Full wwPDB X-ray Structure Validation Report ⓘ

Mar 26, 2026 – 05:32 PM UTC

PDB ID	:	5NDK / pdb_00005ndk
Title	:	Crystal structure of aminoglycoside TC007 co-crystallized with 70S ribosome from Thermus thermophilus, three tRNAs and mRNA
Authors	:	Prokhorova, I.; Djumagulov, M.; Urzhumtsev, A.; Yusupov, M.; Yusupova, G.
Deposited on	:	2017-03-08
Resolution	:	2.95 Å(reported)

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

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

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

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

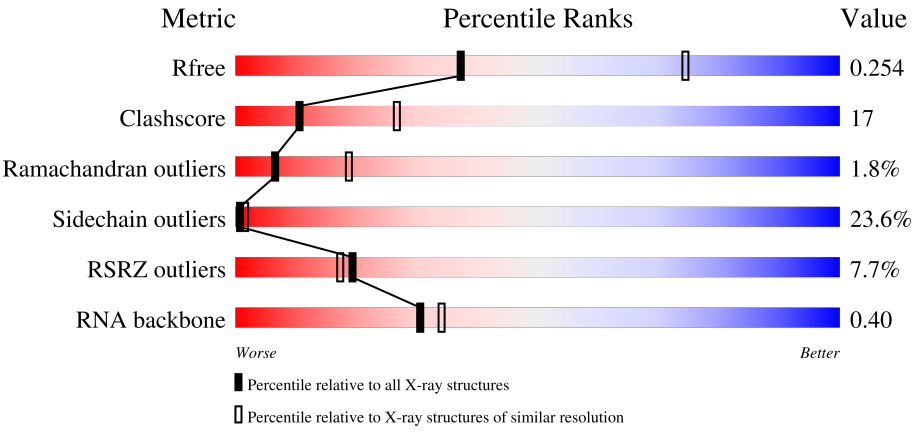
MolProbity	:	4-5-2 with Phenix2.0
Mogul	:	2022.3.0, CSD as543be (2022)
Xtriage (Phenix)	:	2.0
EDS	:	3.0
Buster-report	:	wwPDB partial adaption of 1.1.7 (2018)
Percentile statistics	:	20250101.v01 (using entries in the PDB archive January 1st 2025)
CCP4	:	9.0.010 (Gargrove)
Density-Fitness	:	1.0.12
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP)	:	2.49

1 Overall quality at a glance (i)

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

The reported resolution of this entry is 2.95 Å.

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



Metric	Whole archive (#Entries)	Similar resolution (#Entries, resolution range(Å))
R_{free}	180053	1130 (2.98-2.94)
Clashscore	190562	1157 (2.98-2.94)
Ramachandran outliers	187476	1101 (2.98-2.94)
Sidechain outliers	187428	1101 (2.98-2.94)
RSRZ outliers	180081	1130 (2.98-2.94)
RNA backbone	3983	1046 (3.16-2.76)

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

Mol	Chain	Length	Quality of chain
1	13	1522	43% 44% 12%
1	1G	1522	3% 43% 44% 12%
2	65	112	10% 36% 46% 16%
2	A8	112	2% 42% 41% 15%

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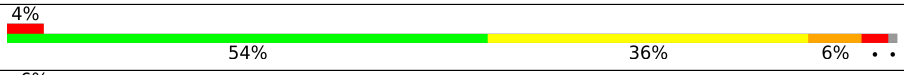
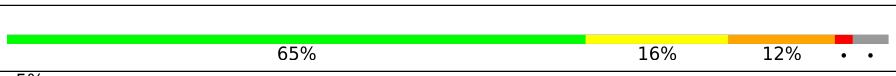
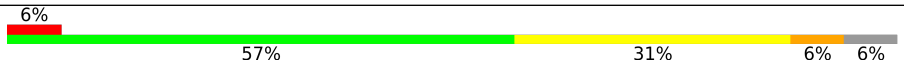
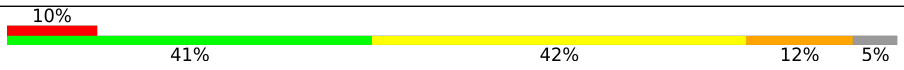
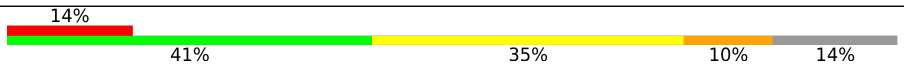
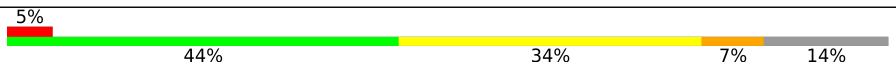
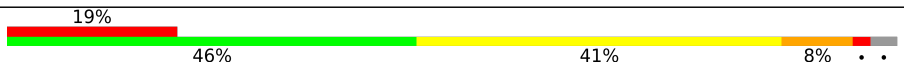
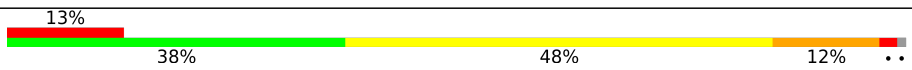
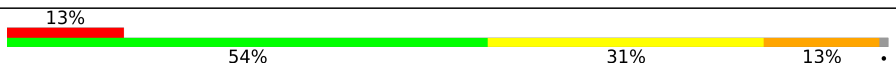
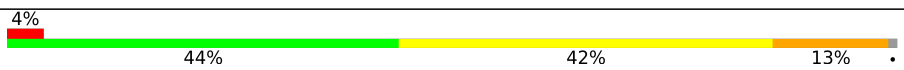
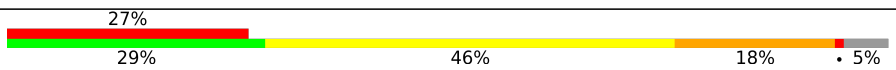
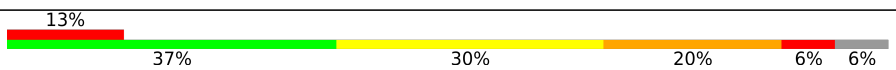
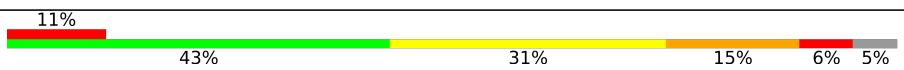
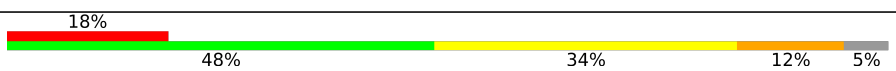
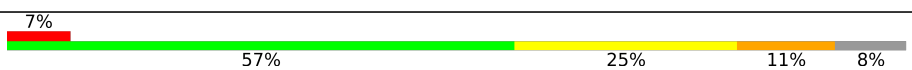
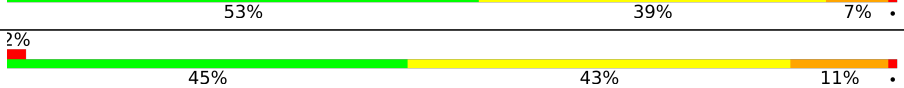
Mol	Chain	Length	Quality of chain
3	B5	96	
3	F8	96	
4	11	276	
4	19	276	
5	L5	49	
5	P8	49	
6	2A	129	
6	2I	129	
7	8A	105	
7	8I	105	
8	22	239	
8	2E	239	
9	82	128	
9	8E	128	
10	15	140	
10	58	140	
11	C5	110	
11	G8	110	
12	M5	65	
12	Q8	65	
13	3A	132	
13	3I	132	
14	32	209	
14	3E	209	
15	14	2917	

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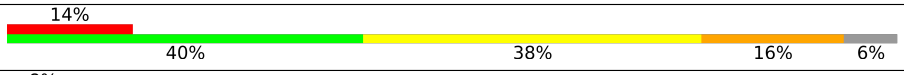
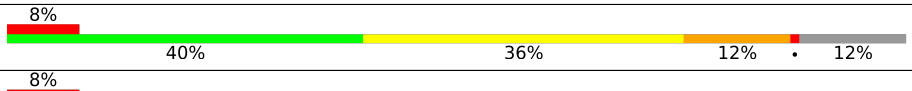
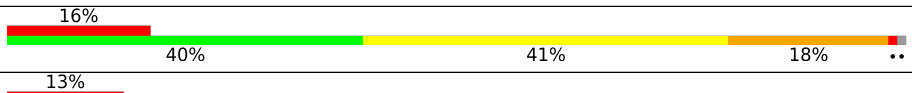
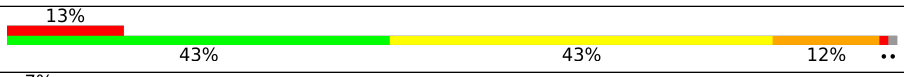
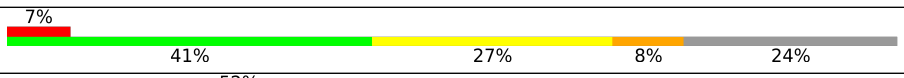
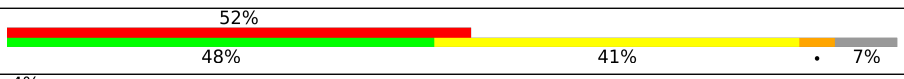
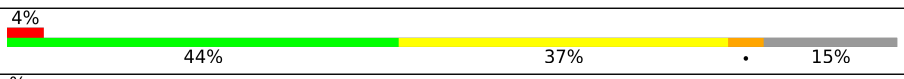
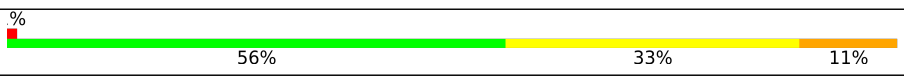
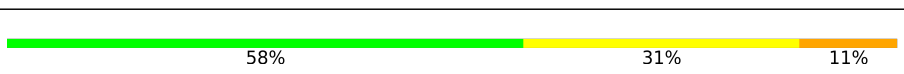
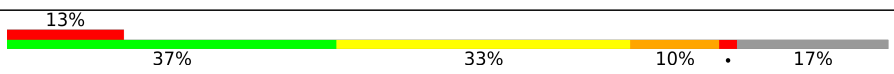
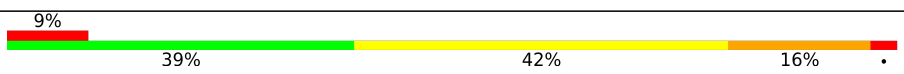
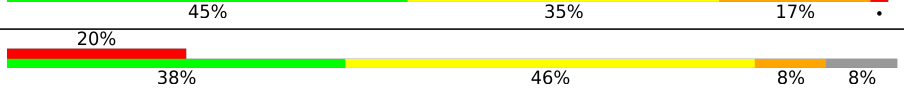
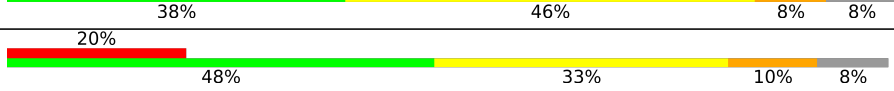
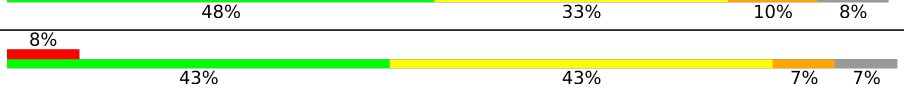
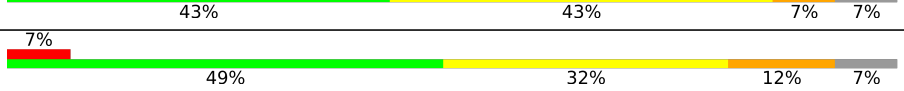
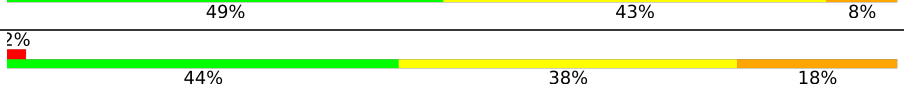
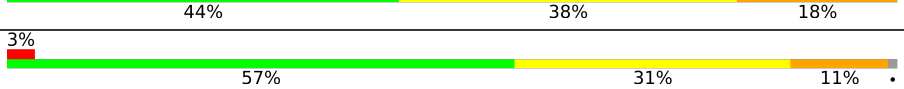
Mol	Chain	Length	Quality of chain
15	1H	2917	
16	75	146	
16	B8	146	
17	H5	60	
17	L8	60	
18	61	148	
18	69	148	
19	9A	88	
19	9I	88	
20	1B	27	
20	1F	27	
21	25	122	
21	68	122	
22	D5	206	
22	H8	206	
23	21	206	
23	29	206	
24	4A	126	
24	4I	126	
25	42	162	
25	4E	162	
26	16	122	
26	1J	122	
27	85	118	
27	C8	118	

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Mol	Chain	Length	Quality of chain
28	I5	71	39% 24% 48% 15% 11%
28	M8	71	49% 30% 46% 15% 7%
29	AA	93	37% 41% 35% 8% 16%
29	AI	93	12% 32% 35% 14% 14%
30	35	150	11% 37% 39% 20%
30	78	150	3% 35% 41% 22%
31	E5	85	9% 49% 40% 9%
31	I8	85	7% 64% 31%
32	31	210	4% 46% 39% 11%
32	39	210	7% 41% 38% 17%
33	5A	61	43% 34% 52% 7% 5%
33	5I	61	7% 38% 48% 13%
34	52	101	3% 53% 35% 12%
34	5E	101	5% 52% 41% 7%
35	95	101	28% 32% 49% 18%
35	D8	101	12% 36% 44% 19%
36	J5	60	12% 45% 35% 13% 7%
36	N8	60	12% 43% 32% 12% 5% 8%
37	BA	106	7% 47% 39% 7% 7%
37	BI	106	13% 43% 37% 13% 7%
38	45	141	12% 39% 45% 13%
38	88	141	8% 45% 37% 16%
39	F5	98	9% 41% 41% 13%
39	J8	98	6% 45% 38% 12%
40	41	182	11% 45% 40% 15%

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Mol	Chain	Length	Quality of chain
40	49	182	13% 41% 45% 13%
41	6A	89	2% 52% 40% 7%
41	6I	89	6% 57% 33% 9%
42	62	156	6% 54% 31% 8% 6%
42	6E	156	3% 53% 29% 10% 8%
43	A5	113	5% 53% 37% 8%
43	E8	113	4% 58% 33% 9%
44	12	256	18% 39% 38% 14% 7%
44	1E	256	22% 41% 42% 10% 7%
45	55	118	1% 51% 36% 12%
45	98	118	2% 36% 47% 15%
46	G5	72	6% 36% 40% 11% 6% 7%
46	K8	72	3% 28% 43% 18% 6% 6%
47	51	180	12% 42% 40% 14%
47	59	180	43% 38% 40% 14% 6%
48	1A	105	41% 39% 42% 13% 6%
48	1I	105	12% 40% 41% 13% 6%
49	7A	88	10% 53% 35% 7% 5%
49	7I	88	27% 40% 49% 7% 5%
50	72	138	4% 58% 33% 9%
50	7E	138	16% 49% 41% 10%
51	Y1	25	40% 52% 12% 36%
51	Y4	25	40% 28% 24% 48%
52	V1	76	34% 21% 36% 43%
52	V4	76	22% 33% 33% 34%

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Mol	Chain	Length	Quality of chain
52	W1	76	17% 47% 37% 16%
52	W4	76	14% 58% 34% 8%
52	X1	76	11% 51% 36% 13%
52	X4	76	8% 43% 38% 18%

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	2238	-	-	-	X
54	MG	13	2239	-	-	-	X
54	MG	13	2287	-	-	-	X
54	MG	13	2293	-	-	-	X
54	MG	13	2307	-	-	-	X
54	MG	13	2321	-	-	-	X
54	MG	13	2322	-	-	-	X
54	MG	13	2335	-	-	-	X
54	MG	13	2372	-	-	-	X
54	MG	14	3250	-	-	-	X
54	MG	14	3396	-	-	-	X
54	MG	14	3433	-	-	-	X
54	MG	14	3457	-	-	-	X
54	MG	14	3460	-	-	-	X
54	MG	14	3495	-	-	-	X
54	MG	1G	2264	-	-	-	X
54	MG	1G	2269	-	-	-	X
54	MG	1G	2329	-	-	-	X
54	MG	1G	2355	-	-	-	X
54	MG	1G	2374	-	-	-	X
54	MG	1H	3094	-	-	-	X
54	MG	1H	3141	-	-	-	X
54	MG	1H	3235	-	-	-	X
54	MG	1H	3492	-	-	-	X
54	MG	X4	102	-	-	-	X

2 Entry composition

There are 56 unique types of molecules in this entry. The entry contains 299577 atoms, of which 0 are hydrogens and 0 are deuteriums.

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

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
1	13	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 6 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
13	2165	G	-	expression tag	GB 55771382
13	2166	C	-	expression tag	GB 55771382
13	2167	U	-	expression tag	GB 55771382
1G	2165	G	-	expression tag	GB 55771382
1G	2166	C	-	expression tag	GB 55771382
1G	2167	U	-	expression tag	GB 55771382

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

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
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
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
4	11	273	Total	C	N	O	S	0	0	0
			2126	1341	424	358	3			
4	19	273	Total	C	N	O	S	0	0	0
			2120	1338	421	358	3			

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

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

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

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

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

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

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

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

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

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
9	8E	127	Total	C	N	O	0	0	0
			1009	639	197	173			

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

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

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

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
12	Q8	60	Total 480	C 306	N 98	O 74	S 2	0	0	0
12	M5	62	Total 495	C 317	N 100	O 76	S 2	0	0	0

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

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

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

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

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

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

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
16	B8	129	Total	C	N	O	S	0	0	0
			1081	674	223	183	1			
16	75	137	Total	C	N	O	S	0	0	0
			1141	710	234	196	1			

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

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

- 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
39	F5	94	Total	C	N	O	S	0	0	0
			737	463	146	127	1			

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

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

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

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

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

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

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

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

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

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

- 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			

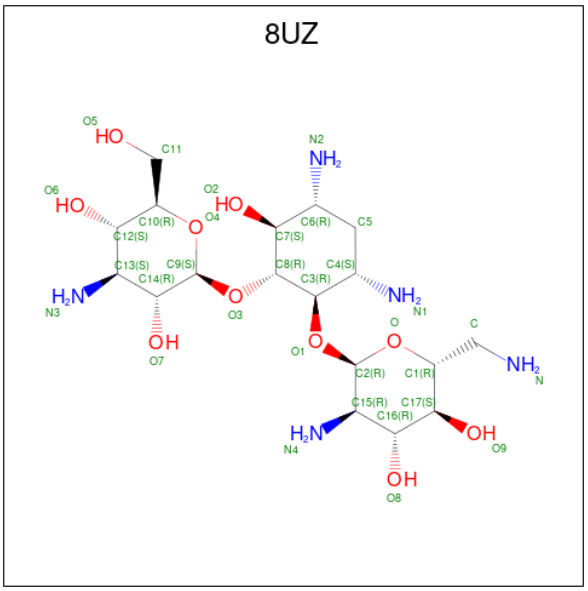
- Molecule 51 is a RNA chain called mRNA.

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 (CCD ID: 8UZ) (formula: $C_{18}H_{37}N_5O_{10}$).



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

- Molecule 54 is MAGNESIUM ION (CCD ID: MG) (formula: Mg).

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
54	13	182	Total Mg 182 182	0	0
54	A8	1	Total Mg 1 1	0	0
54	B5	1	Total Mg 1 1	0	0
54	11	5	Total Mg 5 5	0	0
54	2A	1	Total Mg 1 1	0	0
54	1G	178	Total Mg 178 178	0	0
54	58	1	Total Mg 1 1	0	0
54	G8	1	Total Mg 1 1	0	0

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Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
54	19	3	Total Mg 3 3	0	0
54	3I	1	Total Mg 1 1	0	0
54	3E	2	Total Mg 2 2	0	0
54	1H	597	Total Mg 597 597	0	0
54	B8	1	Total Mg 1 1	0	0
54	C5	2	Total Mg 2 2	0	0
54	L8	1	Total Mg 1 1	0	0
54	14	568	Total Mg 568 568	0	0
54	68	2	Total Mg 2 2	0	0
54	21	3	Total Mg 3 3	0	0
54	4I	1	Total Mg 1 1	0	0
54	4E	1	Total Mg 1 1	0	0
54	16	14	Total Mg 14 14	0	0
54	25	2	Total Mg 2 2	0	0
54	29	5	Total Mg 5 5	0	0
54	42	1	Total Mg 1 1	0	0
54	1J	14	Total Mg 14 14	0	0
54	78	3	Total Mg 3 3	0	0
54	85	1	Total Mg 1 1	0	0
54	I8	2	Total Mg 2 2	0	0
54	31	3	Total Mg 3 3	0	0

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Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
54	5I	1	Total Mg 1 1	0	0
54	5E	1	Total Mg 1 1	0	0
54	35	1	Total Mg 1 1	0	0
54	E5	2	Total Mg 2 2	0	0
54	39	2	Total Mg 2 2	0	0
54	52	1	Total Mg 1 1	0	0
54	88	5	Total Mg 5 5	0	0
54	41	2	Total Mg 2 2	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	1	Total Mg 1 1	0	0
54	A5	1	Total Mg 1 1	0	0
54	K8	1	Total Mg 1 1	0	0
54	55	2	Total Mg 2 2	0	0
54	P8	1	Total Mg 1 1	0	0
54	7A	1	Total Mg 1 1	0	0
54	W1	4	Total Mg 4 4	0	0
54	X1	9	Total Mg 9 9	0	0
54	W4	4	Total Mg 4 4	0	0
54	X4	6	Total Mg 6 6	0	0

- Molecule 55 is ZINC ION (CCD ID: 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
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	3	Total O 3 3	0	0
56	1G	72	Total O 72 72	0	0
56	19	8	Total O 8 8	0	0
56	1H	533	Total O 533 533	0	0
56	B8	1	Total O 1 1	0	0
56	M5	2	Total O 2 2	0	0
56	14	512	Total O 512 512	0	0
56	21	1	Total O 1 1	0	0
56	C8	3	Total O 3 3	0	0
56	29	4	Total O 4 4	0	0
56	78	4	Total O 4 4	0	0

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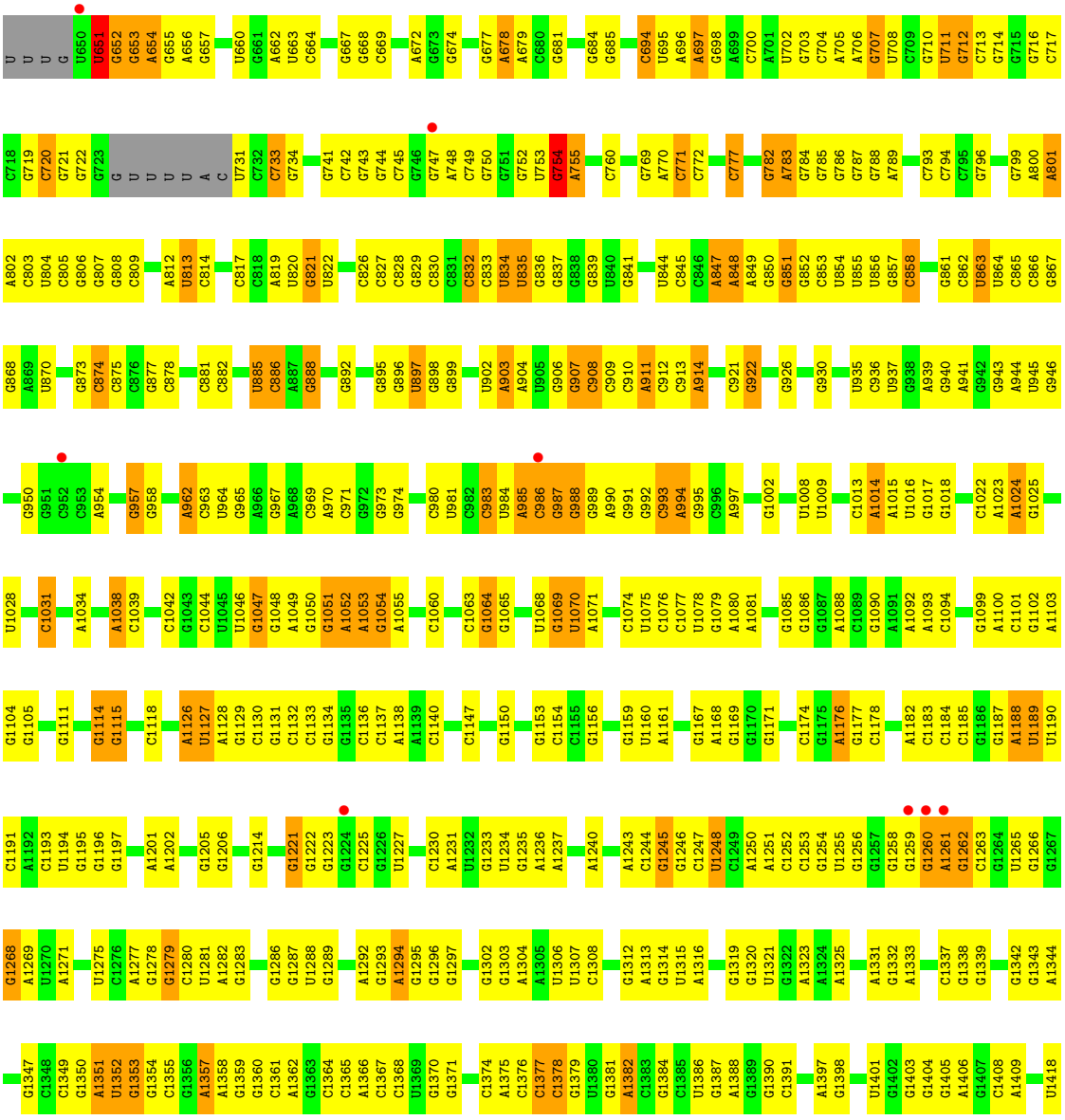
Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
56	I8	5	Total O 5 5	0	0
56	31	5	Total O 5 5	0	0
56	35	1	Total O 1 1	0	0
56	D8	1	Total O 1 1	0	0
56	39	6	Total O 6 6	0	0
56	5A	1	Total O 1 1	0	0
56	J8	1	Total O 1 1	0	0
56	J5	1	Total O 1 1	0	0
56	6I	1	Total O 1 1	0	0
56	E8	1	Total O 1 1	0	0
56	6A	2	Total O 2 2	0	0
56	A5	1	Total O 1 1	0	0
56	55	1	Total O 1 1	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

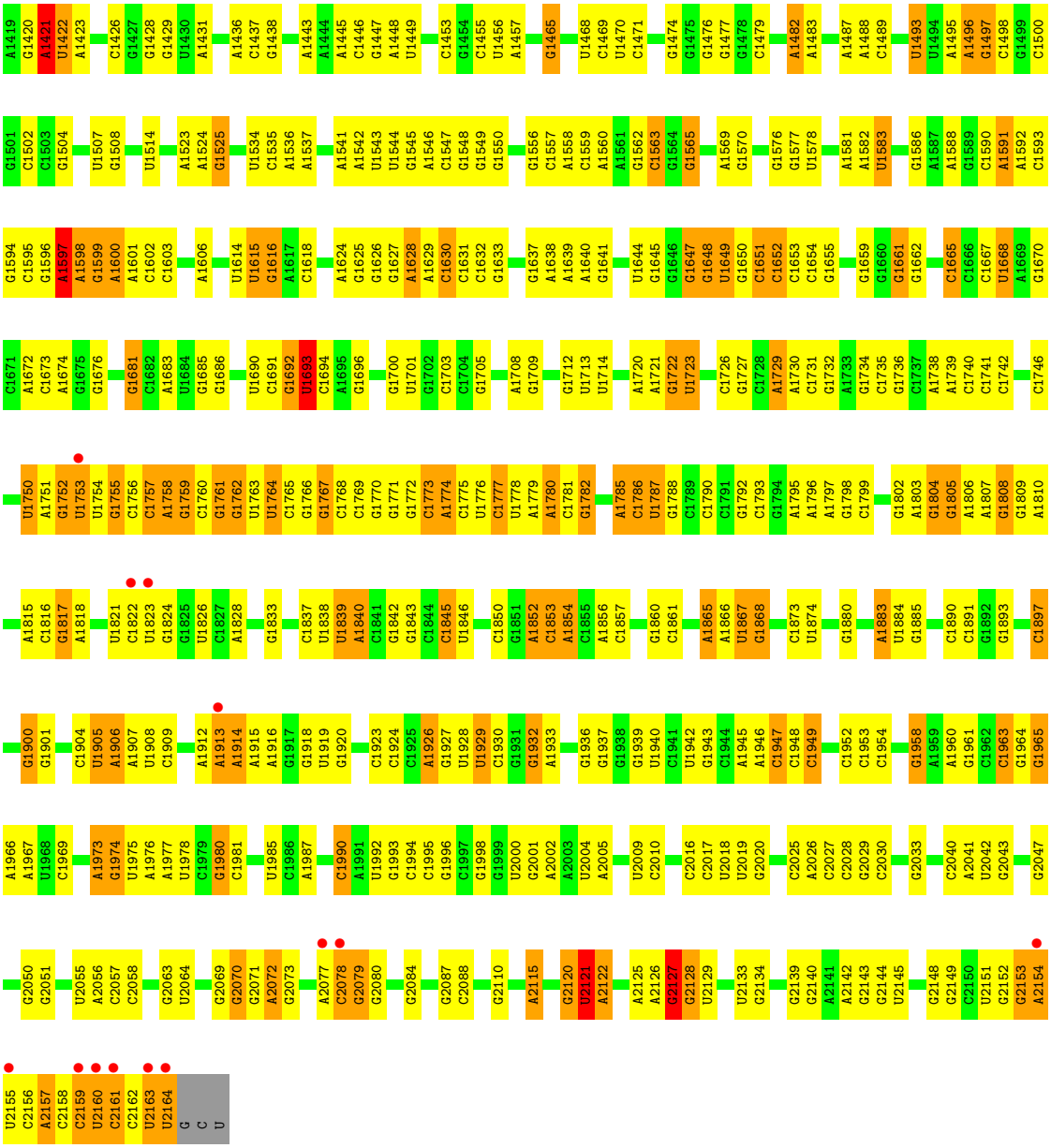
3 Residue-property plots (i)

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

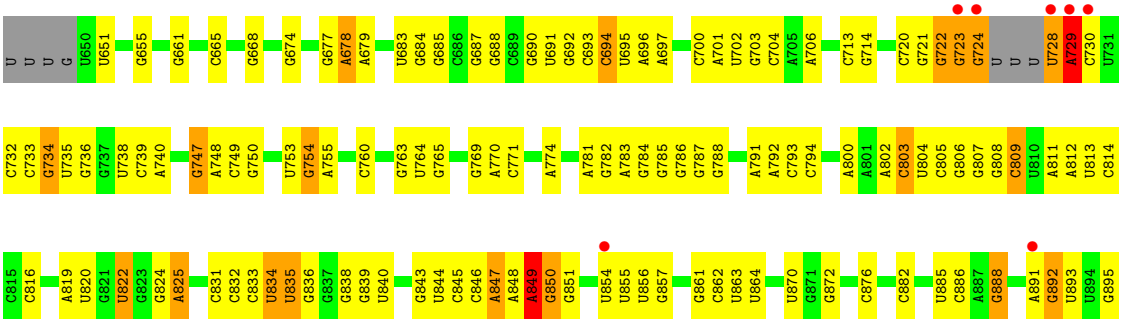
Chain 13:

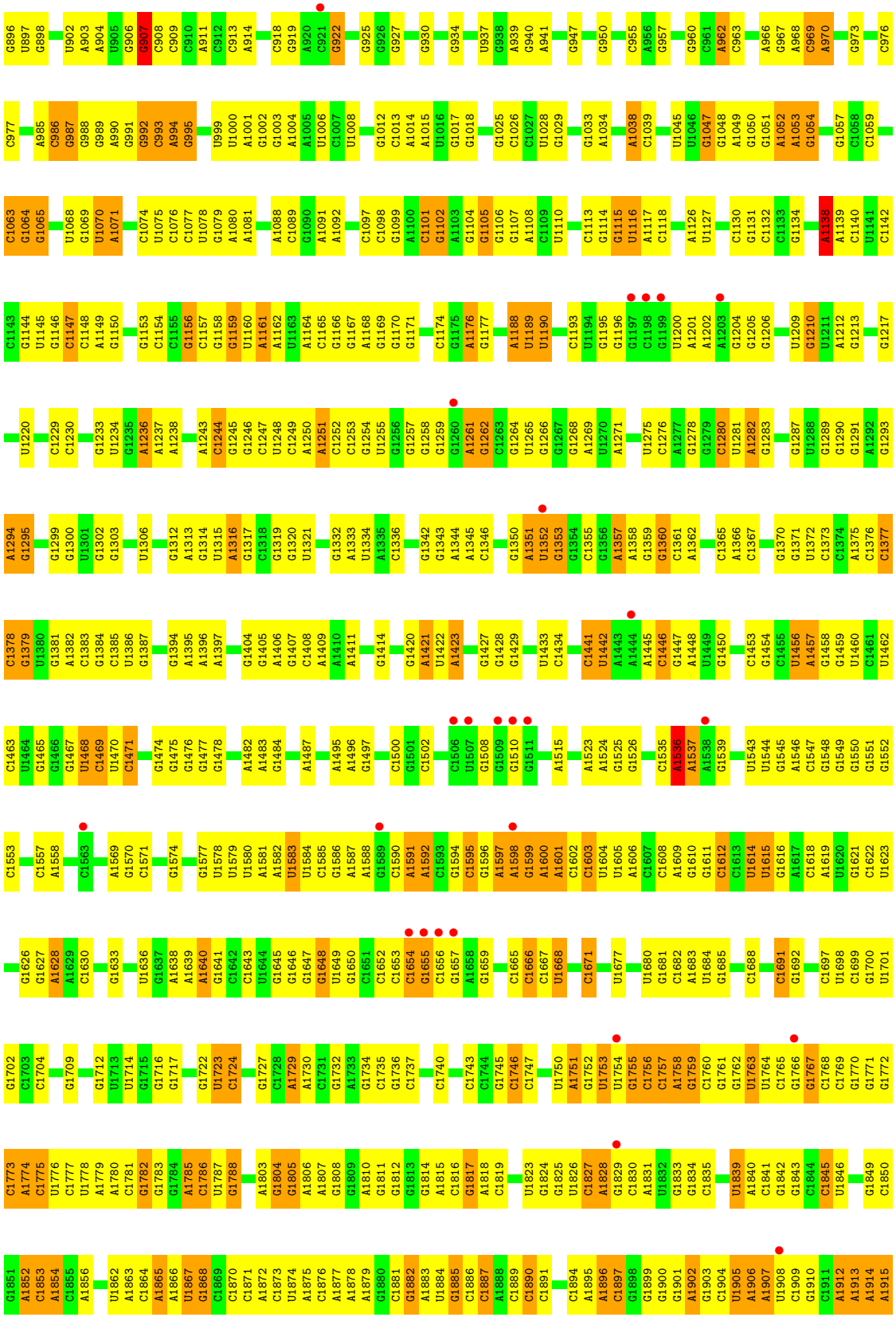


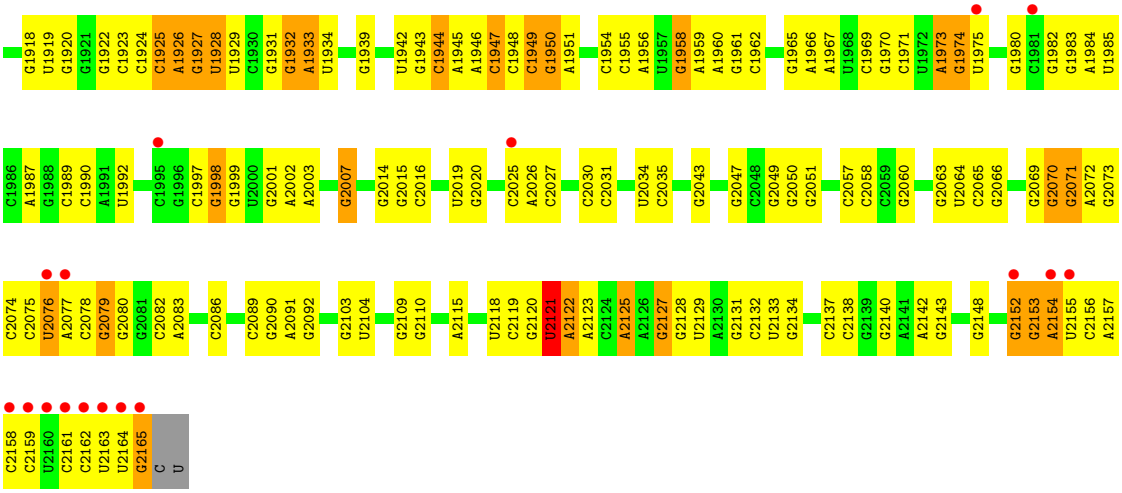


• Molecule 1: 16S ribosomal RNA

Chain 1G:

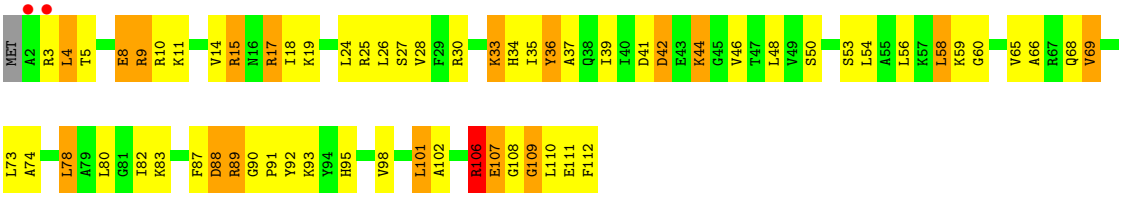






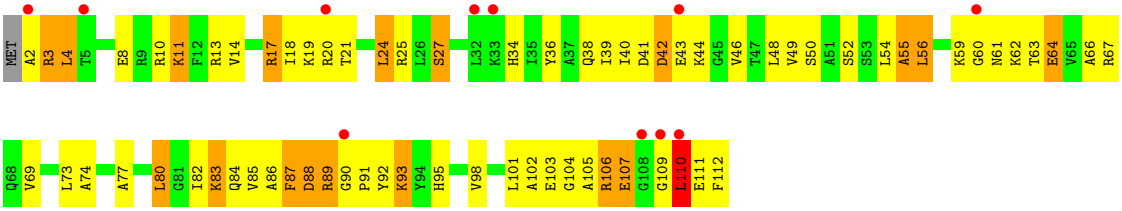
• Molecule 2: 50S ribosomal protein L18

Chain A8:



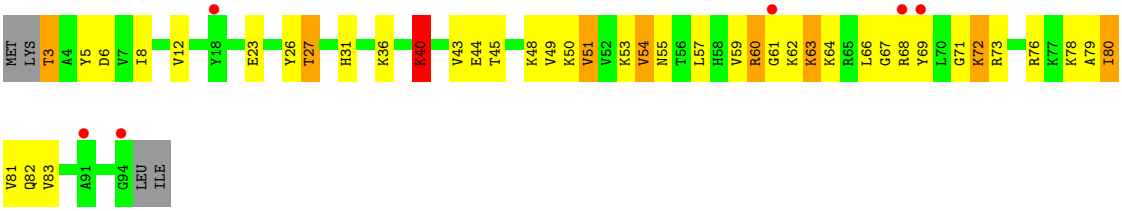
• Molecule 2: 50S ribosomal protein L18

Chain 65:



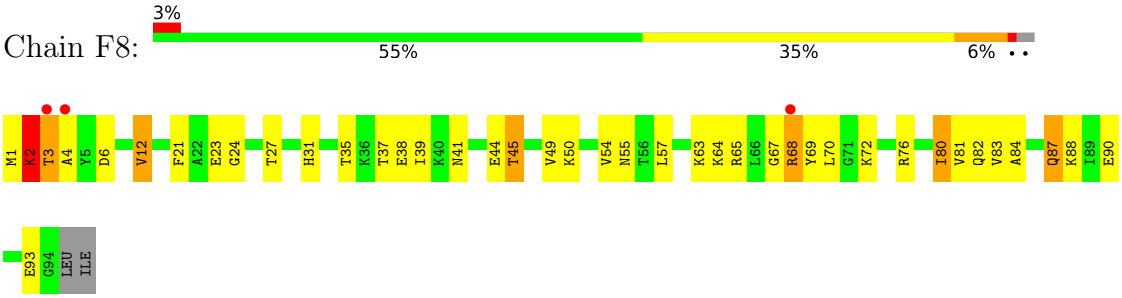
• Molecule 3: 50S ribosomal protein L23

Chain B5:



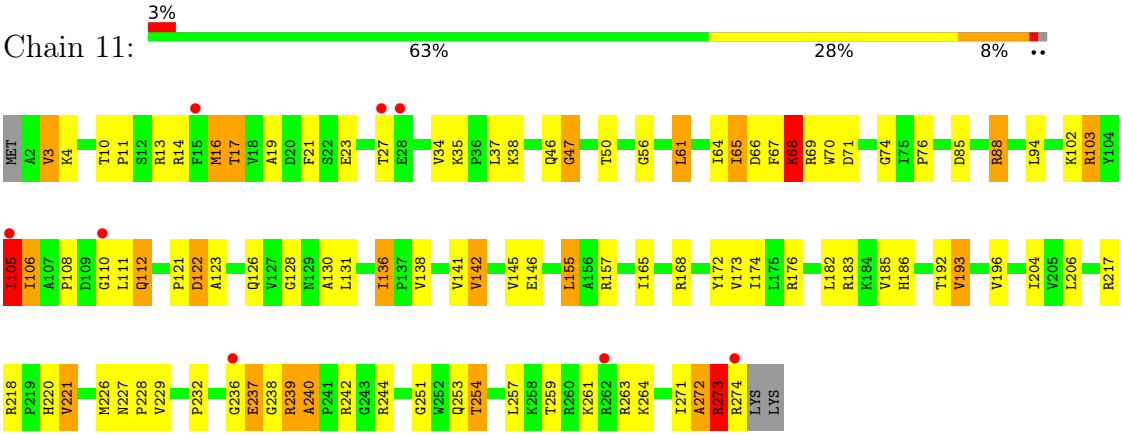
• Molecule 3: 50S ribosomal protein L23

Chain F8:



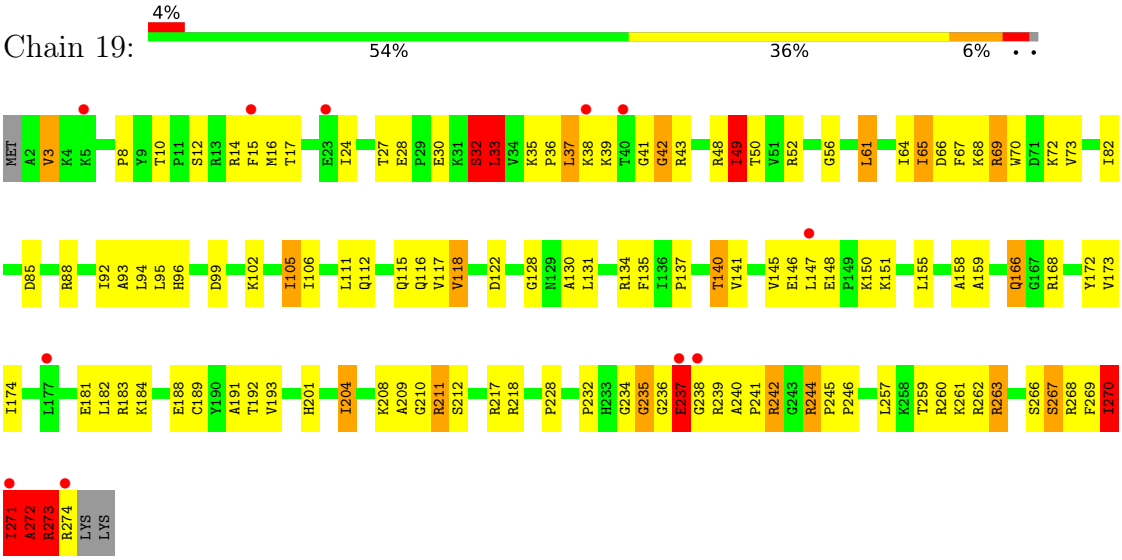
• Molecule 4: 50S ribosomal protein L2

Chain 11:



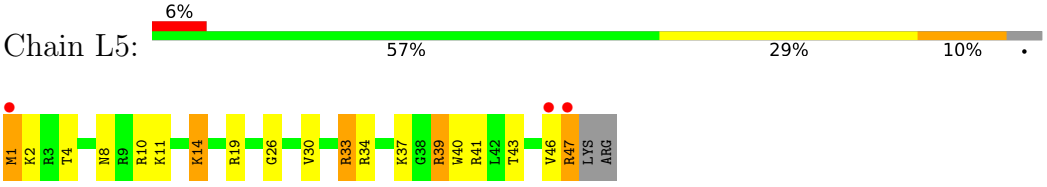
• Molecule 4: 50S ribosomal protein L2

Chain 19:



• Molecule 5: 50S ribosomal protein L34

Chain L5:

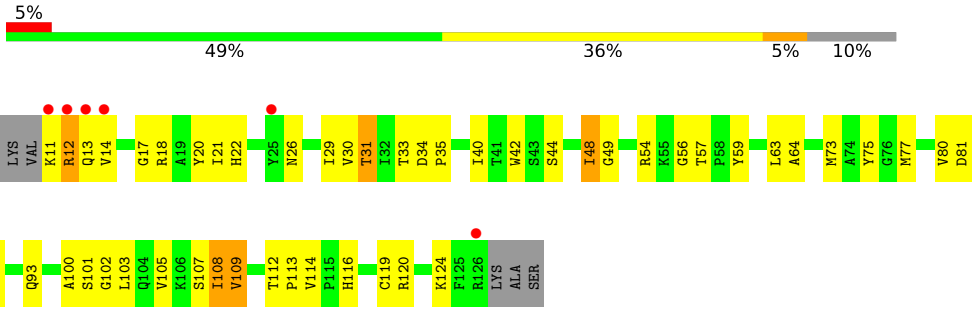


• Molecule 5: 50S ribosomal protein L34

Chain P8:

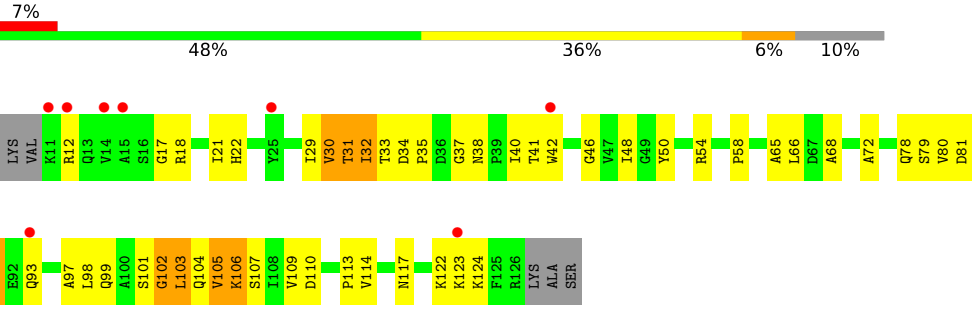
• Molecule 6: 30S ribosomal protein S11

Chain 2A:



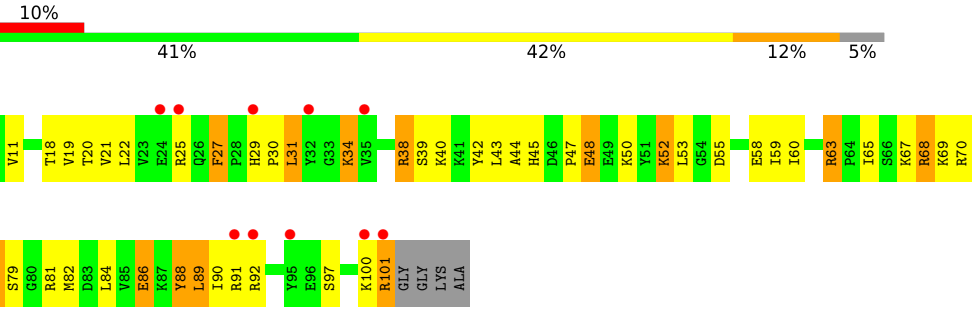
• Molecule 6: 30S ribosomal protein S11

Chain 2I:



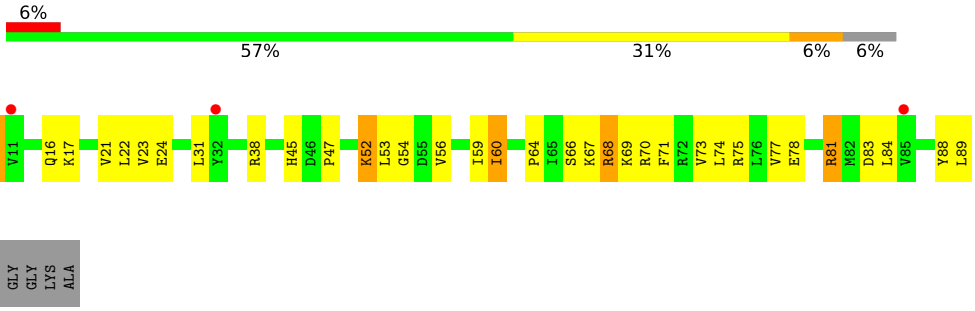
• Molecule 7: 30S ribosomal protein S17

Chain 8I:



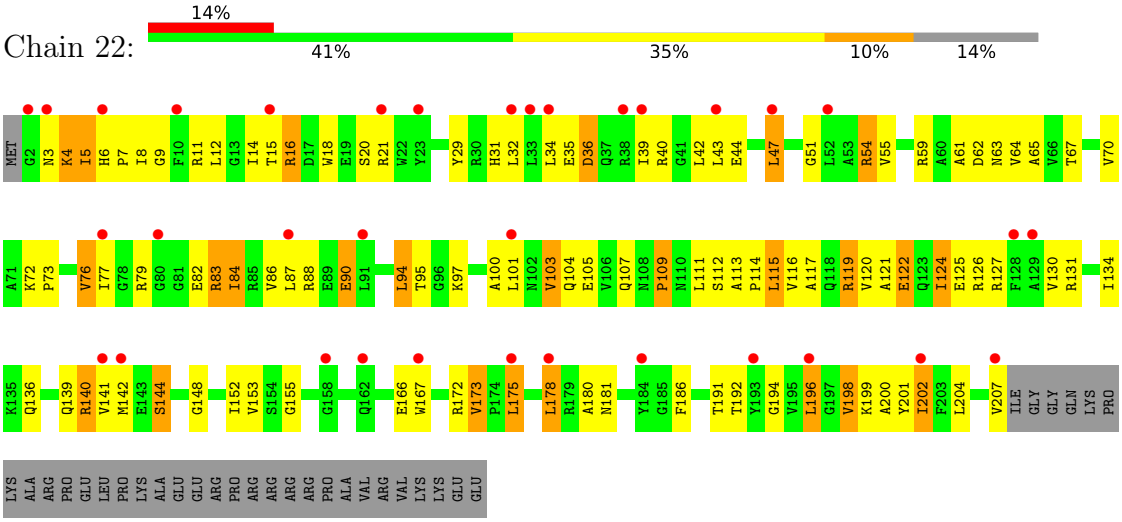
• Molecule 7: 30S ribosomal protein S17

Chain 8A:



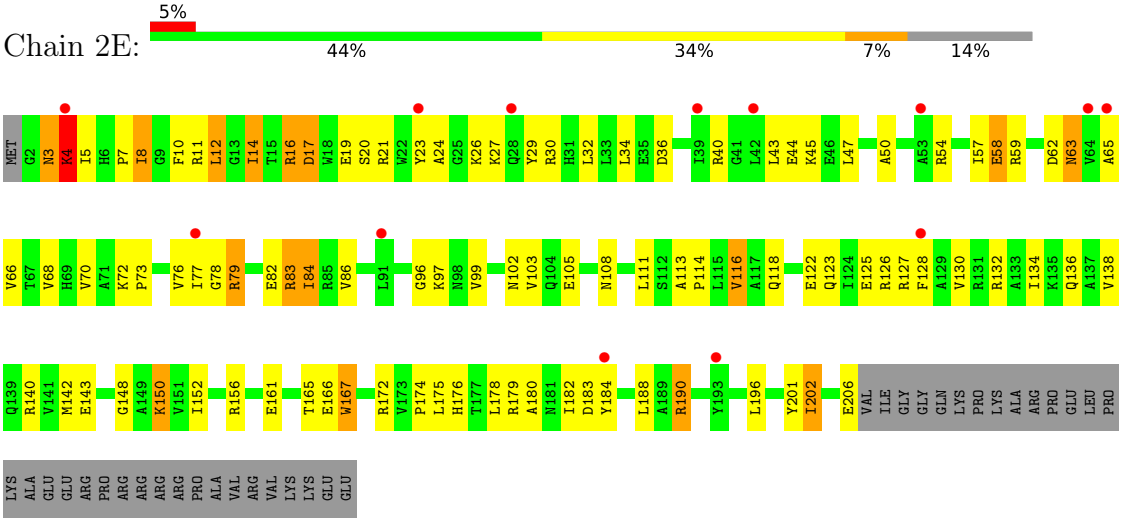
• Molecule 8: 30S ribosomal protein S3

Chain 22:



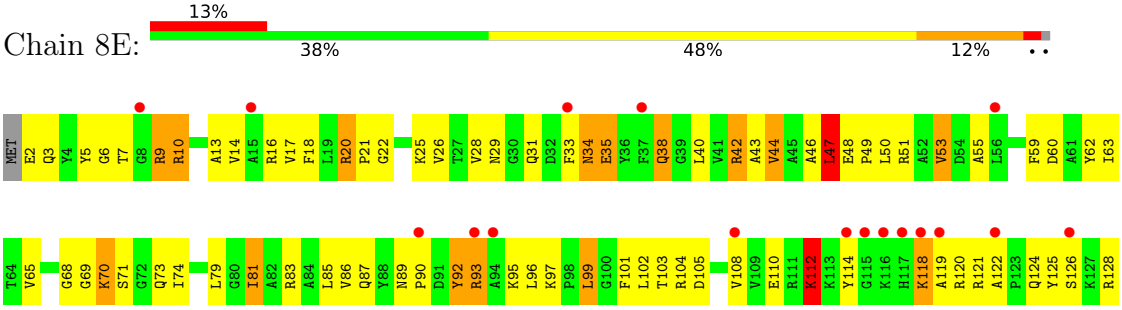
• Molecule 8: 30S ribosomal protein S3

Chain 2E:



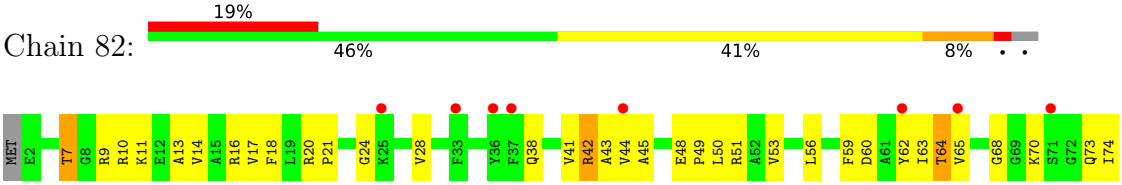
• Molecule 9: 30S ribosomal protein S9

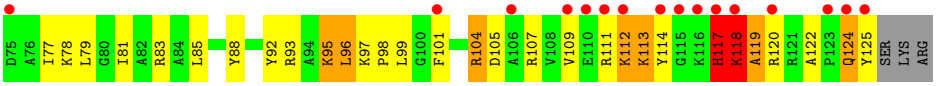
Chain 8E:



• Molecule 9: 30S ribosomal protein S9

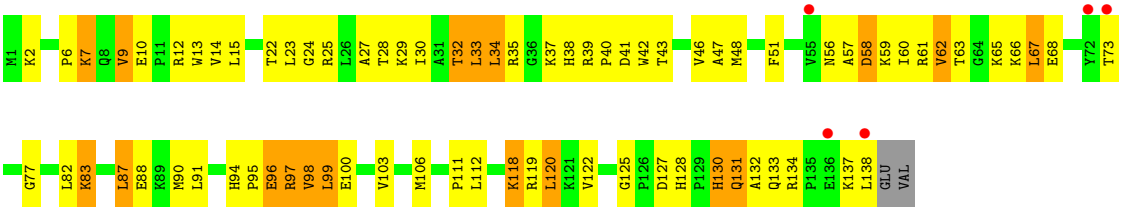
Chain 82:





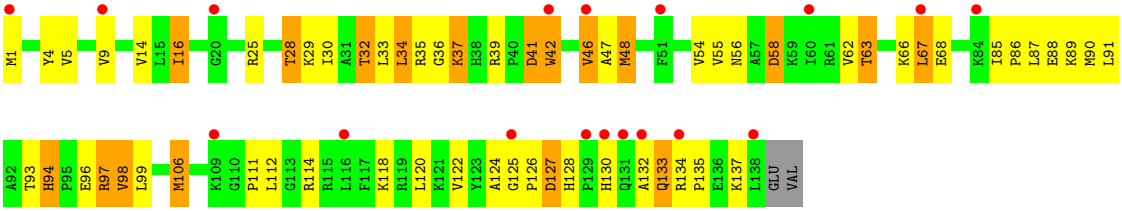
• Molecule 10: 50S ribosomal protein L13

Chain 58:



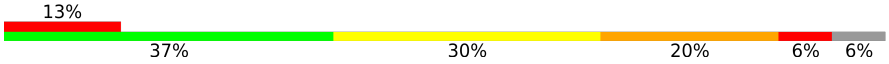
• Molecule 10: 50S ribosomal protein L13

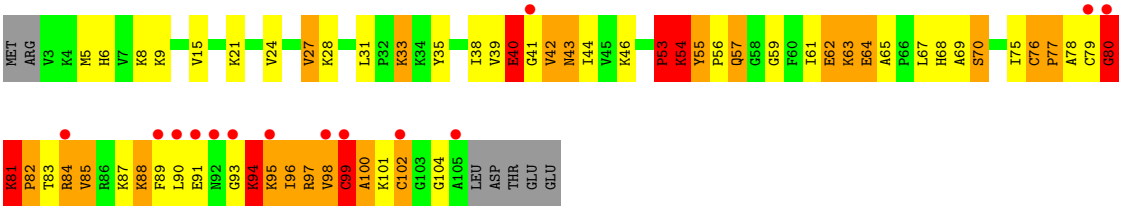
Chain 15:



• Molecule 11: 50S ribosomal protein L24

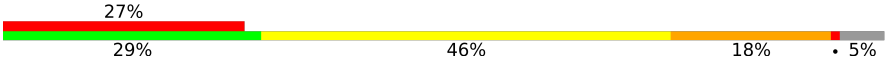
Chain G8:

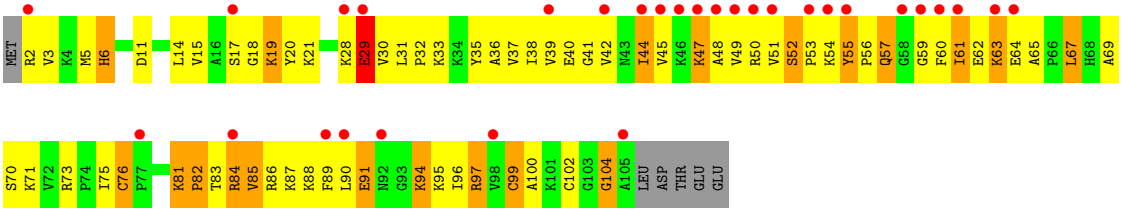




• Molecule 11: 50S ribosomal protein L24

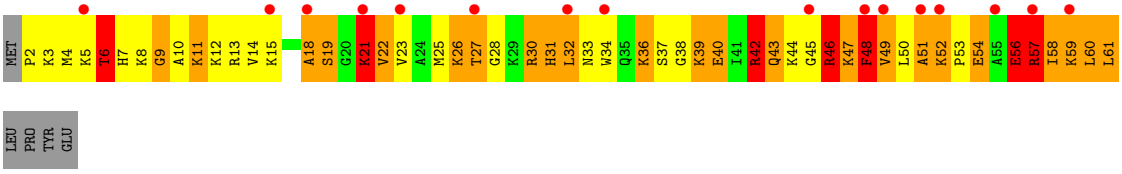
Chain C5:





• Molecule 12: 50S ribosomal protein L35

Chain Q8:

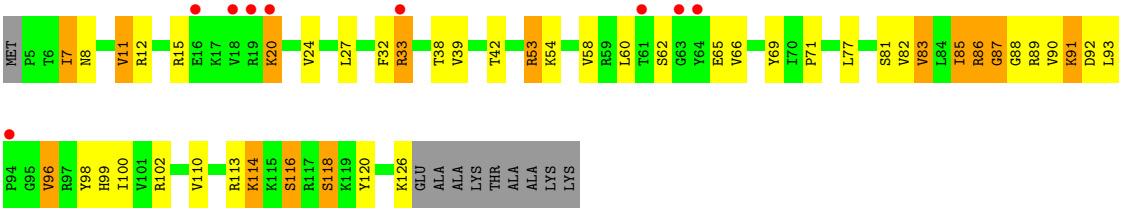


• Molecule 12: 50S ribosomal protein L35

Chain M5:

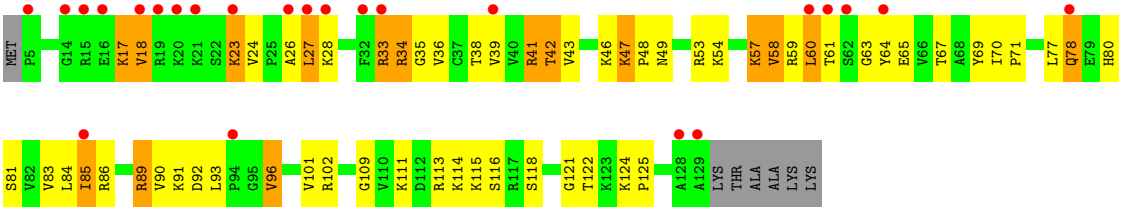
• Molecule 13: 30S ribosomal protein S12

Chain 3I:



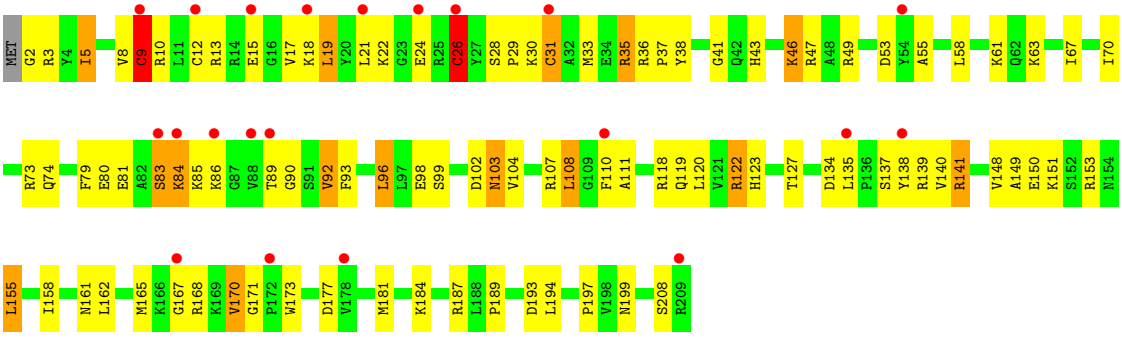
• Molecule 13: 30S ribosomal protein S12

Chain 3A:



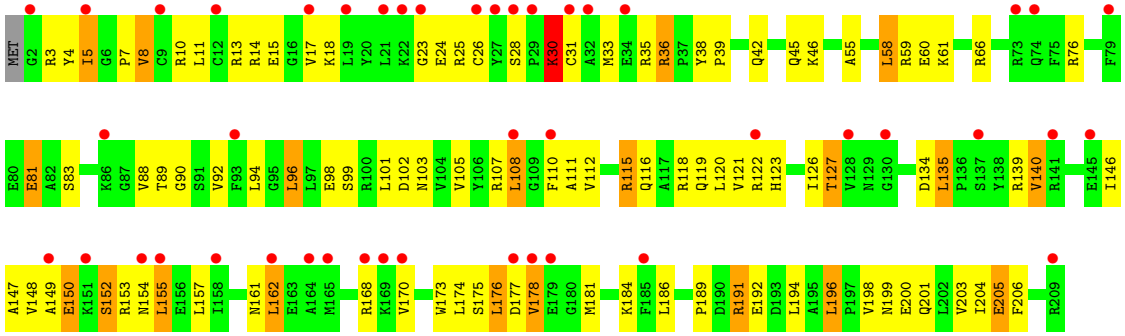
• Molecule 14: 30S ribosomal protein S4

Chain 3E:



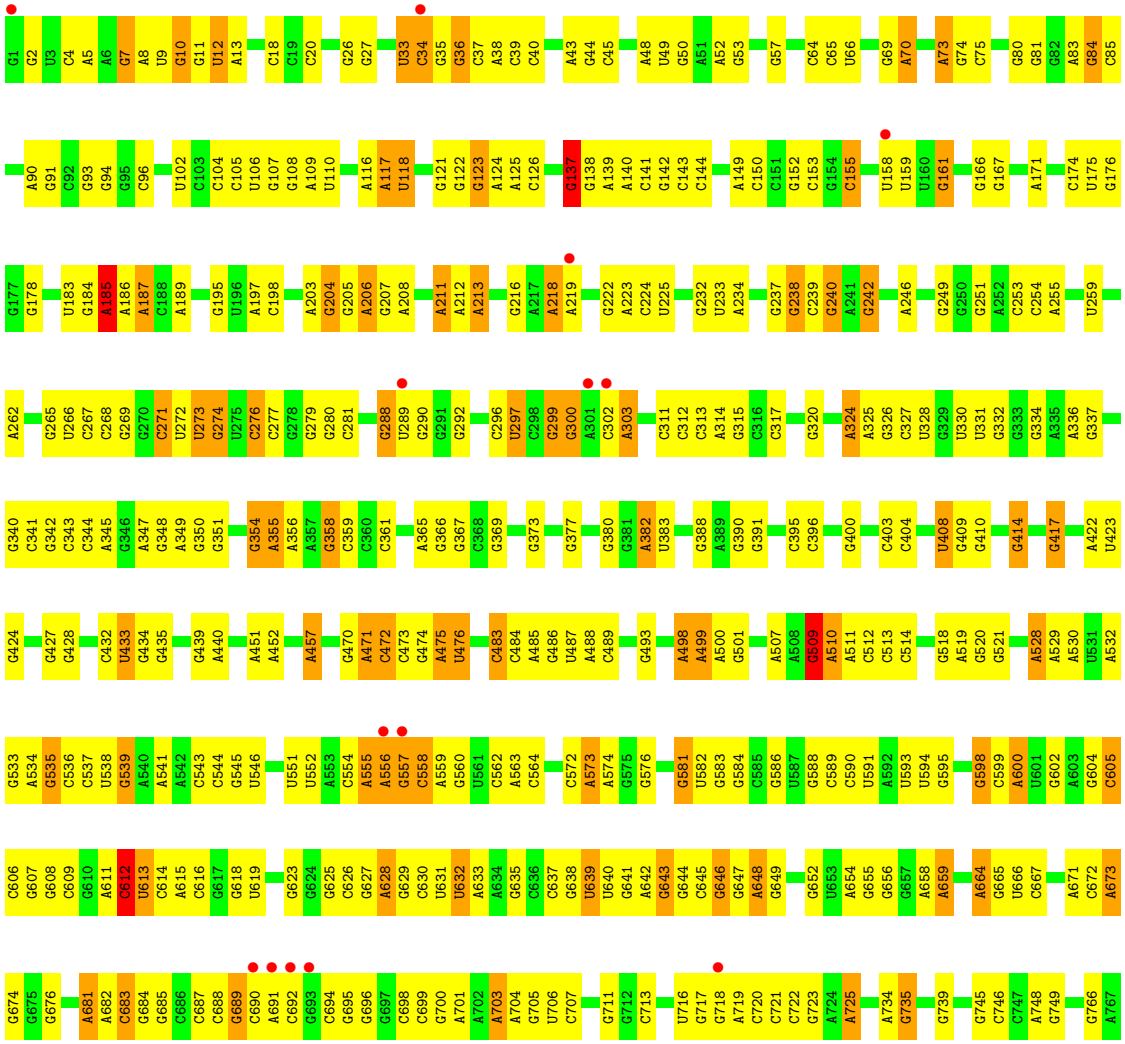
• Molecule 14: 30S ribosomal protein S4

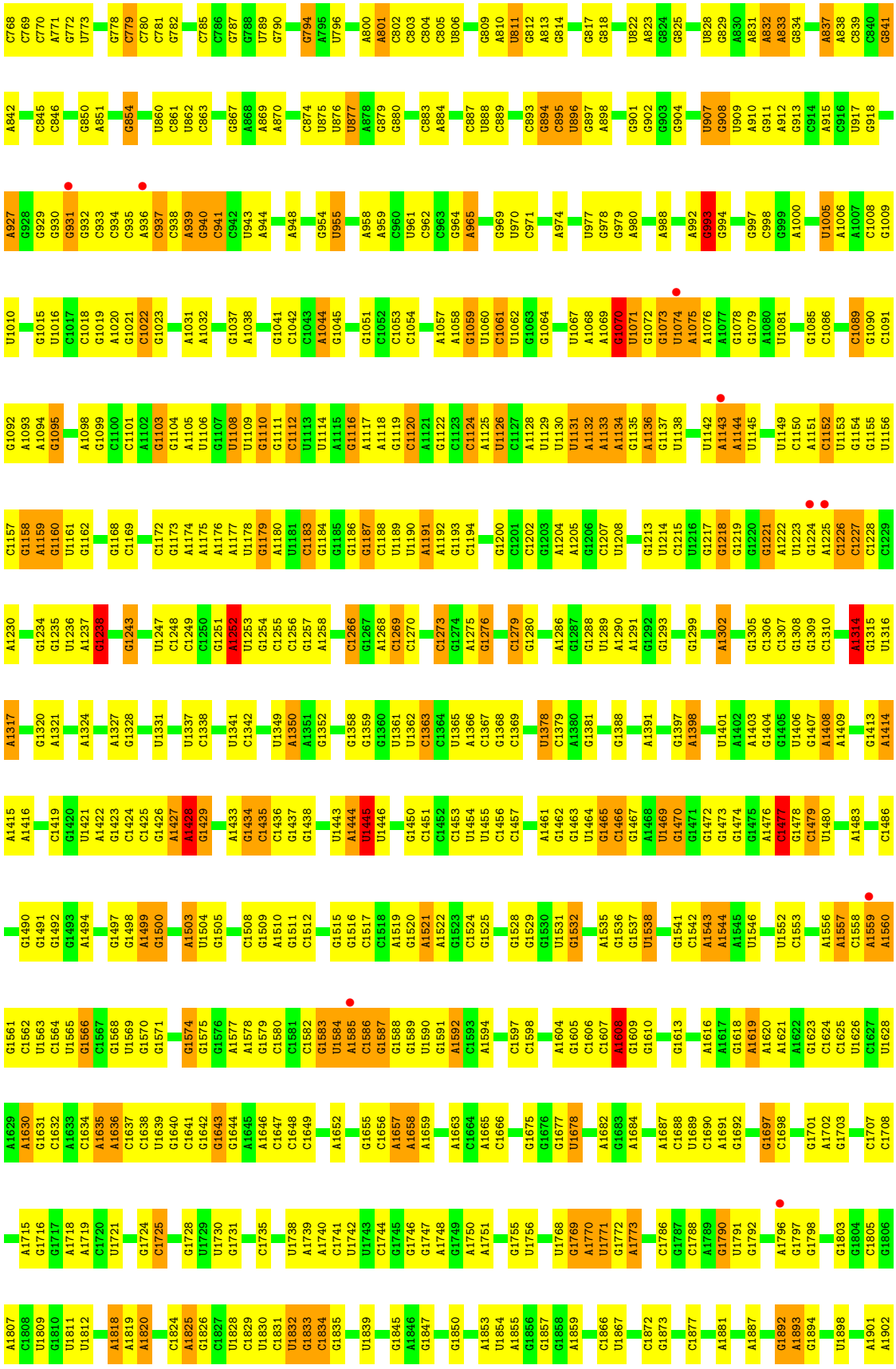
Chain 32:

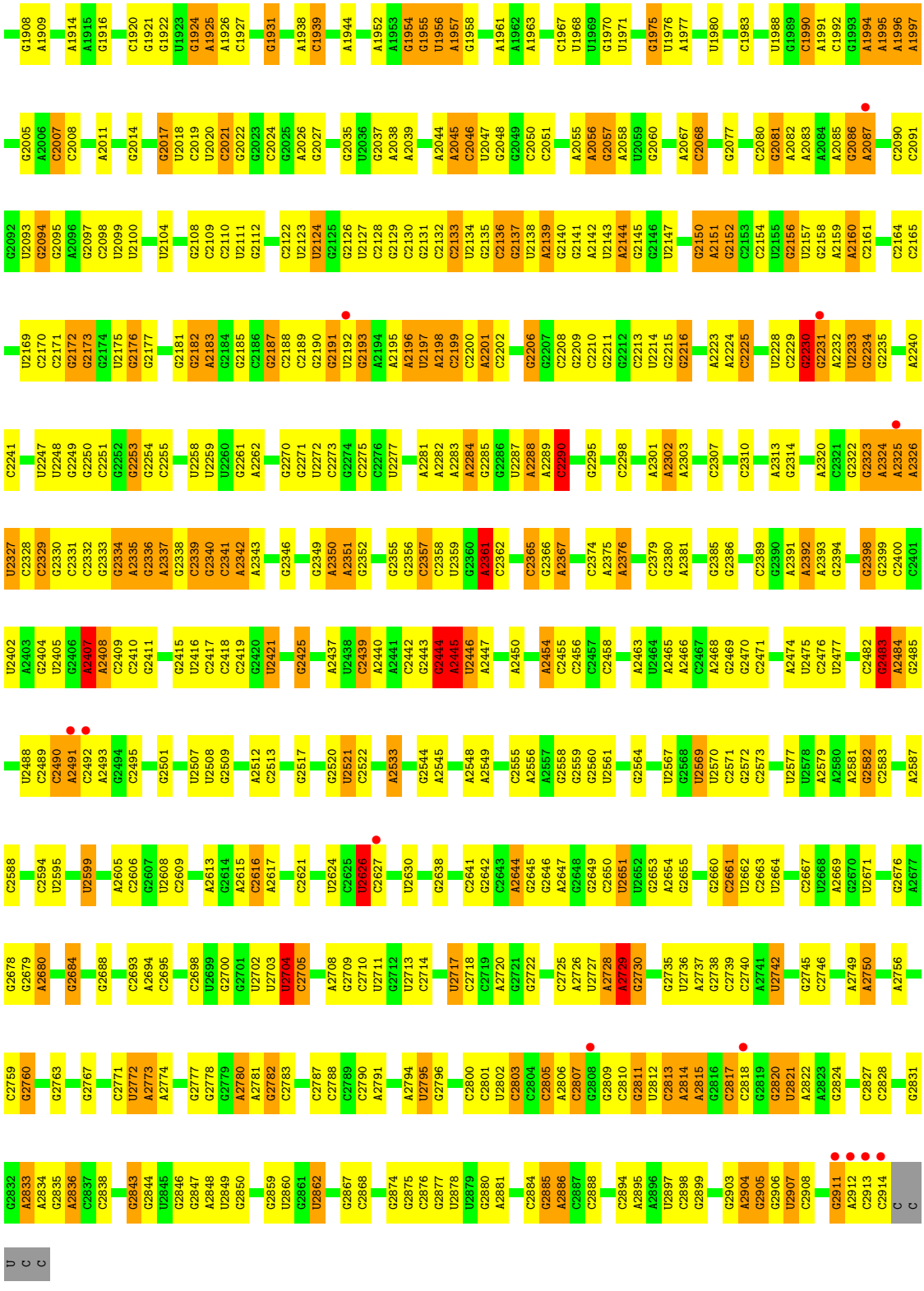


• Molecule 15: 23S ribosomal RNA

Chain 1H:

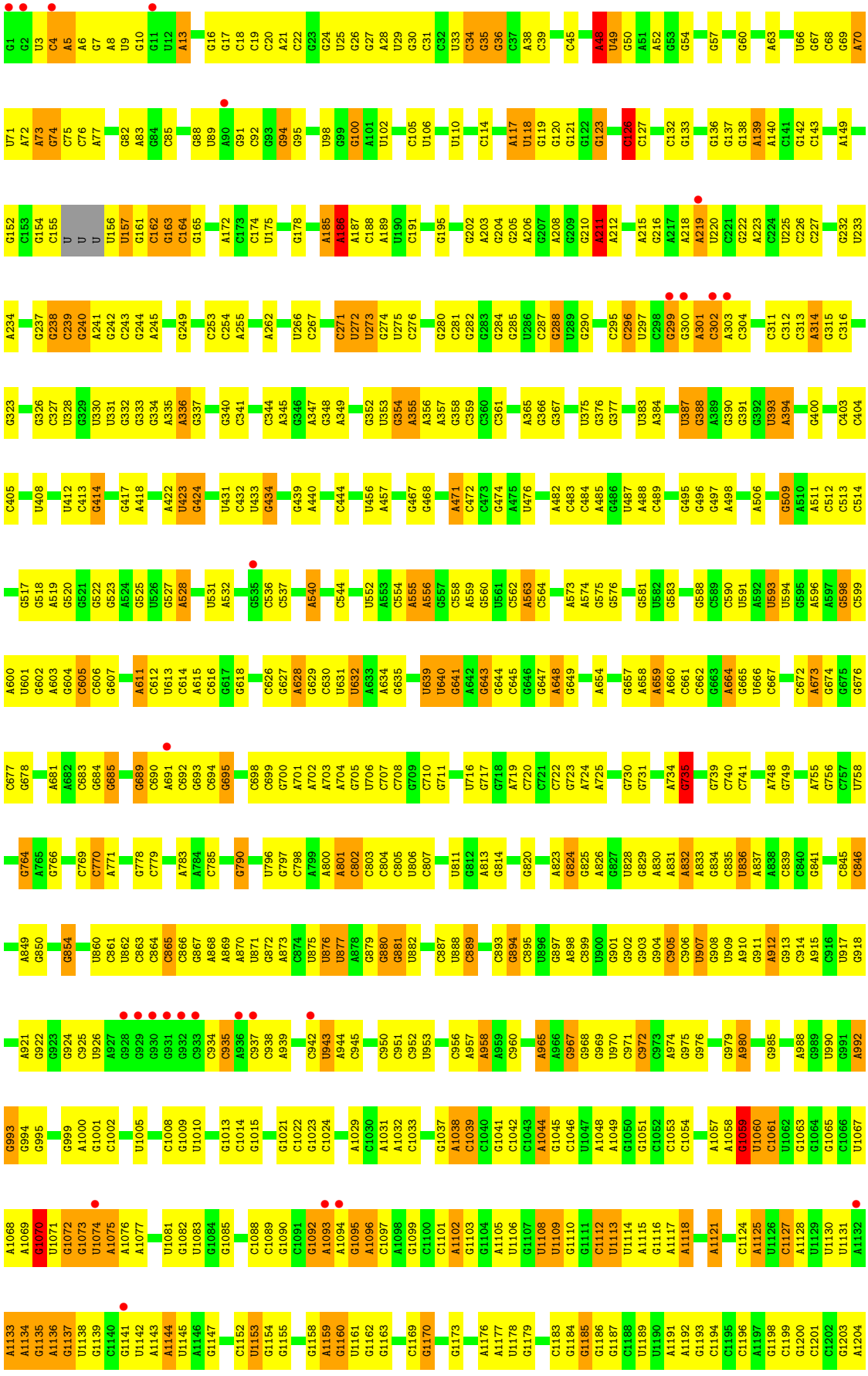


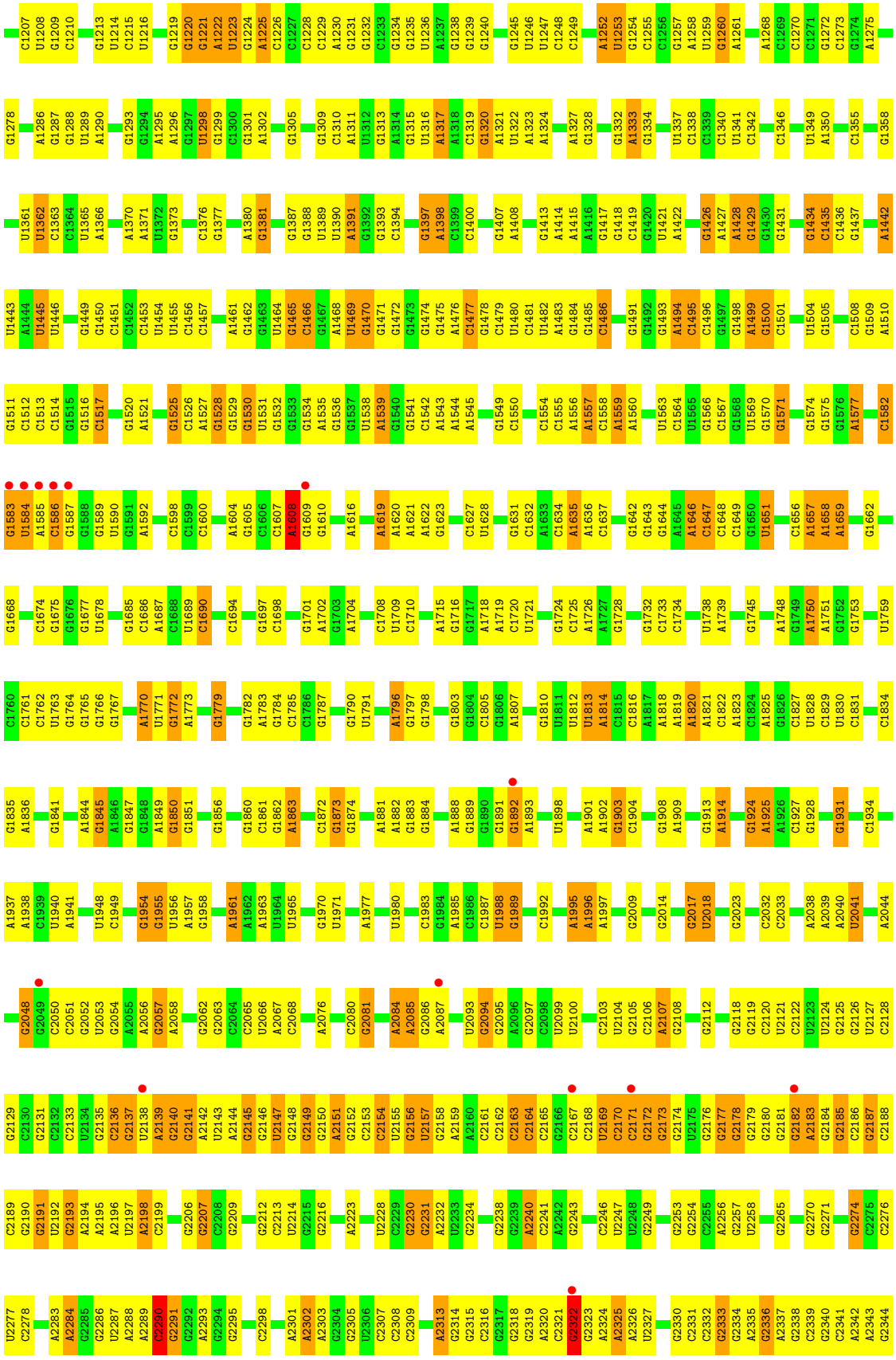




• Molecule 15: 23S ribosomal RNA

Chain 14:

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G1278 A1286 G1287 G1288 U1289 A1290 G1293 G1294 A1295 A1296 G1297 U1298 G1299 C1300 G1301 A1302 G1305 G1309 C1310 A1311 U1312 G1313 A1314 G1315 U1316 A1317 A1318 C1319 G1320 A1321 U1322 A1323 A1324 A1327 G1328 G1332 A1333 G1334 U1337 C1338 C1339 C1340 U1341 C1342 C1346 U1349 A1350 C1355 G1358
U1361 U1362 C1363 C1364 U1365 A1366 A1370 A1371 U1372 G1373 C1376 G1377 A1380 G1381 G1387 G1388 U1389 U1390 A1391 G1392 G1393 C1394 G1397 A1398 C1399 C1400 G1407 A1408 G1413 A1414 A1415 A1416 G1417 G1418 C1419 G1420 U1421 A1422 G1426 A1427 A1428 G1429 G1430 G1431 G1434 C1435 C1436 G1437 A1442
U1443 A1444 U1445 U1446 G1449 G1450 C1451 C1452 C1453 U1454 U1455 C1456 C1457 A1461 G1462 G1463 U1464 G1465 C1466 G1467 A1468 U1469 G1470 G1471 G1472 G1473 G1474 G1475 A1476 C1477 G1478 C1479 A1480 C1481 U1482 A1483 G1484 G1485 C1486 G1491 G1492 G1493 A1494 C1495 C1496 G1497 G1498 A1499 G1500 C1501 U1504 G1505 C1508 G1509 A1510
G1511 C1512 C1513 C1514 G1515 G1516 C1517 G1520 A1521 G1525 C1526 A1527 G1528 G1529 G1530 U1531 G1532 G1533 G1534 A1535 G1536 G1537 U1538 A1539 G1540 G1541 C1542 A1543 A1544 A1545 G1549 C1550 C1554 C1555 A1556 A1557 C1558 A1559 A1560 U1563 C1564 U1565 G1566 C1567 G1568 U1569 G1570 G1571 G1574 G1575 G1576 A1577 C1582
G1583 U1584 A1585 C1586 G1587 G1588 G1589 U1590 G1591 A1592 C1598 C1599 C1600 A1604 G1605 C1606 C1607 A1608 G1609 G1610 A1616 A1619 A1620 A1621 A1622 G1623 C1627 U1628 G1631 C1632 A1633 C1634 A1635 A1636 C1637 G1642 G1643 G1644 A1645 A1646 C1647 C1648 C1649 G1650 U1651 C1656 A1657 A1658 A1659 G1662
G1668 C1674 G1675 G1676 G1677 U1678 G1685 C1686 A1687 C1688 U1689 C1690 C1694 G1697 C1698 G1701 A1702 G1703 A1704 C1708 U1709 C1710 A1715 G1716 G1717 A1718 A1719 C1720 U1721 G1724 C1725 A1726 A1727 G1728 G1732 C1733 C1734 U1738 A1739 G1745 A1748 G1749 A1750 A1751 G1752 G1753 U1759
C1760 C1761 C1762 U1763 G1764 G1765 G1766 G1767 A1770 U1771 G1772 A1773 G1779 G1782 A1783 G1784 C1785 C1786 G1787 G1790 U1791 A1796 G1797 G1798 G1803 G1804 C1805 G1806 A1807 G1810 U1811 U1812 U1813 A1814 C1815 C1816 A1817 A1818 A1819 A1820 A1821 C1822 A1823 C1824 A1825 G1826 C1827 U1828 C1829 U1830 C1831 C1834
G1835 A1836 G1841 A1844 G1845 A1846 G1847 G1848 A1849 G1850 G1851 G1856 G1860 C1861 G1862 A1863 C1872 G1873 G1874 A1881 A1882 G1883 G1884 A1888 G1889 G1890 G1891 G1892 A1893 U1898 A1901 A1902 G1903 C1904 G1908 A1909 G1913 A1914 G1924 A1925 A1926 C1927 G1928 G1931 C1934
A1937 A1938 C1939 U1940 A1941 U1948 C1949 G1954 G1955 U1956 A1957 G1958 A1961 A1962 A1963 U1964 U1965 G1970 U1971 A1977 U1980 C1983 C1984 A1985 C1986 C1987 U1988 G1989 C1992 A1995 A1996 A1997 G2009 G2014 G2017 U2018 G2023 C2032 C2033 A2038 A2039 A2040 U2041 A2044
G2048 G2049 C2050 C2051 G2052 U2053 G2054 A2055 A2056 G2057 A2058 G2062 G2063 C2064 C2065 U2066 A2067 C2068 A2076 C2080 G2081 A2084 A2085 G2086 A2087 U2093 G2094 G2095 A2096 G2097 C2098 U2099 U2100 C2103 U2104 G2105 C2106 A2107 G2108 G2112 G2118 G2119 C2120 U2121 C2122 U2123 U2124 G2125 G2126 U2127 C2128
G2129 C2130 G2131 C2132 C2133 U2134 G2135 C2136 G2137 U2138 A2139 G2140 G2141 A2142 U2143 A2144 G2145 G2146 U2147 G2148 G2149 G2150 A2151 G2152 C2153 G2154 U2155 G2156 U2157 G2158 A2159 A2160 C2161 C2162 C2163 C2164 C2165 G2166 C2167 C2168 U2169 C2170 C2171 G2172 G2173 G2174 U2175 G2176 G2177 G2178 G2179 G2180 G2181 G2182 A2183 G2184 G2185 C2186 G2187 C2188
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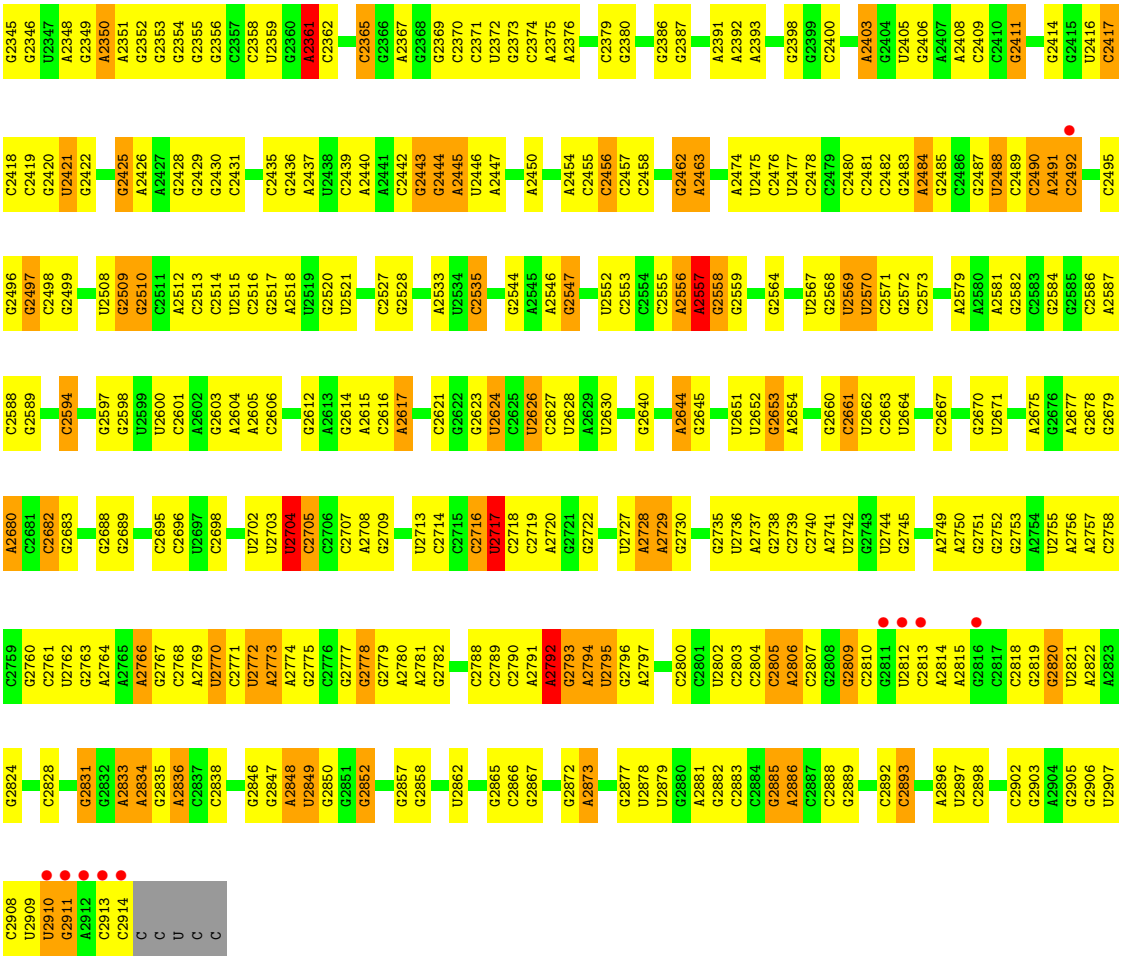
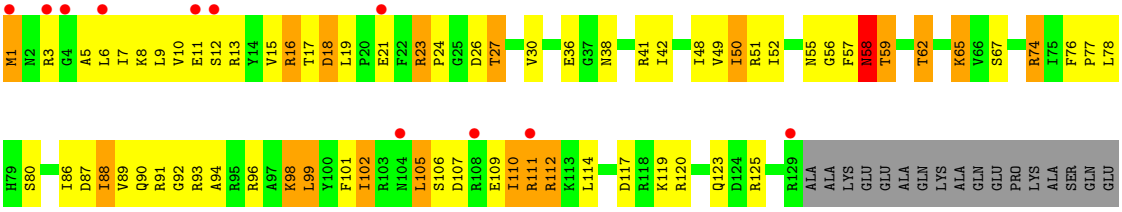
U2277 C2278 A2283 A2284 C2285 G2286 U2287 A2288 A2289 C2290 G2291 G2292 A2293 C2294 G2295 C2298 A2301 A2302 A2303 G2304 G2305 U2306 C2307 C2308 C2309 A2313 G2314 G2315 C2316 G2317 G2318 G2319 A2320 C2321 G2322 G2323 A2324 A2325 A2326 U2327 G2330 C2331 C2332 G2333 G2334 A2335 G2336 A2337 G2338 G2339 G2340 C2341 A2342 A2343 G2344



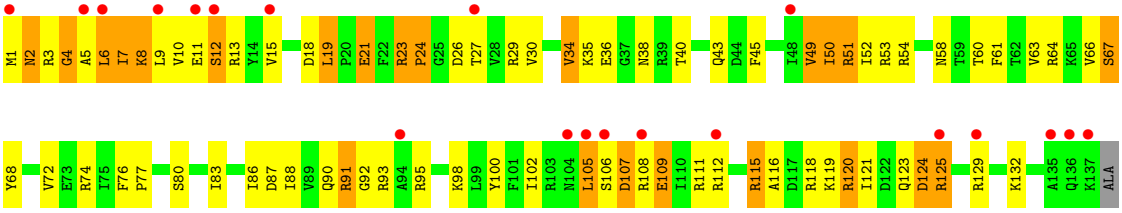
• Molecule 16: 50S ribosomal protein L19

Chain B8:



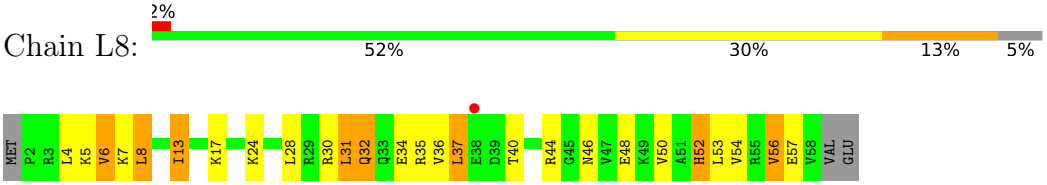
• Molecule 16: 50S ribosomal protein L19

Chain 75:



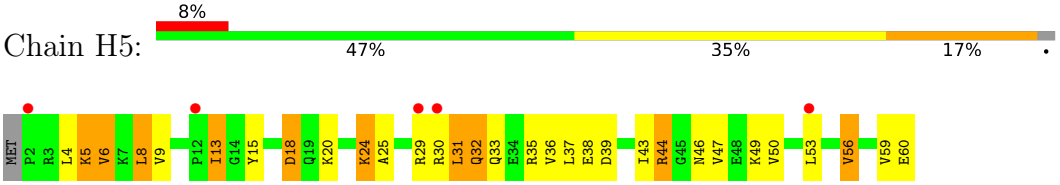
• Molecule 17: 50S ribosomal protein L30

Chain L8:



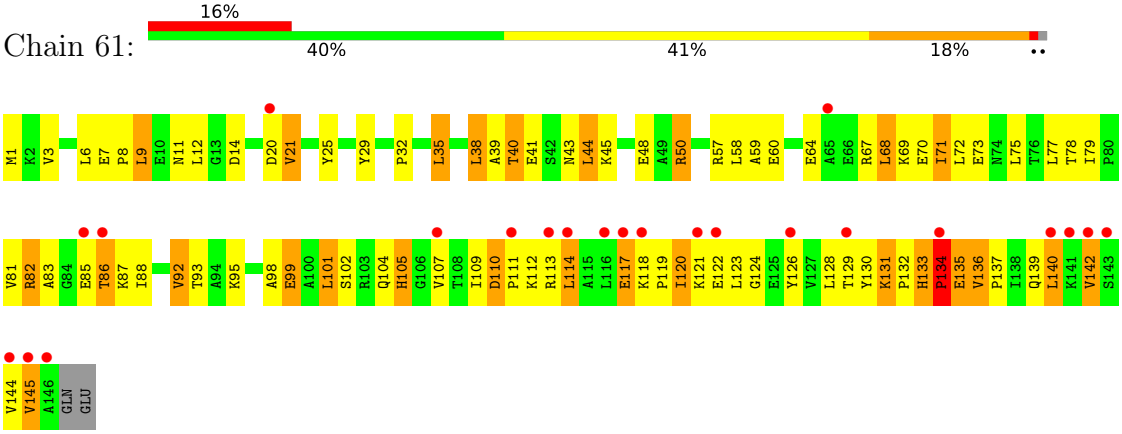
• Molecule 17: 50S ribosomal protein L30

Chain H5:



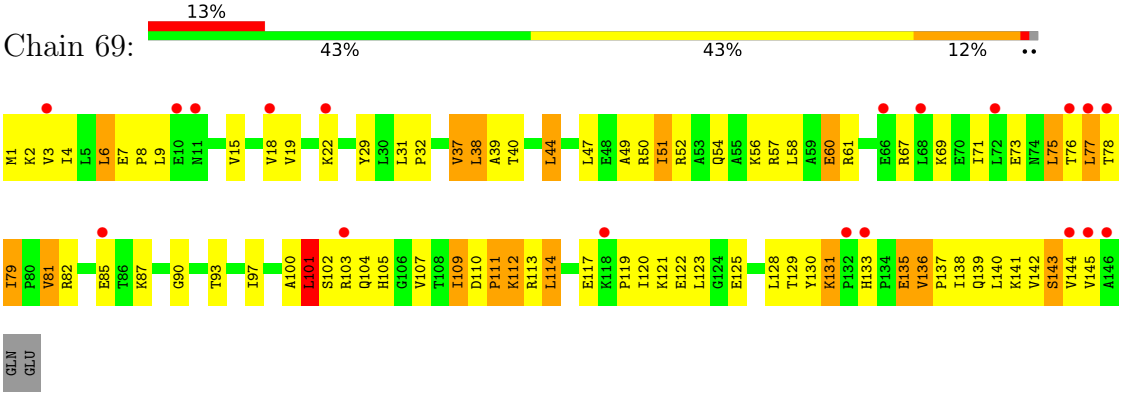
• Molecule 18: 50S ribosomal protein L9

Chain 61:



