	0
54	MG	14	3570	1/1	0.96	0.22	59,59,59,59	0
54	MG	1H	3240	1/1	0.96	0.49	57,57,57,57	0
54	MG	14	3194	1/1	0.96	0.21	65,65,65,65	0
54	MG	1H	3179	1/1	0.96	0.20	49,49,49,49	0
54	MG	14	3196	1/1	0.96	0.33	54,54,54,54	0
54	MG	1H	3052	1/1	0.96	0.08	46,46,46,46	0
54	MG	1H	3498	1/1	0.96	0.14	64,64,64,64	0
55	ZN	C5	201	1/1	0.96	0.08	116,116,116,116	0
54	MG	1H	3055	1/1	0.97	0.10	59,59,59,59	0
54	MG	1G	2370	1/1	0.97	0.17	102,102,102,102	0
54	MG	1H	3506	1/1	0.97	0.33	38,38,38,38	0
54	MG	1H	3140	1/1	0.97	0.27	43,43,43,43	0
54	MG	14	3273	1/1	0.97	0.30	72,72,72,72	0
54	MG	14	3171	1/1	0.97	0.35	49,49,49,49	0
54	MG	1H	3251	1/1	0.97	0.54	52,52,52,52	0
54	MG	1H	3510	1/1	0.97	0.50	56,56,56,56	0
54	MG	1H	3372	1/1	0.97	0.32	40,40,40,40	0
54	MG	1H	3661	1/1	0.97	0.25	48,48,48,48	0
54	MG	14	3496	1/1	0.97	0.17	53,53,53,53	0
54	MG	1H	3193	1/1	0.97	0.45	42,42,42,42	0
54	MG	14	3498	1/1	0.97	0.13	51,51,51,51	0
54	MG	16	206	1/1	0.97	0.50	57,57,57,57	0
54	MG	1H	3438	1/1	0.97	0.19	60,60,60,60	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors( $\text{\AA}^2$ )	Q<0.9
54	MG	14	3179	1/1	0.97	0.75	56,56,56,56	0
54	MG	14	3501	1/1	0.97	0.15	101,101,101,101	0
54	MG	1H	3030	1/1	0.97	0.11	44,44,44,44	0
54	MG	1H	3313	1/1	0.97	0.29	45,45,45,45	0
54	MG	13	2253	1/1	0.97	0.14	57,57,57,57	0
54	MG	14	3184	1/1	0.97	0.36	43,43,43,43	0
54	MG	13	2240	1/1	0.97	0.62	74,74,74,74	0
54	MG	1G	2260	1/1	0.97	0.08	81,81,81,81	0
54	MG	14	3288	1/1	0.97	0.16	47,47,47,47	0
54	MG	1H	3199	1/1	0.97	0.35	37,37,37,37	0
54	MG	1H	3200	1/1	0.97	0.31	41,41,41,41	0
54	MG	1H	3259	1/1	0.97	0.28	54,54,54,54	0
54	MG	1H	3320	1/1	0.97	0.23	42,42,42,42	0
54	MG	14	3011	1/1	0.97	0.22	55,55,55,55	0
54	MG	14	3294	1/1	0.97	0.24	48,48,48,48	0
54	MG	29	306	1/1	0.97	0.27	69,69,69,69	0
54	MG	14	3193	1/1	0.97	0.14	46,46,46,46	0
54	MG	13	2247	1/1	0.97	0.23	68,68,68,68	0
54	MG	14	3093	1/1	0.97	0.08	63,63,63,63	0
54	MG	1H	3452	1/1	0.97	0.26	42,42,42,42	0
54	MG	14	3197	1/1	0.97	0.22	58,58,58,58	0
54	MG	1H	3599	1/1	0.97	0.31	53,53,53,53	0
54	MG	1H	3453	1/1	0.97	0.33	39,39,39,39	0
54	MG	1G	2226	1/1	0.97	0.11	104,104,104,104	0
54	MG	14	3201	1/1	0.97	0.55	45,45,45,45	0
54	MG	14	3202	1/1	0.97	0.23	52,52,52,52	0
54	MG	1H	3094	1/1	0.97	0.11	59,59,59,59	0
54	MG	1H	3263	1/1	0.97	0.60	62,62,62,62	0
54	MG	14	3527	1/1	0.97	0.10	66,66,66,66	0
54	MG	14	3102	1/1	0.97	0.21	51,51,51,51	0
54	MG	14	3416	1/1	0.97	0.12	57,57,57,57	0
54	MG	13	2241	1/1	0.97	0.34	48,48,48,48	0
54	MG	14	3104	1/1	0.97	0.29	48,48,48,48	0
54	MG	14	3420	1/1	0.97	0.43	46,46,46,46	0
54	MG	1G	2278	1/1	0.97	0.13	79,79,79,79	0
54	MG	1H	3152	1/1	0.97	0.30	46,46,46,46	0
54	MG	13	2207	1/1	0.97	0.07	75,75,75,75	0
54	MG	1H	3102	1/1	0.97	0.28	49,49,49,49	0
54	MG	1H	3103	1/1	0.97	0.33	44,44,44,44	0
54	MG	1G	2219	1/1	0.97	0.22	65,65,65,65	0
54	MG	14	3111	1/1	0.97	0.34	61,61,61,61	0
54	MG	1H	3040	1/1	0.97	0.13	53,53,53,53	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors( $\text{\AA}^2$ )	Q<0.9
54	MG	14	3217	1/1	0.97	0.46	64,64,64,64	0
54	MG	1H	3108	1/1	0.97	0.21	53,53,53,53	0
54	MG	1H	3466	1/1	0.97	0.08	54,54,54,54	0
54	MG	14	3032	1/1	0.97	0.16	47,47,47,47	0
54	MG	1H	3109	1/1	0.97	0.37	36,36,36,36	0
54	MG	1H	3215	1/1	0.97	0.28	49,49,49,49	0
54	MG	1H	3110	1/1	0.97	0.33	38,38,38,38	0
54	MG	1H	3161	1/1	0.97	0.32	56,56,56,56	0
54	MG	1H	3401	1/1	0.97	0.30	33,33,33,33	0
54	MG	1H	3111	1/1	0.97	0.42	34,34,34,34	0
54	MG	1H	3112	1/1	0.97	0.34	40,40,40,40	0
54	MG	1H	3279	1/1	0.97	0.20	46,46,46,46	0
54	MG	1H	3222	1/1	0.97	0.30	43,43,43,43	0
54	MG	1H	3114	1/1	0.97	0.23	49,49,49,49	0
54	MG	1H	3016	1/1	0.97	0.09	41,41,41,41	0
54	MG	14	3232	1/1	0.97	0.16	67,67,67,67	0
54	MG	1H	3478	1/1	0.97	0.23	49,49,49,49	0
54	MG	1H	3284	1/1	0.97	0.10	47,47,47,47	0
54	MG	1H	3480	1/1	0.97	0.10	56,56,56,56	0
54	MG	1H	3017	1/1	0.97	0.16	54,54,54,54	0
54	MG	1H	3018	1/1	0.97	0.22	46,46,46,46	0
54	MG	1H	3555	1/1	0.97	0.36	73,73,73,73	0
54	MG	1H	3019	1/1	0.97	0.18	46,46,46,46	0
54	MG	98	201	1/1	0.97	0.19	52,52,52,52	0
54	MG	1H	3557	1/1	0.97	0.22	56,56,56,56	0
54	MG	13	2309	1/1	0.97	0.49	55,55,55,55	0
54	MG	1H	3074	1/1	0.97	0.19	105,105,105,105	0
54	MG	14	3140	1/1	0.97	0.26	53,53,53,53	0
54	MG	1H	3290	1/1	0.97	0.44	38,38,38,38	0
54	MG	14	3245	1/1	0.97	0.29	65,65,65,65	0