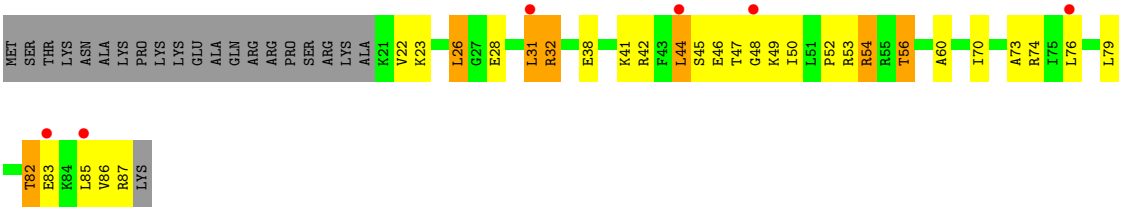
• Molecule 18: 50S ribosomal protein L9

Chain 69:

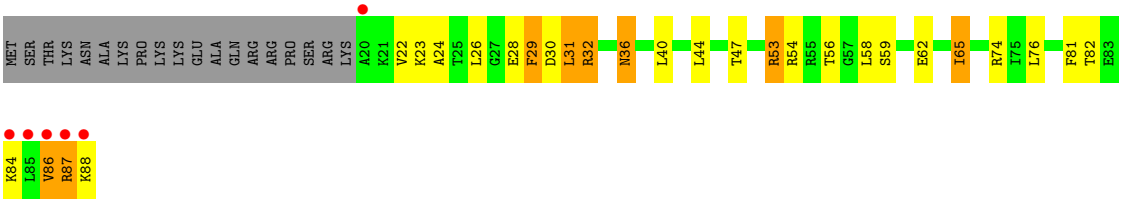


• Molecule 19: 30S ribosomal protein S18

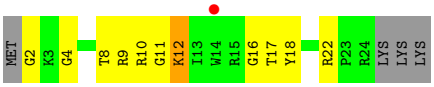
Chain 9I:



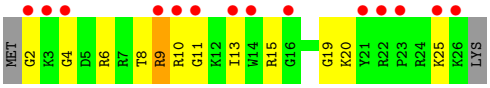
• Molecule 19: 30S ribosomal protein S18



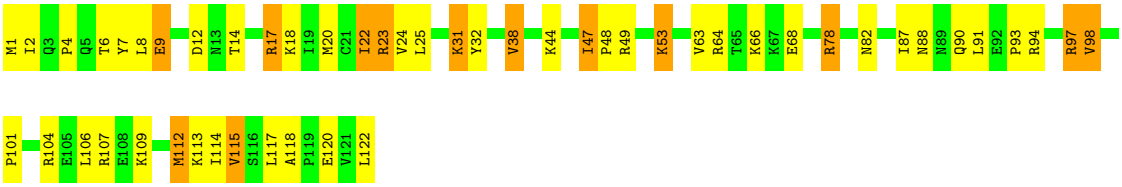
• Molecule 20: 30S ribosomal protein Thx



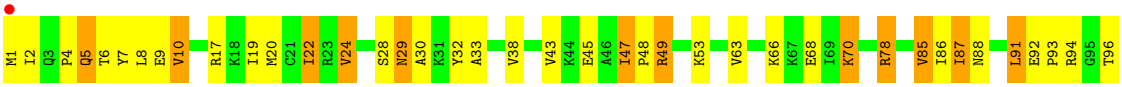
• Molecule 20: 30S ribosomal protein Thx

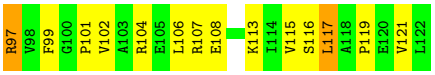


• Molecule 21: 50S ribosomal protein L14



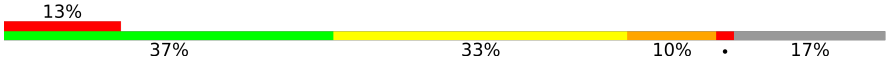
• Molecule 21: 50S ribosomal protein L14

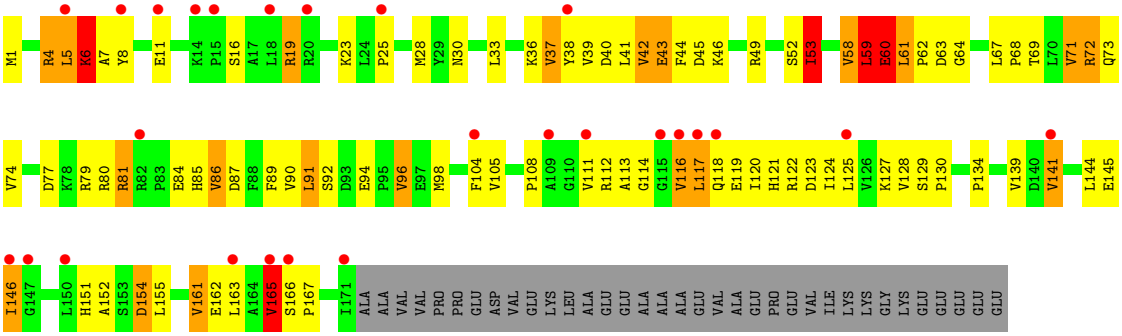




• Molecule 22: 50S ribosomal protein L25

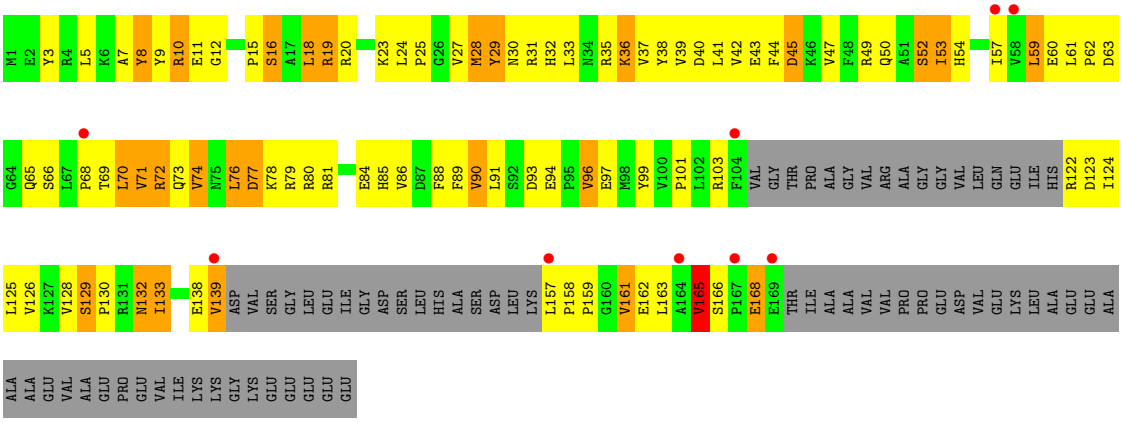
Chain H8:





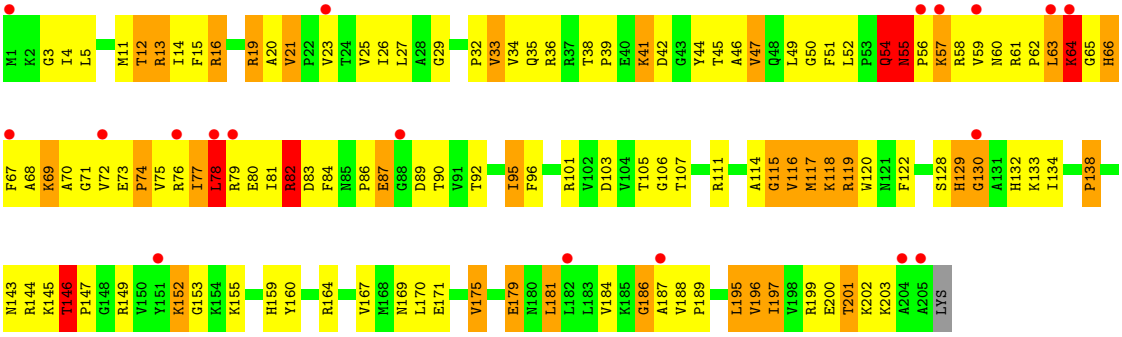
• Molecule 22: 50S ribosomal protein L25

Chain D5:



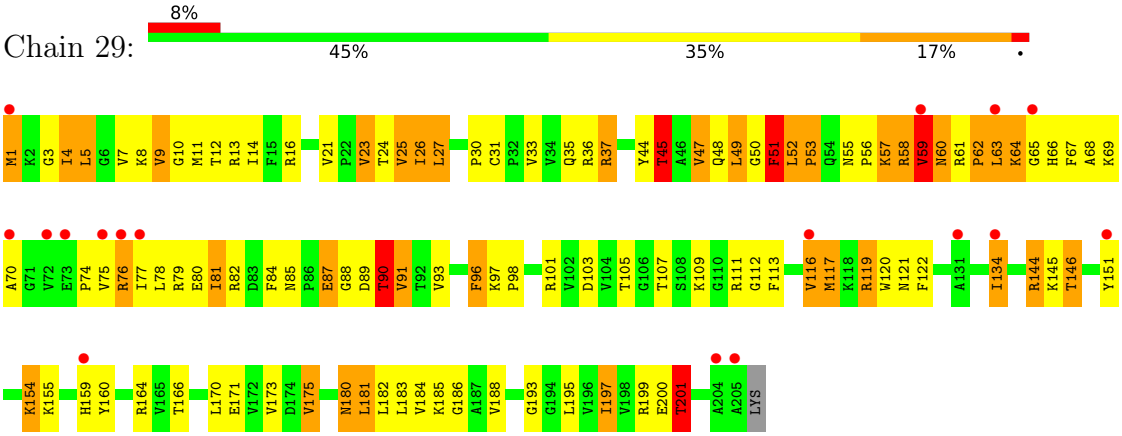
• Molecule 23: 50S ribosomal protein L3

Chain 21:



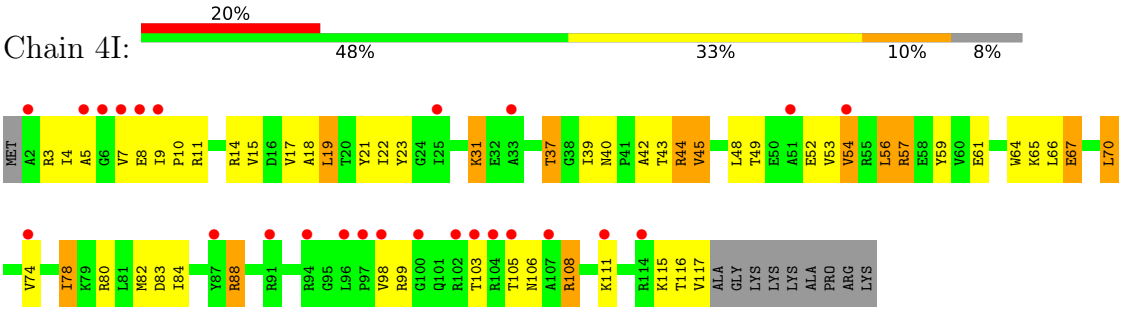
• Molecule 23: 50S ribosomal protein L3

Chain 29:



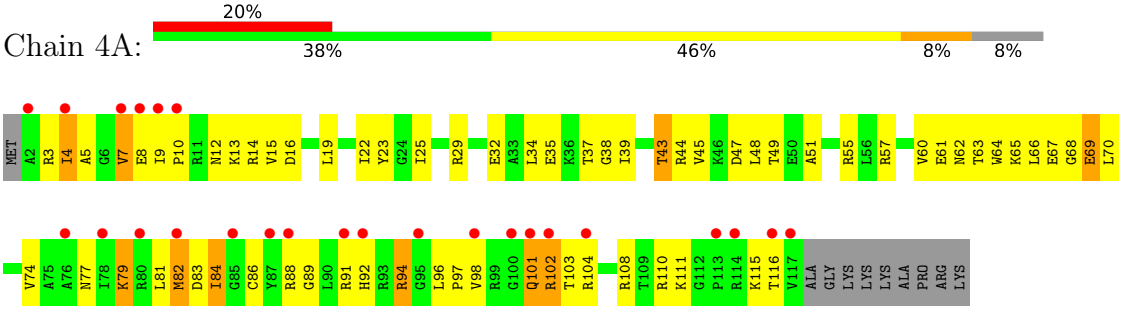
• Molecule 24: 30S ribosomal protein S13

Chain 4I:



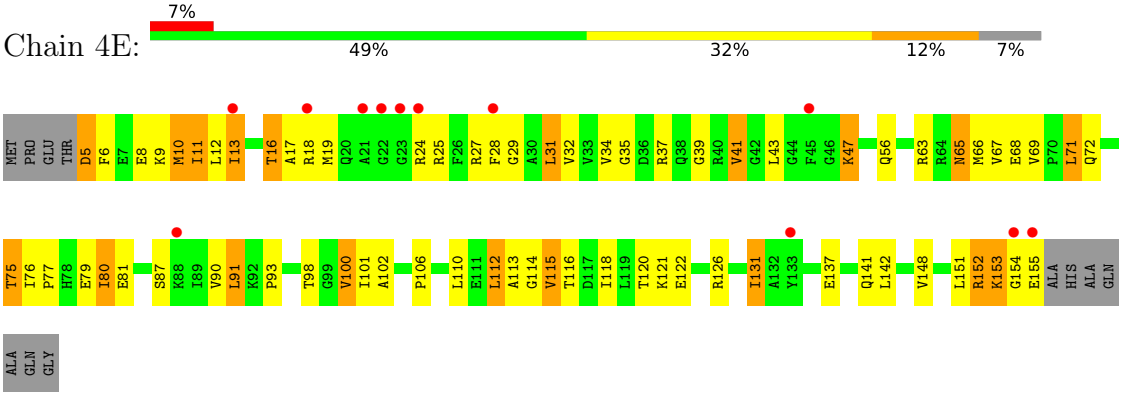
• Molecule 24: 30S ribosomal protein S13

Chain 4A:



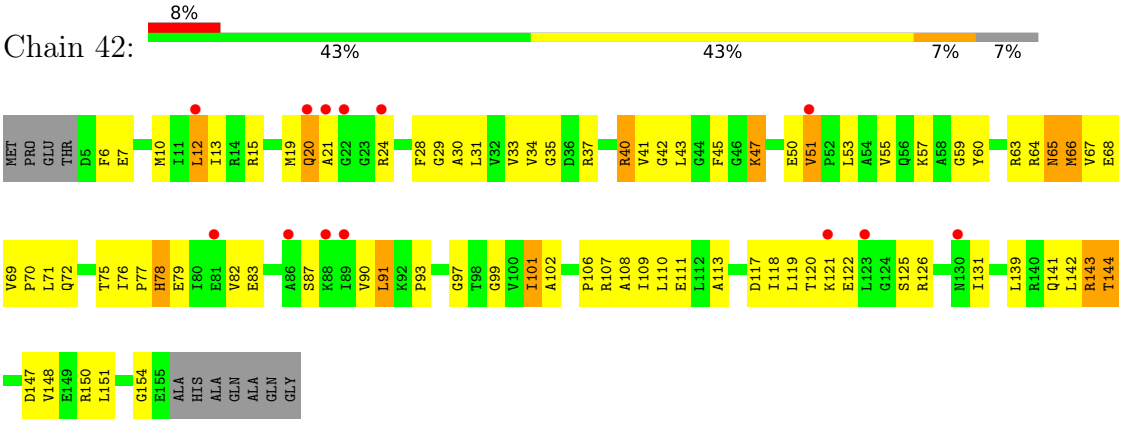
• Molecule 25: 30S ribosomal protein S5

Chain 4E:



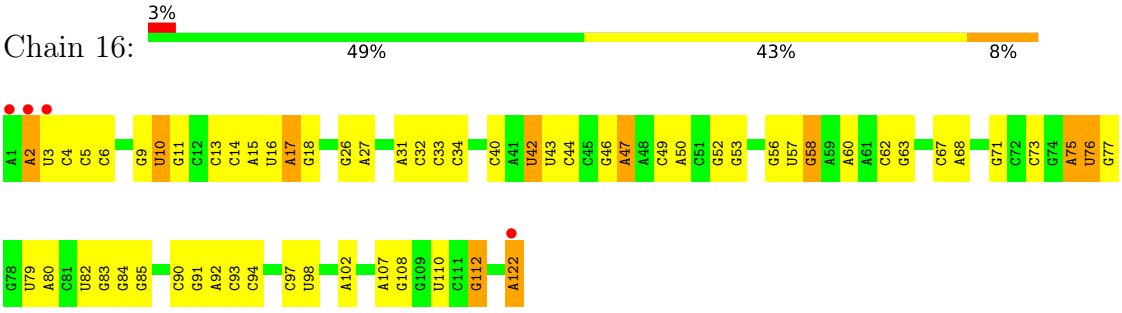
• Molecule 25: 30S ribosomal protein S5

Chain 42:



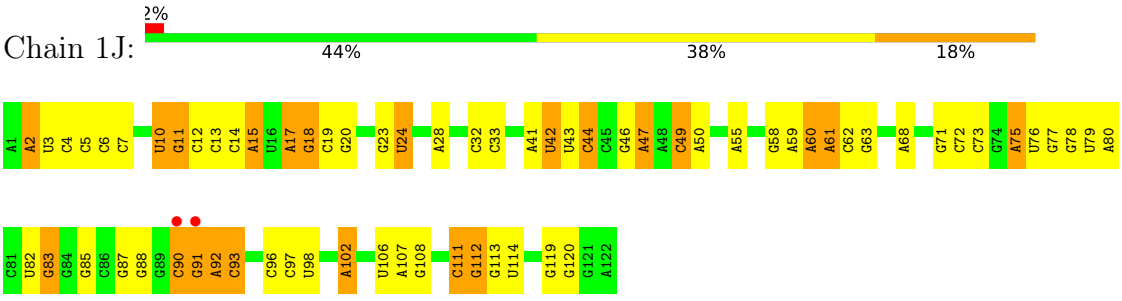
• Molecule 26: 5S ribosomal RNA

Chain 16:



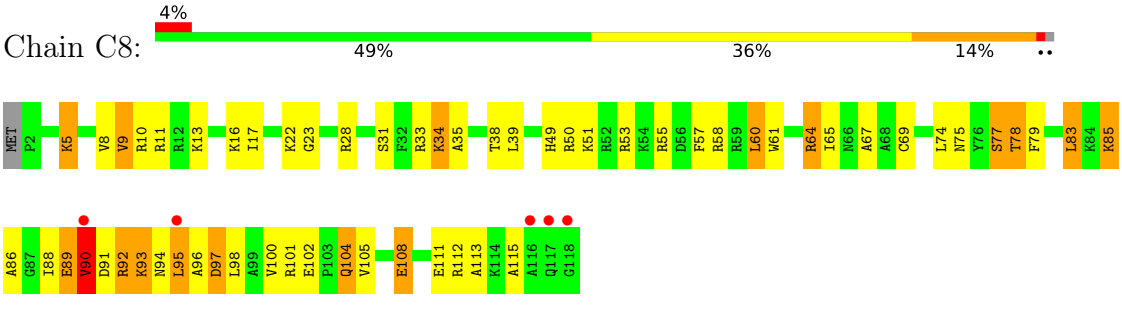
• Molecule 26: 5S ribosomal RNA

Chain 1J:



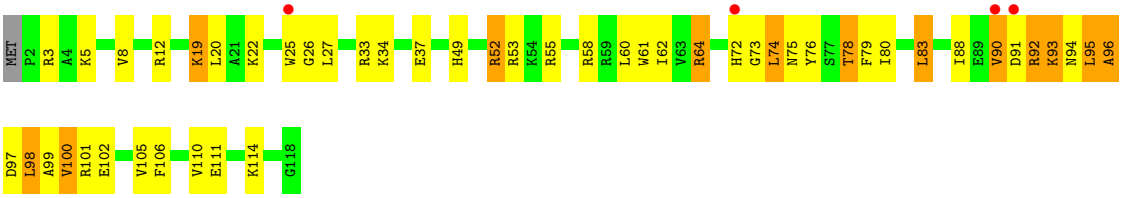
• Molecule 27: 50S ribosomal protein L20

Chain C8:



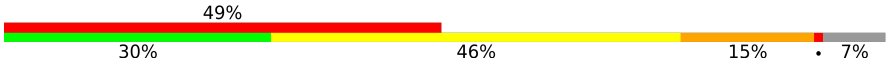
• Molecule 27: 50S ribosomal protein L20

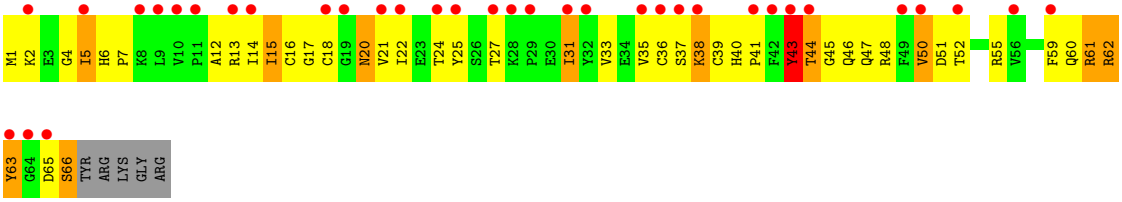
Chain 85:



• Molecule 28: 50S ribosomal protein L31

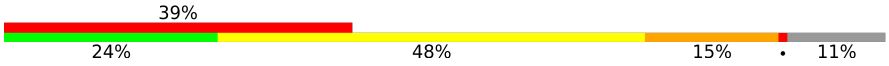
Chain M8:

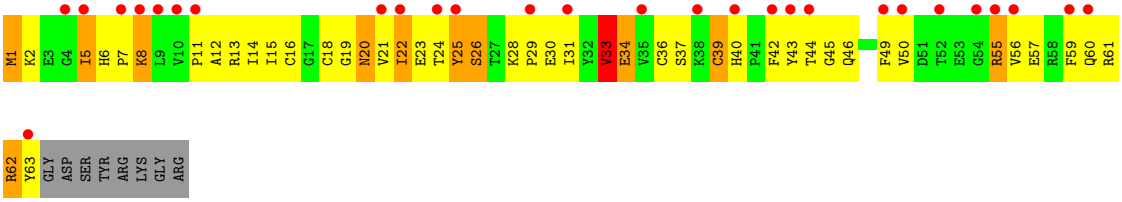




• Molecule 28: 50S ribosomal protein L31

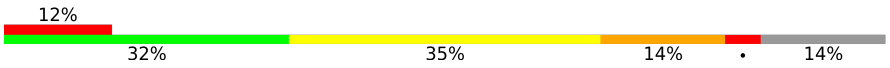
Chain I5:

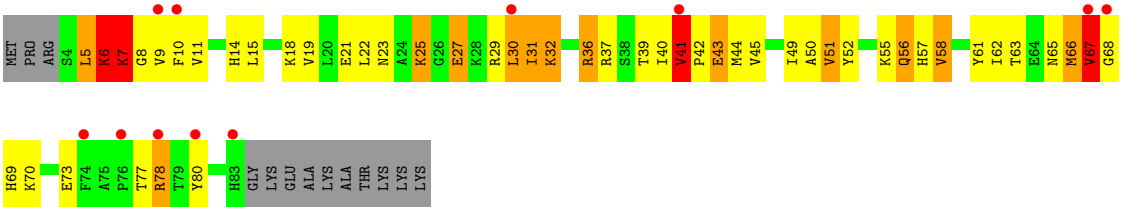




• Molecule 29: 30S ribosomal protein S19

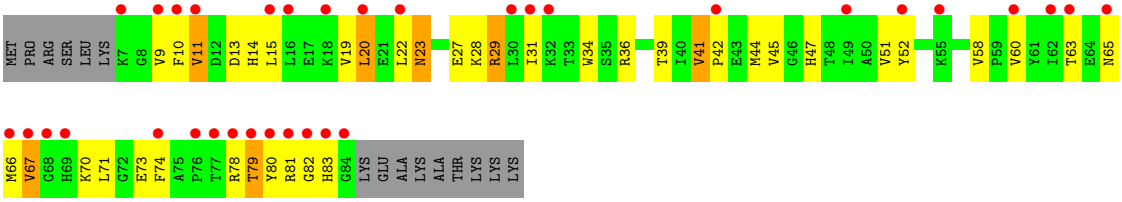
Chain AI:





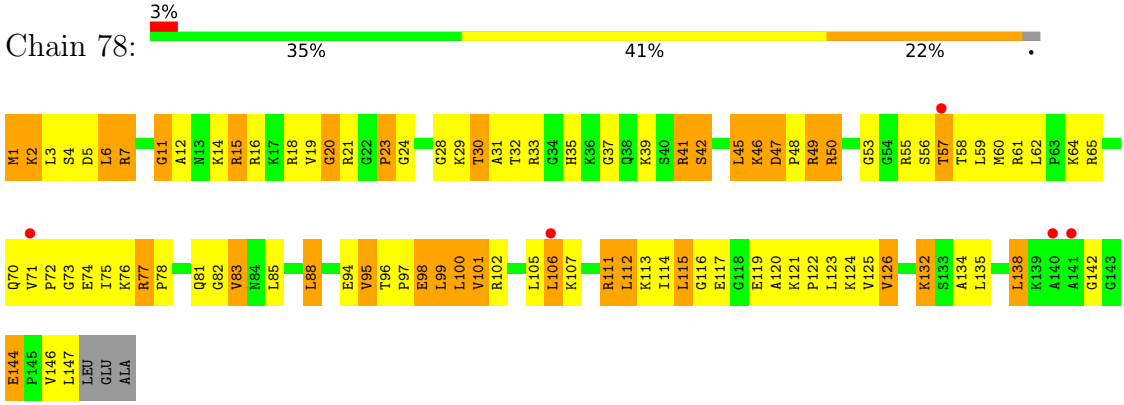
• Molecule 29: 30S ribosomal protein S19

Chain AA:



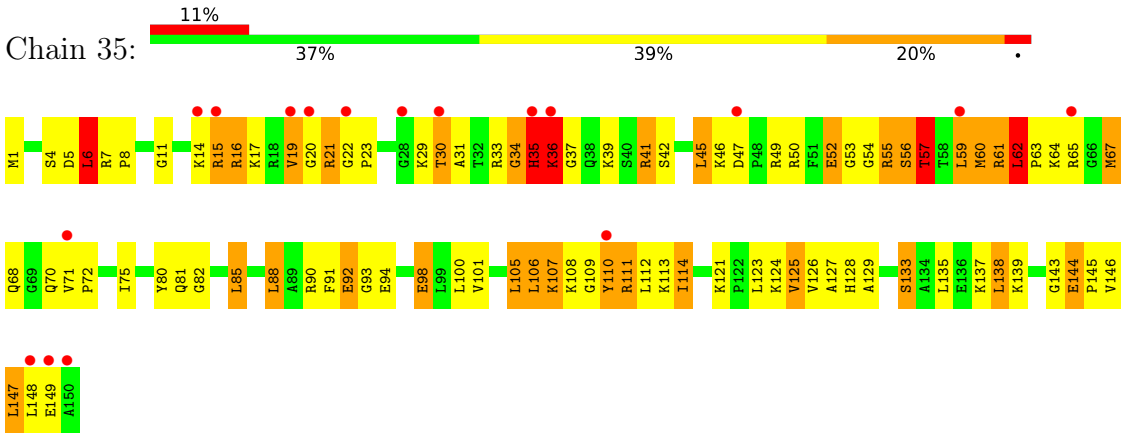
• Molecule 30: 50S ribosomal protein L15

Chain 78:



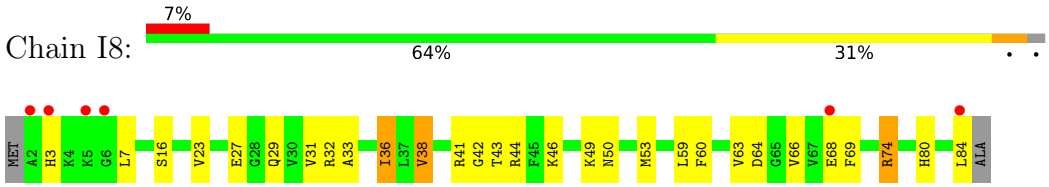
• Molecule 30: 50S ribosomal protein L15

Chain 35:



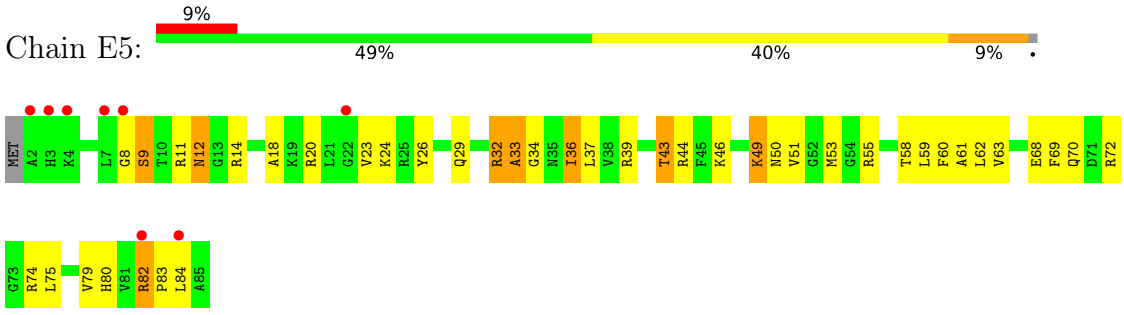
• Molecule 31: 50S ribosomal protein L27

Chain I8:



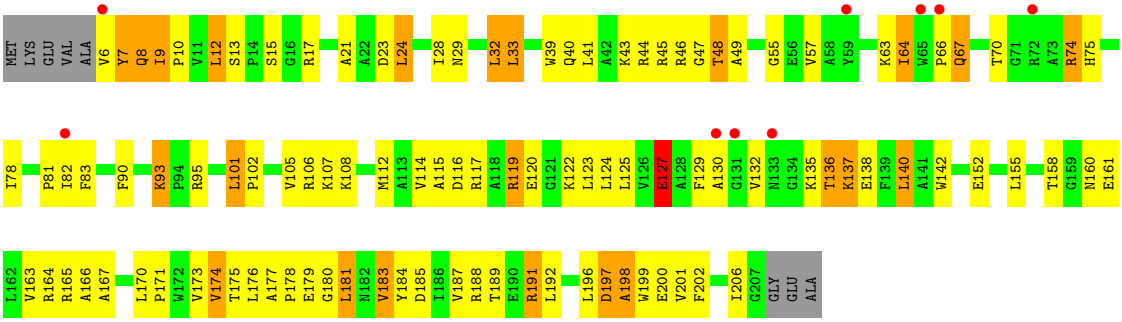
• Molecule 31: 50S ribosomal protein L27

Chain E5:



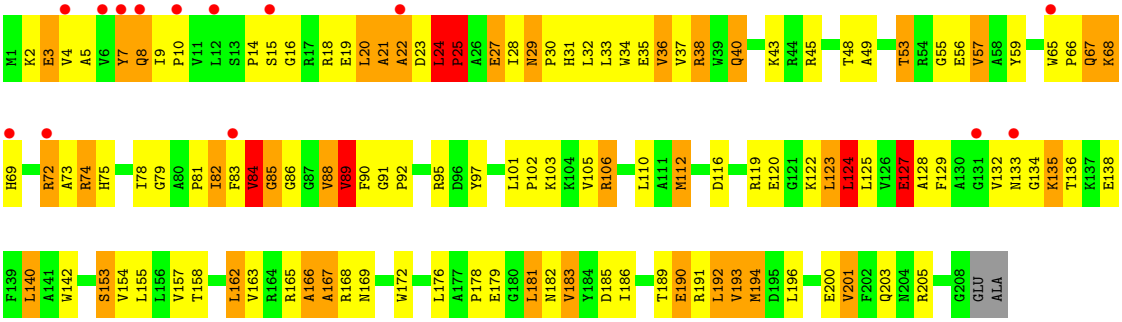
• Molecule 32: 50S ribosomal protein L4

Chain 31:



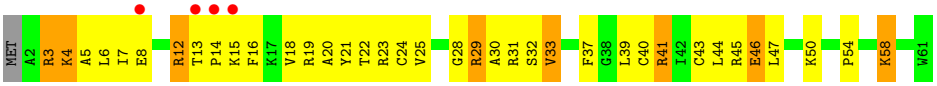
• Molecule 32: 50S ribosomal protein L4

Chain 39:



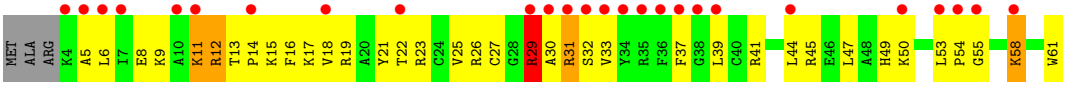
• Molecule 33: 30S ribosomal protein S14 type Z

Chain 5I:



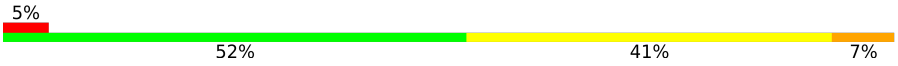
• Molecule 33: 30S ribosomal protein S14 type Z

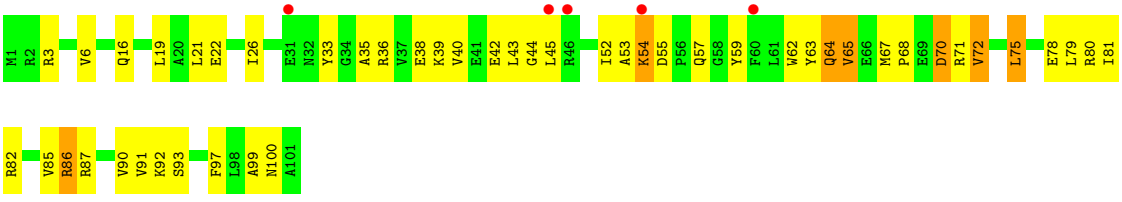
Chain 5A:



• Molecule 34: 30S ribosomal protein S6

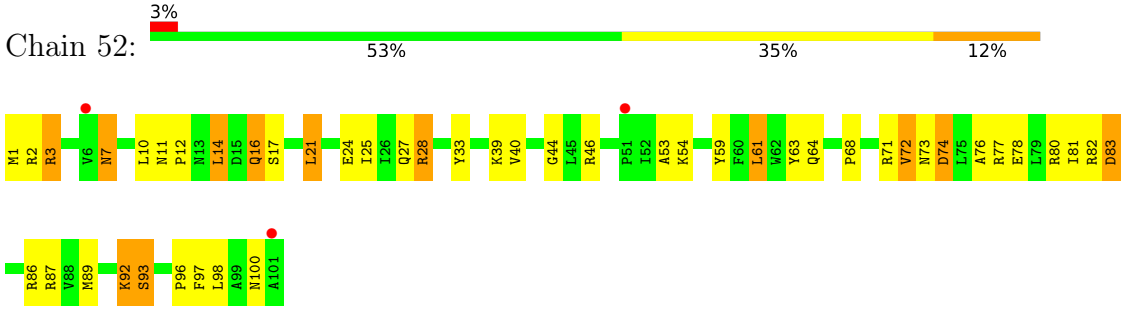
Chain 5E:





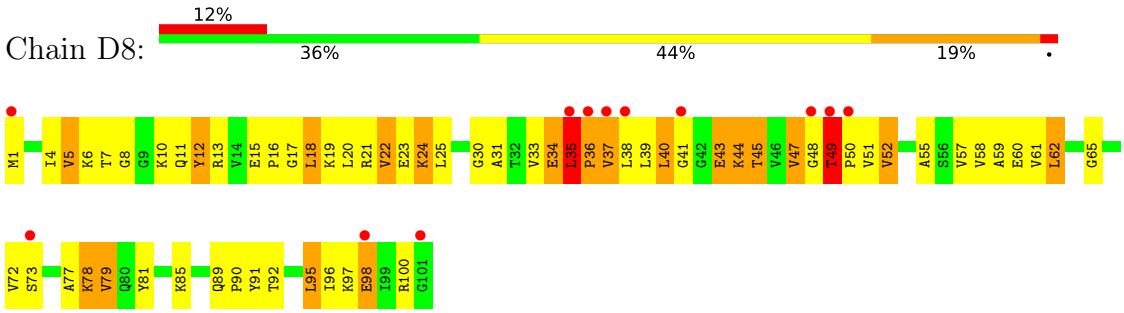
• Molecule 34: 30S ribosomal protein S6

Chain 52:



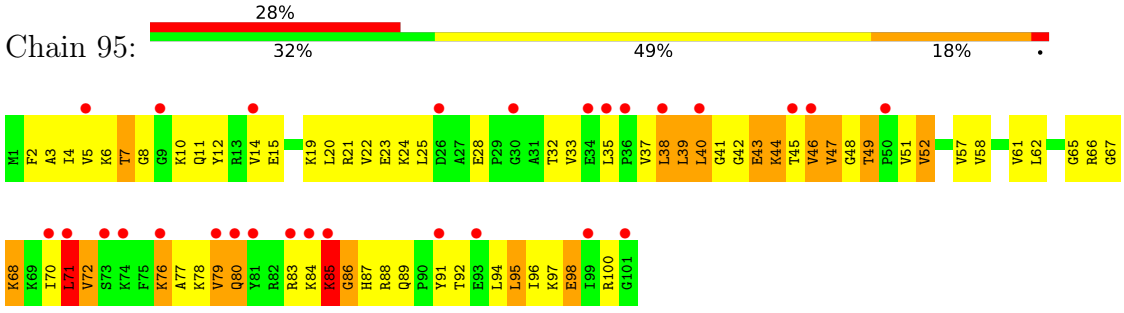
• Molecule 35: 50S ribosomal protein L21

Chain D8:



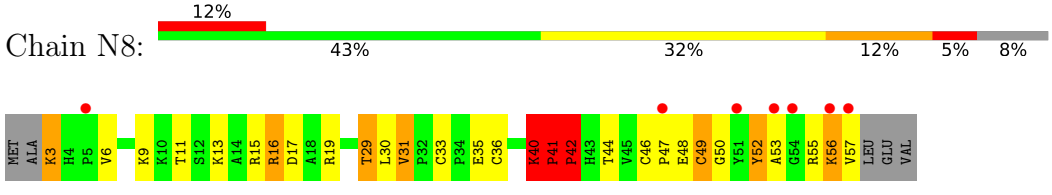
• Molecule 35: 50S ribosomal protein L21

Chain 95:



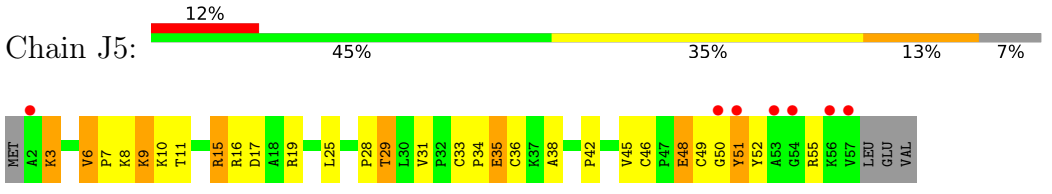
• Molecule 36: 50S ribosomal protein L32

Chain N8:



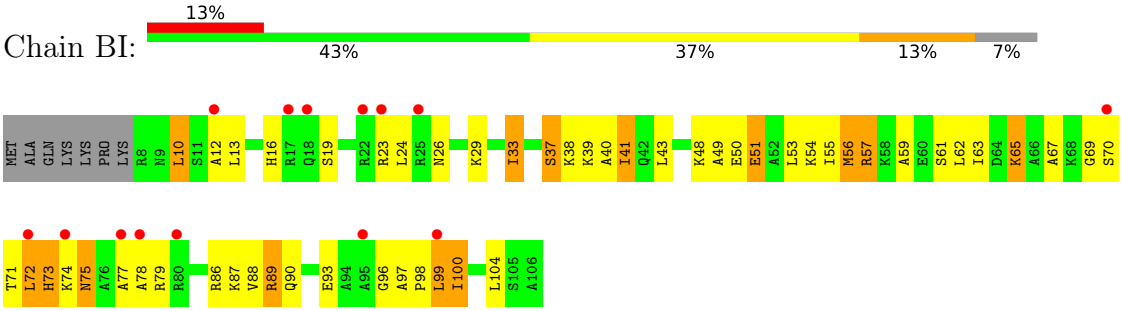
• Molecule 36: 50S ribosomal protein L32

Chain J5:



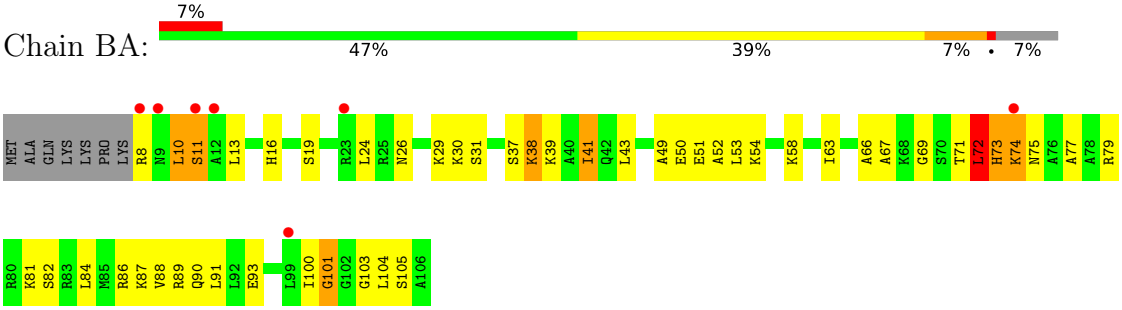
• Molecule 37: 30S ribosomal protein S20

Chain BI:



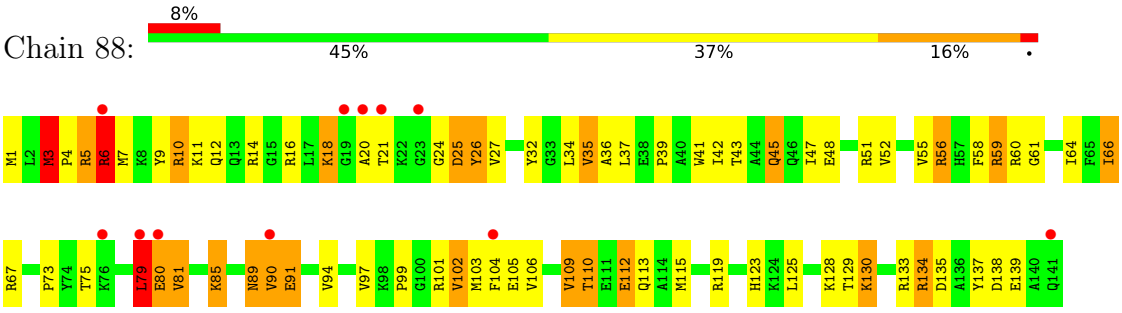
• Molecule 37: 30S ribosomal protein S20

Chain BA:



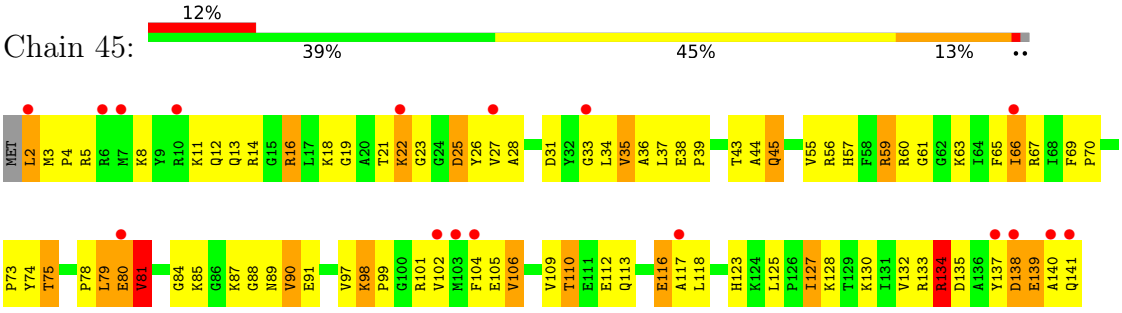
• Molecule 38: 50S ribosomal protein L16

Chain 88:



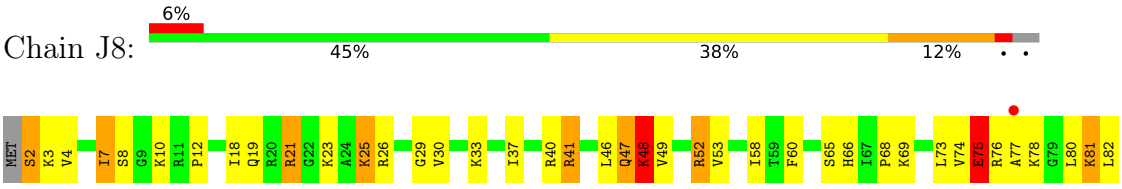
• Molecule 38: 50S ribosomal protein L16

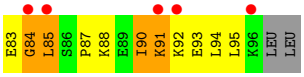
Chain 45:



• Molecule 39: 50S ribosomal protein L28

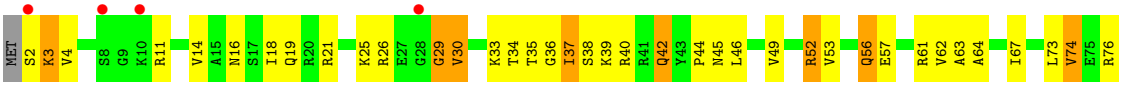
Chain J8:





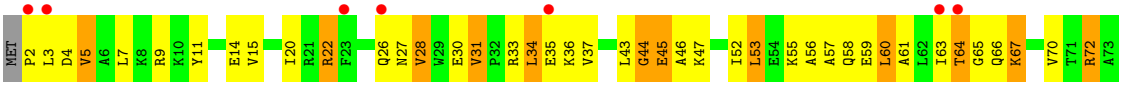
• Molecule 39: 50S ribosomal protein L28

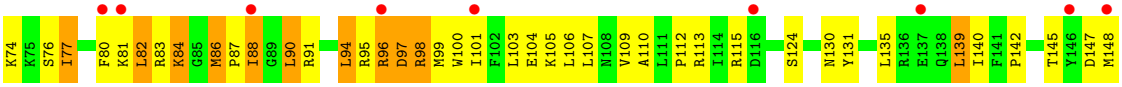
Chain F5:

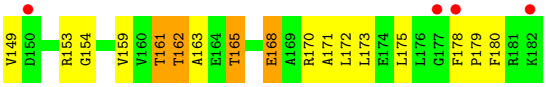


• Molecule 40: 50S ribosomal protein L5

Chain 41:

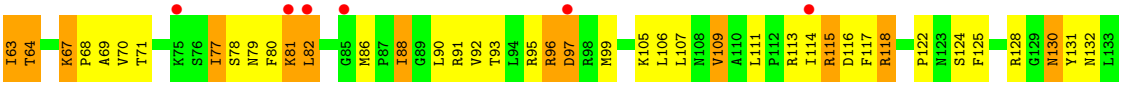


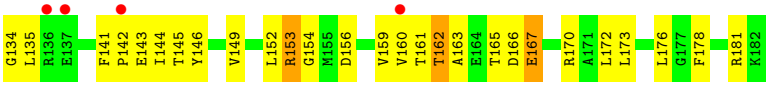




• Molecule 40: 50S ribosomal protein L5

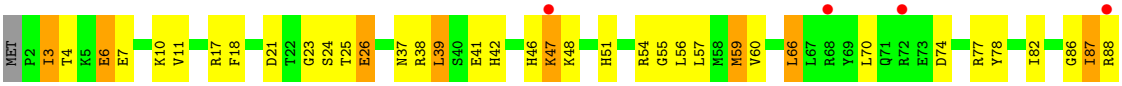
Chain 49:





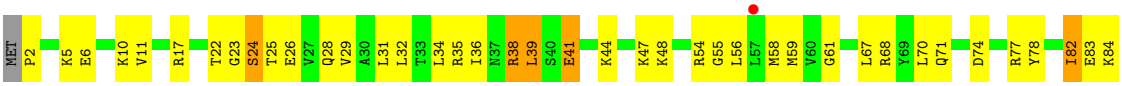
• Molecule 41: 30S ribosomal protein S15

Chain 6I:



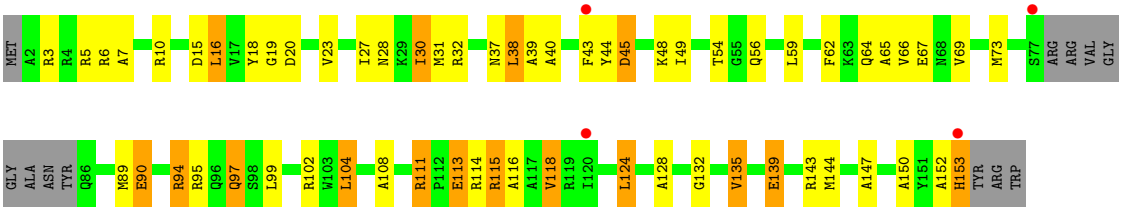
• Molecule 41: 30S ribosomal protein S15

Chain 6A:



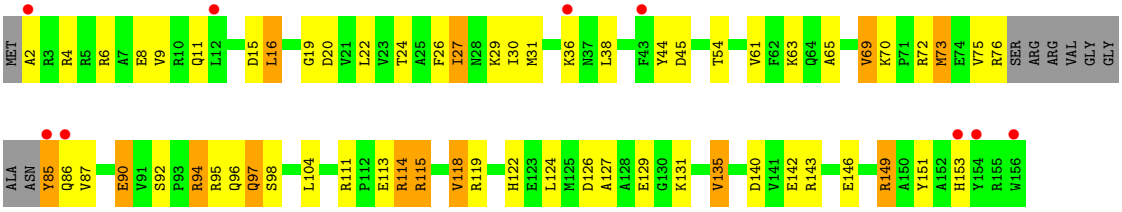
• Molecule 42: 30S ribosomal protein S7

Chain 6E:



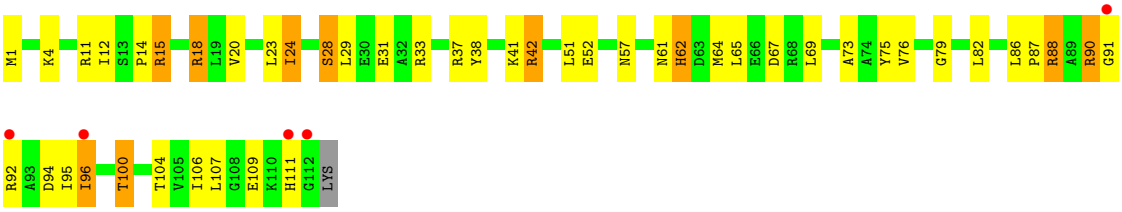
• Molecule 42: 30S ribosomal protein S7

Chain 62:



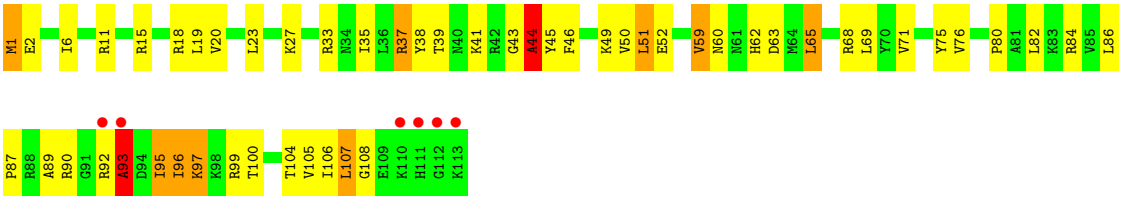
• Molecule 43: 50S ribosomal protein L22

Chain E8:



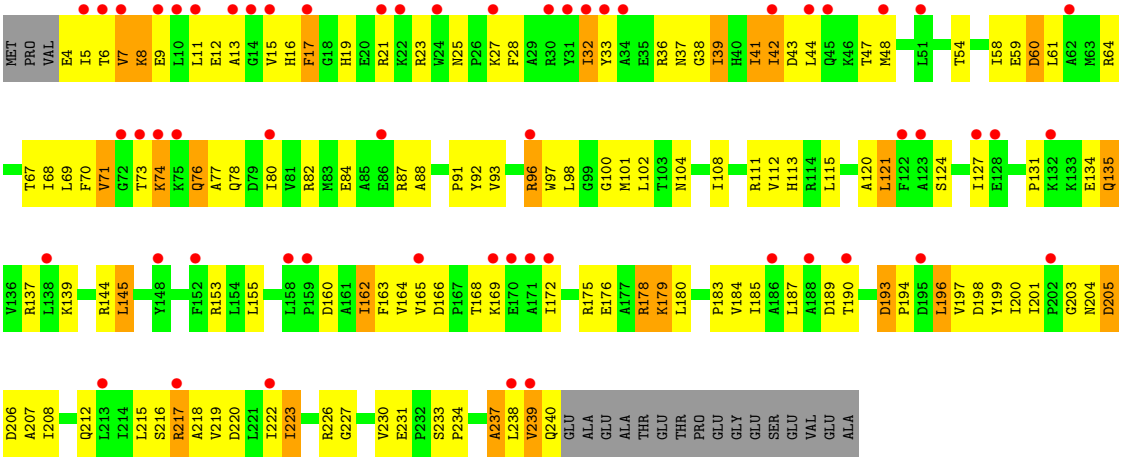
• Molecule 43: 50S ribosomal protein L22

Chain A5:



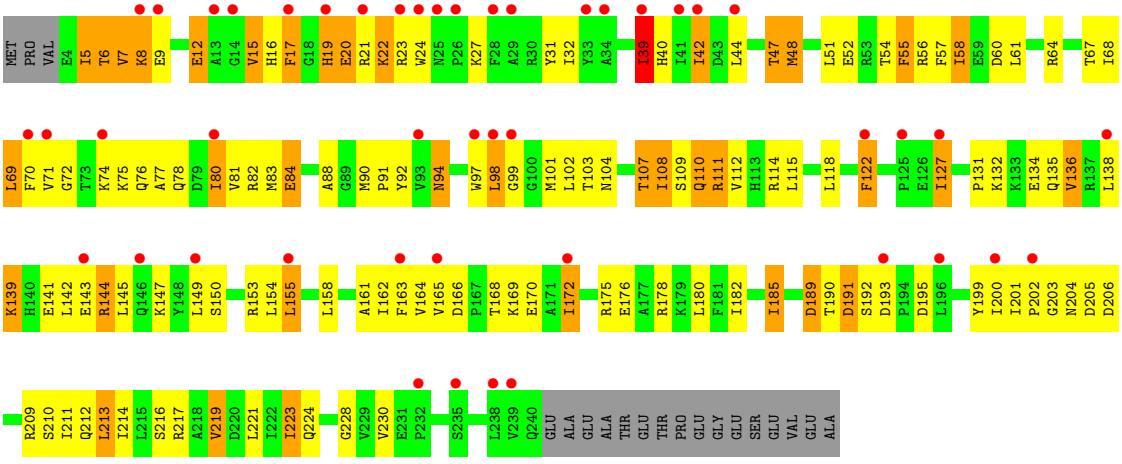
• Molecule 44: 30S ribosomal protein S2

Chain 1E:



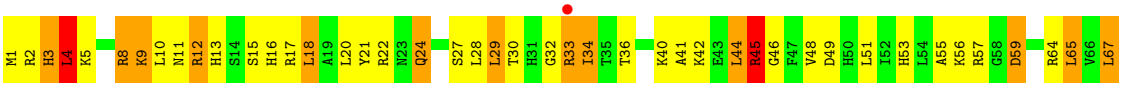
• Molecule 44: 30S ribosomal protein S2

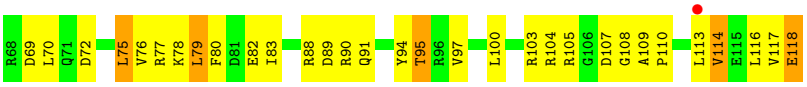
Chain 12:



• Molecule 45: 50S ribosomal protein L17

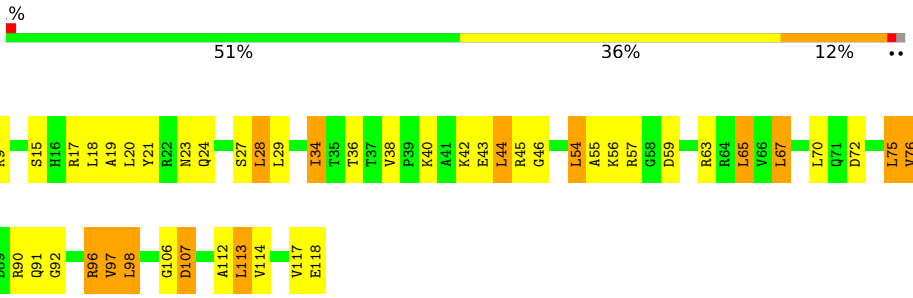
Chain 98:





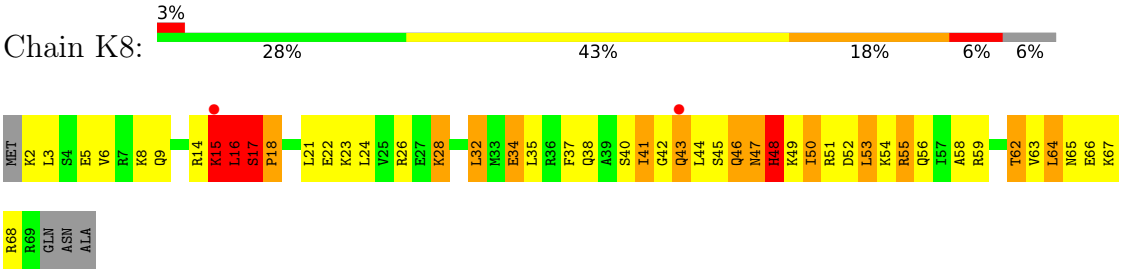
• Molecule 45: 50S ribosomal protein L17

Chain 55:



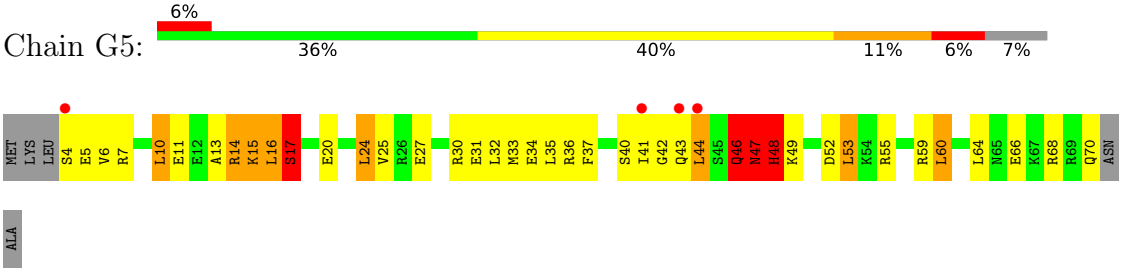
• Molecule 46: 50S ribosomal protein L29

Chain K8:



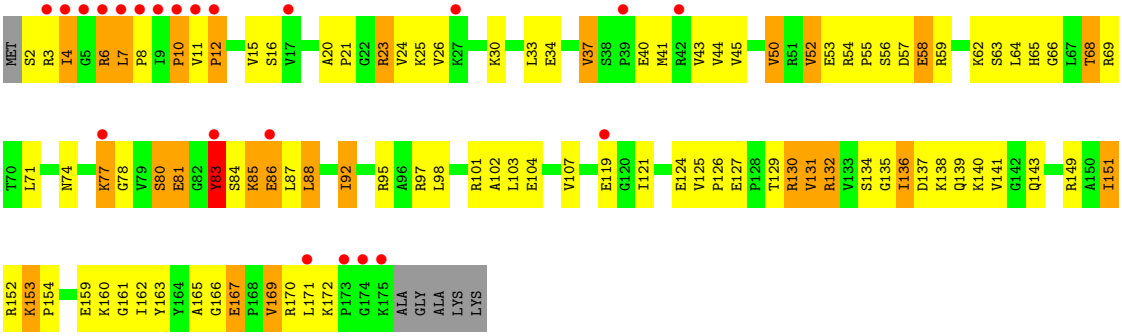
• Molecule 46: 50S ribosomal protein L29

Chain G5:



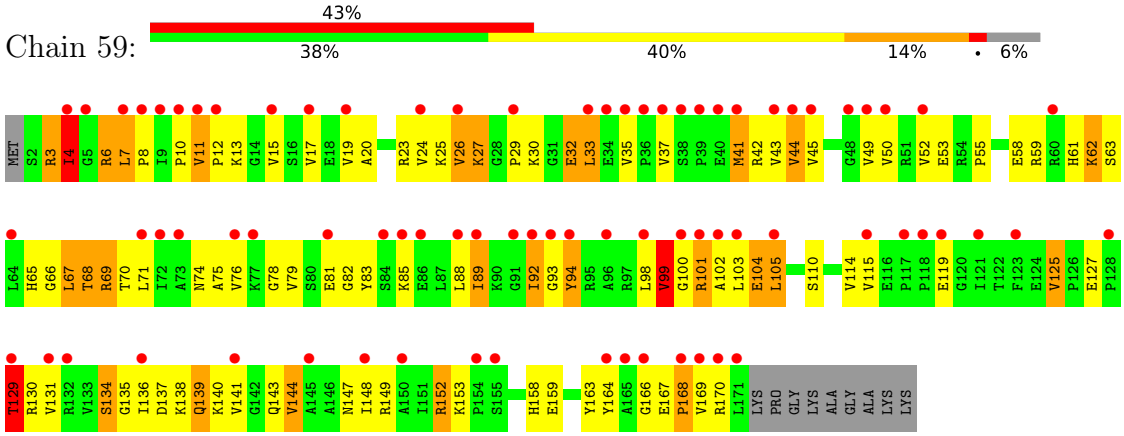
• Molecule 47: 50S ribosomal protein L6

Chain 51:



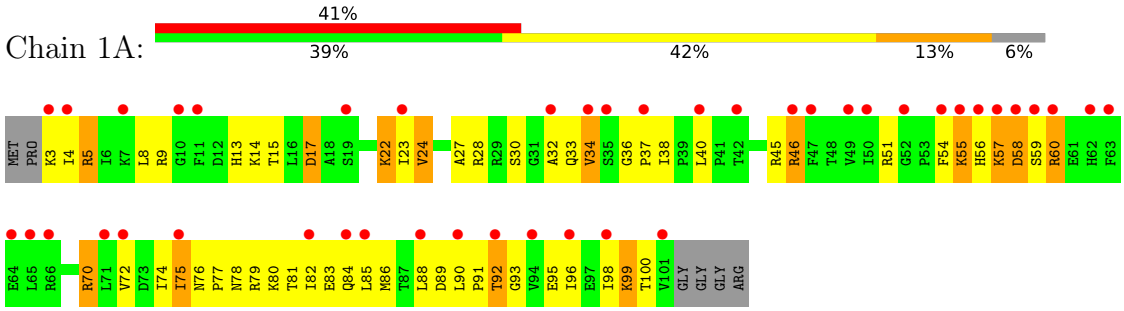
• Molecule 47: 50S ribosomal protein L6

Chain 59:



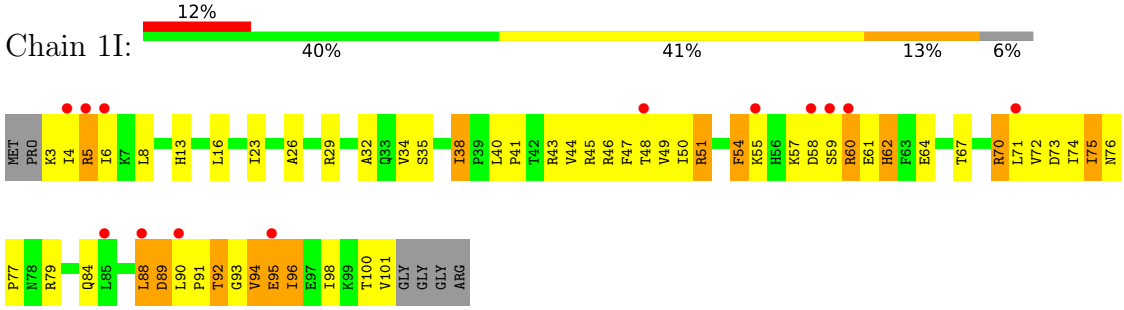
• Molecule 48: 30S ribosomal protein S10

Chain 1A:



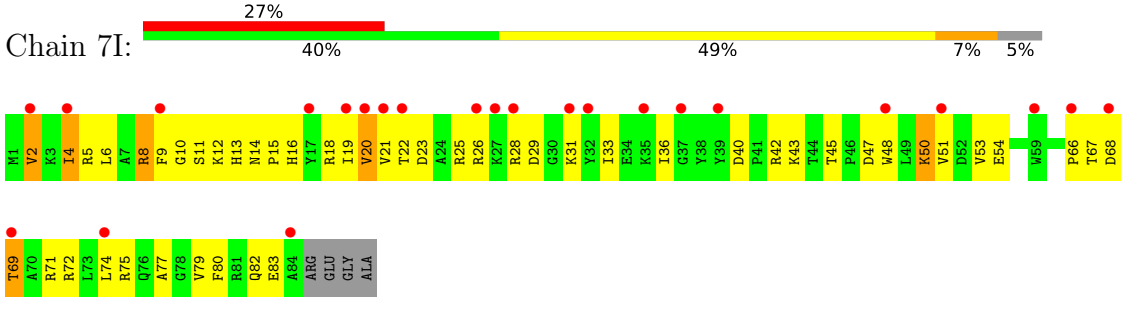
• Molecule 48: 30S ribosomal protein S10

Chain 1I:



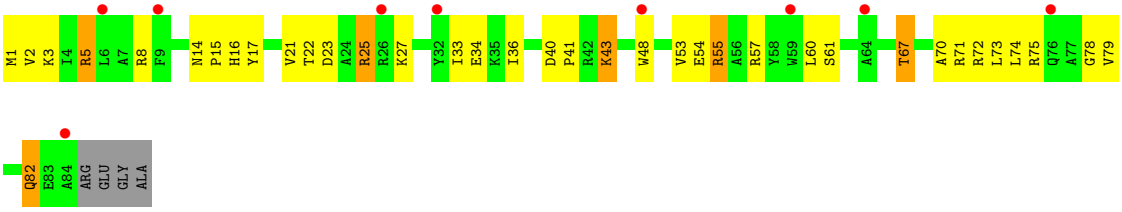
• Molecule 49: 30S ribosomal protein S16

Chain 7I:

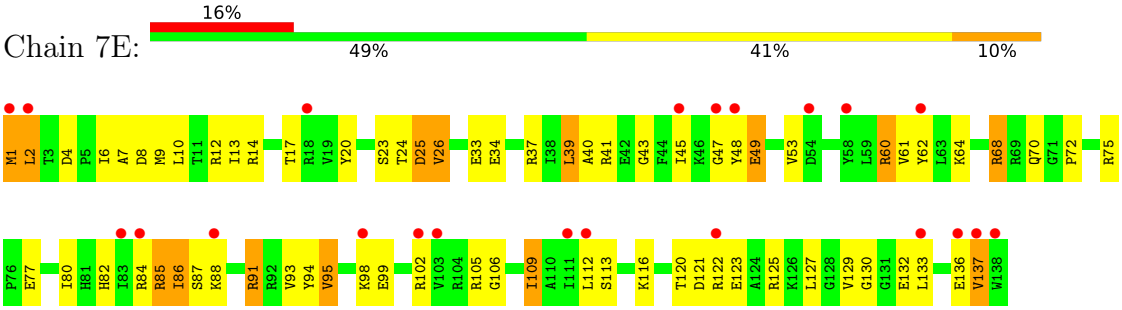


• Molecule 49: 30S ribosomal protein S16

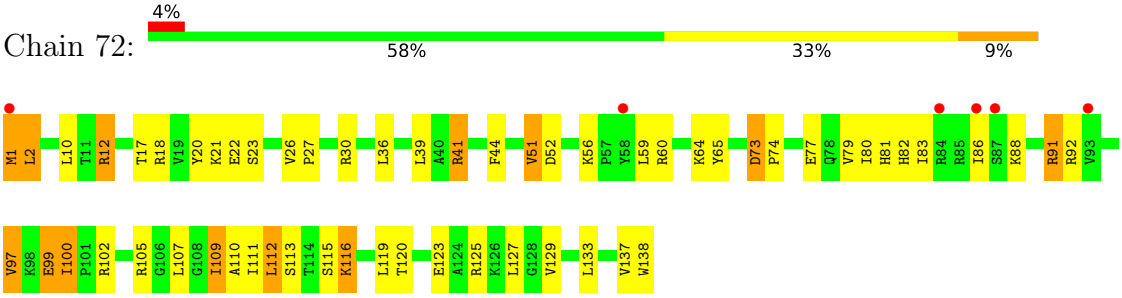
Chain 7A:



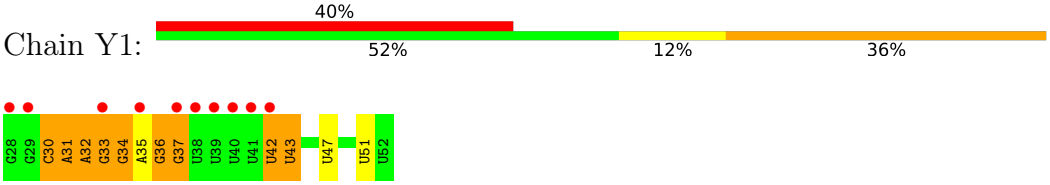
• Molecule 50: 30S ribosomal protein S8



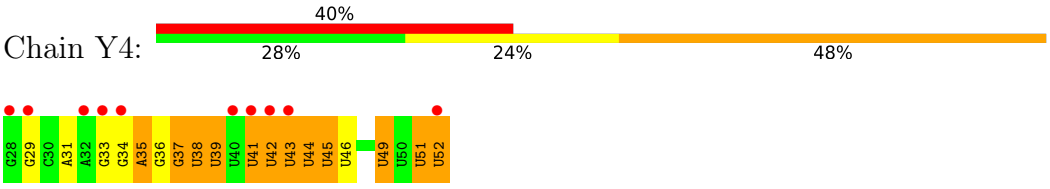
• Molecule 50: 30S ribosomal protein S8



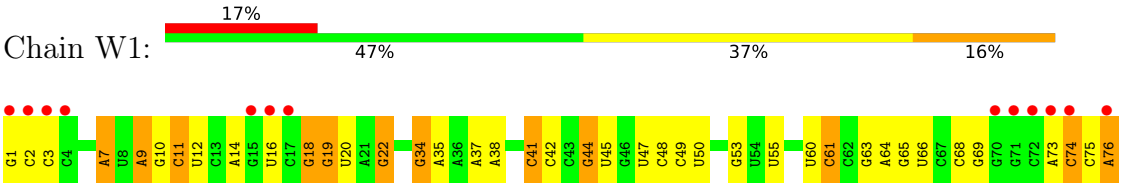
• Molecule 51: mRNA



• Molecule 51: mRNA

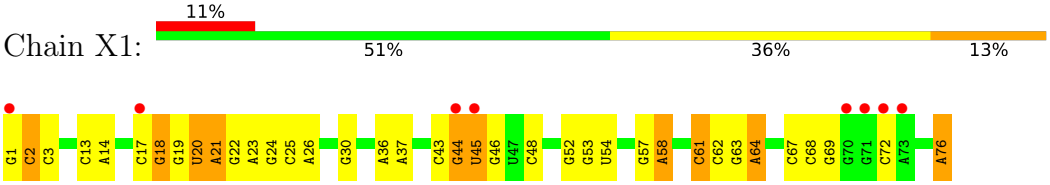


• Molecule 52: tRNA-Phe



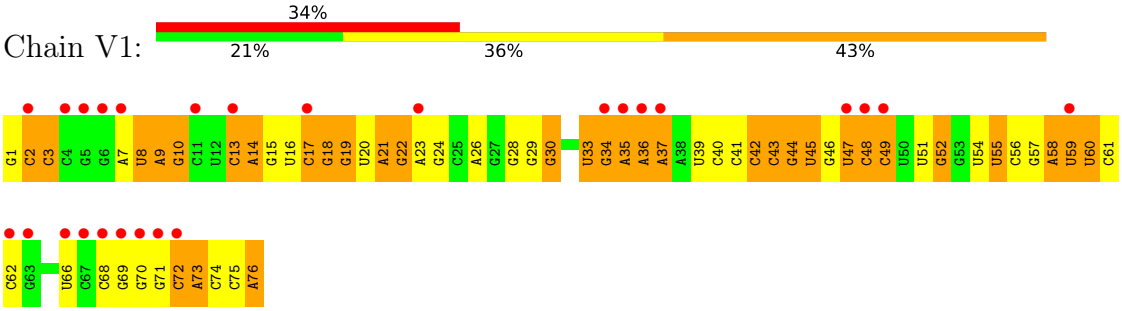
• Molecule 52: tRNA-Phe

Chain X1:



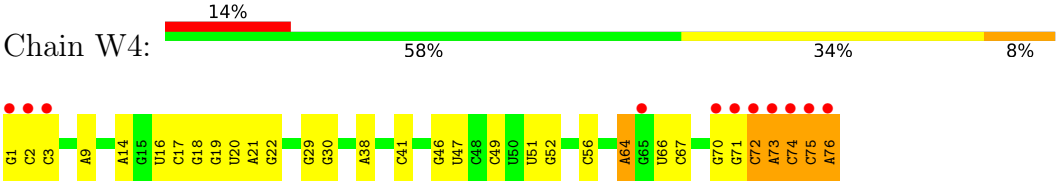
• Molecule 52: tRNA-Phe

Chain V1:



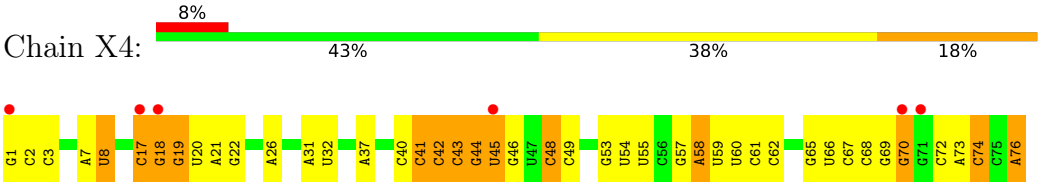
• Molecule 52: tRNA-Phe

Chain W4:



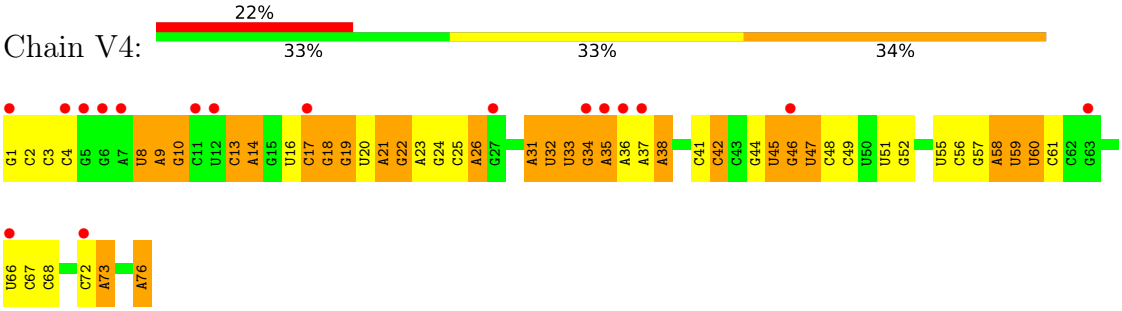
• Molecule 52: tRNA-Phe

Chain X4:



• Molecule 52: tRNA-Phe

Chain V4:



4 Data and refinement statistics (i)

Property	Value	Source
Space group	P 21 21 21	Depositor
Cell constants a, b, c, α, β, γ	209.07Å 447.36Å 619.49Å 90.00° 90.00° 90.00°	Depositor
Resolution (Å)	152.74 – 2.95 152.74 – 2.95	Depositor EDS
% Data completeness (in resolution range)	100.0 (152.74-2.95) 94.2 (152.74-2.95)	Depositor EDS
R_{merge}	0.31	Depositor
R_{sym}	(Not available)	Depositor
$< I/\sigma(I) >$ [1]	0.98 (at 2.96Å)	Xtriage
Refinement program	PHENIX	Depositor
R, R_{free}	0.213 , 0.253 0.214 , 0.254	Depositor DCC
R_{free} test set	24081 reflections (2.00%)	wwPDB-VP
Wilson B-factor (Å^2)	66.3	Xtriage
Anisotropy	0.296	Xtriage
Bulk solvent k_{sol}(e/Å^3), B_{sol}(Å^2)	0.28 , 49.0	EDS
L-test for twinning[2]	$< \|L\| > = 0.48$, $< L^2 > = 0.31$	Xtriage
Estimated twinning fraction	No twinning to report.	Xtriage
F_o,F_c correlation	0.94	EDS
Total number of atoms	299577	wwPDB-VP
Average B, all atoms (Å^2)	78.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 1.51% of the height of the origin peak. No significant pseudotranslation is detected.*

[1] Intensities estimated from amplitudes.

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

5 Model quality

5.1 Standard geometry

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

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	0.58	0/36276	0.77	10/56615 (0.0%)
1	1G	0.52	1/36394 (0.0%)	0.71	12/56800 (0.0%)
2	65	0.71	0/891	1.05	3/1187 (0.3%)
2	A8	0.75	0/891	0.99	3/1187 (0.3%)
3	B5	0.83	0/739	1.03	4/993 (0.4%)
3	F8	0.92	1/756 (0.1%)	1.13	2/1014 (0.2%)
4	11	0.99	4/2176 (0.2%)	1.20	16/2933 (0.5%)
4	19	0.83	2/2170 (0.1%)	1.16	17/2926 (0.6%)
5	L5	1.04	0/417	1.18	0/550
5	P8	1.15	0/417	1.15	1/550 (0.2%)
6	2A	0.51	0/879	0.73	2/1187 (0.2%)
6	2I	0.56	0/879	0.85	3/1187 (0.3%)
7	8A	0.57	0/836	0.77	0/1117
7	8I	0.60	0/847	0.77	0/1131
8	22	0.53	1/1636 (0.1%)	0.65	0/2205
8	2E	0.59	0/1629	0.73	0/2195
9	82	0.40	0/1002	0.66	2/1346 (0.1%)
9	8E	0.45	0/1028	0.71	0/1379
10	15	0.59	0/1131	0.79	0/1525
10	58	0.71	0/1131	0.93	0/1525
11	C5	0.84	0/807	1.12	2/1076 (0.2%)
11	G8	0.89	0/796	1.28	13/1062 (1.2%)
12	M5	1.09	1/502 (0.2%)	1.31	7/661 (1.1%)
12	Q8	1.51	1/486 (0.2%)	2.03	19/638 (3.0%)
13	3A	0.79	1/991 (0.1%)	0.97	1/1327 (0.1%)
13	3I	0.78	0/972	1.08	2/1301 (0.2%)
14	32	0.56	0/1732	0.79	2/2318 (0.1%)
14	3E	0.73	3/1732 (0.2%)	0.85	1/2318 (0.0%)
15	14	0.69	1/70167 (0.0%)	0.87	47/109541 (0.0%)
15	1H	0.80	4/70233 (0.0%)	0.95	72/109643 (0.1%)
16	75	0.75	0/1155	0.94	2/1542 (0.1%)
16	B8	0.81	0/1095	1.01	0/1463

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	#|Z| >5	RMSZ	#|Z| >5
17	H5	0.61	0/473	0.80	0/635
17	L8	0.85	1/457 (0.2%)	1.05	2/613 (0.3%)
18	61	0.64	1/1151 (0.1%)	0.89	4/1558 (0.3%)
18	69	0.53	0/1151	0.81	3/1558 (0.2%)
19	9A	0.58	0/569	0.85	0/757
19	9I	0.63	0/555	0.84	0/739
20	1B	0.53	0/221	0.73	0/288
20	1F	0.51	0/203	0.68	0/266
21	25	0.70	0/942	0.91	0/1269
21	68	0.74	0/942	0.97	2/1269 (0.2%)
22	D5	0.54	0/1145	0.80	2/1547 (0.1%)
22	H8	0.61	1/1403 (0.1%)	0.89	3/1901 (0.2%)
23	21	0.84	1/1601 (0.1%)	1.21	14/2160 (0.6%)
23	29	0.79	1/1601 (0.1%)	1.19	8/2160 (0.4%)
24	4A	0.43	0/938	0.69	0/1258
24	4I	0.52	0/938	0.77	0/1258
25	42	0.54	0/1171	0.72	0/1576
25	4E	0.64	0/1171	0.85	0/1576
26	16	0.67	0/2928	0.94	1/4568 (0.0%)
26	1J	0.57	0/2928	0.85	0/4568
27	85	0.68	0/981	0.90	1/1306 (0.1%)
27	C8	0.81	0/981	1.01	2/1306 (0.2%)
28	I5	0.68	0/527	0.98	0/709
28	M8	0.72	0/545	0.95	0/733
29	AA	0.49	0/638	0.73	0/860
29	AI	0.67	1/657 (0.2%)	0.83	0/885
30	35	0.81	0/1161	1.22	4/1544 (0.3%)
30	78	0.85	0/1139	1.28	10/1514 (0.7%)
31	E5	0.78	0/653	1.08	1/872 (0.1%)
31	I8	0.86	0/665	1.10	2/885 (0.2%)
32	31	0.92	0/1620	1.05	0/2194
32	39	0.75	0/1662	1.11	14/2249 (0.6%)
33	5A	0.46	0/484	0.79	0/643
33	5I	0.51	0/500	0.81	2/664 (0.3%)
34	52	0.61	0/855	0.74	0/1154
34	5E	0.59	0/855	0.72	0/1154
35	95	0.81	0/789	1.09	6/1057 (0.6%)
35	D8	0.77	1/789 (0.1%)	1.00	2/1057 (0.2%)
36	J5	0.80	0/448	0.96	1/606 (0.2%)
36	N8	0.89	0/443	1.62	5/599 (0.8%)
37	BA	0.54	0/764	0.90	0/1007
37	BI	0.47	0/764	0.75	0/1007
38	45	0.73	0/1134	0.96	1/1517 (0.1%)

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	#|Z| >5	RMSZ	#|Z| >5
38	88	0.90	0/1142	1.11	0/1527
39	F5	0.76	0/744	1.08	5/989 (0.5%)
39	J8	0.96	1/753 (0.1%)	1.20	7/1000 (0.7%)
40	41	0.60	0/1498	0.83	2/2016 (0.1%)
40	49	0.47	0/1498	0.75	0/2016
41	6A	0.61	0/744	0.71	0/992
41	6I	0.63	0/744	0.78	0/992
42	62	0.45	0/1218	0.62	0/1632
42	6E	0.48	0/1171	0.65	0/1567
43	A5	0.79	1/910 (0.1%)	0.99	1/1220 (0.1%)
43	E8	0.79	0/901	1.02	1/1209 (0.1%)
44	12	0.42	0/1959	0.72	2/2642 (0.1%)
44	1E	0.46	0/1959	0.67	0/2642
45	55	0.77	0/973	1.03	1/1302 (0.1%)
45	98	0.76	0/981	0.99	2/1312 (0.2%)
46	G5	0.77	0/569	1.10	5/753 (0.7%)
46	K8	0.96	0/577	1.34	6/763 (0.8%)
47	51	0.68	0/1362	0.97	2/1841 (0.1%)
47	59	0.47	1/1332 (0.1%)	0.80	7/1802 (0.4%)
48	1A	0.43	0/814	0.66	0/1095
48	1I	0.49	0/814	0.76	2/1095 (0.2%)
49	7A	0.55	0/721	0.80	0/970
49	7I	0.58	0/721	0.80	0/970
50	72	0.48	0/1135	0.67	0/1527
50	7E	0.55	0/1135	0.79	0/1527
51	Y1	0.73	0/579	0.80	0/899
51	Y4	0.58	0/579	0.70	0/899
52	V1	0.53	0/1809	0.70	0/2819
52	V4	0.46	0/1809	0.64	0/2819
52	W1	0.50	0/1809	0.57	0/2819
52	W4	0.48	0/1809	0.55	0/2819
52	X1	0.69	0/1809	0.93	0/2819
52	X4	0.62	0/1809	0.85	0/2819
All	All	0.68	30/322722 (0.0%)	0.88	376/483601 (0.1%)

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

Mol	Chain	#Chirality outliers	#Planarity outliers
2	65	0	1

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Mol	Chain	#Chirality outliers	#Planarity outliers
2	A8	0	1
3	B5	0	1
4	11	0	3
4	19	0	8
5	P8	0	1
6	2A	0	1
6	2I	0	1
8	22	0	2
9	82	0	1
9	8E	0	2
10	15	0	4
11	C5	0	5
11	G8	0	4
12	M5	0	2
12	Q8	0	9
13	3A	0	3
13	3I	0	2
14	32	0	5
14	3E	0	1
16	75	0	2
16	B8	0	2
18	61	0	4
18	69	0	4
22	H8	0	3
23	21	0	7
23	29	0	3
24	4A	0	1
27	85	0	5
27	C8	0	2
28	I5	0	1
28	M8	0	2
29	AI	0	2
30	35	0	11
30	78	0	7
31	E5	0	2
31	I8	0	1
32	31	0	2
32	39	0	6
33	5A	0	2
35	95	0	2
35	D8	0	1
36	J5	0	1

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Mol	Chain	#Chirality outliers	#Planarity outliers
36	N8	0	2
37	BA	0	3
37	BI	0	3
38	45	0	3
38	88	0	4
39	F5	0	1
39	J8	0	3
40	41	0	1
40	49	0	1
43	A5	0	2
44	12	0	1
44	1E	0	3
45	98	0	2
46	G5	0	3
46	K8	0	3
47	59	0	1
48	1A	0	2
All	All	0	168

All (30) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
29	AI	41	VAL	CA-CB	9.40	1.66	1.54
8	22	173	VAL	C-N	9.20	1.55	1.33
39	J8	48	LYS	CA-C	-8.19	1.45	1.53
12	M5	33	ASN	CB-CG	7.21	1.70	1.52
22	H8	165	VAL	CA-CB	6.97	1.64	1.54
23	29	96	PHE	C-N	6.74	1.47	1.33
15	1H	2445	A	N9-C4	-6.60	1.24	1.37
35	D8	35	LEU	C-N	6.53	1.49	1.33
4	11	105	ILE	CG1-CD1	6.41	1.76	1.51
43	A5	44	ALA	CA-CB	-6.26	1.42	1.53
14	3E	9	CYS	CB-SG	6.25	2.01	1.81
15	1H	725	A	N9-C8	6.08	1.50	1.37
4	11	273	ARG	CA-C	5.97	1.60	1.52
14	3E	31	CYS	CB-SG	5.80	2.00	1.81
4	19	238	GLY	C-O	5.53	1.31	1.23
3	F8	3	THR	CB-CG2	5.47	1.70	1.52
15	1H	1975	G	C2-N3	5.43	1.43	1.32
1	1G	2165	G	C1'-N9	-5.42	1.38	1.47
4	19	237	GLU	CA-C	5.36	1.59	1.52
12	Q8	46	ARG	C-O	-5.27	1.17	1.24

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
4	11	122	ASP	CB-CG	5.27	1.65	1.52
13	3A	78	GLN	CG-CD	5.25	1.65	1.52
4	11	271	ILE	CA-C	5.24	1.59	1.52
17	L8	57	GLU	CG-CD	5.20	1.65	1.52
15	14	832	A	C5-C6	-5.17	1.30	1.41
15	1H	832	A	C5-C6	-5.12	1.30	1.41
23	21	129	HIS	C-N	-5.09	1.27	1.33
14	3E	26	CYS	CB-SG	5.06	1.98	1.81
18	61	134	PRO	CA-C	5.06	1.59	1.52
47	59	125	VAL	CA-C	5.05	1.58	1.52

All (376) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
36	N8	41	PRO	CA-C-N	15.57	139.31	119.84
36	N8	41	PRO	C-N-CA	15.57	139.31	119.84
36	N8	40	LYS	CA-C-N	-14.34	105.61	120.38
36	N8	40	LYS	C-N-CA	-14.34	105.61	120.38
46	K8	17	SER	CA-C-N	13.03	136.12	119.84
46	K8	17	SER	C-N-CA	13.03	136.12	119.84
23	29	88	GLY	N-CA-C	12.58	132.32	110.80
23	21	130	GLY	N-CA-C	12.09	126.52	112.50
4	11	273	ARG	N-CA-C	11.35	128.15	108.75
1	13	2121	U	C2'-C3'-O3'	9.88	124.32	109.50
46	G5	44	LEU	N-CA-C	-9.65	101.51	113.38
4	19	56	GLY	CA-C-N	-9.61	102.58	121.41
4	19	56	GLY	C-N-CA	-9.61	102.58	121.41
12	Q8	42	ARG	CA-C-N	9.44	138.69	121.70
12	Q8	42	ARG	C-N-CA	9.44	138.69	121.70
46	K8	17	SER	N-CA-C	9.20	123.14	108.23
15	14	801	A	C2'-C3'-O3'	9.08	123.12	109.50
23	21	129	HIS	CA-C-N	-9.03	109.91	119.94
23	21	129	HIS	C-N-CA	-9.03	109.91	119.94
4	19	41	GLY	CA-C-N	-8.76	104.23	121.41
4	19	41	GLY	C-N-CA	-8.76	104.23	121.41
4	19	272	ALA	N-CA-C	8.44	121.49	108.07
27	85	73	GLY	N-CA-C	8.43	121.32	110.20
11	G8	81	LYS	N-CA-C	-8.31	91.43	109.81
32	39	68	LYS	CA-C-N	-8.22	109.89	123.37
32	39	68	LYS	C-N-CA	-8.22	109.89	123.37
4	11	46	GLN	CA-C-N	-8.18	105.37	121.41
4	11	46	GLN	C-N-CA	-8.18	105.37	121.41

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
11	G8	99	CYS	N-CA-C	7.97	119.97	111.28
44	12	8	LYS	CB-CA-C	-7.93	105.23	116.34
12	Q8	26	LYS	CA-C-N	7.91	136.65	121.54
12	Q8	26	LYS	C-N-CA	7.91	136.65	121.54
3	F8	3	THR	CA-C-N	7.82	135.78	121.70
3	F8	3	THR	C-N-CA	7.82	135.78	121.70
23	21	152	LYS	CA-C-N	-7.81	106.11	121.41
23	21	152	LYS	C-N-CA	-7.81	106.11	121.41
1	1G	2121	U	C2'-C3'-O3'	7.75	121.13	109.50
1	1G	1441	C	P-O3'-C3'	7.70	131.75	120.20
30	78	23	PRO	CA-C-N	-7.67	111.66	122.86
30	78	23	PRO	C-N-CA	-7.67	111.66	122.86
14	3E	12	CYS	CA-CB-SG	7.63	131.94	114.40
15	14	1820	A	N9-C1'-C2'	7.55	125.32	114.00
15	1H	1314	A	C5'-C4'-C3'	-7.53	103.91	115.20
15	1H	1833	G	C2'-C3'-O3'	7.51	120.77	109.50
44	12	8	LYS	N-CA-C	7.46	119.04	108.00
3	B5	23	GLU	CA-C-N	-7.46	106.80	121.41
3	B5	23	GLU	C-N-CA	-7.46	106.80	121.41
2	65	61	ASN	CB-CA-C	-7.43	106.08	115.89
4	19	272	ALA	CA-C-N	7.35	135.58	121.54
4	19	272	ALA	C-N-CA	7.35	135.58	121.54
15	1H	288	G	C2'-C3'-O3'	7.27	120.41	109.50
12	Q8	8	LYS	CA-C-N	-7.24	107.22	121.41
12	Q8	8	LYS	C-N-CA	-7.24	107.22	121.41
15	1H	612	C	C4'-C3'-O3'	7.17	120.15	109.40
11	G8	81	LYS	CA-C-N	7.16	144.18	127.00
11	G8	81	LYS	C-N-CA	7.16	144.18	127.00
23	29	87	GLU	CA-C-N	-7.15	112.66	121.38
23	29	87	GLU	C-N-CA	-7.15	112.66	121.38
15	1H	801	A	C2'-C3'-O3'	7.08	120.12	109.50
15	1H	509	G	C2'-C3'-O3'	7.07	120.10	109.50
11	C5	104	GLY	N-CA-C	7.01	119.56	111.36
15	14	1651	U	O5'-P-OP2	7.00	128.99	108.00
15	14	48	A	P-O3'-C3'	6.97	130.65	120.20
47	59	152	ARG	CA-C-N	6.95	138.75	121.80
47	59	152	ARG	C-N-CA	6.95	138.75	121.80
39	J8	48	LYS	CA-C-N	6.87	134.06	121.70
39	J8	48	LYS	C-N-CA	6.87	134.06	121.70
12	Q8	40	GLU	CA-CB-CG	6.75	127.61	114.10
15	14	2717	U	N1-C1'-C2'	6.74	122.11	112.00
2	65	110	LEU	CA-CB-CG	6.70	139.74	116.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
3	B5	40	LYS	CA-C-N	-6.68	112.13	122.16
3	B5	40	LYS	C-N-CA	-6.68	112.13	122.16
4	11	272	ALA	N-CA-C	6.66	116.15	108.49
15	14	2240	A	C4'-C3'-O3'	6.63	119.34	109.40
18	61	131	LYS	CA-C-N	6.60	142.85	127.00
18	61	131	LYS	C-N-CA	6.60	142.85	127.00
15	1H	2729	A	OP1-P-O3'	-6.59	88.23	108.00
6	2I	102	GLY	N-CA-C	-6.57	101.71	110.58
39	F5	29	GLY	CA-C-N	6.54	133.73	121.97
39	F5	29	GLY	C-N-CA	6.54	133.73	121.97
4	11	121	PRO	CA-C-N	6.53	134.01	121.54
4	11	121	PRO	C-N-CA	6.53	134.01	121.54
12	Q8	46	ARG	N-CA-C	-6.53	96.89	110.80
12	Q8	42	ARG	CA-C-O	-6.52	113.48	120.46
12	Q8	56	GLU	CA-C-N	6.50	131.57	121.76
12	Q8	56	GLU	C-N-CA	6.50	131.57	121.76
15	1H	288	G	P-O3'-C3'	6.48	129.92	120.20
15	1H	2704	U	C4'-C3'-O3'	6.48	119.12	109.40
46	G5	46	GLN	CA-C-N	6.48	133.91	121.54
46	G5	46	GLN	C-N-CA	6.48	133.91	121.54
15	1H	1477	C	O5'-P-OP1	-6.47	88.58	108.00
15	14	801	A	P-O3'-C3'	6.47	129.90	120.20
15	1H	2087	A	P-O3'-C3'	-6.46	110.50	120.20
30	78	42	SER	CA-C-N	-6.45	108.77	121.41
30	78	42	SER	C-N-CA	-6.45	108.77	121.41
1	13	1421	A	N9-C1'-C2'	6.45	123.67	114.00
1	1G	1441	C	C2'-C3'-O3'	6.42	119.13	109.50
15	1H	539	G	O4'-C1'-N9	6.41	117.82	108.20
23	21	77	ILE	N-CA-C	-6.39	105.47	111.48
15	1H	1820	A	N9-C1'-C2'	6.38	123.57	114.00
15	1H	2361	A	O4'-C1'-N9	6.38	117.77	108.20
4	19	273	ARG	N-CA-C	6.37	124.36	110.80
18	69	131	LYS	CA-C-N	6.36	142.27	127.00
18	69	131	LYS	C-N-CA	6.36	142.27	127.00
15	1H	137	G	N9-C1'-C2'	6.33	121.50	112.00
32	39	89	VAL	CA-C-N	-6.32	111.80	121.66
32	39	89	VAL	C-N-CA	-6.32	111.80	121.66
15	1H	187	A	OP1-P-O3'	-6.31	89.08	108.00
15	14	2557	A	P-O3'-C3'	6.31	129.66	120.20
15	14	2716	C	O3'-P-O5'	6.28	113.42	104.00
18	61	131	LYS	C-N-CD	-6.27	106.80	120.60
46	K8	16	LEU	CA-C-N	-6.27	109.72	122.45

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
46	K8	16	LEU	C-N-CA	-6.27	109.72	122.45
4	19	36	PRO	CA-C-N	-6.25	113.94	123.07
4	19	36	PRO	C-N-CA	-6.25	113.94	123.07
21	68	4	PRO	CA-C-N	6.24	133.47	121.54
21	68	4	PRO	C-N-CA	6.24	133.47	121.54
15	14	2886	A	N9-C1'-C2'	6.19	123.28	114.00
4	19	235	GLY	CA-C-N	6.17	134.32	122.97
4	19	235	GLY	C-N-CA	6.17	134.32	122.97
12	M5	51	ALA	N-CA-C	6.16	123.91	110.80
18	69	131	LYS	C-N-CD	-6.15	107.06	120.60
15	1H	2021	C	OP2-P-O3'	-6.13	89.59	108.00
14	32	30	LYS	CA-C-N	-6.13	113.79	123.23
14	32	30	LYS	C-N-CA	-6.13	113.79	123.23
15	14	2322	G	O4'-C1'-N9	6.13	117.69	108.50
15	1H	1924	G	N3-C4-N9	-6.11	107.66	126.00
11	C5	82	PRO	N-CA-C	6.11	120.07	111.33
15	14	2704	U	C4'-C3'-O3'	6.08	118.52	109.40
23	21	186	GLY	CA-C-N	-6.07	112.94	122.65
23	21	186	GLY	C-N-CA	-6.07	112.94	122.65
47	59	129	THR	CA-C-N	6.06	135.04	121.76
47	59	129	THR	C-N-CA	6.06	135.04	121.76
30	78	35	HIS	N-CA-C	6.05	123.70	110.80
15	14	1333	A	O5'-P-OP2	-6.05	89.86	108.00
30	78	15	ARG	CA-C-N	6.05	132.59	121.70
30	78	15	ARG	C-N-CA	6.05	132.59	121.70
15	14	1059	G	O4'-C1'-N9	6.02	117.23	108.20
15	14	2717	U	O4'-C1'-N1	6.02	117.53	108.50
15	1H	1833	G	C4'-C3'-O3'	6.02	118.43	109.40
27	C8	95	LEU	CA-C-N	5.99	132.97	121.54
27	C8	95	LEU	C-N-CA	5.99	132.97	121.54
1	13	1693	U	C2'-C3'-O3'	5.98	118.47	109.50
1	13	651	U	P-O3'-C3'	5.96	129.14	120.20
15	1H	2483	G	O4'-C1'-N9	5.95	117.13	108.20
15	1H	992	A	C4-N9-C1'	5.95	144.14	126.30
39	J8	47	GLN	CA-C-N	5.94	133.11	122.89
39	J8	47	GLN	C-N-CA	5.94	133.11	122.89
15	14	1070	G	C2'-C3'-O3'	5.92	118.39	109.50
23	29	51	PHE	N-CA-C	5.92	123.42	110.80
15	14	48	A	C2'-C3'-O3'	5.92	118.38	109.50
35	95	86	GLY	CA-C-N	-5.91	114.56	122.42
35	95	86	GLY	C-N-CA	-5.91	114.56	122.42
1	1G	849	A	C2'-C3'-O3'	5.91	118.37	109.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
6	2A	116	HIS	CA-C-N	5.90	132.81	121.54
6	2A	116	HIS	C-N-CA	5.90	132.81	121.54
23	21	146	THR	N-CA-C	-5.90	101.23	110.14
11	G8	95	LYS	N-CA-C	-5.88	98.28	110.80
23	21	54	GLN	CA-C-N	5.88	136.14	121.80
23	21	54	GLN	C-N-CA	5.88	136.14	121.80
23	29	23	VAL	N-CA-C	5.87	121.55	109.34
1	13	754	G	C2'-C3'-O3'	5.87	118.30	109.50
15	1H	721	C	OP2-P-O3'	5.87	125.61	108.00
15	1H	1070	G	C2'-C3'-O3'	5.87	118.30	109.50
15	1H	2230	G	N9-C1'-C2'	5.87	122.80	114.00
47	51	12	PRO	CA-C-N	5.87	132.75	121.54
47	51	12	PRO	C-N-CA	5.87	132.75	121.54
4	11	68	LYS	CA-C-N	-5.85	112.89	122.54
4	11	68	LYS	C-N-CA	-5.85	112.89	122.54
32	39	78	ILE	CA-C-N	-5.85	109.95	121.41
32	39	78	ILE	C-N-CA	-5.85	109.95	121.41
17	L8	52	HIS	CA-C-N	5.84	132.70	121.54
17	L8	52	HIS	C-N-CA	5.84	132.70	121.54
32	39	84	VAL	CA-C-N	-5.84	105.76	122.06
32	39	84	VAL	C-N-CA	-5.84	105.76	122.06
15	1H	1252	A	O4'-C1'-N9	5.83	116.94	108.20
47	59	93	GLY	N-CA-C	5.83	126.99	113.18
32	39	25	PRO	CA-C-N	5.82	132.65	121.54
32	39	25	PRO	C-N-CA	5.82	132.65	121.54
15	1H	2055	A	C4'-C3'-O3'	-5.81	104.28	113.00
12	Q8	56	GLU	CA-CB-CG	5.81	125.72	114.10
4	11	196	VAL	CA-C-N	-5.81	111.87	121.57
4	11	196	VAL	C-N-CA	-5.81	111.87	121.57
15	14	823	A	C4'-C3'-O3'	-5.80	104.30	113.00
12	Q8	54	GLU	CG-CD-OE2	5.80	131.73	118.40
15	1H	2341	C	C3'-C2'-O2'	-5.79	102.02	110.70
15	1H	1833	G	P-O3'-C3'	5.78	128.87	120.20
12	M5	52	LYS	N-CA-C	5.78	122.57	109.81
35	95	80	GLN	N-CA-C	5.78	119.09	109.96
4	19	48	ARG	CA-C-N	-5.76	112.53	121.18
4	19	48	ARG	C-N-CA	-5.76	112.53	121.18
23	21	69	LYS	N-CA-C	-5.75	106.34	113.19
15	1H	185	A	P-O3'-C3'	5.75	128.82	120.20
1	1G	849	A	P-O3'-C3'	5.75	128.82	120.20
22	H8	6	LYS	N-CA-C	-5.72	98.61	110.80
1	1G	1138	A	C2'-C3'-O3'	5.71	122.27	113.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
15	1H	992	A	C6-C5-N7	-5.71	115.17	132.30
15	1H	1238	G	C5'-C4'-C3'	-5.71	107.44	116.00
43	E8	90	ARG	NE-CZ-NH1	-5.71	115.79	121.50
11	G8	80	GLY	N-CA-C	5.70	126.68	113.18
4	19	271	ILE	CA-C-N	-5.68	109.12	122.19
4	19	271	ILE	C-N-CA	-5.68	109.12	122.19
32	39	8	GLN	CA-C-N	5.68	132.63	122.13
32	39	8	GLN	C-N-CA	5.68	132.63	122.13
12	Q8	28	GLY	N-CA-C	-5.66	99.76	113.18
15	14	2048	G	O5'-P-OP2	-5.66	91.01	108.00
12	Q8	21	LYS	CB-CG-CD	-5.66	98.28	111.30
1	1G	1536	A	C2'-C3'-O3'	5.66	117.99	109.50
15	1H	1314	A	O5'-P-OP2	-5.66	91.03	108.00
13	3I	86	ARG	CA-C-N	-5.65	110.34	121.41
13	3I	86	ARG	C-N-CA	-5.65	110.34	121.41
13	3A	78	GLN	CB-CG-CD	5.65	122.20	112.60
15	14	537	C	O5'-P-OP2	-5.65	91.06	108.00
15	14	1415	A	OP1-P-O3'	-5.64	91.07	108.00
35	95	85	LYS	CA-CB-CG	5.64	125.39	114.10
15	1H	1924	G	O3'-P-O5'	-5.64	95.54	104.00
1	1G	907	G	C2'-C3'-O3'	5.64	117.95	109.50
39	F5	35	THR	CA-C-N	-5.63	110.37	121.41
39	F5	35	THR	C-N-CA	-5.63	110.37	121.41
1	1G	1316	A	P-O3'-C3'	5.63	128.65	120.20
15	1H	992	A	O4'-C1'-N9	5.63	116.65	108.20
4	11	56	GLY	CA-C-N	-5.63	103.52	120.92
4	11	56	GLY	C-N-CA	-5.63	103.52	120.92
4	11	220	HIS	CA-C-N	-5.62	115.85	123.10
4	11	220	HIS	C-N-CA	-5.62	115.85	123.10
15	1H	195	G	O5'-P-OP2	-5.58	91.26	108.00
2	65	20	ARG	N-CA-C	-5.57	98.94	110.80
15	14	2290	C	C4'-C3'-O3'	5.56	117.75	109.40
15	1H	1832	U	O3'-P-O5'	-5.53	95.70	104.00
15	1H	1479	C	OP2-P-O3'	-5.53	91.41	108.00
1	13	2127	G	C4'-C3'-O3'	5.53	117.69	109.40
15	1H	1624	C	OP1-P-O3'	-5.53	91.42	108.00
35	95	78	LYS	CA-C-N	5.52	131.91	121.97
35	95	78	LYS	C-N-CA	5.52	131.91	121.97
1	13	1421	A	C3'-C2'-C1'	-5.52	95.98	101.50
26	16	11	G	OP1-P-O3'	-5.51	91.46	108.00
22	D5	29	TYR	CA-C-N	5.51	132.34	122.09
22	D5	29	TYR	C-N-CA	5.51	132.34	122.09

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
30	35	62	LEU	CA-CB-CG	5.50	135.56	116.30
30	78	30	THR	N-CA-CB	-5.50	101.20	110.49
33	5I	12	ARG	CA-C-N	5.50	135.22	121.80
33	5I	12	ARG	C-N-CA	5.50	135.22	121.80
31	E5	9	SER	N-CA-C	5.50	122.51	110.80
45	98	9	LYS	CA-C-N	-5.49	114.36	123.37
45	98	9	LYS	C-N-CA	-5.49	114.36	123.37
15	1H	2367	A	O5'-P-OP1	-5.49	91.53	108.00
12	M5	50	LEU	N-CA-C	5.49	119.75	112.72
9	82	119	ALA	CA-C-N	5.49	132.02	121.54
9	82	119	ALA	C-N-CA	5.49	132.02	121.54
15	1H	1824	C	P-O3'-C3'	5.48	128.42	120.20
15	1H	725	A	O4'-C1'-N9	5.48	116.72	108.50
30	35	36	LYS	N-CA-C	5.47	116.10	108.00
15	1H	206	A	O5'-P-OP1	-5.47	91.59	108.00
15	1H	993	G	OP1-P-OP2	-5.46	103.22	119.60
30	78	48	PRO	CA-C-N	-5.46	111.02	121.94
30	78	48	PRO	C-N-CA	-5.46	111.02	121.94
1	1G	907	G	P-O3'-C3'	5.45	128.37	120.20
39	J8	2	SER	N-CA-C	5.45	126.26	111.00
15	1H	537	C	O5'-P-OP2	-5.45	91.66	108.00
12	Q8	59	LYS	CG-CD-CE	5.44	123.82	111.30
15	1H	894	G	P-O3'-C3'	5.44	128.36	120.20
15	1H	185	A	OP1-P-O3'	-5.44	91.69	108.00
12	Q8	6	THR	N-CA-CB	5.43	119.67	110.49
15	1H	141	C	OP1-P-O3'	-5.43	91.71	108.00
15	1H	837	A	OP1-P-O3'	-5.42	91.75	108.00
11	G8	81	LYS	C-N-CD	-5.41	108.70	120.60
23	29	50	GLY	N-CA-C	5.41	126.00	113.18
12	Q8	58	ILE	CG1-CB-CG2	-5.40	94.49	110.70
15	14	876	U	O5'-P-OP2	-5.40	91.79	108.00
15	14	2792	A	C2'-C3'-O3'	5.40	117.60	109.50
12	M5	56	GLU	CB-CG-CD	-5.39	103.43	112.60
36	J5	51	TYR	CA-CB-CG	5.38	123.58	113.90
38	45	134	ARG	N-CA-C	5.38	121.69	113.51
15	14	1608	A	P-O3'-C3'	5.37	128.25	120.20
39	F5	36	GLY	N-CA-C	5.37	125.90	113.18
1	13	754	G	P-O3'-C3'	5.36	128.24	120.20
15	14	1059	G	C4'-C3'-O3'	5.36	117.44	109.40
15	14	2361	A	O4'-C1'-N9	5.36	116.24	108.20
35	D8	43	GLU	CA-C-N	5.36	131.34	121.70
35	D8	43	GLU	C-N-CA	5.36	131.34	121.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
36	N8	41	PRO	C-N-CD	-5.35	103.05	125.00
15	14	1391	A	N9-C1'-C2'	5.35	122.03	114.00
15	1H	1608	A	P-O3'-C3'	5.35	128.22	120.20
23	21	117	MET	CA-C-N	5.35	131.75	121.54
23	21	117	MET	C-N-CA	5.35	131.75	121.54
39	J8	2	SER	CB-CA-C	-5.34	99.95	110.10
48	1I	54	PHE	CA-C-N	-5.33	113.50	121.72
48	1I	54	PHE	C-N-CA	-5.33	113.50	121.72
15	1H	609	C	OP2-P-O3'	-5.33	92.01	108.00
6	2I	117	ASN	CA-C-N	5.30	131.80	121.41
6	2I	117	ASN	C-N-CA	5.30	131.80	121.41
4	11	157	ARG	NE-CZ-NH1	-5.30	116.20	121.50
15	14	659	A	O5'-P-OP2	5.29	123.87	108.00
15	1H	2613	A	OP2-P-O3'	5.28	123.84	108.00
5	P8	33	ARG	NE-CZ-NH1	-5.28	116.22	121.50
11	G8	99	CYS	CA-C-N	5.27	131.18	121.70
11	G8	99	CYS	C-N-CA	5.27	131.18	121.70
23	29	44	TYR	CA-CB-CG	5.26	123.37	113.90
1	1G	2121	U	P-O3'-C3'	5.25	128.08	120.20
15	1H	2444	G	OP2-P-O3'	5.25	123.75	108.00
15	1H	823	A	C4'-C3'-O3'	-5.25	105.13	113.00
11	G8	94	LYS	CA-C-N	5.24	131.55	121.54
11	G8	94	LYS	C-N-CA	5.24	131.55	121.54
12	Q8	54	GLU	CA-CB-CG	5.24	124.57	114.10
15	1H	801	A	P-O3'-C3'	5.24	128.05	120.20
15	1H	602	G	OP1-P-O3'	-5.22	92.33	108.00
15	14	2290	C	P-O3'-C3'	5.22	128.04	120.20
4	19	49	ILE	CA-CB-CG2	5.22	119.38	110.50
15	14	2716	C	P-O3'-C3'	5.21	128.02	120.20
1	13	2115	A	O5'-P-OP2	-5.20	92.42	108.00
22	H8	4	ARG	CA-C-N	-5.19	116.27	122.44
22	H8	4	ARG	C-N-CA	-5.19	116.27	122.44
11	G8	100	ALA	CA-C-N	5.18	131.03	121.70
11	G8	100	ALA	C-N-CA	5.18	131.03	121.70
15	1H	2626	U	OP2-P-O3'	5.18	123.55	108.00
15	14	894	G	N9-C1'-C2'	-5.18	106.23	114.00
12	M5	32	LEU	CA-C-N	5.18	132.54	121.45
12	M5	32	LEU	C-N-CA	5.18	132.54	121.45
15	14	905	C	O5'-P-OP1	-5.18	92.47	108.00
15	14	1358	G	O5'-P-OP1	5.17	123.52	108.00
15	14	735	G	O5'-C5'-C4'	-5.17	103.94	111.70
15	1H	823	A	C8-N9-C1'	5.17	143.21	127.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
46	G5	17	SER	CA-C-N	5.17	126.30	119.84
46	G5	17	SER	C-N-CA	5.17	126.30	119.84
16	75	12	SER	CA-C-N	5.16	131.06	122.54
16	75	12	SER	C-N-CA	5.16	131.06	122.54
15	1H	204	G	O5'-P-OP2	-5.16	92.52	108.00
15	1H	2055	A	N9-C1'-C2'	5.15	119.72	112.00
15	1H	2407	A	O3'-P-O5'	-5.15	96.28	104.00
15	1H	832	A	N9-C1'-C2'	-5.15	104.28	112.00
15	1H	1428	A	C2'-C3'-O3'	-5.15	101.78	109.50
31	I8	41	ARG	CA-C-N	-5.14	115.91	122.19
31	I8	41	ARG	C-N-CA	-5.14	115.91	122.19
39	J8	48	LYS	CA-C-O	-5.14	111.03	119.21
15	1H	2086	G	OP2-P-O3'	5.14	123.42	108.00
47	59	166	GLY	CA-C-N	5.14	134.34	121.80
47	59	166	GLY	C-N-CA	5.14	134.34	121.80
15	14	2612	G	O5'-P-OP1	5.14	123.42	108.00
2	A8	109	GLY	CA-C-N	5.13	130.93	121.70
2	A8	109	GLY	C-N-CA	5.13	130.93	121.70
15	14	186	A	O5'-C5'-C4'	-5.13	104.01	111.70
15	1H	1975	G	O4'-C1'-N9	5.13	116.19	108.50
15	14	1445	U	O5'-P-OP1	-5.13	92.62	108.00
23	29	44	TYR	N-CA-C	5.12	119.28	112.72
40	41	44	GLY	CA-C-N	5.12	127.40	120.38
40	41	44	GLY	C-N-CA	5.12	127.40	120.38
15	14	211	A	C5'-C4'-C3'	-5.12	107.53	115.20
15	14	1924	G	C8-N9-C1'	5.11	142.34	127.00
15	1H	1818	A	O5'-P-OP2	5.11	123.34	108.00
4	11	272	ALA	O-C-N	-5.11	119.28	123.11
15	14	2557	A	O3'-P-O5'	5.11	111.66	104.00
15	14	126	C	C4'-C3'-O3'	5.10	120.65	113.00
46	K8	18	PRO	N-CA-C	5.10	122.97	112.47
15	14	2462	G	P-O3'-C3'	5.09	127.83	120.20
15	1H	204	G	O4'-C1'-N9	5.08	116.12	108.50
12	M5	33	ASN	CB-CA-C	5.08	120.92	110.40
15	14	1710	C	C5'-C4'-C3'	-5.08	108.39	116.00
43	A5	38	TYR	CA-CB-CG	-5.07	104.78	113.90
1	1G	729	A	P-O3'-C3'	5.07	127.80	120.20
15	1H	1697	G	O5'-P-OP2	5.06	123.18	108.00
15	1H	2437	A	C2'-C3'-O3'	-5.06	106.11	113.70
18	61	135	GLU	N-CA-C	5.06	114.71	108.19
2	A8	9	ARG	NE-CZ-NH1	-5.05	116.45	121.50
15	1H	1479	C	OP1-P-O3'	5.05	123.16	108.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
15	14	790	G	O5'-P-OP1	5.05	123.16	108.00
30	35	15	ARG	N-CA-C	-5.05	100.04	110.80
15	14	2361	A	C1'-O4'-C4'	-5.04	104.66	109.70
15	14	2444	G	O5'-P-OP1	5.04	123.11	108.00
45	55	82	GLU	N-CA-C	5.04	121.53	110.80
1	13	1597	A	O4'-C1'-N9	5.02	115.73	108.20
32	39	22	ALA	CA-C-N	5.02	128.63	120.60
32	39	22	ALA	C-N-CA	5.02	128.63	120.60
15	1H	1445	U	O5'-P-OP1	-5.01	92.97	108.00
15	1H	124	A	OP2-P-O3'	5.01	123.02	108.00
15	1H	2290	C	C5'-C4'-O4'	-5.01	101.59	109.10
30	35	35	HIS	CA-CB-CG	-5.00	108.80	113.80

There are no chirality outliers.

All (168) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
4	11	239	ARG	Mainchain
4	11	273	ARG	Peptide
4	11	47	GLY	Peptide
44	12	19	HIS	Peptide
10	15	124	ALA	Peptide
10	15	127	ASP	Peptide
10	15	36	GLY	Peptide
10	15	41	ASP	Peptide
4	19	122	ASP	Peptide
4	19	237	GLU	Peptide
4	19	270	ILE	Peptide
4	19	271	ILE	Peptide
4	19	272	ALA	Peptide
4	19	32	SER	Peptide
4	19	37	LEU	Peptide
4	19	42	GLY	Peptide
48	1A	55	LYS	Peptide
48	1A	92	THR	Peptide
44	1E	15	VAL	Peptide
44	1E	169	LYS	Peptide
44	1E	237	ALA	Peptide
23	21	115	GLY	Peptide
23	21	132	HIS	Peptide
23	21	153	GLY	Peptide
23	21	57	LYS	Peptide

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Mol	Chain	Res	Type	Group
23	21	64	LYS	Peptide
23	21	78	LEU	Peptide
23	21	82	ARG	Peptide
8	22	109	PRO	Peptide
8	22	77	ILE	Peptide
23	29	186	GLY	Peptide
23	29	201	THR	Peptide
23	29	53	PRO	Peptide
6	2A	49	GLY	Peptide
6	2I	102	GLY	Peptide
32	31	127	GLU	Peptide
32	31	47	GLY	Peptide
14	32	152	SER	Peptide
14	32	154	ASN	Peptide
14	32	155	LEU	Peptide
14	32	178	VAL	Peptide
14	32	30	LYS	Peptide
30	35	106	LEU	Peptide
30	35	107	LYS	Peptide
30	35	11	GLY	Peptide
30	35	110	TYR	Peptide
30	35	22	GLY	Peptide
30	35	36	LYS	Peptide
30	35	5	ASP	Peptide
30	35	52	GLU	Peptide
30	35	56	SER	Peptide
30	35	60	MET	Peptide
30	35	70	GLN	Peptide
32	39	127	GLU	Peptide
32	39	166	ALA	Peptide
32	39	24	LEU	Peptide
32	39	27	GLU	Peptide
32	39	69	HIS	Mainchain
32	39	85	GLY	Peptide
13	3A	17	LYS	Peptide
13	3A	18	VAL	Peptide
13	3A	63	GLY	Peptide
14	3E	151	LYS	Peptide
13	3I	118	SER	Peptide
13	3I	87	GLY	Peptide
40	41	95	ARG	Peptide
38	45	134	ARG	Peptide

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Mol	Chain	Res	Type	Group
38	45	137	TYR	Peptide
38	45	25	ASP	Peptide
40	49	13	GLU	Peptide
24	4A	94	ARG	Peptide
47	59	92	ILE	Peptide
33	5A	29	ARG	Peptide
33	5A	30	ALA	Peptide
18	61	11	ASN	Peptide
18	61	113	ARG	Peptide
18	61	134	PRO	Peptide
18	61	82	ARG	Peptide
2	65	55	ALA	Peptide
18	69	101	LEU	Peptide
18	69	112	LYS	Peptide
18	69	143	SER	Peptide
18	69	85	GLU	Peptide
16	75	12	SER	Peptide
16	75	4	GLY	Peptide
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	5	ASP	Peptide
30	78	70	GLN	Peptide
9	82	117	HIS	Peptide
27	85	72	HIS	Peptide
27	85	90	VAL	Peptide
27	85	95	LEU	Peptide
27	85	96	ALA	Peptide
27	85	98	LEU	Peptide
38	88	21	THR	Peptide
38	88	58	PHE	Peptide
38	88	79	LEU	Peptide
38	88	89	ASN	Peptide
9	8E	110	GLU	Peptide
9	8E	47	LEU	Peptide
35	95	85	LYS	Peptide
35	95	98	GLU	Peptide
45	98	3	HIS	Peptide
45	98	8	ARG	Peptide
43	A5	43	GLY	Peptide

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Mol	Chain	Res	Type	Group
43	A5	93	ALA	Peptide
2	A8	106	ARG	Peptide
29	AI	6	LYS	Peptide
29	AI	7	LYS	Peptide
3	B5	61	GLY	Peptide
16	B8	12	SER	Peptide
16	B8	58	ASN	Peptide
37	BA	101	GLY	Peptide
37	BA	11	SER	Peptide
37	BA	72	LEU	Peptide
37	BI	73	HIS	Peptide
37	BI	96	GLY	Peptide
37	BI	98	PRO	Peptide
11	C5	100	ALA	Peptide
11	C5	57	GLN	Peptide
11	C5	81	LYS	Peptide
11	C5	91	GLU	Peptide
11	C5	99	CYS	Peptide
27	C8	115	ALA	Peptide
27	C8	90	VAL	Peptide
35	D8	45	THR	Peptide
31	E5	8	GLY	Peptide
31	E5	83	PRO	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	77	PRO	Peptide
11	G8	80	GLY	Peptide
22	H8	165	VAL	Peptide
22	H8	59	LEU	Peptide
22	H8	63	ASP	Peptide
28	I5	26	SER	Peptide
31	I8	44	ARG	Peptide
36	J5	3	LYS	Peptide
39	J8	47	GLN	Peptide
39	J8	75	GLU	Peptide
39	J8	85	LEU	Peptide
46	K8	15	LYS	Peptide
46	K8	17	SER	Peptide

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Mol	Chain	Res	Type	Group
46	K8	46	GLN	Peptide
12	M5	39	LYS	Peptide
12	M5	49	VAL	Peptide
28	M8	4	GLY	Peptide
28	M8	43	TYR	Peptide
36	N8	41	PRO	Peptide
36	N8	42	PRO	Peptide
5	P8	46	VAL	Peptide
12	Q8	18	ALA	Peptide
12	Q8	19	SER	Peptide
12	Q8	21	LYS	Peptide
12	Q8	36	LYS	Peptide
12	Q8	48	PHE	Peptide
12	Q8	52	LYS	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	16360	704	0
1	1G	32514	0	16415	700	0
2	65	881	0	943	62	0
2	A8	881	0	943	52	0
3	B5	725	0	778	28	0
3	F8	742	0	803	38	0
4	11	2126	0	2208	64	0
4	19	2120	0	2197	82	0
5	L5	409	0	454	13	0
5	P8	409	0	454	14	0
6	2A	864	0	881	33	0
6	2I	864	0	881	34	0
7	8A	823	0	891	29	0
7	8I	834	0	904	49	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	67	0
9	8E	1009	0	1037	71	0
10	15	1104	0	1180	41	0
10	58	1104	0	1180	69	0
11	C5	794	0	886	64	0
11	G8	783	0	873	62	0
12	M5	495	0	567	55	0
12	Q8	480	0	549	98	0
13	3A	975	0	1062	41	0
13	3I	956	0	1046	36	0
14	32	1702	0	1764	84	0
14	3E	1702	0	1762	86	0
15	14	62647	0	31575	1201	0
15	1H	62707	0	31583	1246	0
16	75	1141	0	1202	58	0
16	B8	1081	0	1141	62	0
17	H5	468	0	518	21	0
17	L8	452	0	503	13	0
18	61	1136	0	1223	53	0
18	69	1136	0	1223	61	0
19	9A	564	0	631	22	0
19	9I	550	0	613	18	0
20	1B	217	0	234	13	0
20	1F	199	0	208	11	0
21	25	932	0	996	43	0
21	68	932	0	996	41	0
22	D5	1120	0	1146	69	0
22	H8	1373	0	1402	72	0
23	21	1568	0	1634	105	0
23	29	1568	0	1633	103	0
24	4A	928	0	987	51	0
24	4I	928	0	987	52	0
25	42	1155	0	1213	54	0
25	4E	1155	0	1213	52	0
26	16	2617	0	1328	46	0
26	1J	2617	0	1328	71	0
27	85	963	0	1022	56	0
27	C8	963	0	1022	56	0
28	I5	515	0	514	47	0
28	M8	533	0	526	48	0
29	AA	624	0	636	40	0
29	AI	643	0	662	54	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
30	35	1144	0	1228	94	0
30	78	1122	0	1206	94	0
31	E5	645	0	652	28	0
31	I8	656	0	683	24	0
32	31	1585	0	1632	92	0
32	39	1627	0	1680	95	0
33	5A	475	0	511	27	0
33	5I	491	0	529	28	0
34	52	842	0	857	35	0
34	5E	842	0	857	27	0
35	95	778	0	852	70	0
35	D8	778	0	852	46	0
36	J5	434	0	454	25	0
36	N8	429	0	449	32	0
37	BA	762	0	861	36	0
37	BI	762	0	861	37	0
38	45	1113	0	1167	81	0
38	88	1121	0	1179	80	0
39	F5	737	0	813	42	0
39	J8	746	0	826	53	0
40	41	1473	0	1535	87	0
40	49	1473	0	1535	81	0
41	6A	733	0	771	23	0
41	6I	733	0	771	32	0
42	62	1200	0	1238	37	0
42	6E	1157	0	1202	47	0
43	A5	899	0	964	41	0
43	E8	890	0	951	30	0
44	12	1924	0	1975	110	0
44	1E	1924	0	1975	97	0
45	55	959	0	1021	38	0
45	98	967	0	1033	73	0
46	G5	567	0	618	28	0
46	K8	575	0	634	40	0
47	51	1336	0	1418	81	0
47	59	1307	0	1382	76	0
48	1A	801	0	849	59	0
48	1I	801	0	849	54	0
49	7A	705	0	725	24	0
49	7I	705	0	725	44	0
50	72	1115	0	1177	40	0
50	7E	1115	0	1177	49	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
51	Y1	521	0	262	13	0
51	Y4	521	0	262	26	0
52	V1	1619	0	822	65	0
52	V4	1619	0	822	49	0
52	W1	1619	0	822	23	0
52	W4	1619	0	822	30	0
52	X1	1619	0	822	25	0
52	X4	1619	0	822	37	0
53	13	66	0	0	0	0
53	1G	66	0	0	4	0
54	11	5	0	0	0	0
54	13	182	0	0	0	0
54	14	568	0	0	0	0
54	16	14	0	0	0	0
54	19	3	0	0	0	0
54	1G	178	0	0	0	0
54	1H	597	0	0	0	0
54	1J	14	0	0	0	0
54	21	3	0	0	0	0
54	25	2	0	0	0	0
54	29	5	0	0	0	0
54	2A	1	0	0	0	0
54	31	3	0	0	0	0
54	35	1	0	0	0	0
54	39	2	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	52	1	0	0	0	0
54	55	2	0	0	0	0
54	58	1	0	0	0	0
54	5E	1	0	0	0	0
54	5I	1	0	0	0	0
54	68	2	0	0	0	0
54	6A	1	0	0	0	0
54	78	3	0	0	0	0
54	7A	1	0	0	0	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
54	85	1	0	0	0	0
54	88	5	0	0	0	0
54	98	1	0	0	0	0
54	A5	1	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	C5	2	0	0	0	0
54	E5	2	0	0	0	0
54	G8	1	0	0	0	0
54	I8	2	0	0	0	0
54	K8	1	0	0	0	0
54	L8	1	0	0	0	0
54	P8	1	0	0	0	0
54	W1	4	0	0	0	0
54	W4	4	0	0	0	0
54	X1	9	0	0	0	0
54	X4	6	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	62	0
56	19	8	0	0	0	0
56	1G	72	0	0	10	0
56	1H	533	0	0	62	0
56	21	1	0	0	0	0
56	29	4	0	0	0	0
56	31	5	0	0	0	0
56	35	1	0	0	0	0
56	39	6	0	0	0	0
56	55	1	0	0	0	0
56	5A	1	0	0	0	0
56	6A	2	0	0	0	0
56	6I	1	0	0	0	0
56	78	4	0	0	0	0
56	7A	1	0	0	0	0
56	A5	1	0	0	0	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
56	B8	1	0	0	0	0
56	C8	3	0	0	0	0
56	D8	1	0	0	0	0
56	E8	1	0	0	0	0
56	F8	1	0	0	0	0
56	I8	5	0	0	1	0
56	J5	1	0	0	0	0
56	J8	1	0	0	0	0
56	L5	3	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	299577	0	199398	8085	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 17.

All (8085) 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)
4:11:105:ILE:CD1	4:11:105:ILE:CG1	1.76	1.54
14:3E:9:CYS:CB	14:3E:9:CYS:SG	2.01	1.48
12:Q8:46:ARG:HH11	12:Q8:46:ARG:HB2	1.09	1.16
12:Q8:46:ARG:HB2	12:Q8:46:ARG:NH1	1.67	1.10
30:78:15:ARG:HB2	30:78:16:ARG:HB2	1.29	1.06
22:H8:30:ASN:HD22	22:H8:90:VAL:HB	1.20	1.06
40:41:64:THR:HG22	40:41:66:GLN:H	1.23	1.04
15:1H:2880:G:OP2	16:B8:119:LYS:NZ	1.91	1.03
44:12:185:ILE:HG22	44:12:199:TYR:HB2	1.41	1.03
15:1H:2057:G:H21	23:21:146:THR:HG23	1.25	1.00
15:14:1273:C:O3'	35:95:85:LYS:HA	1.60	1.00
9:82:112:LYS:HA	9:82:119:ALA:HB2	1.44	0.99
1:13:1932:G:H22	1:13:1958:G:H2'	1.25	0.98
1:1G:1975:U:H3	1:1G:2002:A:H2	1.11	0.98
15:1H:66:U:H3	15:1H:73:A:H2	1.07	0.98
14:32:157:LEU:O	14:32:161:ASN:ND2	1.95	0.97
15:14:1805:C:HO2'	15:14:1820:A:H8	1.03	0.97
15:14:544:C:OP1	36:J5:16:ARG:NH2	1.97	0.97
15:14:1381:G:N2	15:14:1658:A:O2'	1.96	0.97
15:14:1005:U:OP2	38:45:14:ARG:NH1	1.97	0.97
10:58:106:MET:HE3	15:1H:1186:G:H21	1.27	0.97

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:14:4:C:H42	15:14:2911:G:H22	1.10	0.96
15:14:2716:C:H3'	15:14:2717:U:H5"	1.45	0.96
15:1H:867:G:OP2	56:1H:3627:HOH:O	1.83	0.95
15:1H:70:A:H2	3:F8:31:HIS:HE1	1.13	0.95
15:14:1924:G:H22	15:14:1927:C:H41	1.05	0.95
12:Q8:50:LEU:HD23	12:Q8:51:ALA:H	1.28	0.94
36:N8:40:LYS:NZ	36:N8:46:CYS:HB3	1.83	0.94
14:32:26:CYS:HA	14:32:31:CYS:HB3	1.49	0.94
15:1H:269:G:H1	15:1H:277:C:H42	1.15	0.94
1:1G:2165:G:O6	51:Y4:29:G:N2	2.00	0.94
16:B8:3:ARG:HB2	16:B8:6:LEU:HB2	1.49	0.93
3:B5:31:HIS:HE2	15:14:70:A:H2	1.16	0.93
39:J8:21:ARG:HH11	39:J8:21:ARG:HG3	1.34	0.93
1:1G:2125:A:H2	1:1G:2128:G:H1	1.15	0.93
15:14:2598:G:H21	52:W4:76:A:H62	1.10	0.93
15:1H:909:U:H5	15:1H:965:A:C2	1.87	0.93
51:Y4:35:A:H2'	51:Y4:36:G:H8	1.34	0.92
15:1H:1005:U:OP2	38:88:14:ARG:NH1	2.02	0.92
15:14:2514:C:OP1	56:14:3620:HOH:O	1.87	0.92
13:3A:41:ARG:HB3	13:3A:41:ARG:HH11	1.34	0.92
30:35:47:ASP:OD2	30:35:50:ARG:NH1	2.03	0.92
1:13:2125:A:H2	1:13:2128:G:H1	1.14	0.92
15:1H:34:C:OP2	15:1H:34:C:H6	1.52	0.92
32:31:116:ASP:OD1	32:31:119:ARG:NH2	2.02	0.92
15:1H:632:U:H3	15:1H:648:A:H2	1.09	0.91
1:13:1099:G:N2	1:13:1103:A:N7	2.19	0.91
12:Q8:59:LYS:HE3	12:Q8:60:LEU:HD11	1.52	0.91
15:1H:137:G:N2	3:F8:44:GLU:OE2	2.04	0.91
32:39:9:ILE:HG12	32:39:14:PRO:HA	1.53	0.91
15:14:299:G:N7	15:14:388:G:N2	2.17	0.91
1:13:1586:G:N3	48:1I:55:LYS:NZ	2.18	0.91
15:1H:48:A:N7	15:1H:118:U:H5	1.69	0.90
14:3E:107:ARG:HH22	14:3E:194:LEU:HD22	1.34	0.90
15:1H:2349:G:O6	31:I8:74:ARG:NH2	2.02	0.90
40:49:161:THR:HG22	40:49:163:ALA:H	1.36	0.90
33:5I:58:LYS:NZ	48:1I:61:GLU:OE1	2.05	0.90
15:14:1791:U:H3	15:14:1796:A:H2	1.20	0.90
15:14:1739:A:H62	15:14:1748:A:H2	1.14	0.89
15:1H:1805:C:HO2'	15:1H:1820:A:H8	0.93	0.89
15:1H:1769:G:H8	15:1H:1773:A:H62	1.20	0.89
15:1H:1924:G:H22	15:1H:1927:C:H5	1.21	0.89

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:3A:49:ASN:ND2	13:3A:92:ASP:OD2	2.05	0.89
15:14:2696:C:H5	15:14:2741:A:H62	1.20	0.89
15:1H:2302:A:H62	15:1H:2359:U:H3	1.19	0.88
1:1G:1003:G:O2'	13:3A:33:ARG:NH2	2.05	0.88
40:41:66:GLN:OE1	40:41:98:ARG:NH1	2.06	0.88
15:1H:591:U:OP1	30:78:29:LYS:NZ	2.07	0.87
15:1H:2595:U:H4'	23:21:130:GLY:HA3	1.55	0.87
44:1E:185:ILE:HG22	44:1E:199:TYR:HB2	1.56	0.87
1:13:1230:C:H2'	1:13:1231:A:H8	1.39	0.87
15:1H:2443:G:H21	30:78:61:ARG:HH21	1.21	0.87
1:1G:1088:A:P	1:1G:1115:G:H22	1.97	0.87
15:1H:1070:G:N2	15:1H:1071:U:O4	2.06	0.87
15:14:1096:A:N6	15:14:1160:G:O2'	2.07	0.87
23:21:57:LYS:HG3	23:21:59:VAL:HG12	1.55	0.86
43:E8:1:MET:HE3	43:E8:62:HIS:HB3	1.55	0.86
12:Q8:30:ARG:HH11	12:Q8:30:ARG:HG3	1.38	0.86
15:14:1924:G:H22	15:14:1927:C:N4	1.72	0.86
11:C5:29:GLU:OE1	11:C5:29:GLU:N	2.08	0.86
15:14:2886:A:H8	45:55:6:SER:H	1.24	0.86
39:J8:92:LYS:HA	39:J8:95:LEU:HB2	1.57	0.86
1:13:1975:U:H3	1:13:2002:A:H2	1.19	0.86
11:G8:76:CYS:HB2	11:G8:82:PRO:HD3	1.56	0.86
23:21:77:ILE:O	23:21:79:ARG:N	2.09	0.86
15:14:1109:U:H5'	15:14:1118:A:H1'	1.56	0.86
33:5I:45:ARG:NH1	48:1I:61:GLU:OE2	2.09	0.85
1:13:1586:G:N2	1:13:1595:C:N3	2.24	0.85
29:AA:78:ARG:H	29:AA:78:ARG:HD3	1.41	0.85
27:85:92:ARG:HD3	27:85:94:ASN:HB3	1.58	0.85
15:14:723:G:O2'	32:39:74:ARG:HG3	1.76	0.85
11:G8:76:CYS:SG	11:G8:97:ARG:HG2	2.17	0.85
15:14:296:C:N4	15:14:390:G:O6	2.09	0.85
44:12:111:ARG:HA	44:12:111:ARG:HH11	1.40	0.85
15:1H:1872:C:O2'	56:1H:3641:HOH:O	1.95	0.85
52:V1:9:A:H62	52:V1:23:A:H62	1.25	0.85
13:3A:46:LYS:HG3	13:3A:47:LYS:HB2	1.59	0.85
14:32:162:LEU:HD21	14:32:178:VAL:HB	1.59	0.85
1:1G:1934:U:OP1	24:4A:101:GLN:NE2	2.10	0.84
15:1H:1089:C:H42	15:1H:1162:G:H1	1.25	0.84
2:65:3:ARG:HH21	2:65:4:LEU:HB2	1.42	0.84
12:M5:62:LEU:HG	15:14:232:G:H5'	1.58	0.84
6:2A:29:ILE:HG22	6:2A:44:SER:HB2	1.59	0.84

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:Q8:49:VAL:HG21	15:1H:2374:C:H5"	1.59	0.84
16:75:77:PRO:HG2	16:75:80:SER:HB2	1.59	0.84
15:1H:1812:U:H2'	15:1H:1818:A:N6	1.92	0.84
15:1H:2443:G:N2	30:78:61:ARG:HH21	1.76	0.84
27:C8:92:ARG:HD3	27:C8:94:ASN:HB3	1.56	0.84
28:I5:22:ILE:HG12	28:I5:23:GLU:H	1.43	0.84
22:D5:72:ARG:NH1	26:1J:107:A:OP1	2.10	0.84
15:1H:544:C:OP1	36:N8:16:ARG:NH2	2.10	0.84
1:13:1598:A:H4'	1:13:1599:G:H5"	1.60	0.84
15:1H:2407:A:H2	15:1H:2439:C:H42	1.25	0.84
15:14:1728:G:N2	15:14:2014:G:H22	1.75	0.84
22:D5:60:GLU:HA	22:D5:66:SER:HA	1.59	0.83
15:14:66:U:H3	15:14:73:A:H2	1.24	0.83
9:8E:9:ARG:HD2	9:8E:14:VAL:HG13	1.59	0.83
36:N8:40:LYS:HZ3	36:N8:46:CYS:HB3	1.38	0.83
34:52:24:GLU:OE1	34:52:28:ARG:NH1	2.12	0.83
50:7E:87:SER:HB2	50:7E:93:VAL:HB	1.61	0.83
1:13:1500:C:OP1	50:7E:88:LYS:NZ	2.11	0.83
15:14:725:A:H8	15:14:2094:G:H21	1.24	0.83
49:7I:28:ARG:HG2	49:7I:29:ASP:OD1	1.79	0.83
1:1G:1598:A:H4'	1:1G:1599:G:H5"	1.60	0.83
1:1G:1171:G:OP1	14:32:10:ARG:NH2	2.12	0.83
1:13:1188:A:OP1	25:4E:126:ARG:NH2	2.12	0.82
15:14:2513:C:OP2	56:14:3615:HOH:O	1.97	0.82
15:1H:829:G:H21	15:1H:832:A:H62	1.27	0.82
44:12:75:LYS:HA	44:12:78:GLN:HB2	1.61	0.82
15:1H:2587:A:C8	23:21:144:ARG:HD3	2.14	0.82
15:1H:327:C:H2'	15:1H:328:U:H6	1.42	0.82
16:75:108:ARG:HA	16:75:111:ARG:HG3	1.62	0.82
22:H8:116:VAL:HG23	22:H8:146:ILE:HG12	1.61	0.82
1:1G:1456:U:H3	1:1G:1495:A:H62	1.27	0.82
15:1H:1110:G:N2	15:1H:1124:C:O2	2.13	0.82
19:9I:26:LEU:HB3	19:9I:42:ARG:HH22	1.43	0.82
38:88:89:ASN:HB3	38:88:90:VAL:HG22	1.60	0.82
47:59:6:ARG:HH11	47:59:6:ARG:H	1.28	0.82
15:1H:1069:A:H8	15:1H:1070:G:H5"	1.43	0.82
26:16:2:A:H62	26:16:122:A:H61	1.27	0.82
6:2I:91:ARG:NH2	6:2I:110:ASP:OD2	2.13	0.82
15:1H:851:A:OP1	56:1H:3642:HOH:O	1.96	0.82
1:1G:2156:C:H42	51:Y4:39:U:H3	1.26	0.82
4:19:32:SER:O	4:19:32:SER:OG	1.91	0.82

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:V1:72:C:H2'	52:V1:73:A:H5"	1.58	0.82
21:25:4:PRO:O	21:25:5:GLN:HB2	1.78	0.82
1:13:2120:G:H2'	1:13:2121:U:H5'	1.60	0.81
40:49:125:PHE:HB3	40:49:166:ASP:HB2	1.59	0.81
9:8E:125:TYR:HD1	9:8E:126:SER:H	1.27	0.81
15:1H:2409:C:H42	52:V1:76:A:H8	1.25	0.81
15:14:249:G:H21	15:14:648:A:H8	1.27	0.81
15:14:2736:U:H3	15:14:2886:A:H2	1.26	0.81
52:X4:26:A:N6	52:X4:44:G:O6	2.12	0.81
1:1G:2080:G:OP1	37:BA:39:LYS:NZ	2.12	0.81
15:1H:1583:G:H2'	15:1H:1584:U:H4'	1.62	0.81
12:M5:61:LEU:HD13	12:M5:62:LEU:H	1.43	0.81
19:9I:87:ARG:HG3	6:2I:107:SER:HA	1.62	0.81
15:14:2793:G:H5"	15:14:2794:A:H5'	1.63	0.81
32:31:66:PRO:O	32:31:67:GLN:HB3	1.76	0.81
1:13:1932:G:N2	1:13:1958:G:H2'	1.96	0.81
15:14:2057:G:H21	23:29:146:THR:HG23	1.43	0.81
26:1J:82:U:H2'	26:1J:83:G:H21	1.45	0.81
32:31:185:ASP:OD1	32:31:188:ARG:NH1	2.12	0.81
37:BI:86:ARG:NH1	37:BI:86:ARG:O	2.13	0.81
15:14:1092:G:H4'	15:14:1096:A:H1'	1.63	0.81
6:2I:99:GLN:HA	6:2I:105:VAL:HG11	1.61	0.81
7:8I:76:LEU:HD11	7:8I:79:SER:HB3	1.61	0.81
7:8I:100:LYS:HB2	7:8I:101:ARG:HH11	1.43	0.81
16:B8:74:ARG:HG2	16:B8:74:ARG:HH11	1.44	0.81
15:1H:1739:A:H62	15:1H:1748:A:H2	1.25	0.81
30:35:1:MET:N	32:39:116:ASP:OD2	2.13	0.81
1:13:1293:G:H22	1:13:1370:G:H1	1.25	0.81
15:14:1038:A:H8	15:14:1038:A:H5'	1.46	0.81
11:G8:83:THR:HG22	11:G8:84:ARG:HG3	1.63	0.81
41:6I:26:GLU:OE2	41:6I:77:ARG:NH1	2.14	0.81
4:19:134:ARG:NH1	4:19:188:GLU:OE2	2.14	0.80
44:1E:74:LYS:NZ	44:1E:205:ASP:OD2	2.14	0.80
15:1H:1559:A:O2'	15:1H:1561:G:N7	2.13	0.80
15:1H:2750:A:H5"	15:1H:2750:A:H8	1.45	0.80
15:1H:2850:G:H21	45:98:45:ARG:HH21	1.29	0.80
15:14:118:U:OP2	56:14:3633:HOH:O	1.98	0.80
35:95:35:LEU:O	35:95:37:VAL:HG22	1.80	0.80
44:1E:87:ARG:NH2	44:1E:220:ASP:OD1	2.13	0.80
43:A5:20:VAL:HG11	43:A5:44:ALA:H	1.46	0.80
47:59:26:VAL:HG21	47:59:75:ALA:HB1	1.60	0.80

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:M5:51:ALA:C	12:M5:53:PRO:HD2	2.06	0.80
26:16:44:C:O3'	40:41:67:LYS:NZ	2.15	0.80
15:14:2482:C:H4'	38:45:123:HIS:CD2	2.17	0.80
28:I5:63:TYR:OH	29:AA:10:PHE:O	1.99	0.80
15:14:1089:C:H42	15:14:1162:G:H22	1.29	0.80
32:39:122:LYS:HD2	32:39:191:ARG:HB3	1.61	0.80
35:95:21:ARG:HH21	35:95:91:TYR:HB2	1.45	0.80
41:6A:54:ARG:HG2	41:6A:58:MET:HE2	1.63	0.80
1:13:1302:G:H2'	1:13:1303:G:C8	2.17	0.80
50:72:1:MET:HE2	50:72:2:LEU:H	1.47	0.80
12:Q8:21:LYS:HE2	12:Q8:52:LYS:O	1.81	0.80
11:C5:17:SER:HB3	11:C5:71:LYS:HB3	1.61	0.80
15:1H:612:C:OP2	30:78:21:ARG:NH2	2.15	0.80
15:14:1413:G:OP2	39:F5:2:SER:N	2.15	0.80
30:35:23:PRO:HB3	35:95:80:GLN:HG3	1.64	0.80
35:D8:60:GLU:HB2	35:D8:97:LYS:HE2	1.64	0.80
9:82:112:LYS:HE3	9:82:118:LYS:H	1.48	0.79
15:1H:623:G:H5'	30:78:11:GLY:HA3	1.64	0.79
16:B8:77:PRO:HG2	16:B8:80:SER:HB2	1.64	0.79
19:9I:38:GLU:HA	19:9I:41:LYS:HE3	1.62	0.79
15:14:1096:A:H2	15:14:1160:G:H21	1.30	0.79
22:H8:4:ARG:HB3	22:H8:58:VAL:HG22	1.64	0.79
19:9A:23:LYS:O	34:52:100:ASN:ND2	2.14	0.79
32:31:6:VAL:N	32:31:24:LEU:O	2.16	0.79
15:1H:70:A:C2	3:F8:31:HIS:HE1	2.00	0.79
15:1H:470:G:H1'	32:31:48:THR:HG21	1.63	0.79
6:2I:54:ARG:NH2	52:V1:39:U:O2'	2.16	0.79
1:13:817:C:OP1	37:BI:65:LYS:NZ	2.14	0.79
1:1G:1890:C:N4	1:1G:1899:G:O6	2.14	0.79
15:1H:216:G:H21	15:1H:218:A:H2	1.30	0.79
15:1H:2577:U:H1'	21:68:23:ARG:HH11	1.45	0.79
47:51:64:LEU:O	47:51:68:THR:OG1	1.99	0.79
1:13:1167:G:H5"	13:3I:114:LYS:HB2	1.63	0.79
1:13:1586:G:H1	1:13:1595:C:H42	1.28	0.79
18:69:76:THR:HG21	18:69:140:LEU:HD12	1.64	0.79
32:39:53:THR:HG23	32:39:55:GLY:H	1.48	0.79
9:8E:3:GLN:OE1	9:8E:20:ARG:NH1	2.16	0.79
11:G8:94:LYS:HA	11:G8:94:LYS:HZ3	1.47	0.79
22:H8:108:PRO:HB2	22:H8:112:ARG:HA	1.64	0.79
25:42:50:GLU:HB2	25:42:53:LEU:HD13	1.63	0.79
30:78:50:ARG:HH21	30:78:50:ARG:HG3	1.47	0.79