54	MG	1H	3487	1/1	0.97	0.12	59,59,59,59	0
54	MG	1G	2241	1/1	0.97	0.42	75,75,75,75	0
54	MG	14	3248	1/1	0.97	0.32	66,66,66,66	0
54	MG	1H	3127	1/1	0.97	0.39	43,43,43,43	0
54	MG	1H	3128	1/1	0.97	0.28	53,53,53,53	0
54	MG	1H	3077	1/1	0.97	0.23	47,47,47,47	0
54	MG	1H	3078	1/1	0.97	0.39	54,54,54,54	0
54	MG	14	3357	1/1	0.97	0.30	50,50,50,50	0
54	MG	1H	3049	1/1	0.97	0.11	45,45,45,45	0
54	MG	14	3359	1/1	0.97	0.44	63,63,63,63	0
54	MG	13	2206	1/1	0.97	0.08	86,86,86,86	0
54	MG	14	3152	1/1	0.97	0.47	49,49,49,49	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors( $\text{\AA}^2$ )	Q<0.9
54	MG	13	2239	1/1	0.97	0.52	77,77,77,77	0
54	MG	1H	3239	1/1	0.97	0.54	54,54,54,54	0
54	MG	1H	3183	1/1	0.97	0.13	43,43,43,43	0
54	MG	1H	3241	1/1	0.97	0.51	54,54,54,54	0
54	MG	14	3159	1/1	0.97	0.47	46,46,46,46	0
54	MG	14	3587	1/1	0.97	0.16	65,65,65,65	0
54	MG	14	3160	1/1	0.97	0.15	49,49,49,49	0
54	MG	1H	3185	1/1	0.97	0.30	37,37,37,37	0
54	MG	14	3162	1/1	0.97	0.46	49,49,49,49	0
54	MG	1G	2245	1/1	0.97	0.30	73,73,73,73	0
54	MG	1H	3135	1/1	0.97	0.42	51,51,51,51	0
54	MG	14	3266	1/1	0.97	0.19	51,51,51,51	0
54	MG	1H	3027	1/1	0.97	0.13	43,43,43,43	0
54	MG	1H	3028	1/1	0.97	0.11	43,43,43,43	0
54	MG	14	3596	1/1	0.97	0.18	58,58,58,58	0
55	ZN	5A	101	1/1	0.97	0.09	103,103,103,103	0
54	MG	1H	3113	1/1	0.98	0.24	51,51,51,51	0
54	MG	1H	3345	1/1	0.98	0.23	42,42,42,42	0
54	MG	13	2238	1/1	0.98	0.28	80,80,80,80	0
54	MG	1H	3043	1/1	0.98	0.13	44,44,44,44	0
54	MG	1H	3170	1/1	0.98	0.26	40,40,40,40	0
54	MG	14	3302	1/1	0.98	0.23	74,74,74,74	0
54	MG	13	2369	1/1	0.98	0.10	96,96,96,96	0
54	MG	1H	3172	1/1	0.98	0.16	41,41,41,41	0
54	MG	21	301	1/1	0.98	0.31	41,41,41,41	0
54	MG	14	3305	1/1	0.98	0.41	68,68,68,68	0
54	MG	14	3142	1/1	0.98	0.19	55,55,55,55	0
54	MG	1H	3076	1/1	0.98	0.17	49,49,49,49	0
54	MG	13	2248	1/1	0.98	0.45	62,62,62,62	0
54	MG	13	2267	1/1	0.98	0.25	87,87,87,87	0
54	MG	14	3146	1/1	0.98	0.26	58,58,58,58	0
54	MG	14	3311	1/1	0.98	0.32	43,43,43,43	0
54	MG	1H	3121	1/1	0.98	0.29	38,38,38,38	0
54	MG	1H	3282	1/1	0.98	0.51	61,61,61,61	0
54	MG	14	3203	1/1	0.98	0.20	57,57,57,57	0
54	MG	14	3100	1/1	0.98	0.32	51,51,51,51	0
54	MG	14	3101	1/1	0.98	0.27	49,49,49,49	0
54	MG	1H	3177	1/1	0.98	0.37	41,41,41,41	0
54	MG	14	3495	1/1	0.98	0.23	38,38,38,38	0
54	MG	1H	3122	1/1	0.98	0.18	38,38,38,38	0
54	MG	14	3153	1/1	0.98	0.28	47,47,47,47	0
54	MG	1H	3149	1/1	0.98	0.44	33,33,33,33	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors( $\text{\AA}^2$ )	Q<0.9
54	MG	1H	3435	1/1	0.98	0.30	51,51,51,51	0
54	MG	14	3379	1/1	0.98	0.30	56,56,56,56	0
54	MG	1H	3250	1/1	0.98	0.42	42,42,42,42	0
54	MG	1H	3150	1/1	0.98	0.29	53,53,53,53	0
54	MG	14	3158	1/1	0.98	0.47	42,42,42,42	0
54	MG	1H	3096	1/1	0.98	0.11	52,52,52,52	0
54	MG	1H	3182	1/1	0.98	0.50	33,33,33,33	0
54	MG	29	302	1/1	0.98	0.20	49,49,49,49	0
54	MG	1G	2269	1/1	0.98	0.48	65,65,65,65	0
54	MG	14	3025	1/1	0.98	0.08	52,52,52,52	0
54	MG	1H	3184	1/1	0.98	0.23	46,46,46,46	0
54	MG	14	3113	1/1	0.98	0.30	50,50,50,50	0
54	MG	1H	3126	1/1	0.98	0.17	40,40,40,40	0
54	MG	1H	3221	1/1	0.98	0.28	47,47,47,47	0
54	MG	1H	3445	1/1	0.98	0.17	45,45,45,45	0
54	MG	1H	3098	1/1	0.98	0.29	39,39,39,39	0
54	MG	14	3031	1/1	0.98	0.16	48,48,48,48	0
54	MG	14	3119	1/1	0.98	0.15	60,60,60,60	0
54	MG	1H	3099	1/1	0.98	0.30	40,40,40,40	0
54	MG	1H	3048	1/1	0.98	0.12	42,42,42,42	0
54	MG	13	2243	1/1	0.98	0.19	51,51,51,51	0
54	MG	1G	2204	1/1	0.98	0.12	64,64,64,64	0
54	MG	1H	3023	1/1	0.98	0.16	43,43,43,43	0
54	MG	13	2276	1/1	0.98	0.33	69,69,69,69	0
54	MG	1H	3106	1/1	0.98	0.40	37,37,37,37	0
54	MG	13	2215	1/1	0.98	0.11	69,69,69,69	0
54	MG	1G	2217	1/1	0.98	0.27	73,73,73,73	0
54	MG	13	2224	1/1	0.98	0.33	65,65,65,65	0
54	MG	14	3182	1/1	0.98	0.32	56,56,56,56	0
54	MG	1H	3197	1/1	0.98	0.33	39,39,39,39	0
54	MG	13	2220	1/1	0.98	0.17	66,66,66,66	0
54	MG	1H	3089	1/1	0.98	0.14	46,46,46,46	0
54	MG	14	3133	1/1	0.98	0.46	46,46,46,46	0
55	ZN	3E	301	1/1	0.98	0.42	86,86,86,86	0
54	MG	1H	3381	1/1	0.98	0.31	53,53,53,53	0
54	MG	14	3188	1/1	0.98	0.16	53,53,53,53	0
54	MG	14	3391	1/1	0.99	0.16	56,56,56,56	0
54	MG	1H	3059	1/1	0.99	0.08	50,50,50,50	0
54	MG	1H	3231	1/1	0.99	0.22	50,50,50,50	0
54	MG	1H	3100	1/1	0.99	0.27	39,39,39,39	0
54	MG	1H	3107	1/1	0.99	0.30	44,44,44,44	0
54	MG	1H	3508	1/1	0.99	0.67	45,45,45,45	0