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:69:130:TYR:HB3	18:69:136:VAL:HG13	1.63	0.79
15:1H:1020:A:OP2	56:1H:3643:HOH:O	2.01	0.78
13:3A:57:LYS:HG3	13:3A:67:THR:HG22	1.65	0.78
24:4I:3:ARG:HE	24:4I:9:ILE:HD11	1.47	0.78
37:BI:69:GLY:O	37:BI:73:HIS:NE2	2.15	0.78
49:7I:45:THR:HG22	49:7I:47:ASP:H	1.46	0.78
15:1H:1327:A:OP1	45:98:36:THR:HG22	1.82	0.78
15:14:1812:U:H2'	15:14:1818:A:N6	1.99	0.78
15:14:958:A:H62	38:45:12:GLN:HA	1.48	0.78
4:11:69:ARG:NH2	4:11:128:GLY:O	2.16	0.78
13:3A:71:PRO:O	13:3A:102:ARG:NH1	2.16	0.78
15:14:1431:G:N7	56:14:3661:HOH:O	2.17	0.78
15:14:2487:G:H2'	15:14:2490:C:H41	1.49	0.78
32:39:101:LEU:O	32:39:106:ARG:NH1	2.16	0.78
8:2E:122:GLU:OE1	8:2E:126:ARG:NH1	2.17	0.78
2:A8:48:LEU:HD23	2:A8:82:ILE:HD11	1.65	0.78
9:82:28:VAL:HG22	9:82:63:ILE:HB	1.65	0.78
33:5A:21:TYR:OH	33:5A:23:ARG:NH2	2.17	0.78
52:V4:33:U:H3'	52:V4:34:G:H5"	1.66	0.78
1:1G:2066:G:O6	1:1G:2086:C:N4	2.15	0.78
39:F5:85:LEU:HA	39:F5:87:PRO:HD2	1.65	0.78
15:1H:1234:G:N7	56:1H:3664:HOH:O	2.17	0.78
26:1J:19:C:H2'	26:1J:20:G:O4'	1.83	0.78
12:Q8:9:GLY:HA2	12:Q8:12:LYS:HB2	1.64	0.78
35:95:43:GLU:HG3	35:95:44:LYS:HZ1	1.48	0.77
50:7E:41:ARG:NH1	50:7E:123:GLU:OE1	2.17	0.77
39:J8:48:LYS:HB3	39:J8:49:VAL:HA	1.65	0.77
30:78:138:LEU:HD12	30:78:144:GLU:HG3	1.63	0.77
4:11:182:LEU:H	4:11:272:ALA:HB3	1.48	0.77
11:G8:95:LYS:HE3	11:G8:97:ARG:HH22	1.49	0.77
37:BI:89:ARG:NH1	37:BI:93:GLU:OE1	2.18	0.77
40:41:97:ASP:O	40:41:100:TRP:N	2.17	0.77
47:59:81:GLU:O	47:59:138:LYS:NZ	2.17	0.77
15:1H:457:A:OP1	56:1H:3644:HOH:O	2.03	0.77
14:32:157:LEU:HD12	14:32:161:ASN:HD21	1.49	0.77
47:59:152:ARG:HG3	47:59:153:LYS:HB2	1.66	0.77
7:8I:67:LYS:HA	7:8I:70:ARG:HH12	1.48	0.77
10:58:96:GLU:HG2	10:58:97:ARG:N	1.98	0.77
7:8I:45:HIS:HB2	7:8I:65:ILE:HD13	1.64	0.77
15:1H:1922:G:N7	56:1H:3662:HOH:O	2.17	0.77
15:14:632:U:H3	15:14:648:A:H2	1.33	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:4E:91:LEU:HD12	25:4E:120:THR:HG22	1.66	0.77
32:39:123:LEU:O	32:39:125:LEU:N	2.17	0.77
44:12:114:ARG:NH1	44:12:141:GLU:OE2	2.17	0.77
15:14:2598:G:N2	52:W4:76:A:H62	1.82	0.77
15:14:2640:G:O6	56:14:3636:HOH:O	2.02	0.77
37:BA:50:GLU:HA	37:BA:100:ILE:HG21	1.67	0.77
21:68:7:TYR:HE1	21:68:20:MET:HE3	1.50	0.76
16:B8:36:GLU:HG2	21:68:107:ARG:HH12	1.50	0.76
15:14:1901:A:H2'	15:14:1902:A:C8	2.20	0.76
30:35:39:LYS:HG3	30:35:45:LEU:HD22	1.67	0.76
32:39:66:PRO:O	32:39:67:GLN:HB3	1.85	0.76
15:14:2286:G:N7	56:14:3665:HOH:O	2.18	0.76
32:31:101:LEU:HD23	32:31:102:PRO:HD2	1.65	0.76
1:1G:1714:U:H3	1:1G:1727:G:H22	1.31	0.76
15:14:239:C:OP1	56:14:3637:HOH:O	2.03	0.76
26:1J:47:A:OP2	40:49:96:ARG:NH1	2.19	0.76
9:8E:28:VAL:HG22	9:8E:63:ILE:HB	1.67	0.76
15:1H:2027:G:N7	56:1H:3666:HOH:O	2.18	0.76
40:41:77:ILE:HG22	40:41:82:LEU:HD12	1.67	0.76
1:13:986:C:O2'	1:13:987:G:N2	2.18	0.76
15:14:2365:C:OP2	56:14:3638:HOH:O	2.04	0.76
38:45:110:THR:HG23	38:45:113:GLN:HB2	1.66	0.76
47:51:83:TYR:HD1	47:51:84:SER:H	1.32	0.76
46:G5:14:ARG:NH1	46:G5:66:GLU:OE1	2.18	0.76
2:A8:17:ARG:NH1	15:1H:2394:G:O2'	2.19	0.76
15:1H:1359:G:OP2	5:P8:9:ARG:NH1	2.18	0.76
15:1H:2509:G:O2'	38:88:80:GLU:HB3	1.85	0.76
15:14:611:A:OP2	56:14:3634:HOH:O	2.02	0.76
51:Y4:35:A:H2'	51:Y4:36:G:C8	2.21	0.76
1:13:903:A:H2'	1:13:904:A:C8	2.20	0.76
1:13:1994:C:O2'	48:1I:60:ARG:NH2	2.18	0.76
15:1H:810:A:H5"	56:1H:3896:HOH:O	1.84	0.76
15:1H:2877:G:OP1	16:B8:119:LYS:HD2	1.84	0.76
1:1G:1350:G:H4'	1:1G:1351:A:H5'	1.67	0.76
12:Q8:31:HIS:ND1	12:Q8:31:HIS:O	2.17	0.76
15:14:1381:G:N2	15:14:1658:A:HO2'	1.84	0.76
23:29:60:ASN:HB3	23:29:61:ARG:C	2.11	0.76
15:1H:593:U:O4	56:1H:3646:HOH:O	2.04	0.76
15:14:2335:A:H61	15:14:2348:A:H2'	1.49	0.76
26:1J:17:A:H1'	26:1J:112:G:C5	2.21	0.76
8:2E:78:GLY:HA3	8:2E:83:ARG:HB3	1.67	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:13:1576:G:H5'	1:13:1588:A:H61	1.49	0.75
23:29:76:ARG:HG2	23:29:195:LEU:HD13	1.68	0.75
42:6E:144:MET:HE1	52:V1:30:G:H21	1.51	0.75
15:14:1070:G:H22	15:14:1191:A:H2	1.33	0.75
15:14:1483:A:H61	15:14:1608:A:H62	1.35	0.75
24:4A:82:MET:SD	24:4A:83:ASP:N	2.60	0.75
15:1H:1728:G:N2	15:1H:2014:G:H22	1.83	0.75
15:1H:2805:C:O2	15:1H:2906:G:N2	2.17	0.75
1:1G:1586:G:H21	48:1A:55:LYS:HE3	1.52	0.75
15:1H:155:C:H42	15:1H:161:G:H1	1.32	0.75
15:1H:2151:A:N6	15:1H:2188:C:O2	2.20	0.75
15:14:613:U:H2'	15:14:614:C:C6	2.21	0.75
15:14:2409:C:H42	52:V4:76:A:H8	1.33	0.75
30:78:31:ALA:O	30:78:32:THR:HB	1.85	0.75
38:88:25:ASP:H	38:88:102:VAL:HG22	1.52	0.75
15:1H:2060:G:OP1	56:1H:3645:HOH:O	2.03	0.75
15:1H:2807:C:N4	15:1H:2905:G:O6	2.20	0.75
15:14:839:C:OP2	56:14:3639:HOH:O	2.04	0.75
15:14:2372:U:OP1	31:E5:20:ARG:NH1	2.18	0.75
1:13:1948:C:H3'	1:13:1949:C:H5"	1.69	0.75
4:19:242:ARG:HG2	4:19:242:ARG:HH11	1.50	0.75
15:1H:829:G:H21	15:1H:832:A:N6	1.84	0.75
15:1H:1924:G:N2	15:1H:1927:C:H5	1.84	0.75
15:14:2671:U:H3	15:14:2680:A:H2	1.34	0.75
23:21:120:TRP:CE3	23:21:155:LYS:HD3	2.21	0.75
46:G5:16:LEU:HD12	46:G5:20:GLU:HB3	1.67	0.75
16:B8:57:PHE:O	16:B8:58:ASN:ND2	2.19	0.75
22:H8:19:ARG:NH1	22:H8:84:GLU:O	2.19	0.75
47:59:159:GLU:O	47:59:163:TYR:OH	2.05	0.75
15:14:2762:U:OP1	47:59:85:LYS:NZ	2.15	0.75
21:68:88:ASN:HD21	21:68:90:GLN:HB2	1.51	0.75
22:H8:134:PRO:HG3	22:H8:161:VAL:HG11	1.68	0.75
3:B5:36:LYS:HG2	3:B5:54:VAL:HB	1.67	0.75
15:1H:2545:A:N7	47:51:172:LYS:NZ	2.35	0.75
15:14:1924:G:N2	15:14:1927:C:H41	1.83	0.75
44:1E:21:ARG:HB2	44:1E:39:ILE:HA	1.67	0.75
22:D5:69:THR:HG22	22:D5:90:VAL:HG22	1.69	0.74
45:55:20:LEU:HD21	45:55:40:LYS:HD3	1.69	0.74
2:65:106:ARG:NH1	2:65:107:GLU:OE2	2.20	0.74
15:1H:1137:G:N2	15:1H:1149:U:O4	2.19	0.74
14:32:108:LEU:HD23	14:32:110:PHE:HE1	1.52	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:4I:23:TYR:HD1	24:4I:67:GLU:HA	1.50	0.74
31:I8:53:MET:HG3	31:I8:59:LEU:HD23	1.67	0.74
32:31:9:ILE:HD11	32:31:125:LEU:HG	1.68	0.74
44:12:54:THR:HG21	44:12:201:ILE:HD11	1.69	0.74
1:1G:1923:C:O3'	24:4A:13:LYS:NZ	2.20	0.74
15:14:711:G:H5'	30:35:14:LYS:HB2	1.67	0.74
47:51:87:LEU:HB2	47:51:131:VAL:HG12	1.69	0.74
52:X1:2:C:H2'	52:X1:3:C:H6	1.50	0.74
4:11:273:ARG:O	4:11:273:ARG:NE	2.15	0.74
1:1G:2154:A:H2'	1:1G:2155:U:C4	2.22	0.74
15:1H:911:G:OP2	56:1H:3647:HOH:O	2.06	0.74
15:14:2704:U:OP2	15:14:2735:G:N2	2.21	0.74
32:31:39:TRP:CH2	32:31:106:ARG:HD3	2.23	0.74
44:1E:84:GLU:HB3	44:1E:219:VAL:HG21	1.70	0.74
8:2E:96:GLY:H	8:2E:97:LYS:HZ3	1.34	0.74
1:1G:1614:U:O4	1:1G:1839:U:O2'	2.04	0.74
22:H8:163:LEU:HB3	22:H8:165:VAL:H	1.52	0.74
24:4A:12:ASN:O	24:4A:44:ARG:NH1	2.20	0.74
43:E8:95:ILE:O	43:E8:95:ILE:HG13	1.87	0.74
15:1H:779:C:H3'	56:1H:3623:HOH:O	1.87	0.74
32:39:133:ASN:HA	32:39:162:LEU:HD22	1.68	0.74
2:A8:11:LYS:HD2	2:A8:15:ARG:HH21	1.53	0.74
16:75:105:LEU:HD13	16:75:109:GLU:HG3	1.70	0.74
24:4I:3:ARG:HH22	40:41:139:LEU:HD13	1.53	0.74
26:16:17:A:H5'	26:16:18:G:C8	2.23	0.74
34:5E:36:ARG:NH2	34:5E:38:GLU:OE2	2.21	0.74
38:45:38:GLU:HG3	38:45:127:ILE:HG22	1.69	0.74
15:1H:2323:G:H1	15:1H:2326:A:H2	1.36	0.74
15:14:881:G:H5'	30:35:45:LEU:HD11	1.70	0.74
49:7A:34:GLU:OE1	49:7A:55:ARG:NH1	2.19	0.74
52:V4:9:A:H62	52:V4:23:A:H62	1.33	0.74
2:A8:26:LEU:HD12	2:A8:39:ILE:HD11	1.70	0.74
1:1G:1866:A:H4'	1:1G:1867:U:H5"	1.69	0.74
15:1H:1276:G:OP2	27:C8:16:LYS:NZ	2.21	0.74
15:14:2104:U:O4	56:14:3635:HOH:O	2.02	0.74
40:41:56:ALA:HB2	40:41:153:ARG:HE	1.52	0.74
44:12:23:ARG:NH2	44:12:191:ASP:HB2	2.02	0.74
1:13:1757:C:H4'	1:13:1758:A:H5'	1.67	0.73
9:82:42:ARG:HA	42:62:16:LEU:HD12	1.70	0.73
15:1H:909:U:C5	15:1H:965:A:C2	2.74	0.73
15:1H:1924:G:H1	15:1H:1927:C:H41	1.36	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:1H:2330:G:OP1	40:41:36:LYS:NZ	2.21	0.73
12:M5:62:LEU:HB3	12:M5:63:PRO:HD2	1.70	0.73
22:H8:7:ALA:HB3	22:H8:61:LEU:HB3	1.69	0.73
23:21:105:THR:OG1	23:21:199:ARG:NH2	2.21	0.73
21:25:2:ILE:HD12	21:25:6:THR:HG21	1.69	0.73
38:88:37:LEU:HD21	38:88:130:LYS:HE2	1.68	0.73
1:13:1227:U:H4'	50:7E:94:TYR:CD2	2.23	0.73
30:78:47:ASP:OD2	30:78:50:ARG:NH2	2.21	0.73
1:13:1788:G:H1	1:13:1804:G:H1	1.37	0.73
2:A8:9:ARG:HG2	15:1H:2349:G:H5'	1.68	0.73
12:Q8:59:LYS:NZ	12:Q8:60:LEU:HD21	2.03	0.73
15:1H:810:A:OP2	56:1H:3649:HOH:O	2.06	0.73
10:15:56:ASN:H	10:15:125:GLY:HA3	1.51	0.73
15:14:1273:C:H4'	35:95:85:LYS:HB2	1.68	0.73
29:AI:5:LEU:HD13	29:AI:10:PHE:HD1	1.52	0.73
40:49:56:ALA:HA	40:49:59:GLU:HB3	1.70	0.73
1:13:1883:A:N6	1:13:1905:U:OP2	2.15	0.73
1:1G:1209:U:OP2	56:1G:2402:HOH:O	2.07	0.73
1:1G:1948:C:H3'	1:1G:1949:C:H5"	1.70	0.73
38:45:22:LYS:N	38:45:23:GLY:HA3	2.03	0.73
45:98:104:ARG:NH1	45:98:107:ASP:OD2	2.20	0.73
15:1H:1769:G:H2'	15:1H:1772:G:O6	1.88	0.73
16:75:1:MET:HB3	16:75:6:LEU:HB2	1.69	0.73
41:6A:26:GLU:OE2	41:6A:77:ARG:NH1	2.20	0.73
14:32:148:VAL:O	14:32:152:SER:OG	2.04	0.73
23:29:31:CYS:HB3	23:29:49:LEU:HB2	1.69	0.73
29:AI:40:ILE:HD11	29:AI:62:ILE:HG23	1.70	0.73
1:1G:782:G:H2'	1:1G:783:A:H8	1.53	0.73
4:19:273:ARG:O	4:19:273:ARG:HG2	1.88	0.73
15:14:2270:G:OP2	56:14:3640:HOH:O	2.06	0.73
34:52:2:ARG:HD3	34:52:92:LYS:HZ1	1.53	0.73
37:BA:69:GLY:O	37:BA:73:HIS:NE2	2.21	0.73
1:1G:1048:G:OP1	14:32:115:ARG:NH2	2.21	0.73
1:1G:1132:C:OP2	13:3A:116:SER:HB3	1.89	0.73
15:14:1514:C:HO2'	15:14:1577:A:H8	1.37	0.73
23:21:105:THR:HG22	23:21:106:GLY:H	1.53	0.73
37:BI:71:THR:HG22	37:BI:72:LEU:H	1.54	0.73
44:12:9:GLU:HB2	44:12:217:ARG:HH12	1.50	0.73
11:G8:87:LYS:H	11:G8:94:LYS:HG2	1.54	0.73
14:3E:111:ALA:HB2	14:3E:120:LEU:HD12	1.69	0.73
15:14:2181:G:N7	15:14:2182:G:N2	2.37	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:39:7:TYR:CE2	32:39:10:PRO:HG3	2.23	0.73
40:41:67:LYS:H	40:41:67:LYS:HE2	1.54	0.73
1:13:1995:C:H5'	48:1I:60:ARG:HH21	1.54	0.73
14:32:98:GLU:OE2	14:32:103:ASN:ND2	2.22	0.73
22:H8:117:LEU:HD22	22:H8:118:GLN:H	1.51	0.73
30:35:71:VAL:HG23	30:35:72:PRO:HD3	1.71	0.73
37:BA:82:SER:OG	37:BA:86:ARG:NH2	2.22	0.73
15:1H:10:G:O2'	15:1H:2815:A:N3	2.22	0.72
15:1H:2651:U:OP1	23:21:79:ARG:HA	1.89	0.72
15:14:1072:G:H3'	15:14:1073:G:H5"	1.69	0.72
47:51:98:LEU:HD22	47:51:125:VAL:HG23	1.71	0.72
1:13:1288:U:H2'	1:13:1289:G:H8	1.51	0.72
4:19:148:GLU:HB2	4:19:151:LYS:HD2	1.70	0.72
15:1H:909:U:C5	15:1H:965:A:H2	2.07	0.72
15:1H:1069:A:H3'	15:1H:1070:G:H5"	1.71	0.72
29:AI:6:LYS:HA	29:AI:6:LYS:HZ3	1.52	0.72
50:72:100:ILE:HD11	50:72:112:LEU:HD11	1.71	0.72
1:1G:1596:G:H1'	48:1A:55:LYS:NZ	2.04	0.72
15:14:897:G:H2'	15:14:898:A:C8	2.25	0.72
26:1J:12:C:O2	26:1J:113:G:N2	2.18	0.72
30:35:138:LEU:HD12	30:35:144:GLU:HG3	1.71	0.72
14:3E:153:ARG:HB3	14:3E:181:MET:SD	2.29	0.72
15:14:514:C:O2'	43:A5:60:ASN:ND2	2.22	0.72
15:14:2626:U:H5'	15:14:2626:U:H6	1.55	0.72
48:1A:3:LYS:N	48:1A:74:ILE:O	2.23	0.72
1:13:1230:C:H2'	1:13:1231:A:C8	2.23	0.72
1:13:1929:U:OP2	24:4I:21:TYR:OH	2.03	0.72
15:1H:2671:U:H3	15:1H:2680:A:H2	1.37	0.72
23:29:61:ARG:O	23:29:63:LEU:N	2.21	0.72
24:4A:92:HIS:CD2	24:4A:98:VAL:HG11	2.25	0.72
48:1I:57:LYS:HD2	48:1I:60:ARG:HH12	1.54	0.72
50:7E:121:ASP:HB2	50:7E:125:ARG:NH2	2.05	0.72
15:1H:142:G:H1'	3:F8:37:THR:HG21	1.70	0.72
15:1H:632:U:N3	15:1H:648:A:H2	1.86	0.72
21:25:92:GLU:HG2	21:25:113:LYS:NZ	2.03	0.72
50:72:64:LYS:HG2	50:72:79:VAL:HG21	1.71	0.72
11:C5:47:LYS:NZ	15:14:525:G:H21	1.88	0.72
15:14:2017:G:N7	56:14:3671:HOH:O	2.21	0.72
35:D8:65:GLY:HA3	35:D8:91:TYR:CZ	2.25	0.72
40:41:27:ASN:HB3	40:41:30:GLU:HG3	1.72	0.72
47:59:30:LYS:NZ	47:59:78:GLY:O	2.20	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:85:49:HIS:HA	27:85:52:ARG:HB2	1.71	0.72
49:7I:43:LYS:HG2	49:7I:48:TRP:CE3	2.24	0.72
1:13:1853:C:O2'	24:4I:111:LYS:NZ	2.21	0.72
12:Q8:53:PRO:HA	12:Q8:56:GLU:HG2	1.70	0.72
28:I5:31:ILE:HG21	40:49:145:THR:HG22	1.71	0.72
15:14:2572:G:H2'	15:14:2573:C:C6	2.25	0.72
15:14:2850:G:N7	56:14:3673:HOH:O	2.22	0.72
30:35:98:GLU:HA	30:35:101:VAL:HG12	1.72	0.72
52:X1:52:G:N2	52:X1:62:C:O2	2.17	0.72
1:13:2153:G:O2'	1:13:2154:A:N7	2.21	0.71
1:1G:994:A:H5'	1:1G:994:A:H8	1.55	0.71
1:1G:1052:A:H62	1:1G:1054:G:H21	1.38	0.71
15:1H:909:U:H5	15:1H:965:A:H2	1.35	0.71
12:M5:32:LEU:HD13	12:M5:33:ASN:H	1.52	0.71
23:21:116:VAL:HG11	23:21:138:PRO:HB3	1.72	0.71
25:4E:110:LEU:HD13	25:4E:118:ILE:HG21	1.70	0.71
26:1J:44:C:O2	40:49:93:THR:N	2.21	0.71
23:21:82:ARG:O	23:21:84:PHE:N	2.23	0.71
37:BA:51:GLU:HA	37:BA:54:LYS:HE3	1.72	0.71
6:2I:22:HIS:HB3	6:2I:29:ILE:HG23	1.71	0.71
1:1G:1932:G:H22	1:1G:1958:G:H2'	1.55	0.71
2:65:3:ARG:NH2	2:65:4:LEU:HB2	2.04	0.71
15:1H:993:G:OP1	56:1H:3651:HOH:O	2.08	0.71
15:14:849:A:O3'	56:14:3642:HOH:O	2.08	0.71
15:14:2462:G:H3'	56:14:3788:HOH:O	1.88	0.71
46:G5:47:ASN:HD22	46:G5:47:ASN:N	1.89	0.71
8:22:59:ARG:HG2	8:22:64:VAL:HG23	1.72	0.71
35:95:35:LEU:HB3	35:95:37:VAL:CG1	2.19	0.71
47:51:4:ILE:HG13	47:51:6:ARG:NE	2.04	0.71
15:1H:779:C:OP2	56:1H:3621:HOH:O	2.07	0.71
15:1H:2083:A:H5"	56:1H:3634:HOH:O	1.90	0.71
15:1H:2409:C:N4	52:V1:76:A:H8	1.88	0.71
18:61:117:GLU:N	18:61:117:GLU:OE2	2.23	0.71
23:29:111:ARG:HA	45:55:2:ARG:HH12	1.56	0.71
52:W4:75:C:C2'	52:W4:76:A:H5"	2.20	0.71
1:13:799:G:N2	1:13:802:A:OP2	2.23	0.71
1:13:1352:U:O4	1:13:2160:U:O2'	2.06	0.71
1:13:1913:A:C8	1:13:1914:A:H4'	2.25	0.71
9:8E:13:ALA:HB2	9:8E:68:GLY:HA3	1.73	0.71
10:58:33:LEU:HD12	10:58:38:HIS:CD2	2.26	0.71
4:19:93:ALA:HB3	4:19:105:ILE:HG22	1.72	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:1H:1397:G:H2'	15:1H:1398:A:H5"	1.71	0.71
15:14:599:C:N3	23:29:145:LYS:NZ	2.38	0.71
15:14:1393:G:O6	56:14:3643:HOH:O	2.08	0.71
28:I5:20:ASN:ND2	28:I5:39:CYS:SG	2.64	0.71
15:1H:2407:A:H1'	30:78:61:ARG:HH11	1.53	0.71
23:29:68:ALA:C	23:29:70:ALA:H	1.98	0.71
1:1G:1446:C:N3	1:1G:2152:G:O6	2.23	0.71
10:58:96:GLU:C	10:58:98:VAL:H	1.98	0.71
12:Q8:30:ARG:HH11	12:Q8:30:ARG:CG	2.03	0.71
14:3E:107:ARG:NH2	14:3E:194:LEU:HD22	2.06	0.71
15:1H:118:U:OP2	56:1H:3648:HOH:O	2.06	0.71
14:32:119:GLN:HG2	14:32:123:HIS:CD2	2.26	0.71
15:14:474:G:OP2	56:14:3644:HOH:O	2.09	0.71
19:9A:59:SER:HB2	19:9A:62:GLU:H	1.55	0.71
41:6A:87:ILE:HG22	41:6A:88:ARG:H	1.55	0.71
10:58:96:GLU:O	10:58:98:VAL:HG12	1.91	0.71
12:Q8:12:LYS:HD2	30:78:64:LYS:HE3	1.73	0.71
37:BI:33:ILE:O	37:BI:37:SER:OG	2.08	0.71
7:8I:18:THR:OG1	7:8I:69:LYS:NZ	2.20	0.71
9:82:50:LEU:HB3	9:82:56:LEU:HA	1.72	0.71
15:1H:344:C:OP1	32:31:137:LYS:NZ	2.19	0.71
22:D5:99:TYR:HD2	22:D5:123:ASP:HB3	1.55	0.71
23:29:89:ASP:OD1	23:29:90:THR:N	2.24	0.71
26:1J:42:U:O4	28:I5:1:MET:N	2.21	0.71
48:1I:35:SER:HB2	48:1I:73:ASP:HB2	1.73	0.71
47:59:137:ASP:HB3	47:59:140:LYS:HB2	1.72	0.71
6:2A:48:ILE:HD11	6:2A:64:ALA:HA	1.72	0.70
1:1G:2156:C:N4	51:Y4:39:U:H3	1.87	0.70
15:1H:1435:C:H2'	15:1H:1436:C:H6	1.55	0.70
15:14:1063:G:N2	15:14:1196:C:O2	2.20	0.70
40:49:59:GLU:OE2	40:49:153:ARG:NH2	2.23	0.70
9:8E:42:ARG:HH11	9:8E:71:SER:HB3	1.56	0.70
1:1G:919:G:N7	7:8A:92:ARG:NH2	2.38	0.70
2:A8:17:ARG:NH2	15:1H:2307:C:OP1	2.23	0.70
15:1H:1520:G:H5"	15:1H:1521:A:OP1	1.91	0.70
15:1H:2485:G:H5'	38:88:56:ARG:HH21	1.56	0.70
10:15:42:TRP:HA	10:15:48:MET:HE1	1.72	0.70
15:14:1770:A:H2'	15:14:1772:G:N2	2.06	0.70
23:29:134:ILE:HD12	23:29:134:ILE:O	1.90	0.70
35:95:43:GLU:O	35:95:45:THR:OG1	2.07	0.70
6:2I:50:TYR:HD2	6:2I:54:ARG:HB3	1.55	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:58:130:HIS:HA	10:58:134:ARG:HH12	1.56	0.70
15:1H:800:A:P	56:1H:3669:HOH:O	2.49	0.70
15:14:120:G:O6	56:14:3641:HOH:O	2.07	0.70
31:E5:53:MET:HG3	31:E5:59:LEU:HD23	1.72	0.70
38:88:104:PHE:HE2	38:88:125:LEU:HD11	1.56	0.70
40:41:161:THR:HG23	40:41:163:ALA:H	1.55	0.70
1:13:1994:C:H2'	1:13:1995:C:H6	1.57	0.70
1:1G:888:G:OP2	7:8A:100:LYS:N	2.24	0.70
1:1G:1168:A:OP2	13:3A:115:LYS:NZ	2.24	0.70
13:3I:90:VAL:O	13:3I:91:LYS:HB3	1.90	0.70
15:14:854:G:OP2	30:35:41:ARG:HG2	1.91	0.70
25:42:143:ARG:NH1	50:72:77:GLU:OE1	2.25	0.70
46:K8:26:ARG:HE	3:F8:2:LYS:HG2	1.55	0.70
9:8E:42:ARG:HA	42:6E:16:LEU:HD11	1.72	0.70
15:14:1273:C:O2'	35:95:85:LYS:N	2.21	0.70
15:14:1469:U:O2'	15:14:1470:G:OP1	2.09	0.70
16:75:50:ILE:HD11	16:75:102:ILE:HD11	1.72	0.70
25:4E:71:LEU:HD22	25:4E:114:GLY:HA3	1.74	0.70
47:59:71:LEU:O	47:59:75:ALA:N	2.24	0.70
1:13:907:G:H5"	1:13:908:C:C5	2.26	0.70
8:22:70:VAL:HG12	8:22:72:LYS:H	1.57	0.70
1:1G:1387:G:N7	56:1G:2406:HOH:O	2.23	0.70
12:M5:37:SER:N	12:M5:40:GLU:OE1	2.25	0.70
26:1J:90:C:H3'	26:1J:91:G:N7	2.05	0.70
44:1E:101:MET:HA	44:1E:108:ILE:HG21	1.72	0.70
1:13:888:G:OP2	7:8I:100:LYS:N	2.14	0.70
15:14:52:A:OP2	56:14:3648:HOH:O	2.10	0.70
15:14:2789:C:OP1	23:29:166:THR:OG1	2.09	0.70
32:39:178:PRO:HB2	32:39:201:VAL:HG11	1.71	0.70
39:F5:56:GLN:HE21	39:F5:83:GLU:HA	1.54	0.70
45:98:45:ARG:HA	45:98:95:THR:HG21	1.73	0.70
1:1G:1586:G:N2	48:1A:55:LYS:HE3	2.06	0.70
2:65:87:PHE:CE1	2:65:102:ALA:HB2	2.27	0.70
22:D5:70:LEU:O	22:D5:89:PHE:N	2.22	0.70
1:13:793:C:H42	1:13:808:G:H1	1.40	0.70
15:1H:249:G:H21	15:1H:648:A:H8	1.38	0.70
15:1H:327:C:H2'	15:1H:328:U:C6	2.26	0.70
38:88:135:ASP:HB3	38:88:137:TYR:H	1.56	0.70
52:W4:75:C:H2'	52:W4:76:A:H5"	1.74	0.70
4:19:244:ARG:NH2	15:14:2254:G:OP2	2.24	0.69
15:1H:725:A:H8	15:1H:2094:G:H21	1.37	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:4E:63:ARG:HA	25:4E:66:MET:HE2	1.73	0.69
29:AI:40:ILE:HG22	29:AI:69:HIS:O	1.92	0.69
27:85:92:ARG:HD2	27:85:95:LEU:HD12	1.72	0.69
38:88:90:VAL:HG23	38:88:91:GLU:H	1.57	0.69
8:2E:76:VAL:HG21	8:2E:103:VAL:HG21	1.73	0.69
52:V1:45:U:O2	52:V1:47:U:O2'	2.10	0.69
1:1G:728:U:O2'	1:1G:729:A:OP1	2.10	0.69
1:1G:1467:G:H1	1:1G:1471:C:H42	1.38	0.69
10:58:47:ALA:HB2	10:58:112:LEU:HD11	1.72	0.69
9:82:51:ARG:HG2	9:82:56:LEU:HD22	1.74	0.69
15:1H:122:G:N7	56:1H:3679:HOH:O	2.25	0.69
15:1H:1772:G:H2'	15:1H:1773:A:H8	1.57	0.69
15:1H:2150:G:H21	15:1H:2198:A:H62	1.38	0.69
8:2E:16:ARG:NH2	8:2E:183:ASP:OD1	2.25	0.69
1:13:1031:C:O3'	49:7I:28:ARG:NH2	2.25	0.69
1:1G:1088:A:OP2	1:1G:1115:G:N1	2.25	0.69
1:1G:1193:C:O2'	50:72:91:ARG:NH2	2.24	0.69
15:1H:1041:G:OP1	27:C8:50:ARG:NH2	2.25	0.69
18:61:124:GLY:H	18:61:142:VAL:HG23	1.57	0.69
15:14:1728:G:H22	15:14:2014:G:H22	1.38	0.69
28:I5:63:TYR:HD1	29:AA:9:VAL:HG13	1.57	0.69
2:65:3:ARG:HE	2:65:4:LEU:H	1.37	0.69
12:Q8:11:LYS:NZ	12:Q8:61:LEU:HD11	2.08	0.69
15:1H:1214:U:H2'	15:1H:1215:C:C6	2.27	0.69
15:14:1790:G:OP2	56:14:3645:HOH:O	2.09	0.69
39:F5:87:PRO:O	39:F5:91:LYS:N	2.25	0.69
1:13:1288:U:H2'	1:13:1289:G:C8	2.28	0.69
1:13:1738:A:OP2	56:13:2402:HOH:O	2.10	0.69
1:1G:1883:A:H62	1:1G:1904:C:H3'	1.56	0.69
11:G8:87:LYS:HB3	11:G8:96:ILE:HD12	1.74	0.69
12:Q8:2:PRO:HD2	15:1H:716:U:O2	1.92	0.69
10:15:47:ALA:HB2	10:15:112:LEU:HD21	1.74	0.69
40:41:7:LEU:N	40:41:104:GLU:OE1	2.25	0.69
43:A5:33:ARG:NH1	43:A5:52:GLU:OE2	2.21	0.69
1:1G:1281:U:H1'	1:1G:1282:A:H2	1.58	0.69
12:Q8:30:ARG:NH2	15:1H:2407:A:OP2	2.25	0.69
15:1H:75:C:O2'	46:K8:62:THR:HG21	1.91	0.69
15:1H:140:A:H8	15:1H:1644:G:H21	1.39	0.69
15:1H:1158:G:H4'	47:51:3:ARG:HD3	1.75	0.69
38:45:57:HIS:CD2	38:45:117:ALA:HB2	2.28	0.69
44:1E:7:VAL:HG11	44:1E:217:ARG:HH11	1.56	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:51:101:ARG:NH2	47:51:121:ILE:O	2.26	0.69
9:82:63:ILE:HD11	9:82:81:ILE:HD11	1.74	0.69
24:4A:22:ILE:HB	24:4A:25:ILE:HG13	1.75	0.69
40:41:37:VAL:HG22	40:41:159:VAL:HG12	1.73	0.69
42:62:92:SER:HB2	42:62:95:ARG:HB2	1.74	0.69
44:12:115:LEU:HD13	44:12:145:LEU:HB3	1.74	0.69
9:8E:125:TYR:HD1	9:8E:126:SER:N	1.89	0.69
15:1H:1178:U:O2	23:21:149:ARG:NH1	2.24	0.69
15:14:839:C:OP2	56:14:3647:HOH:O	2.09	0.69
15:14:2230:G:H4'	15:14:2231:G:OP2	1.92	0.69
21:68:88:ASN:ND2	21:68:90:GLN:H	1.91	0.69
22:H8:165:VAL:HB	22:H8:166:SER:HA	1.75	0.69
24:4I:23:TYR:HB3	24:4I:67:GLU:HB2	1.75	0.69
28:M8:13:ARG:HH12	28:M8:22:ILE:HG23	1.57	0.69
26:1J:85:G:N2	26:1J:96:C:O2	2.19	0.69
35:95:35:LEU:HB3	35:95:37:VAL:HG11	1.72	0.69
1:13:1103:A:H5"	49:7I:80:PHE:HB3	1.73	0.69
1:13:1815:A:N6	56:13:2404:HOH:O	2.26	0.69
17:L8:35:ARG:HB3	17:L8:37:LEU:HD21	1.75	0.69
15:14:1391:A:H2	15:14:1651:U:H3	1.41	0.69
23:29:89:ASP:CG	23:29:90:THR:H	2.00	0.69
36:N8:33:CYS:HB2	36:N8:40:LYS:HE3	1.75	0.69
2:65:3:ARG:HE	2:65:4:LEU:N	1.91	0.69
12:Q8:51:ALA:O	12:Q8:52:LYS:HD3	1.93	0.69
15:1H:242:G:OP2	30:78:50:ARG:NH1	2.26	0.69
15:1H:723:G:H1'	32:31:74:ARG:HD3	1.73	0.69
15:14:1088:C:H2'	15:14:1089:C:C6	2.27	0.69
15:14:1298:U:O5'	56:14:3649:HOH:O	2.10	0.69
48:1I:3:LYS:N	48:1I:75:ILE:O	2.26	0.69
1:13:1816:C:OP1	48:1I:51:ARG:NH2	2.22	0.68
1:13:1919:U:H2'	1:13:1920:G:C8	2.27	0.68
15:1H:1483:A:H61	15:1H:1608:A:N6	1.90	0.68
15:14:1273:C:H4'	35:95:85:LYS:CB	2.22	0.68
15:14:2893:C:H1'	45:55:92:GLY:HA3	1.74	0.68
30:78:15:ARG:CB	30:78:16:ARG:HB2	2.18	0.68
35:95:67:GLY:O	35:95:88:ARG:HD2	1.93	0.68
8:2E:8:ILE:HG23	8:2E:16:ARG:HG2	1.74	0.68
52:V4:21:A:H2'	52:V4:22:G:H5"	1.74	0.68
11:G8:62:GLU:O	11:G8:63:LYS:HD2	1.92	0.68
13:3I:53:ARG:HG3	13:3I:93:LEU:HD21	1.75	0.68
52:V4:16:U:H1'	52:V4:60:U:O2	1.93	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:13:1477:G:N7	56:13:2405:HOH:O	2.26	0.68
4:11:221:VAL:HG22	4:11:226:MET:HE2	1.75	0.68
12:M5:59:LYS:HE3	30:35:50:ARG:HB3	1.74	0.68
52:V1:3:C:H42	52:V1:70:G:H1	1.41	0.68
8:22:7:PRO:O	8:22:11:ARG:NH1	2.26	0.68
15:1H:573:A:H2'	15:1H:574:A:C8	2.29	0.68
27:C8:28:ARG:NH1	27:C8:38:THR:OG1	2.26	0.68
11:C5:50:ARG:HB3	11:C5:53:PRO:HG3	1.75	0.68
28:M8:40:HIS:CG	28:M8:45:GLY:HA3	2.28	0.68
44:1E:61:LEU:HD23	44:1E:68:ILE:HD11	1.76	0.68
8:2E:180:ALA:HB1	8:2E:182:ILE:HG13	1.74	0.68
15:1H:118:U:OP1	56:1H:3653:HOH:O	2.11	0.68
15:1H:688:C:O2	15:1H:695:G:N2	2.27	0.68
15:14:1315:G:O5'	43:A5:15:ARG:NH2	2.27	0.68
15:14:1400:C:OP2	56:14:3650:HOH:O	2.12	0.68
15:14:1830:U:H2'	15:14:1831:C:C6	2.29	0.68
32:39:40:GLN:HE22	32:39:182:ASN:HB2	1.58	0.68
32:39:88:VAL:HG23	32:39:89:VAL:O	1.94	0.68
47:51:20:ALA:HB3	47:51:23:ARG:HG3	1.76	0.68
8:2E:40:ARG:O	8:2E:44:GLU:HG2	1.94	0.68
1:1G:1875:A:N3	9:82:70:LYS:NZ	2.31	0.68
2:65:17:ARG:NH2	15:14:2307:C:OP1	2.27	0.68
11:G8:97:ARG:HD2	11:G8:97:ARG:N	2.09	0.68
4:19:242:ARG:HE	15:14:1860:G:H4'	1.59	0.68
15:1H:471:A:H1'	15:1H:1249:C:O4'	1.94	0.68
15:1H:1408:A:H2	15:1H:1421:U:O4	1.76	0.68
15:14:593:U:O4	56:14:3614:HOH:O	2.12	0.68
23:21:64:LYS:O	23:21:70:ALA:HB2	1.93	0.68
27:85:34:LYS:NZ	27:85:37:GLU:OE1	2.27	0.68
32:31:197:ASP:O	32:31:199:TRP:N	2.27	0.68
3:F8:1:MET:HG2	3:F8:2:LYS:H	1.59	0.68
9:8E:89:ASN:O	9:8E:89:ASN:ND2	2.26	0.68
1:1G:2125:A:H2	1:1G:2128:G:N1	1.90	0.68
13:3A:27:LEU:HG	13:3A:33:ARG:HG2	1.75	0.68
19:9A:36:ASN:O	19:9A:36:ASN:ND2	2.24	0.68
44:1E:187:LEU:HA	44:1E:201:ILE:HB	1.74	0.68
1:13:1386:U:H2'	1:13:1387:G:O4'	1.94	0.68
1:1G:2063:G:H2'	1:1G:2064:U:C6	2.29	0.68
15:1H:681:A:H3'	15:1H:681:A:N3	2.08	0.68
15:1H:1586:C:H2'	15:1H:1587:G:O4'	1.94	0.68
15:1H:2416:U:H2'	15:1H:2417:C:C2	2.29	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:14:1074:U:H2'	26:1J:90:C:N4	2.09	0.68
15:14:2552:U:H2'	15:14:2553:C:C6	2.29	0.68
17:H5:59:VAL:HG12	17:H5:60:GLU:H	1.59	0.68
28:I5:26:SER:OG	28:I5:28:LYS:O	2.11	0.68
44:1E:17:PHE:HD1	44:1E:17:PHE:H	1.42	0.68
45:98:56:LYS:NZ	45:98:90:ARG:O	2.26	0.68
1:13:796:G:H1	1:13:805:C:H42	1.41	0.68
1:1G:1925:C:OP2	42:62:114:ARG:NH2	2.27	0.68
15:14:348:G:O2'	15:14:1253:U:N3	2.27	0.68
15:14:2491:A:H4'	15:14:2492:C:H5	1.59	0.68
38:45:57:HIS:HD2	38:45:117:ALA:HB2	1.59	0.68
46:K8:42:GLY:O	46:K8:44:LEU:N	2.27	0.68
45:55:106:GLY:O	45:55:107:ASP:HB3	1.92	0.68
15:1H:1059:G:OP1	27:C8:77:SER:OG	2.11	0.67
23:29:3:GLY:HA3	23:29:81:ILE:HD12	1.75	0.67
42:6E:65:ALA:HB2	42:6E:128:ALA:HB2	1.76	0.67
44:12:12:GLU:HB3	44:12:213:LEU:HD22	1.76	0.67
15:1H:183:U:OP1	56:1H:3655:HOH:O	2.12	0.67
15:1H:1528:G:H2'	15:1H:1529:G:H8	1.59	0.67
11:C5:17:SER:HB2	11:C5:71:LYS:HD2	1.75	0.67
12:M5:61:LEU:CD2	12:M5:62:LEU:HD22	2.24	0.67
15:14:1117:A:H2	15:14:1142:U:H3	1.42	0.67
31:I8:16:SER:O	56:I8:201:HOH:O	2.12	0.67
1:13:1615:U:H4'	1:13:1616:G:O5'	1.93	0.67
1:1G:1601:A:O2'	1:1G:1949:C:N3	2.27	0.67
12:M5:39:LYS:NZ	15:14:2380:G:N7	2.42	0.67
32:39:21:ALA:C	32:39:23:ASP:H	2.02	0.67
39:J8:92:LYS:O	39:J8:94:LEU:N	2.28	0.67
47:51:54:ARG:HD3	47:51:65:HIS:ND1	2.09	0.67
47:51:154:PRO:HB3	47:51:163:TYR:CZ	2.30	0.67
52:X1:36:A:H5"	52:X1:36:A:H8	1.59	0.67
4:11:68:LYS:HB3	4:11:70:TRP:CZ3	2.30	0.67
1:1G:1414:G:N7	56:1G:2408:HOH:O	2.26	0.67
1:1G:1760:C:H2'	1:1G:1761:G:H8	1.59	0.67
9:82:45:ALA:HB2	42:62:16:LEU:HD11	1.77	0.67
15:14:2335:A:H1'	15:14:2336:G:C6	2.29	0.67
23:29:81:ILE:HG22	23:29:82:ARG:H	1.59	0.67
1:13:653:G:H5'	1:13:939:A:O4'	1.95	0.67
1:1G:713:C:H2'	1:1G:714:G:C8	2.30	0.67
1:1G:1551:G:O2'	1:1G:2156:C:OP1	2.11	0.67
15:1H:1069:A:C8	15:1H:1070:G:H5"	2.27	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:M5:32:LEU:HD12	12:M5:36:LYS:CG	2.23	0.67
15:14:1535:A:H2'	15:14:1536:G:H8	1.59	0.67
16:75:4:GLY:O	16:75:7:ILE:N	2.27	0.67
52:V4:16:U:H2'	52:V4:17:C:H5'	1.77	0.67
1:13:1975:U:H4'	9:8E:120:ARG:HD2	1.77	0.67
6:2A:100:ALA:O	6:2A:102:GLY:N	2.28	0.67
15:1H:673:A:H2'	15:1H:674:G:O4'	1.95	0.67
15:14:829:G:H21	15:14:832:A:H62	1.42	0.67
32:39:18:ARG:HE	32:39:20:LEU:HD23	1.58	0.67
44:12:67:THR:HG22	44:12:90:MET:HE1	1.77	0.67
50:7E:82:HIS:NE2	50:7E:136:GLU:OE2	2.26	0.67
1:13:1597:A:OP2	33:5I:41:ARG:NH1	2.28	0.67
1:1G:1306:U:H3	1:1G:1342:G:H22	1.41	0.67
15:1H:2045:A:O2'	15:1H:2046:C:H5'	1.95	0.67
23:29:119:ARG:HG2	23:29:160:TYR:HB2	1.77	0.67
29:AI:63:THR:H	29:AI:66:MET:HG3	1.59	0.67
33:5A:29:ARG:HB3	33:5A:31:ARG:H	1.59	0.67
48:1I:8:LEU:HD22	48:1I:96:ILE:HG22	1.75	0.67
49:7I:50:LYS:HD3	49:7I:51:VAL:H	1.59	0.67
52:V1:1:G:H1'	52:V1:73:A:C2	2.28	0.67
8:22:122:GLU:OE1	8:22:126:ARG:NE	2.27	0.67
1:1G:1149:A:N1	1:1G:1165:C:H1'	2.10	0.67
2:65:83:LYS:HB3	2:65:84:GLN:HG2	1.77	0.67
11:G8:97:ARG:CZ	11:G8:104:GLY:HA3	2.25	0.67
15:1H:1465:G:HO2'	15:1H:1466:C:H6	1.43	0.67
15:1H:2703:U:H5	15:1H:2736:U:OP2	1.77	0.67
23:21:197:ILE:HD11	23:21:199:ARG:HE	1.60	0.67
25:4E:39:GLY:HA3	25:4E:71:LEU:HD11	1.75	0.67
23:29:25:VAL:HG12	23:29:26:ILE:H	1.60	0.67
14:3E:162:LEU:HD12	14:3E:181:MET:HE2	1.77	0.67
15:1H:48:A:N7	15:1H:118:U:C5	2.59	0.67
15:1H:1067:U:HO2'	15:1H:1069:A:H2	1.39	0.67
13:3A:58:VAL:HG21	13:3A:85:ILE:HD11	1.75	0.67
28:M8:40:HIS:CD2	28:M8:45:GLY:HA3	2.30	0.67
1:13:1586:G:H21	48:1I:55:LYS:CE	2.08	0.67
1:1G:1905:U:H5'	1:1G:1906:A:O4'	1.94	0.67
1:1G:2091:A:OP2	56:1G:2403:HOH:O	2.12	0.67
4:19:201:HIS:O	4:19:204:ILE:HG23	1.95	0.67
15:1H:1252:A:H2	15:1H:1290:A:N1	1.93	0.67
15:1H:2035:G:N7	56:1H:3682:HOH:O	2.28	0.67
15:1H:2233:U:O4'	39:J8:52:ARG:NH2	2.28	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:9I:52:PRO:HB2	19:9I:54:ARG:HD3	1.77	0.67
16:75:21:GLU:O	16:75:91:ARG:NH2	2.28	0.67
16:75:60:THR:HG22	16:75:77:PRO:HA	1.77	0.67
23:21:54:GLN:O	23:21:55:ASN:ND2	2.28	0.67
24:4A:81:LEU:HD23	24:4A:86:CYS:SG	2.33	0.67
40:41:59:GLU:HG2	40:41:148:MET:HE2	1.76	0.67
44:1E:60:ASP:HB3	44:1E:64:ARG:HH12	1.60	0.67
47:51:4:ILE:HB	47:51:6:ARG:HG3	1.77	0.67
51:Y4:43:U:H2'	51:Y4:44:U:C6	2.30	0.67
1:1G:805:C:H2'	1:1G:806:G:C8	2.30	0.66
4:19:208:LYS:NZ	15:14:778:G:O5'	2.28	0.66
11:C5:42:VAL:HG13	11:C5:65:ALA:HB3	1.77	0.66
23:29:55:ASN:O	23:29:57:LYS:NZ	2.27	0.66
33:5A:26:ARG:O	33:5A:26:ARG:HG2	1.94	0.66
1:13:863:U:H2'	1:13:864:U:C6	2.31	0.66
1:13:1947:C:O2	29:AI:36:ARG:NH2	2.28	0.66
1:1G:1587:A:N3	1:1G:1592:A:O2'	2.25	0.66
1:1G:1698:U:H2'	1:1G:1699:C:H6	1.60	0.66
12:Q8:49:VAL:HG11	15:1H:2374:C:H4'	1.76	0.66
15:1H:1474:G:O6	56:1H:3657:HOH:O	2.13	0.66
15:1H:1498:G:O2'	15:1H:1578:A:N1	2.25	0.66
10:15:42:TRP:O	27:85:64:ARG:NH2	2.26	0.66
12:M5:2:PRO:HD2	15:14:716:U:O2	1.94	0.66
15:14:2128:C:H2'	15:14:2129:G:C8	2.29	0.66
22:H8:30:ASN:ND2	22:H8:90:VAL:HB	2.04	0.66
29:AI:18:LYS:HE2	29:AI:22:LEU:HD11	1.76	0.66
40:49:37:VAL:HG23	40:49:99:MET:HE3	1.77	0.66
45:98:3:HIS:O	45:98:5:LYS:N	2.24	0.66
1:13:862:C:H2'	1:13:863:U:H6	1.60	0.66
1:13:1603:C:O2	56:13:2403:HOH:O	2.11	0.66
2:65:84:GLN:HA	2:65:110:LEU:HD12	1.77	0.66
15:1H:423:U:O2'	56:1H:3656:HOH:O	2.13	0.66
16:B8:50:ILE:HD11	16:B8:102:ILE:HD11	1.76	0.66
15:14:1483:A:H61	15:14:1608:A:N6	1.94	0.66
34:5E:42:GLU:OE1	34:5E:59:TYR:OH	2.12	0.66
52:V1:8:U:H2'	52:V1:13:C:H41	1.60	0.66
14:3E:30:LYS:HA	14:3E:35:ARG:HE	1.59	0.66
15:1H:428:G:O6	56:1H:3652:HOH:O	2.10	0.66
15:14:239:C:OP1	56:14:3653:HOH:O	2.12	0.66
15:14:711:G:H5'	30:35:14:LYS:CB	2.24	0.66
15:14:921:A:H4'	38:45:66:ILE:HD11	1.76	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:4I:3:ARG:HG2	24:4I:9:ILE:HG12	1.78	0.66
27:C8:105:VAL:HG22	35:D8:45:THR:HG21	1.77	0.66
22:D5:28:MET:HE3	22:D5:59:LEU:HD12	1.77	0.66
22:D5:79:ARG:HB3	22:D5:80:ARG:HD2	1.77	0.66
32:31:29:ASN:H	32:31:112:MET:CE	2.07	0.66
38:45:25:ASP:HB3	38:45:102:VAL:HG23	1.77	0.66
1:13:828:C:H42	1:13:841:G:H1	1.43	0.66
1:13:907:G:H5"	1:13:908:C:H5	1.58	0.66
1:13:1017:G:H5"	49:7I:5:ARG:HD2	1.77	0.66
4:11:70:TRP:CD1	4:11:70:TRP:C	2.73	0.66
12:Q8:4:MET:O	12:Q8:59:LYS:HE2	1.94	0.66
11:C5:73:ARG:NH2	11:C5:81:LYS:O	2.29	0.66
8:2E:174:PRO:HD2	8:2E:182:ILE:HD11	1.77	0.66
52:X1:61:C:H2'	52:X1:62:C:H6	1.61	0.66
1:1G:1746:C:OP1	9:82:104:ARG:NH1	2.29	0.66
1:1G:1974:G:N2	1:1G:2001:G:H2'	2.10	0.66
12:Q8:59:LYS:HD2	12:Q8:60:LEU:HG	1.77	0.66
15:1H:121:G:O6	56:1H:3654:HOH:O	2.12	0.66
15:14:120:G:N7	56:14:3641:HOH:O	2.29	0.66
32:39:103:LYS:HA	32:39:106:ARG:HG3	1.78	0.66
44:1E:204:ASN:HD21	44:1E:207:ALA:HB3	1.60	0.66
50:7E:20:TYR:HE2	50:7E:75:ARG:HD2	1.61	0.66
52:X1:2:C:H2'	52:X1:3:C:C6	2.31	0.66
1:13:1840:A:O2'	1:13:1842:G:N7	2.24	0.66
2:A8:11:LYS:HD3	2:A8:91:PRO:HD3	1.78	0.66
2:A8:106:ARG:HA	2:A8:109:GLY:H	1.60	0.66
1:1G:1882:G:O2'	1:1G:1885:G:O2'	2.08	0.66
15:1H:1413:G:N7	39:J8:2:SER:HB3	2.11	0.66
15:14:1465:G:O2'	15:14:1466:C:O5'	2.08	0.66
23:21:63:LEU:HD23	23:21:63:LEU:O	1.95	0.66
45:98:32:GLY:HA2	45:98:116:LEU:HD12	1.77	0.66
2:A8:37:ALA:HB2	2:A8:101:LEU:HD21	1.78	0.66
12:Q8:48:PHE:CD2	12:Q8:52:LYS:HG3	2.31	0.66
15:1H:2314:G:N1	15:1H:2333:G:H8	1.94	0.66
14:32:105:VAL:HG13	14:32:110:PHE:HB2	1.77	0.66
15:14:118:U:OP1	56:14:3654:HOH:O	2.14	0.66
25:4E:35:GLY:HA3	25:4E:112:LEU:O	1.94	0.66
36:N8:47:PRO:HG3	43:E8:38:TYR:OH	1.95	0.66
38:45:25:ASP:HB3	38:45:102:VAL:H	1.60	0.66
50:7E:106:GLY:HA2	50:7E:122:ARG:HH12	1.61	0.66
15:14:332:G:H21	15:14:355:A:H62	1.43	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:14:2330:G:H2'	15:14:2331:C:C6	2.31	0.66
23:29:33:VAL:HG12	23:29:89:ASP:HB3	1.77	0.66
42:6E:62:PHE:HA	42:6E:124:LEU:HD21	1.78	0.66
40:49:109:VAL:HG11	40:49:142:PRO:HG3	1.78	0.66
45:98:67:LEU:HD13	45:98:76:VAL:HG21	1.78	0.66
1:13:921:C:N3	7:8I:39:SER:N	2.44	0.66
9:8E:46:ALA:HB2	9:8E:74:ILE:HG23	1.78	0.66
1:1G:1586:G:H21	48:1A:55:LYS:CE	2.08	0.66
1:1G:2079:G:H1	37:BA:54:LYS:HZ2	1.44	0.66
14:3E:148:VAL:HG21	14:3E:158:ILE:HG21	1.77	0.66
15:1H:240:G:P	30:78:60:MET:HE1	2.36	0.66
12:M5:5:LYS:NZ	15:14:243:C:OP2	2.22	0.66
14:32:111:ALA:HB2	14:32:120:LEU:HD12	1.77	0.66
15:14:593:U:H5'	15:14:992:A:N1	2.11	0.66
15:14:604:G:H2'	15:14:605:C:C6	2.31	0.66
18:69:38:LEU:HD12	18:69:38:LEU:H	1.61	0.66
42:62:69:VAL:HG22	42:62:135:VAL:HG23	1.78	0.66
47:59:7:LEU:HD12	47:59:8:PRO:HD3	1.78	0.66
15:1H:334:G:N3	15:1H:354:G:O2'	2.28	0.65
15:1H:1133:A:H1'	15:1H:1134:A:H2	1.61	0.65
15:14:1108:U:H4'	15:14:1109:U:H5"	1.76	0.65
17:H5:18:ASP:OD1	17:H5:18:ASP:N	2.27	0.65
24:4I:15:VAL:HG23	24:4I:43:THR:O	1.96	0.65
26:16:17:A:H5'	26:16:18:G:H8	1.61	0.65
36:N8:42:PRO:O	36:N8:44:THR:HG22	1.96	0.65
38:45:56:ARG:NH2	52:W4:52:G:O2'	2.29	0.65
43:A5:1:MET:HE2	43:A5:2:GLU:H	1.61	0.65
47:51:4:ILE:HG21	47:51:6:ARG:NH1	2.11	0.65
52:X4:2:C:H2'	52:X4:3:C:C6	2.31	0.65
9:8E:50:LEU:HD23	9:8E:85:LEU:HD11	1.78	0.65
15:1H:555:A:O2'	15:1H:556:A:H5'	1.95	0.65
26:1J:44:C:N3	40:49:91:ARG:NH1	2.43	0.65
31:E5:12:ASN:HA	31:E5:14:ARG:HH21	1.61	0.65
51:Y4:41:U:H5"	51:Y4:42:U:OP1	1.95	0.65
1:13:1980:G:OP1	20:1F:10:ARG:NH2	2.30	0.65
29:AI:5:LEU:HD13	29:AI:10:PHE:CD1	2.30	0.65
46:K8:47:ASN:HB2	46:K8:50:ILE:HD11	1.79	0.65
1:13:957:G:OP2	1:13:992:G:O2'	2.14	0.65
1:13:1637:G:N2	1:13:1640:A:OP2	2.27	0.65
7:8I:67:LYS:HA	7:8I:70:ARG:NH1	2.11	0.65
1:1G:1070:U:OP2	14:32:36:ARG:NH1	2.30	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:Q8:3:LYS:HE2	15:1H:232:G:O5'	1.96	0.65
15:1H:34:C:OP2	15:1H:34:C:C6	2.43	0.65
15:1H:562:C:O3'	27:C8:53:ARG:NH1	2.29	0.65
15:1H:1916:G:N7	56:1H:3684:HOH:O	2.29	0.65
15:14:2247:U:P	39:F5:40:ARG:HH12	2.20	0.65
15:14:2703:U:H5	15:14:2736:U:OP2	1.79	0.65
32:31:6:VAL:HG11	32:31:119:ARG:HA	1.78	0.65
3:F8:3:THR:OG1	3:F8:4:ALA:HA	1.97	0.65
46:G5:13:ALA:HA	46:G5:16:LEU:HD23	1.78	0.65
9:8E:121:ARG:NH1	9:8E:122:ALA:O	2.29	0.65
1:1G:1873:C:O2	1:1G:1918:G:N2	2.20	0.65
11:G8:83:THR:HG23	15:1H:361:C:OP1	1.95	0.65
15:1H:272:U:C2	18:61:50:ARG:HG2	2.32	0.65
15:1H:782:G:OP2	56:1H:3659:HOH:O	2.14	0.65
15:1H:909:U:H5	15:1H:965:A:N1	1.95	0.65
15:1H:2165:C:H42	15:1H:2176:G:H1	1.44	0.65
15:1H:2335:A:N3	15:1H:2335:A:H2'	2.11	0.65
15:1H:2705:C:OP1	45:98:17:ARG:NH1	2.29	0.65
27:C8:108:GLU:OE1	27:C8:112:ARG:NH1	2.29	0.65
32:31:6:VAL:HG21	32:31:119:ARG:HB2	1.78	0.65
38:45:25:ASP:CB	38:45:102:VAL:H	2.09	0.65
44:1E:12:GLU:C	44:1E:16:HIS:HD2	2.04	0.65
1:13:2079:G:H1	37:BI:54:LYS:HZ3	1.43	0.65
1:13:2120:G:C2'	1:13:2121:U:H5'	2.27	0.65
7:8I:100:LYS:HB2	7:8I:101:ARG:NH1	2.10	0.65
11:G8:85:VAL:HG22	11:G8:98:VAL:HB	1.77	0.65
15:1H:632:U:OP1	32:31:102:PRO:HA	1.96	0.65
16:B8:94:ALA:HB1	16:B8:99:LEU:HD21	1.79	0.65
16:B8:102:ILE:HB	16:B8:110:ILE:HG13	1.78	0.65
12:M5:30:ARG:NH1	30:35:63:PRO:HB3	2.12	0.65
18:61:98:ALA:HB2	18:61:111:PRO:HB3	1.79	0.65
15:14:121:G:O6	56:14:3652:HOH:O	2.12	0.65
15:14:2463:A:OP2	56:14:3615:HOH:O	2.14	0.65
15:14:2598:G:H21	52:W4:76:A:N6	1.91	0.65
25:42:101:ILE:HD11	25:42:119:LEU:HD23	1.79	0.65
32:31:9:ILE:HD13	32:31:123:LEU:HG	1.79	0.65
32:39:49:ALA:O	32:39:92:PRO:HB2	1.96	0.65
42:6E:111:ARG:NH1	42:6E:113:GLU:OE2	2.30	0.65
38:45:26:TYR:O	38:45:26:TYR:HD1	1.78	0.65
44:12:98:LEU:O	44:12:101:MET:HG2	1.97	0.65
51:Y4:43:U:H2'	51:Y4:44:U:H6	1.60	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:L5:26:GLY:O	5:L5:30:VAL:HG23	1.97	0.65
10:58:33:LEU:HD12	10:58:38:HIS:HD2	1.62	0.65
15:1H:1857:G:N7	56:1H:3683:HOH:O	2.28	0.65
13:3A:47:LYS:CG	13:3A:48:PRO:HD3	2.27	0.65
15:14:216:G:H21	15:14:218:A:H62	1.44	0.65
15:14:355:A:H2	15:14:1258:A:HO2'	1.42	0.65
46:K8:18:PRO:HA	46:K8:21:LEU:HB2	1.78	0.65
7:8I:53:LEU:HB3	7:8I:82:MET:HE1	1.77	0.65
12:Q8:34:TRP:CD1	12:Q8:38:GLY:HA3	2.32	0.65
15:1H:1587:G:H2'	15:1H:1588:G:H8	1.62	0.65
15:1H:1715:A:H1'	21:68:1:MET:HG3	1.79	0.65
21:25:63:VAL:HG12	21:25:106:LEU:HD11	1.78	0.65
45:98:103:ARG:HD2	45:98:108:GLY:O	1.97	0.65
8:22:73:PRO:HA	8:22:76:VAL:HG13	1.78	0.65
2:65:27:SER:HA	2:65:88:ASP:HB2	1.79	0.65
12:M5:36:LYS:HD3	12:M5:40:GLU:CD	2.21	0.65
18:61:9:LEU:HD21	18:61:35:LEU:HD13	1.79	0.65
15:14:647:G:N3	15:14:647:G:H5'	2.12	0.65
22:H8:151:HIS:N	22:H8:154:ASP:OD2	2.27	0.65
28:I5:14:ILE:HG22	28:I5:22:ILE:HA	1.78	0.65
34:5E:6:VAL:HG22	34:5E:90:VAL:HG22	1.78	0.65
38:88:135:ASP:HB2	38:88:138:ASP:OD1	1.96	0.65
52:V4:8:U:H2'	52:V4:13:C:H41	1.62	0.65
1:1G:1130:C:H2'	1:1G:1131:G:H8	1.62	0.65
1:1G:1281:U:O2'	1:1G:1282:A:N3	2.27	0.65
1:1G:1302:G:H2'	1:1G:1303:G:C8	2.32	0.65
10:15:63:THR:OG1	15:14:1189:U:OP2	2.15	0.65
27:85:91:ASP:O	27:85:92:ARG:HG3	1.97	0.65
32:31:191:ARG:HB3	32:31:191:ARG:HH11	1.61	0.65
40:49:114:ILE:HG22	40:49:117:PHE:HB2	1.77	0.65
44:12:7:VAL:HG22	44:12:8:LYS:H	1.60	0.65
47:59:26:VAL:HG12	47:59:33:LEU:H	1.62	0.65
52:W1:9:A:O2'	52:W1:45:U:N3	2.29	0.65
52:V1:34:G:O2'	52:V1:35:A:O5'	2.14	0.65
56:1H:4029:HOH:O	35:D8:77:ALA:HB3	1.97	0.64
15:14:2137:G:O2'	15:14:2139:A:N6	2.30	0.64
27:C8:75:ASN:HB2	27:C8:78:THR:OG1	1.96	0.64
27:C8:92:ARG:O	27:C8:94:ASN:N	2.30	0.64
28:M8:25:TYR:HE2	40:41:5:VAL:H	1.43	0.64
1:13:1243:A:H2'	1:13:1244:C:H6	1.62	0.64
1:13:1271:A:N3	50:7E:113:SER:OG	2.30	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:1G:1580:U:H1'	1:1G:1583:U:C5	2.32	0.64
15:1H:1901:A:H2'	15:1H:1902:A:C8	2.33	0.64
15:14:83:A:N6	15:14:100:G:O2'	2.26	0.64
15:14:555:A:C2	15:14:2067:A:H2'	2.32	0.64
22:D5:45:ASP:OD2	22:D5:49:ARG:NE	2.31	0.64
38:88:66:ILE:HG22	38:88:67:ARG:N	2.11	0.64
38:45:26:TYR:O	38:45:28:ALA:N	2.30	0.64
39:F5:3:LYS:H	39:F5:61:ARG:HH22	1.45	0.64
1:13:1054:G:O2'	1:13:1069:G:N2	2.30	0.64
1:13:1919:U:H2'	1:13:1920:G:H8	1.61	0.64
11:G8:100:ALA:HB1	11:G8:101:LYS:HB2	1.78	0.64
15:1H:2271:G:N7	56:1H:3688:HOH:O	2.30	0.64
15:14:711:G:OP1	30:35:16:ARG:HD2	1.98	0.64
15:14:2695:C:OP2	23:29:111:ARG:NH2	2.30	0.64
27:85:92:ARG:HG2	35:95:11:GLN:OE1	1.98	0.64
52:X4:2:C:H2'	52:X4:3:C:H6	1.61	0.64
1:13:926:G:N7	56:13:2406:HOH:O	2.29	0.64
8:22:95:THR:HB	8:22:97:LYS:HG2	1.78	0.64
1:1G:1048:G:P	14:32:115:ARG:HH21	2.21	0.64
14:32:150:GLU:C	14:32:152:SER:H	2.05	0.64
32:39:21:ALA:HB2	32:39:203:GLN:HE22	1.63	0.64
32:39:79:GLY:HA2	32:39:86:GLY:HA2	1.79	0.64
44:1E:212:GLN:O	44:1E:216:SER:OG	2.16	0.64
45:55:67:LEU:HD12	45:55:76:VAL:HG21	1.78	0.64
1:13:654:A:H62	14:3E:208:SER:HB2	1.63	0.64
1:1G:1723:U:H5"	1:1G:1737:C:O2	1.97	0.64
25:4E:10:MET:HB2	25:4E:32:VAL:HG22	1.80	0.64
22:D5:124:ILE:HD11	22:D5:165:VAL:HG21	1.77	0.64
35:D8:24:LYS:HA	35:D8:92:THR:HG23	1.80	0.64
32:39:102:PRO:HB2	32:39:105:VAL:HG23	1.79	0.64
37:BA:16:HIS:O	37:BA:19:SER:OG	2.12	0.64
47:51:33:LEU:HD21	47:51:136:ILE:HB	1.78	0.64
51:Y1:36:G:H3'	51:Y1:37:G:C8	2.33	0.64
1:13:912:C:H2'	1:13:913:C:H6	1.63	0.64
1:13:1016:U:OP1	49:7I:69:THR:HG21	1.98	0.64
1:13:2050:G:H5"	21:68:48:PRO:HB3	1.80	0.64
1:1G:1106:G:H2'	1:1G:1107:G:H8	1.62	0.64
15:1H:904:G:O2'	31:I8:27:GLU:OE2	2.09	0.64
15:1H:1772:G:H2'	15:1H:1773:A:C8	2.32	0.64
15:1H:2488:U:H2'	15:1H:2489:C:H6	1.62	0.64
28:M8:12:ALA:HB3	28:M8:24:THR:HB	1.80	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:35:59:LEU:O	30:35:59:LEU:HD22	1.98	0.64
34:52:83:ASP:OD1	34:52:83:ASP:N	2.29	0.64
48:1I:57:LYS:CD	48:1I:60:ARG:HH12	2.10	0.64
48:1I:57:LYS:O	48:1I:60:ARG:NH1	2.30	0.64
44:12:189:ASP:OD1	44:12:189:ASP:N	2.31	0.64
5:P8:10:ARG:O	5:P8:14:LYS:HB2	1.97	0.64
12:Q8:44:LYS:NZ	15:1H:658:A:OP2	2.31	0.64
15:1H:1381:G:C8	15:1H:1381:G:H5'	2.32	0.64
15:1H:1454:U:H2'	15:1H:1455:U:C6	2.32	0.64
15:1H:2767:G:H1	47:51:3:ARG:CZ	2.11	0.64
16:B8:26:ASP:HB2	16:B8:91:ARG:HA	1.78	0.64
15:14:596:A:OP2	56:14:3656:HOH:O	2.15	0.64
15:14:2761:C:O2	47:59:139:GLN:NE2	2.31	0.64
26:16:42:U:H1'	26:16:47:A:H61	1.62	0.64
38:88:34:LEU:HD11	38:88:129:THR:HB	1.80	0.64
41:6A:11:VAL:HG21	41:6A:34:LEU:HD22	1.78	0.64
45:98:12:ARG:HB2	45:98:16:HIS:HB3	1.80	0.64
15:1H:2302:A:N6	15:1H:2359:U:H3	1.93	0.64
15:14:1159:A:H5'	47:59:3:ARG:HD3	1.79	0.64
23:21:179:GLU:HB3	23:21:181:LEU:HD22	1.78	0.64
23:29:89:ASP:O	23:29:91:VAL:N	2.28	0.64
43:A5:82:LEU:HD22	43:A5:84:ARG:HH22	1.62	0.64
8:2E:114:PRO:O	8:2E:118:GLN:HG3	1.97	0.64
8:22:73:PRO:HD3	8:22:105:GLU:HG3	1.80	0.64
1:1G:1638:A:H4'	29:AA:14:HIS:CE1	2.33	0.64
15:1H:2767:G:H1	47:51:3:ARG:NE	1.96	0.64
15:14:2331:C:O2'	40:49:128:ARG:NH1	2.31	0.64
15:14:2355:G:H2'	15:14:2356:G:H8	1.62	0.64
15:14:2653:G:OP1	23:29:82:ARG:NH2	2.31	0.64
22:H8:154:ASP:OD1	22:H8:154:ASP:N	2.21	0.64
31:I8:7:LEU:HD13	38:88:85:LYS:HG3	1.80	0.64
31:I8:23:VAL:HG22	31:I8:38:VAL:HG22	1.78	0.64
34:52:25:ILE:HD12	34:52:82:ARG:HD2	1.80	0.64
43:E8:92:ARG:NH1	43:E8:94:ASP:OD1	2.31	0.64
47:51:10:PRO:HD2	47:51:50:VAL:O	1.98	0.64
4:19:137:PRO:O	4:19:140:THR:OG1	2.16	0.63
15:1H:355:A:HO2'	15:1H:356:A:H8	1.46	0.63
15:1H:897:G:H2'	15:1H:898:A:C8	2.33	0.63
15:1H:1635:A:N3	15:1H:1635:A:H5"	2.12	0.63
11:C5:47:LYS:HZ3	15:14:525:G:H21	1.45	0.63
25:4E:79:GLU:HG3	25:4E:93:PRO:HD2	1.80	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:42:60:TYR:HB3	25:42:64:ARG:HH21	1.62	0.63
40:49:41:GLN:NE2	40:49:154:GLY:O	2.28	0.63
40:49:118:ARG:HB3	40:49:181:ARG:HG3	1.79	0.63
44:1E:8:LYS:HG2	44:1E:9:GLU:HG2	1.78	0.63
4:11:68:LYS:HB3	4:11:70:TRP:CH2	2.33	0.63
1:1G:1017:G:H5"	49:7A:5:ARG:HD2	1.79	0.63
1:1G:1915:A:H4'	20:1B:13:ILE:HD13	1.79	0.63
13:3A:24:VAL:O	13:3A:26:ALA:N	2.30	0.63
15:14:2173:G:H2'	15:14:2174:G:H8	1.63	0.63
21:68:98:VAL:HG13	21:68:117:LEU:HB3	1.79	0.63
6:2I:50:TYR:CD2	6:2I:54:ARG:HB3	2.33	0.63
2:A8:59:LYS:HD3	2:A8:60:GLY:N	2.13	0.63
1:1G:782:G:H2'	1:1G:783:A:C8	2.31	0.63
1:1G:1453:C:H1'	50:72:1:MET:HE1	1.81	0.63
14:3E:28:SER:OG	14:3E:29:PRO:O	2.16	0.63
15:1H:2270:G:OP2	56:1H:3660:HOH:O	2.15	0.63
11:C5:48:ALA:HA	11:C5:50:ARG:NH2	2.13	0.63
15:14:1060:U:OP1	27:85:75:ASN:ND2	2.29	0.63
23:21:116:VAL:O	23:21:117:MET:HB3	1.97	0.63
48:1I:5:ARG:HB2	48:1I:73:ASP:HA	1.80	0.63
44:12:80:ILE:HD13	44:12:212:GLN:HG2	1.81	0.63
1:13:1752:G:O2'	1:13:1773:C:N4	2.31	0.63
16:B8:18:ASP:OD1	16:B8:18:ASP:N	2.32	0.63
15:14:348:G:HO2'	15:14:1253:U:H3	1.42	0.63
22:H8:122:ARG:HH22	38:88:139:GLU:HG2	1.63	0.63
22:D5:52:SER:O	22:D5:52:SER:OG	2.16	0.63
23:29:120:TRP:CE3	23:29:155:LYS:HD3	2.34	0.63
37:BI:97:ALA:O	37:BI:99:LEU:N	2.31	0.63
1:13:706:A:H4'	1:13:707:G:H5'	1.79	0.63
11:G8:76:CYS:O	11:G8:78:ALA:N	2.29	0.63
4:19:32:SER:O	4:19:33:LEU:HB2	1.99	0.63
15:1H:2230:G:H5"	15:1H:2231:G:N7	2.13	0.63
15:1H:2421:U:N3	30:78:73:GLY:O	2.22	0.63
15:1H:2750:A:H5"	15:1H:2750:A:C8	2.30	0.63
24:4I:10:PRO:HB2	24:4I:18:ALA:HB1	1.78	0.63
24:4I:37:THR:HG23	24:4I:59:TYR:HD2	1.63	0.63
29:AA:79:THR:O	29:AA:79:THR:OG1	2.16	0.63
33:5A:15:LYS:HG2	33:5A:16:PHE:CE2	2.33	0.63
39:J8:48:LYS:HB3	39:J8:49:VAL:CA	2.28	0.63
46:K8:15:LYS:HE3	46:K8:15:LYS:H	1.63	0.63
46:K8:41:ILE:HD13	46:K8:44:LEU:HG	1.79	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:1A:82:ILE:O	48:1A:86:MET:N	2.32	0.63
1:13:994:A:H5'	1:13:994:A:H8	1.63	0.63
1:13:1590:C:HO2'	9:8E:125:TYR:HH	1.46	0.63
1:13:1661:G:H2'	1:13:1662:G:H8	1.64	0.63
2:65:21:THR:HG21	15:14:2393:A:O2'	1.97	0.63
15:14:517:G:N7	43:A5:49:LYS:NZ	2.46	0.63
15:14:1461:A:H2'	15:14:1462:G:C8	2.33	0.63
15:14:2521:U:O2	15:14:2521:U:H2'	1.98	0.63
41:6I:4:THR:OG1	41:6I:7:GLU:HB2	1.99	0.63
1:1G:687:G:H2'	1:1G:688:G:C8	2.33	0.63
12:Q8:50:LEU:C	12:Q8:52:LYS:H	2.07	0.63
15:1H:2152:G:N1	15:1H:2187:G:N3	2.45	0.63
16:B8:58:ASN:C	16:B8:58:ASN:HD22	2.07	0.63
15:14:723:G:H1'	32:39:74:ARG:HD3	1.81	0.63
17:H5:6:VAL:HG12	17:H5:56:VAL:HB	1.80	0.63
21:25:87:ILE:HG23	21:25:91:LEU:HA	1.79	0.63
24:4A:86:CYS:HB2	29:AA:73:GLU:HB3	1.81	0.63
37:BI:75:ASN:OD1	37:BI:75:ASN:N	2.32	0.63
35:95:43:GLU:HG3	35:95:44:LYS:NZ	2.13	0.63
46:G5:47:ASN:HD22	46:G5:47:ASN:H	1.46	0.63
50:72:1:MET:HE2	50:72:2:LEU:N	2.13	0.63
1:13:1364:C:H2'	1:13:1365:C:H6	1.63	0.63
2:A8:106:ARG:NH2	2:A8:107:GLU:HB2	2.13	0.63
1:1G:1732:G:OP1	44:12:144:ARG:NH1	2.32	0.63
2:65:25:ARG:HH22	26:1J:11:G:P	2.21	0.63
15:1H:70:A:H2	3:F8:31:HIS:CE1	2.05	0.63
15:1H:1257:G:H21	15:1H:1258:A:H62	1.45	0.63
15:1H:2443:G:N2	30:78:61:ARG:NH2	2.47	0.63
16:B8:50:ILE:HD11	16:B8:102:ILE:CD1	2.29	0.63
12:M5:19:SER:HB3	15:14:678:G:OP1	1.98	0.63
15:14:643:G:OP1	32:39:40:GLN:NE2	2.21	0.63
15:14:2380:G:OP1	31:E5:55:ARG:HG2	1.99	0.63
44:12:82:ARG:NH1	44:12:92:TYR:OH	2.32	0.63
49:7A:53:VAL:HG13	49:7A:79:VAL:HG22	1.81	0.63
1:13:2004:U:H2'	1:13:2005:A:C8	2.34	0.63
3:B5:31:HIS:NE2	15:14:70:A:H2	1.92	0.63
5:L5:34:ARG:NH1	5:L5:41:ARG:O	2.32	0.63
1:1G:1253:C:H2'	1:1G:1254:G:H8	1.64	0.63
16:B8:51:ARG:HB2	16:B8:98:LYS:HD3	1.80	0.63
15:14:1535:A:H2'	15:14:1536:G:C8	2.33	0.63
15:14:2484:A:H2	15:14:2496:G:H21	1.47	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:9A:53:ARG:HA	19:9A:56:THR:OG1	1.99	0.63
9:8E:26:VAL:HB	9:8E:33:PHE:HB2	1.81	0.62
9:82:77:ILE:O	9:82:81:ILE:HG12	1.99	0.62
15:1H:1461:A:H2'	15:1H:1462:G:C8	2.34	0.62
15:1H:1728:G:H22	15:1H:2014:G:H22	1.45	0.62
11:C5:17:SER:O	11:C5:21:LYS:HB2	1.99	0.62
15:14:689:G:N7	15:14:695:G:N1	2.47	0.62
24:4A:7:VAL:HG21	40:49:115:ARG:HD3	1.80	0.62
27:85:92:ARG:C	27:85:94:ASN:H	2.07	0.62
38:45:19:GLY:O	38:45:98:LYS:HB3	1.99	0.62
41:6A:55:GLY:HA2	41:6A:58:MET:HE3	1.80	0.62
43:A5:95:ILE:HG12	43:A5:95:ILE:O	1.99	0.62
47:51:137:ASP:O	47:51:141:VAL:HG12	1.99	0.62
1:13:1153:G:H2'	1:13:1154:C:C6	2.33	0.62
1:1G:1636:U:H3	1:1G:1641:G:H1	1.47	0.62
15:1H:673:A:H5'	15:1H:673:A:N3	2.14	0.62
14:32:24:GLU:HG2	14:32:25:ARG:H	1.65	0.62
15:14:603:A:OP2	56:14:3657:HOH:O	2.16	0.62
15:14:1365:U:H2'	15:14:1366:A:C8	2.34	0.62
15:14:1988:U:H5"	15:14:1988:U:O2	1.99	0.62
15:14:2512:A:O3'	56:14:3655:HOH:O	2.15	0.62
15:14:2792:A:OP1	15:14:2792:A:H3'	1.99	0.62
22:D5:68:PRO:O	22:D5:91:LEU:HD23	1.99	0.62
23:29:65:GLY:HA2	23:29:66:HIS:HB3	1.81	0.62
32:31:67:GLN:HG3	32:31:67:GLN:O	1.97	0.62
40:41:11:TYR:HA	40:41:15:VAL:HB	1.79	0.62
52:X1:67:C:H2'	52:X1:68:C:C6	2.34	0.62
13:3A:27:LEU:HD21	13:3A:61:THR:OG1	1.99	0.62
15:14:1586:C:H2'	15:14:1587:G:C8	2.34	0.62
22:H8:8:TYR:HB2	22:H8:38:TYR:CE2	2.34	0.62
24:4I:15:VAL:O	24:4I:19:LEU:HD22	2.00	0.62
28:M8:6:HIS:CE1	40:41:67:LYS:NZ	2.67	0.62
29:AI:45:VAL:HA	29:AI:62:ILE:HB	1.81	0.62
30:78:99:LEU:HA	30:78:102:ARG:HD3	1.81	0.62
37:BI:61:SER:O	37:BI:65:LYS:HB2	1.99	0.62
39:J8:90:ILE:HA	39:J8:94:LEU:HD12	1.80	0.62
42:6E:73:MET:HG2	42:6E:90:GLU:HA	1.82	0.62
45:98:72:ASP:O	45:98:76:VAL:HG23	1.99	0.62
45:55:38:VAL:HG22	45:55:112:ALA:HB2	1.81	0.62
46:G5:47:ASN:O	46:G5:49:LYS:N	2.26	0.62
47:59:11:VAL:HB	47:59:13:LYS:HE2	1.80	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:13:1047:G:H5”	14:3E:5:ILE:HG12	1.82	0.62
1:13:1690:U:H2’	1:13:1691:C:C6	2.35	0.62
2:A8:10:ARG:O	2:A8:14:VAL:HG12	2.00	0.62
1:1G:1865:A:N3	1:1G:1868:G:O2’	2.27	0.62
1:1G:1970:G:H2’	1:1G:1971:C:C6	2.33	0.62
15:1H:613:U:H2’	15:1H:614:C:C6	2.34	0.62
15:1H:1072:G:H3’	15:1H:1073:G:H5”	1.81	0.62
15:1H:1450:G:H2’	15:1H:1451:C:C6	2.35	0.62
11:C5:76:CYS:HB2	11:C5:97:ARG:CD	2.29	0.62
12:M5:28:GLY:O	12:M5:32:LEU:HB2	1.99	0.62
15:14:913:G:C6	15:14:914:C:N4	2.67	0.62
15:14:2626:U:H3’	15:14:2626:U:OP2	1.99	0.62
28:M8:17:GLY:HA3	28:M8:35:VAL:HG23	1.81	0.62
30:35:144:GLU:CD	30:35:144:GLU:N	2.57	0.62
51:Y1:36:G:H5’	51:Y1:37:G:OP2	1.98	0.62
1:1G:1281:U:H1’	1:1G:1282:A:C2	2.34	0.62
15:1H:1892:G:H1’	15:1H:1909:A:N6	2.13	0.62
15:1H:1925:A:H5’	15:1H:1925:A:H8	1.64	0.62
15:1H:2099:U:H2’	15:1H:2100:U:C6	2.35	0.62
15:1H:2447:A:C4	39:J8:33:LYS:HG2	2.34	0.62
19:9I:44:LEU:HD11	19:9I:70:ILE:HG21	1.80	0.62
15:14:632:U:OP1	32:39:102:PRO:HA	1.99	0.62
23:21:101:ARG:HG2	23:21:169:ASN:OD1	1.98	0.62
21:25:102:VAL:HB	21:25:106:LEU:HD12	1.81	0.62
33:5A:45:ARG:O	33:5A:49:HIS:ND1	2.31	0.62
38:88:133:ARG:O	38:88:134:ARG:HB2	2.00	0.62
1:13:1562:G:H5”	42:6E:102:ARG:NH2	2.15	0.62
4:11:206:LEU:HD12	15:1H:1825:A:H5’	1.80	0.62
15:1H:563:A:H2’	15:1H:564:C:C6	2.34	0.62
12:M5:37:SER:O	12:M5:40:GLU:HB2	2.00	0.62
15:14:2836:A:OP1	23:29:159:HIS:NE2	2.31	0.62
34:52:7:ASN:HD22	34:52:7:ASN:N	1.97	0.62
44:12:47:THR:HG23	44:12:202:PRO:HG2	1.81	0.62
1:13:1596:G:H3’	1:13:1597:A:H5”	1.82	0.62
1:13:1996:G:H5”	9:8E:112:LYS:HB3	1.81	0.62
15:1H:682:A:H2	15:1H:701:A:N1	1.98	0.62
15:1H:1093:A:H1’	15:1H:1095:G:N3	2.14	0.62
15:1H:2850:G:H21	45:98:45:ARG:NH2	1.97	0.62
15:14:274:G:OP1	18:69:57:ARG:NH1	2.33	0.62
15:14:628:A:H8	15:14:629:G:H1’	1.64	0.62
28:M8:6:HIS:CE1	40:41:67:LYS:HE2	2.34	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:I5:12:ALA:HB1	28:I5:29:PRO:HA	1.80	0.62
45:98:88:ARG:NH2	45:98:89:ASP:OD2	2.33	0.62
47:59:89:ILE:HD12	47:59:130:ARG:HA	1.80	0.62
51:Y4:41:U:O2'	51:Y4:42:U:O4'	2.17	0.62
1:13:1168:A:H2'	1:13:1169:G:C8	2.35	0.62
4:11:274:ARG:O	4:11:274:ARG:HG2	2.00	0.62
1:1G:1052:A:H62	1:1G:1054:G:N2	1.97	0.62
10:58:57:ALA:C	10:58:59:LYS:H	2.06	0.62
11:G8:82:PRO:HG3	11:G8:97:ARG:HG3	1.81	0.62
12:Q8:5:LYS:O	12:Q8:6:THR:C	2.39	0.62
15:1H:700:G:O2'	15:1H:701:A:H5"	2.00	0.62
13:3A:41:ARG:NH1	13:3A:42:THR:O	2.33	0.62
15:14:1000:A:OP2	38:45:16:ARG:HD3	1.98	0.62
15:14:1893:A:N6	15:14:1908:G:O2'	2.32	0.62
15:14:2487:G:H3'	15:14:2488:U:H5'	1.82	0.62
21:68:112:MET:HA	21:68:115:VAL:HG13	1.81	0.62
24:4A:57:ARG:HG3	24:4A:61:GLU:OE1	2.00	0.62
30:35:52:GLU:O	30:35:54:GLY:N	2.29	0.62
37:BA:26:ASN:HA	37:BA:29:LYS:HG2	1.82	0.62
42:6E:150:ALA:HB2	6:2I:50:TYR:HE2	1.64	0.62
44:1E:54:THR:HG21	44:1E:201:ILE:HD11	1.80	0.62
8:2E:16:ARG:HD2	8:2E:54:ARG:HH21	1.64	0.62
1:13:1254:G:H4'	49:7I:16:HIS:CD2	2.34	0.62
1:13:1366:A:H2'	1:13:1367:C:C6	2.35	0.62
1:13:1954:C:OP2	20:1F:12:LYS:NZ	2.32	0.62
8:22:65:ALA:HA	8:22:100:ALA:HB3	1.82	0.62
12:M5:32:LEU:HD12	12:M5:36:LYS:HG3	1.82	0.62
12:M5:61:LEU:HD12	12:M5:61:LEU:H	1.63	0.62
15:14:70:A:H5'	15:14:70:A:C8	2.34	0.62
15:14:845:C:H2'	15:14:846:C:C6	2.35	0.62
15:14:1208:U:H2'	15:14:1209:G:H8	1.65	0.62
15:14:1365:U:H2'	15:14:1366:A:H8	1.64	0.62
21:25:115:VAL:HG13	21:25:121:VAL:HG21	1.81	0.62
3:F8:1:MET:C	3:F8:3:THR:H	2.08	0.62
52:V1:9:A:H5"	52:V1:10:G:OP2	2.00	0.62
52:W4:75:C:H3'	52:W4:75:C:H6	1.65	0.62
1:13:1498:C:O2'	50:7E:14:ARG:NH1	2.32	0.62
1:13:1853:C:OP2	24:4I:103:THR:OG1	2.14	0.62
5:L5:47:ARG:HH11	5:L5:47:ARG:HB2	1.65	0.62
4:19:69:ARG:NH2	4:19:128:GLY:O	2.31	0.62
4:19:242:ARG:NH1	15:14:1927:C:OP1	2.33	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:1H:1103:G:O2'	15:1H:1134:A:N6	2.32	0.62
15:1H:2334:G:N2	15:1H:2349:G:OP1	2.22	0.62
15:14:2805:C:H2'	15:14:2806:A:C8	2.35	0.62
24:4I:14:ARG:HB3	24:4I:17:VAL:HG22	1.82	0.62
28:I5:13:ARG:HA	28:I5:22:ILE:HB	1.81	0.62
30:35:105:LEU:O	30:35:106:LEU:HB3	2.00	0.62
39:F5:91:LYS:HA	39:F5:91:LYS:NZ	2.15	0.62
47:51:159:GLU:HG2	47:51:169:VAL:HG21	1.82	0.62
48:1A:33:GLN:HB3	48:1A:75:ILE:HG12	1.81	0.62
3:F8:3:THR:HA	3:F8:6:ASP:OD2	2.00	0.62
47:59:12:PRO:HB3	47:59:15:VAL:HG22	1.82	0.62
51:Y4:45:U:H5'	51:Y4:46:U:OP1	2.00	0.62
1:13:1994:C:H2'	1:13:1995:C:C6	2.35	0.61
11:G8:99:CYS:SG	11:G8:100:ALA:N	2.73	0.61
9:82:65:VAL:HG21	9:82:73:GLN:HB3	1.81	0.61
15:14:2145:G:H2'	15:14:2146:G:H8	1.65	0.61
15:14:2708:A:H2'	15:14:2709:G:H8	1.64	0.61
21:68:7:TYR:CE1	21:68:20:MET:HE3	2.35	0.61
30:78:144:GLU:OE2	30:78:144:GLU:N	2.32	0.61
31:E5:26:TYR:O	31:E5:29:GLN:HB2	2.00	0.61
1:13:1079:G:H4'	14:3E:123:HIS:CD2	2.34	0.61
1:1G:1615:U:H6	1:1G:1615:U:H5"	1.64	0.61
22:D5:78:LYS:NZ	38:45:25:ASP:O	2.33	0.61
23:29:116:VAL:O	23:29:117:MET:HB3	2.00	0.61
27:85:92:ARG:CD	27:85:94:ASN:HB3	2.28	0.61
36:N8:40:LYS:HZ2	36:N8:46:CYS:HB3	1.62	0.61
43:A5:82:LEU:HD22	43:A5:84:ARG:NH2	2.14	0.61
3:F8:41:ASN:O	3:F8:45:THR:HG23	2.01	0.61
47:59:15:VAL:HG12	47:59:29:PRO:HD2	1.81	0.61
9:8E:44:VAL:HG22	42:6E:16:LEU:HD13	1.81	0.61
1:1G:1723:U:P	1:1G:1736:G:H1	2.23	0.61
12:Q8:5:LYS:O	12:Q8:6:THR:O	2.19	0.61
16:B8:26:ASP:HB3	16:B8:92:GLY:H	1.65	0.61
16:B8:27:THR:HG23	16:B8:90:GLN:HB3	1.82	0.61
12:M5:33:ASN:HA	15:14:2435:C:OP2	2.00	0.61
15:14:347:A:OP2	32:39:169:ASN:HB2	2.00	0.61
25:4E:11:ILE:HD11	25:4E:31:LEU:HD13	1.81	0.61
30:78:49:ARG:HG3	30:78:49:ARG:HH11	1.66	0.61
27:85:92:ARG:NH1	35:95:11:GLN:O	2.33	0.61
29:AA:63:THR:OG1	29:AA:65:ASN:O	2.18	0.61
47:51:6:ARG:HB3	47:51:65:HIS:CG	2.35	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:V4:72:C:C3'	52:V4:73:A:H5"	2.30	0.61
9:8E:31:GLN:HB3	9:8E:35:GLU:HG2	1.81	0.61
9:8E:53:VAL:HG12	9:8E:55:ALA:H	1.66	0.61
15:1H:625:G:N2	15:1H:630:C:O3'	2.33	0.61
13:3A:36:VAL:O	13:3A:59:ARG:N	2.31	0.61
15:14:393:U:H5'	15:14:394:A:OP2	1.99	0.61
15:14:829:G:H21	15:14:832:A:N6	1.98	0.61
15:14:2321:C:H3'	15:14:2322:G:H5"	1.81	0.61
1:13:1946:A:OP1	29:AI:70:LYS:NZ	2.34	0.61
10:58:106:MET:HE3	15:1H:1186:G:N2	2.09	0.61
15:1H:652:G:N7	30:78:107:LYS:NZ	2.48	0.61
15:1H:2660:G:H3'	15:1H:2661:C:H5'	1.81	0.61
14:32:175:SER:HB3	14:32:186:LEU:HD11	1.81	0.61
14:32:191:ARG:NH2	14:32:194:LEU:O	2.33	0.61
15:14:467:G:H2'	15:14:468:G:C8	2.35	0.61
21:68:98:VAL:HG11	21:68:114:ILE:HG23	1.82	0.61
22:D5:97:GLU:HB3	22:D5:125:LEU:HD11	1.83	0.61
32:31:28:ILE:HD13	32:31:116:ASP:HB2	1.81	0.61
33:5I:23:ARG:NH1	33:5I:30:ALA:HB2	2.15	0.61
30:35:124:LYS:HA	30:35:143:GLY:O	2.00	0.61
46:K8:47:ASN:O	46:K8:49:LYS:N	2.32	0.61
8:2E:19:GLU:HA	8:2E:54:ARG:HH12	1.65	0.61
3:B5:5:TYR:CE1	46:G5:30:ARG:HG3	2.35	0.61
8:22:109:PRO:HB2	8:22:115:LEU:HD12	1.82	0.61
9:82:13:ALA:HB2	9:82:68:GLY:HA3	1.82	0.61
15:1H:348:G:C8	32:31:171:PRO:HG3	2.35	0.61
15:1H:1558:C:H3'	15:1H:1559:A:H5"	1.83	0.61
15:1H:2193:G:OP1	15:1H:2193:G:H4'	1.99	0.61
15:1H:2272:U:O2'	15:1H:2273:C:H5'	2.01	0.61
15:1H:2888:C:H4'	16:B8:5:ALA:HB2	1.82	0.61
15:14:242:G:OP2	30:35:50:ARG:NH2	2.32	0.61
29:AI:6:LYS:O	29:AI:7:LYS:HB3	2.01	0.61
43:A5:65:LEU:HD13	43:A5:68:ARG:HD3	1.81	0.61
44:12:77:ALA:HB2	44:12:211:ILE:HD13	1.83	0.61
10:58:96:GLU:O	10:58:98:VAL:N	2.31	0.61
15:1H:810:A:N7	56:1H:3693:HOH:O	2.31	0.61
15:14:1076:A:N6	15:14:1173:G:H2'	2.15	0.61
15:14:1686:C:OP2	56:14:3659:HOH:O	2.16	0.61
18:69:75:LEU:HD22	18:69:76:THR:H	1.64	0.61
41:6I:39:LEU:HD13	41:6I:56:LEU:HB2	1.81	0.61
3:F8:68:ARG:NH1	3:F8:69:TYR:OH	2.34	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:V1:68:C:H2'	52:V1:69:G:C8	2.36	0.61
1:13:770:A:O2'	1:13:771:C:O5'	2.19	0.61
1:13:1303:G:H2'	1:13:1304:A:H8	1.64	0.61
1:1G:1747:C:OP1	9:82:83:ARG:NH1	2.34	0.61
2:65:89:ARG:HG3	2:65:92:TYR:O	2.00	0.61
15:1H:1957:A:H2'	15:1H:1958:G:O4'	2.01	0.61
15:14:2739:C:OP2	23:29:109:LYS:NZ	2.34	0.61
1:1G:1770:G:H3'	1:1G:1771:G:C8	2.35	0.61
15:1H:598:G:O2'	15:1H:599:C:H3'	2.01	0.61
15:1H:971:C:O4'	31:I8:29:GLN:NE2	2.34	0.61
12:M5:61:LEU:HD21	12:M5:62:LEU:HD22	1.82	0.61
15:14:240:G:OP1	30:35:60:MET:HE1	2.00	0.61
25:42:40:ARG:HH21	25:42:66:MET:HG2	1.66	0.61
31:E5:36:ILE:HD11	31:E5:39:ARG:HG2	1.81	0.61
37:BI:43:LEU:HD13	37:BI:51:GLU:HB3	1.82	0.61
38:88:59:ARG:HA	38:88:59:ARG:HE	1.66	0.61
44:12:9:GLU:HB2	44:12:217:ARG:NH1	2.16	0.61
1:1G:986:C:O2'	1:1G:987:G:O5'	2.15	0.61
16:B8:26:ASP:O	16:B8:49:VAL:HG12	1.99	0.61
15:14:2041:U:O2	36:J5:7:PRO:HG2	2.01	0.61
25:4E:110:LEU:HD13	25:4E:118:ILE:HD13	1.81	0.61
41:6I:39:LEU:HD12	41:6I:59:MET:HE1	1.83	0.61
37:BA:87:LYS:O	37:BA:91:LEU:HG	2.01	0.61
47:51:124:GLU:HB3	47:51:132:ARG:HB3	1.82	0.61
52:V4:1:G:H1'	52:V4:73:A:C2	2.36	0.61
1:13:874:C:H2'	1:13:875:C:H6	1.66	0.60
5:L5:37:LYS:HD3	5:L5:39:ARG:HD3	1.83	0.60
1:1G:691:U:H2'	1:1G:692:G:C8	2.36	0.60
1:1G:1249:C:H2'	1:1G:1250:A:O4'	2.01	0.60
14:3E:102:ASP:OD1	14:3E:103:ASN:N	2.33	0.60
15:1H:1236:U:H4'	35:D8:79:VAL:HG22	1.83	0.60
21:68:25:LEU:HD12	21:68:38:VAL:HG22	1.82	0.60
23:29:36:ARG:NH1	23:29:85:ASN:OD1	2.34	0.60
27:85:74:LEU:HD13	27:85:79:PHE:HB2	1.83	0.60
28:I5:63:TYR:CD1	29:AA:9:VAL:HG13	2.35	0.60
3:B5:63:LYS:O	3:B5:63:LYS:HD2	2.02	0.60
8:22:62:ASP:O	8:22:97:LYS:HB2	2.01	0.60
12:Q8:10:ALA:HA	30:78:59:LEU:HD11	1.83	0.60
15:1H:1150:C:H2'	15:1H:1151:A:C8	2.35	0.60
18:61:93:THR:HG22	18:61:119:PRO:HB3	1.82	0.60
15:14:2335:A:N6	15:14:2348:A:H2'	2.14	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:14:2483:G:N2	15:14:2496:G:O2'	2.23	0.60
27:C8:17:ILE:HG23	27:C8:39:LEU:HD12	1.83	0.60
29:AA:20:LEU:HA	29:AA:23:ASN:HB3	1.83	0.60
37:BI:97:ALA:HB3	37:BI:99:LEU:HD13	1.83	0.60
43:E8:64:MET:HE3	43:E8:109:GLU:HG3	1.82	0.60
39:F5:53:VAL:HG22	39:F5:74:VAL:HG22	1.82	0.60
46:K8:41:ILE:O	46:K8:41:ILE:HG12	2.01	0.60
44:12:16:HIS:HD2	44:12:210:SER:HA	1.65	0.60
50:7E:121:ASP:OD1	50:7E:121:ASP:N	2.26	0.60
8:2E:175:LEU:H	8:2E:175:LEU:HD12	1.65	0.60
50:72:20:TYR:HA	50:72:65:TYR:CZ	2.36	0.60
1:1G:1771:G:H2'	1:1G:1772:G:C8	2.37	0.60
1:1G:1886:C:O2'	1:1G:1910:G:N2	2.32	0.60
4:19:145:VAL:HG13	4:19:191:ALA:HB2	1.83	0.60
12:Q8:49:VAL:HG13	12:Q8:49:VAL:O	1.99	0.60
14:3E:197:PRO:HD3	34:52:16:GLN:HG3	1.82	0.60
15:1H:1134:A:H1'	15:1H:1151:A:H61	1.67	0.60
15:1H:1252:A:C2	15:1H:1290:A:N1	2.69	0.60
15:1H:1543:A:H2'	15:1H:1544:A:C8	2.36	0.60
15:1H:1656:C:H4'	15:1H:1657:A:O5'	2.01	0.60
18:61:8:PRO:HA	18:61:14:ASP:HA	1.82	0.60
15:14:1820:A:C2	15:14:2621:C:H1'	2.36	0.60
24:4A:3:ARG:HA	24:4A:8:GLU:O	2.01	0.60
24:4A:49:THR:HG22	24:4A:51:ALA:H	1.66	0.60
43:A5:96:ILE:H	43:A5:96:ILE:HD13	1.66	0.60
1:13:1052:A:C4	1:13:1054:G:H1'	2.36	0.60
1:13:1313:A:O2'	6:2I:38:ASN:HB3	2.00	0.60
1:13:1586:G:H21	48:1I:55:LYS:HE2	1.65	0.60
10:15:14:VAL:HA	10:15:135:PRO:HD2	1.83	0.60
15:14:1728:G:N2	15:14:2014:G:N2	2.48	0.60
15:14:2430:G:H4'	30:35:67:MET:N	2.15	0.60
15:14:2848:A:O2'	56:14:3658:HOH:O	2.16	0.60
41:6I:17:ARG:HH11	41:6I:17:ARG:HG3	1.65	0.60
1:13:713:C:H2'	1:13:714:G:C8	2.37	0.60
1:13:1130:C:H2'	1:13:1131:G:C8	2.36	0.60
15:14:1390:U:OP2	15:14:1443:U:O2'	2.14	0.60
15:14:1500:G:H2'	15:14:1501:C:H6	1.67	0.60
23:21:92:THR:O	23:21:95:ILE:HB	2.00	0.60
23:29:33:VAL:H	23:29:89:ASP:CG	2.09	0.60
25:42:6:PHE:HB2	25:42:34:VAL:HG22	1.82	0.60
39:J8:87:PRO:HA	39:J8:90:ILE:HG13	1.82	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:98:13:HIS:HE1	45:98:15:SER:HB2	1.67	0.60
1:13:1545:G:C6	1:13:1546:A:C6	2.89	0.60
3:B5:71:GLY:HA3	15:14:63:A:O3'	2.02	0.60
4:11:145:VAL:HB	4:11:155:LEU:HD23	1.82	0.60
1:1G:986:C:H1'	1:1G:987:G:C2	2.36	0.60
1:1G:1261:A:H1'	1:1G:1262:G:OP2	2.00	0.60
14:3E:92:VAL:O	14:3E:96:LEU:HD22	2.01	0.60
14:32:127:THR:HG21	14:32:149:ALA:HB2	1.83	0.60
15:14:29:U:H2'	15:14:30:G:C8	2.36	0.60
15:14:467:G:H2'	15:14:468:G:H8	1.67	0.60
15:14:2831:G:OP2	45:55:42:LYS:NZ	2.35	0.60
15:14:2888:C:OP1	16:75:3:ARG:NH1	2.34	0.60
23:21:12:THR:OG1	23:21:13:ARG:N	2.33	0.60
35:95:21:ARG:NH2	35:95:91:TYR:HB2	2.15	0.60
40:49:61:ALA:HB2	40:49:68:PRO:HD3	1.84	0.60
47:51:98:LEU:HD12	47:51:102:ALA:O	2.02	0.60
52:V1:19:G:O2'	52:V1:57:G:N3	2.33	0.60
1:13:1943:G:H2'	1:13:1945:A:OP2	2.01	0.60
1:1G:774:A:H61	49:7A:25:ARG:NH1	2.00	0.60
4:19:35:LYS:NZ	15:14:1850:G:O6	2.32	0.60
12:Q8:11:LYS:HZ2	12:Q8:61:LEU:HD11	1.67	0.60
14:3E:98:GLU:HG2	14:3E:189:PRO:HG2	1.84	0.60
9:82:114:TYR:HE2	48:1A:60:ARG:H	1.50	0.60
15:1H:265:G:H1	15:1H:281:C:H42	1.50	0.60
15:1H:2175:U:H2'	15:1H:2176:G:C8	2.37	0.60
15:1H:2417:C:O5'	15:1H:2417:C:H6	1.84	0.60
15:14:1820:A:H2	15:14:2621:C:H1'	1.66	0.60
15:14:2099:U:H2'	15:14:2100:U:C6	2.36	0.60
15:14:2258:U:OP1	56:14:3660:HOH:O	2.17	0.60
25:42:34:VAL:HG13	25:42:66:MET:HE1	1.83	0.60
26:1J:93:C:P	38:45:16:ARG:HH21	2.25	0.60
38:88:12:GLN:HG2	38:88:73:PRO:HD2	1.82	0.60
44:12:42:ILE:HD11	44:12:202:PRO:HB2	1.83	0.60
52:V1:35:A:H2'	52:V1:36:A:C1'	2.31	0.60
1:13:1624:A:H2'	1:13:1625:G:C8	2.37	0.60
1:13:1975:U:H2'	1:13:1976:A:H8	1.67	0.60
1:13:2125:A:H2	1:13:2128:G:N1	1.94	0.60
3:B5:53:LYS:HB3	3:B5:82:GLN:HB3	1.81	0.60
1:1G:1580:U:H1'	1:1G:1583:U:H5	1.66	0.60
15:1H:1655:G:OP1	56:1H:3661:HOH:O	2.17	0.60
15:1H:2324:A:C6	15:1H:2325:A:C8	2.89	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:H8:52:SER:O	22:H8:53:ILE:HG12	2.01	0.60
24:4I:49:THR:HB	24:4I:52:GLU:HG3	1.83	0.60
30:35:85:LEU:HB3	30:35:114:ILE:HD11	1.82	0.60
37:BI:53:LEU:HA	37:BI:56:MET:HB3	1.83	0.60
46:K8:42:GLY:C	46:K8:44:LEU:H	2.08	0.60
8:2E:62:ASP:CG	8:2E:97:LYS:HG2	2.26	0.60
1:13:1247:C:H5"	1:13:1248:U:H5"	1.83	0.60
1:13:1248:U:H3	14:3E:134:ASP:HB2	1.65	0.60
7:8I:48:GLU:O	7:8I:50:LYS:HG2	2.02	0.60
1:1G:844:U:O4'	37:BA:103:GLY:HA2	2.01	0.60
18:61:86:THR:HA	18:61:123:LEU:HD13	1.84	0.60
15:14:1272:G:N2	15:14:1275:A:OP2	2.29	0.60
15:14:2265:G:OP1	38:45:85:LYS:NZ	2.28	0.60
27:C8:92:ARG:CZ	35:D8:11:GLN:H	2.14	0.60
28:M8:36:CYS:HA	40:41:112:PRO:HB2	1.84	0.60
25:42:102:ALA:HB1	25:42:106:PRO:HG2	1.82	0.60
38:88:66:ILE:HG22	38:88:67:ARG:H	1.67	0.60
38:45:37:LEU:HD21	38:45:130:LYS:HE2	1.83	0.60
50:7E:87:SER:HB2	50:7E:93:VAL:CB	2.32	0.60
51:Y1:42:U:H4'	51:Y1:43:U:OP2	2.02	0.60
1:13:1017:G:O3'	49:7I:5:ARG:NH1	2.28	0.60
2:A8:106:ARG:CZ	2:A8:107:GLU:HB2	2.32	0.60
2:65:106:ARG:HB3	2:65:112:PHE:O	2.01	0.60
12:Q8:48:PHE:HD2	12:Q8:49:VAL:H	1.50	0.60
15:1H:33:U:H4'	15:1H:34:C:OP1	2.02	0.60
15:1H:782:G:N7	56:1H:3676:HOH:O	2.32	0.60
15:1H:1606:C:H2'	15:1H:1607:C:H6	1.67	0.60
15:1H:2862:U:O4	16:B8:23:ARG:NH2	2.31	0.60
25:4E:87:SER:HB3	25:4E:131:ILE:HG12	1.84	0.60
27:C8:92:ARG:NH1	27:C8:94:ASN:OD1	2.35	0.60
27:85:74:LEU:HD11	27:85:110:VAL:HG13	1.84	0.60
44:1E:115:LEU:HD13	44:1E:145:LEU:HB3	1.84	0.60
1:13:1130:C:H2'	1:13:1131:G:H8	1.66	0.59
9:82:99:LEU:HB3	9:82:101:PHE:CE1	2.37	0.59
11:C5:52:SER:HA	11:C5:55:TYR:O	2.02	0.59
18:61:73:GLU:HG3	18:61:136:VAL:HG23	1.84	0.59
15:14:1203:G:OP2	27:85:58:ARG:NH1	2.35	0.59