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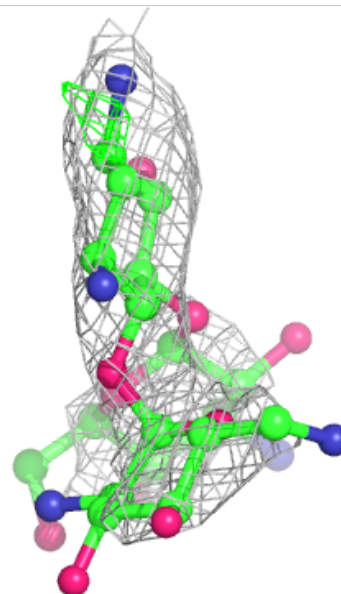
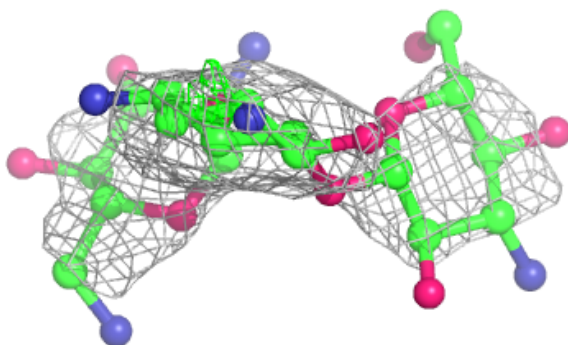
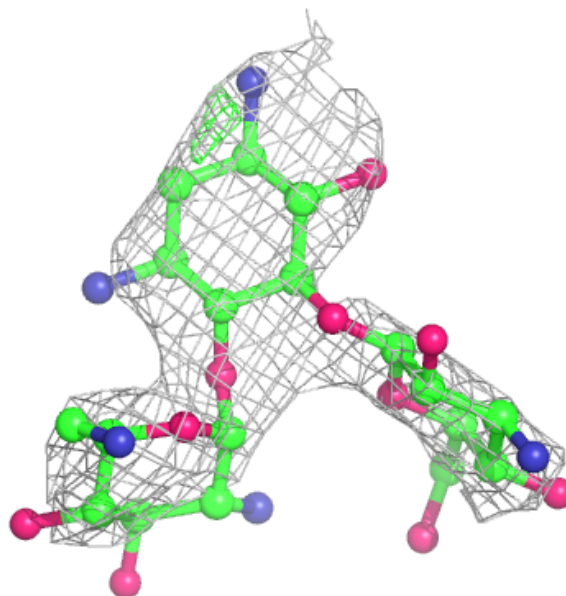
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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors( $\text{\AA}^2$ )	Q<0.9
54	MG	1H	3443	1/1	0.99	0.15	53,53,53,53	0
54	MG	13	2219	1/1	0.99	0.20	71,71,71,71	0
54	MG	14	3418	1/1	0.99	0.45	44,44,44,44	0
54	MG	13	2216	1/1	0.99	0.28	59,59,59,59	0
54	MG	14	3482	1/1	0.99	0.26	61,61,61,61	0
54	MG	1H	3568	1/1	0.99	0.22	48,48,48,48	0
54	MG	K8	101	1/1	0.99	0.22	60,60,60,60	0
54	MG	1H	3659	1/1	0.99	0.16	41,41,41,41	0
54	MG	1H	3117	1/1	0.99	0.24	36,36,36,36	0
54	MG	1H	3216	1/1	0.99	0.39	52,52,52,52	0
54	MG	14	3444	1/1	0.99	0.23	51,51,51,51	0
54	MG	1G	2244	1/1	0.99	0.32	80,80,80,80	0
54	MG	1H	3449	1/1	0.99	0.36	37,37,37,37	0
54	MG	14	3018	1/1	0.99	0.17	51,51,51,51	0
54	MG	1H	3208	1/1	0.99	0.37	54,54,54,54	0
54	MG	14	3173	1/1	0.99	0.36	45,45,45,45	0
55	ZN	32	301	1/1	0.99	0.40	87,87,87,87	0
55	ZN	5I	101	1/1	0.99	0.10	84,84,84,84	0
54	MG	1H	3022	1/1	0.99	0.13	41,41,41,41	0
54	MG	1H	3124	1/1	1.00	0.28	35,35,35,35	0

The following is a graphical depiction of the model fit to experimental electron density of all instances of the Ligand of Interest. In addition, ligands with molecular weight > 250 and outliers as shown on the geometry validation Tables will also be included. Each fit is shown from different orientation to approximate a three-dimensional view.

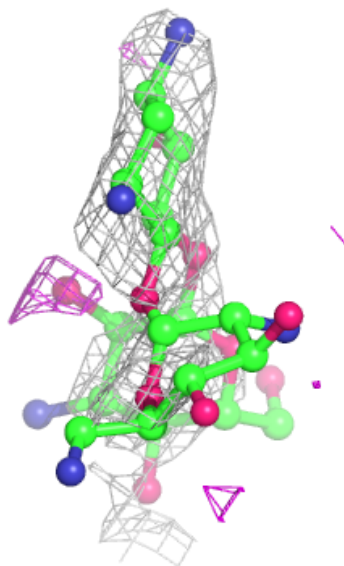
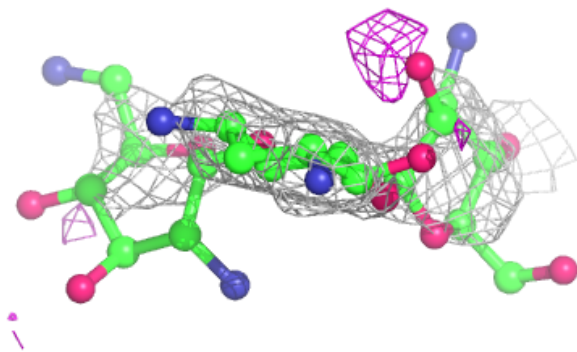
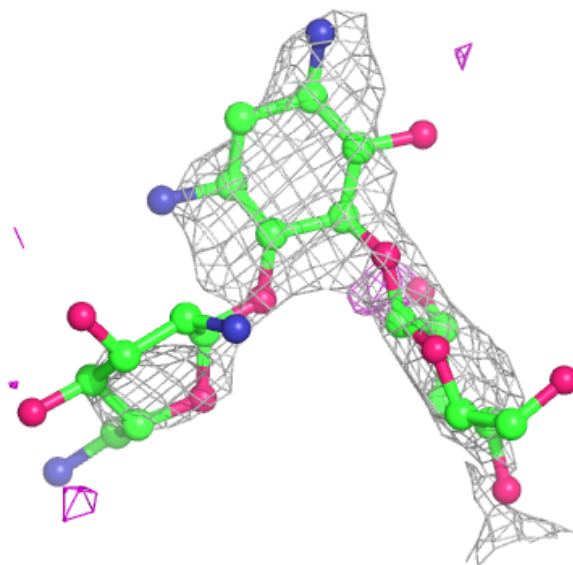
**Electron density around 8UZ 1H 3003:**

$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)



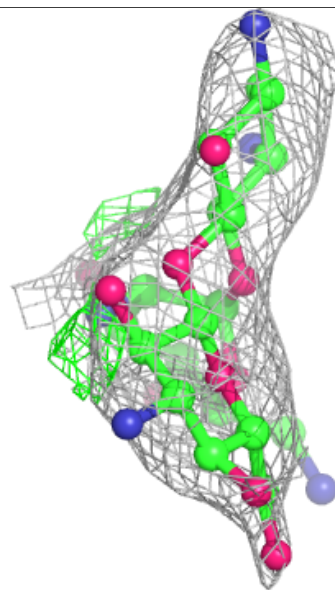
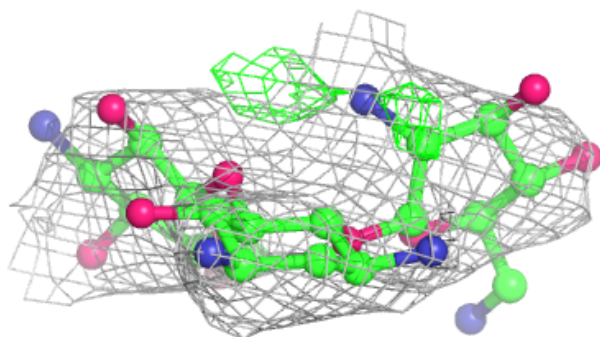
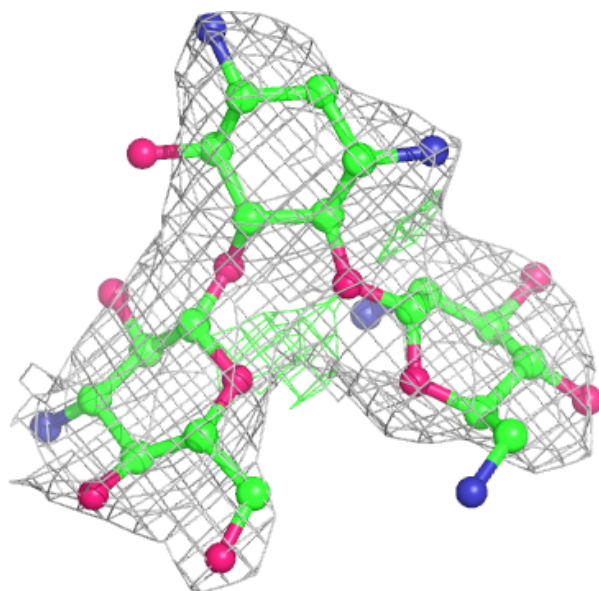
**Electron density around 8UZ 14 3003:**