15:14:2815:A:H5"	15:14:2907:U:H4'	1.83	0.59
32:31:160:ASN:OD1	32:31:163:VAL:HG23	2.02	0.59
31:E5:32:ARG:O	31:E5:34:GLY:N	2.31	0.59
44:1E:5:ILE:HG13	44:1E:6:THR:H	1.67	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:7I:28:ARG:NH1	49:7I:29:ASP:OD1	2.34	0.59
52:X1:43:C:H2'	52:X1:44:G:C8	2.37	0.59
1:13:1054:G:N7	14:3E:35:ARG:NH1	2.49	0.59
1:13:1314:G:O2'	1:13:1315:U:H5'	2.02	0.59
1:13:1756:C:H42	1:13:1771:G:H1	1.50	0.59
1:13:1854:A:OP1	29:AI:80:TYR:OH	2.19	0.59
1:13:1854:A:OP2	24:4I:111:LYS:HE3	2.02	0.59
14:3E:104:VAL:HG21	14:3E:140:VAL:HG21	1.83	0.59
15:1H:279:G:O6	56:1H:3658:HOH:O	2.13	0.59
15:1H:1967:C:OP2	15:1H:1968:U:O2'	2.16	0.59
15:1H:2350:A:C8	15:1H:2352:G:C5	2.90	0.59
15:14:140:A:H8	15:14:1644:G:H21	1.50	0.59
21:25:19:ILE:HG22	21:25:43:VAL:HA	1.84	0.59
47:59:10:PRO:HD3	47:59:50:VAL:O	2.01	0.59
52:X4:44:G:H3'	52:X4:45:U:C6	2.37	0.59
1:13:1044:C:OP1	14:3E:137:SER:OG	2.19	0.59
15:1H:417:G:N1	30:78:71:VAL:HG12	2.18	0.59
15:1H:1158:G:O2'	15:1H:1159:A:O5'	2.18	0.59
15:1H:2488:U:H2'	15:1H:2489:C:C6	2.37	0.59
15:14:1954:G:H4'	15:14:1955:G:OP1	2.00	0.59
15:14:2302:A:H62	15:14:2359:U:H3	1.50	0.59
23:21:111:ARG:HD2	23:21:160:TYR:CE2	2.37	0.59
44:12:163:PHE:HD1	44:12:185:ILE:HG13	1.67	0.59
8:2E:26:LYS:HG3	8:2E:27:LYS:NZ	2.17	0.59
1:13:1618:C:O2	33:5I:4:LYS:NZ	2.35	0.59
1:13:2004:U:H2'	1:13:2005:A:H8	1.67	0.59
1:13:2080:G:OP1	37:BI:39:LYS:NZ	2.26	0.59
10:58:131:GLN:NE2	10:58:132:ALA:HB2	2.16	0.59
15:14:640:U:H1'	15:14:641:G:H5"	1.84	0.59
15:14:888:U:H2'	15:14:889:C:C6	2.38	0.59
15:14:901:G:H2'	15:14:902:G:H8	1.68	0.59
15:14:1642:G:H2'	15:14:1643:G:C8	2.37	0.59
35:D8:59:ALA:HB2	35:D8:96:ILE:HD13	1.82	0.59
45:98:27:SER:HB3	45:98:34:ILE:HD11	1.85	0.59
46:K8:47:ASN:C	46:K8:49:LYS:H	2.10	0.59
50:7E:109:ILE:HG12	50:7E:137:VAL:HG23	1.84	0.59
52:V1:9:A:H2'	52:V1:10:G:N7	2.17	0.59
52:V1:36:A:HO2'	52:V1:37:A:P	2.25	0.59
52:V4:72:C:H2'	52:V4:73:A:H5"	1.85	0.59
3:B5:8:ILE:O	46:G5:36:ARG:NH2	2.35	0.59
13:3I:83:VAL:HG21	13:3I:100:ILE:HD13	1.85	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:1H:2651:U:OP2	23:21:79:ARG:NH2	2.35	0.59
15:1H:2772:U:H1'	15:1H:2773:A:H5"	1.84	0.59
15:14:612:C:O2	30:35:33:ARG:NH1	2.36	0.59
15:14:735:G:N2	15:14:837:A:H61	2.01	0.59
15:14:1805:C:H1'	15:14:1820:A:C8	2.37	0.59
30:78:1:MET:HE1	30:78:6:LEU:HA	1.85	0.59
47:59:42:ARG:NH1	47:59:53:GLU:O	2.32	0.59
52:V1:16:U:H1'	52:V1:60:U:O2	2.03	0.59
52:V1:72:C:C2'	52:V1:73:A:H5"	2.30	0.59
1:13:1278:G:H2'	1:13:1279:G:H8	1.67	0.59
2:A8:83:LYS:HE3	2:A8:110:LEU:HD12	1.83	0.59
1:1G:1638:A:H2'	1:1G:1639:A:C8	2.38	0.59
15:1H:2708:A:H2'	15:1H:2709:G:H8	1.67	0.59
15:1H:2742:U:H4'	21:68:1:MET:HE1	1.83	0.59
11:C5:59:GLY:O	11:C5:61:ILE:HG12	2.01	0.59
12:M5:32:LEU:HD12	12:M5:36:LYS:HG2	1.85	0.59
29:AI:5:LEU:HB3	29:AI:10:PHE:HE1	1.67	0.59
34:52:11:ASN:O	34:52:14:LEU:HD22	2.01	0.59
43:A5:71:VAL:HA	43:A5:107:LEU:HD12	1.85	0.59
43:A5:84:ARG:HB2	43:A5:96:ILE:HD11	1.84	0.59
48:1A:3:LYS:HD2	48:1A:77:PRO:HG3	1.84	0.59
51:Y4:35:A:H8	51:Y4:35:A:OP2	1.86	0.59
1:1G:804:U:H2'	1:1G:805:C:C6	2.37	0.59
1:1G:1881:C:H5"	48:1A:45:ARG:HH12	1.66	0.59
12:Q8:59:LYS:HZ1	12:Q8:60:LEU:HD21	1.68	0.59
14:3E:22:LYS:HB2	14:3E:26:CYS:SG	2.43	0.59
15:1H:1158:G:HO2'	15:1H:1159:A:P	2.25	0.59
13:3A:41:ARG:HB3	13:3A:41:ARG:NH1	2.12	0.59
15:14:2136:C:H42	15:14:2172:G:H21	1.51	0.59
31:I8:63:VAL:HG23	31:I8:64:ASP:O	2.02	0.59
42:62:113:GLU:HB2	42:62:119:ARG:HG2	1.83	0.59
47:59:42:ARG:HD2	47:59:53:GLU:HB3	1.84	0.59
1:13:1638:A:H4'	29:AI:14:HIS:ND1	2.18	0.59
9:8E:47:LEU:H	9:8E:47:LEU:HD22	1.68	0.59
1:1G:1099:G:N2	1:1G:1102:G:N7	2.51	0.59
1:1G:1291:G:O2'	1:1G:1465:G:OP1	2.20	0.59
1:1G:1932:G:H22	1:1G:1958:G:C2'	2.16	0.59
15:1H:2160:A:H4'	15:1H:2185:G:H4'	1.84	0.59
16:75:1:MET:HA	16:75:5:ALA:HB3	1.84	0.59
23:21:51:PHE:CE2	23:21:52:LEU:HG	2.37	0.59
30:35:55:ARG:HG2	30:35:56:SER:N	2.17	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:X1:67:C:H2'	52:X1:68:C:H6	1.66	0.59
1:13:2002:A:O2'	42:6E:28:ASN:HB3	2.03	0.59
2:A8:27:SER:HA	2:A8:88:ASP:HB2	1.84	0.59
2:65:34:HIS:NE2	2:65:54:LEU:HD13	2.18	0.59
12:Q8:34:TRP:O	12:Q8:36:LYS:N	2.36	0.59
15:1H:1583:G:N3	15:1H:1583:G:H3'	2.17	0.59
15:1H:2290:C:H6	15:1H:2290:C:H5'	1.68	0.59
15:1H:2533:A:H5'	15:1H:2533:A:H8	1.68	0.59
15:14:355:A:H2	15:14:1258:A:O2'	1.85	0.59
15:14:1198:G:H2'	15:14:1199:C:C6	2.37	0.59
26:1J:15:A:N1	26:1J:71:G:O2'	2.32	0.59
36:N8:52:TYR:HD1	36:N8:53:ALA:H	1.51	0.59
42:62:111:ARG:NH2	42:62:122:HIS:HB3	2.18	0.59
47:51:77:LYS:HE2	47:51:138:LYS:HD2	1.85	0.59
44:12:19:HIS:CE1	44:12:206:ASP:HB2	2.37	0.59
1:13:1495:A:C4	1:13:1497:G:N7	2.71	0.59
1:13:1714:U:H3	1:13:1727:G:H22	1.49	0.59
1:13:1958:G:OP1	1:13:1958:G:H4'	2.03	0.59
2:A8:41:ASP:OD2	2:A8:44:LYS:HB2	2.03	0.59
1:1G:1130:C:H2'	1:1G:1131:G:C8	2.38	0.59
1:1G:1253:C:H2'	1:1G:1254:G:C8	2.37	0.59
1:1G:1806:A:OP2	9:82:93:ARG:NH2	2.35	0.59
10:58:39:ARG:NH2	10:58:41:ASP:OD2	2.35	0.59
15:1H:2056:A:C6	15:1H:2513:C:H1'	2.37	0.59
13:3A:41:ARG:HG3	13:3A:57:LYS:HZ3	1.67	0.59
28:M8:43:TYR:CG	28:M8:44:THR:N	2.71	0.59
25:42:110:LEU:HD13	25:42:118:ILE:HG21	1.83	0.59
34:52:77:ARG:HH21	34:52:81:ILE:HD11	1.68	0.59
35:95:41:GLY:HA3	35:95:46:VAL:HG13	1.85	0.59
1:1G:1106:G:H2'	1:1G:1107:G:C8	2.38	0.58
1:1G:1890:C:H5'	1:1G:1891:C:OP2	2.03	0.58
2:65:41:ASP:HB2	2:65:48:LEU:HD21	1.84	0.58
15:1H:2150:G:H1	15:1H:2196:A:H5"	1.68	0.58
15:1H:2327:U:H5'	40:41:88:ILE:HD12	1.84	0.58
25:42:142:LEU:O	25:42:143:ARG:NE	2.36	0.58
34:52:11:ASN:HB3	34:52:14:LEU:HD13	1.85	0.58
39:J8:21:ARG:HG3	39:J8:21:ARG:NH1	2.11	0.58
49:7I:21:VAL:O	49:7I:33:ILE:N	2.34	0.58
1:13:677:G:O2'	1:13:694:C:N4	2.36	0.58
1:13:1046:U:O4	14:3E:2:GLY:N	2.36	0.58
1:13:1639:A:H2'	1:13:1640:A:C8	2.38	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:13:1918:G:OP1	42:6E:37:ASN:ND2	2.36	0.58
8:22:84:ILE:HG12	8:22:88:ARG:HH21	1.67	0.58
1:1G:870:U:O2'	49:7A:23:ASP:OD2	2.21	0.58
1:1G:1165:C:OP2	56:1G:2404:HOH:O	2.16	0.58
10:58:46:VAL:CG1	10:58:48:MET:HG3	2.33	0.58
15:1H:276:C:H2'	15:1H:277:C:C6	2.38	0.58
15:1H:1483:A:H61	15:1H:1608:A:H62	1.51	0.58
15:1H:2415:G:H2'	15:1H:2416:U:C6	2.38	0.58
15:1H:2533:A:H5'	15:1H:2533:A:C8	2.39	0.58
15:14:38:A:H1'	32:39:48:THR:HB	1.85	0.58
15:14:518:G:H2'	15:14:519:A:C8	2.38	0.58
15:14:1301:G:N3	27:85:33:ARG:HD2	2.18	0.58
15:14:2572:G:H2'	15:14:2573:C:H6	1.67	0.58
27:C8:92:ARG:HD2	35:D8:11:GLN:HB2	1.83	0.58
28:M8:16:CYS:HB3	28:M8:18:CYS:SG	2.43	0.58
33:5I:41:ARG:HB2	48:1I:49:VAL:HG23	1.84	0.58
34:52:2:ARG:HD3	34:52:92:LYS:NZ	2.16	0.58
45:98:13:HIS:CE1	45:98:15:SER:HB2	2.38	0.58
52:V1:16:U:H2'	52:V1:17:C:H5'	1.86	0.58
1:13:1691:C:H3'	1:13:1692:G:H2'	1.86	0.58
1:1G:1088:A:O5'	1:1G:1115:G:N2	2.35	0.58
12:Q8:26:LYS:HG2	15:1H:2376:A:OP1	2.03	0.58
15:1H:155:C:N4	15:1H:161:G:H1	1.99	0.58
15:1H:1582:C:C2	15:1H:1583:G:N2	2.72	0.58
15:1H:1637:C:H2'	15:1H:1638:C:H6	1.67	0.58
15:1H:2416:U:H2'	15:1H:2417:C:C1'	2.33	0.58
26:1J:82:U:H2'	26:1J:83:G:N2	2.16	0.58
38:88:25:ASP:N	38:88:102:VAL:HG22	2.18	0.58
1:13:769:G:H4'	1:13:770:A:H5"	1.85	0.58
1:13:806:G:H2'	1:13:807:G:H8	1.69	0.58
4:11:50:THR:HB	15:1H:1839:U:O2	2.03	0.58
7:8I:70:ARG:C	7:8I:71:PHE:HD1	2.11	0.58
1:1G:897:U:H2'	1:1G:898:G:C8	2.38	0.58
1:1G:1379:G:H1'	41:6A:22:THR:OG1	2.02	0.58
15:14:1585:A:C8	15:14:1586:C:H1'	2.37	0.58
15:14:2149:G:H1	15:14:2198:A:N6	2.02	0.58
18:69:73:GLU:HG3	18:69:136:VAL:HG23	1.85	0.58
26:16:93:C:H5'	38:88:18:LYS:HA	1.85	0.58
24:4A:34:LEU:O	24:4A:38:GLY:N	2.36	0.58
42:6E:27:ILE:HD12	42:6E:40:ALA:HA	1.85	0.58
44:1E:8:LYS:HG2	44:1E:9:GLU:H	1.67	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:7I:53:VAL:HG13	49:7I:79:VAL:HG22	1.85	0.58
47:59:41:MET:N	47:59:41:MET:SD	2.77	0.58
1:13:720:C:HO2'	1:13:734:G:H22	1.50	0.58
1:13:1853:C:H2'	24:4I:103:THR:HB	1.85	0.58
7:8I:55:ASP:HA	7:8I:79:SER:HA	1.84	0.58
9:8E:43:ALA:HA	9:8E:74:ILE:HD13	1.85	0.58
1:1G:1974:G:O2'	1:1G:2001:G:O6	2.18	0.58
15:1H:2247:U:P	39:J8:40:ARG:HH12	2.26	0.58
12:M5:6:THR:OG1	15:14:233:U:OP1	2.16	0.58
12:M5:52:LYS:O	12:M5:52:LYS:HG2	2.00	0.58
15:14:1252:A:H2	15:14:1290:A:N1	2.01	0.58
15:14:1987:C:O2'	15:14:1989:G:OP2	2.22	0.58
15:14:2367:A:C2	31:E5:33:ALA:O	2.57	0.58
22:H8:79:ARG:CZ	38:88:20:ALA:HB3	2.32	0.58
28:I5:56:VAL:HG22	28:I5:57:GLU:HG3	1.85	0.58
38:88:89:ASN:O	38:88:91:GLU:HB2	2.03	0.58
42:6E:31:MET:HB2	42:6E:39:ALA:HB2	1.85	0.58
39:F5:92:LYS:O	39:F5:94:LEU:N	2.36	0.58
47:51:37:VAL:HG22	47:51:68:THR:HG22	1.85	0.58
47:51:86:GLU:HG3	47:51:165:ALA:HB3	1.84	0.58
48:1A:4:ILE:HA	48:1A:100:THR:HG22	1.85	0.58
50:7E:120:THR:OG1	50:7E:123:GLU:HG3	2.02	0.58
8:2E:58:GLU:HB2	8:2E:65:ALA:HB3	1.86	0.58
50:72:99:GLU:OE2	50:72:100:ILE:N	2.24	0.58
1:13:1703:C:H4'	44:1E:175:ARG:HH22	1.69	0.58
1:13:1867:U:OP2	42:6E:116:ALA:N	2.36	0.58
10:58:40:PRO:O	27:C8:64:ARG:HG2	2.03	0.58
2:65:89:ARG:HH22	15:14:2309:C:P	2.27	0.58
13:3I:93:LEU:HB2	13:3I:96:VAL:CG1	2.33	0.58
15:1H:355:A:O2'	15:1H:356:A:H8	1.86	0.58
15:14:673:A:H2'	15:14:674:G:O4'	2.04	0.58
15:14:1135:G:H2'	15:14:1137:G:H1'	1.86	0.58
22:H8:81:ARG:NH2	38:88:138:ASP:OD1	2.34	0.58
24:4A:29:ARG:HB3	24:4A:64:TRP:CZ2	2.38	0.58
32:31:177:ALA:HB1	32:31:178:PRO:HD2	1.84	0.58
35:D8:5:VAL:HG11	35:D8:57:VAL:HG11	1.85	0.58
1:13:1018:G:H5'	49:7I:5:ARG:HH12	1.68	0.58
1:1G:1543:U:H2'	1:1G:1544:U:C6	2.38	0.58
1:1G:1602:C:H5	1:1G:1603:C:C6	2.21	0.58
15:1H:1478:G:H2'	15:1H:1479:C:C6	2.38	0.58
16:B8:26:ASP:CB	16:B8:92:GLY:H	2.17	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:B8:74:ARG:HD3	16:B8:76:PHE:CZ	2.39	0.58
16:B8:99:LEU:HB3	16:B8:101:PHE:CE1	2.38	0.58
15:14:1059:G:O2'	15:14:1061:C:O4'	2.18	0.58
27:85:83:LEU:HD23	27:85:88:ILE:HB	1.84	0.58
32:39:157:VAL:HB	32:39:194:MET:HB3	1.86	0.58
40:41:33:ARG:O	40:41:162:THR:HG23	2.04	0.58
45:98:20:LEU:HD21	45:98:40:LYS:HD3	1.84	0.58
46:K8:14:ARG:NH1	46:K8:66:GLU:OE2	2.36	0.58
8:2E:17:ASP:O	8:2E:54:ARG:NH2	2.36	0.58
8:22:153:VAL:HG22	8:22:198:VAL:HG13	1.86	0.58
1:1G:1579:U:H4'	29:AA:83:HIS:HB3	1.86	0.58
1:1G:1596:G:O3'	33:5A:41:ARG:NH2	2.25	0.58
1:1G:1639:A:N3	1:1G:1845:C:O2'	2.36	0.58
1:1G:1757:C:N3	1:1G:1767:G:N1	2.52	0.58
1:1G:1785:A:H8	1:1G:1786:C:C5	2.22	0.58
12:Q8:7:HIS:CD2	30:78:50:ARG:HD3	2.39	0.58
15:1H:69:G:H21	15:1H:70:A:N6	2.02	0.58
15:1H:1106:U:H3	15:1H:1128:A:H61	1.50	0.58
15:1H:1924:G:H1	15:1H:1927:C:N4	2.01	0.58
15:1H:2803:C:H1'	23:21:62:PRO:HG3	1.84	0.58
11:C5:86:ARG:NE	11:C5:87:LYS:O	2.37	0.58
12:M5:61:LEU:H	12:M5:61:LEU:CD1	2.17	0.58
32:39:65:TRP:CZ3	32:39:72:ARG:HB3	2.37	0.58
38:88:60:ARG:HB3	38:88:60:ARG:HH11	1.68	0.58
37:BA:74:LYS:HG3	37:BA:75:ASN:H	1.69	0.58
47:51:170:ARG:O	47:51:171:LEU:HD12	2.04	0.58
44:12:76:GLN:NE2	44:12:206:ASP:OD1	2.37	0.58
3:F8:3:THR:HA	3:F8:6:ASP:HB2	1.86	0.58
1:13:2079:G:H2'	37:BI:39:LYS:HE2	1.86	0.58
1:1G:1050:G:H1	1:1G:1074:C:H42	1.51	0.58
1:1G:1975:U:N3	1:1G:2002:A:H2	1.91	0.58
7:8A:17:LYS:HD3	7:8A:47:PRO:HA	1.85	0.58
15:1H:70:A:C2	3:F8:31:HIS:CE1	2.87	0.58
15:1H:535:G:H5"	15:1H:535:G:N3	2.19	0.58
12:M5:58:ILE:HG22	30:35:49:ARG:HD2	1.86	0.58
15:14:2483:G:H22	15:14:2496:G:HO2'	1.48	0.58
22:D5:5:LEU:HD11	22:D5:44:PHE:HA	1.86	0.58
23:29:49:LEU:HD22	23:29:91:VAL:HG21	1.86	0.58
39:J8:92:LYS:H	39:J8:95:LEU:HD12	1.69	0.58
52:V4:9:A:H2'	52:V4:10:G:N7	2.18	0.58
1:13:800:A:H1'	1:13:985:A:C8	2.39	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:13:1586:G:H5'	56:13:2445:HOH:O	2.04	0.58
1:13:1952:C:H4'	20:1F:17:THR:HG21	1.85	0.58
1:1G:1052:A:C5	1:1G:1054:G:H1'	2.39	0.58
1:1G:1313:A:N6	56:1G:2410:HOH:O	2.33	0.58
1:1G:1456:U:H3	1:1G:1495:A:N6	1.99	0.58
9:82:112:LYS:HE3	9:82:118:LYS:N	2.19	0.58
15:1H:1707:C:H2'	15:1H:1708:C:C6	2.39	0.58
15:14:657:G:N2	15:14:660:A:OP2	2.33	0.58
15:14:1323:A:N1	15:14:1694:C:O2'	2.35	0.58
19:9A:22:VAL:HG22	19:9A:23:LYS:H	1.69	0.58
29:AA:20:LEU:O	29:AA:23:ASN:N	2.36	0.58
30:35:82:GLY:HA2	30:35:113:LYS:O	2.04	0.58
42:62:15:ASP:OD1	42:62:44:TYR:OH	2.21	0.58
1:13:1114:G:O2'	1:13:1115:G:OP2	2.18	0.57
1:13:1681:G:N7	1:13:1826:U:H3'	2.19	0.57
8:22:76:VAL:HG21	8:22:103:VAL:HG21	1.86	0.57
1:1G:1647:G:H3'	1:1G:1648:G:H5"	1.85	0.57
7:8A:88:TYR:OH	7:8A:92:ARG:NH1	2.37	0.57
15:1H:26:G:C6	15:1H:27:G:N1	2.71	0.57
15:1H:593:U:O4	56:1H:3643:HOH:O	2.17	0.57
15:1H:2150:G:H21	15:1H:2198:A:N6	2.01	0.57
15:14:1044:A:H4'	27:85:92:ARG:NE	2.19	0.57
15:14:1127:C:N4	15:14:1136:A:OP1	2.37	0.57
15:14:1662:G:O2'	56:14:3663:HOH:O	2.17	0.57
16:75:88:ILE:HD11	16:75:125:ARG:HH12	1.69	0.57
24:4I:39:ILE:HD12	24:4I:56:LEU:HD23	1.85	0.57
23:29:89:ASP:C	23:29:91:VAL:H	2.12	0.57
29:AI:78:ARG:HD3	29:AI:78:ARG:O	2.04	0.57
26:1J:46:G:H1'	26:1J:49:C:H42	1.69	0.57
49:7I:4:ILE:HG13	49:7I:66:PRO:HA	1.86	0.57
47:59:76:VAL:HA	47:59:79:VAL:HG22	1.85	0.57
1:13:1303:G:H2'	1:13:1304:A:C8	2.39	0.57
9:8E:83:ARG:HA	9:8E:86:VAL:HG12	1.86	0.57
11:G8:84:ARG:HD2	11:G8:84:ARG:O	2.04	0.57
15:1H:1557:A:H4'	15:1H:1558:C:C1'	2.34	0.57
15:1H:2875:G:H2'	15:1H:2876:C:H6	1.70	0.57
14:32:178:VAL:HA	14:32:181:MET:H	1.68	0.57
15:14:1389:U:H4'	15:14:1390:U:OP2	2.04	0.57
15:14:1472:G:OP1	15:14:1541:G:O2'	2.22	0.57
15:14:1828:U:H2'	15:14:1829:C:C6	2.40	0.57
26:1J:23:G:H2'	26:1J:24:U:O4'	2.04	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:N8:30:LEU:HD23	36:N8:41:PRO:HA	1.85	0.57
46:K8:37:PHE:O	46:K8:41:ILE:HG22	2.05	0.57
50:7E:9:MET:HG3	50:7E:26:VAL:HG21	1.86	0.57
3:F8:1:MET:O	3:F8:3:THR:N	2.37	0.57
47:59:6:ARG:HH11	47:59:6:ARG:N	1.98	0.57
47:59:163:TYR:CE1	47:59:169:VAL:HG21	2.38	0.57
8:2E:83:ARG:O	8:2E:86:VAL:HG22	2.04	0.57
8:2E:130:VAL:O	8:2E:134:ILE:HG12	2.04	0.57
1:13:877:G:H5"	7:8I:42:TYR:HE2	1.69	0.57
1:13:1504:G:P	13:3I:12:ARG:HH22	2.27	0.57
1:13:1779:A:H5'	48:1I:41:PRO:HA	1.86	0.57
1:13:2051:G:OP1	21:68:49:ARG:NH2	2.35	0.57
1:1G:1856:A:OP1	24:4A:116:THR:HG23	2.04	0.57
12:Q8:45:GLY:O	12:Q8:46:ARG:HG2	2.05	0.57
12:Q8:50:LEU:C	12:Q8:52:LYS:N	2.61	0.57
15:1H:1820:A:H2	15:1H:2621:C:H1'	1.69	0.57
15:1H:1892:G:H8	15:1H:1892:G:OP2	1.88	0.57
16:B8:99:LEU:HB3	16:B8:101:PHE:HE1	1.69	0.57
15:14:271:C:N4	15:14:273:U:O2	2.37	0.57
15:14:1435:C:OP2	15:14:1445:U:H5	1.87	0.57
15:14:1486:C:H6	15:14:1486:C:H5"	1.68	0.57
21:68:9:GLU:OE1	21:68:18:LYS:HE3	2.04	0.57
22:H8:111:VAL:HG11	22:H8:146:ILE:HB	1.85	0.57
23:21:39:PRO:HA	23:21:44:TYR:N	2.19	0.57
37:BI:56:MET:HG3	37:BI:88:VAL:HG21	1.84	0.57
38:45:21:THR:HG22	38:45:23:GLY:HA3	1.85	0.57
3:B5:31:HIS:NE2	15:14:70:A:C2	2.69	0.57
1:1G:2050:G:H5"	21:25:48:PRO:HB3	1.85	0.57
11:G8:94:LYS:HG3	11:G8:95:LYS:H	1.70	0.57
15:1H:1067:U:H3	15:1H:1191:A:H62	1.53	0.57
15:14:85:C:O2'	15:14:102:U:O2'	2.18	0.57
15:14:95:G:H4'	46:G5:48:HIS:CD2	2.40	0.57
15:14:1373:G:C2	15:14:1380:A:C2	2.93	0.57
29:AI:51:VAL:O	29:AI:57:HIS:HA	2.05	0.57
38:88:5:ARG:O	38:88:6:ARG:C	2.47	0.57
38:45:12:GLN:HG2	38:45:73:PRO:HD2	1.85	0.57
39:F5:64:ALA:HA	39:F5:67:ILE:HG12	1.86	0.57
48:1A:32:ALA:HA	48:1A:76:ASN:HB2	1.84	0.57
49:7I:4:ILE:HA	49:7I:20:VAL:O	2.04	0.57
1:13:695:U:C2	1:13:1002:G:N2	2.72	0.57
3:B5:67:GLY:C	3:B5:69:TYR:H	2.12	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:1G:1759:G:H2'	1:1G:1760:C:H6	1.68	0.57
1:1G:1786:C:N3	1:1G:1788:G:C8	2.73	0.57
4:19:69:ARG:NE	4:19:105:ILE:HD11	2.20	0.57
13:3I:38:THR:HG22	13:3I:39:VAL:HG23	1.86	0.57
15:1H:2695:C:H5'	23:21:189:PRO:HA	1.87	0.57
15:14:1229:C:H2'	15:14:1230:A:C8	2.39	0.57
15:14:1327:A:H5"	45:55:36:THR:HG22	1.84	0.57
15:14:2713:U:H2'	15:14:2714:C:C6	2.39	0.57
21:68:87:ILE:HD12	21:68:91:LEU:HA	1.87	0.57
21:68:93:PRO:HG3	21:68:114:ILE:HG12	1.86	0.57
18:69:6:LEU:HD13	18:69:37:VAL:HG23	1.86	0.57
21:25:68:GLU:OE2	21:25:78:ARG:NH1	2.37	0.57
29:AI:18:LYS:HB3	29:AI:31:ILE:HD12	1.85	0.57
29:AI:41:VAL:HB	29:AI:42:PRO:HA	1.86	0.57
29:AA:80:TYR:CZ	29:AA:82:GLY:HA2	2.39	0.57
40:49:50:ALA:HA	40:49:53:LEU:HD21	1.85	0.57
44:1E:184:VAL:N	44:1E:198:ASP:OD2	2.36	0.57
52:V4:19:G:O2'	52:V4:57:G:N3	2.34	0.57
2:A8:56:LEU:HB3	2:A8:58:LEU:HD21	1.86	0.57
1:1G:1876:C:O2'	9:82:73:GLN:OE1	2.22	0.57
1:1G:2066:G:N1	1:1G:2086:C:N3	2.44	0.57
10:58:137:LYS:HE3	10:58:138:LEU:O	2.05	0.57
2:65:54:LEU:O	2:65:56:LEU:N	2.36	0.57
13:3I:8:ASN:HA	13:3I:11:VAL:HG23	1.85	0.57
15:1H:1131:U:H3'	15:1H:1132:A:H5"	1.87	0.57
14:32:14:ARG:HA	14:32:39:PRO:HB3	1.86	0.57
15:14:1391:A:H2	15:14:1651:U:N3	2.03	0.57
15:14:2626:U:C4	36:J5:3:LYS:HG3	2.38	0.57
15:14:2836:A:OP1	23:29:113:PHE:HB2	2.05	0.57
26:1J:44:C:O2'	40:49:67:LYS:O	2.14	0.57
35:D8:35:LEU:HB2	35:D8:37:VAL:HG23	1.86	0.57
36:N8:40:LYS:HD3	36:N8:46:CYS:SG	2.45	0.57
37:BI:38:LYS:O	37:BI:41:ILE:HG13	2.05	0.57
38:88:110:THR:HG23	38:88:113:GLN:OE1	2.04	0.57
8:2E:136:GLN:HG2	8:2E:140:ARG:NH1	2.19	0.57
1:13:769:G:N3	1:13:835:U:H5"	2.19	0.57
1:13:1761:G:H2'	1:13:1762:G:C8	2.39	0.57
1:13:1860:G:H2'	1:13:1861:C:C6	2.40	0.57
4:19:70:TRP:CD1	4:19:70:TRP:C	2.82	0.57
12:Q8:27:THR:HG23	12:Q8:42:ARG:HH21	1.70	0.57
12:Q8:59:LYS:CE	12:Q8:60:LEU:HD21	2.33	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:1H:930:G:H3'	15:1H:931:G:H5"	1.86	0.57
15:1H:2800:C:O2'	23:21:42:ASP:OD1	2.19	0.57
11:C5:39:VAL:O	11:C5:40:GLU:HB2	2.03	0.57
18:61:40:THR:O	18:61:44:LEU:HB2	2.05	0.57
15:14:287:C:O2'	15:14:288:G:H5'	2.05	0.57
15:14:2330:G:H2'	15:14:2331:C:H6	1.69	0.57
23:21:51:PHE:O	23:21:74:PRO:HB2	2.05	0.57
26:16:2:A:N6	26:16:122:A:H61	2.00	0.57
28:M8:62:ARG:HD2	29:AI:6:LYS:HE3	1.86	0.57
40:41:72:ARG:HH21	40:41:87:PRO:HG3	1.70	0.57
37:BA:26:ASN:HB2	37:BA:71:THR:HG23	1.86	0.57
47:51:154:PRO:HD3	47:51:162:ILE:O	2.05	0.57
4:11:136:ILE:O	4:11:168:ARG:NH2	2.38	0.57
1:1G:1602:C:C5	1:1G:1603:C:C6	2.92	0.57
1:1G:1639:A:H8	1:1G:1639:A:O5'	1.88	0.57
15:1H:720:C:OP1	30:78:42:SER:O	2.23	0.57
15:1H:912:A:H2'	15:1H:913:G:C8	2.39	0.57
11:C5:17:SER:CB	11:C5:71:LYS:HD2	2.34	0.57
15:14:1341:U:H2'	15:14:1342:C:C6	2.40	0.57
20:1B:2:GLY:O	20:1B:4:GLY:N	2.38	0.57
22:D5:39:VAL:HG21	22:D5:44:PHE:HD2	1.70	0.57
26:1J:17:A:H5"	26:1J:18:G:H8	1.68	0.57
27:85:8:VAL:HG21	27:85:12:ARG:HH21	1.69	0.57
44:12:27:LYS:NZ	44:12:193:ASP:OD2	2.37	0.57
1:13:1379:G:N3	41:6I:23:GLY:HA3	2.20	0.57
6:2A:85:ARG:HD3	6:2A:113:PRO:HD3	1.86	0.57
1:1G:1254:G:H2'	1:1G:1255:U:H6	1.70	0.57
1:1G:1762:G:C2	1:1G:1763:U:H1'	2.39	0.57
11:G8:9:LYS:HA	11:G8:27:VAL:HG22	1.87	0.57
13:3I:93:LEU:HB2	13:3I:96:VAL:HG13	1.85	0.57
15:1H:939:A:H2'	15:1H:940:G:H5'	1.87	0.57
15:1H:1381:G:N2	15:1H:1658:A:H2'	2.20	0.57
15:1H:1640:G:H2'	15:1H:1641:C:H6	1.70	0.57
15:1H:2324:A:C5	15:1H:2325:A:H8	2.22	0.57
11:C5:44:ILE:HD12	11:C5:45:VAL:H	1.70	0.57
15:14:17:G:H4'	27:85:25:TRP:CH2	2.39	0.57
15:14:1574:G:H2'	15:14:1575:G:H8	1.70	0.57
29:AI:40:ILE:HA	29:AI:44:MET:SD	2.43	0.57
38:88:14:ARG:HG2	38:88:41:TRP:HH2	1.70	0.57
42:6E:62:PHE:HD1	42:6E:124:LEU:HD11	1.70	0.57
45:98:57:ARG:HB3	45:98:59:ASP:OD2	2.05	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:Y1:35:A:H2'	51:Y1:36:G:O4'	2.04	0.57
8:22:8:ILE:O	8:22:11:ARG:N	2.38	0.57
1:1G:1745:G:O3'	9:82:104:ARG:HD2	2.05	0.57
15:1H:2248:U:H2'	15:1H:2249:G:C8	2.40	0.57
15:14:2277:U:O2'	15:14:2278:C:H5'	2.05	0.57
15:14:2417:C:H5	15:14:2430:G:H22	1.52	0.57
22:D5:81:ARG:HE	38:45:132:VAL:HG21	1.70	0.57
41:6A:2:PRO:O	41:6A:38:ARG:NH2	2.38	0.57
45:98:29:LEU:HD23	45:98:70:LEU:HD11	1.86	0.57
47:51:154:PRO:HB3	47:51:163:TYR:CE2	2.39	0.57
49:7A:22:THR:HA	49:7A:33:ILE:HG13	1.86	0.57
1:13:1047:G:H2'	1:13:1048:G:H8	1.70	0.56
1:13:1456:U:C5	1:13:1493:U:C4	2.92	0.56
1:13:1562:G:H2'	1:13:1563:C:C6	2.39	0.56
1:1G:1702:G:O2'	1:1G:1729:A:N1	2.37	0.56
4:19:8:PRO:O	15:14:1745:G:H1'	2.04	0.56
4:19:261:LYS:NZ	15:14:2243:G:OP1	2.34	0.56
12:Q8:18:ALA:O	12:Q8:19:SER:OG	2.21	0.56
7:8A:81:ARG:HB3	7:8A:84:LEU:HD12	1.85	0.56
15:14:1038:A:H5'	15:14:1038:A:C8	2.36	0.56
15:14:2852:G:H5'	45:55:46:GLY:HA2	1.87	0.56
22:H8:111:VAL:HG21	22:H8:146:ILE:HG13	1.87	0.56
23:29:23:VAL:HA	23:29:184:VAL:O	2.05	0.56
31:I8:53:MET:HG3	31:I8:59:LEU:CD2	2.34	0.56
42:62:126:ASP:HB3	42:62:131:LYS:O	2.04	0.56
48:1A:78:ASN:OD1	48:1A:81:THR:HG23	2.05	0.56
52:X4:18:G:H3'	52:X4:57:G:N2	2.19	0.56
1:13:1890:C:H2'	1:13:1891:C:H6	1.68	0.56
1:13:1996:G:OP2	9:8E:112:LYS:HD2	2.05	0.56
9:8E:34:ASN:OD1	9:8E:34:ASN:N	2.37	0.56
1:1G:1700:G:C6	1:1G:1701:U:C4	2.93	0.56
1:1G:1804:G:OP2	1:1G:1804:G:H8	1.88	0.56
15:1H:222:G:H8	15:1H:222:G:OP2	1.88	0.56
15:1H:711:G:P	30:78:15:ARG:HE	2.28	0.56
15:1H:2416:U:H2'	15:1H:2417:C:H1'	1.87	0.56
11:C5:63:LYS:NZ	11:C5:63:LYS:HA	2.21	0.56
25:4E:152:ARG:HA	50:7E:64:LYS:HZ3	1.70	0.56
47:59:6:ARG:H	47:59:6:ARG:HD2	1.70	0.56
1:13:1739:A:H2'	1:13:1740:C:C6	2.40	0.56
6:2A:54:ARG:NH1	42:62:151:TYR:OH	2.39	0.56
1:1G:1079:G:H4'	14:32:123:HIS:ND1	2.19	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:1G:1805:G:H5”	9:82:93:ARG:HH22	1.70	0.56
10:58:65:LYS:NZ	15:1H:1069:A:OP2	2.30	0.56
15:1H:841:G:H5”	15:1H:842:A:H5’	1.87	0.56
15:1H:880:G:N2	30:78:53:GLY:O	2.38	0.56
15:1H:1574:G:H2’	15:1H:1575:G:H8	1.69	0.56
15:1H:1820:A:C2	15:1H:2621:C:H1’	2.41	0.56
15:1H:2801:C:OP1	23:21:41:LYS:HE3	2.06	0.56
11:C5:18:GLY:HA3	15:14:334:G:H4’	1.86	0.56
12:M5:4:MET:HB2	12:M5:61:LEU:HD21	1.87	0.56
15:14:38:A:H2’	15:14:39:C:C6	2.41	0.56
15:14:666:U:H2’	15:14:667:C:C6	2.39	0.56
15:14:1089:C:N4	15:14:1162:G:H22	2.02	0.56
15:14:1656:C:H4’	15:14:1657:A:O5’	2.04	0.56
15:14:2145:G:H2’	15:14:2146:G:C8	2.40	0.56
15:14:2862:U:O4	16:75:23:ARG:NH2	2.37	0.56
25:42:41:VAL:O	25:42:67:VAL:HG12	2.06	0.56
26:1J:92:A:H5’	26:1J:93:C:OP2	2.06	0.56
32:31:8:GLN:H	32:31:8:GLN:CD	2.12	0.56
32:31:9:ILE:HD12	32:31:10:PRO:HD2	1.87	0.56
38:88:90:VAL:HG23	38:88:91:GLU:N	2.20	0.56
35:95:28:GLU:O	35:95:61:VAL:HG11	2.05	0.56
35:95:46:VAL:CG2	35:95:52:VAL:HG21	2.36	0.56
43:A5:86:LEU:HD12	43:A5:87:PRO:HD2	1.87	0.56
48:1I:34:VAL:HG12	48:1I:74:ILE:HG12	1.86	0.56
48:1I:48:THR:HA	48:1I:62:HIS:HB3	1.88	0.56
44:12:92:TYR:HE2	44:12:94:ASN:HB2	1.70	0.56
52:V4:72:C:H3’	52:V4:73:A:H5”	1.87	0.56
1:13:710:G:H4’	1:13:711:U:H5’	1.88	0.56
1:13:848:A:O2’	1:13:849:A:H2’	2.05	0.56
1:13:1366:A:H2’	1:13:1367:C:H6	1.70	0.56
1:13:1821:U:H2’	1:13:1822:C:C6	2.40	0.56
7:8I:9:VAL:HG21	7:8I:84:LEU:HD12	1.87	0.56
15:1H:390:G:H2’	15:1H:391:G:H8	1.70	0.56
15:1H:555:A:N1	15:1H:2067:A:H2’	2.20	0.56
15:1H:612:C:P	30:78:21:ARG:HH22	2.29	0.56
19:9I:53:ARG:HH21	19:9I:60:ALA:N	2.03	0.56
15:14:387:U:H5’	15:14:388:G:OP2	2.05	0.56
15:14:1738:U:O2	15:14:1750:A:H5’	2.05	0.56
15:14:1770:A:H2’	15:14:1772:G:H22	1.70	0.56
22:H8:77:ASP:OD1	22:H8:80:ARG:HD2	2.05	0.56
44:1E:82:ARG:HG3	44:1E:92:TYR:CZ	2.41	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:W1:44:G:H2'	52:W1:45:U:C6	2.40	0.56
1:13:674:G:O2'	1:13:937:U:OP1	2.22	0.56
1:13:777:C:H42	1:13:867:G:H1	1.52	0.56
1:1G:781:A:H1'	1:1G:822:U:C2	2.39	0.56
15:1H:2745:G:H1'	23:21:187:ALA:HB2	1.87	0.56
13:3A:70:ILE:HD13	13:3A:77:LEU:HD12	1.87	0.56
15:14:1469:U:HO2'	15:14:1470:G:P	2.27	0.56
16:75:4:GLY:O	16:75:8:LYS:N	2.29	0.56
22:H8:45:ASP:O	22:H8:49:ARG:HG3	2.05	0.56
26:16:42:U:C5	28:M8:2:LYS:HG2	2.41	0.56
22:D5:11:GLU:HG3	22:D5:12:GLY:H	1.70	0.56
26:1J:17:A:H1'	26:1J:112:G:C8	2.40	0.56
33:5I:21:TYR:OH	33:5I:23:ARG:NH2	2.38	0.56
33:5I:41:ARG:HB2	48:1I:49:VAL:CG2	2.36	0.56
52:V4:9:A:N6	52:V4:23:A:H62	2.03	0.56
1:1G:1943:G:H5"	33:5A:17:LYS:NZ	2.20	0.56
4:19:37:LEU:HB2	4:19:38:LYS:HG2	1.86	0.56
15:1H:612:C:O2	30:78:33:ARG:NH1	2.38	0.56
15:1H:810:A:H8	56:1H:3649:HOH:O	1.88	0.56
15:1H:1574:G:H2'	15:1H:1575:G:C8	2.41	0.56
15:1H:1647:C:O2'	15:1H:1648:C:H5'	2.05	0.56
15:14:237:G:H4'	15:14:414:G:C5	2.40	0.56
15:14:519:A:H2'	15:14:520:G:O4'	2.05	0.56
18:69:120:ILE:HG22	18:69:122:GLU:H	1.71	0.56
27:C8:92:ARG:NH2	35:D8:11:GLN:H	2.03	0.56
41:6I:78:TYR:CZ	41:6I:82:ILE:HD11	2.41	0.56
37:BA:49:ALA:HA	37:BA:52:ALA:HB3	1.87	0.56
37:BA:74:LYS:CG	37:BA:75:ASN:H	2.18	0.56
40:49:11:TYR:OH	40:49:16:ARG:NH1	2.39	0.56
1:13:1746:C:H1'	1:13:1806:A:C4	2.41	0.56
3:B5:55:ASN:HB2	3:B5:80:ILE:HG13	1.87	0.56
4:11:239:ARG:HG3	15:1H:2606:C:P	2.46	0.56
5:L5:19:ARG:HD3	15:14:123:G:H5"	1.88	0.56
1:1G:1596:G:H1'	48:1A:55:LYS:HZ1	1.71	0.56
1:1G:1596:G:H3'	1:1G:1597:A:H5"	1.87	0.56
12:Q8:46:ARG:HH11	12:Q8:46:ARG:CB	2.00	0.56
9:82:114:TYR:HB2	48:1A:60:ARG:HD2	1.87	0.56
15:1H:1828:U:H2'	15:1H:1829:C:C6	2.41	0.56
15:1H:2313:A:H2'	15:1H:2314:G:O4'	2.05	0.56
16:B8:6:LEU:HA	16:B8:9:LEU:HB2	1.86	0.56
19:9I:73:ALA:HB3	19:9I:79:LEU:HD12	1.88	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:14:1044:A:C2	15:14:1045:G:C8	2.94	0.56
15:14:2815:A:C5'	15:14:2907:U:H4'	2.36	0.56
19:9A:76:LEU:HG	34:52:89:MET:HE3	1.86	0.56
44:1E:77:ALA:HB1	44:1E:165:VAL:HG11	1.88	0.56
8:2E:78:GLY:CA	8:2E:83:ARG:HB3	2.34	0.56
52:X4:53:G:H2'	52:X4:54:U:C6	2.41	0.56
1:13:656:A:OP2	25:4E:126:ARG:HD3	2.06	0.56
1:13:1104:G:H2'	1:13:1105:G:C8	2.41	0.56
7:8I:34:LYS:HD3	13:3I:11:VAL:HG21	1.87	0.56
1:1G:897:U:H2'	1:1G:898:G:H8	1.71	0.56
10:58:38:HIS:O	27:C8:67:ALA:HB1	2.05	0.56
15:1H:484:C:H3'	3:F8:68:ARG:NH2	2.21	0.56
15:1H:2330:G:H2'	15:1H:2331:C:C6	2.41	0.56
10:15:62:VAL:HG22	10:15:66:LYS:HD2	1.88	0.56
13:3A:41:ARG:HH12	13:3A:43:VAL:HG23	1.70	0.56
15:14:901:G:H2'	15:14:902:G:C8	2.39	0.56
15:14:1103:G:H22	15:14:1134:A:H5'	1.71	0.56
22:H8:52:SER:O	22:H8:52:SER:OG	2.14	0.56
22:H8:53:ILE:HG22	22:H8:71:VAL:HG22	1.87	0.56
23:21:201:THR:HG22	23:21:203:LYS:H	1.71	0.56
29:AI:39:THR:HG22	29:AI:40:ILE:H	1.70	0.56
32:31:129:PHE:HB2	32:31:132:VAL:HG13	1.88	0.56
30:35:125:VAL:HG13	30:35:144:GLU:HB3	1.87	0.56
31:E5:51:VAL:N	31:E5:62:LEU:HD12	2.21	0.56
40:49:125:PHE:HB3	40:49:166:ASP:CB	2.32	0.56
45:98:117:VAL:HG22	45:98:118:GLU:H	1.69	0.56
1:13:1577:G:H2'	1:13:1578:U:C6	2.41	0.56
6:2A:87:THR:O	6:2A:87:THR:OG1	2.23	0.56
8:22:181:ASN:OD1	8:22:204:LEU:HB2	2.06	0.56
1:1G:1293:G:H22	1:1G:1370:G:H1	1.54	0.56
1:1G:1319:G:H2'	1:1G:1320:G:O4'	2.05	0.56
1:1G:1409:A:OP2	56:1G:2405:HOH:O	2.17	0.56
1:1G:1688:C:HO2'	48:1A:56:HIS:HD1	1.54	0.56
15:14:2788:C:H2'	15:14:2789:C:C6	2.41	0.56
24:4A:81:LEU:HD21	24:4A:88:ARG:NH2	2.20	0.56
24:4A:91:ARG:HB2	24:4A:98:VAL:HG12	1.86	0.56
39:J8:18:ILE:HG12	39:J8:37:ILE:HG12	1.87	0.56
43:A5:15:ARG:O	43:A5:19:LEU:HD13	2.06	0.56
46:K8:35:LEU:HD12	46:K8:53:LEU:HD12	1.87	0.56
52:V1:68:C:H2'	52:V1:69:G:H8	1.70	0.56
1:13:1696:G:N7	1:13:1722:G:H2'	2.21	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:8I:29:HIS:CD2	7:8I:30:PRO:HD2	2.41	0.56
1:1G:843:G:H1'	37:BA:104:LEU:O	2.05	0.56
11:G8:40:GLU:HB2	11:G8:41:GLY:HA2	1.88	0.56
15:1H:809:G:OP1	56:1H:3665:HOH:O	2.17	0.56
15:1H:1069:A:H8	15:1H:1069:A:H3'	1.71	0.56
15:1H:1557:A:H4'	15:1H:1558:C:H1'	1.88	0.56
15:1H:2805:C:H2'	15:1H:2806:A:H5"	1.88	0.56
14:32:8:VAL:O	14:32:11:LEU:N	2.35	0.56
15:14:345:A:N3	32:39:169:ASN:ND2	2.50	0.56
15:14:888:U:H2'	15:14:889:C:H6	1.69	0.56
15:14:1914:A:O2'	15:14:2112:G:H5'	2.06	0.56
26:1J:4:C:H2'	26:1J:5:C:C6	2.41	0.56
30:78:121:LYS:O	30:78:123:LEU:N	2.39	0.56
35:95:14:VAL:HB	35:95:96:ILE:HG13	1.88	0.56
39:F5:73:LEU:HB3	39:F5:90:ILE:HG23	1.87	0.56
48:1I:45:ARG:HD3	48:1I:47:PHE:CZ	2.41	0.56
47:59:74:ASN:O	47:59:78:GLY:N	2.39	0.56
47:59:99:VAL:HG13	47:59:100:GLY:H	1.71	0.56
6:2I:34:ASP:HB3	6:2I:40:ILE:HD11	1.88	0.56
1:13:1189:U:H5'	1:13:1195:G:N2	2.21	0.55
1:13:1756:C:N4	1:13:1771:G:H1	2.03	0.55
1:13:1761:G:H1	1:13:1769:C:H42	1.54	0.55
1:13:1853:C:H4'	29:AI:80:TYR:OH	2.06	0.55
2:A8:17:ARG:HH22	15:1H:2307:C:P	2.29	0.55
2:A8:87:PHE:CE2	2:A8:102:ALA:HB2	2.41	0.55
1:1G:805:C:H2'	1:1G:806:G:H8	1.70	0.55
1:1G:1047:G:C2	1:1G:1048:G:C8	2.94	0.55
1:1G:1756:C:H1'	1:1G:1774:A:H61	1.71	0.55
2:65:11:LYS:HG3	2:65:91:PRO:HD3	1.87	0.55
12:Q8:27:THR:CG2	12:Q8:42:ARG:HH21	2.18	0.55
14:3E:108:LEU:HB3	14:3E:110:PHE:CD1	2.41	0.55
15:1H:745:G:O2'	15:1H:746:C:H5'	2.06	0.55
15:1H:2777:G:H1'	47:51:143:GLN:OE1	2.07	0.55
15:14:628:A:O4'	15:14:704:A:N6	2.39	0.55
15:14:2558:G:H2'	15:14:2559:G:C8	2.41	0.55
15:14:2716:C:H3'	15:14:2717:U:C5'	2.29	0.55
26:16:75:A:C4	26:16:107:A:C2	2.94	0.55
24:4A:37:THR:O	24:4A:55:ARG:NH2	2.33	0.55
32:39:40:GLN:NE2	32:39:182:ASN:HB2	2.20	0.55
46:K8:2:LYS:HD2	46:K8:5:GLU:OE1	2.06	0.55
1:13:1586:G:C2	48:1I:55:LYS:NZ	2.73	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:13:1763:U:H4'	1:13:1764:U:H5	1.71	0.55
1:13:1918:G:O2'	9:8E:38:GLN:OE1	2.24	0.55
1:1G:1596:G:H1'	48:1A:55:LYS:HZ2	1.71	0.55
15:1H:2407:A:H1'	30:78:61:ARG:NH1	2.21	0.55
11:C5:39:VAL:HG23	11:C5:41:GLY:H	1.71	0.55
11:C5:83:THR:HG23	15:14:361:C:OP1	2.06	0.55
15:14:1232:G:H5'	17:H5:29:ARG:HH21	1.72	0.55
15:14:1500:G:H2'	15:14:1501:C:C6	2.41	0.55
15:14:1569:U:H2'	15:14:1570:G:O4'	2.06	0.55
15:14:2773:A:N1	47:59:67:LEU:HD23	2.21	0.55
26:16:17:A:H1'	26:16:112:G:N9	2.21	0.55
26:1J:17:A:H5"	26:1J:18:G:C8	2.40	0.55
29:AA:41:VAL:HG12	29:AA:42:PRO:HD2	1.88	0.55
52:X4:72:C:C4	52:X4:73:A:N7	2.74	0.55
1:13:1255:U:H2'	1:13:1256:G:H8	1.71	0.55
1:1G:999:U:H2'	1:1G:1000:U:H6	1.71	0.55
1:1G:1680:U:O2'	1:1G:1683:A:OP2	2.23	0.55
1:1G:2007:G:OP1	42:62:6:ARG:NH1	2.39	0.55
1:1G:2051:G:OP1	21:25:49:ARG:NH2	2.39	0.55
12:Q8:46:ARG:HA	12:Q8:47:LYS:O	2.04	0.55
15:1H:1892:G:HO2'	15:1H:1893:A:H8	1.52	0.55
15:14:1246:U:H2'	15:14:1247:U:C6	2.41	0.55
15:14:2704:U:H4'	15:14:2705:C:H5'	1.88	0.55
22:H8:8:TYR:HB2	22:H8:38:TYR:CZ	2.41	0.55
18:69:101:LEU:HA	18:69:105:HIS:HB2	1.89	0.55
25:4E:101:ILE:O	25:4E:120:THR:OG1	2.23	0.55
20:1B:9:ARG:HG3	20:1B:10:ARG:N	2.20	0.55
32:31:12:LEU:O	32:31:127:GLU:N	2.40	0.55
32:31:176:LEU:HD21	32:31:180:GLY:C	2.31	0.55
33:5I:23:ARG:HD2	33:5I:28:GLY:O	2.05	0.55
38:45:11:LYS:NZ	38:45:88:GLY:O	2.32	0.55
52:X4:18:G:N3	52:X4:18:G:H2'	2.20	0.55
1:13:1488:A:H2	1:13:1541:A:H4'	1.72	0.55
1:13:2133:U:H2'	1:13:2134:G:C8	2.41	0.55
9:8E:10:ARG:NH2	9:8E:105:ASP:OD2	2.40	0.55
2:65:60:GLY:O	2:65:64:GLU:HB3	2.06	0.55
14:3E:19:LEU:HB3	14:3E:21:LEU:HD21	1.88	0.55
14:3E:149:ALA:O	14:3E:153:ARG:HG2	2.07	0.55
15:1H:10:G:H2'	15:1H:11:G:C8	2.40	0.55
15:1H:166:G:O2'	15:1H:167:G:H5'	2.07	0.55
15:1H:1238:G:H5"	15:1H:1238:G:H8	1.70	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:14:66:U:N3	15:14:73:A:H2	2.01	0.55
15:14:1161:U:OP1	47:59:3:ARG:N	2.35	0.55
15:14:1898:U:OP1	15:14:2425:G:O2'	2.24	0.55
22:H8:113:ALA:N	22:H8:114:GLY:HA2	2.22	0.55
18:69:4:ILE:HG12	18:69:18:VAL:HG22	1.88	0.55
19:9A:22:VAL:O	19:9A:23:LYS:HB3	2.07	0.55
27:C8:88:ILE:O	27:C8:88:ILE:HG22	2.06	0.55
28:M8:37:SER:H	40:41:112:PRO:HB3	1.72	0.55
34:52:44:GLY:HA2	34:52:59:TYR:CZ	2.41	0.55
38:88:20:ALA:HB2	38:88:99:PRO:HD2	1.88	0.55
43:E8:24:ILE:HD12	43:E8:24:ILE:O	2.05	0.55
44:1E:237:ALA:O	44:1E:239:VAL:HG23	2.06	0.55
46:K8:15:LYS:HE3	46:K8:15:LYS:N	2.21	0.55
52:V4:9:A:H4'	52:V4:46:G:H4'	1.87	0.55
1:13:1235:G:N2	1:13:1261:A:N1	2.55	0.55
1:13:1945:A:H5"	29:AI:10:PHE:CD2	2.41	0.55
1:1G:1912:A:H4'	1:1G:1913:A:O5'	2.06	0.55
14:3E:13:ARG:HD2	14:3E:38:TYR:O	2.05	0.55
15:1H:262:A:N1	15:1H:292:G:O2'	2.37	0.55
15:1H:1607:C:OP2	15:1H:1608:A:O2'	2.20	0.55
15:1H:2850:G:N7	56:1H:3702:HOH:O	2.33	0.55
15:14:4:C:H42	15:14:2911:G:N2	1.92	0.55
15:14:1042:C:O2'	15:14:1044:A:OP1	2.18	0.55
15:14:2271:G:O6	56:14:3662:HOH:O	2.17	0.55
26:1J:17:A:H1'	26:1J:112:G:C4	2.42	0.55
32:39:53:THR:HG22	32:39:56:GLU:HG3	1.88	0.55
32:39:123:LEU:O	32:39:193:VAL:HA	2.05	0.55
32:39:155:LEU:HB2	32:39:189:THR:HG21	1.87	0.55
47:59:19:VAL:HG12	47:59:20:ALA:H	1.72	0.55
49:7A:57:ARG:HA	49:7A:60:LEU:HD12	1.88	0.55
50:72:10:LEU:HD22	50:72:83:ILE:HD11	1.87	0.55
51:Y1:34:G:H3'	51:Y1:35:A:C8	2.42	0.55
1:13:1936:G:OP1	24:4I:88:ARG:NH1	2.40	0.55
1:13:2160:U:H2'	1:13:2161:C:C6	2.42	0.55
1:1G:1303:G:N2	1:1G:1346:C:O2	2.40	0.55
1:1G:1770:G:H3'	1:1G:1771:G:H8	1.71	0.55
4:19:68:LYS:HB3	4:19:70:TRP:CH2	2.42	0.55
9:82:117:HIS:O	9:82:118:LYS:HB2	2.04	0.55
15:1H:804:C:H2'	15:1H:805:C:C6	2.41	0.55
15:1H:1956:U:H5	15:1H:1994:A:N7	2.04	0.55
15:1H:2342:A:H2'	15:1H:2343:A:C8	2.41	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:15:28:THR:HG21	15:14:1060:U:C5	2.42	0.55
15:14:1494:A:H2'	15:14:1494:A:N3	2.21	0.55
25:4E:100:VAL:HG12	25:4E:118:ILE:HG22	1.87	0.55
28:M8:7:PRO:HG2	40:41:65:GLY:HA2	1.87	0.55
28:M8:33:VAL:HG13	40:41:113:ARG:HD2	1.87	0.55
25:42:12:LEU:HD22	25:42:13:ILE:N	2.21	0.55
38:88:51:ARG:HH12	38:88:52:VAL:HG23	1.71	0.55
44:1E:17:PHE:HB3	44:1E:44:LEU:HD11	1.88	0.55
46:K8:52:ASP:N	46:K8:52:ASP:OD1	2.36	0.55
47:51:56:SER:OG	47:51:58:GLU:HG3	2.07	0.55
44:12:61:LEU:HD23	44:12:68:ILE:HD11	1.89	0.55
52:V1:33:U:H3'	52:V1:34:G:H3'	1.89	0.55
1:13:713:C:H2'	1:13:714:G:H8	1.71	0.55
1:13:749:C:O2'	49:7I:25:ARG:O	2.24	0.55
1:13:844:U:H2'	1:13:845:C:H6	1.72	0.55
1:13:1128:A:H4'	1:13:1129:G:OP1	2.06	0.55
1:13:1705:G:N2	1:13:1708:A:OP2	2.38	0.55
1:13:1788:G:H22	1:13:1804:G:N2	2.05	0.55
1:13:1973:A:OP1	9:8E:120:ARG:NH1	2.25	0.55
1:13:2057:C:H2'	1:13:2058:C:H6	1.72	0.55
4:11:10:THR:OG1	4:11:13:ARG:HB2	2.07	0.55
10:58:96:GLU:C	10:58:98:VAL:N	2.64	0.55
9:82:18:PHE:HD2	9:82:62:TYR:HD2	1.55	0.55
15:1H:1158:G:O2'	15:1H:1159:A:H8	1.90	0.55
15:1H:2275:C:OP1	56:1H:3663:HOH:O	2.17	0.55
15:1H:2356:G:H2'	15:1H:2357:C:C6	2.42	0.55
15:14:1069:A:H62	15:14:1189:U:H3	1.53	0.55
23:21:70:ALA:O	23:21:73:GLU:N	2.40	0.55
25:4E:69:VAL:O	25:4E:71:LEU:HG	2.05	0.55
25:4E:126:ARG:HG3	25:4E:126:ARG:HH11	1.71	0.55
27:85:99:ALA:HB2	27:85:106:PHE:CD1	2.41	0.55
30:35:30:THR:HG21	30:35:35:HIS:H	1.72	0.55
36:J5:38:ALA:HB3	36:J5:48:GLU:HG3	1.88	0.55
42:6E:132:GLY:O	42:6E:135:VAL:HG23	2.06	0.55
38:45:26:TYR:O	38:45:26:TYR:CD1	2.60	0.55
45:98:117:VAL:O	45:98:118:GLU:HB2	2.07	0.55
50:7E:39:LEU:HB3	50:7E:45:ILE:HG12	1.88	0.55
52:W1:18:G:H1	52:W1:55:U:H1'	1.71	0.55
52:X1:61:C:O2'	52:X1:62:C:H5'	2.07	0.55
1:13:941:A:H1'	1:13:1194:U:O2	2.07	0.55
1:13:1221:G:H2'	1:13:1222:G:H8	1.72	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:13:2019:U:H2'	1:13:2020:G:C8	2.41	0.55
4:11:274:ARG:CZ	15:1H:1831:C:H41	2.20	0.55
8:22:94:LEU:HD12	8:22:95:THR:N	2.22	0.55
1:1G:1156:G:O2'	1:1G:1164:A:N1	2.36	0.55
1:1G:1271:A:N3	50:72:113:SER:OG	2.38	0.55
1:1G:1343:G:H2'	1:1G:1344:A:C8	2.42	0.55
1:1G:1908:U:OP2	1:1G:1909:C:N4	2.27	0.55
11:G8:82:PRO:HB3	11:G8:99:CYS:HB3	1.88	0.55
4:19:112:GLN:O	4:19:115:GLN:HG3	2.07	0.55
15:1H:723:G:C1'	32:31:74:ARG:HD3	2.36	0.55
15:1H:1559:A:N3	15:1H:1559:A:H2'	2.22	0.55
15:1H:2130:C:H2'	15:1H:2131:G:H8	1.71	0.55
15:1H:2713:U:H2'	15:1H:2714:C:C6	2.42	0.55
15:1H:2831:G:OP2	45:98:42:LYS:NZ	2.40	0.55
15:14:5:A:H2'	15:14:6:A:C8	2.41	0.55
25:4E:41:VAL:HG13	25:4E:113:ALA:HB2	1.88	0.55
22:D5:53:ILE:HG22	22:D5:71:VAL:HG13	1.88	0.55
44:1E:189:ASP:OD1	44:1E:190:THR:N	2.40	0.55
1:13:783:A:H2	1:13:861:G:H1	1.54	0.55
1:13:1243:A:H2'	1:13:1244:C:C6	2.41	0.55
2:A8:106:ARG:NH1	2:A8:107:GLU:HB2	2.22	0.55
6:2A:81:ASP:OD2	6:2A:107:SER:OG	2.25	0.55
14:3E:29:PRO:O	14:3E:30:LYS:HG2	2.06	0.55
15:1H:11:G:H2'	15:1H:12:U:H5'	1.87	0.55
15:1H:1187:G:O2'	15:1H:1192:A:N1	2.36	0.55
15:1H:1235:G:H5"	35:D8:81:TYR:CE2	2.42	0.55
15:1H:1503:A:O2'	15:1H:1504:U:H2'	2.07	0.55
15:1H:2324:A:C6	15:1H:2325:A:H8	2.24	0.55
15:1H:2328:C:H4'	40:41:91:ARG:HG3	1.87	0.55
14:32:92:VAL:O	14:32:96:LEU:HD12	2.07	0.55
15:14:282:G:N7	56:14:3702:HOH:O	2.33	0.55
15:14:969:G:H4'	15:14:2284:A:C5	2.42	0.55
15:14:2173:G:H2'	15:14:2174:G:C8	2.42	0.55
18:69:76:THR:HG21	18:69:140:LEU:HA	1.88	0.55
26:16:17:A:H1'	26:16:112:G:C8	2.42	0.55
22:D5:130:PRO:HA	22:D5:133:ILE:HD11	1.89	0.55
30:78:85:LEU:HA	30:78:88:LEU:HD22	1.89	0.55
32:31:129:PHE:HA	32:31:142:TRP:NE1	2.22	0.55
33:5I:15:LYS:HE2	33:5I:16:PHE:HE2	1.72	0.55
35:95:35:LEU:C	35:95:37:VAL:HG13	2.31	0.55
42:6E:27:ILE:HA	42:6E:30:ILE:HD12	1.89	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:12:104:ASN:OD1	44:12:107:THR:OG1	2.25	0.55
1:13:1456:U:H5	1:13:1495:A:N1	2.05	0.55
1:1G:720:C:H42	1:1G:734:G:H1	1.55	0.55
1:1G:1217:G:H1	1:1G:1280:C:H42	1.55	0.55
1:1G:1782:G:H2'	1:1G:1783:G:H8	1.71	0.55
11:G8:56:PRO:HD2	11:G8:57:GLN:OE1	2.07	0.55
15:1H:614:C:H2'	15:1H:615:A:C8	2.42	0.55
15:1H:681:A:H2'	15:1H:682:A:C8	2.42	0.55
15:1H:1528:G:H2'	15:1H:1529:G:C8	2.42	0.55
10:15:30:ILE:HG22	10:15:34:LEU:HD22	1.87	0.55
12:M5:61:LEU:CD1	12:M5:61:LEU:N	2.69	0.55
15:14:2594:C:H4'	23:29:134:ILE:HG12	1.89	0.55
22:H8:98:MET:O	22:H8:125:LEU:HD12	2.07	0.55
41:6I:18:PHE:CZ	41:6I:21:ASP:HB2	2.42	0.55
39:F5:85:LEU:HD13	39:F5:88:LYS:HD2	1.89	0.55
52:X1:45:U:OP2	52:X1:45:U:H6	1.90	0.55
52:X4:48:C:H2'	52:X4:59:U:O4'	2.07	0.55
1:13:980:C:OP2	21:68:97:ARG:HD3	2.07	0.54
1:13:1233:G:H2'	1:13:1234:U:O4'	2.07	0.54
1:13:1576:G:H2'	1:13:1577:G:O4'	2.07	0.54
4:11:47:GLY:HA3	15:1H:822:U:C4'	2.37	0.54
8:22:111:LEU:HD11	8:22:144:SER:HB3	1.89	0.54
4:19:85:ASP:OD2	4:19:88:ARG:NH1	2.37	0.54
15:1H:590:C:H4'	56:1H:3743:HOH:O	2.07	0.54
15:1H:1454:U:H2'	15:1H:1455:U:H6	1.71	0.54
15:1H:2134:U:H1'	15:1H:2206:G:N2	2.22	0.54
16:B8:3:ARG:HG3	16:B8:3:ARG:O	2.06	0.54
16:B8:120:ARG:HA	16:B8:123:GLN:HG2	1.89	0.54
12:M5:32:LEU:HA	12:M5:33:ASN:OD1	2.06	0.54
15:14:717:G:H2'	15:14:719:A:H62	1.72	0.54
15:14:1124:C:C5	15:14:1125:A:H1'	2.42	0.54
16:75:26:ASP:OD1	16:75:120:ARG:NH2	2.40	0.54
25:4E:102:ALA:HB1	25:4E:106:PRO:HG2	1.88	0.54
25:4E:152:ARG:HB3	50:7E:43:GLY:O	2.07	0.54
32:39:4:VAL:HA	32:39:19:GLU:HB3	1.88	0.54
45:98:1:MET:O	45:98:1:MET:HG2	2.07	0.54
45:98:9:LYS:HA	45:98:17:ARG:NE	2.22	0.54
46:K8:64:LEU:HD11	46:K8:68:ARG:NH1	2.22	0.54
48:1A:54:PHE:CD2	48:1A:55:LYS:HD2	2.42	0.54
44:12:19:HIS:CD2	44:12:20:GLU:HG2	2.43	0.54
52:V1:36:A:O2'	52:V1:37:A:OP1	2.20	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:13:1586:G:H21	48:1I:55:LYS:NZ	2.05	0.54
8:22:16:ARG:HH12	8:22:181:ASN:ND2	2.05	0.54
2:65:34:HIS:HD2	2:65:54:LEU:N	2.05	0.54
15:1H:1093:A:H1'	15:1H:1095:G:C4	2.42	0.54
15:1H:1288:G:H2'	15:1H:1289:U:O4'	2.07	0.54
15:1H:1770:A:O2'	15:1H:1771:U:P	2.66	0.54
15:1H:2187:G:H2'	15:1H:2188:C:C6	2.42	0.54
20:1F:12:LYS:O	20:1F:16:GLY:N	2.40	0.54
16:75:67:SER:OG	21:25:101:PRO:HG3	2.06	0.54
26:1J:46:G:H1'	26:1J:49:C:N4	2.23	0.54
34:5E:3:ARG:NH1	34:5E:38:GLU:OE2	2.39	0.54
35:95:77:ALA:O	35:95:79:VAL:HG22	2.07	0.54
40:49:34:LEU:HB3	40:49:99:MET:HE1	1.89	0.54
45:98:53:HIS:ND1	45:98:94:TYR:OH	2.40	0.54
47:51:88:LEU:HB3	47:51:130:ARG:HG2	1.89	0.54
48:1A:30:SER:HB2	48:1A:81:THR:HA	1.90	0.54
51:Y4:38:U:H2'	51:Y4:39:U:O4'	2.08	0.54
1:13:865:C:H2'	1:13:866:C:C6	2.42	0.54
1:13:907:G:H5'	1:13:909:C:H41	1.72	0.54
1:13:1805:G:N2	1:13:1808:G:H8	2.05	0.54
1:1G:1248:U:N3	14:32:134:ASP:OD1	2.37	0.54
1:1G:1782:G:H2'	1:1G:1783:G:C8	2.42	0.54
13:3I:24:VAL:HB	13:3I:27:LEU:HD12	1.90	0.54
15:1H:931:G:H4'	15:1H:931:G:OP1	2.08	0.54
15:1H:1106:U:H3	15:1H:1128:A:N6	2.05	0.54
15:1H:1236:U:C4'	35:D8:79:VAL:HG22	2.36	0.54
15:1H:1435:C:OP2	15:1H:1445:U:H5	1.90	0.54
15:1H:1663:A:N1	43:E8:91:GLY:HA2	2.20	0.54
15:1H:2324:A:C5	15:1H:2325:A:C8	2.94	0.54
11:C5:82:PRO:HB3	11:C5:99:CYS:HB2	1.89	0.54
18:61:39:ALA:HB1	18:61:44:LEU:HD13	1.90	0.54
13:3A:47:LYS:HG2	13:3A:48:PRO:HD3	1.89	0.54
20:1F:10:ARG:HA	20:1F:10:ARG:HE	1.72	0.54
15:14:330:U:H2'	15:14:331:U:C6	2.43	0.54
15:14:412:U:H2'	15:14:413:C:C6	2.42	0.54
22:H8:59:LEU:O	22:H8:60:GLU:HB2	2.07	0.54
22:H8:117:LEU:H	22:H8:117:LEU:HD13	1.72	0.54
25:4E:121:LYS:HG3	25:4E:122:GLU:N	2.22	0.54
27:C8:83:LEU:HD13	27:C8:113:ALA:HB2	1.89	0.54
28:M8:66:SER:CB	29:AI:8:GLY:H	2.20	0.54
35:95:98:GLU:OE1	35:95:100:ARG:HD3	2.07	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:6E:5:ARG:HE	42:6E:7:ALA:HA	1.73	0.54
44:12:72:GLY:C	44:12:74:LYS:H	2.14	0.54
1:13:870:U:O2'	49:7I:23:ASP:OD2	2.20	0.54
1:13:1017:G:OP1	49:7I:5:ARG:HB2	2.07	0.54
1:13:1297:G:O2'	41:6I:46:HIS:HB3	2.07	0.54
1:13:1456:U:C5	1:13:1495:A:N1	2.75	0.54
1:1G:1379:G:N3	41:6A:23:GLY:HA3	2.22	0.54
1:1G:1932:G:O2'	1:1G:1933:A:H8	1.90	0.54
15:1H:860:U:H2'	30:78:21:ARG:HA	1.88	0.54
15:1H:1397:G:C2'	15:1H:1398:A:H5"	2.35	0.54
15:1H:1954:G:H4'	15:1H:1955:G:OP1	2.08	0.54
15:1H:2044:A:N7	36:N8:9:LYS:HE3	2.21	0.54
15:14:711:G:H5"	30:35:16:ARG:HG2	1.90	0.54
15:14:1067:U:OP1	15:14:1083:U:O2'	2.20	0.54
15:14:2159:A:C2	15:14:2184:G:H1'	2.43	0.54
25:42:122:GLU:HG2	25:42:131:ILE:HD12	1.90	0.54
40:41:34:LEU:HD23	40:41:172:LEU:HD21	1.90	0.54
43:A5:1:MET:HG3	43:A5:2:GLU:N	2.20	0.54
6:2I:46:GLY:HA2	6:2I:50:TYR:O	2.07	0.54
51:Y1:33:G:H5'	51:Y1:34:G:OP2	2.08	0.54
1:13:799:G:N2	1:13:801:A:H5"	2.22	0.54
1:13:862:C:H2'	1:13:863:U:C6	2.42	0.54
1:13:1488:A:C2	1:13:1541:A:H4'	2.43	0.54
8:22:14:ILE:HG12	8:22:15:THR:H	1.72	0.54
8:22:94:LEU:HD12	8:22:95:THR:H	1.72	0.54
1:1G:1299:G:H21	34:52:73:ASN:ND2	2.05	0.54
1:1G:1732:G:O2'	44:12:110:GLN:OE1	2.23	0.54
1:1G:1862:U:O2'	1:1G:1932:G:O5'	2.25	0.54
13:3I:42:THR:HA	13:3I:53:ARG:O	2.08	0.54
15:1H:312:C:H2'	15:1H:313:C:H6	1.73	0.54
15:1H:643:G:OP1	32:31:40:GLN:NE2	2.41	0.54
15:1H:997:G:H2'	15:1H:998:C:C6	2.43	0.54
15:1H:1069:A:H3'	15:1H:1069:A:C8	2.43	0.54
15:1H:1078:G:OP2	38:88:128:LYS:NZ	2.37	0.54
15:1H:1892:G:O2'	15:1H:1893:A:H8	1.91	0.54
15:1H:2160:A:N6	15:1H:2181:G:O2'	2.40	0.54
15:1H:2230:G:H2'	15:1H:2231:G:C2	2.43	0.54
13:3A:38:THR:OG1	13:3A:57:LYS:HB2	2.08	0.54
15:14:219:A:H5'	15:14:220:U:OP1	2.08	0.54
15:14:1029:A:N1	15:14:2052:G:O2'	2.34	0.54
15:14:1075:A:H5'	26:1J:90:C:H41	1.73	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:14:1229:C:H2'	15:14:1230:A:H8	1.72	0.54
15:14:1381:G:N2	15:14:1659:A:C8	2.76	0.54
15:14:1862:G:OP2	56:14:3664:HOH:O	2.18	0.54
15:14:1892:G:H1'	15:14:1909:A:H62	1.73	0.54
15:14:2809:G:N2	15:14:2818:C:O2	2.41	0.54
23:21:51:PHE:CD2	23:21:52:LEU:HG	2.42	0.54
23:21:128:SER:OG	23:21:129:HIS:N	2.38	0.54
40:49:113:ARG:NH1	40:49:142:PRO:HB3	2.23	0.54
41:6A:82:ILE:HD13	41:6A:88:ARG:HB2	1.90	0.54
52:X1:18:G:H1'	52:X1:58:A:C2	2.43	0.54
1:13:807:G:H2'	1:13:808:G:C8	2.43	0.54
1:13:921:C:C2	7:8I:38:ARG:HG3	2.43	0.54
1:13:1803:A:C2	1:13:1804:G:C6	2.95	0.54
8:22:94:LEU:HD12	8:22:95:THR:HG23	1.88	0.54
1:1G:1075:U:H2'	1:1G:1076:C:C6	2.43	0.54
15:1H:142:G:H1'	3:F8:37:THR:CG2	2.38	0.54
15:1H:331:U:H2'	15:1H:332:G:O4'	2.07	0.54
15:1H:337:G:H5'	15:1H:356:A:O2'	2.08	0.54
15:1H:534:A:H5"	15:1H:535:G:H3'	1.90	0.54
15:1H:2615:A:H2'	15:1H:2616:C:C6	2.42	0.54
15:1H:2801:C:H2'	15:1H:2802:U:O4'	2.06	0.54
19:9A:22:VAL:HG12	19:9A:56:THR:HA	1.90	0.54
25:4E:35:GLY:H	25:4E:112:LEU:HD13	1.73	0.54
21:25:24:VAL:HB	21:25:33:ALA:HB2	1.90	0.54
24:4A:10:PRO:HG2	24:4A:45:VAL:HG21	1.88	0.54
32:31:136:THR:O	32:31:140:LEU:HB2	2.08	0.54
48:1A:32:ALA:HB2	48:1A:81:THR:HG21	1.88	0.54
44:12:22:LYS:HB3	44:12:40:HIS:NE2	2.23	0.54
45:55:98:LEU:HD12	45:55:113:LEU:HD21	1.88	0.54
8:2E:96:GLY:H	8:2E:97:LYS:NZ	2.04	0.54
52:V1:8:U:H4'	52:V1:9:A:OP1	2.07	0.54
1:13:1319:G:H2'	1:13:1320:G:O4'	2.08	0.54
1:13:1602:C:N4	56:13:2412:HOH:O	2.40	0.54
1:13:1703:C:OP1	44:1E:179:LYS:NZ	2.21	0.54
1:13:1809:G:H4'	1:13:1810:A:H5"	1.90	0.54
2:65:85:VAL:H	2:65:110:LEU:HB3	1.73	0.54
4:19:8:PRO:HB3	4:19:14:ARG:HB2	1.90	0.54
15:1H:1247:U:H2'	15:1H:1248:C:C6	2.43	0.54
15:1H:2409:C:N4	52:V1:76:A:C8	2.68	0.54
18:61:88:ILE:O	18:61:121:LYS:HE3	2.08	0.54
15:14:1435:C:H2'	15:14:1436:C:C6	2.43	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:21:50:GLY:HA2	23:21:76:ARG:O	2.08	0.54
28:M8:1:MET:HG3	40:41:98:ARG:HH21	1.73	0.54
44:1E:70:PHE:O	44:1E:93:VAL:N	2.35	0.54
2:A8:14:VAL:O	2:A8:18:ILE:HD13	2.08	0.54
1:1G:1815:A:O3'	33:5A:58:LYS:HE3	2.07	0.54
10:58:67:LEU:HD23	10:58:88:GLU:HB3	1.90	0.54
11:G8:94:LYS:HG3	11:G8:95:LYS:N	2.22	0.54
4:19:146:GLU:HB2	4:19:189:CYS:HB3	1.89	0.54
14:3E:108:LEU:HD23	14:3E:110:PHE:HE1	1.73	0.54
14:3E:141:ARG:HB2	14:3E:141:ARG:CZ	2.37	0.54
14:3E:187:ARG:HH22	14:3E:193:ASP:CG	2.15	0.54
15:1H:1565:U:H2'	15:1H:1566:G:H8	1.72	0.54
15:1H:1639:U:H2'	15:1H:1640:G:C8	2.42	0.54
15:1H:1640:G:H2'	15:1H:1641:C:C6	2.43	0.54
15:1H:1970:G:H2'	15:1H:1971:U:C6	2.42	0.54
15:1H:2411:G:H5"	39:J8:25:LYS:HE3	1.90	0.54
15:1H:2843:G:H5"	15:1H:2843:G:H8	1.73	0.54
15:14:175:U:H4'	15:14:208:A:H4'	1.90	0.54
15:14:1387:G:N3	15:14:1442:A:H2	2.05	0.54
15:14:1631:G:H2'	15:14:1632:C:O4'	2.08	0.54
15:14:2778:G:H5'	15:14:2779:G:OP2	2.08	0.54
15:14:2852:G:H21	45:55:92:GLY:HA2	1.72	0.54
16:75:58:ASN:HD21	23:29:12:THR:HG22	1.73	0.54
18:69:112:LYS:HA	18:69:114:LEU:H	1.72	0.54
24:4I:88:ARG:HB3	24:4I:88:ARG:HH11	1.73	0.54
26:16:42:U:H5	28:M8:2:LYS:HG2	1.73	0.54
30:78:46:LYS:O	30:78:47:ASP:HB3	2.08	0.54
44:1E:134:GLU:HA	44:1E:137:ARG:HB3	1.90	0.54
42:62:15:ASP:HB3	42:62:19:GLY:H	1.71	0.54
45:98:42:LYS:O	45:98:45:ARG:HD3	2.08	0.54
46:K8:51:ARG:NH1	46:K8:55:ARG:HH11	2.06	0.54
48:1I:16:LEU:HD11	48:1I:70:ARG:HB2	1.90	0.54
3:F8:57:LEU:N	3:F8:57:LEU:HD23	2.23	0.54
52:W1:60:U:H5"	52:W1:61:C:H5	1.73	0.54
52:V1:58:A:O2'	52:V1:59:U:OP1	2.23	0.54
52:X4:17:C:H6	52:X4:17:C:H3'	1.72	0.54
1:13:1627:G:H1	1:13:1665:C:H42	1.56	0.54
1:13:1890:C:H2'	1:13:1891:C:C6	2.43	0.54
1:1G:753:U:O2'	1:1G:754:G:H5'	2.08	0.54
1:1G:1385:C:H2'	1:1G:1386:U:O4'	2.08	0.54
1:1G:1806:A:H2'	1:1G:1807:A:O4'	2.07	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:8A:5:VAL:HG22	7:8A:60:ILE:HG12	1.90	0.54
7:8A:67:LYS:O	7:8A:68:ARG:HB3	2.08	0.54
15:1H:473:C:O2'	15:1H:474:G:H5'	2.08	0.54
15:1H:685:G:N2	15:1H:698:C:H41	2.06	0.54
15:1H:1258:A:H5'	15:1H:1258:A:H8	1.73	0.54
15:1H:2407:A:H2	15:1H:2439:C:N4	2.02	0.54
10:15:134:ARG:N	10:15:135:PRO:HD3	2.23	0.54
15:14:1381:G:N2	15:14:1659:A:H8	2.06	0.54
26:16:42:U:H1'	26:16:47:A:N6	2.22	0.54
28:I5:43:TYR:CG	28:I5:43:TYR:O	2.61	0.54
32:31:129:PHE:HA	32:31:142:TRP:CD1	2.43	0.54
32:39:7:TYR:CE1	32:39:16:GLY:HA3	2.42	0.54
40:49:4:ASP:CG	40:49:5:VAL:H	2.14	0.54
52:V4:18:G:H2'	52:V4:57:G:N2	2.22	0.54
1:13:747:G:N2	1:13:967:G:O6	2.41	0.54
1:13:1773:C:H4'	1:13:1774:A:O5'	2.07	0.54
1:13:1802:G:C6	1:13:1803:A:C2	2.96	0.54
1:13:2159:C:H2'	1:13:2160:U:O4'	2.07	0.54
1:1G:1063:C:OP1	1:1G:1063:C:H4'	2.08	0.54
1:1G:1469:C:H1'	1:1G:1471:C:N3	2.23	0.54
1:1G:1754:U:C4	1:1G:1908:U:C6	2.96	0.54
15:1H:1512:C:H4'	15:1H:2718:C:O4'	2.08	0.54
15:1H:2225:C:P	39:J8:48:LYS:HD3	2.48	0.54
16:B8:8:LYS:HA	16:B8:11:GLU:HG2	1.89	0.54
15:14:157:U:H4'	15:14:161:G:C4	2.43	0.54
15:14:2913:C:H2'	15:14:2914:C:H5'	1.90	0.54
23:21:78:LEU:O	23:21:79:ARG:HB2	2.05	0.54
21:25:92:GLU:HG2	21:25:113:LYS:HZ1	1.71	0.54
28:M8:59:PHE:HD2	29:AI:68:GLY:HA3	1.72	0.54
30:78:82:GLY:HA2	30:78:113:LYS:O	2.08	0.54
33:5I:4:LYS:HD3	33:5I:7:ILE:HD11	1.90	0.54
37:BA:63:ILE:HG21	37:BA:81:LYS:HG3	1.90	0.54
39:F5:44:PRO:HB2	39:F5:46:LEU:HD13	1.89	0.54
47:59:44:VAL:O	47:59:50:VAL:HA	2.07	0.54
52:V4:9:A:H4'	52:V4:46:G:C4'	2.37	0.54
1:13:788:G:H2'	1:13:789:A:H8	1.73	0.53
1:13:1752:G:HO2'	1:13:1773:C:N4	2.05	0.53
1:13:2063:G:H2'	1:13:2064:U:C6	2.42	0.53
7:8I:76:LEU:HD12	7:8I:77:VAL:H	1.72	0.53
1:1G:1883:A:N6	1:1G:1905:U:OP2	2.40	0.53
4:19:16:MET:HG3	4:19:211:ARG:HH21	1.73	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:19:42:GLY:O	15:14:1847:G:O2'	2.26	0.53
4:19:259:THR:OG1	15:14:1831:C:O2'	2.24	0.53
9:82:111:ARG:HD2	33:5A:61:TRP:C	2.32	0.53
15:1H:628:A:H4'	15:1H:629:G:O5'	2.08	0.53
20:1F:8:THR:OG1	20:1F:11:GLY:N	2.32	0.53
15:14:975:G:H2'	15:14:976:G:O4'	2.09	0.53
15:14:2804:C:O2'	15:14:2822:A:N3	2.40	0.53
15:14:2824:G:OP1	23:29:61:ARG:HB3	2.07	0.53
22:H8:152:ALA:HB1	22:H8:163:LEU:HD21	1.89	0.53
25:4E:75:THR:OG1	25:4E:76:ILE:N	2.41	0.53
25:4E:153:LYS:HD2	25:4E:154:GLY:H	1.72	0.53
27:C8:88:ILE:C	27:C8:90:VAL:N	2.66	0.53
30:35:8:PRO:HB3	32:39:34:TRP:CZ3	2.43	0.53
48:1A:58:ASP:N	48:1A:58:ASP:OD1	2.41	0.53
52:V1:34:G:O2'	52:V1:35:A:O4'	2.26	0.53
1:13:749:C:H2'	1:13:750:G:O4'	2.08	0.53
2:A8:78:LEU:HD12	2:A8:108:GLY:HA2	1.90	0.53
7:8I:22:LEU:HD11	7:8I:39:SER:HB3	1.90	0.53
8:22:32:LEU:HB3	8:22:59:ARG:HH12	1.74	0.53
8:22:152:ILE:HB	8:22:199:LYS:HB2	1.90	0.53
9:8E:99:LEU:HD12	9:8E:101:PHE:CZ	2.43	0.53
15:1H:417:G:H1	30:78:71:VAL:HG12	1.72	0.53
15:1H:2346:G:H4'	31:I8:42:GLY:HA3	1.90	0.53
12:M5:32:LEU:HG	12:M5:36:LYS:HE2	1.89	0.53
14:32:127:THR:HG23	14:32:147:ALA:HB3	1.89	0.53
15:14:1089:C:H2'	15:14:1090:G:H8	1.71	0.53
15:14:2163:C:O2	15:14:2179:G:N1	2.41	0.53
22:D5:8:TYR:HA	22:D5:62:PRO:HD3	1.91	0.53
28:M8:62:ARG:HB2	29:AI:6:LYS:NZ	2.23	0.53
23:29:65:GLY:C	23:29:68:ALA:HB2	2.33	0.53
26:1J:46:G:H5"	26:1J:47:A:OP1	2.08	0.53
27:85:92:ARG:O	27:85:94:ASN:N	2.37	0.53
41:6I:56:LEU:HA	41:6I:59:MET:HE2	1.90	0.53
1:1G:786:G:H1	1:1G:816:C:H42	1.56	0.53
12:Q8:4:MET:C	12:Q8:59:LYS:HE2	2.33	0.53
12:Q8:50:LEU:HD23	12:Q8:51:ALA:N	2.11	0.53
15:1H:623:G:C5'	30:78:11:GLY:HA3	2.36	0.53
15:14:1258:A:H5'	15:14:1260:G:C5'	2.39	0.53
15:14:2409:C:N4	52:V4:76:A:H8	2.04	0.53
15:14:2703:U:C5	15:14:2736:U:OP2	2.60	0.53
25:4E:65:ASN:ND2	25:4E:65:ASN:O	2.41	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:M8:63:TYR:CE2	29:AI:42:PRO:HD3	2.44	0.53
26:1J:93:C:OP2	38:45:16:ARG:NH2	2.42	0.53
44:1E:80:ILE:HD11	44:1E:208:ILE:HG23	1.91	0.53
45:98:55:ALA:HA	45:98:80:PHE:CE1	2.44	0.53
43:A5:84:ARG:O	43:A5:96:ILE:HD13	2.08	0.53
48:1I:77:PRO:HB2	48:1I:79:ARG:HH12	1.72	0.53
52:W1:1:G:O6	52:W1:73:A:N6	2.41	0.53
52:W4:74:C:H2'	52:W4:75:C:C5'	2.39	0.53
1:13:1453:C:H4'	50:7E:1:MET:HB2	1.91	0.53
1:1G:724:G:H8	1:1G:724:G:O5'	1.92	0.53
1:1G:2020:G:H21	1:1G:2125:A:H8	1.56	0.53
12:Q8:25:MET:HE2	12:Q8:46:ARG:HB3	1.90	0.53
7:8A:21:VAL:HG21	7:8A:59:ILE:HD11	1.90	0.53
9:82:99:LEU:HB3	9:82:101:PHE:HE1	1.72	0.53
15:1H:1587:G:H2'	15:1H:1588:G:C8	2.43	0.53
16:B8:56:GLY:O	16:B8:59:THR:HG22	2.08	0.53
14:32:30:LYS:HB3	14:32:35:ARG:HD2	1.91	0.53
15:14:764:G:C2	41:6A:56:LEU:HD21	2.43	0.53
15:14:1044:A:N6	15:14:1209:G:C6	2.76	0.53
15:14:1053:C:H2'	15:14:1054:C:H6	1.74	0.53
15:14:1479:C:H2'	15:14:1480:U:C6	2.43	0.53
21:25:107:ARG:HB2	21:25:115:VAL:HG21	1.91	0.53
32:31:135:LYS:HB3	32:31:138:GLU:HG3	1.91	0.53
29:AA:27:GLU:O	29:AA:47:HIS:NE2	2.41	0.53
35:D8:34:GLU:HB2	35:D8:58:VAL:HG22	1.90	0.53
35:95:5:VAL:HB	35:95:37:VAL:CG1	2.38	0.53
39:F5:92:LYS:O	39:F5:93:GLU:C	2.50	0.53
43:A5:50:VAL:HG22	43:A5:105:VAL:HG23	1.89	0.53
8:2E:43:LEU:O	8:2E:47:LEU:HB2	2.08	0.53
8:2E:152:ILE:HG12	8:2E:167:TRP:HB2	1.91	0.53
52:V4:2:C:O5'	52:V4:2:C:H6	1.92	0.53
1:13:1042:C:O2'	1:13:1250:A:N3	2.39	0.53
4:11:251:GLY:HA3	15:1H:2254:G:H5'	1.91	0.53
1:1G:1017:G:H5"	49:7A:5:ARG:HB2	1.91	0.53
1:1G:1757:C:O5'	1:1G:1758:A:H5'	2.08	0.53
1:1G:2019:U:H2'	1:1G:2020:G:C8	2.44	0.53
4:19:50:THR:OG1	15:14:1847:G:H1'	2.09	0.53
7:8A:45:HIS:CD2	7:8A:47:PRO:HD3	2.44	0.53
9:82:53:VAL:HG11	9:82:92:TYR:CZ	2.42	0.53
15:1H:140:A:C8	15:1H:1457:C:H1'	2.44	0.53
15:1H:867:G:H5'	15:1H:888:U:OP1	2.08	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:1H:1158:G:H4'	47:51:3:ARG:CD	2.38	0.53
16:B8:36:GLU:HG2	21:68:107:ARG:NH1	2.20	0.53
20:1F:9:ARG:HH11	20:1F:22:ARG:HG2	1.74	0.53
15:14:631:U:H4'	15:14:707:C:H4'	1.91	0.53
15:14:797:G:C8	43:A5:89:ALA:HB1	2.44	0.53
15:14:1072:G:C3'	15:14:1073:G:H5"	2.38	0.53
15:14:2763:G:O6	15:14:2771:C:H5"	2.09	0.53
44:12:90:MET:HE2	44:12:90:MET:HA	1.90	0.53
44:12:92:TYR:CE2	44:12:94:ASN:HB2	2.44	0.53
52:X1:64:A:H8	52:X1:64:A:OP2	1.92	0.53
1:13:1296:G:H4'	41:6I:51:HIS:CE1	2.43	0.53
1:13:1306:U:H3	1:13:1342:G:H22	1.56	0.53
1:13:1923:C:H5'	24:4I:14:ARG:NH1	2.24	0.53
1:1G:1063:C:O2'	1:1G:1064:G:N3	2.40	0.53
12:Q8:49:VAL:C	12:Q8:50:LEU:O	2.48	0.53
15:1H:1925:A:H8	15:1H:1925:A:C5'	2.22	0.53
15:1H:2314:G:N1	15:1H:2333:G:C8	2.76	0.53
15:1H:2323:G:H22	15:1H:2326:A:H2	1.56	0.53
15:1H:2641:C:H2'	15:1H:2642:G:O4'	2.08	0.53
13:3A:58:VAL:O	13:3A:65:GLU:HA	2.09	0.53
15:14:1221:G:H2'	15:14:1223:U:H5"	1.91	0.53
15:14:2484:A:H2	15:14:2496:G:N2	2.07	0.53
23:21:75:VAL:HG12	23:21:76:ARG:HD2	1.90	0.53
28:M8:62:ARG:HB2	29:AI:6:LYS:HZ1	1.73	0.53
26:1J:4:C:H2'	26:1J:5:C:H6	1.73	0.53
30:78:49:ARG:HG3	30:78:49:ARG:NH1	2.24	0.53
28:I5:22:ILE:HD13	28:I5:22:ILE:H	1.74	0.53
35:D8:15:GLU:HB3	35:D8:16:PRO:HD2	1.91	0.53
40:49:47:LYS:HE2	40:49:81:LYS:HB2	1.90	0.53
44:12:101:MET:HA	44:12:101:MET:HE2	1.90	0.53
3:F8:84:ALA:HB3	3:F8:87:GLN:OE1	2.09	0.53
1:13:681:G:O2'	13:3I:118:SER:O	2.21	0.53
1:13:1255:U:C2	1:13:1256:G:C8	2.97	0.53
1:1G:1057:G:H1	1:1G:1068:U:H3	1.55	0.53
1:1G:2071:G:C8	16:75:118:ARG:HG2	2.44	0.53
10:58:37:LYS:NZ	15:1H:1057:A:OP1	2.34	0.53
15:1H:647:G:H4'	15:1H:648:A:H5"	1.91	0.53
15:1H:1490:G:H2'	15:1H:1491:G:H8	1.73	0.53
15:1H:1646:A:H5"	15:1H:1647:C:OP1	2.09	0.53
11:C5:83:THR:HG22	11:C5:84:ARG:H	1.73	0.53
14:32:112:VAL:HG12	14:32:116:GLN:OE1	2.08	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:14:240:G:P	30:35:60:MET:HE1	2.48	0.53
15:14:312:C:H2'	15:14:313:C:C6	2.44	0.53
15:14:1820:A:H1'	15:14:1963:A:N6	2.23	0.53
15:14:2487:G:H3'	15:14:2488:U:C5'	2.39	0.53
23:21:78:LEU:O	23:21:78:LEU:HD23	2.08	0.53
18:69:29:TYR:C	18:69:32:PRO:HD2	2.33	0.53
18:69:79:ILE:HB	18:69:142:VAL:HA	1.91	0.53
21:25:88:ASN:HD21	21:25:92:GLU:HB2	1.74	0.53
28:M8:61:ARG:HA	28:M8:61:ARG:HE	1.74	0.53
25:42:60:TYR:CB	25:42:64:ARG:HH21	2.21	0.53
30:78:56:SER:OG	30:78:61:ARG:HD3	2.09	0.53
32:31:39:TRP:O	32:31:43:LYS:HG2	2.09	0.53
33:5I:23:ARG:HH11	33:5I:30:ALA:HB2	1.74	0.53
42:6E:5:ARG:HG2	42:6E:7:ALA:H	1.74	0.53
44:12:23:ARG:HH22	44:12:191:ASP:HB2	1.71	0.53
50:7E:13:ILE:O	50:7E:17:THR:HG23	2.09	0.53
1:13:1378:C:H2'	1:13:1379:G:H8	1.74	0.53
1:13:1590:C:O2'	9:8E:125:TYR:OH	2.24	0.53
4:11:3:VAL:HG13	4:11:17:THR:HG23	1.90	0.53
4:11:239:ARG:O	4:11:240:ALA:CB	2.56	0.53
6:2A:20:TYR:CE1	6:2A:83:ILE:HD12	2.44	0.53
9:8E:29:ASN:ND2	9:8E:65:VAL:O	2.38	0.53
1:1G:690:G:N7	56:1G:2411:HOH:O	2.33	0.53
1:1G:1265:U:H2'	1:1G:1266:G:H8	1.74	0.53
1:1G:1759:G:C8	1:1G:1760:C:H5	2.26	0.53
10:58:35:ARG:HD3	10:58:37:LYS:HD2	1.91	0.53
2:65:49:VAL:HG22	2:65:80:LEU:HD12	1.91	0.53
11:G8:28:LYS:HD2	11:G8:40:GLU:HG3	1.91	0.53
15:1H:545:G:H2'	15:1H:546:U:C6	2.44	0.53
15:1H:2290:C:O2	38:88:85:LYS:HD3	2.07	0.53
18:61:110:ASP:OD1	18:61:111:PRO:HA	2.08	0.53
19:9I:31:LEU:HD23	34:5E:97:PHE:O	2.08	0.53
19:9I:52:PRO:O	19:9I:56:THR:HG23	2.09	0.53
14:32:31:CYS:C	14:32:33:MET:H	2.16	0.53
15:14:139:A:H8	15:14:1457:C:HO2'	1.54	0.53
15:14:239:C:H4'	15:14:240:G:O5'	2.09	0.53
15:14:266:U:H2'	15:14:267:C:C6	2.44	0.53
15:14:555:A:O2'	15:14:556:A:H5"	2.08	0.53
15:14:1574:G:H2'	15:14:1575:G:C8	2.43	0.53
15:14:1583:G:H3'	15:14:1584:U:H5"	1.91	0.53
15:14:2667:C:H42	15:14:2683:G:H1	1.55	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:68:63:VAL:HG12	21:68:106:LEU:HD11	1.91	0.53
16:75:4:GLY:HA2	16:75:8:LYS:HB2	1.88	0.53
18:69:135:GLU:N	18:69:135:GLU:OE2	2.40	0.53
34:52:76:ALA:O	34:52:80:ARG:HG3	2.09	0.53
42:6E:15:ASP:HB3	42:6E:19:GLY:N	2.23	0.53
43:E8:88:ARG:HB3	43:E8:92:ARG:HB3	1.89	0.53
8:2E:76:VAL:CG2	8:2E:103:VAL:HG21	2.39	0.53
1:1G:2069:G:H5"	1:1G:2070:G:H5'	1.90	0.53
15:1H:558:C:OP1	15:1H:586:G:N1	2.41	0.53
15:1H:1252:A:N1	15:1H:1290:A:C2	2.77	0.53
15:1H:1925:A:H5'	15:1H:1925:A:C8	2.43	0.53
15:1H:2250:G:H2'	15:1H:2251:C:C6	2.44	0.53
11:C5:6:HIS:CD2	15:14:361:C:H5"	2.44	0.53
11:C5:76:CYS:SG	11:C5:97:ARG:HG3	2.49	0.53
15:14:839:C:P	56:14:3647:HOH:O	2.67	0.53
15:14:1545:A:H8	15:14:1627:C:O2'	1.92	0.53
15:14:1586:C:H4'	15:14:1586:C:OP1	2.09	0.53
15:14:2587:A:OP1	15:14:2589:G:O2'	2.25	0.53
15:14:2852:G:H5'	45:55:46:GLY:CA	2.38	0.53
23:29:111:ARG:HD3	23:29:160:TYR:CE2	2.44	0.53
24:4A:15:VAL:O	24:4A:19:LEU:HG	2.08	0.53
27:85:92:ARG:NH2	35:95:11:GLN:H	2.05	0.53
42:6E:69:VAL:HG22	42:6E:135:VAL:HG13	1.89	0.53
47:51:4:ILE:HD11	47:51:7:LEU:HD21	1.89	0.53
3:F8:12:VAL:HG13	3:F8:27:THR:O	2.08	0.53
8:2E:73:PRO:O	8:2E:76:VAL:HG22	2.08	0.53
50:72:86:ILE:HG21	50:72:133:LEU:HG	1.91	0.53
1:13:1048:G:O4'	14:3E:119:GLN:NE2	2.42	0.53
8:22:172:ARG:HG2	1:1G:1734:G:H5"	1.90	0.53
11:G8:94:LYS:HE3	11:G8:96:ILE:HG13	1.91	0.53
4:19:242:ARG:NE	15:14:1860:G:H4'	2.24	0.53
15:1H:104:C:H2'	15:1H:105:C:H6	1.74	0.53
15:1H:955:U:O2'	38:88:101:ARG:NH2	2.42	0.53
15:1H:1101:C:N4	15:1H:1154:G:H1	2.07	0.53
15:1H:1266:C:H6	15:1H:1266:C:H5"	1.74	0.53
15:1H:1291:A:N1	30:78:4:SER:OG	2.38	0.53
15:1H:2339:C:H5"	15:1H:2340:G:H5'	1.90	0.53
14:32:13:ARG:HD2	14:32:38:TYR:O	2.09	0.53
15:14:312:C:H2'	15:14:313:C:H6	1.74	0.53
15:14:336:A:C6	15:14:353:U:C4	2.97	0.53
15:14:999:G:C6	15:14:1013:G:C6	2.97	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:14:1477:C:N4	15:14:1620:A:OP2	2.38	0.53
15:14:2788:C:H2'	15:14:2789:C:H6	1.74	0.53
22:D5:15:PRO:HB2	22:D5:19:ARG:NH2	2.24	0.53
31:I8:7:LEU:HD21	38:88:81:VAL:HG13	1.91	0.53
32:31:29:ASN:H	32:31:112:MET:HE3	1.73	0.53
36:N8:50:GLY:H	36:N8:56:LYS:HB2	1.74	0.53
39:J8:92:LYS:O	39:J8:93:GLU:C	2.50	0.53
40:41:96:ARG:O	40:41:97:ASP:HB2	2.09	0.53
50:7E:4:ASP:OD1	50:7E:85:ARG:NH1	2.42	0.53
47:59:6:ARG:HB2	47:59:66:GLY:HA2	1.91	0.53
6:2I:79:SER:HB2	6:2I:106:LYS:HD2	1.91	0.53
8:2E:123:GLN:NE2	8:2E:136:GLN:OE1	2.41	0.53
52:W1:19:G:H3'	52:W1:20:U:C5	2.44	0.53
52:X1:62:C:H2'	52:X1:63:G:C8	2.44	0.53
52:X4:1:G:C6	52:X4:2:C:C4	2.97	0.53
52:V4:72:C:C2'	52:V4:73:A:H5"	2.39	0.53
1:13:2151:U:O2	1:13:2153:G:H5"	2.09	0.52
1:1G:1054:G:O2'	1:1G:1069:G:N2	2.42	0.52
15:1H:211:A:N1	15:1H:255:A:O2'	2.42	0.52
15:1H:817:G:O2'	15:1H:1428:A:N6	2.42	0.52
15:1H:1252:A:N1	15:1H:1290:A:H2	2.08	0.52
15:1H:1559:A:OP1	15:1H:1560:A:H5'	2.10	0.52
15:1H:1728:G:N2	15:1H:2014:G:N2	2.53	0.52
10:15:46:VAL:HG12	10:15:48:MET:HG3	1.91	0.52
14:32:157:LEU:HD12	14:32:161:ASN:ND2	2.20	0.52
15:14:897:G:H2'	15:14:898:A:H8	1.73	0.52
15:14:1228:C:H2'	15:14:1229:C:C6	2.45	0.52
15:14:2419:C:H1'	30:35:67:MET:HE1	1.90	0.52
29:AI:18:LYS:O	29:AI:22:LEU:HD13	2.09	0.52
28:I5:24:THR:HG22	40:49:105:LYS:HG2	1.91	0.52
32:31:23:ASP:CG	32:31:24:LEU:H	2.16	0.52
41:6A:35:ARG:HH21	41:6A:59:MET:HE2	1.73	0.52
43:A5:96:ILE:HD13	43:A5:96:ILE:N	2.24	0.52
8:2E:58:GLU:HB2	8:2E:65:ALA:CB	2.39	0.52
1:13:1752:G:N3	1:13:1755:G:N2	2.57	0.52
9:8E:114:TYR:CE2	48:1I:59:SER:HA	2.44	0.52
1:1G:703:G:C5	1:1G:704:C:C4	2.97	0.52
1:1G:1919:U:H2'	1:1G:1920:G:C8	2.44	0.52
2:65:62:LYS:O	2:65:66:ALA:N	2.32	0.52
15:1H:1435:C:H2'	15:1H:1436:C:C6	2.39	0.52
15:1H:1465:G:O2'	15:1H:1466:C:O5'	2.24	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:14:412:U:H2'	15:14:413:C:H6	1.72	0.52
15:14:1109:U:C5'	15:14:1118:A:H1'	2.35	0.52
15:14:2093:U:N3	15:14:2445:A:C2	2.72	0.52
15:14:2756:A:C6	15:14:2780:A:C8	2.97	0.52
24:4I:54:VAL:HA	24:4I:57:ARG:HB3	1.90	0.52
28:M8:66:SER:HB3	29:AI:8:GLY:H	1.73	0.52
26:1J:17:A:H1'	26:1J:112:G:N7	2.24	0.52
28:I5:40:HIS:ND1	28:I5:45:GLY:HA3	2.24	0.52
28:I5:62:ARG:HB2	29:AA:9:VAL:HG22	1.91	0.52
39:F5:91:LYS:HA	39:F5:91:LYS:HZ3	1.71	0.52
44:1E:82:ARG:NE	44:1E:92:TYR:OH	2.41	0.52
46:K8:32:LEU:HD11	46:K8:54:LYS:HG2	1.90	0.52
47:59:149:ARG:HD3	47:59:164:TYR:CE1	2.44	0.52
1:13:1255:U:H2'	1:13:1256:G:C8	2.43	0.52
1:13:1750:U:O4	1:13:1751:A:N6	2.42	0.52
2:A8:30:ARG:NH2	2:A8:92:TYR:CD1	2.78	0.52
1:1G:1622:C:H2'	1:1G:1623:U:C6	2.45	0.52
1:1G:2003:A:H4'	42:62:29:LYS:HE3	1.92	0.52
2:65:55:ALA:HB2	26:1J:119:G:C5'	2.39	0.52
15:1H:2521:U:H1'	52:W1:76:A:O3'	2.09	0.52
16:B8:3:ARG:HD2	16:B8:6:LEU:HB3	1.91	0.52
19:9I:48:GLY:O	19:9I:74:ARG:NH2	2.43	0.52
14:32:139:ARG:HH11	14:32:139:ARG:HG3	1.74	0.52
15:14:29:U:H2'	15:14:30:G:H8	1.74	0.52
15:14:70:A:H5"	15:14:72:A:C8	2.44	0.52
15:14:720:C:OP1	30:35:42:SER:O	2.27	0.52
15:14:1222:A:H62	15:14:1225:A:H4'	1.73	0.52
15:14:1224:G:H5'	15:14:1225:A:OP1	2.09	0.52
15:14:2288:A:H2'	15:14:2289:A:C8	2.44	0.52
15:14:2821:U:H5"	15:14:2903:G:O6	2.10	0.52
18:69:123:LEU:HD22	18:69:143:SER:HB3	1.91	0.52
22:D5:126:VAL:HA	22:D5:163:LEU:HA	1.91	0.52
43:E8:79:GLY:HA3	43:E8:100:THR:HG22	1.92	0.52
44:1E:163:PHE:HA	44:1E:185:ILE:HG13	1.90	0.52
43:A5:45:TYR:CZ	43:A5:49:LYS:HE3	2.44	0.52
44:12:109:SER:HA	44:12:112:VAL:HG23	1.92	0.52
52:V4:9:A:H62	52:V4:23:A:N6	2.05	0.52
1:13:719:G:N3	1:13:720:C:H5'	2.24	0.52
1:13:819:A:H2'	1:13:820:U:C6	2.44	0.52
1:13:819:A:H2'	1:13:820:U:H6	1.75	0.52
1:13:1293:G:N2	1:13:1370:G:H1	2.03	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:13:1586:G:N2	1:13:1595:C:C2	2.74	0.52