$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)



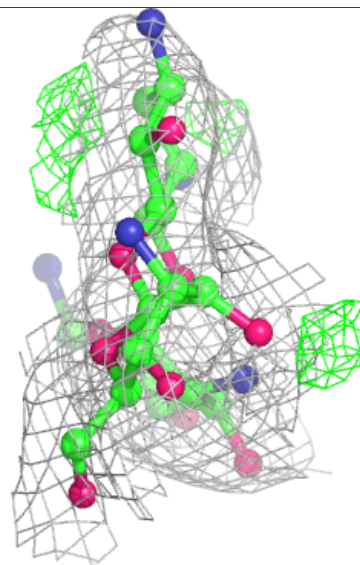
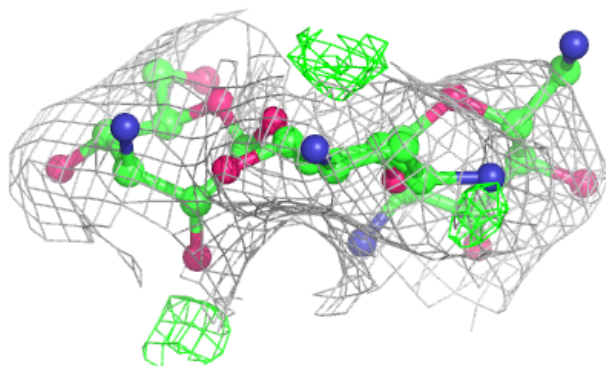
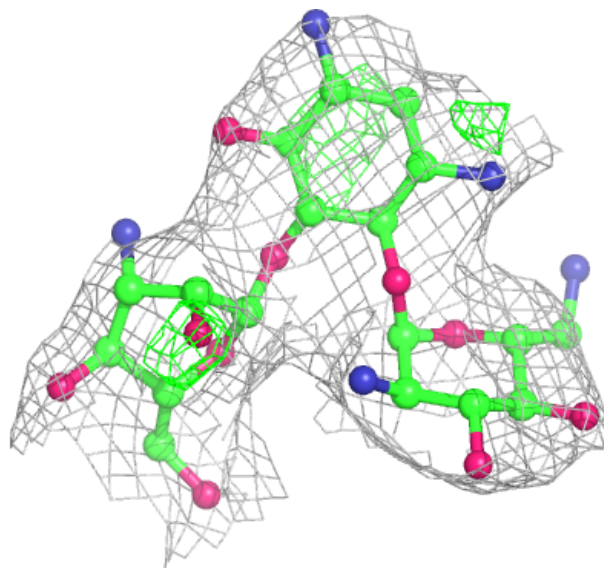
**Electron density around 8UZ 14 3006:**

$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)



**Electron density around 8UZ 14 3005:**

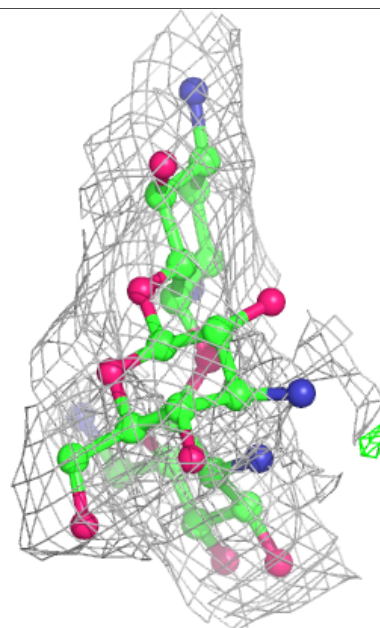
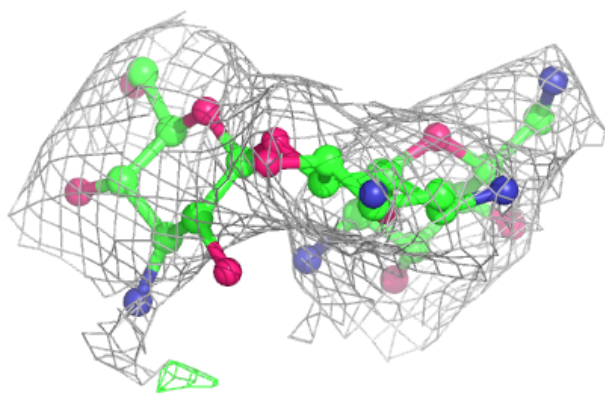
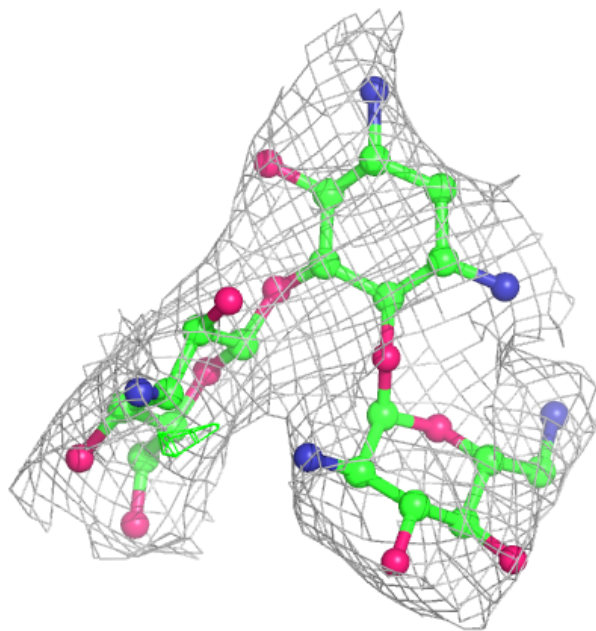
$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)