6:2A:12:ARG:NH1	6:2A:13:GLN:O	2.42	0.52
1:1G:1025:G:H2'	1:1G:1026:C:C6	2.45	0.52
1:1G:1688:C:O2'	48:1A:56:HIS:ND1	2.42	0.52
2:65:17:ARG:HH11	2:65:17:ARG:HG3	1.74	0.52
11:G8:84:ARG:HD2	11:G8:84:ARG:C	2.34	0.52
4:19:181:GLU:HA	4:19:272:ALA:HB1	1.90	0.52
15:1H:472:C:H4'	32:31:49:ALA:HB2	1.91	0.52
15:1H:912:A:H2'	15:1H:913:G:H8	1.74	0.52
15:1H:1498:G:H1'	15:1H:1577:A:H62	1.74	0.52
15:1H:2093:U:N3	15:1H:2445:A:C2	2.77	0.52
15:1H:2287:U:H5"	15:1H:2288:A:OP1	2.09	0.52
15:1H:2507:U:H2'	15:1H:2508:U:C6	2.44	0.52
11:C5:28:LYS:HE3	11:C5:64:GLU:OE2	2.09	0.52
12:M5:61:LEU:HD13	12:M5:62:LEU:N	2.19	0.52
12:M5:61:LEU:HD22	12:M5:62:LEU:HD22	1.92	0.52
15:14:2508:U:H2'	15:14:2509:G:O4'	2.09	0.52
15:14:2569:U:H2'	15:14:2570:U:C6	2.45	0.52
16:75:68:TYR:CE2	21:25:119:PRO:HB2	2.44	0.52
22:H8:165:VAL:HB	22:H8:167:PRO:HD3	1.91	0.52
25:42:107:ARG:O	25:42:111:GLU:N	2.39	0.52
37:BI:75:ASN:O	37:BI:79:ARG:HB2	2.09	0.52
44:12:131:PRO:HG2	44:12:134:GLU:HB2	1.91	0.52
3:F8:1:MET:C	3:F8:3:THR:N	2.68	0.52
1:13:885:U:H4'	1:13:886:C:O5'	2.10	0.52
1:1G:770:A:H1'	1:1G:904:A:O2'	2.10	0.52
1:1G:1752:G:H4'	48:1A:38:ILE:HD11	1.91	0.52
12:Q8:59:LYS:HE3	12:Q8:60:LEU:CD1	2.33	0.52
15:1H:104:C:H2'	15:1H:105:C:C6	2.45	0.52
15:1H:265:G:C6	15:1H:266:U:C4	2.97	0.52
15:1H:312:C:H2'	15:1H:313:C:C6	2.44	0.52
15:1H:2374:C:H2'	15:1H:2375:A:O4'	2.09	0.52
15:1H:2415:G:H2'	15:1H:2416:U:O4'	2.10	0.52
11:C5:11:ASP:OD2	11:C5:95:LYS:NZ	2.42	0.52
12:M5:50:LEU:HB3	12:M5:53:PRO:CD	2.40	0.52
15:14:21:A:O2'	15:14:22:C:H5'	2.09	0.52
15:14:1273:C:C3'	35:95:85:LYS:HA	2.39	0.52
15:14:1337:U:C2	15:14:1376:C:O2	2.62	0.52
15:14:1689:U:H5'	56:14:3979:HOH:O	2.10	0.52
15:14:2886:A:H8	45:55:6:SER:N	2.01	0.52
27:C8:102:GLU:OE1	35:D8:13:ARG:NH2	2.43	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:D5:7:ALA:O	22:D5:8:TYR:CG	2.63	0.52
32:39:116:ASP:O	32:39:120:GLU:HG2	2.08	0.52
45:98:17:ARG:HG2	45:98:21:TYR:CE2	2.45	0.52
46:K8:14:ARG:HB3	46:K8:15:LYS:NZ	2.23	0.52
49:7I:43:LYS:HA	49:7I:48:TRP:HB2	1.91	0.52
6:2I:21:ILE:HG12	6:2I:30:VAL:HG12	1.91	0.52
8:2E:3:ASN:O	8:2E:4:LYS:HG2	2.10	0.52
50:72:120:THR:HG23	50:72:123:GLU:H	1.74	0.52
52:V4:58:A:H2	52:V4:60:U:C2	2.28	0.52
1:1G:687:G:H2'	1:1G:688:G:H8	1.74	0.52
4:19:237:GLU:OE2	4:19:239:ARG:HA	2.09	0.52
15:14:2119:G:OP1	18:69:22:LYS:HD2	2.10	0.52
15:14:2770:U:H5'	15:14:2771:C:OP2	2.09	0.52
15:14:2790:C:H2'	15:14:2791:A:O4'	2.10	0.52
16:75:23:ARG:HG3	16:75:120:ARG:NH1	2.25	0.52
18:69:71:ILE:HG21	18:69:107:VAL:HG21	1.92	0.52
24:4I:82:MET:O	24:4I:84:ILE:N	2.37	0.52
26:1J:96:C:H2'	26:1J:97:C:H6	1.75	0.52
32:31:127:GLU:OE2	32:31:127:GLU:HA	1.93	0.52
33:5I:43:CYS:HA	33:5I:46:GLU:HB2	1.91	0.52
30:35:113:LYS:HA	30:35:129:ALA:O	2.09	0.52
35:D8:18:LEU:HD22	35:D8:19:LYS:N	2.25	0.52
35:D8:35:LEU:C	35:D8:37:VAL:H	2.17	0.52
32:39:3:GLU:HA	32:39:24:LEU:HD23	1.92	0.52
32:39:163:VAL:O	32:39:167:ALA:HB2	2.10	0.52
42:6E:108:ALA:HA	42:6E:111:ARG:HD2	1.92	0.52
39:F5:85:LEU:CA	39:F5:87:PRO:HD2	2.38	0.52
48:1A:9:ARG:HE	48:1A:95:GLU:HG2	1.73	0.52
49:7I:77:ALA:HB3	49:7I:79:VAL:HG23	1.92	0.52
44:12:67:THR:HG21	44:12:155:LEU:HD21	1.92	0.52
50:7E:129:VAL:HG23	50:7E:130:GLY:H	1.75	0.52
8:2E:59:ARG:HA	8:2E:63:ASN:O	2.09	0.52
1:13:684:G:C2	1:13:1038:A:C2	2.97	0.52
1:13:813:U:H5"	1:13:849:A:O4'	2.10	0.52
1:13:877:G:H5"	7:8I:42:TYR:CE2	2.45	0.52
1:13:911:A:H2'	1:13:912:C:C6	2.45	0.52
1:13:1159:G:O6	51:Y1:51:U:H1'	2.10	0.52
1:1G:1050:G:H2'	1:1G:1051:G:O4'	2.09	0.52
1:1G:1755:G:H2'	1:1G:1775:C:H42	1.74	0.52
1:1G:1759:G:H2'	1:1G:1760:C:C6	2.45	0.52
1:1G:1878:A:H2'	1:1G:1879:A:C8	2.45	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:58:95:PRO:O	10:58:96:GLU:CD	2.52	0.52
15:1H:768:C:H2'	15:1H:769:C:H6	1.75	0.52
15:1H:2230:G:H2'	15:1H:2231:G:C6	2.45	0.52
18:61:75:LEU:HD23	18:61:105:HIS:CD2	2.44	0.52
15:14:912:A:H2'	15:14:913:G:C8	2.45	0.52
18:69:76:THR:HG23	18:69:77:LEU:N	2.25	0.52
24:4I:80:ARG:NH1	29:AI:65:ASN:O	2.40	0.52
22:D5:28:MET:HA	22:D5:88:PHE:O	2.09	0.52
23:29:33:VAL:HG12	23:29:89:ASP:CB	2.39	0.52
32:39:83:PHE:O	32:39:84:VAL:HB	2.09	0.52
38:45:79:LEU:C	38:45:80:GLU:HG2	2.35	0.52
43:E8:37:ARG:HD3	43:E8:38:TYR:CE2	2.44	0.52
41:6A:74:ASP:OD2	41:6A:77:ARG:HG2	2.09	0.52
52:V4:57:G:H8	52:V4:57:G:O5'	1.93	0.52
1:13:1443:A:N7	1:13:1445:A:C4	2.78	0.52
3:B5:63:LYS:HA	3:B5:72:LYS:HA	1.92	0.52
7:8I:70:ARG:O	7:8I:71:PHE:HD1	1.93	0.52
8:22:141:VAL:HA	8:22:144:SER:HB2	1.92	0.52
1:1G:688:G:N3	1:1G:1251:A:H2	2.08	0.52
1:1G:1773:C:H4'	1:1G:1774:A:O5'	2.09	0.52
1:1G:1951:A:O4'	1:1G:1989:C:H4'	2.10	0.52
10:58:6:PRO:HG3	10:58:41:ASP:HB2	1.91	0.52
12:Q8:14:VAL:O	12:Q8:15:LYS:HD3	2.09	0.52
15:1H:417:G:H22	30:78:72:PRO:HD3	1.73	0.52
15:1H:1254:G:C6	15:1H:1255:C:C4	2.98	0.52
15:1H:1535:A:H2'	15:1H:1536:G:H8	1.74	0.52
15:1H:1691:A:H2'	15:1H:1692:G:O4'	2.10	0.52
15:1H:1828:U:H2'	15:1H:1829:C:H6	1.74	0.52
15:14:661:C:H2'	15:14:662:C:C6	2.44	0.52
15:14:725:A:H1'	15:14:2458:C:H1'	1.92	0.52
23:21:32:PRO:HD2	23:21:50:GLY:O	2.09	0.52
23:21:119:ARG:HD3	23:21:160:TYR:HB2	1.92	0.52
27:C8:69:CYS:HG	27:C8:79:PHE:HD2	1.56	0.52
27:C8:88:ILE:O	27:C8:90:VAL:N	2.43	0.52
28:I5:14:ILE:HG12	28:I5:33:VAL:HG21	1.90	0.52
30:35:47:ASP:HB3	30:35:49:ARG:N	2.25	0.52
40:49:124:SER:HB2	40:49:131:TYR:CE1	2.45	0.52
44:1E:71:VAL:HG12	44:1E:93:VAL:HB	1.90	0.52
47:51:137:ASP:HB3	47:51:140:LYS:HB3	1.91	0.52
1:13:1196:G:H2'	1:13:1197:G:O4'	2.10	0.52
1:13:1354:G:H2'	1:13:1355:C:H6	1.74	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:13:1581:A:N6	29:AI:77:THR:O	2.43	0.52
1:13:1953:C:H2'	1:13:1954:C:C6	2.45	0.52
4:11:65:ILE:HG12	4:11:67:PHE:CZ	2.45	0.52
6:2A:56:GLY:O	6:2A:89:ALA:HB3	2.10	0.52
1:1G:1882:G:OP1	48:1A:45:ARG:NH2	2.43	0.52
15:1H:408:U:H2'	15:1H:409:G:H8	1.75	0.52
15:1H:1207:C:H4'	17:L8:32:GLN:HB2	1.92	0.52
15:1H:1499:A:H5'	15:1H:1500:G:OP2	2.10	0.52
15:1H:1582:C:H3'	15:1H:1583:G:C5'	2.40	0.52
15:1H:2417:C:O5'	15:1H:2417:C:C6	2.63	0.52
15:14:685:G:H22	15:14:698:C:H42	1.55	0.52
15:14:2041:U:H1'	36:J5:6:VAL:HG13	1.91	0.52
15:14:2153:C:H42	15:14:2185:G:N2	2.07	0.52
22:H8:45:ASP:CG	22:H8:49:ARG:HH11	2.17	0.52
30:78:120:ALA:HB1	30:78:138:LEU:HD22	1.90	0.52
27:85:91:ASP:C	27:85:92:ARG:HG3	2.34	0.52
30:35:121:LYS:O	30:35:123:LEU:N	2.37	0.52
34:52:74:ASP:OD1	34:52:74:ASP:N	2.42	0.52
37:BA:37:SER:O	37:BA:41:ILE:HG23	2.10	0.52
43:E8:86:LEU:HD12	43:E8:87:PRO:HD2	1.91	0.52
47:51:10:PRO:HB2	47:51:50:VAL:HG13	1.91	0.52
44:12:16:HIS:CD2	44:12:210:SER:HA	2.45	0.52
44:12:134:GLU:O	44:12:138:LEU:HG	2.10	0.52
44:12:166:ASP:OD2	44:12:169:LYS:HB2	2.10	0.52
1:13:1418:U:H5	1:13:1421:A:OP2	1.93	0.52
2:A8:27:SER:HA	2:A8:88:ASP:CB	2.40	0.52
6:2A:85:ARG:NH1	1:1G:1336:C:OP1	2.43	0.52
1:1G:1161:A:N7	1:1G:1834:G:H4'	2.24	0.52
1:1G:1265:U:H2'	1:1G:1266:G:C8	2.45	0.52
1:1G:1950:G:H2'	1:1G:1951:A:C8	2.45	0.52
1:1G:2071:G:N2	16:75:119:LYS:HB2	2.24	0.52
10:58:96:GLU:HG2	10:58:97:ARG:H	1.70	0.52
15:1H:2835:G:OP1	23:21:159:HIS:NE2	2.41	0.52
15:14:912:A:H2'	15:14:913:G:H8	1.75	0.52
15:14:956:C:O2'	15:14:957:A:H5'	2.10	0.52
15:14:1346:C:OP2	56:14:3667:HOH:O	2.19	0.52
15:14:1583:G:H3'	15:14:1584:U:C5'	2.39	0.52
23:21:105:THR:HG21	23:21:164:ARG:CZ	2.40	0.52
25:4E:69:VAL:O	25:4E:71:LEU:N	2.43	0.52
32:31:41:LEU:HA	32:31:44:ARG:HD3	1.92	0.52
46:K8:51:ARG:NH1	46:K8:55:ARG:NH1	2.58	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:51:86:GLU:HG3	47:51:165:ALA:H	1.74	0.52
1:13:1652:C:H42	1:13:1661:G:H22	1.57	0.51
6:2A:29:ILE:CG2	6:2A:44:SER:HB2	2.35	0.51
1:1G:994:A:H5'	1:1G:994:A:C8	2.40	0.51
1:1G:1359:G:C5	1:1G:1360:G:H1'	2.45	0.51
1:1G:1760:C:H2'	1:1G:1761:G:C8	2.44	0.51
15:1H:342:G:C2	15:1H:343:C:C2	2.98	0.51
15:1H:403:C:H2'	15:1H:404:C:C6	2.45	0.51
15:1H:1854:U:H4'	15:1H:1855:A:OP2	2.10	0.51
15:14:332:G:N2	15:14:334:G:H3'	2.25	0.51
15:14:903:G:H2'	15:14:904:G:C8	2.45	0.51
15:14:1892:G:H8	15:14:1892:G:OP2	1.93	0.51
15:14:2556:A:H4'	15:14:2780:A:N1	2.24	0.51
16:75:4:GLY:O	16:75:5:ALA:C	2.52	0.51
27:85:8:VAL:O	27:85:12:ARG:HG3	2.09	0.51
32:31:108:LYS:O	32:31:112:MET:HG3	2.11	0.51
32:39:132:VAL:C	32:39:134:GLY:H	2.18	0.51
38:88:59:ARG:HA	38:88:59:ARG:NE	2.26	0.51
41:6I:17:ARG:HD3	41:6I:26:GLU:HG3	1.90	0.51
44:1E:102:LEU:HB3	44:1E:180:LEU:HD12	1.91	0.51
45:98:24:GLN:HE22	45:98:36:THR:HG21	1.75	0.51
52:W1:19:G:H3'	52:W1:20:U:H5	1.75	0.51
52:W4:1:G:H21	52:W4:73:A:H61	1.58	0.51
52:X4:43:C:O2'	52:X4:44:G:OP1	2.27	0.51
1:13:1235:G:N3	1:13:1261:A:N6	2.58	0.51
1:13:1807:A:OP1	9:8E:103:THR:OG1	2.26	0.51
1:13:1975:U:N3	1:13:2002:A:H2	1.97	0.51
8:22:199:LYS:HB3	8:22:201:TYR:HE1	1.75	0.51
9:8E:9:ARG:HB3	9:8E:14:VAL:HG22	1.91	0.51
1:1G:800:A:H1'	1:1G:985:A:C5	2.45	0.51
1:1G:1467:G:H1	1:1G:1471:C:N4	2.07	0.51
1:1G:1755:G:H1'	1:1G:1776:U:C2	2.45	0.51
1:1G:1874:U:H2'	1:1G:1875:A:O4'	2.10	0.51
11:G8:35:TYR:CE2	11:G8:69:ALA:HB3	2.45	0.51
16:B8:24:PRO:HA	16:B8:49:VAL:HG13	1.92	0.51
15:14:311:C:H2'	15:14:312:C:C6	2.45	0.51
15:14:471:A:H1'	15:14:1249:C:O4'	2.09	0.51
15:14:1252:A:C2	15:14:1290:A:N1	2.78	0.51
15:14:2704:U:P	15:14:2735:G:H22	2.31	0.51
18:69:75:LEU:HD13	18:69:77:LEU:N	2.26	0.51
24:4I:8:GLU:OE2	24:4I:22:ILE:HA	2.09	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:M8:15:ILE:HG23	28:M8:20:ASN:ND2	2.25	0.51
35:D8:41:GLY:O	35:D8:45:THR:HA	2.09	0.51
35:D8:44:LYS:HA	35:D8:44:LYS:HE2	1.91	0.51
32:39:192:LEU:HD22	32:39:194:MET:HE2	1.92	0.51
35:95:35:LEU:HB3	35:95:37:VAL:HG13	1.91	0.51
35:95:43:GLU:O	35:95:43:GLU:HG2	2.10	0.51
38:45:78:PRO:HG2	38:45:81:VAL:HG11	1.93	0.51
46:G5:52:ASP:N	46:G5:52:ASP:OD1	2.40	0.51
52:V1:62:C:O5'	52:V1:62:C:H6	1.93	0.51
1:13:1756:C:O2'	1:13:1757:C:H5"	2.10	0.51
1:1G:1052:A:N7	1:1G:1054:G:N3	2.58	0.51
1:1G:1153:G:H2'	1:1G:1154:C:C6	2.45	0.51
1:1G:1495:A:C4	1:1G:1497:G:C8	2.98	0.51
1:1G:1944:C:H5"	1:1G:1945:A:OP2	2.09	0.51
7:8A:45:HIS:O	7:8A:73:VAL:HG12	2.09	0.51
15:1H:804:C:H2'	15:1H:805:C:H6	1.74	0.51
15:1H:1583:G:H21	15:1H:1584:U:H5"	1.75	0.51
15:1H:1625:C:H2'	15:1H:1626:U:H6	1.74	0.51
15:1H:1768:U:H2'	15:1H:1769:G:O4'	2.10	0.51
15:1H:2104:U:OP1	39:J8:21:ARG:NH2	2.41	0.51
15:1H:2577:U:H1'	21:68:23:ARG:HD3	1.93	0.51
15:1H:2821:U:H5'	15:1H:2903:G:O6	2.10	0.51
14:32:96:LEU:HD23	14:32:139:ARG:NH1	2.26	0.51
15:14:643:G:OP1	32:39:40:GLN:HG3	2.11	0.51
15:14:1514:C:O2'	15:14:1577:A:H8	1.92	0.51
15:14:1538:U:HO2'	15:14:1539:A:H8	1.56	0.51
15:14:1903:G:H2'	15:14:1904:C:C6	2.45	0.51
15:14:2319:G:H22	15:14:2327:U:H3	1.58	0.51
22:H8:117:LEU:HD22	22:H8:118:GLN:N	2.22	0.51
17:H5:46:ASN:O	17:H5:50:VAL:HG22	2.09	0.51
18:69:7:GLU:HG3	18:69:8:PRO:HD2	1.93	0.51
22:D5:40:ASP:OD1	22:D5:43:GLU:HG2	2.09	0.51
38:88:59:ARG:C	38:88:61:GLY:H	2.18	0.51
36:J5:25:LEU:HD12	43:A5:19:LEU:HB3	1.92	0.51
44:12:27:LYS:HZ2	44:12:195:ASP:HB2	1.76	0.51
45:55:57:ARG:NE	45:55:59:ASP:OD1	2.25	0.51
1:13:1339:G:H5"	34:5E:54:LYS:HE2	1.92	0.51
1:1G:1895:A:O2'	20:1B:19:GLY:HA2	2.11	0.51
1:1G:1901:G:H2'	1:1G:1902:A:H8	1.75	0.51
10:58:73:THR:HB	10:58:82:LEU:HD11	1.92	0.51
4:19:242:ARG:HG2	4:19:242:ARG:NH1	2.20	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:1H:20:C:OP1	27:C8:22:LYS:HE2	2.10	0.51
15:1H:2050:C:N4	56:1H:3689:HOH:O	2.30	0.51
15:1H:2329:C:H2'	15:1H:2330:G:H8	1.74	0.51
15:1H:2704:U:OP2	15:1H:2735:G:N2	2.37	0.51
15:14:1556:A:C2	15:14:1557:A:H1'	2.46	0.51
16:75:4:GLY:N	16:75:7:ILE:HG22	2.25	0.51
18:69:93:THR:O	18:69:97:ILE:HG13	2.10	0.51
31:I8:68:GLU:HG3	31:I8:80:HIS:HB2	1.92	0.51
32:39:153:SER:OG	32:39:190:GLU:HB2	2.11	0.51
38:88:36:ALA:O	38:88:99:PRO:HA	2.10	0.51
35:95:79:VAL:C	35:95:80:GLN:OE1	2.54	0.51
40:41:67:LYS:O	40:41:67:LYS:HE3	2.10	0.51
40:41:107:LEU:HD21	40:41:178:PHE:CD1	2.44	0.51
42:6E:48:LYS:HD2	42:6E:49:ILE:HD13	1.92	0.51
38:45:25:ASP:HB3	38:45:102:VAL:CG2	2.41	0.51
40:49:146:TYR:HA	40:49:149:VAL:HG22	1.91	0.51
44:1E:60:ASP:HB3	44:1E:64:ARG:NH1	2.24	0.51
47:51:6:ARG:HB3	47:51:65:HIS:ND1	2.26	0.51
47:59:20:ALA:HB1	47:59:23:ARG:HG3	1.91	0.51
52:V1:75:C:HO2'	52:V1:76:A:H2	1.59	0.51
1:13:950:G:H1'	1:13:1237:A:C2	2.45	0.51
1:13:1672:A:C5	1:13:1673:C:H1'	2.46	0.51
1:13:1776:U:H2'	1:13:1777:C:O4'	2.11	0.51
8:22:29:TYR:OH	33:5A:54:PRO:HD2	2.10	0.51
1:1G:1158:G:O6	13:3A:49:ASN:HA	2.10	0.51
1:1G:1753:U:O4	48:1A:5:ARG:NH2	2.44	0.51
14:3E:194:LEU:HD11	34:52:17:SER:OG	2.10	0.51
9:82:97:LYS:HB3	9:82:98:PRO:HD3	1.93	0.51
15:1H:311:C:H42	15:1H:380:G:H1	1.58	0.51
15:1H:470:G:C4	15:1H:472:C:C5	2.98	0.51
12:M5:61:LEU:HD23	15:14:618:G:H4'	1.92	0.51
15:14:1207:C:H4'	17:H5:32:GLN:HB2	1.92	0.51
15:14:2349:G:O6	31:E5:74:ARG:NH1	2.39	0.51
15:14:2769:A:H2'	15:14:2770:U:O4'	2.11	0.51
32:31:101:LEU:CD2	32:31:102:PRO:HD2	2.39	0.51
29:AA:15:LEU:O	29:AA:19:VAL:HG23	2.11	0.51
37:BI:75:ASN:HA	37:BI:78:ALA:HB3	1.92	0.51
48:1I:6:ILE:HG22	48:1I:98:ILE:HG12	1.93	0.51
52:V1:18:G:HO2'	52:V1:19:G:P	2.33	0.51
1:1G:833:C:H2'	1:1G:834:U:O4'	2.11	0.51
1:1G:1377:C:H4'	1:1G:1378:C:O5'	2.11	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:G8:81:LYS:HE3	15:1H:327:C:O5'	2.10	0.51
14:3E:84:LYS:HD3	14:3E:85:LYS:O	2.11	0.51
15:1H:599:C:H4'	15:1H:600:A:O5'	2.11	0.51
15:1H:1637:C:O2'	15:1H:1638:C:H5'	2.09	0.51
15:1H:1639:U:H2'	15:1H:1640:G:H8	1.74	0.51
15:1H:2302:A:C2	15:1H:2361:A:H2	2.29	0.51
15:1H:2572:G:H2'	15:1H:2573:C:C6	2.46	0.51
15:1H:2698:C:H4'	23:21:13:ARG:NH2	2.26	0.51
14:32:7:PRO:HB2	14:32:10:ARG:HD2	1.91	0.51
15:14:615:A:H2'	15:14:616:C:C6	2.45	0.51
15:14:1298:U:P	56:14:3649:HOH:O	2.69	0.51
15:14:2510:G:H5'	38:45:81:VAL:O	2.11	0.51
24:4I:74:VAL:O	24:4I:78:ILE:HG12	2.11	0.51
23:29:12:THR:O	23:29:23:VAL:HG22	2.11	0.51
25:42:78:HIS:HA	50:72:105:ARG:HG2	1.92	0.51
32:31:196:LEU:C	32:31:197:ASP:O	2.52	0.51
34:52:33:TYR:CE2	34:52:78:GLU:HG3	2.46	0.51
35:95:46:VAL:HG21	35:95:52:VAL:HG21	1.91	0.51
40:41:131:TYR:O	40:41:159:VAL:HG22	2.11	0.51
44:1E:121:LEU:O	44:1E:139:LYS:NZ	2.44	0.51
47:51:170:ARG:C	47:51:171:LEU:HD12	2.36	0.51
47:59:30:LYS:HD3	47:59:79:VAL:C	2.36	0.51
52:V1:21:A:H2'	52:V1:22:G:H5"	1.91	0.51
1:13:731:U:H6	1:13:731:U:P	2.34	0.51
1:13:1171:G:H5'	14:3E:41:GLY:HA3	1.93	0.51
2:A8:28:VAL:HG11	2:A8:98:VAL:HG13	1.91	0.51
1:1G:1312:G:C6	1:1G:1313:A:C6	2.99	0.51
1:1G:1814:G:O5'	9:82:113:LYS:NZ	2.43	0.51
12:Q8:30:ARG:HH22	15:1H:2407:A:P	2.34	0.51
14:3E:85:LYS:HG2	14:3E:86:LYS:H	1.75	0.51
15:1H:143:C:H2'	15:1H:144:C:H6	1.74	0.51
15:1H:1174:A:H4'	15:1H:1175:A:O5'	2.11	0.51
15:1H:1925:A:C5'	15:1H:1925:A:C8	2.94	0.51
15:14:1053:C:H2'	15:14:1054:C:C6	2.45	0.51
15:14:2212:G:C5	15:14:2213:C:C4	2.98	0.51
15:14:2291:G:OP1	38:45:84:GLY:HA2	2.11	0.51
15:14:2909:U:H5'	15:14:2910:U:OP2	2.11	0.51
22:H8:45:ASP:OD2	22:H8:49:ARG:NH1	2.39	0.51
23:21:197:ILE:HD11	23:21:199:ARG:NE	2.25	0.51
25:42:53:LEU:O	25:42:57:LYS:HB2	2.11	0.51
26:1J:2:A:H2'	26:1J:3:U:C6	2.46	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:1J:6:C:H42	26:1J:119:G:H1	1.58	0.51
26:1J:14:C:N3	31:E5:74:ARG:NH2	2.57	0.51
30:35:126:VAL:HA	30:35:145:PRO:HD2	1.92	0.51
32:39:178:PRO:HB2	32:39:201:VAL:CG1	2.41	0.51
40:49:42:GLY:O	40:49:43:LEU:HD13	2.09	0.51
43:A5:1:MET:CE	43:A5:2:GLU:H	2.23	0.51
50:7E:116:LYS:HG3	50:7E:129:VAL:HG11	1.93	0.51
1:13:1088:A:P	1:13:1115:G:H22	2.34	0.51
1:13:1932:G:H8	1:13:1932:G:OP2	1.94	0.51
1:13:1963:C:C6	1:13:1963:C:H5"	2.45	0.51
1:13:2025:C:H4'	1:13:2026:A:OP2	2.09	0.51
1:1G:1588:A:C2	1:1G:1592:A:C2	2.98	0.51
10:58:96:GLU:HB2	10:58:122:VAL:HG12	1.92	0.51
10:58:130:HIS:CA	10:58:134:ARG:HH12	2.23	0.51
2:65:25:ARG:NH2	26:1J:11:G:OP1	2.44	0.51
12:Q8:13:ARG:HD2	30:78:59:LEU:O	2.11	0.51
13:3I:20:LYS:HB3	13:3I:20:LYS:NZ	2.26	0.51
15:1H:274:G:OP1	18:61:57:ARG:NH2	2.44	0.51
15:1H:433:U:H2'	15:1H:433:U:O2	2.10	0.51
15:1H:632:U:N3	15:1H:648:A:C2	2.69	0.51
15:1H:1257:G:N2	15:1H:1258:A:H62	2.09	0.51
15:1H:1434:G:HO2'	15:1H:1445:U:H6	1.55	0.51
15:1H:1466:C:H2'	15:1H:1467:G:O4'	2.10	0.51
15:1H:2805:C:H1'	15:1H:2904:A:H2	1.76	0.51
14:32:30:LYS:HA	14:32:33:MET:O	2.11	0.51
15:14:1309:G:H2'	15:14:1310:C:C6	2.46	0.51
15:14:1534:G:H2'	15:14:1535:A:H8	1.75	0.51
15:14:1828:U:H2'	15:14:1829:C:H6	1.75	0.51
15:14:2352:G:C2	15:14:2353:G:C8	2.99	0.51
25:4E:10:MET:SD	25:4E:13:ILE:HD12	2.51	0.51
27:C8:90:VAL:O	27:C8:91:ASP:C	2.53	0.51
28:M8:25:TYR:CE1	40:41:2:PRO:HB3	2.45	0.51
30:78:6:LEU:HD11	32:31:33:LEU:HB3	1.93	0.51
29:AA:23:ASN:ND2	29:AA:27:GLU:OE1	2.40	0.51
40:41:46:ALA:HB2	40:41:52:ILE:HB	1.93	0.51
37:BA:26:ASN:O	37:BA:30:LYS:HB2	2.10	0.51
48:1I:38:ILE:HG23	48:1I:71:LEU:HB3	1.93	0.51
47:59:129:THR:HB	47:59:130:ARG:HG3	1.93	0.51
1:13:1349:C:OP2	1:13:1350:G:O2'	2.22	0.51
1:13:1806:A:H2'	1:13:1807:A:O4'	2.10	0.51
2:A8:56:LEU:O	2:A8:58:LEU:HD23	2.10	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:11:145:VAL:HG12	4:11:146:GLU:O	2.10	0.51
4:11:239:ARG:O	4:11:240:ALA:HB2	2.09	0.51
1:1G:819:A:H2'	1:1G:820:U:C6	2.45	0.51
1:1G:1352:U:H5	1:1G:1478:G:O2'	1.93	0.51
1:1G:1599:G:N2	1:1G:1990:C:OP2	2.29	0.51
10:58:23:LEU:HB3	15:1H:1188:C:OP1	2.11	0.51
11:G8:59:GLY:HA2	15:1H:511:A:O2'	2.11	0.51
12:Q8:22:VAL:HG22	12:Q8:47:LYS:H	1.75	0.51
15:1H:810:A:C8	56:1H:3649:HOH:O	2.55	0.51
15:1H:869:A:H2'	15:1H:870:A:O4'	2.11	0.51
15:1H:1061:C:O2'	15:1H:1062:U:H5'	2.10	0.51
14:32:13:ARG:C	14:32:15:GLU:H	2.18	0.51
15:14:1009:G:H2'	15:14:1010:U:C6	2.46	0.51
15:14:2877:G:OP1	16:75:119:LYS:HD3	2.11	0.51
21:68:53:LYS:HA	21:68:53:LYS:HE3	1.91	0.51
25:42:150:ARG:O	25:42:154:GLY:HA2	2.11	0.51
30:35:85:LEU:HA	30:35:88:LEU:HB2	1.93	0.51
41:6I:7:GLU:OE1	41:6I:38:ARG:NH2	2.43	0.51
42:6E:15:ASP:OD1	42:6E:44:TYR:OH	2.29	0.51
46:K8:34:GLU:O	46:K8:38:GLN:HG3	2.11	0.51
6:2I:30:VAL:HG21	6:2I:65:ALA:HA	1.92	0.51
49:7A:40:ASP:HB3	49:7A:48:TRP:HB2	1.93	0.51
52:X4:42:C:C2'	52:X4:43:C:H5'	2.41	0.51
1:13:965:G:OP1	37:BI:70:SER:OG	2.17	0.51
1:13:1104:G:H2'	1:13:1105:G:H8	1.76	0.51
1:13:1421:A:H4'	1:13:1422:U:O5'	2.11	0.51
1:13:1756:C:H5"	9:8E:16:ARG:HH22	1.75	0.51
4:11:11:PRO:O	4:11:13:ARG:N	2.43	0.51
9:8E:104:ARG:HG2	9:8E:105:ASP:N	2.26	0.51
1:1G:1188:A:H4'	1:1G:1189:U:H5"	1.93	0.51
1:1G:1827:C:H5'	1:1G:1828:A:H5'	1.91	0.51
2:65:41:ASP:OD1	2:65:44:LYS:HB2	2.10	0.51
11:G8:93:GLY:O	11:G8:94:LYS:HB2	2.11	0.51
15:1H:1103:G:H1'	15:1H:1133:A:H2	1.76	0.51
15:1H:2302:A:C2	15:1H:2361:A:C2	2.98	0.51
15:1H:2484:A:N3	15:1H:2484:A:H5'	2.26	0.51
15:1H:2663:C:H2'	15:1H:2664:U:C6	2.46	0.51
15:1H:2710:C:H2'	15:1H:2711:U:C6	2.46	0.51
14:32:107:ARG:HH22	14:32:196:LEU:HD21	1.74	0.51
15:14:1160:G:H2'	15:14:1161:U:C6	2.46	0.51
15:14:1301:G:O4'	27:85:33:ARG:HD3	2.10	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:14:1426:G:OP2	56:14:3668:HOH:O	2.19	0.51
15:14:1931:G:H5"	15:14:1954:G:O2'	2.10	0.51
15:14:2084:A:H5"	15:14:2085:A:OP2	2.10	0.51
15:14:2159:A:O2'	15:14:2184:G:N2	2.44	0.51
24:4I:7:VAL:H	40:41:115:ARG:NH1	2.09	0.51
23:29:111:ARG:HA	45:55:2:ARG:NH1	2.23	0.51
24:4A:97:PRO:HB2	24:4A:101:GLN:HG3	1.92	0.51
29:AA:27:GLU:HG2	29:AA:47:HIS:NE2	2.26	0.51
36:J5:28:PRO:HD2	43:A5:35:ILE:HG23	1.93	0.51
43:E8:79:GLY:CA	43:E8:100:THR:HG22	2.41	0.51
39:F5:14:VAL:HG11	39:F5:39:LYS:HD3	1.92	0.51
46:K8:18:PRO:O	46:K8:22:GLU:HG3	2.11	0.51
48:1I:89:ASP:OD1	48:1I:89:ASP:N	2.39	0.51
52:V1:18:G:O2'	52:V1:19:G:OP1	2.26	0.51
52:W4:64:A:OP2	52:W4:64:A:H8	1.93	0.51
1:13:1312:G:C6	1:13:1313:A:C6	3.00	0.50
3:B5:80:ILE:HG13	3:B5:80:ILE:O	2.11	0.50
11:G8:100:ALA:HB1	11:G8:101:LYS:CB	2.41	0.50
15:1H:49:U:H4'	15:1H:50:G:OP2	2.11	0.50
15:1H:683:C:H2'	15:1H:684:G:C8	2.45	0.50
15:1H:1073:G:C4	15:1H:1183:C:H1'	2.46	0.50
15:1H:1314:A:H3'	36:N8:19:ARG:NH1	2.26	0.50
15:1H:1582:C:H2'	15:1H:1583:G:C2	2.46	0.50
15:1H:1585:A:OP2	15:1H:1586:C:C4	2.64	0.50
15:1H:2277:U:OP1	15:1H:2402:U:O2'	2.19	0.50
12:M5:50:LEU:HB3	12:M5:53:PRO:HD3	1.93	0.50
18:61:40:THR:HB	18:61:43:ASN:H	1.75	0.50
15:14:1258:A:H5'	15:14:1260:G:H5'	1.92	0.50
15:14:1689:U:C2'	15:14:1690:C:H5'	2.41	0.50
15:14:1925:A:N1	15:14:1995:A:C6	2.79	0.50
15:14:2105:G:O2'	15:14:2106:C:H5'	2.11	0.50
15:14:2168:C:H2'	15:14:2169:U:H4'	1.92	0.50
15:14:2324:A:C6	15:14:2325:A:C6	2.99	0.50
15:14:2552:U:H2'	15:14:2553:C:H6	1.75	0.50
22:D5:76:LEU:H	22:D5:76:LEU:HD23	1.76	0.50
28:M8:1:MET:HG3	40:41:98:ARG:NH2	2.26	0.50
31:I8:27:GLU:HG3	31:I8:69:PHE:H	1.75	0.50
30:35:57:THR:HB	30:35:60:MET:H	1.74	0.50
37:BI:59:ALA:O	37:BI:63:ILE:HG13	2.12	0.50
39:J8:83:GLU:HG2	39:J8:85:LEU:H	1.75	0.50
40:41:109:VAL:HG11	40:41:142:PRO:HD3	1.93	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:62:97:GLN:HG3	42:62:98:SER:N	2.26	0.50
46:K8:50:ILE:HD12	46:K8:51:ARG:H	1.75	0.50
3:F8:24:GLY:HA3	3:F8:82:GLN:HE22	1.76	0.50
1:13:1504:G:OP2	13:3I:12:ARG:NH2	2.45	0.50
1:1G:1755:G:H2'	1:1G:1755:G:N3	2.26	0.50
1:1G:1864:C:O2'	1:1G:1927:G:N2	2.41	0.50
2:65:86:ALA:O	2:65:87:PHE:HB2	2.11	0.50
9:82:105:ASP:OD1	9:82:107:ARG:HD3	2.11	0.50
15:1H:390:G:H2'	15:1H:391:G:C8	2.46	0.50
15:1H:1931:G:H5"	15:1H:1954:G:O2'	2.12	0.50
12:M5:59:LYS:HZ1	30:35:50:ARG:HG2	1.76	0.50
18:61:29:TYR:O	18:61:32:PRO:HD2	2.11	0.50
15:14:897:G:N9	15:14:980:A:H8	2.09	0.50
15:14:1158:G:O2'	15:14:1159:A:O4'	2.20	0.50
15:14:1159:A:H4'	47:59:3:ARG:HD3	1.93	0.50
15:14:1803:G:O2'	15:14:1983:C:OP1	2.28	0.50
15:14:1901:A:H2'	15:14:1902:A:H8	1.74	0.50
15:14:2476:C:H2'	15:14:2477:U:C6	2.46	0.50
27:C8:104:GLN:NE2	27:C8:105:VAL:HG23	2.26	0.50
23:29:51:PHE:O	23:29:52:LEU:HB2	2.09	0.50
32:31:107:LYS:HD3	32:31:206:ILE:HA	1.92	0.50
34:5E:44:GLY:HA2	34:5E:59:TYR:CZ	2.47	0.50
37:BI:16:HIS:O	37:BI:19:SER:N	2.45	0.50
39:J8:7:ILE:HD12	39:J8:91:LYS:HZ1	1.76	0.50
41:6I:7:GLU:O	41:6I:11:VAL:HG23	2.12	0.50
8:2E:26:LYS:HG3	8:2E:27:LYS:HZ2	1.76	0.50
50:72:116:LYS:HD2	50:72:129:VAL:HG11	1.93	0.50
51:Y4:34:G:C6	51:Y4:35:A:C6	3.00	0.50
1:13:1408:C:H2'	1:13:1409:A:O4'	2.11	0.50
7:8I:7:THR:OG1	7:8I:58:GLU:HG2	2.11	0.50
1:1G:844:U:H2'	1:1G:845:C:H6	1.76	0.50
1:1G:1115:G:H1'	1:1G:1116:U:H5	1.76	0.50
1:1G:1754:U:O2'	1:1G:1755:G:OP2	2.28	0.50
1:1G:2165:G:C6	51:Y4:29:G:N2	2.72	0.50
2:65:95:HIS:CD2	26:1J:50:A:H4'	2.45	0.50
15:1H:139:A:H8	15:1H:1457:C:HO2'	1.57	0.50
15:1H:665:G:H2'	15:1H:666:U:C6	2.46	0.50
15:1H:1273:C:O2'	35:D8:85:LYS:HA	2.10	0.50
15:1H:1341:U:H2'	15:1H:1342:C:C6	2.46	0.50
15:1H:2285:G:OP2	56:1H:3667:HOH:O	2.18	0.50
16:B8:1:MET:HE3	23:21:27:LEU:HD22	1.93	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:L8:46:ASN:O	17:L8:50:VAL:HG22	2.11	0.50
15:14:2253:G:N7	56:14:3703:HOH:O	2.34	0.50
15:14:2770:U:H6	15:14:2770:U:H5"	1.74	0.50
23:29:52:LEU:O	23:29:75:VAL:N	2.40	0.50
32:39:24:LEU:HD12	32:39:25:PRO:HD3	1.93	0.50
40:49:95:ARG:O	40:49:99:MET:HG2	2.10	0.50
48:1I:84:GLN:O	48:1I:88:LEU:HB2	2.11	0.50
49:7I:5:ARG:HE	49:7I:22:THR:HG21	1.76	0.50
46:G5:40:SER:C	46:G5:42:GLY:H	2.19	0.50
1:13:1734:G:C6	1:13:1735:C:C4	3.00	0.50
1:13:2069:G:H5"	1:13:2070:G:H5'	1.93	0.50
4:11:108:PRO:HD2	4:11:111:LEU:HG	1.94	0.50
1:1G:695:U:O2	1:1G:1003:G:H1'	2.11	0.50
1:1G:1700:G:C5	1:1G:1701:U:C4	2.99	0.50
10:58:137:LYS:NZ	10:58:138:LEU:HB2	2.26	0.50
4:19:241:PRO:HB2	15:14:1928:G:OP1	2.10	0.50
15:1H:1042:C:O2'	15:1H:1044:A:OP1	2.29	0.50
15:1H:1126:U:H1'	15:1H:1136:A:C2	2.47	0.50
15:1H:1558:C:H2'	15:1H:1560:A:C8	2.47	0.50
15:1H:2454:A:H5'	15:1H:2454:A:C8	2.47	0.50
15:1H:2569:U:H2'	15:1H:2570:U:C6	2.46	0.50
11:C5:71:LYS:NZ	15:14:354:G:OP2	2.44	0.50
12:M5:14:VAL:HG13	12:M5:22:VAL:HG13	1.93	0.50
18:61:114:LEU:HD12	18:61:114:LEU:N	2.27	0.50
15:14:10:G:C6	15:14:2644:A:N7	2.80	0.50
15:14:383:U:H2'	15:14:384:A:H8	1.76	0.50
15:14:1381:G:H5'	15:14:1381:G:C8	2.46	0.50
15:14:1434:G:HO2'	15:14:1445:U:H6	1.60	0.50
15:14:1493:G:N2	15:14:1598:C:C2	2.80	0.50
15:14:2032:C:H2'	15:14:2033:C:C6	2.47	0.50
16:75:45:PHE:CE2	16:75:74:ARG:HB2	2.46	0.50
23:21:52:LEU:O	23:21:75:VAL:N	2.38	0.50
18:69:90:GLY:O	18:69:121:LYS:HD2	2.12	0.50
24:4I:3:ARG:NE	24:4I:9:ILE:HD11	2.22	0.50
22:D5:158:PRO:HB2	22:D5:159:PRO:HD2	1.93	0.50
28:I5:20:ASN:OD1	28:I5:36:CYS:HB2	2.10	0.50
32:39:155:LEU:HD23	32:39:186:ILE:HD13	1.93	0.50
38:88:20:ALA:CB	38:88:99:PRO:HD2	2.41	0.50
40:41:135:LEU:N	40:41:135:LEU:HD12	2.27	0.50
42:6E:15:ASP:HB3	42:6E:19:GLY:H	1.76	0.50
44:1E:204:ASN:ND2	44:1E:207:ALA:HB3	2.26	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:51:59:ARG:O	47:51:63:SER:OG	2.26	0.50
47:51:83:TYR:HA	47:51:135:GLY:H	1.74	0.50
44:12:78:GLN:C	44:12:94:ASN:HD21	2.18	0.50
8:2E:10:PHE:HD2	8:2E:11:ARG:NH1	2.10	0.50
52:V1:15:G:C6	52:V1:48:C:N4	2.80	0.50
1:13:910:C:H2'	1:13:911:A:C8	2.47	0.50
1:13:1048:G:H2'	1:13:1049:A:C8	2.45	0.50
9:8E:114:TYR:H	9:8E:114:TYR:HD1	1.60	0.50
1:1G:674:G:O2'	1:1G:937:U:OP1	2.24	0.50
1:1G:1314:G:N2	1:1G:1334:U:O4	2.35	0.50
1:1G:1574:G:OP2	24:4A:102:ARG:NH2	2.44	0.50
1:1G:1950:G:H4'	1:1G:1990:C:N3	2.25	0.50
1:1G:1954:C:H2'	1:1G:1955:C:C6	2.47	0.50
13:3I:71:PRO:O	13:3I:102:ARG:NH1	2.41	0.50
15:1H:350:G:O2'	15:1H:351:G:H5'	2.12	0.50
15:1H:845:C:H2'	15:1H:846:C:C6	2.46	0.50
15:1H:970:U:H2'	15:1H:971:C:C6	2.46	0.50
15:1H:1579:G:H2'	15:1H:1580:C:C6	2.47	0.50
15:1H:1718:A:H4'	15:1H:1719:A:O5'	2.11	0.50
15:1H:2485:G:H5'	38:88:56:ARG:NH2	2.23	0.50
15:1H:2558:G:H2'	15:1H:2559:G:C8	2.46	0.50
15:1H:2582:G:H2'	15:1H:2583:C:C6	2.47	0.50
10:15:48:MET:O	10:15:48:MET:SD	2.69	0.50
18:61:3:VAL:HG12	18:61:38:LEU:HA	1.92	0.50
15:14:375:U:H2'	15:14:376:G:O4'	2.10	0.50
15:14:645:C:OP2	32:39:103:LYS:HE2	2.11	0.50
15:14:1042:C:OP1	27:85:53:ARG:NH2	2.44	0.50
15:14:2081:G:O3'	36:J5:8:LYS:NZ	2.44	0.50
15:14:2421:U:C2	30:35:72:PRO:HB2	2.47	0.50
15:14:2489:C:H5'	15:14:2490:C:OP2	2.11	0.50
24:4I:4:ILE:HG22	24:4I:5:ALA:H	1.75	0.50
22:D5:16:SER:O	22:D5:20:ARG:HG3	2.11	0.50
23:29:11:MET:HA	23:29:24:THR:HA	1.93	0.50
31:E5:36:ILE:HG12	31:E5:37:LEU:N	2.26	0.50
34:52:68:PRO:HG2	34:52:71:ARG:HG3	1.93	0.50
36:J5:51:TYR:HD1	36:J5:52:TYR:CZ	2.30	0.50
38:45:74:TYR:O	38:45:90:VAL:O	2.29	0.50
40:49:63:ILE:HD12	40:49:141:PHE:CD2	2.47	0.50
42:62:65:ALA:O	42:62:69:VAL:HG23	2.12	0.50
45:98:12:ARG:HD3	45:98:16:HIS:CG	2.47	0.50
52:V4:23:A:H2'	52:V4:24:G:H8	1.76	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:13:1368:C:O2'	41:6I:42:HIS:ND1	2.33	0.50
1:13:1495:A:C2	1:13:1497:G:C6	3.00	0.50
1:13:1523:A:H2'	1:13:1524:A:O4'	2.12	0.50
8:22:36:ASP:HA	8:22:39:ILE:HD12	1.94	0.50
1:1G:1169:G:H2'	1:1G:1170:G:O4'	2.11	0.50
1:1G:1997:C:H2'	1:1G:1998:G:C8	2.46	0.50
1:1G:2074:C:H2'	1:1G:2075:C:O4'	2.12	0.50
4:19:228:PRO:HD3	4:19:235:GLY:HA3	1.94	0.50
15:1H:138:G:N3	15:1H:140:A:N1	2.59	0.50
14:32:170:VAL:HG21	14:32:176:LEU:HD22	1.94	0.50
15:14:126:C:C6	15:14:126:C:H3'	2.46	0.50
15:14:280:G:C6	15:14:281:C:C4	3.00	0.50
15:14:1231:G:O3'	17:H5:29:ARG:NH2	2.45	0.50
15:14:2163:C:O2'	15:14:2179:G:N2	2.40	0.50
18:69:49:ALA:HA	18:69:52:ARG:NH1	2.26	0.50
24:4I:7:VAL:HB	40:41:115:ARG:CZ	2.41	0.50
27:C8:88:ILE:C	27:C8:90:VAL:H	2.19	0.50
26:1J:59:A:C2'	26:1J:60:A:H5'	2.41	0.50
43:E8:28:SER:OG	43:E8:31:GLU:HG2	2.11	0.50
44:1E:28:PHE:O	44:1E:32:ILE:HG22	2.11	0.50
48:1A:78:ASN:OD1	48:1A:80:LYS:HB3	2.12	0.50
48:1I:57:LYS:HD2	48:1I:60:ARG:NH1	2.22	0.50
48:1I:94:VAL:HG12	48:1I:95:GLU:H	1.77	0.50
8:2E:78:GLY:O	8:2E:79:ARG:NE	2.45	0.50
52:X4:61:C:H2'	52:X4:62:C:H6	1.77	0.50
1:13:748:A:H2'	1:13:967:G:N2	2.27	0.50
1:13:755:A:H61	1:13:954:A:H1'	1.76	0.50
1:13:1255:U:N3	1:13:1256:G:N7	2.58	0.50
1:13:2078:C:H4'	1:13:2079:G:O5'	2.12	0.50
8:22:117:ALA:HB2	8:22:200:ALA:HB2	1.93	0.50
1:1G:907:G:H5'	1:1G:909:C:H41	1.76	0.50
1:1G:1600:A:O2'	1:1G:1604:U:N3	2.40	0.50
1:1G:2156:C:N4	1:1G:2157:A:C6	2.79	0.50
15:1H:594:U:C4	15:1H:595:G:C6	3.00	0.50
15:1H:1363:C:H5'	15:1H:1363:C:H6	1.77	0.50
15:1H:1663:A:N6	43:E8:88:ARG:H	2.10	0.50
15:1H:1892:G:O2'	15:1H:1893:A:O5'	2.30	0.50
10:15:4:TYR:CD2	27:85:100:VAL:HG11	2.47	0.50
20:1F:2:GLY:O	20:1F:4:GLY:N	2.45	0.50
15:14:234:A:C2	15:14:245:A:C4	3.00	0.50
15:14:627:G:O2'	15:14:704:A:N6	2.43	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:14:2290:C:H5'	15:14:2290:C:C6	2.47	0.50
18:69:111:PRO:O	18:69:113:ARG:HB2	2.12	0.50
24:4I:82:MET:C	24:4I:84:ILE:H	2.20	0.50
24:4A:79:LYS:HA	24:4A:82:MET:HB3	1.94	0.50
30:78:2:LYS:NZ	30:78:4:SER:H	2.09	0.50
32:31:155:LEU:HD13	32:31:174:VAL:HG22	1.93	0.50
34:5E:33:TYR:CD2	34:5E:75:LEU:HD23	2.46	0.50
30:35:127:ALA:O	30:35:147:LEU:N	2.43	0.50
48:1I:89:ASP:C	48:1I:91:PRO:HD3	2.36	0.50
44:12:102:LEU:HD23	44:12:182:ILE:HD13	1.94	0.50
45:55:19:ALA:O	45:55:23:ASN:ND2	2.45	0.50
8:2E:150:LYS:HD3	8:2E:152:ILE:HD11	1.94	0.50
52:W1:11:C:H2'	52:W1:12:U:C6	2.47	0.50
52:X1:19:G:C5	52:X1:57:G:N2	2.80	0.50
1:13:984:U:O2'	1:13:987:G:O6	2.25	0.50
1:13:1904:C:O2'	1:13:1906:A:H1'	2.12	0.50
1:13:1933:A:H61	1:13:1958:G:H1'	1.77	0.50
2:A8:83:LYS:O	2:A8:110:LEU:HB2	2.11	0.50
7:8I:78:GLU:OE2	7:8I:81:ARG:HD2	2.11	0.50
1:1G:1148:C:H2'	1:1G:1149:A:O4'	2.11	0.50
12:Q8:30:ARG:CG	12:Q8:30:ARG:NH1	2.71	0.50
15:1H:959:A:H2'	38:88:9:TYR:OH	2.12	0.50
15:1H:1314:A:H8	15:1H:1314:A:OP1	1.93	0.50
15:1H:1770:A:H8	15:1H:1771:U:C6	2.30	0.50
15:1H:2133:C:H2'	15:1H:2134:U:O4'	2.12	0.50
10:15:134:ARG:O	10:15:134:ARG:HG2	2.12	0.50
15:14:835:C:O2'	15:14:836:U:H5'	2.12	0.50
15:14:898:A:N1	17:H5:25:ALA:HB2	2.26	0.50
15:14:1093:A:H1'	15:14:1095:G:C4	2.46	0.50
15:14:1108:U:H4'	15:14:1109:U:C5'	2.41	0.50
15:14:1169:C:H2'	15:14:1170:G:O4'	2.12	0.50
15:14:1582:C:C4	15:14:1583:G:H1'	2.47	0.50
15:14:1924:G:N2	15:14:1927:C:C5	2.80	0.50
15:14:2318:G:N3	40:49:132:ASN:ND2	2.60	0.50
15:14:2430:G:H4'	30:35:67:MET:H	1.76	0.50
25:4E:93:PRO:HG2	50:7E:105:ARG:HE	1.77	0.50
26:16:62:C:C2	26:16:63:G:C8	3.00	0.50
22:D5:74:VAL:HG13	22:D5:86:VAL:HG23	1.93	0.50
28:M8:17:GLY:H	28:M8:35:VAL:HA	1.76	0.50
33:5I:15:LYS:HG2	33:5I:16:PHE:CD2	2.46	0.50
30:35:93:GLY:H	30:35:123:LEU:HD22	1.77	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:95:2:PHE:H	35:95:42:GLY:HA3	1.77	0.50
35:95:38:LEU:HD23	35:95:40:LEU:O	2.11	0.50
36:J5:49:CYS:SG	36:J5:50:GLY:N	2.84	0.50
40:41:171:ALA:O	40:41:175:LEU:HG	2.11	0.50
44:1E:44:LEU:HA	44:1E:47:THR:OG1	2.12	0.50
42:62:70:LYS:HD3	42:62:96:GLN:HB3	1.93	0.50
52:V4:18:G:O2'	52:V4:19:G:OP1	2.28	0.50
1:13:720:C:O2'	1:13:734:G:N2	2.30	0.50
1:13:1194:U:H3'	1:13:1195:G:H2'	1.94	0.50
1:13:1805:G:N2	1:13:1808:G:C8	2.80	0.50
1:13:1932:G:O2'	1:13:1958:G:N2	2.45	0.50
8:22:61:ALA:C	8:22:63:ASN:H	2.20	0.50
9:8E:87:GLN:O	9:8E:90:PRO:HD3	2.12	0.50
1:1G:678:A:C2	1:1G:679:A:C4	3.00	0.50
1:1G:1012:G:O2'	1:1G:1014:A:N7	2.43	0.50
1:1G:1870:C:OP1	20:1B:8:THR:HG21	2.12	0.50
15:1H:52:A:H2'	15:1H:53:G:O4'	2.12	0.50
15:1H:1703:G:C6	45:98:9:LYS:HG3	2.47	0.50
15:1H:2323:G:N1	15:1H:2326:A:H2	2.06	0.50
12:M5:50:LEU:O	12:M5:51:ALA:HB3	2.12	0.50
18:61:109:ILE:HB	18:61:130:TYR:CE1	2.46	0.50
15:14:295:C:H5'	15:14:296:C:OP2	2.12	0.50
15:14:562:C:O2'	15:14:563:A:H5'	2.11	0.50
15:14:564:C:H5"	15:14:564:C:H6	1.77	0.50
15:14:1051:G:O2'	15:14:1058:A:N1	2.43	0.50
15:14:1154:G:H2'	15:14:1155:G:C8	2.47	0.50
15:14:2708:A:H2'	15:14:2709:G:C8	2.45	0.50
27:C8:112:ARG:NH2	35:D8:47:VAL:HG13	2.26	0.50
22:D5:25:PRO:O	22:D5:85:HIS:HA	2.12	0.50
24:4A:79:LYS:HG2	24:4A:82:MET:SD	2.52	0.50
30:35:61:ARG:HH21	30:35:61:ARG:HG3	1.77	0.50
35:D8:21:ARG:HG2	35:D8:91:TYR:CD2	2.47	0.50
36:N8:36:CYS:SG	36:N8:48:GLU:O	2.66	0.50
32:39:95:ARG:HG3	32:39:97:TYR:CE1	2.46	0.50
40:49:27:ASN:HB3	40:49:30:GLU:HG3	1.94	0.50
44:1E:226:ARG:HG3	44:1E:227:GLY:H	1.77	0.50
45:98:100:LEU:HD11	45:98:113:LEU:HB2	1.94	0.50
47:51:74:ASN:O	47:51:78:GLY:N	2.44	0.50
47:51:80:SER:C	47:51:81:GLU:HG3	2.37	0.50
50:7E:49:GLU:OE2	50:7E:62:TYR:OH	2.30	0.50
52:W4:1:G:N2	52:W4:73:A:N6	2.59	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:X4:31:A:C5	52:X4:32:U:C5	3.00	0.50
1:13:782:G:H2'	1:13:783:A:H8	1.77	0.49
1:13:828:C:N4	1:13:841:G:H1	2.10	0.49
1:13:1614:U:C5	1:13:1839:U:H1'	2.47	0.49
1:13:2079:G:H22	37:BI:54:LYS:NZ	2.09	0.49
7:8I:22:LEU:HD12	7:8I:40:LYS:O	2.12	0.49
9:8E:69:GLY:O	9:8E:73:GLN:HG3	2.12	0.49
1:1G:846:C:H2'	1:1G:847:A:H5"	1.94	0.49
1:1G:1600:A:C8	1:1G:1850:C:C4	3.00	0.49
1:1G:1755:G:H1'	1:1G:1776:U:O2	2.12	0.49
11:G8:9:LYS:HB2	15:1H:84:G:OP2	2.12	0.49
12:Q8:9:GLY:O	12:Q8:13:ARG:HG2	2.12	0.49
9:82:114:TYR:HD2	48:1A:60:ARG:HG3	1.77	0.49
15:1H:417:G:H22	30:78:72:PRO:CD	2.25	0.49
15:1H:612:C:H4'	15:1H:613:U:OP2	2.12	0.49
15:1H:1226:C:H1'	15:1H:1227:C:C6	2.46	0.49
10:15:112:LEU:HD12	15:14:583:G:H5'	1.93	0.49
11:C5:60:PHE:CE1	15:14:511:A:H1'	2.46	0.49
15:14:487:U:H2'	15:14:488:A:H8	1.77	0.49
15:14:967:G:N2	15:14:2284:A:OP2	2.44	0.49
15:14:1198:G:C6	15:14:1199:C:N4	2.80	0.49
15:14:1478:G:H2'	15:14:1479:C:C6	2.47	0.49
15:14:1566:G:H2'	15:14:1567:C:C6	2.47	0.49
15:14:2484:A:O2'	38:45:56:ARG:HG2	2.12	0.49
23:21:116:VAL:HG13	23:21:122:PHE:CG	2.47	0.49
22:D5:52:SER:C	22:D5:54:HIS:H	2.20	0.49
28:I5:21:VAL:HG22	28:I5:22:ILE:HD13	1.94	0.49
29:AA:23:ASN:O	29:AA:27:GLU:HB2	2.12	0.49
39:F5:49:VAL:CG2	39:F5:67:ILE:HD12	2.42	0.49
44:1E:76:GLN:NE2	44:1E:206:ASP:OD1	2.45	0.49
48:1A:83:GLU:HA	48:1A:86:MET:HE2	1.94	0.49
45:55:21:TYR:OH	45:55:43:GLU:HG2	2.12	0.49
47:59:17:VAL:HA	47:59:25:LYS:O	2.12	0.49
52:X4:44:G:H3'	52:X4:45:U:H6	1.75	0.49
52:V4:45:U:O2	52:V4:47:U:O2'	2.16	0.49
1:13:1752:G:C2	1:13:1755:G:N2	2.80	0.49
1:13:2163:U:H2'	1:13:2164:U:O4'	2.12	0.49
2:A8:14:VAL:HG11	2:A8:90:GLY:O	2.11	0.49
1:1G:849:A:N6	1:1G:861:G:O2'	2.44	0.49
1:1G:1866:A:C4	1:1G:1925:C:N4	2.80	0.49
10:58:9:VAL:HG11	10:58:39:ARG:HH12	1.75	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:19:65:ILE:HD11	4:19:67:PHE:CE1	2.46	0.49
14:3E:84:LYS:HA	14:3E:85:LYS:C	2.37	0.49
14:3E:85:LYS:CG	14:3E:86:LYS:H	2.24	0.49
15:1H:365:A:H2'	15:1H:366:G:O4'	2.11	0.49
15:1H:796:U:O2	15:1H:2039:A:H1'	2.13	0.49
15:1H:2482:C:H4'	38:88:123:HIS:CG	2.47	0.49
15:1H:2650:C:OP1	23:21:78:LEU:HD12	2.13	0.49
16:B8:93:ARG:HG3	16:B8:93:ARG:HH11	1.77	0.49
15:14:1872:C:O3'	56:14:3666:HOH:O	2.18	0.49
22:H8:73:GLN:HB2	22:H8:87:ASP:HB2	1.94	0.49
18:69:29:TYR:O	18:69:32:PRO:HD2	2.12	0.49
24:4I:88:ARG:HD2	24:4I:98:VAL:HG12	1.94	0.49
28:I5:55:ARG:HA	29:AA:66:MET:HE1	1.94	0.49
33:5I:6:LEU:HB3	33:5I:23:ARG:HH22	1.75	0.49
38:45:21:THR:HG21	38:45:101:ARG:HD2	1.93	0.49
39:F5:86:SER:N	39:F5:87:PRO:HD2	2.26	0.49
47:51:87:LEU:HA	47:51:163:TYR:O	2.12	0.49
48:1I:54:PHE:CZ	48:1I:55:LYS:NZ	2.74	0.49
49:7A:75:ARG:O	49:7A:78:GLY:N	2.32	0.49
1:13:1078:U:H5"	14:3E:155:LEU:HD21	1.92	0.49
1:13:1183:C:H2'	1:13:1184:C:C6	2.47	0.49
1:13:1245:G:H2'	1:13:1246:G:H8	1.77	0.49
1:13:1860:G:H2'	1:13:1861:C:H6	1.77	0.49
4:11:172:TYR:HD2	4:11:185:VAL:C	2.20	0.49
8:22:191:THR:OG1	8:22:194:GLY:O	2.27	0.49
1:1G:678:A:H2'	1:1G:679:A:C8	2.47	0.49
1:1G:765:G:OP1	1:1G:1234:U:O2'	2.23	0.49
1:1G:1750:U:O4	1:1G:1751:A:N6	2.44	0.49
1:1G:1785:A:H8	1:1G:1786:C:C4	2.28	0.49
1:1G:2152:G:H4'	1:1G:2153:G:OP2	2.12	0.49
12:Q8:58:ILE:O	12:Q8:58:ILE:HG22	2.11	0.49
15:1H:197:A:H2'	15:1H:198:C:O4'	2.13	0.49
15:1H:299:G:H8	15:1H:299:G:H3'	1.77	0.49
15:1H:326:G:C6	15:1H:342:G:C5	3.00	0.49
15:1H:557:G:C5	15:1H:2047:U:H5"	2.47	0.49
15:1H:1191:A:C4	15:1H:1193:G:C8	2.99	0.49
15:1H:2806:A:H2	15:1H:2906:G:H5"	1.78	0.49
15:1H:2807:C:H42	15:1H:2820:G:N2	2.11	0.49
13:3A:53:ARG:HG3	13:3A:93:LEU:HD21	1.94	0.49
14:32:88:VAL:HG13	25:42:97:GLY:HA3	1.94	0.49
15:14:26:G:OP1	43:A5:80:PRO:HB3	2.11	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:14:404:C:H2'	15:14:405:C:C6	2.47	0.49
15:14:606:C:H2'	15:14:607:G:H8	1.78	0.49
15:14:683:C:H2'	15:14:684:G:C8	2.47	0.49
15:14:769:C:H2'	15:14:770:C:C6	2.46	0.49
15:14:1252:A:O2'	15:14:1253:U:OP2	2.28	0.49
21:68:88:ASN:ND2	21:68:90:GLN:OE1	2.46	0.49
26:16:3:U:H2'	26:16:4:C:C6	2.47	0.49
21:25:68:GLU:HB3	21:25:78:ARG:HB3	1.94	0.49
23:29:27:LEU:HA	23:29:180:ASN:O	2.12	0.49
23:29:116:VAL:O	23:29:117:MET:CB	2.59	0.49
29:AI:51:VAL:HG12	29:AI:52:TYR:H	1.77	0.49
25:42:33:VAL:HG11	25:42:109:ILE:HA	1.93	0.49
28:I5:23:GLU:OE2	40:49:6:ALA:N	2.45	0.49
49:7I:71:ARG:O	49:7I:75:ARG:N	2.45	0.49
44:12:204:ASN:HB2	44:12:210:SER:HB3	1.94	0.49
52:V1:9:A:H62	52:V1:23:A:N6	2.04	0.49
1:13:826:C:H2'	1:13:827:C:H6	1.77	0.49
1:13:987:G:N2	1:13:988:G:C8	2.80	0.49
1:13:1080:A:C4	1:13:1126:A:C2	3.00	0.49
1:13:2016:C:H2'	1:13:2017:C:H6	1.76	0.49
6:2A:108:ILE:H	19:9A:87:ARG:HH12	1.61	0.49
1:1G:962:A:N7	1:1G:969:C:O2'	2.44	0.49
1:1G:1050:G:H1	1:1G:1074:C:N4	2.10	0.49
1:1G:1600:A:H2'	1:1G:1601:A:H5'	1.93	0.49
1:1G:1887:C:H3'	1:1G:1887:C:H6	1.78	0.49
1:1G:1970:G:H2'	1:1G:1971:C:H6	1.77	0.49
14:3E:111:ALA:HB2	14:3E:120:LEU:CD1	2.41	0.49
14:3E:155:LEU:HB3	14:3E:158:ILE:HG13	1.95	0.49
15:1H:1443:U:C4	15:1H:1444:A:C5	3.01	0.49
15:1H:2703:U:C5	15:1H:2736:U:OP2	2.63	0.49
15:1H:2727:U:OP1	15:1H:2730:G:H4'	2.12	0.49
11:C5:87:LYS:HB3	11:C5:94:LYS:HA	1.94	0.49
13:3A:60:LEU:HB2	13:3A:64:TYR:HB3	1.94	0.49
15:14:875:U:H4'	30:35:55:ARG:HB2	1.94	0.49
15:14:950:C:H2'	15:14:951:C:C6	2.47	0.49
15:14:1117:A:H5"	15:14:1118:A:H5"	1.95	0.49
15:14:1210:C:H1'	35:95:8:GLY:O	2.12	0.49
15:14:2660:G:H3'	15:14:2661:C:H5'	1.94	0.49
15:14:2802:U:H2'	15:14:2803:C:H6	1.76	0.49
21:68:7:TYR:CZ	21:68:44:LYS:HG3	2.47	0.49
16:75:3:ARG:O	16:75:4:GLY:C	2.55	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:H8:92:SER:O	22:H8:130:PRO:HG2	2.12	0.49
23:21:105:THR:HG22	23:21:106:GLY:N	2.25	0.49
38:88:51:ARG:NH1	38:88:52:VAL:HG23	2.27	0.49
35:95:4:ILE:HA	35:95:12:TYR:O	2.12	0.49
44:1E:60:ASP:O	44:1E:64:ARG:HG2	2.12	0.49
46:K8:48:HIS:N	46:K8:50:ILE:HD11	2.27	0.49
49:7A:17:TYR:HE2	49:7A:41:PRO:HG3	1.77	0.49
1:13:1337:C:H2'	1:13:1338:G:H8	1.78	0.49
1:13:1375:A:H2'	1:13:1376:C:C6	2.47	0.49
1:13:1581:A:C6	1:13:1582:A:C6	3.01	0.49
1:13:1866:A:H62	1:13:1926:A:H62	1.60	0.49
1:13:1923:C:H4'	1:13:1929:U:C5	2.47	0.49
8:22:32:LEU:O	8:22:36:ASP:HB2	2.12	0.49
1:1G:1104:G:H2'	1:1G:1105:G:C8	2.48	0.49
1:1G:1579:U:C2	1:1G:1852:A:C2	3.01	0.49
14:3E:90:GLY:O	14:3E:93:PHE:HB3	2.13	0.49
9:82:43:ALA:HA	9:82:74:ILE:HD13	1.94	0.49
15:1H:507:A:N3	15:1H:509:G:H5"	2.27	0.49
15:1H:513:C:H2'	15:1H:514:C:C6	2.47	0.49
15:1H:896:U:C5	15:1H:980:A:N1	2.80	0.49
15:1H:954:G:OP1	38:88:26:TYR:OH	2.18	0.49
15:1H:1116:G:H1'	15:1H:1144:A:H1'	1.93	0.49
15:1H:1205:A:O4'	27:C8:51:LYS:HE3	2.12	0.49
15:1H:1427:A:OP1	5:P8:10:ARG:NH2	2.46	0.49
15:1H:2355:G:O2'	15:1H:2356:G:H5'	2.12	0.49
15:1H:2512:A:N1	56:1H:3709:HOH:O	2.35	0.49
11:C5:50:ARG:CB	11:C5:53:PRO:HG3	2.42	0.49
13:3A:34:ARG:HG3	13:3A:35:GLY:N	2.25	0.49
15:14:1632:C:HO2'	15:14:1635:A:H8	1.53	0.49
23:21:29:GLY:H	23:21:51:PHE:HE1	1.61	0.49
25:4E:28:PHE:O	25:4E:47:LYS:HA	2.13	0.49
26:16:17:A:O2'	26:16:112:G:C8	2.60	0.49
28:M8:33:VAL:HG21	40:41:109:VAL:HG22	1.94	0.49
27:85:88:ILE:HA	35:95:49:THR:O	2.12	0.49
33:5I:6:LEU:HB3	33:5I:23:ARG:NH2	2.27	0.49
41:6I:74:ASP:CG	41:6I:77:ARG:HG2	2.37	0.49
37:BA:51:GLU:HG2	37:BA:54:LYS:NZ	2.28	0.49
44:12:97:TRP:HZ3	44:12:99:GLY:HA2	1.77	0.49
52:X4:70:G:H8	52:X4:70:G:OP2	1.96	0.49
3:B5:54:VAL:C	3:B5:55:ASN:HD22	2.19	0.49
1:1G:1131:G:OP2	13:3A:116:SER:HA	2.12	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:1G:2030:C:H2'	1:1G:2031:C:O4'	2.13	0.49
7:8A:88:TYR:CE1	7:8A:92:ARG:HD3	2.48	0.49
15:1H:140:A:H8	15:1H:1457:C:H1'	1.77	0.49
15:1H:803:C:H2'	15:1H:804:C:C6	2.48	0.49
15:1H:2005:G:O2'	15:1H:2007:C:OP2	2.29	0.49
15:1H:2258:U:H2'	15:1H:2259:U:C6	2.48	0.49
14:32:45:GLN:O	14:32:46:LYS:HG2	2.12	0.49
15:14:216:G:N2	15:14:218:A:H62	2.11	0.49
15:14:1000:A:C2	15:14:1001:G:C8	3.00	0.49
15:14:1421:U:H2'	15:14:1422:A:O4'	2.11	0.49
15:14:2849:U:H2'	15:14:2850:G:C8	2.47	0.49
22:D5:30:ASN:HD22	22:D5:90:VAL:HB	1.76	0.49
22:D5:132:ASN:OD1	22:D5:132:ASN:N	2.42	0.49
23:29:182:LEU:O	23:29:183:LEU:HD12	2.12	0.49
32:31:10:PRO:O	32:31:124:LEU:HD12	2.13	0.49
30:35:125:VAL:O	30:35:144:GLU:HB3	2.12	0.49
39:J8:92:LYS:C	39:J8:95:LEU:H	2.20	0.49
36:J5:11:THR:HG23	36:J5:15:ARG:HB3	1.95	0.49
38:45:138:ASP:N	38:45:138:ASP:OD1	2.42	0.49
40:49:9:ARG:HD3	40:49:13:GLU:OE2	2.12	0.49
50:7E:23:SER:HA	50:7E:61:VAL:O	2.13	0.49
47:59:82:GLY:HA3	47:59:135:GLY:O	2.12	0.49
47:59:168:PRO:HB2	47:59:170:ARG:HG3	1.95	0.49
6:2I:32:ILE:HD12	6:2I:72:ALA:HB2	1.92	0.49
8:2E:19:GLU:HA	8:2E:54:ARG:NH1	2.26	0.49
50:72:44:PHE:HB3	50:72:80:ILE:HG12	1.93	0.49
51:Y4:41:U:H3'	51:Y4:41:U:OP2	2.13	0.49
52:W4:66:U:C4	52:W4:67:C:N4	2.81	0.49
1:13:1762:G:H1	1:13:1768:C:H42	1.60	0.49
1:13:1973:A:H5"	9:8E:120:ARG:NH1	2.28	0.49
1:13:2072:A:H4'	1:13:2072:A:OP1	2.12	0.49
1:13:2156:C:H2'	1:13:2157:A:O4'	2.13	0.49
3:B5:44:GLU:OE2	15:14:137:G:N2	2.36	0.49
8:22:15:THR:HG21	8:22:181:ASN:HA	1.95	0.49
1:1G:999:U:H2'	1:1G:1000:U:C6	2.48	0.49
1:1G:2162:C:H2'	1:1G:2163:U:C6	2.48	0.49
15:1H:1552:U:H2'	15:1H:1553:C:H6	1.77	0.49
15:1H:1755:G:C6	15:1H:1756:U:C4	3.00	0.49
15:1H:1892:G:H2'	15:1H:1908:G:H22	1.77	0.49
15:1H:2651:U:OP1	23:21:80:GLU:HG3	2.13	0.49
16:B8:36:GLU:OE1	16:B8:41:ARG:HD3	2.12	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:C5:76:CYS:HB2	11:C5:97:ARG:HD3	1.92	0.49
18:61:110:ASP:HB2	18:61:112:LYS:H	1.78	0.49
13:3A:41:ARG:HH12	13:3A:43:VAL:CG2	2.25	0.49
15:14:67:G:H2'	15:14:68:C:H6	1.78	0.49
15:14:707:C:H2'	15:14:708:C:C6	2.47	0.49
15:14:880:G:H5"	15:14:881:G:OP2	2.13	0.49
15:14:2705:C:OP2	15:14:2705:C:H6	1.95	0.49
15:14:2762:U:H4'	47:59:138:LYS:HB3	1.95	0.49
22:H8:72:ARG:HD3	26:16:107:A:H5'	1.95	0.49
27:C8:95:LEU:HG	35:D8:4:ILE:HD13	1.95	0.49
28:M8:40:HIS:O	28:M8:47:GLN:HG2	2.13	0.49
23:29:51:PHE:CE2	23:29:52:LEU:HG	2.48	0.49
23:29:52:LEU:HD12	23:29:76:ARG:HD2	1.94	0.49
25:42:13:ILE:HA	25:42:29:GLY:O	2.12	0.49
36:N8:41:PRO:HD2	36:N8:44:THR:CG2	2.43	0.49
33:5A:45:ARG:NE	48:1A:51:ARG:O	2.45	0.49
35:95:21:ARG:HH21	35:95:91:TYR:CB	2.23	0.49
35:95:21:ARG:NH2	35:95:65:GLY:O	2.46	0.49
40:41:107:LEU:HD21	40:41:178:PHE:CE1	2.48	0.49
39:F5:87:PRO:O	39:F5:88:LYS:C	2.54	0.49
39:F5:91:LYS:O	39:F5:92:LYS:C	2.56	0.49
44:1E:178:ARG:HG3	50:7E:72:PRO:HA	1.95	0.49
4:11:71:ASP:N	4:11:71:ASP:OD1	2.40	0.49
1:1G:1753:U:H2'	1:1G:1754:U:C6	2.48	0.49
1:1G:1834:G:H2'	1:1G:1835:C:C6	2.48	0.49
1:1G:1846:U:OP1	33:5A:19:ARG:NH1	2.27	0.49
11:G8:28:LYS:NZ	11:G8:40:GLU:HG2	2.28	0.49
11:G8:94:LYS:HA	11:G8:94:LYS:NZ	2.25	0.49
12:Q8:26:LYS:HD3	15:1H:2376:A:P	2.53	0.49
15:1H:1866:C:H2'	15:1H:1867:U:O5'	2.13	0.49
15:1H:1867:U:O2'	15:1H:1994:A:N1	2.39	0.49
13:3A:89:ARG:HD2	13:3A:91:LYS:HA	1.94	0.49
15:14:67:G:H2'	15:14:68:C:C6	2.47	0.49
15:14:1102:A:N6	15:14:1152:C:H42	2.10	0.49
15:14:2803:C:H1'	23:29:62:PRO:HG3	1.94	0.49
15:14:2835:G:O2'	15:14:2838:C:N4	2.45	0.49
21:25:1:MET:HB2	21:25:32:TYR:HB3	1.95	0.49
29:AA:42:PRO:O	29:AA:45:VAL:HG22	2.13	0.49
35:95:87:HIS:CD2	35:95:89:GLN:HB2	2.48	0.49
36:J5:36:CYS:SG	36:J5:48:GLU:HB2	2.53	0.49
37:BA:89:ARG:NH1	37:BA:105:SER:O	2.37	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:6A:35:ARG:NH2	41:6A:59:MET:HE2	2.27	0.49
41:6A:39:LEU:CD1	41:6A:56:LEU:HB2	2.43	0.49
44:1E:21:ARG:O	44:1E:23:ARG:N	2.42	0.49
44:1E:21:ARG:C	44:1E:23:ARG:H	2.20	0.49
6:2I:32:ILE:HD11	6:2I:68:ALA:HB1	1.94	0.49
8:2E:3:ASN:C	8:2E:4:LYS:HG2	2.37	0.49
50:72:12:ARG:NH2	50:72:27:PRO:HD3	2.27	0.49
1:13:796:G:H1	1:13:805:C:N4	2.09	0.49
1:13:1268:G:H2'	1:13:1269:A:H8	1.77	0.49
1:13:1479:C:O2	1:13:2162:C:H4'	2.13	0.49
1:13:1787:U:O4'	1:13:1809:G:N2	2.46	0.49
1:13:1845:C:H2'	1:13:1846:U:C6	2.48	0.49
8:22:16:ARG:HH12	8:22:181:ASN:HD22	1.61	0.49
8:22:20:SER:HB2	8:22:40:ARG:HH12	1.78	0.49
1:1G:834:U:O2'	1:1G:835:U:O5'	2.29	0.49
1:1G:882:C:H6	1:1G:882:C:O5'	1.96	0.49
1:1G:1195:G:H4'	1:1G:1196:G:OP1	2.13	0.49
14:3E:162:LEU:O	14:3E:165:MET:N	2.46	0.49
9:82:70:LYS:O	9:82:74:ILE:HG13	2.13	0.49
15:1H:7:G:H2'	15:1H:8:A:O4'	2.12	0.49
15:1H:90:A:C5	15:1H:91:G:C8	3.01	0.49
15:1H:1153:U:H2'	15:1H:1154:G:C8	2.48	0.49
15:1H:1255:C:H2'	15:1H:1256:C:H6	1.78	0.49
15:14:1214:U:H2'	15:14:1215:C:C6	2.48	0.49
15:14:1461:A:H2'	15:14:1462:G:H8	1.75	0.49
15:14:2131:G:C2	15:14:2209:G:C2	3.01	0.49
18:69:40:THR:O	18:69:44:LEU:HB2	2.13	0.49
22:D5:3:TYR:HB3	22:D5:47:VAL:HG13	1.95	0.49
28:M8:59:PHE:CD2	29:AI:68:GLY:HA3	2.47	0.49
27:85:90:VAL:HG11	35:95:40:LEU:HD13	1.94	0.49
29:AA:36:ARG:HD2	29:AA:52:TYR:O	2.13	0.49
41:6I:37:ASN:O	41:6I:41:GLU:HG2	2.13	0.49
41:6I:82:ILE:O	41:6I:86:GLY:N	2.45	0.49
41:6A:29:VAL:HG11	41:6A:67:LEU:HD21	1.95	0.49
44:12:158:LEU:HD22	44:12:182:ILE:HD11	1.94	0.49
51:Y1:36:G:H3'	51:Y1:37:G:H8	1.77	0.49
52:W4:74:C:N4	52:W4:75:C:O2	2.46	0.49
52:V4:8:U:H4'	52:V4:9:A:OP1	2.13	0.49
1:13:826:C:H2'	1:13:827:C:C6	2.48	0.49
1:13:1974:G:H22	1:13:2002:A:P	2.35	0.49
8:22:16:ARG:HH22	8:22:181:ASN:HA	1.78	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:22:83:ARG:NH1	8:22:87:LEU:HD12	2.28	0.49
1:1G:791:A:H2'	1:1G:792:A:O4'	2.13	0.49
1:1G:966:A:H2'	1:1G:967:G:O4'	2.12	0.49
1:1G:1360:G:OP1	1:1G:1395:A:H1'	2.13	0.49
1:1G:2015:G:H2'	1:1G:2016:C:C6	2.48	0.49
4:19:95:LEU:HD11	4:19:105:ILE:HD12	1.94	0.49
7:8A:56:VAL:O	7:8A:77:VAL:HB	2.12	0.49
15:1H:2859:G:H2'	15:1H:2860:U:O4'	2.11	0.49
14:32:148:VAL:HG12	14:32:152:SER:HB2	1.94	0.49
15:14:803:C:H2'	15:14:804:C:C6	2.48	0.49
15:14:1527:A:H2'	15:14:1528:G:O4'	2.13	0.49
15:14:2156:G:OP2	15:14:2157:U:H5'	2.13	0.49
22:H8:61:LEU:O	22:H8:64:GLY:HA2	2.13	0.49
25:42:51:VAL:O	25:42:55:VAL:HG23	2.13	0.49
31:I8:23:VAL:HG22	31:I8:38:VAL:CG2	2.43	0.49
30:35:50:ARG:HG2	30:35:50:ARG:HH11	1.78	0.49
41:6I:6:GLU:CD	41:6I:6:GLU:H	2.21	0.49
44:1E:100:GLY:O	44:1E:104:ASN:N	2.46	0.49
43:A5:75:TYR:CZ	43:A5:104:THR:HG21	2.48	0.49
48:1I:84:GLN:HG3	48:1I:88:LEU:HD13	1.95	0.49
49:7I:19:ILE:HB	49:7I:36:ILE:O	2.12	0.49
1:13:805:C:H2'	1:13:806:G:C8	2.47	0.48
1:13:895:G:O3'	7:8I:69:LYS:NZ	2.30	0.48
1:13:906:G:N2	1:13:908:C:H5'	2.28	0.48
1:13:1350:G:C6	1:13:1362:A:C2	3.01	0.48
1:13:1495:A:C5	1:13:1497:G:C8	3.01	0.48
1:13:2154:A:H2'	1:13:2155:U:C6	2.48	0.48
9:8E:112:LYS:HA	9:8E:119:ALA:HB2	1.95	0.48
1:1G:922:G:OP2	1:1G:922:G:H8	1.96	0.48
1:1G:1252:C:C4	1:1G:1253:C:C5	3.01	0.48
1:1G:1314:G:C2	1:1G:1315:U:C4	3.01	0.48
1:1G:1754:U:H4'	1:1G:1755:G:N7	2.28	0.48
10:58:57:ALA:O	10:58:59:LYS:N	2.43	0.48
10:58:77:GLY:HA3	23:21:152:LYS:HD2	1.95	0.48
11:G8:89:PHE:HD1	11:G8:90:LEU:N	2.11	0.48
4:19:239:ARG:HG3	15:14:2606:C:P	2.53	0.48
14:3E:173:TRP:CZ3	14:3E:193:ASP:HB3	2.48	0.48
15:1H:37:C:H2'	15:1H:38:A:C8	2.48	0.48
15:1H:633:A:H1'	15:1H:648:A:N6	2.28	0.48
15:1H:711:G:OP1	30:78:15:ARG:NE	2.43	0.48
15:1H:1213:G:H2'	15:1H:1214:U:C6	2.47	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:1H:2172:G:H2'	15:1H:2173:G:H4'	1.94	0.48
15:1H:2555:C:H2'	15:1H:2556:A:O4'	2.12	0.48
15:1H:2663:C:H2'	15:1H:2664:U:H6	1.77	0.48
15:1H:2767:G:C2	47:51:3:ARG:HB2	2.48	0.48
15:1H:2820:G:H3'	15:1H:2821:U:H5"	1.95	0.48
16:B8:117:ASP:OD2	16:B8:120:ARG:NE	2.36	0.48
15:14:313:C:H2'	15:14:314:A:C8	2.48	0.48
15:14:315:G:H2'	15:14:316:C:O4'	2.12	0.48
15:14:1247:U:H2'	15:14:1248:C:C6	2.48	0.48
15:14:1525:G:H5'	15:14:1526:C:OP2	2.12	0.48
15:14:1582:C:N4	15:14:1586:C:H42	2.11	0.48
15:14:1764:G:C6	15:14:1779:G:C6	3.01	0.48
26:16:31:A:H2'	26:16:32:C:C6	2.48	0.48
26:16:56:G:H2'	26:16:57:U:H6	1.78	0.48
22:D5:18:LEU:CD1	22:D5:23:LYS:HB2	2.43	0.48
24:4A:4:ILE:HG23	24:4A:5:ALA:H	1.78	0.48
30:78:106:LEU:O	30:78:106:LEU:HD22	2.12	0.48
30:35:80:TYR:CD2	30:35:111:ARG:HB3	2.48	0.48
30:35:106:LEU:O	30:35:107:LYS:C	2.55	0.48
32:39:135:LYS:HB3	32:39:138:GLU:HG3	1.95	0.48
37:BI:26:ASN:HB2	37:BI:71:THR:HG23	1.93	0.48
37:BI:67:ALA:HA	37:BI:72:LEU:O	2.13	0.48
36:J5:16:ARG:NH1	36:J5:17:ASP:OD1	2.45	0.48
44:12:5:ILE:HA	44:12:221:LEU:HD11	1.94	0.48
44:12:55:PHE:HD1	44:12:58:ILE:HG13	1.76	0.48
44:12:103:THR:HG23	44:12:176:GLU:HB3	1.95	0.48
52:W4:71:G:H2'	52:W4:72:C:H5"	1.95	0.48
52:X4:76:A:OP1	52:X4:76:A:H4'	2.13	0.48
1:13:1586:G:H1	1:13:1595:C:N4	2.02	0.48
1:13:1943:G:N2	1:13:1945:A:H3'	2.28	0.48
6:2A:73:MET:SD	6:2A:103:LEU:HD13	2.53	0.48
1:1G:1159:G:O6	51:Y4:51:U:H1'	2.14	0.48
1:1G:1987:A:H8	1:1G:1987:A:OP1	1.97	0.48
4:19:3:VAL:HG12	4:19:17:THR:HB	1.94	0.48
13:3I:58:VAL:O	13:3I:65:GLU:HA	2.13	0.48
14:3E:110:PHE:CE2	14:3E:148:VAL:HG23	2.48	0.48
15:1H:299:G:H3'	15:1H:299:G:C8	2.48	0.48
15:1H:409:G:C4	15:1H:422:A:C2	3.01	0.48
15:1H:451:A:H2'	15:1H:452:A:O4'	2.13	0.48
15:1H:771:A:H2'	15:1H:772:G:C8	2.48	0.48
15:1H:1101:C:H42	15:1H:1154:G:H1	1.59	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:1H:1413:G:OP2	39:J8:2:SER:OG	2.28	0.48
15:1H:2828:C:H5'	36:N8:29:THR:HG21	1.95	0.48
15:14:253:C:H2'	15:14:254:C:O4'	2.13	0.48
15:14:1718:A:H4'	15:14:1719:A:O5'	2.12	0.48
15:14:2477:U:H2'	15:14:2478:C:C6	2.48	0.48
22:H8:121:HIS:HB3	22:H8:123:ASP:O	2.12	0.48
24:4I:15:VAL:HA	24:4I:45:VAL:HG12	1.96	0.48
23:29:33:VAL:HG23	23:29:47:VAL:HG13	1.96	0.48
30:78:144:GLU:N	30:78:144:GLU:CD	2.72	0.48
28:I5:11:PRO:HA	28:I5:25:TYR:CG	2.48	0.48
38:88:42:ILE:HD13	38:88:97:VAL:HB	1.95	0.48
40:41:55:LYS:HZ2	40:41:148:MET:HE3	1.78	0.48
41:6A:32:LEU:O	41:6A:36:ILE:HG13	2.13	0.48
44:1E:166:ASP:C	44:1E:168:THR:H	2.21	0.48
42:62:111:ARG:CZ	42:62:122:HIS:HB3	2.43	0.48
49:7I:36:ILE:O	49:7I:36:ILE:HG13	2.13	0.48
6:2I:78:GLN:O	6:2I:103:LEU:HA	2.13	0.48
51:Y1:32:A:H5'	51:Y1:33:G:OP2	2.13	0.48
52:X1:36:A:H5"	52:X1:36:A:C8	2.44	0.48
1:13:1253:C:O3'	49:7I:10:GLY:HA2	2.13	0.48
1:13:1667:C:H2'	1:13:1668:U:C6	2.48	0.48
3:B5:3:THR:HG22	3:B5:6:ASP:OD2	2.12	0.48
4:11:65:ILE:HD12	4:11:66:ASP:H	1.78	0.48
1:1G:732:C:H2'	1:1G:733:C:C6	2.48	0.48
1:1G:1048:G:H2'	1:1G:1049:A:C8	2.48	0.48
1:1G:1275:U:H2'	1:1G:1276:C:C6	2.49	0.48
1:1G:1845:C:OP2	33:5A:9:LYS:NZ	2.26	0.48
1:1G:1853:C:H2'	24:4A:103:THR:HB	1.94	0.48
15:1H:614:C:H2'	15:1H:615:A:H8	1.77	0.48
15:1H:615:A:H2'	15:1H:616:C:C6	2.48	0.48
15:1H:1069:A:H62	15:1H:1189:U:H3	1.61	0.48
15:1H:1074:U:O2'	15:1H:1075:A:O5'	2.20	0.48
15:1H:1221:G:H8	15:1H:1221:G:OP2	1.96	0.48
15:1H:1238:G:H5"	15:1H:1238:G:C8	2.48	0.48
15:1H:1358:G:H4'	5:P8:7:PRO:HB2	1.95	0.48
15:1H:2081:G:C2	15:1H:2082:A:C8	3.00	0.48
15:1H:2803:C:O2'	23:21:61:ARG:HB3	2.12	0.48
15:1H:2806:A:C2	15:1H:2906:G:H5"	2.48	0.48
18:61:131:LYS:HB3	18:61:132:PRO:HA	1.94	0.48
15:14:66:U:H2'	15:14:67:G:H8	1.78	0.48
15:14:1054:C:C2	15:14:1186:G:N2	2.81	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:14:2482:C:H2'	15:14:2483:G:O4'	2.12	0.48
17:H5:18:ASP:HB2	17:H5:49:LYS:HE3	1.96	0.48
27:C8:61:TRP:O	27:C8:65:ILE:HG13	2.12	0.48
22:D5:122:ARG:NH1	38:45:134:ARG:HH22	2.10	0.48
28:M8:14:ILE:CG2	28:M8:21:VAL:HB	2.44	0.48
29:AA:23:ASN:HA	29:AA:27:GLU:HG3	1.94	0.48
35:D8:19:LYS:HG3	35:D8:95:LEU:HD23	1.95	0.48
40:49:47:LYS:HG2	40:49:81:LYS:HB3	1.95	0.48
44:1E:212:GLN:OE1	44:1E:216:SER:OG	2.31	0.48
3:F8:35:THR:O	3:F8:39:ILE:HD12	2.13	0.48
47:59:8:PRO:HG2	47:59:69:ARG:HH21	1.78	0.48
52:X1:19:G:C4	52:X1:57:G:N2	2.81	0.48
52:W4:29:G:H2'	52:W4:30:G:H8	1.79	0.48
1:13:1034:A:OP2	49:7I:12:LYS:NZ	2.30	0.48
1:13:1756:C:H5"	9:8E:16:ARG:HH12	1.78	0.48
1:13:1770:G:H2'	1:13:1771:G:O4'	2.13	0.48
2:A8:58:LEU:HD12	2:A8:65:VAL:HG13	1.95	0.48
6:2A:34:ASP:HB2	6:2A:35:PRO:HD2	1.95	0.48
6:2A:57:THR:HG22	6:2A:59:TYR:H	1.78	0.48
1:1G:1545:G:C2	1:1G:1546:A:C4	3.01	0.48
1:1G:1970:G:H4'	9:82:122:ALA:HB3	1.95	0.48
4:19:266:SER:O	4:19:269:PHE:HB2	2.13	0.48
12:Q8:54:GLU:HG2	30:78:49:ARG:HA	1.95	0.48
15:1H:38:A:H2'	15:1H:39:C:C6	2.48	0.48
15:1H:666:U:H2'	15:1H:667:C:C6	2.48	0.48
15:1H:2171:C:H4'	15:1H:2172:G:N7	2.28	0.48
10:15:35:ARG:HB3	10:15:42:TRP:CZ3	2.49	0.48
15:14:867:G:H4'	15:14:887:C:O3'	2.14	0.48
16:75:125:ARG:HG3	16:75:129:ARG:HH21	1.79	0.48
18:69:130:TYR:HB3	18:69:136:VAL:CG1	2.40	0.48
21:25:22:ILE:HD12	21:25:22:ILE:HA	1.61	0.48
26:1J:68:A:C6	26:1J:111:C:C6	3.01	0.48
32:31:130:ALA:HA	32:31:132:VAL:HG22	1.95	0.48
35:D8:24:LYS:HD3	35:D8:90:PRO:HB2	1.96	0.48
36:N8:33:CYS:SG	36:N8:40:LYS:HD3	2.53	0.48
37:BI:49:ALA:HB1	37:BI:99:LEU:HB3	1.94	0.48
35:95:58:VAL:HG23	35:95:98:GLU:HB2	1.95	0.48
44:1E:42:ILE:HD13	44:1E:203:GLY:HA2	1.94	0.48
44:1E:124:SER:O	44:1E:127:ILE:HB	2.14	0.48
44:1E:160:ASP:O	44:1E:183:PRO:HD2	2.13	0.48
47:51:20:ALA:HB1	47:51:21:PRO:HD2	1.95	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:7E:20:TYR:CE2	50:7E:75:ARG:HD2	2.44	0.48
50:7E:25:ASP:C	50:7E:26:VAL:HG12	2.38	0.48
8:2E:142:MET:SD	8:2E:148:GLY:HA2	2.53	0.48
1:13:1583:U:C2	1:13:1852:A:N7	2.82	0.48
2:A8:25:ARG:O	2:A8:39:ILE:HA	2.13	0.48
1:1G:1014:A:C2	1:1G:1015:A:C8	3.02	0.48
1:1G:1697:C:O2'	1:1G:1819:C:H1'	2.14	0.48
1:1G:1757:C:N4	1:1G:1767:G:N2	2.62	0.48
1:1G:1776:U:OP1	9:82:7:THR:HG21	2.14	0.48
2:65:89:ARG:NH2	15:14:2309:C:OP2	2.46	0.48
12:Q8:23:VAL:HG21	30:78:62:LEU:HD13	1.94	0.48
15:1H:39:C:H2'	15:1H:40:C:C6	2.49	0.48
15:1H:639:U:H5'	15:1H:642:A:N6	2.28	0.48
15:1H:1378:U:H5"	15:1H:1379:C:H5	1.78	0.48
15:1H:1751:A:OP2	56:1H:3671:HOH:O	2.20	0.48
15:1H:2608:U:H2'	15:1H:2609:C:C6	2.48	0.48
15:1H:2704:U:P	15:1H:2735:G:H22	2.36	0.48
10:15:58:ASP:OD1	10:15:58:ASP:N	2.44	0.48
12:M5:27:THR:HG22	30:35:62:LEU:HA	1.95	0.48
20:1F:12:LYS:HB3	20:1F:22:ARG:HD2	1.96	0.48
15:14:1397:G:C6	15:14:1398:A:N1	2.81	0.48
15:14:1586:C:H2'	15:14:1587:G:H8	1.77	0.48
15:14:1914:A:N1	15:14:2249:G:H1'	2.28	0.48
15:14:2159:A:H2	15:14:2184:G:H1'	1.77	0.48
23:21:47:VAL:O	23:21:80:GLU:HA	2.14	0.48
22:D5:29:TYR:HA	22:D5:33:LEU:O	2.14	0.48
22:D5:30:ASN:OD1	22:D5:33:LEU:N	2.46	0.48
29:AI:15:LEU:O	29:AI:19:VAL:HG23	2.13	0.48
48:1A:24:VAL:HG21	48:1A:37:PRO:HD3	1.95	0.48
52:X1:53:G:H2'	52:X1:54:U:H6	1.78	0.48
8:22:40:ARG:O	8:22:44:GLU:HG2	2.13	0.48
8:22:178:LEU:HD23	1:1G:1740:C:C4	2.48	0.48
9:8E:114:TYR:HE2	48:1I:59:SER:HA	1.78	0.48
1:1G:800:A:H1'	1:1G:985:A:N7	2.28	0.48
1:1G:1229:C:H2'	1:1G:1230:C:H6	1.78	0.48
1:1G:1753:U:H2'	1:1G:1754:U:C5	2.49	0.48
1:1G:1954:C:OP1	20:1B:20:LYS:HB3	2.13	0.48
1:1G:2049:G:H2'	1:1G:2050:G:O4'	2.13	0.48
4:19:208:LYS:HB2	15:14:778:G:C6	2.49	0.48
7:8A:59:ILE:HD13	7:8A:73:VAL:HA	1.95	0.48
15:1H:90:A:C4	15:1H:91:G:C8	3.02	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:1H:581:G:H2'	15:1H:582:U:C6	2.49	0.48
15:1H:646:G:H5"	15:1H:647:G:OP2	2.12	0.48
15:1H:1067:U:O2'	15:1H:1069:A:H2	1.95	0.48
15:1H:2326:A:H1'	40:41:88:ILE:HD13	1.94	0.48
15:1H:2447:A:C5	39:J8:33:LYS:HG2	2.48	0.48
15:1H:2849:U:H2'	15:1H:2850:G:C8	2.48	0.48
14:32:31:CYS:C	14:32:33:MET:N	2.72	0.48
14:32:162:LEU:O	14:32:162:LEU:HD22	2.13	0.48
15:14:54:G:C2	15:14:114:C:C2	3.02	0.48
15:14:735:G:H21	15:14:837:A:H61	1.59	0.48
15:14:1957:A:H2'	15:14:1958:G:O4'	2.13	0.48
15:14:2355:G:H2'	15:14:2356:G:C8	2.48	0.48
23:29:101:ARG:CZ	23:29:171:GLU:HB2	2.43	0.48
39:J8:8:SER:OG	39:J8:10:LYS:HG3	2.14	0.48
36:J5:33:CYS:HB2	36:J5:46:CYS:SG	2.54	0.48
43:E8:29:LEU:HD21	43:E8:33:ARG:NH2	2.28	0.48
40:49:10:LYS:O	40:49:14:GLU:HB2	2.12	0.48
46:G5:64:LEU:O	46:G5:64:LEU:HD23	2.13	0.48
6:2I:79:SER:HA	6:2I:104:GLN:O	2.14	0.48
1:13:1068:U:H5'	14:3E:41:GLY:HA2	1.94	0.48
1:13:1601:A:OP2	1:13:1990:C:N4	2.47	0.48
1:13:1712:G:H21	1:13:1730:A:H61	1.61	0.48
1:13:2153:G:O2'	1:13:2154:A:OP2	2.31	0.48
8:22:12:LEU:HD23	8:22:12:LEU:HA	1.72	0.48
1:1G:1097:C:H2'	1:1G:1098:C:C6	2.49	0.48
1:1G:1229:C:H5"	50:72:97:VAL:HG23	1.95	0.48
2:65:89:ARG:O	2:65:90:GLY:C	2.57	0.48
11:G8:40:GLU:HG2	11:G8:64:GLU:OE1	2.13	0.48
15:1H:311:C:H2'	15:1H:312:C:H6	1.79	0.48
15:1H:642:A:C4	32:31:180:GLY:HA2	2.49	0.48
15:1H:862:U:H2'	15:1H:863:C:C6	2.48	0.48
15:1H:1095:G:H2'	15:1H:1158:G:N1	2.28	0.48
15:1H:1625:C:H2'	15:1H:1626:U:C6	2.48	0.48
15:1H:2346:G:O3'	31:I8:43:THR:HG22	2.13	0.48
15:1H:2867:G:H2'	15:1H:2868:C:C6	2.49	0.48
16:B8:16:ARG:HE	16:B8:19:LEU:HD11	1.78	0.48
16:B8:107:ASP:HA	16:B8:110:ILE:HG22	1.96	0.48
17:L8:6:VAL:HG13	17:L8:56:VAL:HG13	1.95	0.48
15:14:344:C:C2	15:14:358:G:N2	2.82	0.48
15:14:1337:U:H4'	15:14:1338:C:OP2	2.13	0.48
15:14:1582:C:N3	15:14:1583:G:O2'	2.40	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:14:2171:C:H4'	15:14:2172:G:C8	2.49	0.48
15:14:2313:A:N6	15:14:2333:G:C8	2.81	0.48
23:21:47:VAL:HG11	23:21:86:PRO:HD2	1.95	0.48
19:9A:56:THR:HB	19:9A:58:LEU:HD12	1.94	0.48
21:25:10:VAL:HG13	21:25:17:ARG:O	2.14	0.48
27:C8:93:LYS:O	27:C8:96:ALA:HB2	2.14	0.48
25:42:91:LEU:HD12	25:42:120:THR:HG22	1.95	0.48
27:85:76:TYR:CZ	27:85:80:ILE:HG13	2.49	0.48
32:31:8:GLN:OE1	32:31:8:GLN:N	2.39	0.48
29:AA:66:MET:HA	29:AA:67:VAL:C	2.38	0.48
34:5E:39:LYS:H	34:5E:64:GLN:HB2	1.78	0.48
33:5A:45:ARG:HG2	33:5A:49:HIS:HE1	1.79	0.48
34:52:33:TYR:HE2	34:52:78:GLU:HG3	1.78	0.48
38:88:66:ILE:O	38:88:104:PHE:N	2.46	0.48
40:49:107:LEU:HD11	40:49:178:PHE:CE1	2.48	0.48
45:98:48:VAL:O	45:98:51:LEU:N	2.47	0.48
50:7E:121:ASP:HB2	50:7E:125:ARG:HH22	1.78	0.48
47:59:137:ASP:CB	47:59:140:LYS:HB2	2.43	0.48
51:Y4:35:A:C4	51:Y4:36:G:C8	3.02	0.48
52:W4:75:C:C3'	52:W4:76:A:H5"	2.44	0.48
1:13:1547:C:H2'	1:13:1548:G:C8	2.49	0.48
1:13:1590:C:OP2	1:13:1591:A:O2'	2.24	0.48
1:13:1843:G:H5"	33:5I:5:ALA:HB2	1.96	0.48
6:2A:57:THR:HG22	6:2A:59:TYR:N	2.28	0.48
9:8E:125:TYR:CD1	9:8E:126:SER:N	2.76	0.48
1:1G:1281:U:C4	1:1G:1381:G:N3	2.82	0.48
1:1G:2154:A:H2'	1:1G:2155:U:C5	2.49	0.48
2:65:18:ILE:O	2:65:21:THR:HG22	2.13	0.48
4:19:37:LEU:HB2	4:19:38:LYS:HE3	1.96	0.48
9:82:17:VAL:HG22	9:82:63:ILE:HG12	1.96	0.48
9:82:114:TYR:H	9:82:114:TYR:HD1	1.62	0.48
15:1H:65:C:H2'	15:1H:66:U:H6	1.79	0.48
15:1H:345:A:H2'	32:31:136:THR:HG21	1.96	0.48
15:1H:554:C:H4'	15:1H:555:A:O5'	2.13	0.48
15:1H:606:C:H2'	15:1H:607:G:H8	1.79	0.48
15:1H:1143:A:H2'	15:1H:1143:A:N3	2.29	0.48
15:1H:1543:A:H2'	15:1H:1544:A:H8	1.78	0.48
15:1H:1565:U:H2'	15:1H:1566:G:C8	2.48	0.48
15:1H:2233:U:O2'	15:1H:2234:G:OP1	2.29	0.48
11:C5:47:LYS:HG3	11:C5:60:PHE:CE2	2.48	0.48
11:C5:84:ARG:HH21	11:C5:85:VAL:C	2.21	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:32:59:ARG:HH21	14:32:66:ARG:HH12	1.61	0.48
15:14:951:C:O2'	22:D5:168:GLU:OE2	2.19	0.48
15:14:1161:U:H2'	15:14:1162:G:O4'	2.12	0.48
15:14:1498:G:H1'	15:14:1577:A:H62	1.79	0.48
15:14:2301:A:H4'	15:14:2302:A:O4'	2.13	0.48
15:14:2615:A:H2'	15:14:2616:C:C6	2.48	0.48
15:14:2661:C:H2'	15:14:2662:U:O4'	2.14	0.48
21:68:68:GLU:OE2	21:68:78:ARG:NH1	2.46	0.48
22:H8:141:VAL:O	22:H8:144:LEU:HG	2.13	0.48
17:H5:43:ILE:O	17:H5:47:VAL:HG23	2.13	0.48
18:69:4:ILE:HD11	18:69:44:LEU:HD22	1.96	0.48
18:69:81:VAL:HG23	18:69:143:SER:HB2	1.96	0.48
21:25:17:ARG:HB2	21:25:45:GLU:HG2	1.96	0.48
23:29:58:ARG:O	23:29:59:VAL:HG22	2.14	0.48
24:4A:68:GLY:HA3	40:49:116:ASP:OD1	2.14	0.48
26:1J:10:U:H6	26:1J:10:U:H5"	1.78	0.48
27:85:90:VAL:HG22	35:95:39:LEU:HB2	1.95	0.48
27:85:90:VAL:O	27:85:92:ARG:N	2.47	0.48
29:AA:42:PRO:HA	29:AA:45:VAL:HG13	1.96	0.48
30:35:8:PRO:HB3	32:39:34:TRP:CH2	2.49	0.48
31:E5:72:ARG:HH21	31:E5:75:LEU:HD13	1.78	0.48
39:J8:87:PRO:O	39:J8:91:LYS:N	2.36	0.48
43:A5:90:ARG:HH11	43:A5:90:ARG:HG3	1.78	0.48
6:2I:98:LEU:O	6:2I:101:SER:OG	2.28	0.48
52:V4:33:U:H2'	52:V4:35:A:OP2	2.14	0.48
1:13:1436:A:H2'	1:13:1437:C:C6	2.48	0.48
1:13:1577:G:H21	1:13:1854:A:H62	1.61	0.48
2:A8:10:ARG:NH1	15:1H:2310:C:OP1	2.46	0.48
8:22:121:ALA:O	8:22:125:GLU:HG3	2.14	0.48
9:8E:14:VAL:O	9:8E:65:VAL:HG23	2.14	0.48
1:1G:1017:G:H1	1:1G:1028:U:H3	1.62	0.48
1:1G:1212:A:H2'	1:1G:1213:G:O4'	2.13	0.48
1:1G:1508:G:O2'	1:1G:1537:A:N1	2.32	0.48
1:1G:1877:A:H4'	9:82:68:GLY:N	2.28	0.48
1:1G:2162:C:H2'	1:1G:2163:U:H6	1.78	0.48
11:G8:55:TYR:N	11:G8:56:PRO:HD3	2.29	0.48
15:1H:665:G:H2'	15:1H:666:U:H6	1.79	0.48
15:1H:1000:A:OP2	38:88:16:ARG:NH1	2.45	0.48
15:1H:1434:G:H4'	15:1H:1435:C:OP1	2.14	0.48
15:1H:1552:U:H2'	15:1H:1553:C:C6	2.49	0.48
16:B8:102:ILE:HA	16:B8:105:LEU:HB2	1.94	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:61:67:ARG:O	18:61:71:ILE:HG22	2.14	0.48
14:32:4:TYR:CE2	14:32:11:LEU:HD11	2.49	0.48
14:32:61:LYS:HA	14:32:203:VAL:HG22	1.96	0.48
15:14:1110:G:OP1	15:14:1112:C:N4	2.46	0.48
15:14:1332:G:N2	15:14:1334:G:H3'	2.28	0.48
15:14:1821:A:O4'	15:14:2604:A:H4'	2.13	0.48
15:14:1924:G:N2	15:14:1927:C:H5	2.12	0.48