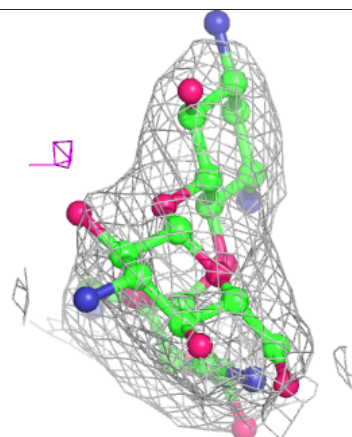
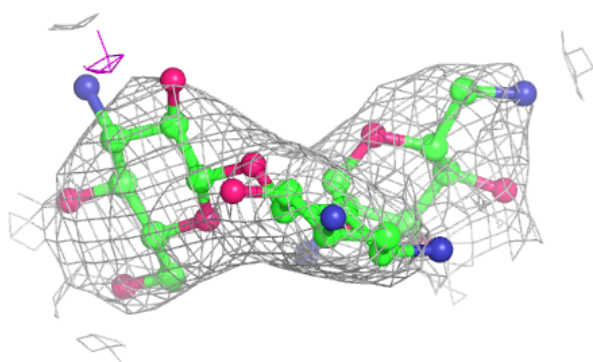
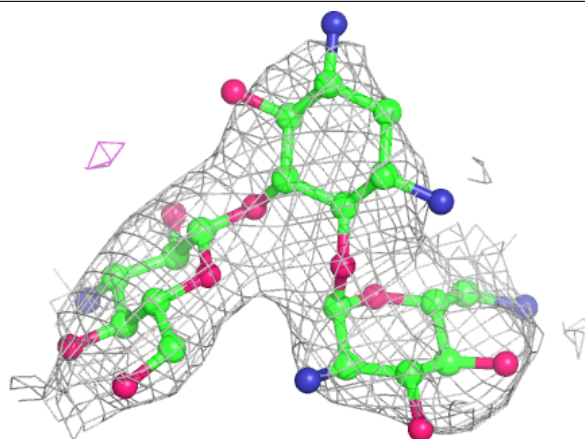
**Electron density around 8UZ 1H 3005:**

$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)



**Electron density around 8UZ 14 3004:**

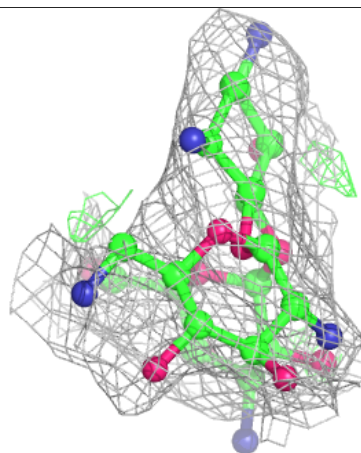
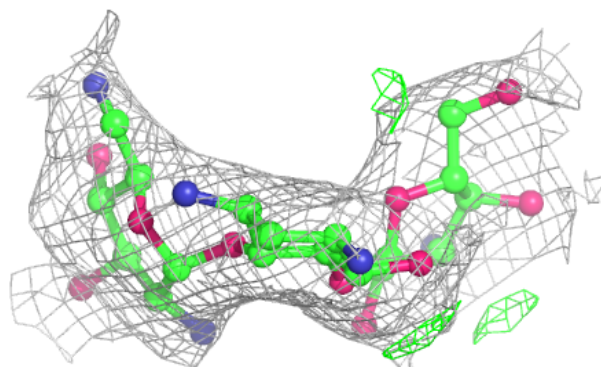
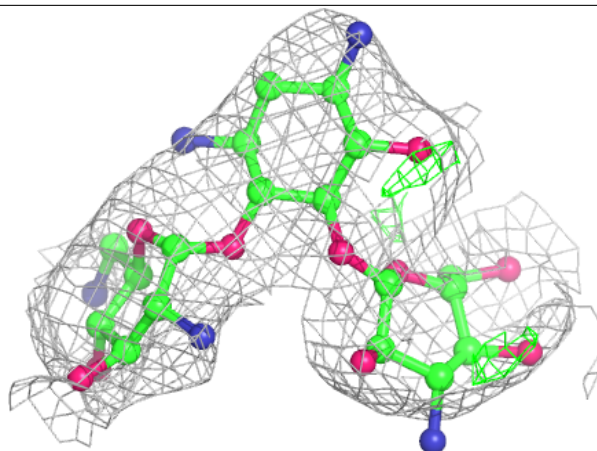
$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)





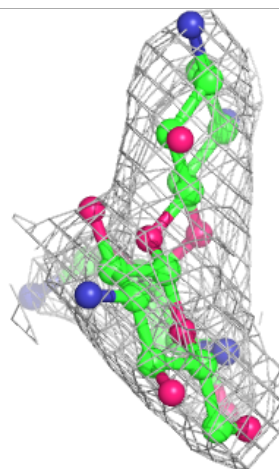
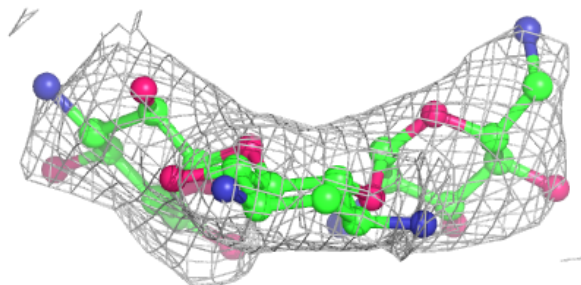
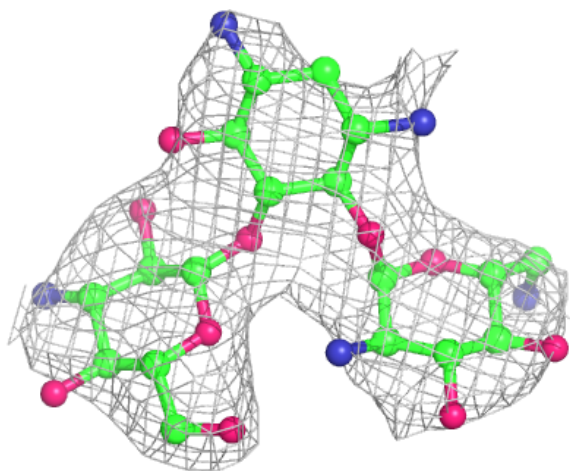
**Electron density around 8UZ 1H 3004:**

$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)