15:14:2032:C:H2'	15:14:2033:C:H6	1.78	0.48
15:14:2135:G:O2'	15:14:2145:G:OP1	2.20	0.48
15:14:2288:A:O2'	15:14:2289:A:H5'	2.14	0.48
15:14:2342:A:H2'	15:14:2343:A:C8	2.48	0.48
15:14:2411:G:H4'	39:F5:30:VAL:H	1.78	0.48
16:75:2:ASN:O	16:75:7:ILE:HB	2.14	0.48
16:75:45:PHE:CE2	16:75:74:ARG:HD3	2.49	0.48
21:25:85:VAL:HG12	21:25:87:ILE:HD13	1.96	0.48
23:29:81:ILE:HG21	23:29:84:PHE:HD2	1.78	0.48
25:42:35:GLY:HA3	25:42:41:VAL:HG12	1.96	0.48
26:1J:75:A:C4	26:1J:107:A:C2	3.01	0.48
30:78:101:VAL:HG12	30:78:106:LEU:HD12	1.94	0.48
31:E5:34:GLY:HA2	31:E5:61:ALA:O	2.14	0.48
40:41:44:GLY:O	40:41:47:LYS:HB2	2.13	0.48
43:A5:46:PHE:O	43:A5:50:VAL:HG12	2.13	0.48
48:1A:13:HIS:CE1	48:1A:14:LYS:HG3	2.49	0.48
44:12:60:ASP:OD1	44:12:64:ARG:HD3	2.13	0.48
51:Y4:37:G:OP1	51:Y4:37:G:H4'	2.13	0.48
1:13:1683:A:H2'	8:2E:156:ARG:HD2	1.96	0.48
1:13:1741:C:H2'	1:13:1742:C:H6	1.79	0.48
2:A8:17:ARG:NH2	15:1H:2307:C:P	2.87	0.48
6:2A:100:ALA:C	6:2A:102:GLY:H	2.22	0.48
9:8E:17:VAL:HA	9:8E:63:ILE:HG12	1.96	0.48
1:1G:713:C:H2'	1:1G:714:G:H8	1.78	0.48
1:1G:1088:A:OP2	1:1G:1115:G:N2	2.44	0.48
1:1G:1683:A:N7	1:1G:1827:C:N4	2.62	0.48
1:1G:1755:G:H22	1:1G:1772:G:H1	1.62	0.48
1:1G:1781:C:C4	1:1G:1782:G:N7	2.82	0.48
11:G8:78:ALA:C	11:G8:79:CYS:SG	2.96	0.48
12:Q8:37:SER:HA	12:Q8:40:GLU:HB3	1.96	0.48
7:8A:59:ILE:HG22	7:8A:71:PHE:CD2	2.48	0.48
15:1H:18:C:O3'	27:C8:23:GLY:HA2	2.12	0.48
15:1H:608:G:OP2	27:C8:10:ARG:HD2	2.14	0.48
15:1H:1179:G:N2	15:1H:1180:A:N3	2.62	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:1H:2230:G:H2'	15:1H:2231:G:N1	2.28	0.48
18:61:126:TYR:HB2	18:61:140:LEU:CD1	2.44	0.48
15:14:769:C:H2'	15:14:770:C:H6	1.79	0.48
15:14:2193:G:N2	15:14:2195:A:OP2	2.47	0.48
22:H8:81:ARG:HG2	38:88:130:LYS:NZ	2.29	0.48
23:29:112:GLY:O	23:29:159:HIS:HA	2.14	0.48
30:35:19:VAL:HG13	30:35:31:ALA:HB1	1.96	0.48
39:J8:60:PHE:HE2	39:J8:91:LYS:HE2	1.78	0.48
39:J8:83:GLU:C	39:J8:85:LEU:H	2.21	0.48
38:45:79:LEU:H	38:45:79:LEU:HD22	1.79	0.48
44:12:101:MET:HB2	44:12:102:LEU:HD12	1.95	0.48
45:55:87:TYR:CD1	45:55:90:ARG:HD2	2.48	0.48
3:F8:67:GLY:C	3:F8:69:TYR:H	2.22	0.48
5:P8:46:VAL:O	5:P8:47:ARG:HB2	2.14	0.48
52:W4:74:C:C2	52:W4:75:C:H5'	2.49	0.48
52:X4:60:U:H5"	52:X4:61:C:H5	1.79	0.48
1:13:1734:G:H5"	8:2E:172:ARG:HG2	1.95	0.47
1:13:2122:A:O2'	1:13:2143:G:H5'	2.13	0.47
1:1G:1901:G:H2'	1:1G:1902:A:C8	2.48	0.47
15:1H:233:U:O2'	15:1H:234:A:H5'	2.14	0.47
15:1H:725:A:H1'	15:1H:2458:C:H1'	1.95	0.47
15:1H:978:G:O2'	17:L8:24:LYS:HE3	2.14	0.47
15:1H:1058:A:N3	15:1H:1202:C:H1'	2.29	0.47
15:1H:1455:U:H2'	15:1H:1456:C:C6	2.48	0.47
15:14:218:A:H2'	15:14:220:U:O4'	2.14	0.47
15:14:1209:G:C6	15:14:1210:C:C4	3.02	0.47
15:14:2346:G:O3'	31:E5:43:THR:HG22	2.13	0.47
15:14:2777:G:H1'	47:59:143:GLN:HE22	1.79	0.47
15:14:2885:G:C4	15:14:2886:A:C2	3.01	0.47
17:H5:4:LEU:O	17:H5:36:VAL:HA	2.14	0.47
18:69:102:SER:OG	18:69:103:ARG:N	2.47	0.47
26:16:46:G:C2	26:16:50:A:C2	3.02	0.47
32:39:7:TYR:HE2	32:39:10:PRO:HG3	1.76	0.47
42:62:15:ASP:O	42:62:19:GLY:HA2	2.14	0.47
48:1I:92:THR:OG1	48:1I:93:GLY:N	2.47	0.47
3:F8:3:THR:HB	3:F8:6:ASP:HB2	1.96	0.47
3:F8:27:THR:HB	3:F8:80:ILE:HB	1.95	0.47
1:13:852:G:H1	1:13:858:C:H42	1.59	0.47
1:13:1370:G:H2'	1:13:1371:G:O4'	2.14	0.47
2:A8:5:THR:HG23	2:A8:8:GLU:OE2	2.14	0.47
4:11:182:LEU:HA	4:11:182:LEU:HD23	1.72	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:22:70:VAL:HG12	8:22:72:LYS:N	2.25	0.47
1:1G:786:G:H2'	1:1G:787:G:H8	1.78	0.47
1:1G:1257:G:H2'	1:1G:1258:G:C8	2.49	0.47
1:1G:1283:G:C2	1:1G:1382:A:C4	3.02	0.47
1:1G:1372:U:H2'	1:1G:1373:C:C6	2.48	0.47
10:58:25:ARG:HH22	15:1H:1191:A:H4'	1.79	0.47
2:65:55:ALA:HB2	26:1J:119:G:H5'	1.95	0.47
2:65:103:GLU:O	2:65:106:ARG:HG3	2.14	0.47
9:82:24:GLY:HA2	9:82:59:PHE:O	2.15	0.47
9:82:48:GLU:N	9:82:49:PRO:HD2	2.29	0.47
15:1H:64:C:H2'	15:1H:65:C:C6	2.49	0.47
15:1H:644:G:H2'	15:1H:645:C:C6	2.49	0.47
15:1H:769:C:H2'	15:1H:770:C:C6	2.49	0.47
15:1H:1434:G:O2'	15:1H:1445:U:H6	1.96	0.47
15:1H:1478:G:H2'	15:1H:1479:C:H6	1.79	0.47
15:1H:1606:C:H2'	15:1H:1607:C:C6	2.49	0.47
10:15:4:TYR:O	27:85:64:ARG:NH1	2.47	0.47
14:32:23:GLY:H	14:32:26:CYS:HB2	1.79	0.47
15:14:301:A:H2'	15:14:302:C:C6	2.49	0.47
15:14:665:G:H2'	15:14:666:U:C6	2.48	0.47
15:14:1970:G:H2'	15:14:1971:U:C6	2.49	0.47
15:14:2136:C:H42	15:14:2172:G:N2	2.12	0.47
15:14:2253:G:N3	15:14:2253:G:H2'	2.29	0.47
22:H8:19:ARG:HD3	22:H8:25:PRO:HD2	1.96	0.47
23:21:33:VAL:CG1	23:21:89:ASP:HA	2.44	0.47
28:M8:6:HIS:CE1	40:41:67:LYS:CE	2.96	0.47
28:M8:66:SER:OG	29:AI:8:GLY:N	2.47	0.47
29:AI:25:LYS:HG2	29:AI:27:GLU:OE2	2.14	0.47
26:1J:85:G:N1	26:1J:96:C:N3	2.41	0.47
32:31:7:TYR:O	32:31:21:ALA:HA	2.14	0.47
32:31:136:THR:HG22	32:31:166:ALA:O	2.14	0.47
30:35:6:LEU:HD12	30:35:6:LEU:HA	1.61	0.47
31:E5:49:LYS:HG3	31:E5:80:HIS:HB3	1.95	0.47
32:39:89:VAL:HG12	32:39:90:PHE:H	1.78	0.47
38:88:135:ASP:O	38:88:139:GLU:HG3	2.14	0.47
41:6I:87:ILE:HG22	41:6I:88:ARG:N	2.28	0.47
48:1A:17:ASP:OD2	48:1A:70:ARG:NH1	2.47	0.47
46:G5:47:ASN:N	46:G5:47:ASN:ND2	2.56	0.47
8:2E:47:LEU:CD2	8:2E:76:VAL:HG12	2.44	0.47
52:V1:51:U:H2'	52:V1:52:G:C8	2.49	0.47
52:V4:51:U:H2'	52:V4:52:G:C8	2.49	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:13:921:C:H3'	1:13:922:G:H5'	1.96	0.47
1:13:1047:G:H21	14:3E:119:GLN:HE22	1.62	0.47
1:13:1136:C:OP2	1:13:1137:C:O2'	2.24	0.47
1:13:1260:G:H2'	1:13:1261:A:N3	2.29	0.47
4:11:11:PRO:C	4:11:13:ARG:H	2.22	0.47
4:11:65:ILE:HD12	4:11:66:ASP:N	2.29	0.47
4:11:130:ALA:C	4:11:131:LEU:HD12	2.38	0.47
6:2A:59:TYR:CE2	42:62:149:ARG:HB3	2.49	0.47
8:22:155:GLY:HA3	8:22:196:LEU:HD13	1.96	0.47
1:1G:1070:U:H1'	1:1G:1071:A:H5"	1.96	0.47
1:1G:2133:U:H2'	1:1G:2134:G:C8	2.48	0.47
10:58:57:ALA:C	10:58:59:LYS:N	2.73	0.47
10:58:118:LYS:HE2	15:1H:2796:G:P	2.54	0.47
13:3I:32:PHE:HE1	13:3I:86:ARG:HG3	1.80	0.47
15:1H:123:G:C6	5:P8:10:ARG:HG3	2.49	0.47
15:1H:613:U:O4	15:1H:719:A:H1'	2.14	0.47
15:1H:615:A:OP1	32:31:95:ARG:NH1	2.48	0.47
15:1H:685:G:N2	15:1H:698:C:N4	2.61	0.47
15:1H:1415:A:H2'	15:1H:1416:A:O4'	2.15	0.47
15:1H:1687:A:H4'	15:1H:2726:A:O2'	2.14	0.47
15:1H:2416:U:O2	15:1H:2417:C:O2	2.32	0.47
11:C5:97:ARG:HH11	11:C5:104:GLY:HA3	1.79	0.47
18:61:72:LEU:HD11	18:61:107:VAL:HG21	1.96	0.47
20:1F:18:TYR:HA	20:1F:22:ARG:HB3	1.96	0.47
15:14:4:C:N4	15:14:2911:G:H22	1.94	0.47
15:14:249:G:O2'	15:14:648:A:O2'	2.15	0.47
15:14:640:U:H4'	15:14:641:G:OP1	2.13	0.47
15:14:907:U:O2	15:14:2283:A:H2'	2.14	0.47
15:14:2151:A:C2	15:14:2188:C:H1'	2.49	0.47
15:14:2342:A:H2'	15:14:2343:A:O4'	2.14	0.47
15:14:2489:C:H3'	15:14:2490:C:C4'	2.44	0.47
15:14:2535:C:H41	15:14:2557:A:H62	1.62	0.47
15:14:2703:U:H1'	15:14:2737:A:N6	2.29	0.47
23:29:119:ARG:CG	23:29:160:TYR:HB2	2.44	0.47
31:I8:84:LEU:HD12	31:I8:84:LEU:HA	1.68	0.47
35:D8:49:THR:O	35:D8:50:PRO:C	2.55	0.47
38:88:43:THR:HG22	38:88:94:VAL:HG12	1.95	0.47
48:1I:32:ALA:CB	48:1I:76:ASN:HB2	2.45	0.47
49:7I:25:ARG:HG3	49:7I:25:ARG:HH11	1.79	0.47
44:12:108:ILE:HA	44:12:108:ILE:HD13	1.72	0.47
45:55:70:LEU:O	45:55:72:ASP:N	2.48	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:2E:113:ALA:HB3	8:2E:114:PRO:HD3	1.96	0.47
8:2E:140:ARG:HA	8:2E:143:GLU:HB2	1.95	0.47
1:13:1287:G:H2'	1:13:1288:U:H6	1.79	0.47
1:13:1785:A:N6	1:13:1805:G:H21	2.13	0.47
1:13:1837:C:N4	1:13:1838:U:O4	2.47	0.47
1:13:1973:A:C4	42:6E:10:ARG:NH1	2.82	0.47
4:11:227:ASN:ND2	15:1H:833:A:O4'	2.48	0.47
5:L5:33:ARG:HG3	15:14:495:G:OP1	2.14	0.47
6:2A:20:TYR:HB2	6:2A:31:THR:HG23	1.95	0.47
7:8I:86:GLU:O	7:8I:90:ILE:HG12	2.14	0.47
1:1G:895:G:OP1	7:8A:67:LYS:O	2.32	0.47
1:1G:1302:G:O3'	34:52:87:ARG:NH2	2.46	0.47
1:1G:1420:G:O6	1:1G:1421:A:N6	2.44	0.47
1:1G:1942:U:H2'	1:1G:1943:G:O4'	2.14	0.47
15:1H:1306:C:H4'	32:31:83:PHE:CD1	2.49	0.47
15:1H:2391:A:H2'	15:1H:2392:A:O4'	2.14	0.47
15:1H:2419:C:O3'	30:78:77:ARG:NH2	2.48	0.47
15:1H:2647:A:O2'	15:1H:2824:G:O2'	2.12	0.47
10:15:96:GLU:H	10:15:96:GLU:CD	2.21	0.47
15:14:866:C:O2'	15:14:888:U:OP1	2.21	0.47
15:14:1039:C:O2	15:14:1213:G:C2	2.68	0.47
15:14:2172:G:H2'	15:14:2173:G:H4'	1.97	0.47
15:14:2336:G:H5"	15:14:2337:A:OP2	2.15	0.47
15:14:2793:G:OP2	15:14:2797:A:O2'	2.30	0.47
23:21:15:PHE:HA	23:21:19:ARG:O	2.13	0.47
22:D5:54:HIS:HB3	22:D5:101:PRO:HD3	1.96	0.47
22:D5:166:SER:O	22:D5:168:GLU:N	2.47	0.47
40:41:131:TYR:HB3	40:41:159:VAL:CG2	2.45	0.47
37:BA:72:LEU:HB3	37:BA:73:HIS:H	1.56	0.47
47:59:94:TYR:N	47:59:94:TYR:CD1	2.83	0.47
8:2E:123:GLN:O	8:2E:128:PHE:HB2	2.15	0.47
52:W1:68:C:H2'	52:W1:69:G:H8	1.79	0.47
52:W4:75:C:H3'	52:W4:75:C:C6	2.47	0.47
1:13:1281:U:C4	1:13:1381:G:N3	2.82	0.47
1:1G:1639:A:N6	1:1G:1640:A:C6	2.83	0.47
1:1G:1712:G:H5'	1:1G:1730:A:OP2	2.14	0.47
15:1H:604:G:H2'	15:1H:605:C:C6	2.49	0.47
15:1H:626:C:O2'	15:1H:630:C:OP1	2.19	0.47
15:1H:717:G:H2'	15:1H:719:A:H62	1.78	0.47
15:1H:907:U:O2	15:1H:2283:A:H2'	2.13	0.47
15:1H:1009:G:H2'	15:1H:1010:U:C6	2.49	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:1H:1159:A:N3	15:1H:1160:G:H1'	2.29	0.47
15:1H:1563:U:H2'	15:1H:1564:C:C6	2.50	0.47
15:1H:1637:C:H2'	15:1H:1638:C:C6	2.48	0.47
15:1H:2468:A:H2'	15:1H:2469:G:O4'	2.14	0.47
16:B8:67:SER:OG	21:68:101:PRO:HG3	2.14	0.47
11:C5:50:ARG:CG	11:C5:53:PRO:HG3	2.45	0.47
17:L8:7:LYS:HB2	17:L8:34:GLU:HG2	1.97	0.47
15:14:333:G:C8	15:14:528:A:H1'	2.50	0.47
15:14:496:G:H2'	15:14:497:G:O4'	2.14	0.47
15:14:604:G:H2'	15:14:605:C:H6	1.78	0.47
15:14:630:C:O2	15:14:706:U:O2'	2.30	0.47
15:14:1152:C:H2'	15:14:1153:U:C6	2.49	0.47
15:14:1216:U:C2	15:14:1231:G:N2	2.83	0.47
15:14:2344:G:H2'	15:14:2345:G:O4'	2.14	0.47
15:14:2644:A:N3	15:14:2644:A:H2'	2.30	0.47
20:1B:6:ARG:HD3	20:1B:15:ARG:CZ	2.44	0.47
20:1B:9:ARG:O	20:1B:13:ILE:HG13	2.14	0.47
26:16:13:C:H3'	26:16:14:C:H6	1.80	0.47
34:5E:22:GLU:O	34:5E:26:ILE:HG13	2.13	0.47
30:35:36:LYS:NZ	30:35:39:LYS:HB3	2.30	0.47
33:5A:12:ARG:HB2	33:5A:14:PRO:HD3	1.97	0.47
39:J8:8:SER:HB3	39:J8:66:HIS:CD2	2.50	0.47
38:45:19:GLY:H	38:45:98:LYS:HZ3	1.62	0.47
44:1E:17:PHE:CD1	44:1E:17:PHE:N	2.83	0.47
42:62:85:TYR:N	42:62:85:TYR:CD1	2.83	0.47
45:98:9:LYS:HA	45:98:17:ARG:HE	1.79	0.47
46:K8:22:GLU:OE2	46:K8:68:ARG:NH2	2.45	0.47
47:51:149:ARG:NH1	47:51:167:GLU:OE2	2.47	0.47
45:55:54:LEU:HD12	45:55:54:LEU:HA	1.76	0.47
52:V1:18:G:H2'	52:V1:57:G:N2	2.29	0.47
1:13:1070:U:OP2	14:3E:36:ARG:NH2	2.48	0.47
1:13:1074:C:H2'	1:13:1075:U:C6	2.49	0.47
1:13:1599:G:N2	1:13:1990:C:OP2	2.43	0.47
1:13:1758:A:O2'	9:8E:3:GLN:NE2	2.47	0.47
1:13:2070:G:C8	1:13:2072:A:C2	3.02	0.47
4:11:182:LEU:N	4:11:272:ALA:HB3	2.23	0.47
9:8E:10:ARG:NE	9:8E:105:ASP:OD2	2.47	0.47
1:1G:1404:G:N2	1:1G:1433:U:O4	2.45	0.47
1:1G:1854:A:O3'	24:4A:115:LYS:HD2	2.14	0.47
1:1G:1974:G:H22	1:1G:2001:G:H2'	1.78	0.47
1:1G:2120:G:C2'	1:1G:2121:U:H5'	2.44	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:65:77:ALA:O	2:65:80:LEU:N	2.47	0.47
4:19:88:ARG:NH2	15:14:1851:G:OP1	2.48	0.47
15:1H:1269:C:H2'	15:1H:1270:C:H6	1.79	0.47
15:1H:2367:A:N6	15:1H:2380:G:O2'	2.48	0.47
14:32:4:TYR:CD2	14:32:11:LEU:HD11	2.49	0.47
15:14:249:G:N2	15:14:648:A:H8	2.02	0.47
15:14:867:G:H5'	15:14:888:U:OP1	2.13	0.47
15:14:2330:G:OP1	40:49:36:LYS:NZ	2.37	0.47
15:14:2419:C:H2'	15:14:2420:G:H5'	1.96	0.47
25:4E:80:ILE:HG12	25:4E:81:GLU:N	2.29	0.47
26:16:80:A:C2	26:16:102:A:C4	3.03	0.47
22:D5:30:ASN:HA	22:D5:89:PHE:HE1	1.79	0.47
23:29:96:PHE:O	23:29:175:VAL:HG11	2.15	0.47
25:42:59:GLY:O	25:42:63:ARG:HG2	2.15	0.47
30:78:39:LYS:HB2	30:78:45:LEU:HD22	1.96	0.47
32:39:15:SER:OG	32:39:16:GLY:N	2.48	0.47
32:39:172:TRP:CD1	32:39:172:TRP:H	2.30	0.47
34:52:86:ARG:O	34:52:87:ARG:HG2	2.14	0.47
35:95:20:LEU:O	35:95:94:LEU:N	2.44	0.47
39:J8:25:LYS:HB3	39:J8:25:LYS:HE2	1.57	0.47
40:41:124:SER:HB2	40:41:131:TYR:CE1	2.49	0.47
43:E8:75:TYR:CZ	43:E8:104:THR:HG21	2.50	0.47
43:A5:59:VAL:HG12	43:A5:60:ASN:OD1	2.14	0.47
44:12:115:LEU:HB2	44:12:145:LEU:HD12	1.95	0.47
45:55:97:VAL:HA	45:55:113:LEU:O	2.14	0.47
47:59:83:TYR:CD1	47:59:134:SER:HB3	2.50	0.47
49:7A:23:ASP:OD1	49:7A:25:ARG:HG3	2.14	0.47
1:13:906:G:O2'	7:8I:67:LYS:N	2.47	0.47
1:13:1018:G:H5'	49:7I:5:ARG:NH1	2.30	0.47
1:13:1176:A:OP1	14:3E:73:ARG:NH2	2.47	0.47
1:13:1221:G:C6	1:13:1277:A:C6	3.02	0.47
1:13:1639:A:H2'	1:13:1640:A:H8	1.79	0.47
1:13:1651:C:C2	1:13:1652:C:H5	2.32	0.47
1:13:1661:G:H2'	1:13:1662:G:C8	2.47	0.47
1:13:1942:U:H2'	1:13:1943:G:O4'	2.15	0.47
3:B5:57:LEU:N	3:B5:57:LEU:HD23	2.28	0.47
4:11:259:THR:OG1	15:1H:1832:U:H5'	2.14	0.47
7:8I:43:LEU:O	7:8I:69:LYS:HG3	2.15	0.47
9:8E:118:LYS:HE2	9:8E:118:LYS:HB3	1.36	0.47
1:1G:786:G:C2	1:1G:787:G:C5	3.02	0.47
1:1G:950:G:H1'	1:1G:1237:A:C2	2.49	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:1G:1079:G:H4'	14:32:123:HIS:CE1	2.49	0.47
1:1G:1117:A:H2'	1:1G:1118:C:O4'	2.15	0.47
1:1G:1229:C:H2'	1:1G:1230:C:C6	2.49	0.47
1:1G:1756:C:H2'	1:1G:1767:G:O6	2.15	0.47
1:1G:1931:G:N2	1:1G:1959:A:OP2	2.42	0.47
10:58:87:LEU:HD22	10:58:91:LEU:HG	1.97	0.47
2:65:110:LEU:HD23	2:65:112:PHE:CE1	2.50	0.47
12:Q8:25:MET:HB3	12:Q8:42:ARG:HB3	1.97	0.47
9:82:21:PRO:HA	9:82:59:PHE:HA	1.95	0.47
15:1H:53:G:O2'	5:P8:35:ARG:HD3	2.15	0.47
15:1H:355:A:H2	15:1H:1258:A:O2'	1.98	0.47
15:1H:488:A:H2'	15:1H:489:C:O4'	2.14	0.47
15:1H:658:A:H2'	15:1H:659:A:O4'	2.14	0.47
15:1H:781:C:H3'	56:1H:3659:HOH:O	2.14	0.47
15:1H:964:G:C2'	15:1H:965:A:H5"	2.45	0.47
15:1H:1279:C:H2'	15:1H:1280:G:H8	1.79	0.47
15:1H:1461:A:H2'	15:1H:1462:G:H8	1.78	0.47
15:1H:2210:C:H2'	15:1H:2211:G:C8	2.50	0.47
15:1H:2379:C:H2'	15:1H:2380:G:O4'	2.14	0.47
15:1H:2615:A:H2'	15:1H:2616:C:H6	1.79	0.47
15:1H:2708:A:H2'	15:1H:2709:G:C8	2.47	0.47
15:1H:2787:C:H2'	15:1H:2788:C:H6	1.79	0.47
10:15:67:LEU:O	10:15:88:GLU:HG3	2.14	0.47
12:M5:27:THR:HG22	30:35:63:PRO:HD3	1.95	0.47
14:32:59:ARG:HH21	14:32:66:ARG:NH1	2.13	0.47
14:32:81:GLU:OE2	14:32:139:ARG:NH2	2.47	0.47
20:1F:10:ARG:HA	20:1F:10:ARG:NE	2.30	0.47
15:14:301:A:C4	15:14:302:C:N4	2.83	0.47
15:14:471:A:C5	32:39:45:ARG:HD2	2.50	0.47
15:14:518:G:H2'	15:14:519:A:H8	1.78	0.47
15:14:598:G:O2'	15:14:599:C:H3'	2.15	0.47
15:14:870:A:O2'	15:14:993:G:OP2	2.24	0.47
15:14:1067:U:HO2'	15:14:1069:A:H2	1.61	0.47
15:14:1203:G:OP1	27:85:58:ARG:HD3	2.14	0.47
15:14:1288:G:H2'	15:14:1289:U:O4'	2.15	0.47
15:14:1313:G:OP1	36:J5:19:ARG:NH2	2.39	0.47
15:14:1361:U:H4'	15:14:1362:U:O5'	2.14	0.47
15:14:1479:C:H2'	15:14:1480:U:H6	1.79	0.47
15:14:1512:C:H2'	15:14:1513:C:H6	1.80	0.47
15:14:1701:G:H2'	15:14:1702:A:O4'	2.15	0.47
15:14:2256:A:H2'	15:14:2257:G:C8	2.50	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:14:2350:A:C8	15:14:2352:G:C5	3.03	0.47
25:4E:110:LEU:O	25:4E:115:VAL:HB	2.15	0.47
27:C8:34:LYS:H	27:C8:34:LYS:HG2	1.38	0.47
27:C8:86:ALA:CB	27:C8:88:ILE:HG13	2.45	0.47
23:29:101:ARG:NH2	23:29:171:GLU:HB2	2.29	0.47
26:1J:42:U:C5	28:I5:1:MET:HB3	2.50	0.47
26:1J:107:A:H2'	26:1J:108:G:O4'	2.14	0.47
32:31:140:LEU:HA	32:31:140:LEU:HD12	1.63	0.47
32:31:178:PRO:HG2	32:31:179:GLU:OE1	2.15	0.47
35:D8:38:LEU:HD21	35:D8:40:LEU:O	2.15	0.47
38:88:5:ARG:H	38:88:5:ARG:HD3	1.79	0.47
38:88:32:TYR:O	38:88:105:GLU:HA	2.15	0.47
36:J5:48:GLU:OE2	43:A5:37:ARG:NH2	2.48	0.47
40:41:165:THR:OG1	40:41:168:GLU:HG3	2.14	0.47
42:6E:6:ARG:HB3	42:6E:6:ARG:CZ	2.45	0.47
38:45:102:VAL:O	38:45:102:VAL:HG12	2.15	0.47
44:12:48:MET:HA	44:12:51:LEU:HD12	1.96	0.47
44:12:52:GLU:HG2	44:12:56:ARG:NH2	2.30	0.47
45:55:96:ARG:CZ	45:55:117:VAL:HG23	2.44	0.47
46:G5:16:LEU:HG	46:G5:16:LEU:O	2.14	0.47
6:2I:41:THR:HG22	6:2I:42:TRP:N	2.29	0.47
50:72:109:ILE:HG12	50:72:110:ALA:N	2.30	0.47
1:13:991:G:C6	1:13:992:G:O6	2.68	0.47
1:13:1359:G:C5	1:13:1360:G:H1'	2.49	0.47
1:13:1365:C:H2'	1:13:1366:A:C8	2.49	0.47
1:13:1792:G:C6	1:13:1793:C:C4	3.03	0.47
1:13:2154:A:H8	1:13:2154:A:O5'	1.98	0.47
7:8I:44:ALA:HA	7:8I:71:PHE:O	2.15	0.47
8:22:32:LEU:HB3	8:22:59:ARG:NH1	2.29	0.47
1:1G:734:G:H2'	1:1G:735:U:O4'	2.15	0.47
1:1G:1138:A:H5"	14:32:55:ALA:HB2	1.96	0.47
1:1G:1229:C:H5"	50:72:97:VAL:CG2	2.45	0.47
1:1G:1247:C:H5'	1:1G:1248:U:H5"	1.96	0.47
1:1G:1757:C:C4	1:1G:1767:G:C2	3.03	0.47
1:1G:1926:A:C2	1:1G:1928:U:C4	3.03	0.47
10:58:99:LEU:HD22	10:58:103:VAL:HG23	1.95	0.47
9:82:14:VAL:O	9:82:65:VAL:HG23	2.15	0.47
9:82:95:LYS:NZ	9:82:96:LEU:HD13	2.29	0.47
15:1H:302:C:H3'	15:1H:303:A:O4'	2.15	0.47
15:1H:520:G:H2'	15:1H:521:G:O4'	2.15	0.47
15:1H:554:C:OP2	15:1H:2795:U:H5	1.97	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:1H:1151:A:H3'	15:1H:1152:C:H6	1.80	0.47
15:1H:2302:A:N1	15:1H:2361:A:H2	2.13	0.47
10:15:120:LEU:HG	10:15:122:VAL:HG23	1.96	0.47
18:61:133:HIS:HB2	18:61:134:PRO:HD2	1.96	0.47
15:14:4:C:O2'	15:14:5:A:OP1	2.29	0.47
15:14:19:C:H2'	15:14:20:C:H6	1.80	0.47
15:14:211:A:N6	15:14:255:A:C8	2.83	0.47
15:14:634:A:H2'	15:14:635:G:O4'	2.15	0.47
15:14:1648:C:H2'	15:14:1649:C:H6	1.79	0.47
15:14:2897:U:H2'	15:14:2898:C:O4'	2.15	0.47
22:H8:60:GLU:HB3	22:H8:61:LEU:H	1.39	0.47
23:21:103:ASP:OD1	23:21:201:THR:HG23	2.15	0.47
19:9A:29:PHE:N	19:9A:29:PHE:CD1	2.82	0.47
21:25:116:SER:OG	21:25:117:LEU:N	2.48	0.47
28:M8:43:TYR:CE1	28:M8:44:THR:HG23	2.50	0.47
28:M8:48:ARG:HA	28:M8:48:ARG:HD3	1.63	0.47
23:29:65:GLY:O	23:29:68:ALA:HB2	2.15	0.47
29:AI:52:TYR:CE1	29:AI:56:GLN:HA	2.49	0.47
27:85:91:ASP:OD1	27:85:96:ALA:HB2	2.14	0.47
35:D8:38:LEU:HD23	35:D8:38:LEU:C	2.40	0.47
35:95:70:ILE:O	35:95:70:ILE:HG22	2.15	0.47
42:62:26:PHE:O	42:62:30:ILE:HG13	2.14	0.47
44:12:22:LYS:H	44:12:22:LYS:HG3	1.41	0.47
49:7A:14:ASN:OD1	49:7A:16:HIS:NE2	2.47	0.47
1:13:1017:G:N2	1:13:1028:U:O2	2.40	0.47
1:13:1426:C:OP1	6:2I:124:LYS:HE2	2.15	0.47
1:13:1804:G:H4'	1:13:1804:G:OP1	2.14	0.47
1:13:1963:C:H5"	1:13:1963:C:H6	1.80	0.47
1:13:1965:G:C6	1:13:1966:A:C6	3.03	0.47
4:11:105:ILE:CD1	4:11:105:ILE:CB	2.82	0.47
8:22:4:LYS:NZ	1:1G:1818:A:OP1	2.47	0.47
1:1G:849:A:H3'	1:1G:849:A:OP2	2.15	0.47
1:1G:1344:A:H2'	1:1G:1345:A:C8	2.50	0.47
4:19:17:THR:O	4:19:211:ARG:NH2	2.45	0.47
4:19:96:HIS:HD2	4:19:102:LYS:HG2	1.80	0.47
12:Q8:27:THR:HG23	12:Q8:42:ARG:NH2	2.30	0.47
15:1H:37:C:H2'	15:1H:38:A:H8	1.80	0.47
15:1H:174:C:H2'	15:1H:175:U:C6	2.50	0.47
15:1H:240:G:OP1	30:78:60:MET:HE1	2.15	0.47
15:1H:640:U:O4	32:31:175:THR:HG22	2.15	0.47
15:1H:794:G:OP2	23:21:133:LYS:HE2	2.14	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:1H:1689:U:O2'	15:1H:1690:C:H5'	2.15	0.47
15:1H:2416:U:H2'	15:1H:2417:C:N1	2.30	0.47
15:1H:2417:C:C2	15:1H:2418:C:H5	2.33	0.47
15:14:474:G:P	56:14:3679:HOH:O	2.73	0.47
15:14:614:C:H2'	15:14:615:A:C8	2.49	0.47
15:14:1391:A:C2	15:14:1446:U:C2	3.02	0.47
20:1B:8:THR:HB	20:1B:11:GLY:H	1.80	0.47
21:25:97:ARG:CZ	21:25:99:PHE:HE1	2.27	0.47
30:78:114:ILE:HD13	30:78:125:VAL:HG11	1.97	0.47
30:78:132:LYS:HE3	30:78:132:LYS:HB3	1.41	0.47
32:31:32:LEU:CD2	32:31:105:VAL:HG13	2.43	0.47
31:E5:69:PHE:CE2	31:E5:79:VAL:HG22	2.50	0.47
32:39:4:VAL:HG13	32:39:19:GLU:CD	2.40	0.47
44:1E:74:LYS:H	44:1E:74:LYS:HG2	1.39	0.47
44:1E:102:LEU:HB3	44:1E:180:LEU:CD1	2.45	0.47
8:2E:150:LYS:HB3	8:2E:201:TYR:HB2	1.97	0.47
52:V1:58:A:H2	52:V1:60:U:N3	2.13	0.47
1:13:651:U:H4'	1:13:652:G:O5'	2.14	0.47
1:13:1292:A:H5'	1:13:1465:G:OP1	2.15	0.47
1:13:1647:G:H3'	1:13:1648:G:H5"	1.97	0.47
5:L5:10:ARG:O	5:L5:14:LYS:HB2	2.15	0.47
1:1G:1269:A:N3	50:72:115:SER:HB2	2.30	0.47
1:1G:1371:G:O6	53:1G:2202:8UZ:N4	2.48	0.47
1:1G:1653:C:H2'	1:1G:1654:C:H5"	1.97	0.47
1:1G:1779:A:O2'	1:1G:1780:A:O5'	2.33	0.47
1:1G:2109:G:H2'	1:1G:2110:G:C8	2.50	0.47
10:58:51:PHE:CE2	10:58:119:ARG:HG2	2.50	0.47
11:G8:85:VAL:HG23	11:G8:96:ILE:HG22	1.97	0.47
15:1H:628:A:O4'	15:1H:704:A:N6	2.48	0.47
15:1H:867:G:H4'	15:1H:887:C:O3'	2.15	0.47
15:1H:1172:C:H2'	15:1H:1173:G:O4'	2.15	0.47
15:1H:1476:A:H4'	15:1H:1477:C:O4'	2.15	0.47
15:1H:1561:G:H2'	15:1H:1562:C:C6	2.50	0.47
15:1H:2097:G:H2'	15:1H:2098:C:O4'	2.15	0.47
15:1H:2336:G:H5"	15:1H:2337:A:OP2	2.15	0.47
15:1H:2907:U:H2'	15:1H:2908:C:C6	2.50	0.47
14:32:24:GLU:OE2	14:32:24:GLU:N	2.41	0.47
15:14:710:C:O3'	30:35:14:LYS:HB3	2.15	0.47
15:14:893:C:H3'	15:14:894:G:C8	2.50	0.47
15:14:1258:A:H5'	15:14:1260:G:O4'	2.15	0.47
17:H5:9:VAL:HG22	17:H5:53:LEU:O	2.15	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:21:70:ALA:O	23:21:71:GLY:C	2.57	0.47
18:69:31:LEU:HD21	18:69:38:LEU:HG	1.97	0.47
24:4A:70:LEU:O	24:4A:74:VAL:HG23	2.14	0.47
28:I5:25:TYR:OH	40:49:4:ASP:OD2	2.33	0.47
36:N8:33:CYS:HB2	36:N8:40:LYS:CE	2.44	0.47
32:39:7:TYR:HE1	32:39:16:GLY:HA3	1.79	0.47
37:BI:53:LEU:O	37:BI:57:ARG:HD3	2.14	0.47
39:J8:23:LYS:HG2	39:J8:29:GLY:HA3	1.96	0.47
40:41:96:ARG:HD3	40:41:96:ARG:C	2.40	0.47
45:98:46:GLY:HA2	45:98:49:ASP:HB2	1.97	0.47
48:1A:4:ILE:HG12	48:1A:100:THR:HG22	1.97	0.47
48:1I:50:ILE:HD11	48:1I:57:LYS:HD2	1.97	0.47
48:1I:84:GLN:HE21	48:1I:88:LEU:HD22	1.79	0.47
49:7I:4:ILE:HG13	49:7I:66:PRO:CA	2.45	0.47
49:7I:13:HIS:C	49:7I:15:PRO:HD3	2.40	0.47
44:12:7:VAL:HG13	44:12:8:LYS:HG3	1.96	0.47
3:F8:35:THR:C	3:F8:39:ILE:HD12	2.40	0.47
1:13:1023:A:C2	1:13:1024:A:C4	3.03	0.46
1:13:1732:G:OP1	44:1E:144:ARG:NH2	2.45	0.46
1:13:1977:A:C2	1:13:1978:U:C2	3.04	0.46
2:A8:33:LYS:HB3	2:A8:34:HIS:CD2	2.50	0.46
1:1G:876:C:H5’	7:8A:70:ARG:HG2	1.97	0.46
1:1G:1459:G:H2’	1:1G:1460:U:O4’	2.15	0.46
14:3E:63:LYS:O	14:3E:67:ILE:HG13	2.15	0.46
14:3E:81:GLU:CD	14:3E:139:ARG:HH22	2.24	0.46
15:1H:1543:A:O2’	15:1H:1544:A:H5’	2.15	0.46
15:1H:2302:A:N1	15:1H:2361:A:C2	2.83	0.46
15:1H:2811:G:H2’	15:1H:2813:C:H5”	1.96	0.46
12:M5:58:ILE:CG2	30:35:49:ARG:HD2	2.45	0.46
15:14:30:G:H2’	15:14:31:C:C6	2.49	0.46
15:14:76:C:OP1	46:G5:59:ARG:HD3	2.15	0.46
15:14:202:G:H2’	15:14:203:A:O4’	2.15	0.46
15:14:1529:G:N2	15:14:1530:G:H1’	2.30	0.46
15:14:1689:U:H2’	15:14:1690:C:H5’	1.97	0.46
15:14:2374:C:H2’	15:14:2375:A:O4’	2.15	0.46
15:14:2375:A:H2’	15:14:2376:A:O4’	2.15	0.46
15:14:2819:G:H2’	15:14:2820:G:C8	2.50	0.46
23:21:16:ARG:HG3	23:21:16:ARG:O	2.15	0.46
23:21:46:ALA:HB2	23:21:82:ARG:HA	1.97	0.46
23:21:96:PHE:O	23:21:175:VAL:HG11	2.14	0.46
28:M8:65:ASP:CG	28:M8:66:SER:H	2.23	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:29:81:ILE:HD12	23:29:81:ILE:HG23	1.73	0.46
25:42:83:GLU:HG3	25:42:83:GLU:O	2.14	0.46
30:78:94:GLU:O	30:78:124:LYS:O	2.33	0.46
32:31:167:ALA:HB1	32:31:173:VAL:HG11	1.97	0.46
35:95:7:THR:HG23	35:95:22:VAL:HG21	1.96	0.46
39:J8:91:LYS:HE2	39:J8:91:LYS:HB2	1.58	0.46
40:41:67:LYS:HE2	40:41:67:LYS:N	2.28	0.46
38:45:25:ASP:HB3	38:45:102:VAL:N	2.29	0.46
44:1E:32:ILE:HG13	44:1E:41:ILE:O	2.14	0.46
49:7I:68:ASP:O	49:7I:71:ARG:HG2	2.15	0.46
44:12:165:VAL:HG23	44:12:166:ASP:N	2.30	0.46
8:2E:20:SER:OG	8:2E:40:ARG:NH2	2.37	0.46
1:13:1187:G:H5"	1:13:1188:A:OP2	2.15	0.46
1:13:2072:A:O2'	16:B8:125:ARG:NH2	2.48	0.46
2:A8:66:ALA:HA	2:A8:69:VAL:CG1	2.45	0.46
3:B5:40:LYS:HA	3:B5:51:VAL:HG11	1.97	0.46
5:L5:47:ARG:HB2	5:L5:47:ARG:NH1	2.29	0.46
1:1G:1167:G:H5"	13:3A:114:LYS:HB2	1.97	0.46
1:1G:1217:G:H1	1:1G:1280:C:N4	2.12	0.46
1:1G:1685:G:C4	1:1G:1831:A:C2	3.03	0.46
1:1G:1747:C:OP2	9:82:9:ARG:NH2	2.48	0.46
11:G8:35:TYR:CD2	11:G8:69:ALA:HB3	2.50	0.46
12:Q8:50:LEU:CD2	12:Q8:51:ALA:H	2.13	0.46
7:8A:78:GLU:CD	7:8A:81:ARG:HD3	2.39	0.46
15:1H:487:U:H5"	5:P8:40:TRP:CD2	2.50	0.46
15:1H:909:U:C5	15:1H:965:A:N1	2.81	0.46
15:1H:2346:G:C4'	31:I8:42:GLY:HA3	2.44	0.46
15:1H:2772:U:H4'	15:1H:2773:A:OP1	2.14	0.46
16:B8:74:ARG:HG2	16:B8:74:ARG:NH1	2.20	0.46
19:9I:26:LEU:O	34:5E:100:ASN:ND2	2.48	0.46
15:14:909:U:C2	15:14:2283:A:C8	3.03	0.46
15:14:2482:C:H4'	38:45:123:HIS:CG	2.49	0.46
15:14:2487:G:H1	15:14:2492:C:P	2.38	0.46
22:D5:84:GLU:OE2	26:1J:79:U:H4'	2.15	0.46
29:AI:30:LEU:CD1	29:AI:30:LEU:H	2.29	0.46
25:42:99:GLY:O	25:42:117:ASP:HA	2.14	0.46
27:85:91:ASP:OD1	27:85:96:ALA:N	2.48	0.46
27:85:92:ARG:NH1	35:95:11:GLN:H	2.14	0.46
28:I5:40:HIS:CE1	28:I5:45:GLY:HA3	2.50	0.46
34:5E:3:ARG:O	34:5E:93:SER:HB2	2.15	0.46
35:95:47:VAL:O	35:95:47:VAL:HG22	2.15	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:41:55:LYS:NZ	40:41:148:MET:HE3	2.30	0.46
40:49:77:ILE:HD12	40:49:78:SER:N	2.30	0.46
47:51:4:ILE:HG13	47:51:6:ARG:HB2	1.96	0.46
47:51:25:LYS:HG2	47:51:34:GLU:HG2	1.97	0.46
48:1A:36:GLY:O	48:1A:38:ILE:HG13	2.16	0.46
48:1A:54:PHE:CE1	48:1A:55:LYS:NZ	2.75	0.46
47:59:59:ARG:O	47:59:63:SER:OG	2.23	0.46
47:59:104:GLU:HG3	47:59:114:VAL:HG22	1.97	0.46
1:13:964:U:H5'	37:BI:23:ARG:HB2	1.97	0.46
1:13:1250:A:H2'	1:13:1251:A:O4'	2.15	0.46
1:13:1569:A:H2'	1:13:1570:G:C8	2.51	0.46
1:13:1586:G:N2	48:1I:55:LYS:NZ	2.63	0.46
1:13:1928:U:O2'	1:13:1929:U:H5'	2.15	0.46
4:11:110:GLY:O	4:11:112:GLN:HG3	2.16	0.46
7:8I:45:HIS:O	7:8I:73:VAL:HG23	2.16	0.46
7:8I:67:LYS:O	7:8I:68:ARG:HB3	2.14	0.46
1:1G:706:A:N6	1:1G:749:C:N3	2.61	0.46
1:1G:849:A:H1'	1:1G:850:G:O4'	2.15	0.46
1:1G:849:A:H8	1:1G:850:G:N9	2.14	0.46
1:1G:1048:G:C2	1:1G:1077:C:C2	3.03	0.46
1:1G:1077:C:H2'	1:1G:1078:U:H6	1.80	0.46
1:1G:1138:A:C8	1:1G:1138:A:H3'	2.50	0.46
1:1G:1396:A:H2'	1:1G:1397:A:O4'	2.15	0.46
1:1G:1853:C:P	24:4A:91:ARG:HH12	2.38	0.46
1:1G:2118:U:O4	53:1G:2201:8UZ:N2	2.47	0.46
2:65:10:ARG:O	2:65:14:VAL:HG23	2.14	0.46
2:65:106:ARG:O	2:65:107:GLU:CD	2.58	0.46
15:1H:1044:A:O2'	27:C8:92:ARG:HG3	2.15	0.46
15:1H:1359:G:P	5:P8:9:ARG:HH11	2.38	0.46
15:1H:1408:A:C2	15:1H:1421:U:O4	2.62	0.46
15:1H:1739:A:N6	15:1H:1748:A:H2	2.03	0.46
15:1H:2862:U:H4'	15:1H:2881:A:C2	2.50	0.46
19:9I:32:ARG:HE	34:5E:97:PHE:HB2	1.80	0.46
15:14:34:C:O2'	15:14:35:G:OP1	2.32	0.46
15:14:94:G:H4'	46:G5:46:GLN:HB2	1.96	0.46
15:14:191:C:H4'	15:14:414:G:C2	2.50	0.46
15:14:684:G:H2'	15:14:685:G:O4'	2.16	0.46
15:14:755:A:H2'	15:14:756:G:O4'	2.16	0.46
15:14:802:C:O2'	15:14:803:C:H5'	2.14	0.46
15:14:1159:A:O3'	15:14:1160:G:H4'	2.15	0.46
15:14:1213:G:H2'	15:14:1214:U:C6	2.50	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:14:1435:C:OP2	15:14:1445:U:C5	2.69	0.46
15:14:1491:G:C2	15:14:1600:C:O2	2.68	0.46
15:14:1715:A:H2'	15:14:1716:G:O4'	2.16	0.46
15:14:1733:C:H2'	15:14:1734:C:C6	2.49	0.46
15:14:2159:A:HO2'	15:14:2184:G:N2	2.13	0.46
24:4I:40:ASN:HB3	24:4I:43:THR:HG23	1.98	0.46
25:4E:13:ILE:HA	25:4E:29:GLY:O	2.16	0.46
22:D5:94:GLU:O	22:D5:130:PRO:HD3	2.14	0.46
32:31:130:ALA:H	32:31:132:VAL:HG13	1.80	0.46
40:49:96:ARG:O	40:49:97:ASP:HB2	2.14	0.46
44:1E:5:ILE:HG13	44:1E:6:THR:N	2.29	0.46
44:1E:74:LYS:O	44:1E:78:GLN:HB2	2.14	0.46
45:98:70:LEU:HA	45:98:70:LEU:HD23	1.62	0.46
43:A5:92:ARG:NH1	43:A5:93:ALA:O	2.42	0.46
48:1A:22:LYS:HD2	48:1A:88:LEU:HD21	1.98	0.46
48:1A:99:LYS:HD3	48:1A:100:THR:H	1.80	0.46
44:12:7:VAL:O	44:12:217:ARG:NH2	2.48	0.46
50:7E:8:ASP:O	50:7E:12:ARG:HB2	2.15	0.46
6:2I:85:ARG:HD3	6:2I:113:PRO:HD3	1.96	0.46
50:72:21:LYS:HG2	50:72:23:SER:O	2.15	0.46
1:13:1086:G:H1	1:13:1118:C:H42	1.63	0.46
1:1G:1342:G:OP1	4:19:166:GLN:NE2	2.48	0.46
12:Q8:56:GLU:O	12:Q8:57:ARG:NE	2.45	0.46
13:3I:53:ARG:HB3	13:3I:69:TYR:HE1	1.80	0.46
15:1H:683:C:H2'	15:1H:684:G:H8	1.80	0.46
15:1H:1075:A:H2'	15:1H:1075:A:N3	2.30	0.46
15:1H:1630:A:H5'	15:1H:1631:G:OP2	2.15	0.46
15:1H:2290:C:H5'	15:1H:2290:C:C6	2.48	0.46
13:3A:47:LYS:O	13:3A:49:ASN:N	2.49	0.46
15:14:69:G:H21	15:14:70:A:N6	2.13	0.46
15:14:434:G:H8	15:14:434:G:O5'	1.98	0.46
15:14:1429:G:N2	15:14:1620:A:C2	2.82	0.46
15:14:1686:C:H2'	15:14:1687:A:C8	2.50	0.46
15:14:2057:G:H21	23:29:146:THR:CG2	2.22	0.46
15:14:2495:C:H2'	15:14:2496:G:H5'	1.96	0.46
15:14:2882:G:H2'	15:14:2883:C:O4'	2.16	0.46
23:21:16:ARG:NH2	23:21:171:GLU:OE2	2.48	0.46
22:D5:27:VAL:HG23	22:D5:36:LYS:HA	1.95	0.46
33:5I:24:CYS:HB2	33:5I:40:CYS:HB3	1.97	0.46
34:5E:53:ALA:C	34:5E:54:LYS:HG2	2.39	0.46
31:E5:82:ARG:HH11	31:E5:84:LEU:HB2	1.81	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:41:135:LEU:O	40:41:154:GLY:HA3	2.15	0.46
38:45:39:PRO:HA	38:45:97:VAL:O	2.15	0.46
49:7I:8:ARG:HB3	49:7I:28:ARG:NH1	2.31	0.46
45:55:107:ASP:OD1	45:55:107:ASP:C	2.59	0.46
49:7A:82:GLN:H	49:7A:82:GLN:HG2	1.45	0.46
8:2E:57:ILE:HG12	8:2E:66:VAL:HG22	1.97	0.46
52:X4:42:C:H2'	52:X4:43:C:H5'	1.98	0.46
1:13:830:C:H42	1:13:839:G:H1	1.62	0.46
1:13:1048:G:H2'	1:13:1049:A:H8	1.80	0.46
1:13:1236:A:C2	49:7I:31:LYS:HG3	2.51	0.46
1:13:1796:A:C6	1:13:1797:A:N1	2.84	0.46
1:13:1805:G:P	9:8E:93:ARG:HH21	2.37	0.46
4:11:238:GLY:HA2	15:1H:2605:A:OP2	2.16	0.46
1:1G:950:G:O2'	1:1G:1236:A:N1	2.49	0.46
1:1G:1785:A:H62	1:1G:1804:G:H22	1.63	0.46
1:1G:2031:C:H1'	1:1G:2123:A:N1	2.31	0.46
1:1G:2153:G:H2'	1:1G:2154:A:O4'	2.15	0.46
12:Q8:32:LEU:HG	12:Q8:33:ASN:N	2.30	0.46
12:Q8:46:ARG:NH2	12:Q8:48:PHE:CD1	2.84	0.46
13:3I:88:GLY:O	13:3I:99:HIS:ND1	2.41	0.46
15:1H:631:U:H4'	15:1H:707:C:H4'	1.97	0.46
15:1H:1535:A:H2'	15:1H:1536:G:C8	2.50	0.46
15:1H:1811:U:O2'	15:1H:1812:U:H5'	2.15	0.46
15:1H:2653:G:P	23:21:82:ARG:NH2	2.89	0.46
15:1H:2888:C:O2'	16:B8:5:ALA:HB3	2.15	0.46
15:1H:2897:U:O2	36:N8:52:TYR:OH	2.33	0.46
10:15:106:MET:HE3	15:14:1054:C:H1'	1.98	0.46
15:14:120:G:C6	56:14:3641:HOH:O	2.65	0.46
15:14:691:A:H2'	15:14:692:C:C5	2.51	0.46
15:14:910:A:C2	15:14:965:A:C4	3.04	0.46
15:14:969:G:H2'	15:14:970:U:C6	2.51	0.46
15:14:1081:U:H1'	15:14:2766:A:N1	2.30	0.46
15:14:1805:C:C1'	15:14:1820:A:H8	2.28	0.46
15:14:1938:A:C6	52:W4:38:A:H5'	2.50	0.46
15:14:2246:C:OP1	39:F5:42:GLN:HA	2.15	0.46
15:14:2371:C:H4'	31:E5:20:ARG:HG3	1.97	0.46
22:D5:23:LYS:HB3	22:D5:38:TYR:CD1	2.51	0.46
25:42:90:VAL:O	25:42:120:THR:HA	2.14	0.46
32:31:24:LEU:HD21	32:31:114:VAL:HG12	1.96	0.46
29:AA:66:MET:HA	29:AA:67:VAL:O	2.15	0.46
35:D8:1:MET:SD	35:D8:43:GLU:O	2.74	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:52:10:LEU:HD11	34:52:61:LEU:HD22	1.98	0.46
35:95:71:LEU:O	35:95:72:VAL:HG12	2.15	0.46
36:J5:36:CYS:SG	36:J5:49:CYS:SG	3.11	0.46
44:1E:223:ILE:H	44:1E:223:ILE:HG12	1.45	0.46
46:K8:14:ARG:HB3	46:K8:15:LYS:HZ1	1.80	0.46
3:F8:54:VAL:C	3:F8:55:ASN:HD22	2.23	0.46
52:W1:14:A:C6	52:W1:22:G:C4	3.04	0.46
52:V1:20:U:O2'	52:V1:21:A:H5'	2.16	0.46
1:13:1377:C:H4'	1:13:1378:C:O5'	2.15	0.46
1:13:1753:U:H6	1:13:1753:U:H5"	1.80	0.46
1:13:2057:C:H2'	1:13:2058:C:C6	2.50	0.46
3:B5:49:VAL:HB	3:B5:83:VAL:CG2	2.46	0.46
1:1G:1683:A:C5	1:1G:1833:G:C2	3.04	0.46
1:1G:1913:A:H2'	1:1G:1914:A:H4'	1.97	0.46
15:1H:237:G:H4'	15:1H:414:G:C5	2.51	0.46
15:1H:528:A:H8	15:1H:528:A:O5'	1.98	0.46
15:1H:2485:G:OP1	38:88:56:ARG:NH2	2.49	0.46
15:1H:2875:G:H2'	15:1H:2876:C:C6	2.50	0.46
14:32:101:LEU:HD23	14:32:121:VAL:CG1	2.46	0.46
15:14:19:C:H2'	15:14:20:C:C6	2.50	0.46
15:14:864:C:H2'	15:14:865:C:C6	2.51	0.46
15:14:1270:C:C2	15:14:1278:G:C2	3.03	0.46
15:14:1311:A:N3	36:J5:10:LYS:NZ	2.64	0.46
15:14:2050:C:H2'	15:14:2051:C:C6	2.51	0.46
22:H8:85:HIS:CE1	26:16:77:G:H21	2.34	0.46
28:M8:63:TYR:HE2	29:AI:42:PRO:HD3	1.80	0.46
23:29:173:VAL:N	23:29:183:LEU:O	2.44	0.46
39:J8:58:ILE:HG23	39:J8:87:PRO:HG3	1.96	0.46
38:45:75:THR:HA	38:45:89:ASN:O	2.16	0.46
44:1E:233:SER:OG	44:1E:234:PRO:HD2	2.15	0.46
45:98:78:LYS:O	45:98:83:ILE:HG13	2.15	0.46
43:A5:33:ARG:HD3	43:A5:52:GLU:OE2	2.15	0.46
47:51:8:PRO:HG2	47:51:69:ARG:NH2	2.31	0.46
44:12:24:TRP:N	44:12:24:TRP:CD1	2.83	0.46
50:7E:7:ALA:HB2	50:7E:85:ARG:HD2	1.98	0.46
8:2E:47:LEU:HD23	8:2E:47:LEU:HA	1.78	0.46
51:Y1:35:A:H5"	51:Y1:36:G:OP2	2.14	0.46
1:13:770:A:OP2	7:8I:63:ARG:NE	2.44	0.46
1:13:1085:G:H2'	1:13:1086:G:C8	2.50	0.46
1:13:1775:C:O2'	9:8E:16:ARG:HD3	2.16	0.46
1:13:1795:A:C6	1:13:1796:A:C6	3.04	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:1G:688:G:O2'	1:1G:1251:A:N1	2.37	0.46
1:1G:769:G:N3	1:1G:835:U:H5'	2.31	0.46
1:1G:1236:A:H2'	1:1G:1237:A:O4'	2.15	0.46
1:1G:1757:C:H41	1:1G:1769:C:N4	2.14	0.46
11:G8:90:LEU:HA	11:G8:91:GLU:C	2.41	0.46
15:1H:519:A:H2'	15:1H:520:G:O4'	2.16	0.46
15:1H:599:C:N3	23:21:145:LYS:NZ	2.63	0.46
15:1H:647:G:H4'	15:1H:648:A:C5'	2.46	0.46
15:1H:725:A:H2	15:1H:851:A:H61	1.64	0.46
15:1H:929:G:C6	15:1H:931:G:N2	2.84	0.46
15:1H:1350:A:H2	15:1H:1675:G:N3	2.13	0.46
15:1H:1577:A:H2'	15:1H:1578:A:O4'	2.16	0.46
15:1H:2767:G:H22	47:51:3:ARG:HE	1.64	0.46
11:C5:48:ALA:HB3	11:C5:59:GLY:O	2.16	0.46
18:61:92:VAL:HG13	18:61:120:ILE:HD13	1.98	0.46
15:14:2313:A:H1'	15:14:2336:G:N2	2.30	0.46
15:14:2717:U:O2'	15:14:2718:C:C5	2.69	0.46
21:68:64:ARG:O	21:68:82:ASN:HA	2.16	0.46
24:4I:37:THR:HG23	24:4I:59:TYR:CD2	2.48	0.46
25:4E:153:LYS:NZ	25:4E:155:GLU:O	2.48	0.46
26:16:46:G:H1'	26:16:49:C:H42	1.81	0.46
22:D5:77:ASP:OD1	22:D5:80:ARG:NH1	2.48	0.46
26:1J:59:A:H1'	40:49:29:TRP:HB2	1.98	0.46
33:5I:54:PRO:O	8:2E:29:TYR:OH	2.29	0.46
39:J8:3:LYS:HG3	39:J8:46:LEU:HD22	1.97	0.46
38:45:2:LEU:HD23	38:45:44:ALA:HB1	1.97	0.46
38:45:98:LYS:HB3	38:45:99:PRO:HD2	1.98	0.46
39:F5:49:VAL:HG21	39:F5:67:ILE:HD12	1.97	0.46
40:49:51:ARG:HE	40:49:51:ARG:HB3	1.56	0.46
45:98:18:LEU:HD23	45:98:18:LEU:HA	1.79	0.46
46:K8:28:LYS:HE3	46:K8:56:GLN:NE2	2.31	0.46
47:59:55:PRO:HG2	47:59:61:HIS:CD2	2.51	0.46
52:V1:58:A:H2	52:V1:60:U:C2	2.33	0.46
51:Y4:43:U:O2'	51:Y4:44:U:H5'	2.16	0.46
1:13:707:G:H2'	1:13:708:U:O4'	2.15	0.46
1:13:1182:A:H5"	13:3I:24:VAL:HG21	1.98	0.46
1:13:1639:A:N3	1:13:1845:C:O2'	2.41	0.46
1:1G:989:G:C2	1:1G:990:A:C8	3.04	0.46
1:1G:1365:C:H2'	1:1G:1366:A:C8	2.51	0.46
1:1G:1404:G:O2'	1:1G:1405:G:H5'	2.15	0.46
1:1G:1665:C:H2'	1:1G:1666:C:C6	2.51	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:1G:1904:C:O2'	1:1G:1906:A:H1'	2.16	0.46
1:1G:1932:G:HO2'	1:1G:1933:A:P	2.39	0.46
12:Q8:46:ARG:HA	12:Q8:47:LYS:C	2.40	0.46
15:1H:35:G:H2'	15:1H:36:G:O4'	2.16	0.46
15:1H:658:A:OP1	30:78:65:ARG:NH2	2.38	0.46
15:1H:1480:U:C2	15:1H:1613:G:N2	2.83	0.46
15:1H:1490:G:H2'	15:1H:1491:G:C8	2.51	0.46
15:1H:1582:C:H3'	15:1H:1583:G:H5"	1.98	0.46
15:1H:2727:U:O2'	15:1H:2729:A:H5'	2.16	0.46
15:1H:2824:G:H8	15:1H:2824:G:OP2	1.99	0.46
12:M5:23:VAL:CG1	12:M5:47:LYS:HD3	2.46	0.46
14:32:90:GLY:HA2	14:32:204:ILE:HD11	1.96	0.46
14:32:189:PRO:HB2	14:32:194:LEU:HD21	1.98	0.46
15:14:142:G:H2'	15:14:143:C:C6	2.51	0.46
15:14:1481:C:H2'	15:14:1482:U:O4'	2.16	0.46
15:14:2689:G:H4'	21:25:30:ALA:HB2	1.96	0.46
21:68:68:GLU:CD	21:68:68:GLU:H	2.24	0.46
16:75:61:PHE:CE1	16:75:76:PHE:HB2	2.50	0.46
22:H8:124:ILE:HD12	22:H8:124:ILE:HA	1.74	0.46
23:21:67:PHE:O	23:21:69:LYS:HD2	2.15	0.46
22:D5:72:ARG:NH2	22:D5:97:GLU:O	2.49	0.46
24:4A:65:LYS:HB3	28:I5:49:PHE:CE2	2.50	0.46
24:4A:84:ILE:HG23	29:AA:74:PHE:CZ	2.50	0.46
29:AI:6:LYS:HA	29:AI:6:LYS:NZ	2.27	0.46
25:42:70:PRO:HB3	25:42:144:THR:HG22	1.96	0.46
26:1J:72:C:H2'	26:1J:73:C:H6	1.81	0.46
32:31:93:LYS:HA	32:31:93:LYS:HD2	1.79	0.46
32:31:130:ALA:C	32:31:132:VAL:H	2.24	0.46
34:5E:86:ARG:O	34:5E:87:ARG:HG2	2.16	0.46
38:88:60:ARG:HB3	38:88:60:ARG:NH1	2.29	0.46
39:J8:91:LYS:HA	39:J8:91:LYS:NZ	2.31	0.46
41:6I:25:THR:HG21	41:6I:70:LEU:HB2	1.98	0.46
39:F5:79:GLY:C	39:F5:80:LEU:HG	2.40	0.46
40:49:77:ILE:HD11	40:49:79:ASN:OD1	2.16	0.46
40:49:109:VAL:CG1	40:49:142:PRO:HG3	2.46	0.46
47:51:126:PRO:HG2	47:51:130:ARG:HH12	1.81	0.46
48:1I:5:ARG:HB2	48:1I:73:ASP:OD1	2.15	0.46
44:12:27:LYS:NZ	44:12:195:ASP:HB2	2.30	0.46
47:59:3:ARG:HD2	47:59:4:ILE:HG12	1.98	0.46
8:2E:62:ASP:OD1	8:2E:97:LYS:HG2	2.15	0.46
52:V1:23:A:H2'	52:V1:24:G:C8	2.51	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:X4:1:G:C6	52:X4:73:A:C6	3.03	0.46
1:13:668:G:O2'	1:13:1536:A:N1	2.43	0.46
1:13:835:U:C4	7:8I:72:ARG:NH2	2.84	0.46
1:13:847:A:C5	1:13:848:A:N1	2.84	0.46
1:13:1092:A:H2'	1:13:1093:A:C8	2.50	0.46
1:13:1093:A:C6	1:13:1094:C:C4	3.03	0.46
1:13:1277:A:C6	1:13:1278:G:C5	3.03	0.46
1:13:1343:G:H2'	1:13:1344:A:C8	2.51	0.46
1:13:1777:C:H2'	1:13:1778:U:C6	2.51	0.46
1:13:1852:A:N3	1:13:1852:A:H2'	2.31	0.46
1:13:2016:C:H2'	1:13:2017:C:C6	2.51	0.46
3:B5:60:ARG:NH1	3:B5:60:ARG:HB2	2.30	0.46
4:11:17:THR:HG22	4:11:204:ILE:HA	1.97	0.46
6:2A:34:ASP:HB3	6:2A:40:ILE:HD11	1.98	0.46
8:22:148:GLY:HA3	8:22:172:ARG:H	1.81	0.46
1:1G:692:G:O2'	1:1G:1006:U:H1'	2.16	0.46
1:1G:1233:G:H2'	1:1G:1234:U:O4'	2.16	0.46
1:1G:1386:U:H2'	1:1G:1387:G:O4'	2.15	0.46
1:1G:1421:A:H1'	1:1G:1423:A:N7	2.31	0.46
1:1G:1974:G:C8	9:82:107:ARG:HB3	2.50	0.46
1:1G:2060:G:OP1	16:75:107:ASP:HB2	2.15	0.46
10:58:32:THR:HG22	10:58:37:LYS:HB2	1.98	0.46
10:58:73:THR:HA	10:58:83:LYS:O	2.16	0.46
15:1H:90:A:C5	15:1H:91:G:N7	2.84	0.46
15:1H:664:A:H2'	30:78:117:GLU:OE1	2.16	0.46
15:1H:1131:U:H3'	15:1H:1132:A:C5'	2.46	0.46
15:1H:1157:C:O2'	15:1H:1158:G:O4'	2.34	0.46
15:1H:1788:C:H5	16:B8:96:ARG:NH2	2.13	0.46
15:1H:1812:U:C4	15:1H:1818:A:C4	3.04	0.46
15:1H:2787:C:H2'	15:1H:2788:C:C6	2.51	0.46
18:61:77:LEU:HB2	18:61:140:LEU:HB3	1.97	0.46
14:32:108:LEU:HD23	14:32:110:PHE:CE1	2.41	0.46
14:32:176:LEU:HD12	14:32:176:LEU:HA	1.61	0.46
15:14:488:A:H2'	15:14:489:C:O4'	2.16	0.46
15:14:1534:G:H2'	15:14:1535:A:C8	2.50	0.46
15:14:2141:G:N1	15:14:2187:G:OP1	2.49	0.46
15:14:2277:U:H4'	15:14:2343:A:C2	2.51	0.46
22:H8:40:ASP:OD2	22:H8:43:GLU:HB2	2.16	0.46
23:21:195:LEU:HD22	23:21:196:VAL:N	2.31	0.46
25:4E:71:LEU:HG	25:4E:71:LEU:H	1.38	0.46
23:29:1:MET:HG3	23:29:200:GLU:OE2	2.15	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:1J:82:U:O2'	26:1J:83:G:H5'	2.16	0.46
30:78:116:GLY:H	30:78:134:ALA:HB2	1.81	0.46
30:78:134:ALA:O	30:78:138:LEU:HB2	2.15	0.46
28:I5:34:GLU:H	28:I5:34:GLU:HG2	1.41	0.46
32:31:164:ARG:HG2	32:31:175:THR:OG1	2.16	0.46
40:41:83:ARG:N	40:41:86:MET:SD	2.86	0.46
37:BA:38:LYS:HB3	37:BA:38:LYS:HE2	1.74	0.46
42:6E:15:ASP:HB3	42:6E:20:ASP:H	1.80	0.46
43:A5:62:HIS:O	43:A5:63:ASP:C	2.59	0.46
47:51:130:ARG:NH1	47:51:130:ARG:HB3	2.31	0.46
47:59:41:MET:HA	47:59:53:GLU:O	2.16	0.46
6:2I:31:THR:HA	6:2I:42:TRP:HA	1.98	0.46
50:72:111:ILE:C	50:72:112:LEU:HD23	2.41	0.46
52:V1:3:C:N4	52:V1:70:G:H1	2.10	0.46
1:13:741:G:C6	1:13:742:C:C4	3.03	0.46
1:13:835:U:C2	7:8I:72:ARG:NH1	2.83	0.46
1:13:848:A:HO2'	1:13:849:A:H2'	1.81	0.46
1:13:850:G:C6	1:13:861:G:C2	3.03	0.46
1:13:945:U:H2'	1:13:946:G:C8	2.51	0.46
1:13:1127:U:N3	1:13:1128:A:N7	2.64	0.46
1:13:1753:U:O4	48:1I:5:ARG:NE	2.36	0.46
1:13:2127:G:P	1:13:2127:G:H3'	2.56	0.46
7:8I:11:VAL:HG23	7:8I:20:THR:HB	1.97	0.46
7:8I:59:ILE:HG13	7:8I:71:PHE:HD2	1.81	0.46
8:22:175:LEU:HD21	8:22:201:TYR:HE2	1.81	0.46
9:8E:48:GLU:N	9:8E:49:PRO:HD2	2.29	0.46
1:1G:684:G:N2	1:1G:1038:A:C4	2.84	0.46
1:1G:1523:A:H2'	1:1G:1524:A:O4'	2.16	0.46
1:1G:1606:A:N1	1:1G:1849:G:N2	2.64	0.46
1:1G:1700:G:C5	1:1G:1701:U:C5	3.04	0.46
2:65:42:ASP:O	2:65:43:GLU:HB2	2.15	0.46
4:19:242:ARG:NH2	15:14:1996:A:OP2	2.42	0.46
12:Q8:48:PHE:CE2	12:Q8:52:LYS:HG3	2.51	0.46
15:1H:299:G:H2'	15:1H:300:G:O3'	2.16	0.46
15:1H:832:A:C8	15:1H:832:A:H3'	2.51	0.46
15:1H:1406:U:H2'	15:1H:1407:G:O4'	2.16	0.46
15:1H:1569:U:H2'	15:1H:1570:G:O4'	2.16	0.46
15:1H:2026:A:H2'	15:1H:2027:G:C8	2.51	0.46
15:1H:2594:C:H2'	15:1H:2595:U:O4'	2.16	0.46
15:14:423:U:H2'	15:14:424:G:C8	2.51	0.46
15:14:958:A:C5	38:45:13:GLN:HG3	2.51	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:14:1073:G:O2'	15:14:1074:U:OP1	2.33	0.46
15:14:1162:G:H2'	15:14:1163:G:C8	2.51	0.46
15:14:1319:C:H5"	15:14:1320:G:O5'	2.15	0.46
15:14:1836:A:N1	15:14:1856:G:H1'	2.30	0.46
21:68:98:VAL:HG22	21:68:118:ALA:HA	1.98	0.46
16:75:7:ILE:HD11	23:29:181:LEU:HD11	1.97	0.46
18:69:77:LEU:HD13	18:69:141:LYS:HD2	1.97	0.46
18:69:104:GLN:HE22	18:69:105:HIS:CE1	2.33	0.46
20:1B:2:GLY:C	20:1B:4:GLY:H	2.24	0.46
28:M8:38:LYS:HE3	40:41:179:PRO:HG3	1.97	0.46
23:29:3:GLY:HA3	23:29:81:ILE:CD1	2.45	0.46
26:1J:43:U:C6	40:49:69:ALA:HB1	2.51	0.46
32:31:64:ILE:HA	32:31:64:ILE:HD13	1.53	0.46
32:31:114:VAL:HG21	32:31:202:PHE:CE1	2.51	0.46
34:5E:52:ILE:O	34:5E:55:ASP:HB2	2.16	0.46
30:35:14:LYS:HD3	30:35:16:ARG:HD2	1.97	0.46
35:95:48:GLY:CA	35:95:52:VAL:HG22	2.46	0.46
36:J5:34:PRO:HG2	36:J5:35:GLU:OE2	2.16	0.46
40:49:58:GLN:O	40:49:62:LEU:HB2	2.15	0.46
40:49:167:GLU:H	40:49:167:GLU:HG2	1.39	0.46
44:12:21:ARG:HA	44:12:39:ILE:HA	1.96	0.46
44:12:54:THR:HG23	44:12:199:TYR:HB3	1.98	0.46
5:P8:5:TRP:NE1	5:P8:7:PRO:HG3	2.31	0.46
52:V4:10:G:N2	52:V4:26:A:H1'	2.31	0.46
1:13:903:A:C6	1:13:904:A:C6	3.04	0.45
1:13:1286:G:C2	1:13:1287:G:C8	3.04	0.45
1:13:1542:A:O2'	1:13:1543:U:H5'	2.16	0.45
1:13:1547:C:H2'	1:13:1548:G:H8	1.82	0.45
1:13:1559:C:H2'	1:13:1560:A:O4'	2.16	0.45
1:13:1638:A:C2	1:13:1846:U:H1'	2.51	0.45
1:13:1919:U:H5'	9:8E:38:GLN:OE1	2.16	0.45
4:11:105:ILE:HD13	4:11:106:ILE:H	1.81	0.45
1:1G:1014:A:N3	1:1G:1015:A:C8	2.84	0.45
1:1G:1071:A:OP2	14:32:8:VAL:HG23	2.15	0.45
2:65:95:HIS:HD2	26:1J:50:A:H4'	1.81	0.45
12:Q8:34:TRP:C	12:Q8:36:LYS:N	2.74	0.45
14:3E:170:VAL:HG13	14:3E:171:GLY:O	2.16	0.45
15:1H:554:C:OP2	15:1H:2795:U:C5	2.69	0.45
15:1H:1054:C:C2	15:1H:1186:G:N2	2.84	0.45
15:1H:1153:U:H2'	15:1H:1154:G:H8	1.80	0.45
15:1H:1193:G:C6	15:1H:1194:C:N4	2.84	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:1H:1279:C:H2'	15:1H:1280:G:C8	2.51	0.45
15:1H:1755:G:O2'	15:1H:1756:U:H5'	2.16	0.45
15:1H:2136:C:O2'	15:1H:2144:A:OP1	2.21	0.45
15:1H:2740:C:OP1	23:21:118:LYS:HE3	2.16	0.45
15:14:48:A:H5"	15:14:50:G:O4'	2.16	0.45
15:14:418:A:C6	30:35:71:VAL:HG11	2.51	0.45
15:14:1554:C:H2'	15:14:1555:C:C6	2.51	0.45
15:14:1772:G:H5"	15:14:1772:G:N3	2.31	0.45
15:14:2318:G:C2'	15:14:2319:G:H5'	2.46	0.45
24:4I:66:LEU:O	24:4I:70:LEU:N	2.46	0.45
28:M8:31:ILE:HD12	40:41:142:PRO:HB2	1.97	0.45
30:78:100:LEU:HA	30:78:100:LEU:HD12	1.62	0.45
27:85:92:ARG:CZ	35:95:11:GLN:H	2.28	0.45
28:I5:8:LYS:HD3	28:I5:8:LYS:HA	1.56	0.45
32:39:178:PRO:HG2	32:39:179:GLU:OE1	2.16	0.45
37:BI:73:HIS:HB3	37:BI:74:LYS:HG3	1.98	0.45
38:88:56:ARG:HD2	38:88:56:ARG:HA	1.73	0.45
39:J8:83:GLU:O	39:J8:85:LEU:N	2.49	0.45
36:J5:33:CYS:SG	36:J5:36:CYS:N	2.89	0.45
40:49:106:LEU:HD23	40:49:107:LEU:HD23	1.99	0.45
44:1E:36:ARG:C	44:1E:38:GLY:H	2.24	0.45
47:51:52:VAL:O	47:51:65:HIS:NE2	2.29	0.45
52:V4:23:A:H2'	52:V4:24:G:C8	2.51	0.45
1:13:656:A:O2'	1:13:657:G:H5'	2.17	0.45
1:13:668:G:H2'	1:13:669:C:C6	2.51	0.45
1:13:1420:G:C6	1:13:1421:A:C2	3.04	0.45
1:13:1578:U:H1'	1:13:1854:A:N6	2.31	0.45
1:13:1712:G:C5	1:13:1713:U:C4	3.04	0.45
1:13:2139:G:N1	1:13:2142:A:OP2	2.49	0.45
2:A8:74:ALA:HB1	2:A8:108:GLY:HA3	1.97	0.45
1:1G:902:U:OP2	37:BA:79:ARG:NH2	2.49	0.45
1:1G:1351:A:H2	1:1G:1362:A:H61	1.62	0.45
1:1G:1447:G:O2'	1:1G:1448:A:H5'	2.17	0.45
1:1G:1569:A:H2'	1:1G:1570:G:C8	2.51	0.45
1:1G:1638:A:H5'	29:AA:15:LEU:HD11	1.98	0.45
1:1G:1842:G:C2	1:1G:1843:G:C8	3.05	0.45
2:65:54:LEU:HD12	2:65:54:LEU:HA	1.77	0.45
14:3E:43:HIS:HA	14:3E:46:LYS:HD2	1.98	0.45
15:1H:638:G:O2'	15:1H:642:A:N1	2.48	0.45
15:1H:1068:A:N1	15:1H:1189:U:O2'	2.46	0.45
15:1H:1142:U:HO2'	15:1H:1144:A:P	2.37	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:1H:1204:A:OP1	27:C8:55:ARG:HD3	2.16	0.45
15:1H:1234:G:H2'	15:1H:1235:G:O4'	2.16	0.45
15:1H:2470:G:H2'	15:1H:2471:C:C6	2.51	0.45
15:1H:2667:C:C2	15:1H:2684:G:C2	3.04	0.45
10:15:90:MET:HE2	10:15:90:MET:HA	1.99	0.45
12:M5:4:MET:HE3	12:M5:61:LEU:HD23	1.99	0.45
12:M5:5:LYS:HE2	15:14:244:G:N7	2.32	0.45
13:3A:27:LEU:HB3	13:3A:33:ARG:HD3	1.97	0.45
15:14:705:G:H2'	15:14:706:U:O4'	2.16	0.45
15:14:924:G:C2	15:14:951:C:C2	3.04	0.45
15:14:2153:C:H42	15:14:2185:G:H22	1.63	0.45
15:14:2546:A:C2'	15:14:2547:G:H5'	2.47	0.45
23:21:203:LYS:HD2	23:21:203:LYS:O	2.16	0.45
24:4I:10:PRO:CB	24:4I:18:ALA:HB1	2.44	0.45
22:D5:163:LEU:HD23	22:D5:163:LEU:H	1.81	0.45
33:5I:58:LYS:HE3	33:5I:58:LYS:HB2	1.69	0.45
39:J8:81:LYS:N	39:J8:81:LYS:HD2	2.31	0.45
40:41:53:LEU:O	40:41:56:ALA:N	2.49	0.45
41:6I:3:ILE:HA	41:6I:7:GLU:OE1	2.17	0.45
37:BA:67:ALA:HB2	37:BA:77:ALA:HB2	1.98	0.45
41:6A:41:GLU:HA	41:6A:44:LYS:HD2	1.97	0.45
45:55:44:LEU:O	45:55:45:ARG:C	2.60	0.45
50:72:97:VAL:HG22	50:72:129:VAL:C	2.41	0.45
1:13:702:U:H4'	18:69:82:ARG:NH2	2.31	0.45
1:13:990:A:O2'	1:13:991:G:H5'	2.16	0.45
1:13:1596:G:OP1	48:1I:57:LYS:NZ	2.29	0.45
1:13:2027:C:H4'	1:13:2028:C:O5'	2.16	0.45
4:11:17:THR:CG2	4:11:204:ILE:HA	2.46	0.45
1:1G:703:G:H2'	1:1G:704:C:C6	2.52	0.45
1:1G:1147:C:H5"	1:1G:1148:C:C6	2.50	0.45
11:G8:88:LYS:HD3	11:G8:88:LYS:HA	1.71	0.45
11:G8:101:LYS:C	11:G8:102:CYS:SG	3.00	0.45
15:1H:768:C:H2'	15:1H:769:C:C6	2.51	0.45
15:1H:1631:G:C6	15:1H:1632:C:C4	3.05	0.45
15:1H:1792:G:C2	15:1H:2711:U:H5'	2.52	0.45
15:1H:1990:C:H3'	15:1H:1991:A:H2'	1.99	0.45
15:1H:2288:A:H2'	15:1H:2289:A:C8	2.51	0.45
15:1H:2599:U:H1'	52:W1:76:A:O2'	2.16	0.45
15:1H:2815:A:H5'	15:1H:2907:U:H1'	1.98	0.45
10:15:133:GLN:HG3	10:15:135:PRO:HG3	1.97	0.45
11:C5:52:SER:H	11:C5:56:PRO:HA	1.81	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:C5:81:LYS:HB2	11:C5:99:CYS:SG	2.57	0.45
15:14:685:G:H22	15:14:698:C:N4	2.14	0.45
15:14:1317:A:C2	15:14:2038:A:C4	3.04	0.45
15:14:1720:C:C5	15:14:1721:U:C4	3.05	0.45
15:14:2183:A:H1'	15:14:2184:G:C8	2.51	0.45
15:14:2314:G:N1	15:14:2333:G:C8	2.84	0.45
23:21:77:ILE:C	23:21:79:ARG:N	2.73	0.45
22:D5:10:ARG:HG3	22:D5:37:VAL:C	2.41	0.45
22:D5:52:SER:O	22:D5:54:HIS:N	2.50	0.45
23:29:37:ARG:O	23:29:45:THR:HA	2.17	0.45
35:95:95:LEU:HD13	35:95:97:LYS:HE2	1.98	0.45
38:45:4:PRO:HD3	38:45:70:PRO:O	2.16	0.45
39:F5:45:ASN:O	39:F5:63:ALA:HA	2.16	0.45
41:6A:25:THR:HG21	41:6A:70:LEU:HB2	1.99	0.45
48:1A:57:LYS:HD3	48:1A:60:ARG:NH2	2.31	0.45
48:1A:81:THR:HB	48:1A:85:LEU:HD12	1.98	0.45
49:7I:8:ARG:C	49:7I:9:PHE:HD1	2.24	0.45
50:7E:25:ASP:OD1	50:7E:60:ARG:HG3	2.16	0.45
1:13:1598:A:H8	1:13:1598:A:H5"	1.80	0.45
1:13:1759:G:H2'	1:13:1760:C:C6	2.52	0.45
1:13:1974:G:O2'	1:13:2001:G:O6	2.21	0.45
1:13:2004:U:C2	1:13:2005:A:N7	2.85	0.45
4:11:254:THR:HG21	15:1H:1859:A:O4'	2.17	0.45
1:1G:793:C:H2'	1:1G:794:C:C6	2.52	0.45
1:1G:903:A:C6	1:1G:904:A:C6	3.04	0.45
1:1G:1735:C:C4	1:1G:1736:G:C8	3.04	0.45
1:1G:2103:G:C6	1:1G:2104:U:C4	3.05	0.45
10:58:46:VAL:O	10:58:47:ALA:HB3	2.16	0.45
4:19:92:ILE:HG21	4:19:92:ILE:HD13	1.72	0.45
4:19:242:ARG:N	4:19:242:ARG:HD3	2.26	0.45
7:8A:10:VAL:HG23	7:8A:54:GLY:H	1.80	0.45
15:1H:149:A:H2'	15:1H:150:C:H6	1.82	0.45
15:1H:936:A:H4'	15:1H:937:C:H5'	1.98	0.45
15:1H:1168:G:H2'	15:1H:1169:C:O4'	2.16	0.45
15:1H:1756:U:C2	15:1H:1791:U:H5'	2.51	0.45
15:1H:1887:A:N1	15:1H:2112:G:H1'	2.32	0.45
15:1H:2019:C:O2'	15:1H:2020:U:H5'	2.17	0.45
15:1H:2790:C:H2'	15:1H:2791:A:O4'	2.16	0.45
15:1H:2888:C:C4'	16:B8:5:ALA:HB2	2.46	0.45
10:15:67:LEU:HD23	10:15:88:GLU:HG2	1.98	0.45
16:B8:1:MET:SD	16:B8:1:MET:O	2.75	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:14:994:G:N3	15:14:1032:A:H2	2.14	0.45
15:14:1784:G:O2'	15:14:1785:C:H5'	2.17	0.45
15:14:2305:G:C2	15:14:2358:C:O2	2.69	0.45
15:14:2727:U:H2'	15:14:2730:G:H5"	1.97	0.45
15:14:2833:A:C5	45:55:4:LEU:HD11	2.50	0.45
16:75:51:ARG:HG2	16:75:98:LYS:HD2	1.98	0.45
18:69:2:LYS:HB2	18:69:39:ALA:HB2	1.98	0.45
18:69:54:GLN:HA	18:69:57:ARG:HD3	1.98	0.45
32:31:197:ASP:O	32:31:198:ALA:C	2.56	0.45
35:D8:98:GLU:OE1	35:D8:100:ARG:HD3	2.16	0.45
38:88:51:ARG:HB3	38:88:51:ARG:HH11	1.80	0.45
39:J8:87:PRO:O	39:J8:88:LYS:C	2.59	0.45
40:49:80:PHE:O	40:49:82:LEU:HB2	2.17	0.45
48:1A:22:LYS:HE3	48:1A:90:LEU:HD11	1.98	0.45
48:1I:46:ARG:NH2	48:1I:64:GLU:OE1	2.50	0.45
47:59:27:LYS:HD2	47:59:32:GLU:HG2	1.99	0.45
47:59:58:GLU:HB2	47:59:61:HIS:CE1	2.51	0.45
52:W4:1:G:H21	52:W4:73:A:N6	2.14	0.45
52:V4:19:G:H5"	52:V4:20:U:C5	2.50	0.45
1:13:2029:G:C2	1:13:2030:C:H1'	2.51	0.45
8:22:194:GLY:HA2	1:1G:1833:G:O4'	2.16	0.45
1:1G:696:A:N1	1:1G:1001:A:O2'	2.42	0.45
1:1G:850:G:H2'	1:1G:851:G:H8	1.81	0.45
1:1G:1428:G:O6	1:1G:1429:G:C2	2.69	0.45
1:1G:1596:G:O4'	48:1A:55:LYS:HG3	2.16	0.45
1:1G:1602:C:H5	1:1G:1603:C:C5	2.35	0.45
1:1G:1967:A:OP1	52:V4:35:A:H5'	2.17	0.45
10:58:15:LEU:HB2	10:58:134:ARG:HB3	1.99	0.45
10:58:46:VAL:HG11	10:58:48:MET:HG3	1.97	0.45
2:65:106:ARG:O	2:65:106:ARG:HD2	2.17	0.45
12:Q8:47:LYS:HA	12:Q8:47:LYS:HD2	1.66	0.45
13:3I:90:VAL:HG11	13:3I:93:LEU:HG	1.98	0.45
9:82:53:VAL:HG11	9:82:92:TYR:CE2	2.51	0.45
15:1H:317:C:H42	15:1H:373:G:H1	1.64	0.45
15:1H:499:A:H8	15:1H:499:A:OP2	2.00	0.45
15:1H:977:U:O4'	15:1H:977:U:O2	2.31	0.45
15:1H:977:U:H4'	15:1H:978:G:O5'	2.17	0.45
15:1H:1443:U:C4	15:1H:1444:A:C6	3.05	0.45
15:1H:2126:G:C6	15:1H:2127:U:N3	2.85	0.45
15:1H:2885:G:O2'	15:1H:2886:A:H5'	2.17	0.45
18:61:68:LEU:HA	18:61:68:LEU:HD12	1.74	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:14:739:G:H2'	15:14:740:C:C6	2.51	0.45
15:14:1090:G:C6	15:14:1162:G:N2	2.84	0.45
15:14:1476:A:H4'	15:14:1477:C:O4'	2.16	0.45
15:14:1554:C:H2'	15:14:1555:C:H6	1.81	0.45
15:14:1873:G:H5"	15:14:1874:G:OP2	2.16	0.45
15:14:2164:C:N4	15:14:2177:G:O6	2.49	0.45
15:14:2476:C:H2'	15:14:2477:U:H6	1.79	0.45
21:68:17:ARG:HG2	21:68:17:ARG:HH11	1.82	0.45
20:1B:2:GLY:C	20:1B:4:GLY:N	2.73	0.45
23:29:90:THR:O	23:29:91:VAL:C	2.59	0.45
23:29:117:MET:HA	23:29:122:PHE:N	2.31	0.45
25:42:107:ARG:O	25:42:110:LEU:N	2.50	0.45
32:39:18:ARG:HG2	32:39:19:GLU:N	2.32	0.45
32:39:134:GLY:HA2	32:39:166:ALA:HB2	1.98	0.45
37:BI:10:LEU:HD11	37:BI:12:ALA:HB3	1.97	0.45
38:45:80:GLU:HB2	38:45:81:VAL:H	1.53	0.45
40:49:134:GLY:C	40:49:135:LEU:HD12	2.42	0.45
45:98:45:ARG:HB3	45:98:46:GLY:H	1.60	0.45
47:51:86:GLU:HG3	47:51:165:ALA:N	2.31	0.45
44:12:155:LEU:HD22	44:12:155:LEU:HA	1.73	0.45
44:12:213:LEU:O	44:12:213:LEU:HD23	2.16	0.45
3:F8:80:ILE:O	3:F8:80:ILE:HG12	2.17	0.45
52:V1:35:A:H2'	52:V1:36:A:H1'	1.97	0.45
52:X4:69:G:H2'	52:X4:70:G:O4'	2.17	0.45
1:13:651:U:O2	14:3E:84:LYS:HE3	2.16	0.45
1:13:997:A:N3	1:13:1009:U:O2'	2.38	0.45
1:13:1321:U:O2'	1:13:1323:A:N7	2.37	0.45
1:13:1729:A:H4'	1:13:1730:A:O5'	2.17	0.45
1:13:1804:G:H8	1:13:1805:G:C4	2.34	0.45
1:13:1939:G:H5'	29:AI:6:LYS:HD2	1.99	0.45
6:2A:21:ILE:HB	6:2A:84:VAL:HG12	1.99	0.45
6:2A:59:TYR:CZ	6:2A:63:LEU:HD21	2.51	0.45
1:1G:661:G:H1'	25:42:19:MET:HE3	1.98	0.45
1:1G:701:A:C5	1:1G:702:U:C5	3.05	0.45
1:1G:1547:C:H2'	1:1G:1548:G:H8	1.80	0.45
1:1G:1577:G:O6	24:4A:104:ARG:NH1	2.49	0.45
1:1G:1947:C:OP1	29:AA:70:LYS:HE3	2.17	0.45
1:1G:2020:G:N2	1:1G:2125:A:H8	2.15	0.45
10:58:96:GLU:HB2	10:58:122:VAL:CG1	2.47	0.45
2:65:67:ARG:CZ	2:65:67:ARG:HB2	2.46	0.45
11:G8:15:VAL:HG21	11:G8:42:VAL:HG21	1.99	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:19:70:TRP:HZ3	4:19:146:GLU:OE2	1.99	0.45
4:19:267:SER:HA	4:19:270:ILE:HG13	1.99	0.45
15:1H:43:A:C2'	15:1H:44:G:H5'	2.46	0.45
15:1H:883:C:H2'	15:1H:884:A:O4'	2.17	0.45
15:1H:2660:G:C3'	15:1H:2661:C:H5'	2.45	0.45
56:1H:3865:HOH:O	39:J8:65:SER:HB2	2.16	0.45
17:L8:4:LEU:HD23	17:L8:4:LEU:HA	1.65	0.45
14:32:60:GLU:OE2	14:32:199:ASN:N	2.46	0.45
14:32:88:VAL:HG13	25:42:97:GLY:CA	2.47	0.45
15:14:35:G:H2'	15:14:36:G:O4'	2.17	0.45
15:14:906:C:H4'	31:E5:23:VAL:HG21	1.98	0.45
15:14:1457:C:C2	15:14:1644:G:N2	2.85	0.45
15:14:1585:A:N7	15:14:1586:C:H1'	2.31	0.45
15:14:2559:G:H8	15:14:2559:G:O5'	1.99	0.45
15:14:2567:U:O2	15:14:2569:U:H5'	2.16	0.45
18:69:97:ILE:O	18:69:100:ALA:HB3	2.16	0.45
24:4I:78:ILE:HG12	24:4I:78:ILE:H	1.57	0.45
26:16:13:C:H3'	26:16:14:C:C6	2.51	0.45
32:39:89:VAL:O	32:39:91:GLY:N	2.49	0.45
40:41:35:GLU:OE1	40:41:35:GLU:HA	2.17	0.45
40:41:45:GLU:H	40:41:45:GLU:HG2	1.45	0.45
39:F5:56:GLN:NE2	39:F5:83:GLU:HA	2.28	0.45
45:98:118:GLU:OE1	45:98:118:GLU:HA	2.16	0.45
47:51:169:VAL:C	47:51:170:ARG:HE	2.25	0.45
49:7I:19:ILE:HG22	49:7I:36:ILE:HG13	1.98	0.45
50:7E:86:ILE:O	50:7E:88:LYS:HG2	2.17	0.45
3:F8:24:GLY:O	3:F8:83:VAL:HG22	2.16	0.45
49:7A:15:PRO:O	49:7A:41:PRO:HD2	2.17	0.45
50:72:51:VAL:HG11	50:72:60:ARG:HE	1.80	0.45
52:V1:39:U:H2'	52:V1:40:C:C6	2.51	0.45
52:W4:75:C:P	52:W4:76:A:OP2	2.75	0.45
52:V4:14:A:N6	52:V4:22:G:C4	2.85	0.45
1:13:1296:G:OP1	1:13:1361:C:O2'	2.28	0.45
1:13:1347:G:N2	19:9I:82:THR:HG23	2.31	0.45
2:A8:106:ARG:HA	2:A8:109:GLY:N	2.29	0.45
5:L5:1:MET:HB3	5:L5:1:MET:HE2	1.48	0.45
5:L5:39:ARG:HD2	5:L5:39:ARG:HA	1.56	0.45
8:22:43:LEU:O	8:22:47:LEU:HB2	2.17	0.45
1:1G:1291:G:N7	53:1G:2202:8UZ:N2	2.65	0.45
11:G8:76:CYS:SG	11:G8:97:ARG:CG	2.97	0.45
11:G8:95:LYS:O	11:G8:96:ILE:HG13	2.17	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:Q8:36:LYS:HA	12:Q8:39:LYS:HE2	1.98	0.45
9:82:16:ARG:CZ	9:82:64:THR:HG21	2.46	0.45
15:1H:854:G:OP2	30:78:41:ARG:HG2	2.17	0.45
15:1H:1515:G:C4	15:1H:1516:G:C8	3.05	0.45
15:1H:2182:G:HO2'	15:1H:2183:A:P	2.39	0.45
15:1H:2314:G:C2	15:1H:2333:G:H8	2.34	0.45
15:1H:2398:G:O2'	15:1H:2399:G:H5'	2.16	0.45
15:1H:2626:U:H5'	15:1H:2626:U:H6	1.81	0.45
15:1H:2756:A:C6	15:1H:2780:A:C8	3.04	0.45
15:14:658:A:H2'	15:14:659:A:O4'	2.17	0.45
15:14:2315:G:H2'	15:14:2316:C:C6	2.52	0.45
15:14:2518:A:P	56:14:3684:HOH:O	2.74	0.45
15:14:2737:A:H2'	15:14:2738:G:O4'	2.17	0.45
22:H8:44:PHE:CE2	22:H8:86:VAL:HG11	2.51	0.45
23:21:95:ILE:HD13	23:21:95:ILE:HA	1.65	0.45
24:4I:19:LEU:HA	24:4I:22:ILE:HD13	1.99	0.45
28:M8:13:ARG:NH1	28:M8:22:ILE:HG23	2.29	0.45
23:29:101:ARG:O	23:29:201:THR:OG1	2.35	0.45
30:78:71:VAL:HG12	30:78:72:PRO:HD3	1.97	0.45
34:5E:70:ASP:OD1	34:5E:70:ASP:N	2.37	0.45
36:N8:55:ARG:HB2	45:98:33:ARG:HH12	1.82	0.45
32:39:129:PHE:HA	32:39:142:TRP:CD1	2.52	0.45
35:95:51:VAL:HG12	35:95:52:VAL:N	2.32	0.45
39:J8:83:GLU:C	39:J8:85:LEU:N	2.75	0.45
38:45:19:GLY:O	38:45:99:PRO:HD2	2.16	0.45
40:49:56:ALA:CA	40:49:59:GLU:HB3	2.45	0.45
45:98:33:ARG:CZ	45:98:113:LEU:HD21	2.47	0.45
46:K8:14:ARG:HG2	46:K8:63:VAL:HG13	1.98	0.45
6:2I:54:ARG:HH21	52:V1:39:U:H4'	1.82	0.45
8:2E:12:LEU:O	8:2E:14:ILE:N	2.50	0.45
52:W4:74:C:OP2	52:W4:74:C:H4'	2.16	0.45
1:13:1397:A:H2'	1:13:1398:G:O4'	2.17	0.45
1:13:1597:A:P	33:5I:41:ARG:HH12	2.40	0.45
1:13:1685:G:H2'	1:13:1686:G:O4'	2.17	0.45
1:13:1865:A:N3	1:13:1868:G:O2'	2.48	0.45
1:13:2033:G:O4'	1:13:2142:A:H4'	2.16	0.45
7:8I:88:TYR:CD1	7:8I:88:TYR:C	2.95	0.45
1:1G:1462:U:O2	1:1G:1477:G:C2	2.70	0.45
1:1G:1843:G:H5"	33:5A:5:ALA:HB3	1.99	0.45
1:1G:2082:C:H2'	1:1G:2083:A:O4'	2.16	0.45
10:58:111:PRO:HD2	15:1H:583:G:OP1	2.16	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:19:236:GLY:HA2	15:14:2614:G:H8	1.82	0.45
12:Q8:23:VAL:HG21	30:78:62:LEU:HB3	1.97	0.45
12:Q8:52:LYS:N	12:Q8:53:PRO:HD2	2.31	0.45
14:3E:30:LYS:HA	14:3E:35:ARG:NE	2.29	0.45
9:82:45:ALA:O	9:82:78:LYS:NZ	2.49	0.45
15:1H:340:G:C6	15:1H:341:C:C4	3.05	0.45
15:1H:472:C:C4'	32:31:49:ALA:HB2	2.47	0.45
15:1H:699:C:C2'	15:1H:700:G:H5'	2.47	0.45
15:1H:1236:U:O2'	15:1H:1237:A:H5'	2.17	0.45
15:1H:2024:C:H4'	15:1H:2739:C:O2	2.17	0.45
15:1H:2334:G:H4'	15:1H:2335:A:OP1	2.16	0.45
16:B8:111:ARG:O	16:B8:112:ARG:HB3	2.17	0.45
16:B8:114:LEU:HA	16:B8:114:LEU:HD23	1.52	0.45
11:C5:85:VAL:HA	15:14:323:G:OP1	2.17	0.45
18:61:68:LEU:HA	18:61:71:ILE:CG2	2.47	0.45
18:61:85:GLU:OE1	18:61:86:THR:OG1	2.35	0.45
14:32:173:TRP:CD2	14:32:189:PRO:HB3	2.52	0.45
15:14:218:A:C4	15:14:220:U:H1'	2.52	0.45
15:14:1763:U:O2'	15:14:1764:G:H5'	2.16	0.45
15:14:1764:G:C4	15:14:1765:G:C8	3.05	0.45
22:H8:53:ILE:HA	22:H8:71:VAL:HG13	1.98	0.45
23:21:101:ARG:HB3	23:21:201:THR:OG1	2.17	0.45
23:21:120:TRP:CD2	23:21:155:LYS:HD3	2.51	0.45
23:29:33:VAL:N	23:29:89:ASP:OD2	2.45	0.45
25:42:42:GLY:HA3	25:42:65:ASN:O	2.17	0.45
25:42:76:ILE:HG23	25:42:142:LEU:HD13	1.98	0.45
27:85:58:ARG:HA	27:85:61:TRP:CE3	2.52	0.45
32:31:184:TYR:O	32:31:188:ARG:HB2	2.17	0.45
35:D8:47:VAL:CG2	35:D8:48:GLY:N	2.80	0.45
36:N8:55:ARG:CB	45:98:33:ARG:HH12	2.29	0.45
38:88:7:MET:HE2	38:88:7:MET:HB3	1.89	0.45
42:6E:115:ARG:O	42:6E:118:VAL:HG13	2.17	0.45
38:45:18:LYS:H	38:45:98:LYS:NZ	2.15	0.45
43:E8:14:PRO:HB2	43:E8:18:ARG:NH2	2.32	0.45
44:1E:8:LYS:HG2	44:1E:9:GLU:N	2.30	0.45
44:1E:19:HIS:CD2	44:1E:19:HIS:C	2.94	0.45
44:1E:165:VAL:HG23	44:1E:166:ASP:H	1.82	0.45
45:98:29:LEU:HD12	45:98:29:LEU:HA	1.63	0.45
45:98:34:ILE:HG22	45:98:114:VAL:HG12	1.98	0.45
47:51:153:LYS:HE2	47:51:153:LYS:H	1.82	0.45
44:12:58:ILE:H	44:12:58:ILE:HG12	1.41	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:12:172:ILE:H	44:12:172:ILE:HG13	1.43	0.45
52:X4:17:C:H3'	52:X4:17:C:C6	2.51	0.45
1:13:1453:C:C4'	50:7E:1:MET:HB2	2.46	0.45
1:13:2027:C:C2	1:13:2125:A:N6	2.85	0.45
3:B5:67:GLY:C	3:B5:69:TYR:N	2.74	0.45
8:22:9:GLY:HA2	8:22:12:LEU:HG	1.98	0.45
1:1G:694:C:H5"	1:1G:1006:U:O4	2.17	0.45
1:1G:1611:G:C6	1:1G:1612:C:C4	3.05	0.45
1:1G:1626:G:H2'	1:1G:1627:G:C8	2.52	0.45
10:58:46:VAL:HG13	10:58:48:MET:HG3	1.98	0.45
4:19:236:GLY:HA2	15:14:2614:G:C8	2.52	0.45
12:Q8:45:GLY:C	12:Q8:46:ARG:O	2.60	0.45
12:Q8:46:ARG:NH1	12:Q8:46:ARG:CB	2.59	0.45
14:3E:108:LEU:HD23	14:3E:110:PHE:CE1	2.52	0.45
9:82:20:ARG:O	9:82:60:ASP:HB2	2.16	0.45
15:1H:1016:U:OP1	17:L8:17:LYS:HG2	2.16	0.45
15:1H:1064:G:O6	56:1H:3673:HOH:O	2.21	0.45
15:1H:1191:A:C5	15:1H:1193:G:C5	3.05	0.45
15:1H:1424:C:H2'	15:1H:1425:C:H6	1.82	0.45
15:1H:1620:A:H2'	15:1H:1621:A:C8	2.52	0.45
15:1H:1955:G:O2'	15:1H:1956:U:P	2.75	0.45
15:1H:2224:A:O3'	39:J8:48:LYS:HD3	2.16	0.45
15:1H:2228:U:O2'	15:1H:2229:C:H5'	2.16	0.45
19:9I:70:ILE:O	19:9I:74:ARG:HG3	2.17	0.45
14:32:102:ASP:OD1	14:32:103:ASN:N	2.49	0.45
15:14:272:U:H3	18:69:50:ARG:NH1	2.14	0.45
15:14:299:G:H8	15:14:299:G:H3'	1.81	0.45
15:14:576:G:H5'	35:95:68:LYS:HZ1	1.82	0.45
15:14:1208:U:H2'	15:14:1209:G:C8	2.49	0.45
15:14:1257:G:H21	15:14:1258:A:H62	1.64	0.45
15:14:2302:A:C2	15:14:2361:A:C2	3.05	0.45
15:14:2644:A:O2'	15:14:2907:U:O4	2.30	0.45
26:16:92:A:N7	26:16:93:C:H1'	2.32	0.45
29:AA:66:MET:N	29:AA:67:VAL:HB	2.32	0.45
35:D8:12:TYR:N	35:D8:12:TYR:CD1	2.84	0.45
32:39:57:VAL:HG13	32:39:59:TYR:CD2	2.52	0.45
35:95:6:LYS:H	35:95:37:VAL:HG12	1.81	0.45
45:98:2:ARG:HB3	45:98:3:HIS:H	1.46	0.45
44:12:69:LEU:HD23	44:12:70:PHE:N	2.32	0.45
47:59:37:VAL:HG23	47:59:68:THR:HG21	1.99	0.45
52:W1:73:A:O2'	52:W1:74:C:H4'	2.17	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:X1:23:A:H2'	52:X1:24:G:C8	2.52	0.45
51:Y4:34:G:H2'	51:Y4:35:A:C8	2.52	0.45
52:W4:74:C:H2'	52:W4:75:C:H5'	1.98	0.45
1:13:1053:A:N6	14:3E:35:ARG:HA	2.31	0.45
1:13:1076:C:H2'	1:13:1077:C:H6	1.80	0.45
1:13:1353:G:C2	1:13:1354:G:C8	3.05	0.45
1:13:1676:G:H5"	33:5I:3:ARG:HB3	1.99	0.45
8:22:11:ARG:HE	8:22:180:ALA:HB3	1.82	0.45
1:1G:738:U:O5'	1:1G:738:U:H6	2.00	0.45
1:1G:969:C:H4'	1:1G:970:A:H5"	1.99	0.45
1:1G:1896:A:H5"	1:1G:1897:C:OP2	2.16	0.45
11:G8:87:LYS:O	11:G8:94:LYS:HB2	2.16	0.45
14:3E:108:LEU:HB3	14:3E:110:PHE:CE1	2.51	0.45
14:3E:155:LEU:HD12	14:3E:158:ILE:HD11	1.98	0.45
15:1H:80:G:H2'	15:1H:81:G:O4'	2.17	0.45
15:1H:584:G:H22	27:C8:49:HIS:CE1	2.34	0.45
15:1H:722:C:H5"	32:31:81:PRO:HD2	1.98	0.45
15:1H:828:U:O4	56:1H:3674:HOH:O	2.21	0.45
15:1H:936:A:H5'	15:1H:937:C:OP1	2.17	0.45
15:1H:1702:A:N6	45:98:11:ASN:OD1	2.49	0.45
15:1H:1747:G:OP2	15:1H:1748:A:O2'	2.31	0.45
15:1H:2196:A:O2'	15:1H:2197:U:O5'	2.35	0.45
15:1H:2645:G:H2'	15:1H:2646:G:C8	2.52	0.45
13:3A:69:TYR:HB2	13:3A:90:VAL:HG21	1.98	0.45
15:14:66:U:H2'	15:14:67:G:C8	2.52	0.45
15:14:75:C:O2'	15:14:76:C:H5'	2.16	0.45
15:14:798:C:OP2	56:14:3670:HOH:O	2.21	0.45
15:14:877:U:H4'	15:14:880:G:N1	2.32	0.45
15:14:1048:A:C6	15:14:1049:A:N1	2.85	0.45
15:14:1299:G:OP2	30:35:21:ARG:NH1	2.50	0.45
15:14:1589:G:H2'	15:14:1590:U:O4'	2.17	0.45
15:14:2044:A:OP2	36:J5:9:LYS:NZ	2.50	0.45
15:14:2447:A:C8	39:F5:33:LYS:HD2	2.52	0.45
15:14:2757:A:H2'	15:14:2758:C:O4'	2.17	0.45
18:69:61:ARG:HA	18:69:61:ARG:HD2	1.62	0.45
25:4E:37:ARG:HA	25:4E:114:GLY:H	1.82	0.45
24:4A:23:TYR:HB3	24:4A:67:GLU:HA	1.98	0.45
32:31:9:ILE:HD12	32:31:10:PRO:CD	2.47	0.45
32:31:125:LEU:HD11	32:31:199:TRP:CD2	2.52	0.45
35:D8:35:LEU:C	35:D8:37:VAL:N	2.75	0.45
36:N8:33:CYS:HB2	36:N8:40:LYS:CD	2.47	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:39:66:PRO:O	32:39:67:GLN:CB	2.56	0.45
39:J8:90:ILE:O	39:J8:94:LEU:HB2	2.16	0.45
39:F5:87:PRO:O	39:F5:90:ILE:N	2.50	0.45
47:51:86:GLU:O	47:51:131:VAL:O	2.33	0.45
5:P8:33:ARG:HH11	5:P8:33:ARG:HD2	1.55	0.45
47:59:137:ASP:O	47:59:141:VAL:HG23	2.17	0.45
51:Y4:33:G:H2'	51:Y4:34:G:C8	2.52	0.45
52:W4:9:A:H5'	52:W4:46:G:H1'	1.99	0.45
52:X4:1:G:C6	52:X4:2:C:N4	2.85	0.45
1:13:1357:A:C5	41:6I:54:ARG:HD2	2.52	0.44
1:13:1377:C:O5'	1:13:1377:C:H6	2.00	0.44
1:13:2133:U:H1'	1:13:2149:G:N2	2.32	0.44
1:1G:665:C:OP1	25:42:125:SER:OG	2.33	0.44
1:1G:1101:C:H2'	1:1G:1101:C:O2	2.15	0.44
1:1G:1483:A:H2'	1:1G:1484:G:O4'	2.17	0.44
1:1G:1805:G:C5'	9:82:93:ARG:HH22	2.30	0.44