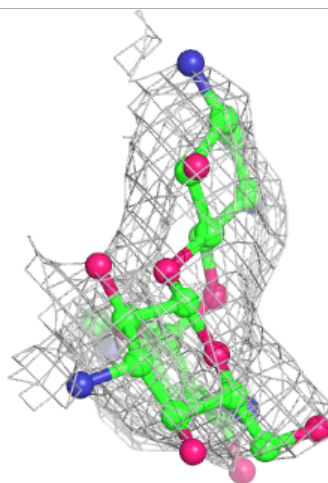
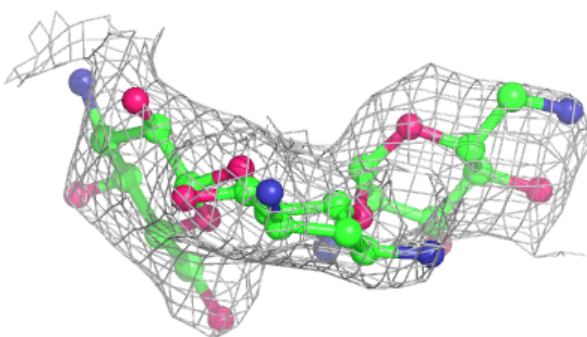
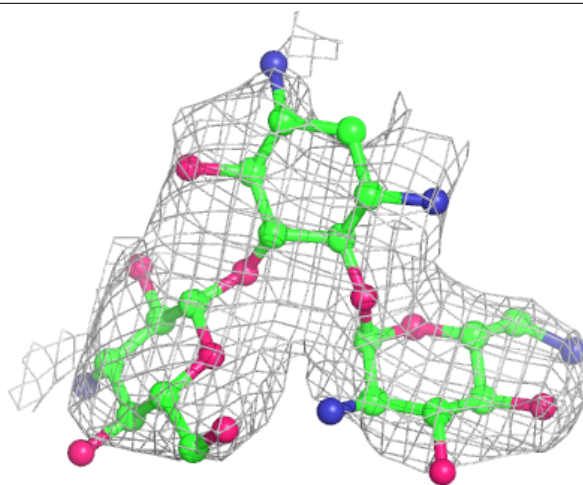
**Electron density around 8UZ 1H 3002:**

$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)



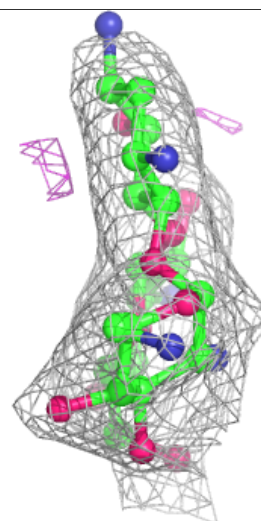
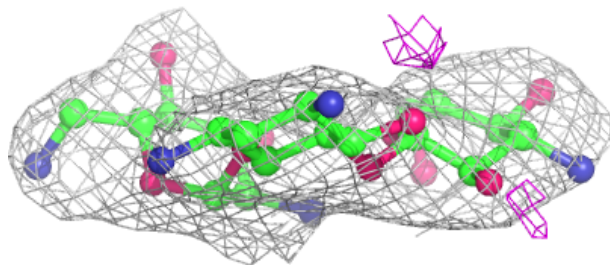
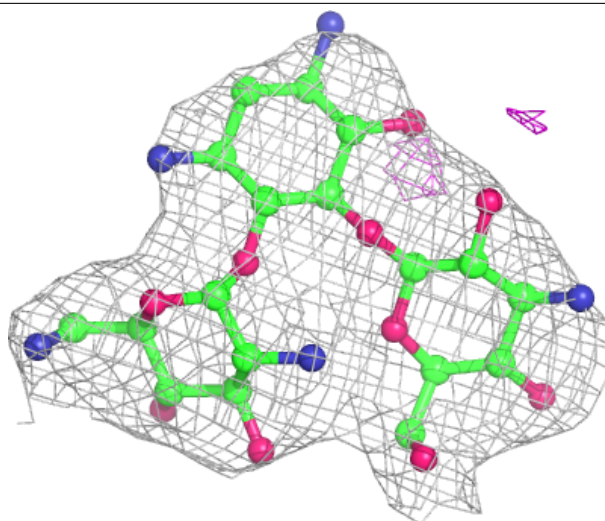
**Electron density around 8UZ 14 3002:**

$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)



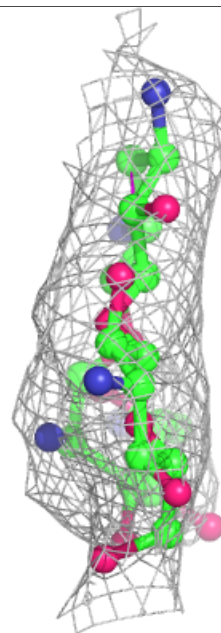
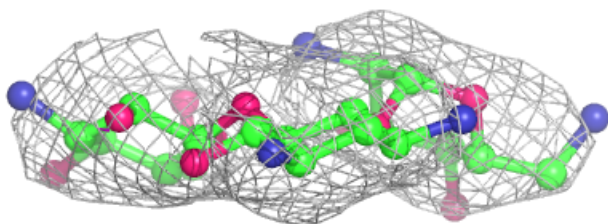
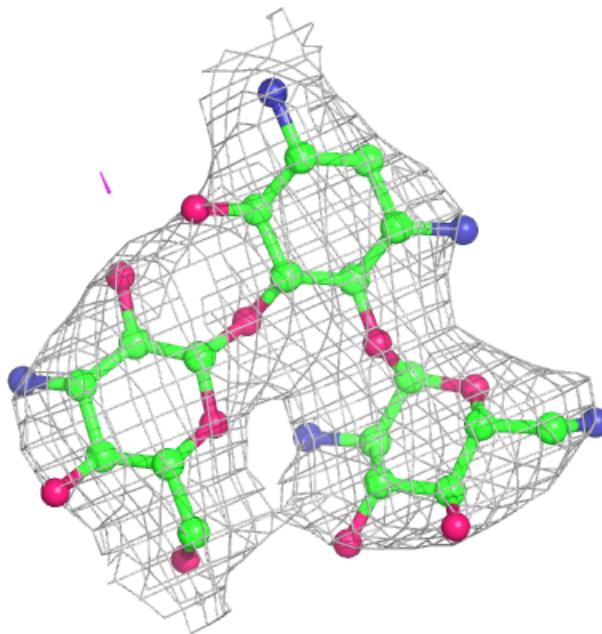
**Electron density around 8UZ 13 2202:**

$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)



**Electron density around 8UZ 1G 2202:**

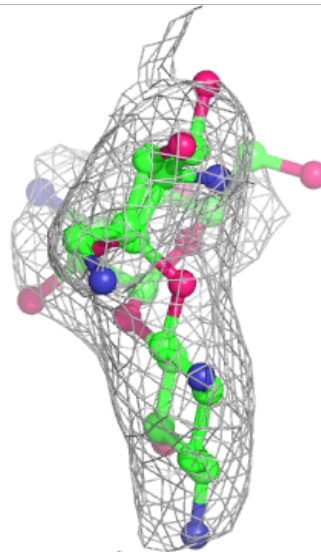
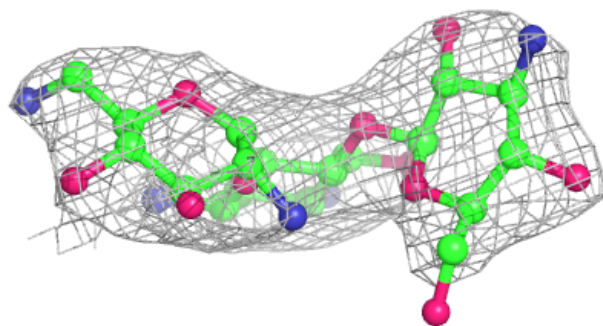
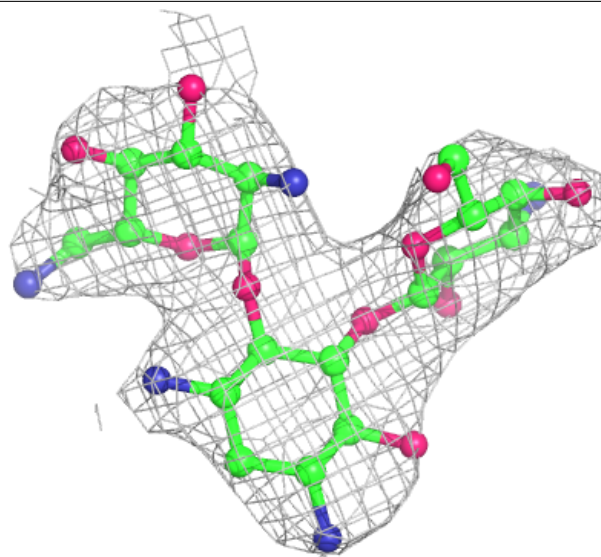
$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)

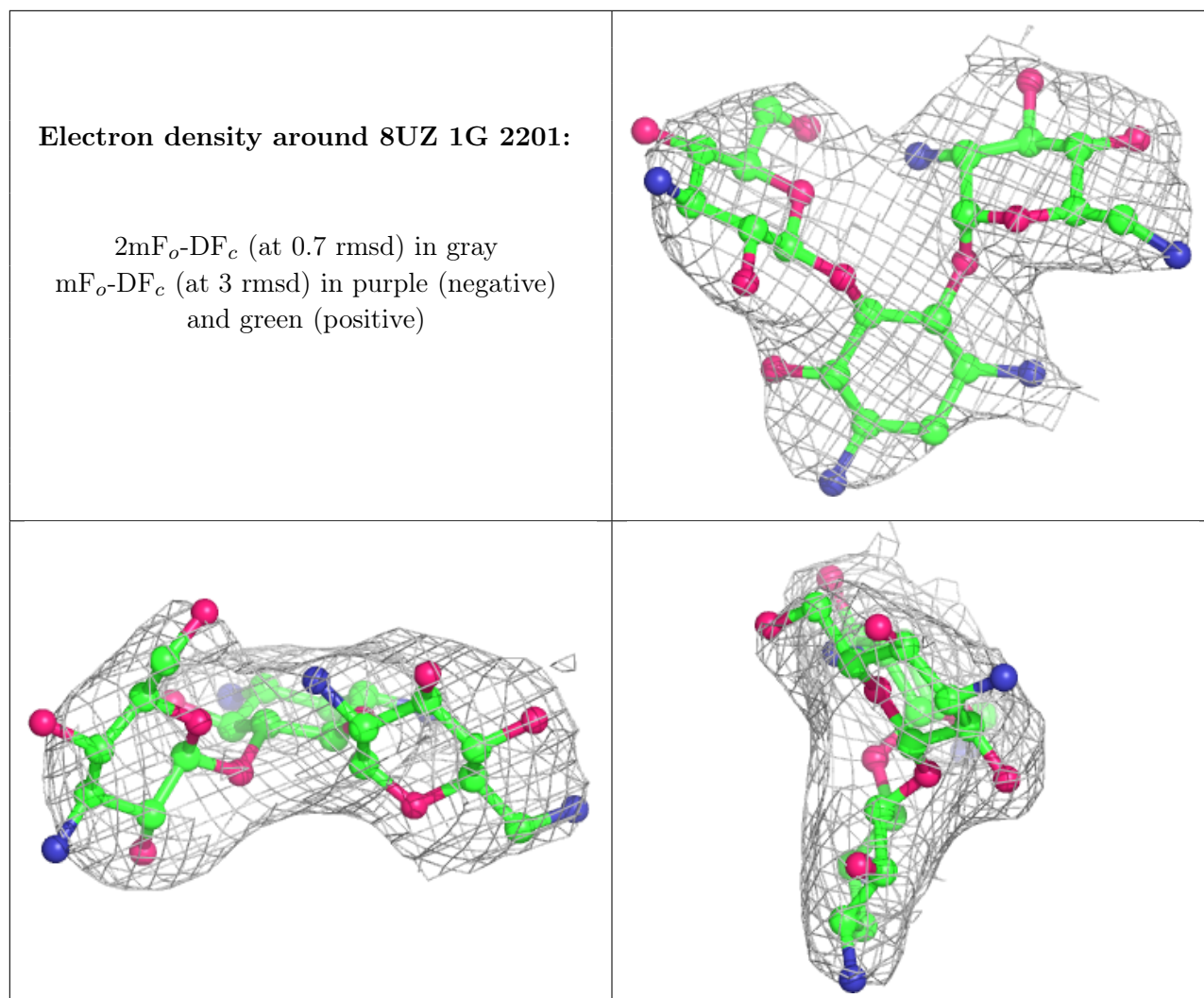




**Electron density around 8UZ 13 2201:**

$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)





## 6.5 Other polymers [i](#)

There are no such residues in this entry.