1:1G:1853:C:N4	24:4A:104:ARG:HD2	2.32	0.44
2:65:91:PRO:HG2	2:65:92:TYR:CE1	2.51	0.44
12:Q8:26:LYS:NZ	15:1H:2375:A:O2'	2.40	0.44
15:1H:238:G:H5'	15:1H:240:G:N7	2.32	0.44
15:1H:486:G:C8	5:P8:37:LYS:HG3	2.52	0.44
15:1H:789:U:H2'	15:1H:790:G:C8	2.52	0.44
15:1H:1117:A:O2'	15:1H:1120:C:OP2	2.34	0.44
15:1H:1149:U:H2'	15:1H:1150:C:C6	2.52	0.44
15:1H:1238:G:OP1	30:78:30:THR:HG23	2.17	0.44
15:1H:1642:G:H2'	15:1H:1643:G:C8	2.52	0.44
15:1H:2490:C:H4'	15:1H:2491:A:OP1	2.17	0.44
15:1H:2693:C:H2'	15:1H:2694:A:O4'	2.16	0.44
15:1H:2710:C:H2'	15:1H:2711:U:H6	1.81	0.44
16:B8:106:SER:O	16:B8:110:ILE:HG22	2.17	0.44
11:C5:76:CYS:HB2	11:C5:97:ARG:NE	2.32	0.44
15:14:17:G:H2'	15:14:18:C:C6	2.52	0.44
15:14:326:G:C4	15:14:327:C:C5	3.05	0.44
15:14:383:U:H2'	15:14:384:A:C8	2.52	0.44
15:14:783:A:O2'	15:14:1685:G:H5'	2.17	0.44
15:14:803:C:H2'	15:14:804:C:H6	1.82	0.44
15:14:850:G:P	56:14:3642:HOH:O	2.76	0.44
15:14:1261:A:N3	15:14:1287:G:O2'	2.41	0.44
15:14:2828:C:H5'	36:J5:29:THR:HG21	1.99	0.44
23:21:35:GLN:HG2	23:21:36:ARG:N	2.32	0.44
18:69:109:ILE:HG12	18:69:110:ASP:N	2.32	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:4I:65:LYS:NZ	28:M8:52:THR:HB	2.32	0.44
19:9A:87:ARG:HB3	19:9A:88:LYS:H	1.62	0.44
25:4E:76:ILE:HG13	25:4E:93:PRO:HB3	1.99	0.44
25:4E:152:ARG:HA	50:7E:64:LYS:NZ	2.32	0.44
23:29:68:ALA:C	23:29:70:ALA:N	2.69	0.44
29:AI:42:PRO:HD2	29:AI:43:GLU:OE1	2.16	0.44
27:85:61:TRP:HB3	27:85:93:LYS:O	2.17	0.44
30:35:92:GLU:HG3	30:35:123:LEU:HD21	1.98	0.44
42:6E:147:ALA:HB1	52:V1:40:C:H4'	1.98	0.44
45:98:55:ALA:HB2	45:98:79:LEU:HD13	1.97	0.44
47:51:87:LEU:HB2	47:51:131:VAL:CG1	2.42	0.44
50:7E:68:ARG:O	50:7E:68:ARG:HG3	2.17	0.44
45:55:87:TYR:O	45:55:88:ARG:C	2.60	0.44
47:59:8:PRO:HG2	47:59:69:ARG:NH2	2.32	0.44
51:Y1:34:G:H3'	51:Y1:35:A:H8	1.81	0.44
1:13:829:G:C5	1:13:841:G:C2	3.06	0.44
1:13:1357:A:H2'	1:13:1358:A:C8	2.52	0.44
1:13:1960:A:H2'	1:13:1961:G:O4'	2.17	0.44
3:B5:63:LYS:HE2	3:B5:63:LYS:N	2.33	0.44
4:11:47:GLY:HA3	15:1H:822:U:H5'	2.00	0.44
4:11:264:LYS:NZ	15:1H:1834:C:OP1	2.51	0.44
7:8I:101:ARG:HB2	7:8I:101:ARG:NH2	2.32	0.44
1:1G:1906:A:H5"	1:1G:1907:A:OP2	2.18	0.44
10:58:94:HIS:C	10:58:95:PRO:O	2.60	0.44
11:G8:55:TYR:CE1	11:G8:61:ILE:HD11	2.52	0.44
15:1H:207:G:P	56:1H:3821:HOH:O	2.76	0.44
15:1H:1037:G:C8	17:L8:13:ILE:HD11	2.52	0.44
15:1H:2077:G:H4'	23:21:143:ASN:O	2.18	0.44
15:1H:2654:A:H2'	15:1H:2655:G:O4'	2.17	0.44
15:1H:2821:U:O2'	15:1H:2822:A:H5'	2.17	0.44
11:C5:36:ALA:HA	11:C5:67:LEU:O	2.16	0.44
11:C5:47:LYS:HZ1	15:14:525:G:H21	1.65	0.44
11:C5:60:PHE:HE1	15:14:511:A:H1'	1.82	0.44
11:C5:90:LEU:HA	11:C5:91:GLU:HA	1.61	0.44
18:61:77:LEU:HD23	18:61:77:LEU:HA	1.84	0.44
14:32:36:ARG:HB3	14:32:38:TYR:CE1	2.53	0.44
15:14:50:G:N3	15:14:117:A:C2	2.86	0.44
15:14:639:U:O2	15:14:639:U:O4'	2.35	0.44
15:14:748:A:H2'	15:14:749:G:O4'	2.16	0.44
15:14:882:U:O2	30:35:55:ARG:NH1	2.49	0.44
15:14:898:A:H2	17:H5:24:LYS:HB3	1.82	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:14:1159:A:C5'	47:59:3:ARG:HD3	2.46	0.44
22:H8:53:ILE:O	22:H8:53:ILE:HG13	2.16	0.44
23:21:11:MET:HE3	23:21:186:GLY:HA2	1.98	0.44
18:69:40:THR:O	18:69:44:LEU:N	2.40	0.44
19:9A:29:PHE:N	19:9A:29:PHE:HD1	2.15	0.44
19:9A:31:LEU:HD23	34:52:97:PHE:O	2.16	0.44
26:16:34:C:C2	26:16:53:G:N2	2.84	0.44
22:D5:9:TYR:CE1	22:D5:61:LEU:HD13	2.52	0.44
22:D5:96:VAL:N	22:D5:128:VAL:O	2.50	0.44
36:N8:16:ARG:HG3	36:N8:17:ASP:N	2.25	0.44
40:41:135:LEU:HD23	40:41:140:ILE:HD11	2.00	0.44
43:E8:90:ARG:HH11	43:E8:90:ARG:HD2	1.61	0.44
40:49:60:LEU:O	40:49:64:THR:HG23	2.16	0.44
44:1E:11:LEU:HD22	44:1E:217:ARG:HH12	1.81	0.44
48:1I:4:ILE:HG13	48:1I:100:THR:HG23	1.99	0.44
49:7I:74:LEU:HA	49:7I:77:ALA:HB2	1.98	0.44
3:F8:50:LYS:HG2	3:F8:84:ALA:HB2	1.99	0.44
49:7A:8:ARG:HD3	49:7A:17:TYR:CE1	2.53	0.44
8:2E:23:TYR:CD1	8:2E:23:TYR:C	2.95	0.44
8:2E:32:LEU:HD22	8:2E:59:ARG:HD3	1.99	0.44
50:72:41:ARG:HE	50:72:41:ARG:HB2	1.23	0.44
1:13:733:C:N4	1:13:734:G:O6	2.51	0.44
1:13:1047:G:N3	1:13:1048:G:C8	2.85	0.44
1:13:1052:A:C6	1:13:1070:U:C5	3.05	0.44
1:13:1103:A:H4'	49:7I:80:PHE:O	2.17	0.44
1:13:1183:C:H2'	1:13:1184:C:H6	1.82	0.44
1:13:1265:U:H2'	1:13:1266:G:H8	1.82	0.44
1:13:1312:G:C6	1:13:1313:A:C5	3.06	0.44
1:13:1757:C:C5	1:13:1760:C:N4	2.85	0.44
1:13:2042:U:H2'	1:13:2043:G:H8	1.82	0.44
2:A8:25:ARG:NH2	26:16:10:U:O3'	2.50	0.44
1:1G:1883:A:N6	1:1G:1904:C:H3'	2.25	0.44
2:65:39:ILE:HD12	2:65:85:VAL:HG11	1.99	0.44
2:65:67:ARG:HB2	2:65:67:ARG:NH1	2.32	0.44
4:19:12:SER:HB2	4:19:208:LYS:HB3	1.98	0.44
12:Q8:27:THR:CG2	12:Q8:42:ARG:NH2	2.80	0.44
15:1H:355:A:O2'	15:1H:356:A:C8	2.66	0.44
15:1H:748:A:H2'	15:1H:749:G:O4'	2.18	0.44
15:1H:811:U:H4'	15:1H:812:G:O5'	2.17	0.44
15:1H:1090:G:H1	15:1H:1161:U:H3	1.64	0.44
15:1H:1465:G:O2'	15:1H:1466:C:H6	2.00	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:1H:1577:A:C2	15:1H:1592:A:N1	2.86	0.44
15:1H:1688:C:H5"	15:1H:2725:C:O2'	2.17	0.44
15:1H:1721:U:O5'	15:1H:1721:U:H6	1.99	0.44
15:1H:2357:C:O2'	15:1H:2389:C:H5"	2.17	0.44
15:1H:2745:G:H2'	15:1H:2746:C:O4'	2.17	0.44
16:B8:48:ILE:HD12	16:B8:110:ILE:HD11	1.99	0.44
11:C5:87:LYS:HB2	11:C5:96:ILE:HD13	1.99	0.44
15:14:408:U:H5'	39:F5:18:ILE:HD12	1.98	0.44
15:14:576:G:H5'	35:95:68:LYS:NZ	2.33	0.44
15:14:922:G:C2	15:14:953:U:O2	2.70	0.44
15:14:1002:C:OP1	38:45:87:LYS:NZ	2.42	0.44
15:14:1023:G:C5	15:14:1024:C:C5	3.06	0.44
15:14:1429:G:O2'	15:14:1619:A:N6	2.51	0.44
15:14:1474:G:H2'	15:14:1475:G:C8	2.53	0.44
15:14:1814:A:N6	56:14:3759:HOH:O	2.51	0.44
15:14:2136:C:N3	15:14:2143:U:O2'	2.38	0.44
15:14:2146:G:H2'	15:14:2147:U:C6	2.52	0.44
15:14:2334:G:C2	15:14:2335:A:N1	2.86	0.44
16:75:18:ASP:OD1	16:75:19:LEU:HG	2.18	0.44
16:75:34:VAL:O	16:75:40:THR:HA	2.18	0.44
18:69:75:LEU:HD23	18:69:139:GLN:HB2	1.99	0.44
19:9A:86:VAL:HG12	19:9A:87:ARG:HH11	1.82	0.44
20:1B:8:THR:HG22	20:1B:10:ARG:H	1.82	0.44
27:C8:39:LEU:HA	27:C8:39:LEU:HD23	1.77	0.44
23:29:151:TYR:HD2	23:29:154:LYS:NZ	2.15	0.44
28:I5:21:VAL:HG22	28:I5:22:ILE:H	1.82	0.44
35:D8:31:ALA:O	35:D8:61:VAL:HG22	2.17	0.44
36:N8:49:CYS:H	36:N8:57:VAL:HG12	1.81	0.44
33:5A:53:LEU:HD23	33:5A:53:LEU:HA	1.63	0.44
40:41:74:LYS:O	40:41:84:LYS:HD2	2.17	0.44
40:41:99:MET:HE3	40:41:99:MET:HB2	1.82	0.44
43:E8:82:LEU:HD23	43:E8:82:LEU:HA	1.81	0.44
39:F5:29:GLY:O	39:F5:30:VAL:HG22	2.18	0.44
44:1E:131:PRO:O	44:1E:135:GLN:HB2	2.18	0.44
46:K8:64:LEU:HD22	46:K8:68:ARG:HD2	2.00	0.44
46:G5:47:ASN:C	46:G5:49:LYS:H	2.21	0.44
47:59:89:ILE:HD13	47:59:89:ILE:H	1.82	0.44
52:W1:41:C:H5'	52:W1:42:C:OP2	2.18	0.44
52:V1:54:U:H2'	52:V1:55:U:C5	2.52	0.44
52:X4:72:C:C2	52:X4:73:A:C8	3.05	0.44
52:V4:20:U:O2'	52:V4:21:A:H5'	2.17	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:13:896:G:P	7:8I:69:LYS:HZ3	2.40	0.44
1:13:1428:G:C6	1:13:1429:G:C4	3.05	0.44
1:13:1578:U:H1'	1:13:1854:A:H61	1.82	0.44
1:13:1734:G:C5	1:13:1735:C:C5	3.05	0.44
9:8E:48:GLU:O	9:8E:51:ARG:N	2.51	0.44
1:1G:703:G:C6	1:1G:704:C:C4	3.06	0.44
1:1G:804:U:H2'	1:1G:805:C:H6	1.82	0.44
1:1G:816:C:OP1	37:BA:29:LYS:NZ	2.51	0.44
1:1G:1515:A:O2'	1:1G:2043:G:H4'	2.17	0.44
1:1G:1586:G:H21	48:1A:55:LYS:CD	2.30	0.44
1:1G:1826:U:H4'	48:1A:54:PHE:CE1	2.52	0.44
1:1G:1853:C:H4'	1:1G:1854:A:OP1	2.18	0.44
10:58:12:ARG:HG2	10:58:13:TRP:N	2.33	0.44
2:65:54:LEU:C	2:65:56:LEU:H	2.25	0.44
4:19:209:ALA:O	4:19:210:GLY:C	2.60	0.44
12:Q8:23:VAL:HG11	12:Q8:48:PHE:CD1	2.52	0.44
15:1H:43:A:O2'	15:1H:44:G:H5'	2.18	0.44
15:1H:152:G:H2'	15:1H:153:C:C6	2.52	0.44
15:1H:476:U:C4	15:1H:608:G:H1'	2.52	0.44
15:1H:863:C:H4'	15:1H:1273:C:O2	2.17	0.44
15:1H:1497:G:C6	15:1H:1515:G:C6	3.04	0.44
15:1H:2123:U:H2'	15:1H:2124:U:O4'	2.16	0.44
15:1H:2392:A:H2'	15:1H:2393:A:C8	2.52	0.44
15:1H:2759:C:H2'	15:1H:2760:G:O4'	2.17	0.44
10:15:25:ARG:HA	15:14:1060:U:O4	2.16	0.44
16:B8:36:GLU:HA	21:68:107:ARG:NH1	2.32	0.44
17:L8:4:LEU:O	17:L8:36:VAL:HA	2.18	0.44
17:L8:5:LYS:NZ	17:L8:34:GLU:OE1	2.46	0.44
12:M5:47:LYS:NZ	15:14:658:A:OP2	2.43	0.44
15:14:242:G:P	30:35:50:ARG:NH2	2.90	0.44
15:14:740:C:H2'	15:14:741:C:C6	2.53	0.44
15:14:1009:G:OP1	15:14:1010:U:OP2	2.35	0.44
15:14:1370:A:H2'	15:14:1371:A:O4'	2.17	0.44
15:14:2274:G:H1'	15:14:2442:C:H2'	1.99	0.44
15:14:2489:C:H3'	15:14:2490:C:O4'	2.17	0.44
15:14:2663:C:H2'	15:14:2664:U:C6	2.52	0.44
22:H8:28:MET:HG3	22:H8:37:VAL:HG11	1.98	0.44
22:H8:127:LYS:HB3	22:H8:162:GLU:HG3	1.99	0.44
28:M8:6:HIS:CE1	40:41:67:LYS:HZ3	2.32	0.44
30:78:37:GLY:O	30:78:41:ARG:HD2	2.18	0.44
27:85:95:LEU:O	27:85:98:LEU:HG	2.18	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:31:63:LYS:HE3	32:31:67:GLN:HB2	2.00	0.44
32:31:66:PRO:O	32:31:67:GLN:CB	2.54	0.44
38:45:139:GLU:HG2	38:45:140:ALA:H	1.83	0.44
40:49:32:PRO:HB3	40:49:163:ALA:HB2	1.98	0.44
43:A5:27:LYS:O	43:A5:71:VAL:HG23	2.18	0.44
48:1A:78:ASN:CG	48:1A:81:THR:HG23	2.42	0.44
52:V1:34:G:O2'	52:V1:35:A:P	2.75	0.44
52:V1:70:G:H2'	52:V1:71:G:C8	2.52	0.44
1:13:722:G:H2'	1:13:722:G:N3	2.33	0.44
1:13:1455:C:H2'	1:13:1456:U:O2	2.18	0.44
1:13:1714:U:H3	1:13:1727:G:N2	2.15	0.44
1:13:1726:C:C2	1:13:1727:G:C8	3.06	0.44
1:13:2079:G:H22	37:BI:54:LYS:HZ3	1.66	0.44
2:A8:34:HIS:HB3	2:A8:53:SER:OG	2.17	0.44
2:A8:93:LYS:HG2	2:A8:95:HIS:HB2	1.99	0.44
4:11:138:VAL:HG23	4:11:168:ARG:NH1	2.32	0.44
4:11:221:VAL:HG22	4:11:226:MET:CE	2.45	0.44
8:22:51:GLY:O	8:22:70:VAL:HG13	2.18	0.44
8:22:199:LYS:HB3	8:22:201:TYR:CE1	2.53	0.44
1:1G:691:U:H2'	1:1G:692:G:H8	1.82	0.44
1:1G:807:G:H2'	1:1G:808:G:H8	1.83	0.44
1:1G:1174:C:OP1	14:32:61:LYS:NZ	2.51	0.44
1:1G:1590:C:H2'	1:1G:1591:A:N7	2.33	0.44
1:1G:1599:G:OP1	33:5A:32:SER:N	2.46	0.44
1:1G:1653:C:H5	1:1G:1655:G:C5	2.34	0.44
1:1G:1830:C:H2'	1:1G:1831:A:H8	1.82	0.44
1:1G:1943:G:H4'	33:5A:18:VAL:HG11	2.00	0.44
12:Q8:34:TRP:C	12:Q8:36:LYS:H	2.26	0.44
15:1H:224:C:H2'	15:1H:225:U:H6	1.82	0.44
15:1H:408:U:H2'	15:1H:409:G:C8	2.52	0.44
15:1H:475:A:C4	15:1H:501:G:N7	2.86	0.44
15:1H:893:C:H2'	15:1H:894:G:O4'	2.18	0.44
15:1H:1076:A:N3	15:1H:2501:G:O2'	2.45	0.44
15:1H:2224:A:C4	15:1H:2225:C:C6	3.06	0.44
15:1H:2332:C:C2'	15:1H:2333:G:H5'	2.47	0.44
16:B8:26:ASP:CB	16:B8:91:ARG:HA	2.48	0.44
15:14:174:C:H2'	15:14:175:U:C6	2.52	0.44
15:14:295:C:H42	15:14:391:G:H1	1.65	0.44
15:14:573:A:C6	15:14:574:A:N6	2.85	0.44
15:14:805:C:H2'	15:14:806:U:H5'	1.98	0.44
15:14:1041:G:H21	35:95:89:GLN:NE2	2.16	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:14:1065:G:N3	15:14:1065:G:H2'	2.32	0.44
15:14:1726:A:C2	15:14:2018:U:H5'	2.53	0.44
15:14:1761:C:H2'	15:14:1762:C:C6	2.53	0.44
15:14:1818:A:H4'	15:14:1819:A:C5'	2.48	0.44
16:75:3:ARG:CG	23:29:9:VAL:HA	2.48	0.44
16:75:53:ARG:HG3	16:75:53:ARG:O	2.17	0.44
23:21:50:GLY:HA2	23:21:77:ILE:HA	1.99	0.44
24:4I:5:ALA:HB2	24:4I:61:GLU:HG3	2.00	0.44
27:C8:57:PHE:O	27:C8:60:LEU:N	2.51	0.44
27:C8:92:ARG:HD3	27:C8:94:ASN:CB	2.38	0.44
24:4A:32:GLU:O	24:4A:35:GLU:HG2	2.16	0.44
25:42:41:VAL:HG13	25:42:113:ALA:HA	1.99	0.44
30:35:61:ARG:H	30:35:61:ARG:HG2	1.13	0.44
35:D8:34:GLU:O	35:D8:36:PRO:HD3	2.17	0.44
40:49:70:VAL:HG12	40:49:90:LEU:CD2	2.47	0.44
40:49:111:LEU:HD23	40:49:111:LEU:HA	1.78	0.44
45:98:41:ALA:O	45:98:44:LEU:N	2.49	0.44
47:51:54:ARG:HE	47:51:62:LYS:HG3	1.83	0.44
47:51:166:GLY:O	47:51:167:GLU:HG2	2.17	0.44
48:1A:30:SER:HB3	48:1A:84:GLN:OE1	2.17	0.44
44:12:72:GLY:C	44:12:74:LYS:N	2.76	0.44
8:2E:84:ILE:H	8:2E:84:ILE:HG13	1.55	0.44
51:Y4:51:U:H5"	51:Y4:52:U:OP2	2.18	0.44
52:W4:74:C:N4	52:W4:75:C:C2	2.86	0.44
7:8I:9:VAL:O	7:8I:21:VAL:HA	2.17	0.44
1:1G:1018:G:OP1	49:7A:3:LYS:NZ	2.40	0.44
1:1G:1525:G:O2'	1:1G:1526:G:H5'	2.18	0.44
1:1G:2079:G:H1	37:BA:54:LYS:NZ	2.12	0.44
10:58:30:ILE:O	10:58:34:LEU:HD22	2.17	0.44
14:3E:96:LEU:HG	14:3E:139:ARG:NH2	2.33	0.44
14:3E:141:ARG:HB2	14:3E:141:ARG:NH1	2.32	0.44
15:1H:644:G:H2'	15:1H:645:C:H6	1.82	0.44
15:1H:994:G:N3	15:1H:1032:A:H2	2.16	0.44
15:1H:1577:A:N1	15:1H:1592:A:C2	2.86	0.44
13:3A:109:GLY:HA3	13:3A:121:GLY:O	2.18	0.44
15:14:26:G:C6	15:14:27:G:N1	2.86	0.44
15:14:210:G:H2'	15:14:456:U:O4	2.17	0.44
15:14:506:A:N1	15:14:527:G:H4'	2.32	0.44
15:14:850:G:OP2	56:14:3669:HOH:O	2.21	0.44
15:14:2750:A:C8	15:14:2751:G:C8	3.06	0.44
18:69:101:LEU:H	18:69:101:LEU:HG	1.57	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:16:75:A:H5'	26:16:76:U:OP2	2.17	0.44
25:42:7:GLU:CD	25:42:37:ARG:HH21	2.26	0.44
25:42:144:THR:HG23	25:42:147:ASP:OD2	2.17	0.44
30:78:112:LEU:HD23	30:78:112:LEU:HA	1.64	0.44
29:AA:29:ARG:HH12	29:AA:47:HIS:CD2	2.36	0.44
35:D8:17:GLY:N	35:D8:96:ILE:O	2.40	0.44
36:N8:11:THR:HG23	36:N8:15:ARG:HB3	1.99	0.44
32:39:89:VAL:O	32:39:90:PHE:C	2.56	0.44
33:5A:12:ARG:H	33:5A:12:ARG:HG3	1.28	0.44
33:5A:39:LEU:HD13	33:5A:47:LEU:HD12	1.98	0.44
40:41:61:ALA:HB2	40:41:67:LYS:HA	2.00	0.44
38:45:25:ASP:HB3	38:45:102:VAL:CB	2.48	0.44
38:45:25:ASP:OD1	38:45:25:ASP:N	2.51	0.44
43:E8:86:LEU:HB2	43:E8:96:ILE:HG23	1.99	0.44
8:2E:50:ALA:O	8:2E:70:VAL:HB	2.17	0.44
51:Y4:37:G:C6	51:Y4:38:U:C4	3.06	0.44
1:13:753:U:H2'	1:13:754:G:C8	2.53	0.44
1:13:1277:A:C6	1:13:1278:G:C6	3.05	0.44
7:8I:45:HIS:CE1	7:8I:47:PRO:HG3	2.52	0.44
8:22:139:GLN:NE2	8:22:142:MET:SD	2.83	0.44
1:1G:838:G:C2	1:1G:839:G:C4	3.05	0.44
1:1G:896:G:H1'	7:8A:16:GLN:OE1	2.18	0.44
1:1G:1776:U:H2'	1:1G:1777:C:O4'	2.18	0.44
2:65:2:ALA:C	15:14:2333:G:H22	2.25	0.44
12:Q8:44:LYS:C	12:Q8:45:GLY:O	2.58	0.44
7:8A:10:VAL:HG21	7:8A:52:LYS:O	2.18	0.44
14:3E:103:ASN:O	14:3E:107:ARG:HG2	2.18	0.44
9:82:125:TYR:O	9:82:125:TYR:HD1	2.00	0.44
15:1H:628:A:C8	15:1H:704:A:N1	2.86	0.44
15:1H:1000:A:O2'	15:1H:2281:A:OP2	2.32	0.44
15:1H:1161:U:H2'	15:1H:1162:G:C8	2.52	0.44
15:1H:1677:G:O2'	15:1H:1678:U:H5'	2.18	0.44
15:1H:1770:A:C5	15:1H:1772:G:C5	3.06	0.44
15:1H:2050:C:H2'	15:1H:2051:C:C6	2.53	0.44
15:1H:2122:C:H2'	15:1H:2123:U:O4'	2.18	0.44
12:M5:36:LYS:HD2	12:M5:40:GLU:HB3	1.99	0.44
15:14:140:A:C8	15:14:1457:C:H1'	2.53	0.44
15:14:554:C:H4'	15:14:555:A:O5'	2.18	0.44
15:14:873:A:H1'	15:14:2373:G:N7	2.32	0.44
15:14:910:A:H2'	15:14:911:G:O4'	2.16	0.44
15:14:960:C:OP1	38:45:8:LYS:NZ	2.41	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:14:1185:G:N2	15:14:1186:G:H1'	2.32	0.44
15:14:2154:C:C4	15:14:2155:U:C2	3.06	0.44
15:14:2276:C:H1'	15:14:2403:A:N3	2.32	0.44
15:14:2527:C:H2'	15:14:2528:G:O4'	2.17	0.44
15:14:2546:A:H61	15:14:2677:A:H61	1.65	0.44
15:14:2729:A:H8	15:14:2729:A:H2'	1.66	0.44
22:H8:69:THR:HA	22:H8:89:PHE:O	2.17	0.44
22:H8:122:ARG:HH12	38:88:139:GLU:HG2	1.83	0.44
17:H5:15:TYR:O	17:H5:20:LYS:NZ	2.44	0.44
18:69:3:VAL:HG12	18:69:38:LEU:HA	1.99	0.44
18:69:7:GLU:HA	18:69:15:VAL:HG22	2.00	0.44
26:16:62:C:N3	26:16:63:G:N7	2.66	0.44
26:16:68:A:H61	26:16:110:U:H2'	1.82	0.44
27:C8:85:LYS:HA	27:C8:85:LYS:NZ	2.33	0.44
26:1J:96:C:H2'	26:1J:97:C:C6	2.52	0.44
27:85:92:ARG:HH22	35:95:11:GLN:H	1.65	0.44
28:I5:6:HIS:CE1	40:49:67:LYS:H	2.35	0.44
32:31:120:GLU:HB2	32:31:122:LYS:HG2	1.99	0.44
32:39:32:LEU:HD11	32:39:105:VAL:HG13	1.99	0.44
32:39:74:ARG:O	32:39:74:ARG:HG2	2.18	0.44
41:6I:56:LEU:O	41:6I:60:VAL:HG23	2.18	0.44
44:1E:27:LYS:HB2	44:1E:194:PRO:HD2	2.00	0.44
44:1E:96:ARG:N	44:1E:96:ARG:HD2	2.32	0.44
42:62:27:ILE:H	42:62:27:ILE:HG12	1.42	0.44
45:98:4:LEU:HD12	45:98:4:LEU:HA	1.70	0.44
47:59:7:LEU:HB3	47:59:65:HIS:HE1	1.82	0.44
8:2E:73:PRO:HB3	8:2E:103:VAL:HG11	1.99	0.44
52:X4:1:G:C4	52:X4:2:C:C5	3.06	0.44
52:V4:9:A:H5"	52:V4:10:G:OP2	2.18	0.44
1:13:896:G:H2'	1:13:897:U:C6	2.53	0.44
1:13:1280:C:H2'	1:13:1281:U:C6	2.53	0.44
1:13:1993:G:C6	1:13:1994:C:C4	3.06	0.44
4:11:236:GLY:O	4:11:237:GLU:HB2	2.17	0.44
1:1G:1164:A:H5"	56:1G:2404:HOH:O	2.17	0.44
1:1G:1500:C:OP1	50:72:88:LYS:HE2	2.18	0.44
10:58:97:ARG:H	10:58:100:GLU:HG3	1.83	0.44
2:65:87:PHE:CZ	2:65:102:ALA:HB2	2.53	0.44
11:G8:89:PHE:CD1	11:G8:90:LEU:N	2.86	0.44
15:1H:253:C:H2'	15:1H:254:C:O4'	2.18	0.44
15:1H:324:A:H62	15:1H:325:A:H61	1.66	0.44
15:1H:1010:U:OP1	56:1H:3675:HOH:O	2.21	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:1H:1469:U:HO2'	15:1H:1470:G:P	2.41	0.44
15:1H:1532:G:C2	15:1H:1556:A:C8	3.05	0.44
15:1H:1740:A:H2'	15:1H:1741:C:O4'	2.17	0.44
15:1H:2323:G:N3	15:1H:2323:G:H2'	2.33	0.44
10:15:35:ARG:HB3	10:15:42:TRP:HZ3	1.83	0.44
18:61:73:GLU:OE2	18:61:137:PRO:HD2	2.17	0.44
14:32:146:ILE:H	14:32:146:ILE:HD12	1.82	0.44
15:14:162:C:H2'	15:14:163:G:H8	1.83	0.44
15:14:730:G:H2'	15:14:731:G:O4'	2.18	0.44
15:14:796:U:O2	15:14:2039:A:H1'	2.17	0.44
15:14:969:G:C6	15:14:970:U:C4	3.06	0.44
15:14:2307:C:H2'	15:14:2308:C:C6	2.53	0.44
17:H5:39:ASP:O	17:H5:44:ARG:NH2	2.39	0.44
23:21:119:ARG:HB3	23:21:120:TRP:CD1	2.52	0.44
18:69:75:LEU:HD13	18:69:77:LEU:H	1.83	0.44
24:4I:14:ARG:NE	24:4I:42:ALA:HA	2.33	0.44
23:29:111:ARG:HD3	23:29:160:TYR:CD2	2.53	0.44
25:42:6:PHE:HB3	25:42:35:GLY:C	2.43	0.44
27:85:98:LEU:HB2	27:85:102:GLU:HB2	1.98	0.44
34:52:25:ILE:HD12	34:52:82:ARG:CD	2.47	0.44
41:6I:66:LEU:HD12	41:6I:66:LEU:HA	1.91	0.44
48:1A:27:ALA:HA	48:1A:30:SER:OG	2.18	0.44
48:1A:91:PRO:HB2	48:1A:93:GLY:H	1.82	0.44
44:12:72:GLY:HA2	44:12:165:VAL:HG22	1.99	0.44
44:12:150:SER:O	44:12:153:ARG:HG2	2.18	0.44
49:7A:43:LYS:HG2	49:7A:48:TRP:CE2	2.53	0.44
52:W4:2:C:H2'	52:W4:3:C:C6	2.53	0.44
1:13:1626:G:C2	1:13:1627:G:H1'	2.53	0.44
2:A8:15:ARG:HD2	2:A8:88:ASP:OD1	2.18	0.44
4:11:66:ASP:OD1	4:11:68:LYS:O	2.35	0.44
8:22:124:ILE:HG12	8:22:130:VAL:HG22	1.99	0.44
1:1G:1352:U:O2'	1:1G:1353:G:P	2.76	0.44
1:1G:1366:A:H2'	1:1G:1367:C:C6	2.52	0.44
1:1G:1379:G:H21	41:6A:23:GLY:HA3	1.82	0.44
1:1G:1457:A:H2'	1:1G:1458:G:O4'	2.18	0.44
1:1G:1477:G:C2	1:1G:1478:G:C8	3.06	0.44
1:1G:1577:G:H2'	1:1G:1578:U:O4'	2.18	0.44
1:1G:1583:U:N3	1:1G:1852:A:C4	2.85	0.44
1:1G:1756:C:N3	1:1G:1767:G:N1	2.66	0.44
1:1G:1960:A:C8	1:1G:1961:G:C8	3.06	0.44
12:Q8:13:ARG:NH1	15:1H:2408:A:O2'	2.51	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:3E:162:LEU:HA	14:3E:162:LEU:HD23	1.69	0.44
15:1H:175:U:H2'	15:1H:176:G:H8	1.83	0.44
15:1H:1715:A:H2'	15:1H:1716:G:O4'	2.18	0.44
15:1H:1938:A:N1	52:W1:37:A:O2'	2.44	0.44
10:15:39:ARG:C	10:15:41:ASP:H	2.26	0.44
18:61:1:MET:O	18:61:20:ASP:HA	2.18	0.44
18:61:129:THR:HA	18:61:137:PRO:HA	2.00	0.44
19:9I:47:THR:O	19:9I:83:GLU:N	2.39	0.44
14:32:201:GLN:O	14:32:205:GLU:HB2	2.18	0.44
15:14:226:C:H2'	15:14:227:C:C6	2.53	0.44
15:14:512:C:H2'	15:14:513:C:C6	2.53	0.44
15:14:872:G:H2'	15:14:873:A:C8	2.52	0.44
15:14:1240:G:OP2	30:35:17:LYS:NZ	2.49	0.44
15:14:1977:A:C5	21:25:22:ILE:HD11	2.53	0.44
15:14:2062:G:O2'	15:14:2063:G:H5'	2.17	0.44
15:14:2515:U:H5"	15:14:2516:C:OP2	2.18	0.44
21:68:2:ILE:HD12	21:68:6:THR:HG21	2.00	0.44
25:4E:8:GLU:HG2	25:4E:34:VAL:HG22	2.00	0.44
26:16:14:C:O2'	31:I8:74:ARG:HG2	2.18	0.44
21:25:87:ILE:HD12	21:25:87:ILE:HA	1.69	0.44
27:C8:11:ARG:HH11	27:C8:11:ARG:HD3	1.63	0.44
24:4A:65:LYS:HB2	24:4A:69:GLU:OE1	2.18	0.44
28:I5:18:CYS:HB2	28:I5:36:CYS:HB3	2.00	0.44
30:35:111:ARG:HG2	30:35:128:HIS:CG	2.53	0.44
40:41:28:VAL:O	40:41:31:VAL:HG13	2.18	0.44
44:1E:98:LEU:HB2	44:1E:101:MET:HE3	2.00	0.44
44:1E:163:PHE:CD1	44:1E:185:ILE:HG13	2.53	0.44
42:62:15:ASP:HB3	42:62:19:GLY:N	2.33	0.44
42:62:73:MET:HG3	42:62:90:GLU:HA	2.00	0.44
47:51:4:ILE:HG21	47:51:6:ARG:HH11	1.83	0.44
48:1A:28:ARG:HB2	48:1A:34:VAL:HG21	2.00	0.44
48:1I:8:LEU:CD2	48:1I:96:ILE:HG22	2.47	0.44
48:1I:45:ARG:HD3	48:1I:47:PHE:HZ	1.82	0.44
44:12:127:ILE:HD12	44:12:135:GLN:OE1	2.18	0.44
6:2I:33:THR:HB	6:2I:37:GLY:C	2.43	0.44
49:7A:67:THR:O	49:7A:71:ARG:N	2.46	0.44
52:X1:19:G:H4'	52:X1:20:U:OP2	2.18	0.44
52:V1:7:A:H5'	52:V1:8:U:OP2	2.18	0.44
1:13:663:U:H2'	1:13:664:C:C6	2.52	0.43
1:13:702:U:H4'	18:69:82:ARG:CZ	2.47	0.43
1:13:806:G:H2'	1:13:807:G:C8	2.50	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:13:1599:G:C8	1:13:1985:U:C2	3.06	0.43
1:13:1741:C:H2'	1:13:1742:C:C6	2.53	0.43
1:13:1756:C:O2'	1:13:1767:G:N7	2.38	0.43
1:13:1785:A:O2'	1:13:1786:C:H5"	2.18	0.43
1:13:2055:U:H2'	1:13:2056:A:C8	2.52	0.43
1:1G:1050:G:C2	1:1G:1051:G:H1'	2.52	0.43
1:1G:1597:A:P	33:5A:41:ARG:HH12	2.41	0.43
1:1G:1785:A:H4'	1:1G:1786:C:O5'	2.17	0.43
1:1G:1969:C:H1'	9:82:124:GLN:NE2	2.33	0.43
10:58:48:MET:SD	10:58:48:MET:O	2.76	0.43
12:Q8:49:VAL:HG12	12:Q8:50:LEU:O	2.18	0.43
7:8A:66:SER:OG	7:8A:69:LYS:HB2	2.17	0.43
15:1H:591:U:O4	35:D8:78:LYS:HD3	2.18	0.43
15:1H:2131:G:C6	15:1H:2132:C:C2	3.05	0.43
15:1H:2490:C:H2'	15:1H:2492:C:OP2	2.18	0.43
12:M5:31:HIS:O	12:M5:33:ASN:OD1	2.35	0.43
15:14:10:G:N7	15:14:2644:A:N6	2.65	0.43
15:14:337:G:H4'	15:14:356:A:N3	2.33	0.43
15:14:665:G:C5	15:14:678:G:C2	3.06	0.43
15:14:864:C:H2'	15:14:865:C:H6	1.83	0.43
15:14:1340:C:H2'	15:14:1341:U:C6	2.53	0.43
15:14:2484:A:C8	15:14:2497:G:C4	3.06	0.43
15:14:2762:U:H2'	15:14:2763:G:H5'	1.99	0.43
16:75:91:ARG:HH11	16:75:124:ASP:CG	2.26	0.43
25:4E:153:LYS:H	50:7E:64:LYS:HZ1	1.66	0.43
22:D5:72:ARG:HG2	26:1J:106:U:O2'	2.17	0.43
26:1J:80:A:C2	26:1J:102:A:C4	3.05	0.43
34:5E:44:GLY:HA2	34:5E:59:TYR:CE2	2.53	0.43
40:41:94:LEU:N	40:41:94:LEU:HD23	2.34	0.43
40:41:170:ARG:HH21	40:41:180:PHE:CB	2.31	0.43
41:6I:74:ASP:HB3	41:6I:77:ARG:HG2	2.00	0.43
44:1E:162:ILE:HD11	44:1E:184:VAL:HG13	2.00	0.43
44:1E:187:LEU:HD11	44:1E:204:ASN:O	2.18	0.43
3:F8:88:LYS:HD2	3:F8:90:GLU:OE2	2.18	0.43
6:2I:66:LEU:HD21	6:2I:97:ALA:HB1	1.99	0.43
1:13:962:A:C2	1:13:974:G:C2	3.05	0.43
1:13:1022:C:H2'	1:13:1023:A:O4'	2.17	0.43
1:13:1915:A:H2'	1:13:1916:A:O4'	2.18	0.43
5:L5:34:ARG:HH11	5:L5:34:ARG:HD3	1.63	0.43
8:22:186:PHE:HA	8:22:198:VAL:O	2.18	0.43
9:8E:18:PHE:CD2	9:8E:62:TYR:HD2	2.35	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:8E:21:PRO:HA	9:8E:59:PHE:HA	2.00	0.43
1:1G:986:C:H1'	1:1G:987:G:N1	2.33	0.43
1:1G:1468:U:O2'	1:1G:1469:C:H5"	2.17	0.43
1:1G:1666:C:H2'	1:1G:1667:C:C6	2.53	0.43
1:1G:1780:A:H2'	1:1G:1781:C:C6	2.53	0.43
1:1G:1965:G:C6	1:1G:1966:A:C6	3.07	0.43
10:58:131:GLN:CD	10:58:132:ALA:HB2	2.42	0.43
4:19:237:GLU:HB3	15:14:2605:A:OP2	2.18	0.43
13:3I:89:ARG:NH2	13:3I:91:LYS:HD2	2.33	0.43
15:1H:267:C:H2'	15:1H:268:C:O4'	2.18	0.43
15:1H:705:G:H2'	15:1H:706:U:O4'	2.18	0.43
15:1H:735:G:H21	15:1H:837:A:H61	1.66	0.43
15:1H:1568:G:C6	15:1H:1569:U:C4	3.06	0.43
15:1H:2661:C:H2'	15:1H:2662:U:O4'	2.18	0.43
15:1H:2767:G:N1	47:51:3:ARG:NE	2.64	0.43
15:1H:2835:G:H2'	15:1H:2836:A:H5"	1.99	0.43
11:C5:35:TYR:CE2	11:C5:69:ALA:HB3	2.53	0.43
14:32:59:ARG:NH2	14:32:66:ARG:HH12	2.15	0.43
14:32:176:LEU:HG	14:32:178:VAL:CG1	2.48	0.43
15:14:241:A:C5	15:14:242:G:H1'	2.53	0.43
15:14:423:U:H2'	15:14:424:G:N7	2.33	0.43
15:14:676:G:C5	15:14:677:C:C4	3.06	0.43
15:14:806:U:H2'	15:14:807:C:O4'	2.18	0.43
15:14:881:G:H21	30:35:53:GLY:H	1.66	0.43
15:14:917:U:C4	15:14:918:G:N7	2.87	0.43
15:14:990:U:OP2	30:35:36:LYS:CD	2.66	0.43
15:14:1067:U:H2'	15:14:1068:A:C8	2.53	0.43
15:14:1873:G:H2'	15:14:1873:G:N3	2.33	0.43
15:14:2188:C:OP1	15:14:2197:U:H5"	2.18	0.43
22:H8:40:ASP:OD1	22:H8:42:VAL:HG23	2.18	0.43
24:4I:49:THR:O	24:4I:53:VAL:HG23	2.17	0.43
19:9A:30:ASP:CG	34:52:96:PRO:HB3	2.42	0.43
25:42:121:LYS:HD2	25:42:122:GLU:H	1.82	0.43
30:78:88:LEU:HD12	30:78:95:VAL:HG11	2.00	0.43
35:D8:30:GLY:N	35:D8:61:VAL:HG23	2.33	0.43
35:95:24:LYS:HA	35:95:92:THR:OG1	2.17	0.43
39:J8:12:PRO:HB2	39:J8:41:ARG:HH21	1.82	0.43
39:J8:73:LEU:HA	39:J8:73:LEU:HD23	1.70	0.43
39:F5:44:PRO:HB2	39:F5:46:LEU:CD1	2.47	0.43
41:6A:71:GLN:HB2	41:6A:78:TYR:CD1	2.53	0.43
44:12:32:ILE:HD11	44:12:40:HIS:CG	2.53	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:G5:4:SER:N	46:G5:7:ARG:HG3	2.33	0.43
47:59:74:ASN:OD1	47:59:138:LYS:HG2	2.18	0.43
8:2E:58:GLU:H	8:2E:65:ALA:HB3	1.83	0.43
51:Y1:30:C:H2'	51:Y1:31:A:H8	1.83	0.43
52:V4:18:G:HO2'	52:V4:19:G:P	2.38	0.43
1:13:881:C:H2'	1:13:882:C:C6	2.53	0.43
1:13:1487:A:H2'	1:13:1488:A:C8	2.54	0.43
3:B5:49:VAL:HB	3:B5:83:VAL:HG21	2.01	0.43
3:B5:50:LYS:HD2	3:B5:50:LYS:HA	1.77	0.43
4:11:85:ASP:OD2	4:11:88:ARG:NH1	2.47	0.43
7:8I:27:PHE:N	7:8I:27:PHE:CD1	2.86	0.43
8:22:3:ASN:HD22	8:22:3:ASN:H	1.66	0.43
9:8E:18:PHE:HD2	9:8E:62:TYR:HD2	1.66	0.43
1:1G:963:C:OP2	1:1G:969:C:N4	2.51	0.43
1:1G:1220:U:P	50:72:30:ARG:HH11	2.41	0.43
1:1G:1825:G:H2'	1:1G:1826:U:C6	2.54	0.43
1:1G:2043:G:C6	1:1G:2109:G:C6	3.06	0.43
11:G8:39:VAL:O	11:G8:39:VAL:HG12	2.18	0.43
4:19:61:LEU:HD13	4:19:61:LEU:HA	1.70	0.43
12:Q8:59:LYS:CD	12:Q8:60:LEU:HG	2.46	0.43
15:1H:342:G:N2	15:1H:343:C:H1'	2.33	0.43
15:1H:551:U:H2'	15:1H:552:U:C6	2.54	0.43
15:1H:1368:G:C6	15:1H:1369:C:N4	2.86	0.43
15:1H:1746:G:C6	15:1H:1747:G:C4	3.06	0.43
15:1H:1898:U:OP1	15:1H:2425:G:O2'	2.31	0.43
15:1H:2277:U:H4'	15:1H:2343:A:C2	2.53	0.43
15:1H:2466:A:O2'	52:X1:76:A:H2'	2.19	0.43
15:1H:2483:G:OP1	38:88:119:ARG:NH2	2.41	0.43
15:1H:2717:U:H4'	15:1H:2718:C:OP1	2.18	0.43
15:1H:2727:U:H1'	15:1H:2728:A:C8	2.53	0.43
13:3A:86:ARG:HB2	13:3A:101:VAL:HG23	2.00	0.43
15:14:88:G:OP2	15:14:89:U:O2'	2.30	0.43
15:14:262:A:N7	15:14:284:G:N2	2.65	0.43
15:14:911:G:C6	15:14:912:A:C4	3.06	0.43
15:14:967:G:C4	15:14:968:G:C8	3.06	0.43
15:14:1245:G:C2	15:14:1299:G:C6	3.06	0.43
15:14:1891:G:C6	15:14:1892:G:N1	2.86	0.43
15:14:1940:U:H2'	15:14:1941:A:O4'	2.17	0.43
15:14:2167:C:H2'	15:14:2168:C:C6	2.53	0.43
15:14:2555:C:H2'	15:14:2556:A:O4'	2.17	0.43
15:14:2774:A:C2	15:14:2775:G:H1'	2.52	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:14:2802:U:H2'	15:14:2803:C:C6	2.52	0.43
19:9A:76:LEU:HG	34:52:89:MET:CE	2.48	0.43
23:29:21:VAL:CG1	23:29:185:LYS:HG3	2.48	0.43
29:AI:19:VAL:O	29:AI:23:ASN:HB2	2.18	0.43
30:78:32:THR:O	30:78:32:THR:CG2	2.67	0.43
28:I5:42:PHE:O	28:I5:43:TYR:HB3	2.18	0.43
38:88:45:GLN:CD	38:88:45:GLN:H	2.24	0.43
40:41:107:LEU:HD11	40:41:178:PHE:CD1	2.54	0.43
41:6I:17:ARG:HG3	41:6I:17:ARG:NH1	2.33	0.43
39:F5:34:THR:O	39:F5:34:THR:HG22	2.18	0.43
42:62:115:ARG:O	42:62:118:VAL:HG22	2.18	0.43
47:51:7:LEU:H	47:51:7:LEU:HD12	1.82	0.43
47:51:86:GLU:HG2	47:51:87:LEU:H	1.83	0.43
46:G5:32:LEU:HD12	46:G5:53:LEU:HB3	2.00	0.43
49:7A:43:LYS:HE2	49:7A:43:LYS:HB2	1.74	0.43
50:72:81:HIS:HB2	50:72:138:TRP:CE3	2.53	0.43
52:V4:31:A:H3'	52:V4:32:U:O4'	2.17	0.43
1:13:697:A:OP2	1:13:698:G:H8	2.01	0.43
1:13:943:G:C6	1:13:944:A:C5	3.07	0.43
1:13:1053:A:H4'	1:13:1054:G:O5'	2.19	0.43
1:13:1222:G:H2'	1:13:1223:G:C8	2.54	0.43
1:13:1562:G:C6	1:13:1563:C:N4	2.86	0.43
1:13:1629:A:H5"	1:13:1630:C:O4'	2.18	0.43
1:13:1759:G:H2'	1:13:1760:C:H6	1.83	0.43
3:B5:26:TYR:O	3:B5:81:VAL:HG22	2.18	0.43
4:11:70:TRP:HZ3	4:11:146:GLU:OE2	2.01	0.43
1:1G:1065:G:O5'	1:1G:1065:G:H8	2.01	0.43
1:1G:1777:C:H2'	1:1G:1778:U:C6	2.53	0.43
1:1G:2079:G:H2'	37:BA:39:LYS:HZ2	1.82	0.43
2:65:55:ALA:HB2	26:1J:119:G:H5"	2.00	0.43
11:G8:6:HIS:HE1	11:G8:69:ALA:O	2.00	0.43
4:19:49:ILE:HD11	4:19:52:ARG:HA	2.01	0.43
12:Q8:21:LYS:NZ	12:Q8:48:PHE:CG	2.86	0.43
12:Q8:50:LEU:O	12:Q8:52:LYS:HG2	2.17	0.43
7:8A:78:GLU:OE2	7:8A:81:ARG:HD3	2.19	0.43
9:82:95:LYS:HE2	9:82:96:LEU:N	2.33	0.43
15:1H:862:U:OP2	30:78:23:PRO:O	2.37	0.43
15:1H:1045:G:C2	15:1H:1208:U:C2	3.06	0.43
15:1H:1179:G:C2	15:1H:1180:A:C4	3.07	0.43
15:1H:2151:A:N7	15:1H:2187:G:N2	2.66	0.43
15:1H:2229:C:C2	15:1H:2235:G:C2	3.06	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:B8:50:ILE:HA	16:B8:50:ILE:HD12	1.74	0.43
14:32:150:GLU:C	14:32:152:SER:N	2.72	0.43
15:14:626:C:O2	15:14:630:C:H4'	2.19	0.43
15:14:1159:A:H4'	47:59:3:ARG:HH11	1.83	0.43
15:14:1236:U:H4'	35:95:79:VAL:HG12	2.01	0.43
15:14:2289:A:C6	15:14:2291:G:C8	3.06	0.43
22:H8:81:ARG:HG3	22:H8:81:ARG:O	2.18	0.43
23:21:134:ILE:C	23:21:134:ILE:HD12	2.43	0.43
25:4E:43:LEU:O	25:4E:65:ASN:ND2	2.51	0.43
27:C8:9:VAL:HG12	27:C8:10:ARG:N	2.33	0.43
27:C8:85:LYS:HA	27:C8:85:LYS:HZ2	1.83	0.43
27:C8:92:ARG:C	27:C8:94:ASN:N	2.75	0.43
23:29:197:ILE:HD11	23:29:199:ARG:HE	1.83	0.43
24:4A:7:VAL:HG13	40:49:115:ARG:HB3	1.99	0.43
29:AI:21:GLU:O	29:AI:25:LYS:HB2	2.19	0.43
26:1J:46:G:OP1	28:I5:2:LYS:NZ	2.52	0.43
27:85:92:ARG:HH11	27:85:95:LEU:HD12	1.84	0.43
32:31:29:ASN:H	32:31:112:MET:HE1	1.79	0.43
35:D8:62:LEU:HA	35:D8:62:LEU:HD12	1.72	0.43
32:39:82:ILE:H	32:39:82:ILE:HG13	1.55	0.43
38:88:60:ARG:HD3	52:W1:53:G:OP1	2.19	0.43
35:95:39:LEU:H	35:95:39:LEU:HD12	1.82	0.43
37:BA:72:LEU:O	37:BA:73:HIS:HB2	2.18	0.43
37:BA:74:LYS:HZ2	37:BA:74:LYS:HG2	1.43	0.43
38:45:43:THR:OG1	38:45:45:GLN:HG2	2.17	0.43
39:F5:14:VAL:CG1	39:F5:39:LYS:HD3	2.49	0.43
45:55:54:LEU:O	45:55:57:ARG:HB2	2.19	0.43
52:V4:35:A:H2'	52:V4:36:A:O4'	2.17	0.43
1:13:1132:C:H2'	1:13:1133:C:H6	1.83	0.43
1:13:1240:A:H61	1:13:1258:G:H1	1.64	0.43
1:13:1368:C:HO2'	41:6I:42:HIS:CE1	2.30	0.43
2:A8:42:ASP:OD2	2:A8:42:ASP:N	2.51	0.43
1:1G:940:G:H2'	1:1G:941:A:C8	2.53	0.43
1:1G:1138:A:H8	1:1G:1138:A:O5'	2.02	0.43
1:1G:1547:C:H2'	1:1G:1548:G:C8	2.54	0.43
1:1G:1667:C:H3'	1:1G:1668:U:H5"	2.01	0.43
1:1G:1982:G:H2'	1:1G:1983:G:O4'	2.17	0.43
10:58:34:LEU:HD21	10:58:120:LEU:HB2	2.01	0.43
10:58:35:ARG:O	10:58:42:TRP:HZ3	2.00	0.43
2:65:19:LYS:H	2:65:19:LYS:HG2	1.61	0.43
4:19:236:GLY:O	4:19:237:GLU:O	2.37	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:1H:96:C:H5”	46:K8:2:LYS:HB2	2.00	0.43
15:1H:772:G:H2’	15:1H:773:U:O4’	2.18	0.43
15:1H:1155:G:H2’	15:1H:1156:U:C6	2.53	0.43
15:1H:1531:U:O4	15:1H:1559:A:C8	2.71	0.43
15:1H:2201:A:H2’	15:1H:2202:C:C6	2.53	0.43
15:1H:2763:G:O6	15:1H:2771:C:H5”	2.18	0.43
10:15:55:VAL:HB	10:15:126:PRO:HA	2.01	0.43
14:32:99:SER:O	14:32:140:VAL:HG23	2.18	0.43
15:14:208:A:C2	15:14:225:U:H4’	2.53	0.43
15:14:357:A:O2’	15:14:359:C:OP2	2.35	0.43
15:14:1470:G:C2	15:14:1471:G:C8	3.06	0.43
15:14:1888:A:H2’	15:14:1889:G:O4’	2.18	0.43
15:14:2421:U:H2’	15:14:2421:U:OP2	2.18	0.43
15:14:2727:U:OP1	15:14:2730:G:H4’	2.18	0.43
17:H5:5:LYS:HB3	17:H5:5:LYS:HE3	1.45	0.43
23:21:116:VAL:HG13	23:21:122:PHE:CD2	2.53	0.43
18:69:56:LYS:O	18:69:60:GLU:HB3	2.19	0.43
21:25:47:ILE:HD12	21:25:47:ILE:HA	1.77	0.43
28:I5:5:ILE:HB	40:49:67:LYS:HE2	1.99	0.43
32:31:32:LEU:HD21	32:31:105:VAL:HG13	1.99	0.43
32:39:36:VAL:O	32:39:40:GLN:HB2	2.19	0.43
37:BA:74:LYS:CG	37:BA:75:ASN:N	2.81	0.43
38:45:59:ARG:O	38:45:60:ARG:HG3	2.17	0.43
38:45:65:PHE:O	38:45:104:PHE:HA	2.19	0.43
42:62:22:LEU:HD12	42:62:22:LEU:H	1.83	0.43
47:51:4:ILE:HD13	47:51:4:ILE:H	1.83	0.43
47:59:144:VAL:O	47:59:148:ILE:HG12	2.18	0.43
8:2E:47:LEU:HD13	8:2E:68:VAL:HG11	2.00	0.43
8:2E:73:PRO:O	8:2E:76:VAL:N	2.52	0.43
8:2E:79:ARG:HA	8:2E:79:ARG:HE	1.84	0.43
8:2E:125:GLU:HG2	8:2E:190:ARG:O	2.17	0.43
52:W1:50:U:C2	52:W1:65:G:N2	2.86	0.43
1:13:747:G:C2	1:13:748:A:N1	2.86	0.43
1:13:1390:G:H2’	1:13:1391:C:H6	1.84	0.43
1:13:1732:G:O5’	44:1E:111:ARG:HD2	2.18	0.43
1:13:1840:A:C8	1:13:1842:G:C5	3.06	0.43
4:11:176:ARG:HA	4:11:182:LEU:HD23	2.00	0.43
6:2A:120:ARG:HD3	1:1G:1408:C:O2’	2.18	0.43
1:1G:1034:A:H5’	1:1G:1113:C:O2’	2.18	0.43
1:1G:1370:G:H2’	1:1G:1371:G:O4’	2.19	0.43
1:1G:1759:G:C8	1:1G:1760:C:C5	3.06	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:1G:1816:C:P	48:1A:51:ARG:HH22	2.41	0.43
15:1H:476:U:O4	15:1H:608:G:H1'	2.17	0.43
15:1H:800:A:H5'	43:E8:90:ARG:HA	2.01	0.43
15:1H:927:A:C6	15:1H:948:A:C8	3.06	0.43
15:1H:1044:A:C2	15:1H:1045:G:C8	3.06	0.43
15:1H:1098:A:H2'	15:1H:1099:G:C8	2.54	0.43
15:1H:1108:U:C4	15:1H:1110:G:H4'	2.53	0.43
15:1H:1299:G:N7	30:78:18:ARG:NH2	2.67	0.43
15:1H:1682:A:O5'	15:1H:1682:A:H8	2.02	0.43
15:1H:1770:A:C8	15:1H:1771:U:C5	3.06	0.43
15:1H:1786:C:H42	15:1H:1790:G:H1	1.67	0.43
15:1H:2017:G:C2	15:1H:2022:G:C5	3.06	0.43
15:1H:2476:C:H2'	15:1H:2477:U:C6	2.53	0.43
15:1H:2898:C:N3	15:1H:2899:G:H1'	2.33	0.43
11:C5:19:LYS:C	11:C5:21:LYS:H	2.27	0.43
15:14:48:A:H4'	15:14:49:U:H5"	2.00	0.43
15:14:347:A:H5'	15:14:365:A:H1'	2.01	0.43
15:14:970:U:H2'	15:14:971:C:C6	2.53	0.43
15:14:1118:A:H2'	15:14:1144:A:C2	2.54	0.43
15:14:1549:G:C6	15:14:1550:C:N4	2.87	0.43
15:14:1818:A:H4'	15:14:1819:A:O5'	2.19	0.43
15:14:1977:A:C2	21:25:22:ILE:HG13	2.53	0.43
15:14:2350:A:C8	15:14:2352:G:N7	2.87	0.43
15:14:2483:G:O2'	15:14:2484:A:O4'	2.36	0.43
16:75:95:ARG:HD2	16:75:95:ARG:HA	1.77	0.43
18:69:51:ILE:HG22	18:69:52:ARG:N	2.34	0.43
24:4I:108:ARG:N	24:4I:108:ARG:HD2	2.33	0.43
23:29:5:LEU:HD22	23:29:49:LEU:HD12	2.00	0.43
24:4A:79:LYS:HE3	24:4A:82:MET:SD	2.59	0.43
24:4A:84:ILE:HG12	29:AA:63:THR:HG21	2.00	0.43
31:I8:7:LEU:HD23	31:I8:7:LEU:HA	1.78	0.43
28:I5:37:SER:C	28:I5:39:CYS:H	2.26	0.43
34:5E:35:ALA:HB1	34:5E:65:VAL:HB	2.00	0.43
38:45:109:VAL:HB	38:45:113:GLN:HB3	2.01	0.43
44:1E:178:ARG:NH1	44:1E:196:LEU:O	2.35	0.43
44:12:42:ILE:CD1	44:12:202:PRO:HB2	2.49	0.43
44:12:107:THR:O	44:12:110:GLN:NE2	2.51	0.43
3:F8:3:THR:CB	3:F8:4:ALA:HA	2.48	0.43
47:59:7:LEU:HB3	47:59:65:HIS:CE1	2.52	0.43
6:2I:17:GLY:C	6:2I:80:VAL:HG12	2.43	0.43
6:2I:34:ASP:HB2	6:2I:35:PRO:HD2	1.99	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:2E:182:ILE:HA	8:2E:202:ILE:O	2.19	0.43
52:V1:43:C:H5'	52:V1:44:G:OP2	2.19	0.43
1:13:703:G:C5	1:13:704:C:C4	3.07	0.43
1:13:992:G:H4'	1:13:993:C:OP1	2.19	0.43
1:13:1187:G:C5	1:13:1188:A:C2	3.07	0.43
1:13:1287:G:H2'	1:13:1288:U:C6	2.53	0.43
1:13:1731:C:H2'	1:13:1732:G:O4'	2.19	0.43
1:13:1762:G:H1	1:13:1768:C:N4	2.16	0.43
4:11:61:LEU:HD13	4:11:61:LEU:HA	1.89	0.43
1:1G:695:U:C2	1:1G:1002:G:N2	2.87	0.43
1:1G:702:U:H2'	1:1G:703:G:C8	2.54	0.43
1:1G:1830:C:H2'	1:1G:1831:A:C8	2.54	0.43
1:1G:1950:G:H4'	1:1G:1990:C:C2	2.54	0.43
1:1G:2035:C:O2'	15:14:1937:A:N1	2.48	0.43
10:58:24:GLY:HA2	10:58:27:ALA:HB3	1.99	0.43
14:3E:13:ARG:HD3	14:3E:36:ARG:O	2.18	0.43
15:1H:13:A:N1	15:1H:552:U:H2'	2.34	0.43
15:1H:606:C:H2'	15:1H:607:G:C8	2.54	0.43
15:1H:778:G:H2'	15:1H:1809:U:H1'	2.00	0.43
15:1H:1155:G:H2'	15:1H:1156:U:H6	1.84	0.43
15:1H:1302:A:N7	56:1H:3604:HOH:O	2.50	0.43
15:1H:1397:G:C2	15:1H:1648:C:N3	2.87	0.43
15:1H:2137:G:H1'	52:V1:19:G:C6	2.54	0.43
15:1H:2439:C:O2	15:1H:2444:G:O2'	2.28	0.43
16:B8:65:LYS:HE3	16:B8:67:SER:HB2	1.99	0.43
15:14:699:C:N4	15:14:700:G:O6	2.51	0.43
15:14:1059:G:H5'	15:14:1060:U:OP2	2.19	0.43
15:14:1101:C:H42	15:14:1154:G:H1	1.66	0.43
15:14:1620:A:H2'	15:14:1621:A:C8	2.54	0.43
15:14:1813:U:H5"	15:14:1814:A:H5'	2.00	0.43
15:14:1844:A:H2'	15:14:1845:G:O4'	2.19	0.43
15:14:2386:G:C6	15:14:2387:G:N7	2.86	0.43
16:75:74:ARG:HG2	16:75:76:PHE:CZ	2.53	0.43
16:75:80:SER:HB3	16:75:83:ILE:HG13	2.01	0.43
22:H8:25:PRO:O	22:H8:85:HIS:HA	2.18	0.43
23:21:65:GLY:C	23:21:68:ALA:H	2.27	0.43
27:C8:5:LYS:H	27:C8:5:LYS:HG3	1.42	0.43
27:C8:97:ASP:OD2	27:C8:101:ARG:NH1	2.47	0.43
24:4A:96:LEU:C	24:4A:110:ARG:HE	2.26	0.43
25:42:93:PRO:HG2	50:72:105:ARG:NE	2.34	0.43
29:AA:63:THR:HG23	29:AA:74:PHE:HE2	1.84	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:35:19:VAL:HA	30:35:20:GLY:HA2	1.76	0.43
30:35:133:SER:O	30:35:137:LYS:HG3	2.19	0.43
33:5A:37:PHE:CE1	33:5A:53:LEU:HD13	2.54	0.43
35:95:20:LEU:HD12	35:95:20:LEU:HA	1.57	0.43
37:BA:29:LYS:HB3	37:BA:29:LYS:HE2	1.69	0.43
37:BA:69:GLY:O	37:BA:73:HIS:CD2	2.72	0.43
42:6E:18:TYR:HB3	42:6E:59:LEU:HD12	1.99	0.43
38:45:69:PHE:CD1	38:45:70:PRO:HD2	2.53	0.43
41:6A:24:SER:O	41:6A:28:GLN:HG3	2.18	0.43
44:1E:58:ILE:O	44:1E:61:LEU:N	2.42	0.43
44:1E:218:ALA:O	44:1E:222:ILE:HD12	2.18	0.43
45:98:12:ARG:HG2	45:98:12:ARG:HH11	1.83	0.43
48:1I:49:VAL:HG12	48:1I:61:GLU:O	2.18	0.43
44:12:168:THR:HG21	44:12:191:ASP:O	2.18	0.43
44:12:221:LEU:HA	44:12:224:GLN:HB3	1.99	0.43
50:7E:95:VAL:HG12	50:7E:99:GLU:HB2	2.01	0.43
50:72:119:LEU:HD23	50:72:119:LEU:HA	1.76	0.43
52:V1:29:G:H2'	52:V1:30:G:H5"	1.99	0.43
52:X4:19:G:C4	52:X4:57:G:N2	2.87	0.43
1:13:744:G:H2'	1:13:745:C:C6	2.53	0.43
1:13:1047:G:C5'	14:3E:5:ILE:HG12	2.47	0.43
1:13:1184:C:H2'	1:13:1185:C:C6	2.53	0.43
1:13:2144:G:H2'	1:13:2145:U:C6	2.54	0.43
2:A8:5:THR:HG23	2:A8:5:THR:H	1.55	0.43
2:A8:26:LEU:HD22	2:A8:87:PHE:HD2	1.82	0.43
1:1G:969:C:H2'	1:1G:969:C:O2	2.18	0.43
1:1G:1105:G:C6	1:1G:1106:G:N7	2.86	0.43
1:1G:1357:A:H2'	1:1G:1358:A:C8	2.53	0.43
1:1G:1626:G:H2'	1:1G:1627:G:H8	1.84	0.43
12:Q8:49:VAL:HG11	15:1H:2374:C:C4'	2.47	0.43
13:3I:93:LEU:O	13:3I:96:VAL:HG13	2.18	0.43
9:82:49:PRO:HD3	9:82:78:LYS:HZ2	1.84	0.43
15:1H:509:G:C4	15:1H:534:A:C2	3.07	0.43
15:1H:511:A:C8	15:1H:512:C:C5	3.06	0.43
15:1H:1218:G:H1	15:1H:1228:C:H42	1.66	0.43
15:1H:1358:G:P	5:P8:9:ARG:HD3	2.59	0.43
15:1H:1788:C:OP1	16:B8:96:ARG:NH1	2.45	0.43
15:1H:1805:C:O2'	15:1H:1820:A:H8	1.75	0.43
15:1H:1924:G:H22	15:1H:1927:C:H41	1.66	0.43
15:1H:2213:C:H2'	15:1H:2214:U:O4'	2.19	0.43
15:1H:2579:A:C2	15:1H:2662:U:H4'	2.54	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:61:101:LEU:HG	18:61:107:VAL:HB	2.00	0.43
15:14:590:C:H2'	15:14:591:U:O4'	2.18	0.43
15:14:860:U:H2'	30:35:21:ARG:HA	2.01	0.43
15:14:1407:G:N2	15:14:1421:U:C5	2.87	0.43
15:14:1544:A:O2'	15:14:1545:A:H5'	2.19	0.43
15:14:2053:U:H2'	15:14:2054:G:O4'	2.18	0.43
15:14:2477:U:H2'	15:14:2478:C:H6	1.83	0.43
15:14:2587:A:OP1	23:29:144:ARG:HB2	2.19	0.43
15:14:2702:U:H2'	15:14:2703:U:O4'	2.19	0.43
15:14:2867:G:C2	15:14:2877:G:C2	3.06	0.43
22:D5:81:ARG:HH22	38:45:135:ASP:HB2	1.84	0.43
25:42:101:ILE:H	25:42:101:ILE:HD13	1.84	0.43
26:1J:78:G:H2'	26:1J:79:U:O4'	2.18	0.43
30:78:96:THR:OG1	30:78:98:GLU:HG3	2.18	0.43
28:I5:15:ILE:O	28:I5:33:VAL:HG13	2.19	0.43
32:31:46:ARG:HH11	32:31:46:ARG:HD2	1.69	0.43
34:5E:82:ARG:HB2	34:5E:85:VAL:HG23	2.01	0.43
37:BI:63:ILE:HG22	37:BI:77:ALA:HB1	2.01	0.43
38:88:3:MET:HG2	38:88:4:PRO:O	2.18	0.43
38:88:24:GLY:O	38:88:25:ASP:CB	2.67	0.43
42:6E:38:LEU:HD22	42:6E:38:LEU:HA	1.70	0.43
44:1E:178:ARG:HH22	44:1E:196:LEU:HA	1.84	0.43
45:98:10:LEU:O	45:98:12:ARG:HG2	2.19	0.43
47:51:4:ILE:O	47:51:4:ILE:HG12	2.16	0.43
48:1A:46:ARG:HE	48:1A:46:ARG:HB2	1.37	0.43
52:V1:2:C:N3	52:V1:3:C:N4	2.66	0.43
1:13:1191:C:O2	13:3I:15:ARG:O	2.37	0.43
1:13:1307:U:H2'	1:13:1308:C:C6	2.54	0.43
1:13:1577:G:C6	1:13:1578:U:C4	3.07	0.43
2:A8:56:LEU:CB	2:A8:58:LEU:HD21	2.49	0.43
4:11:155:LEU:H	4:11:155:LEU:HD22	1.83	0.43
6:2A:18:ARG:HB3	6:2A:33:THR:OG1	2.19	0.43
1:1G:1408:C:H2'	1:1G:1409:A:O4'	2.19	0.43
1:1G:1433:U:H5"	1:1G:1434:C:OP2	2.19	0.43
1:1G:1746:C:P	9:82:104:ARG:HH11	2.41	0.43
1:1G:1854:A:H8	1:1G:1854:A:H3'	1.83	0.43
2:65:74:ALA:HB1	2:65:107:GLU:HB2	2.01	0.43
12:Q8:57:ARG:HG3	30:78:49:ARG:HD2	2.01	0.43
13:3I:110:VAL:HG23	13:3I:120:TYR:HB3	2.01	0.43
15:1H:65:C:O2'	15:1H:66:U:H5'	2.18	0.43
15:1H:109:A:H2'	15:1H:110:U:O4'	2.19	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:1H:483:C:N3	15:1H:501:G:H5'	2.34	0.43
15:1H:888:U:H2'	15:1H:889:C:C6	2.53	0.43
15:1H:1069:A:C8	15:1H:1069:A:C3'	3.02	0.43
15:1H:1308:G:H2'	15:1H:1309:G:C8	2.54	0.43
15:1H:1422:A:H2'	15:1H:1423:G:O4'	2.19	0.43
15:1H:2229:C:O2	15:1H:2235:G:C2	2.71	0.43
15:1H:2230:G:C5'	15:1H:2231:G:N7	2.80	0.43
15:1H:2253:G:N3	15:1H:2253:G:H2'	2.33	0.43
15:1H:2416:U:C2	15:1H:2417:C:C2	3.07	0.43
15:1H:2817:C:H2'	15:1H:2818:C:C6	2.54	0.43
15:1H:2875:G:C5	15:1H:2876:C:C5	3.07	0.43
15:1H:2877:G:C6	15:1H:2878:U:N3	2.86	0.43
10:15:86:PRO:O	10:15:89:LYS:N	2.49	0.43
11:C5:71:LYS:HD3	15:14:354:G:OP2	2.18	0.43
15:14:33:U:H4'	15:14:34:C:OP1	2.19	0.43
15:14:186:A:C8	30:35:46:LYS:HD2	2.53	0.43
15:14:311:C:H2'	15:14:312:C:H6	1.84	0.43
15:14:899:C:O3'	17:H5:49:LYS:HE2	2.19	0.43
15:14:925:C:C4	15:14:926:U:C4	3.06	0.43
15:14:1044:A:N3	15:14:1045:G:C8	2.87	0.43
15:14:1191:A:C8	15:14:1193:G:N7	2.87	0.43
15:14:1450:G:H2'	15:14:1451:C:C6	2.54	0.43
15:14:1805:C:C1'	15:14:1820:A:C8	3.01	0.43
15:14:1849:A:C5	15:14:1851:G:C6	3.07	0.43
15:14:2313:A:C4	15:14:2336:G:N2	2.87	0.43
15:14:2569:U:O2	52:W4:74:C:H5	2.02	0.43
16:75:8:LYS:NZ	23:29:9:VAL:HG12	2.34	0.43
22:H8:79:ARG:NH2	26:16:94:C:H5"	2.34	0.43
23:21:111:ARG:HD2	23:21:160:TYR:CD2	2.52	0.43
19:9A:22:VAL:C	19:9A:24:ALA:H	2.27	0.43
22:D5:39:VAL:HG21	22:D5:44:PHE:HB2	2.00	0.43
22:D5:122:ARG:CZ	38:45:134:ARG:HH22	2.31	0.43
28:M8:39:CYS:SG	28:M8:41:PRO:HD3	2.59	0.43
29:AI:31:ILE:HG23	29:AI:49:ILE:HG12	2.00	0.43
25:42:76:ILE:HG23	25:42:77:PRO:HD2	2.01	0.43
30:78:60:MET:HE3	30:78:60:MET:HB3	1.65	0.43
32:31:9:ILE:CD1	32:31:125:LEU:HG	2.43	0.43
30:35:60:MET:HE3	30:35:60:MET:HB3	1.64	0.43
35:D8:34:GLU:HG2	35:D8:36:PRO:HD3	2.00	0.43
36:N8:3:LYS:HZ2	36:N8:3:LYS:HB3	1.83	0.43
32:39:28:ILE:HD13	32:39:119:ARG:NE	2.33	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:39:129:PHE:CE2	32:39:163:VAL:HG11	2.54	0.43
37:BI:29:LYS:O	37:BI:33:ILE:HG12	2.17	0.43
38:88:64:ILE:HG12	38:88:106:VAL:HG12	2.00	0.43
38:45:60:ARG:HH11	38:45:61:GLY:HA2	1.84	0.43
40:49:9:ARG:O	40:49:10:LYS:C	2.62	0.43
44:1E:222:ILE:O	44:1E:226:ARG:HG2	2.19	0.43
46:K8:64:LEU:HD22	46:K8:64:LEU:O	2.19	0.43
44:12:162:ILE:O	44:12:185:ILE:HG12	2.18	0.43
46:G5:24:LEU:HD13	46:G5:60:LEU:HD21	2.01	0.43
52:X1:45:U:OP2	52:X1:45:U:H2'	2.19	0.43
1:13:878:C:H5"	7:8I:25:ARG:CZ	2.49	0.43
1:13:984:U:N3	1:13:988:G:C6	2.85	0.43
1:13:1214:G:N3	1:13:1502:C:H4'	2.32	0.43
1:13:1262:G:H5"	1:13:1263:C:OP2	2.19	0.43
1:13:1325:A:N1	1:13:1426:C:O2'	2.35	0.43
1:13:1488:A:C2	1:13:1489:C:C2	3.07	0.43
1:13:1736:G:H5'	8:2E:176:HIS:CD2	2.54	0.43
1:13:1923:C:H5'	24:4I:14:ARG:HH12	1.84	0.43
1:13:2027:C:C2	1:13:2029:G:C5	3.07	0.43
8:22:40:ARG:NH2	8:22:55:VAL:O	2.44	0.43
8:22:113:ALA:HB3	8:22:114:PRO:HD3	2.01	0.43
9:8E:9:ARG:HG3	9:8E:104:ARG:NH1	2.34	0.43
1:1G:986:C:HO2'	1:1G:987:G:P	2.40	0.43
1:1G:1064:G:H2'	1:1G:1065:G:O4'	2.19	0.43
1:1G:1776:U:O3'	9:82:14:VAL:HG11	2.19	0.43
1:1G:1833:G:C6	1:1G:1834:G:C5	3.07	0.43
1:1G:2127:G:H4'	1:1G:2128:G:C4	2.54	0.43
2:65:14:VAL:HG12	2:65:18:ILE:CD1	2.49	0.43
12:Q8:13:ARG:HB3	30:78:64:LYS:HA	2.01	0.43
12:Q8:50:LEU:O	12:Q8:51:ALA:C	2.60	0.43
14:3E:161:ASN:O	14:3E:165:MET:HB2	2.19	0.43
9:82:53:VAL:HG13	9:82:95:LYS:HE3	2.00	0.43
15:1H:175:U:H2'	15:1H:176:G:C8	2.54	0.43
15:1H:246:A:H8	15:1H:246:A:O5'	2.02	0.43
15:1H:249:G:N2	15:1H:648:A:H8	2.13	0.43
15:1H:326:G:C6	15:1H:342:G:C6	3.07	0.43
15:1H:555:A:C2	15:1H:2068:C:H4'	2.54	0.43
15:1H:1103:G:H1'	15:1H:1133:A:C2	2.52	0.43
15:1H:1315:G:O2'	15:1H:2037:G:O6	2.25	0.43
15:1H:1317:A:C2	15:1H:2038:A:C4	3.07	0.43
15:1H:1873:G:C8	15:1H:1952:A:H1'	2.54	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:1H:2404:G:H5"	15:1H:2405:U:O4'	2.18	0.43
18:61:29:TYR:C	18:61:32:PRO:HD2	2.44	0.43
19:9I:23:LYS:HE3	34:5E:99:ALA:HB1	2.00	0.43
14:32:108:LEU:HD11	14:32:174:LEU:HB3	2.00	0.43
15:14:299:G:H3'	15:14:299:G:C8	2.54	0.43
15:14:722:C:H5"	32:39:81:PRO:HD2	2.01	0.43
15:14:824:G:O5'	15:14:826:A:H1'	2.18	0.43
15:14:880:G:N2	30:35:53:GLY:O	2.51	0.43
15:14:905:C:O5'	15:14:905:C:H6	2.02	0.43
15:14:971:C:H2'	15:14:972:C:C6	2.53	0.43
15:14:1584:U:N3	15:14:1585:A:H2	2.16	0.43
15:14:2354:G:H2'	15:14:2355:G:H8	1.83	0.43
15:14:2371:C:H2'	15:14:2372:U:O4'	2.19	0.43
25:4E:16:THR:OG1	25:4E:17:ALA:N	2.50	0.43
22:D5:5:LEU:HD22	22:D5:39:VAL:HB	2.01	0.43
23:29:25:VAL:HG12	23:29:26:ILE:N	2.31	0.43
24:4A:16:ASP:OD1	24:4A:16:ASP:N	2.52	0.43
24:4A:81:LEU:HD21	24:4A:88:ARG:CZ	2.48	0.43
31:I8:36:ILE:HA	31:I8:60:PHE:HA	2.00	0.43
32:39:124:LEU:HD12	32:39:124:LEU:HA	1.80	0.43
39:J8:83:GLU:HG2	39:J8:84:GLY:N	2.32	0.43
40:41:76:SER:OG	40:41:84:LYS:N	2.52	0.43
38:45:34:LEU:HD12	38:45:130:LYS:O	2.19	0.43
44:1E:33:TYR:HB2	44:1E:43:ASP:HB2	2.01	0.43
47:51:43:VAL:O	47:51:43:VAL:HG13	2.18	0.43
44:12:149:LEU:HD23	44:12:149:LEU:HA	1.65	0.43
50:7E:40:ALA:HB2	50:7E:47:GLY:HA2	2.01	0.43
45:55:55:ALA:HB2	45:55:79:LEU:HD13	2.01	0.43
45:55:57:ARG:HB3	45:55:59:ASP:OD1	2.19	0.43
52:X1:25:C:H2'	52:X1:26:A:O4'	2.19	0.43
1:13:1014:A:C2	1:13:1015:A:C8	3.07	0.42
1:13:1364:C:O2'	1:13:1365:C:H5'	2.19	0.42
1:13:1390:G:H2'	1:13:1391:C:C6	2.53	0.42
1:13:1497:G:C6	1:13:1498:C:C4	3.07	0.42
1:13:1798:G:H2'	1:13:1799:C:C6	2.54	0.42
1:13:1924:C:O2'	42:6E:114:ARG:NH1	2.49	0.42
8:22:4:LYS:NZ	1:1G:1818:A:H5"	2.34	0.42
1:1G:802:A:C5	1:1G:803:C:H1'	2.54	0.42
1:1G:824:G:O2'	1:1G:825:A:H5'	2.18	0.42
1:1G:1053:A:O2'	1:1G:1054:G:OP2	2.25	0.42
1:1G:1552:G:C6	1:1G:1553:C:C4	3.07	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:1G:1621:G:H22	1:1G:1671:C:H42	1.67	0.42
1:1G:2131:G:H2'	1:1G:2132:C:C6	2.53	0.42
4:19:228:PRO:HD3	4:19:234:GLY:C	2.43	0.42
12:Q8:10:ALA:O	12:Q8:14:VAL:HG22	2.19	0.42
12:Q8:25:MET:CB	12:Q8:42:ARG:HB3	2.49	0.42
12:Q8:58:ILE:HG22	12:Q8:61:LEU:HB2	2.01	0.42
15:1H:493:G:H8	15:1H:493:G:O5'	2.01	0.42
15:1H:2560:G:C2'	15:1H:2561:U:H5'	2.49	0.42
15:1H:2703:U:H1'	15:1H:2737:A:N6	2.34	0.42
15:1H:2833:A:OP2	45:98:2:ARG:NH2	2.52	0.42
16:B8:36:GLU:CG	21:68:104:ARG:HD3	2.50	0.42
11:C5:54:LYS:HD3	11:C5:54:LYS:HA	1.78	0.42
12:M5:33:ASN:OD1	12:M5:33:ASN:N	2.51	0.42
12:M5:50:LEU:HB3	12:M5:53:PRO:CG	2.49	0.42
15:14:647:G:H4'	15:14:648:A:H5"	2.01	0.42
15:14:835:C:H5"	56:14:3690:HOH:O	2.17	0.42
15:14:1228:C:H2'	15:14:1229:C:H6	1.83	0.42
15:14:1373:G:C4	15:14:1377:G:O6	2.72	0.42
15:14:2139:A:H4'	15:14:2140:G:OP1	2.18	0.42
15:14:2379:C:H2'	15:14:2380:G:O4'	2.19	0.42
15:14:2442:C:H5"	15:14:2443:G:OP1	2.19	0.42
15:14:2603:G:OP2	56:14:3672:HOH:O	2.22	0.42
23:21:20:ALA:O	23:21:21:VAL:HB	2.19	0.42
23:21:169:ASN:OD1	23:21:201:THR:HG21	2.19	0.42
18:69:77:LEU:HD22	18:69:141:LYS:HE3	2.01	0.42
23:29:134:ILE:H	23:29:134:ILE:HG13	1.70	0.42
25:42:20:GLN:O	25:42:21:ALA:C	2.61	0.42
30:35:135:LEU:O	30:35:139:LYS:HG2	2.18	0.42
30:35:144:GLU:CD	30:35:144:GLU:H	2.27	0.42
34:52:10:LEU:HB2	34:52:59:TYR:HB3	2.01	0.42
38:88:75:THR:HA	38:88:89:ASN:O	2.19	0.42
44:1E:165:VAL:O	44:1E:187:LEU:O	2.37	0.42
45:98:44:LEU:O	45:98:45:ARG:C	2.62	0.42
43:A5:96:ILE:HG23	43:A5:96:ILE:HD12	1.75	0.42
48:1A:15:THR:HG21	48:1A:92:THR:HG21	2.01	0.42
5:P8:8:ASN:OD1	5:P8:8:ASN:C	2.62	0.42
47:59:119:GLU:H	47:59:119:GLU:CD	2.25	0.42
52:V1:41:C:H2'	52:V1:42:C:O4'	2.19	0.42
1:13:743:G:N2	1:13:744:G:C4	2.87	0.42
1:13:902:U:O2'	1:13:904:A:N7	2.46	0.42
1:13:1044:C:H4'	14:3E:122:ARG:NH1	2.34	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:13:1482:A:H2'	1:13:1483:A:O4'	2.19	0.42
4:11:74:GLY:O	4:11:76:PRO:HD3	2.19	0.42
8:22:87:LEU:O	8:22:90:GLU:HG2	2.19	0.42
8:22:136:GLN:HA	8:22:139:GLN:HB3	2.01	0.42
1:1G:720:C:N4	1:1G:734:G:H1	2.17	0.42
1:1G:1069:G:C5	1:1G:1071:A:C6	3.07	0.42
1:1G:1098:C:H2'	1:1G:1099:G:H8	1.84	0.42
1:1G:1902:A:H2'	1:1G:1903:G:O4'	2.20	0.42
4:19:15:PHE:HE2	15:14:1863:A:N3	2.17	0.42
4:19:30:GLU:HG3	4:19:30:GLU:O	2.20	0.42
4:19:70:TRP:CH2	4:19:150:LYS:HA	2.53	0.42
4:19:151:LYS:HG2	15:14:2228:U:H4'	2.00	0.42
4:19:263:ARG:HE	4:19:263:ARG:HB2	1.70	0.42
15:1H:1189:U:H4'	15:1H:1191:A:O4'	2.19	0.42
15:1H:1388:G:H21	15:1H:1652:A:H1'	1.83	0.42
15:1H:1388:G:N2	15:1H:1652:A:H1'	2.34	0.42
15:1H:1407:G:OP2	56:1H:3677:HOH:O	2.21	0.42
15:1H:1728:G:H8	15:1H:1728:G:O5'	2.02	0.42
15:1H:2156:G:H1'	15:1H:2183:A:N6	2.34	0.42
15:1H:2165:C:C2	15:1H:2177:G:N2	2.87	0.42
15:1H:2782:G:H5"	15:1H:2783:C:OP2	2.19	0.42
15:14:1009:G:H2'	15:14:1010:U:H6	1.84	0.42
15:14:1048:A:N6	15:14:1049:A:N1	2.67	0.42
15:14:1495:C:H2'	15:14:1496:C:C6	2.54	0.42
15:14:2458:C:OP1	32:39:68:LYS:HG2	2.19	0.42
15:14:2670:G:N2	15:14:2680:A:OP2	2.49	0.42
15:14:2717:U:O2'	15:14:2718:C:H5	2.02	0.42
15:14:2865:G:H2'	15:14:2866:C:C6	2.53	0.42
15:14:2878:U:C4	15:14:2879:U:C4	3.07	0.42
21:25:10:VAL:HG12	21:25:19:ILE:HG12	2.00	0.42
21:25:117:LEU:HD13	21:25:117:LEU:HA	1.75	0.42
24:4A:14:ARG:HA	24:4A:43:THR:O	2.19	0.42
31:E5:36:ILE:HG13	31:E5:58:THR:HG23	2.00	0.42
32:39:36:VAL:HB	32:39:183:VAL:HG11	2.01	0.42
39:J8:48:LYS:HB3	39:J8:49:VAL:HG22	2.01	0.42
40:41:60:LEU:HD23	40:41:60:LEU:HA	1.72	0.42
41:6I:47:LYS:H	41:6I:47:LYS:HG2	1.42	0.42
42:6E:95:ARG:HG2	42:6E:99:LEU:HD12	2.01	0.42
42:6E:104:LEU:HD13	42:6E:104:LEU:HA	1.83	0.42
39:F5:92:LYS:HA	39:F5:95:LEU:HB2	2.01	0.42
40:49:144:ILE:HG21	40:49:149:VAL:HG13	2.01	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:K8:47:ASN:O	46:K8:49:LYS:HG3	2.19	0.42
44:12:163:PHE:HD1	44:12:185:ILE:CG1	2.32	0.42
50:7E:112:LEU:HD13	50:7E:133:LEU:HA	2.01	0.42
47:59:83:TYR:HD1	47:59:134:SER:HB3	1.83	0.42
8:2E:23:TYR:CD1	8:2E:24:ALA:N	2.87	0.42
8:2E:77:ILE:HG22	8:2E:78:GLY:O	2.20	0.42
52:X4:57:G:H2'	52:X4:58:A:H5'	2.01	0.42
52:X4:65:G:H2'	52:X4:66:U:H6	1.84	0.42
52:X4:73:A:H5"	52:X4:74:C:O5'	2.19	0.42
1:13:769:G:C2	1:13:834:U:O2'	2.73	0.42
1:13:771:C:H2'	1:13:772:C:C6	2.54	0.42
1:13:794:C:H42	1:13:807:G:H1	1.66	0.42
1:13:1063:C:H4'	1:13:1064:G:O5'	2.19	0.42
3:B5:64:LYS:HE2	3:B5:73:ARG:NH2	2.34	0.42
8:22:95:THR:C	8:22:97:LYS:H	2.25	0.42
9:8E:42:ARG:HE	9:8E:42:ARG:HB2	1.48	0.42
1:1G:787:G:N2	1:1G:788:G:C4	2.87	0.42
1:1G:934:G:H4'	1:1G:1238:A:N1	2.34	0.42
1:1G:1243:A:C6	1:1G:1244:C:C4	3.06	0.42
1:1G:1580:U:O2'	1:1G:1582:A:N7	2.47	0.42
1:1G:1585:C:H1'	1:1G:1828:A:C6	2.54	0.42
1:1G:1877:A:H2'	1:1G:1878:A:C8	2.54	0.42
1:1G:1984:A:C5	1:1G:1985:U:C4	3.07	0.42
1:1G:2064:U:H2'	1:1G:2065:C:O4'	2.19	0.42
15:1H:208:A:H2	15:1H:225:U:H4'	1.84	0.42
15:1H:224:C:H2'	15:1H:225:U:C6	2.53	0.42
15:1H:471:A:H3'	32:31:45:ARG:HH21	1.85	0.42
15:1H:530:A:C6	15:1H:533:G:C6	3.06	0.42
15:1H:935:C:H2'	15:1H:936:A:H4'	2.00	0.42
15:1H:1091:C:C4	15:1H:1092:G:N7	2.87	0.42
15:1H:1365:U:H2'	15:1H:1366:A:C8	2.55	0.42
15:1H:1524:C:H2'	15:1H:1525:G:C8	2.55	0.42
15:1H:2108:G:H2'	15:1H:2109:C:C6	2.54	0.42
15:1H:2567:U:H2'	15:1H:2569:U:H5"	2.01	0.42
15:1H:2704:U:H5"	15:1H:2729:A:C2	2.55	0.42
18:61:83:ALA:HB2	18:61:144:VAL:HG23	2.01	0.42
13:3A:124:LYS:HA	13:3A:125:PRO:HD3	1.86	0.42
15:14:94:G:O2'	46:G5:48:HIS:HB3	2.19	0.42
15:14:942:C:H3'	15:14:943:U:H5"	2.02	0.42
15:14:1109:U:H5"	15:14:1110:G:OP2	2.20	0.42
15:14:1133:A:OP2	15:14:1133:A:H2'	2.20	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:14:1201:C:H5”	27:85:80:ILE:HG22	2.02	0.42
15:14:1563:U:O2’	15:14:1564:C:H5’	2.19	0.42
15:14:2039:A:H2’	15:14:2040:A:C8	2.55	0.42
15:14:2126:G:H2’	15:14:2127:U:O4’	2.18	0.42
15:14:2154:C:H2’	15:14:2155:U:O4’	2.19	0.42
22:H8:104:PHE:CE2	22:H8:119:GLU:HG2	2.53	0.42
25:4E:152:ARG:CA	50:7E:64:LYS:HZ3	2.33	0.42
26:16:82:U:H2’	26:16:83:G:H21	1.84	0.42
27:C8:79:PHE:C	27:C8:79:PHE:CD1	2.96	0.42
23:29:4:ILE:HG22	23:29:5:LEU:O	2.19	0.42
30:78:116:GLY:N	30:78:134:ALA:HB2	2.34	0.42
28:I5:16:CYS:HA	28:I5:33:VAL:HG22	2.00	0.42
32:39:31:HIS:NE2	32:39:35:GLU:OE1	2.52	0.42
38:88:103:MET:HB2	38:88:104:PHE:CD2	2.53	0.42
44:1E:88:ALA:HB2	44:1E:219:VAL:HG13	1.99	0.42
46:K8:42:GLY:O	46:K8:44:LEU:HD23	2.20	0.42
47:51:92:ILE:H	47:51:92:ILE:HD12	1.84	0.42
44:12:212:GLN:O	44:12:216:SER:N	2.49	0.42
47:59:35:VAL:HG21	47:59:75:ALA:HB2	2.01	0.42
52:V1:7:A:N6	52:V1:49:C:C4	2.87	0.42
1:13:707:G:H1	1:13:745:C:H42	1.67	0.42
1:13:832:C:H5”	1:13:833:C:OP2	2.19	0.42
1:13:834:U:C2’	1:13:835:U:H5’	2.49	0.42
1:13:1016:U:O3’	49:7I:6:LEU:HB2	2.19	0.42
1:13:1187:G:C4	1:13:1188:A:C2	3.08	0.42
1:13:1288:U:C2	1:13:1289:G:C8	3.07	0.42
1:13:1544:U:H2’	1:13:1545:G:O4’	2.20	0.42
1:13:1900:G:H3’	1:13:1901:G:C8	2.54	0.42
1:13:2040:C:H2’	1:13:2041:A:C8	2.54	0.42
2:A8:89:ARG:O	2:A8:90:GLY:C	2.62	0.42
4:11:253:GLN:OE1	15:1H:1877:C:H5’	2.19	0.42
8:22:125:GLU:O	8:22:127:ARG:NH1	2.44	0.42
9:8E:89:ASN:O	9:8E:89:ASN:CG	2.62	0.42
1:1G:849:A:N6	1:1G:862:C:H5’	2.34	0.42
1:1G:870:U:H5”	49:7A:33:ILE:HD13	2.00	0.42
1:1G:993:C:H4’	1:1G:995:G:OP1	2.20	0.42
1:1G:1088:A:H2’	1:1G:1089:C:O2	2.20	0.42
1:1G:1099:G:C6	1:1G:1101:C:H5’	2.54	0.42
10:58:12:ARG:HG2	10:58:13:TRP:H	1.85	0.42
14:3E:148:VAL:CG1	14:3E:153:ARG:HA	2.48	0.42
15:1H:326:G:C4	15:1H:327:C:C5	3.07	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:1H:344:C:C2	15:1H:358:G:N2	2.87	0.42
15:1H:483:C:N3	15:1H:500:A:H2'	2.35	0.42
15:1H:961:U:H4'	15:1H:962:C:OP1	2.19	0.42
15:1H:1022:C:OP2	15:1H:1022:C:H4'	2.18	0.42
15:1H:1315:G:O5'	43:E8:15:ARG:NH2	2.53	0.42
15:1H:1519:A:H2'	15:1H:1520:G:C8	2.54	0.42
15:1H:1635:A:H3'	15:1H:1636:A:H8	1.84	0.42
15:1H:1975:G:C2	15:1H:1976:U:O4	2.72	0.42
15:1H:1996:A:H5'	15:1H:1997:A:H5"	2.00	0.42
15:1H:2139:A:H2'	15:1H:2139:A:N3	2.34	0.42
15:1H:2445:A:H8	15:1H:2446:U:C5	2.38	0.42
10:15:118:LYS:HE2	15:14:2796:G:OP1	2.19	0.42
16:B8:24:PRO:HD3	16:B8:52:ILE:HD12	2.02	0.42
15:14:238:G:H2'	56:14:3653:HOH:O	2.20	0.42
15:14:554:C:C5	15:14:2795:U:H2'	2.54	0.42
15:14:969:G:H2'	15:14:970:U:H6	1.84	0.42
15:14:1106:U:H3	15:14:1128:A:H61	1.68	0.42
15:14:1238:G:O2'	15:14:1239:G:H5'	2.19	0.42
15:14:1493:G:C2	15:14:1598:C:C2	3.08	0.42
15:14:1520:G:N2	15:14:1571:G:OP2	2.48	0.42
15:14:2212:G:C6	15:14:2213:C:C4	3.07	0.42
15:14:2474:A:C5	15:14:2475:U:C5	3.08	0.42
15:14:2568:G:H2'	15:14:2569:U:O4'	2.19	0.42
22:H8:59:LEU:HA	22:H8:59:LEU:HD23	1.66	0.42
23:21:23:VAL:HA	23:21:184:VAL:O	2.20	0.42
24:4I:44:ARG:HD2	24:4I:44:ARG:N	2.35	0.42
24:4I:66:LEU:HD23	24:4I:66:LEU:HA	1.76	0.42
26:16:18:G:N2	26:16:71:G:H1'	2.34	0.42
28:M8:41:PRO:HA	28:M8:47:GLN:HG3	2.01	0.42
23:29:35:GLN:OE1	23:29:64:LYS:NZ	2.41	0.42
23:29:56:PRO:O	23:29:57:LYS:HG2	2.20	0.42
23:29:103:ASP:OD1	23:29:201:THR:HG23	2.19	0.42
23:29:105:THR:HG21	23:29:164:ARG:CZ	2.49	0.42
29:AI:32:LYS:H	29:AI:32:LYS:HG2	1.55	0.42
29:AI:36:ARG:HD2	29:AI:52:TYR:O	2.19	0.42
26:1J:61:A:H5"	26:1J:62:C:OP2	2.19	0.42
32:31:24:LEU:HD23	32:31:115:ALA:HA	2.01	0.42
33:5I:29:ARG:HG3	33:5I:31:ARG:H	1.83	0.42
32:39:73:ALA:HB3	32:39:75:HIS:CE1	2.54	0.42
33:5A:47:LEU:HD23	33:5A:47:LEU:HA	1.87	0.42
35:95:46:VAL:HG23	35:95:52:VAL:HG21	2.01	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:J8:85:LEU:HA	39:J8:85:LEU:HD13	1.51	0.42
40:49:60:LEU:HD23	40:49:64:THR:HG21	2.01	0.42
42:62:86:GLN:OE1	42:62:86:GLN:N	2.51	0.42
45:98:13:HIS:CE1	45:98:16:HIS:H	2.37	0.42
45:98:72:ASP:OD2	45:98:75:LEU:HB2	2.19	0.42
44:12:40:HIS:CB	44:12:190:THR:HG21	2.50	0.42
44:12:189:ASP:HB3	44:12:203:GLY:O	2.19	0.42
50:7E:94:TYR:HE1	50:7E:132:GLU:HB2	1.83	0.42
45:55:78:LYS:O	45:55:82:GLU:HG2	2.19	0.42
52:V1:14:A:N6	52:V1:22:G:C5	2.87	0.42
1:13:742:C:H2'	1:13:743:G:H8	1.84	0.42
1:13:1390:G:O2'	1:13:1391:C:H5'	2.20	0.42
1:13:1796:A:C6	1:13:1797:A:C6	3.06	0.42
1:13:1803:A:C8	1:13:1803:A:H3'	2.55	0.42
1:13:1817:G:OP1	8:2E:4:LYS:HA	2.19	0.42
2:A8:58:LEU:HD13	2:A8:68:GLN:OE1	2.20	0.42
3:B5:27:THR:HA	3:B5:79:ALA:O	2.19	0.42
4:11:183:ARG:NH2	15:1H:1834:C:OP2	2.42	0.42
1:1G:1104:G:C2	1:1G:1105:G:C5	3.07	0.42
1:1G:1379:G:N2	41:6A:23:GLY:HA3	2.34	0.42
1:1G:1465:G:C6	1:1G:1474:G:C6	3.08	0.42
1:1G:1755:G:N2	1:1G:1772:G:H1	2.17	0.42
14:3E:24:GLU:H	14:3E:24:GLU:HG3	1.57	0.42
9:82:9:ARG:HA	9:82:13:ALA:O	2.19	0.42
15:1H:314:A:H2'	15:1H:315:G:O4'	2.20	0.42
15:1H:538:U:H5"	15:1H:539:G:OP2	2.19	0.42
15:1H:1427:A:C8	15:1H:1429:G:C6	3.08	0.42
15:1H:1504:U:P	45:98:77:ARG:HH11	2.42	0.42
15:1H:1564:C:H2'	15:1H:1565:U:H6	1.85	0.42
15:1H:1583:G:N2	15:1H:1587:G:H1	2.16	0.42
15:1H:1730:U:H2'	15:1H:1731:G:O4'	2.20	0.42
15:1H:2189:C:OP2	15:1H:2191:G:N2	2.53	0.42
15:1H:2653:G:OP2	23:21:82:ARG:NH2	2.53	0.42
15:1H:2729:A:H3'	15:1H:2730:G:H5"	2.00	0.42
11:C5:56:PRO:O	11:C5:57:GLN:C	2.62	0.42
18:61:104:GLN:HG2	18:61:105:HIS:ND1	2.35	0.42
18:61:110:ASP:OD1	18:61:110:ASP:N	2.52	0.42
13:3A:27:LEU:CG	13:3A:33:ARG:HG2	2.45	0.42
15:14:19:C:O2'	15:14:20:C:H5'	2.20	0.42
15:14:28:A:C2	15:14:540:A:C8	3.08	0.42
15:14:186:A:N3	15:14:186:A:H2'	2.35	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:14:869:A:O2'	15:14:870:A:H5'	2.20	0.42
15:14:1238:G:H2'	15:14:1239:G:H8	1.84	0.42
15:14:1860:G:H2'	15:14:1861:C:O4'	2.20	0.42
15:14:2149:G:H2'	15:14:2149:G:N3	2.34	0.42
15:14:2170:C:N4	15:14:2172:G:H22	2.18	0.42
15:14:2487:G:H22	15:14:2492:C:H5'	1.84	0.42
15:14:2695:C:H2'	15:14:2696:C:O2	2.19	0.42
22:H8:91:LEU:HD12	22:H8:96:VAL:HG11	2.01	0.42
24:4I:31:LYS:HE2	24:4I:31:LYS:HB2	1.82	0.42
25:4E:39:GLY:HA2	25:4E:113:ALA:HB1	2.02	0.42
25:4E:137:GLU:OE1	25:4E:141:GLN:NE2	2.51	0.42
28:M8:60:GLN:C	28:M8:63:TYR:HB2	2.43	0.42
23:29:8:LYS:HB3	23:29:193:GLY:H	1.84	0.42
30:78:50:ARG:HG3	30:78:50:ARG:NH2	2.21	0.42
30:78:71:VAL:CG1	30:78:72:PRO:HD3	2.49	0.42
32:31:33:LEU:HD13	32:31:112:MET:HE2	2.01	0.42
33:5A:25:VAL:O	33:5A:26:ARG:HB3	2.19	0.42
37:BI:43:LEU:HD22	37:BI:48:LYS:HE2	2.01	0.42
38:88:20:ALA:HB1	38:88:99:PRO:HB2	2.01	0.42
39:J8:58:ILE:CG2	39:J8:87:PRO:HG3	2.49	0.42
40:41:22:ARG:NH1	40:41:175:LEU:HD21	2.33	0.42
37:BA:100:ILE:HG22	37:BA:101:GLY:O	2.20	0.42
38:45:18:LYS:H	38:45:98:LYS:HZ3	1.65	0.42
39:F5:52:ARG:HD2	39:F5:57:GLU:HG3	2.02	0.42
44:1E:69:LEU:HB3	44:1E:162:ILE:HG22	2.01	0.42
43:A5:97:LYS:HE2	43:A5:99:ARG:NH2	2.34	0.42
47:51:131:VAL:HG22	47:51:132:ARG:H	1.83	0.42
47:51:152:ARG:HG3	47:51:161:GLY:HA2	2.01	0.42
48:1I:23:ILE:HA	48:1I:26:ALA:HB3	2.01	0.42
50:7E:39:LEU:HD12	50:7E:39:LEU:HA	1.79	0.42
52:V1:2:C:H2'	52:V1:3:C:C6	2.55	0.42
1:13:703:G:H2'	1:13:704:C:C6	2.54	0.42
1:13:819:A:O2'	1:13:820:U:H5'	2.20	0.42
1:13:1080:A:H2'	1:13:1081:A:O4'	2.19	0.42
1:13:1524:A:C5	1:13:1525:G:H1'	2.55	0.42
8:22:134:ILE:HD13	8:22:134:ILE:HA	1.73	0.42
8:22:173:VAL:HG12	8:22:175:LEU:HD12	2.00	0.42
1:1G:722:G:H5'	1:1G:723:G:OP2	2.19	0.42
1:1G:785:G:C4	1:1G:786:G:C8	3.07	0.42
1:1G:847:A:C6	1:1G:848:A:N1	2.88	0.42
1:1G:906:G:H5'	7:8A:64:PRO:O	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:1G:1014:A:H2'	1:1G:1015:A:H8	1.84	0.42
1:1G:1209:U:H2'	1:1G:1210:G:O4'	2.19	0.42
1:1G:1264:G:C6	1:1G:1265:U:C4	3.08	0.42
1:1G:1299:G:H21	34:52:73:ASN:HD21	1.67	0.42
1:1G:1638:A:C5	1:1G:1639:A:C6	3.08	0.42
1:1G:1723:U:H2'	1:1G:1724:C:O4'	2.19	0.42
1:1G:1876:C:O4'	9:82:70:LYS:HE2	2.20	0.42
10:58:96:GLU:CG	10:58:97:ARG:H	2.31	0.42
2:65:24:LEU:HD12	2:65:40:ILE:O	2.20	0.42
15:1H:511:A:C2'	15:1H:512:C:H5'	2.50	0.42
15:1H:908:G:O3'	15:1H:909:U:O2	2.38	0.42
15:1H:2208:C:H2'	15:1H:2209:G:H8	1.85	0.42
15:1H:2415:G:C2	15:1H:2416:U:C2	3.07	0.42
11:C5:35:TYR:CD2	11:C5:69:ALA:HB3	2.54	0.42
18:61:110:ASP:CB	18:61:112:LYS:H	2.31	0.42
14:32:162:LEU:HD21	14:32:178:VAL:CB	2.40	0.42
15:14:105:C:H2'	15:14:106:U:H6	1.85	0.42
15:14:591:U:OP1	30:35:29:LYS:HD2	2.19	0.42
15:14:664:A:H4'	15:14:665:G:O5'	2.20	0.42
15:14:1584:U:C2	15:14:1585:A:C2	3.07	0.42
15:14:1708:C:H2'	15:14:1709:U:C6	2.55	0.42
15:14:1805:C:H1'	15:14:1820:A:H8	1.83	0.42
15:14:1827:C:H2'	15:14:1828:U:C6	2.54	0.42
15:14:2491:A:H4'	15:14:2492:C:C5	2.48	0.42
16:75:51:ARG:HD3	16:75:100:TYR:OH	2.20	0.42
25:4E:10:MET:HE3	25:4E:10:MET:HB3	1.78	0.42
26:16:90:C:H2'	26:16:91:G:O4'	2.19	0.42
28:M8:36:CYS:HA	40:41:112:PRO:CB	2.47	0.42
30:78:3:LEU:HD23	30:78:3:LEU:HA	1.61	0.42
34:5E:39:LYS:HD3	34:5E:64:GLN:HG3	2.00	0.42
30:35:94:GLU:HG3	30:35:124:LYS:HG2	2.00	0.42
32:39:24:LEU:O	32:39:25:PRO:O	2.37	0.42
32:39:102:PRO:O	32:39:105:VAL:N	2.51	0.42
32:39:181:LEU:CD2	32:39:186:ILE:HD11	2.49	0.42
38:88:42:ILE:HG22	38:88:47:ILE:HG13	2.01	0.42
35:95:3:ALA:HB1	35:95:38:LEU:HG	2.01	0.42
39:J8:3:LYS:HG3	39:J8:46:LEU:CD2	2.50	0.42
39:J8:60:PHE:CE2	39:J8:91:LYS:HE2	2.53	0.42
42:6E:113:GLU:H	42:6E:113:GLU:HG2	1.50	0.42
39:F5:91:LYS:HZ1	39:F5:95:LEU:CD1	2.31	0.42
44:1E:68:ILE:O	44:1E:91:PRO:HD2	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:1E:84:GLU:O	44:1E:88:ALA:N	2.46	0.42
47:51:41:MET:HA	47:51:55:PRO:HD3	2.00	0.42
44:12:103:THR:HA	44:12:180:LEU:HD11	2.01	0.42
44:12:114:ARG:O	44:12:114:ARG:HG3	2.16	0.42
44:12:228:GLY:O	44:12:230:VAL:HG13	2.18	0.42
52:V1:20:U:C2'	52:V1:21:A:H5'	2.49	0.42
1:13:719:G:N3	1:13:719:G:H2'	2.33	0.42
1:13:1131:G:C6	1:13:1132:C:C4	3.07	0.42
1:13:1177:G:H2'	1:13:1178:C:H6	1.85	0.42
1:13:1296:G:H4'	41:6I:51:HIS:ND1	2.34	0.42
1:13:1523:A:H8	1:13:1523:A:O5'	2.02	0.42
1:13:1626:G:C5	1:13:1627:G:C8	3.07	0.42
1:13:1692:G:H4'	1:13:1693:U:OP1	2.19	0.42
1:13:1767:G:H4'	1:13:1768:C:H5'	2.02	0.42
6:2A:109:VAL:HG13	19:9A:86:VAL:HG13	2.02	0.42
9:8E:114:TYR:CD1	9:8E:114:TYR:N	2.86	0.42
1:1G:748:A:C6	1:1G:967:G:C6	3.07	0.42
1:1G:863:U:H2'	1:1G:864:U:C6	2.54	0.42
1:1G:907:G:O3'	7:8A:67:LYS:HB2	2.19	0.42
1:1G:939:A:H2'	1:1G:940:G:O4'	2.20	0.42
1:1G:1249:C:C2	14:32:135:LEU:HG	2.55	0.42
1:1G:1411:A:O3'	1:1G:2138:C:H4'	2.19	0.42
1:1G:1647:G:H2'	1:1G:1647:G:N3	2.35	0.42
1:1G:1890:C:H3'	1:1G:1891:C:H6	1.84	0.42
1:1G:2075:C:H3'	1:1G:2076:U:H4'	2.01	0.42
4:19:14:ARG:NH2	15:14:1745:G:N7	2.67	0.42
4:19:242:ARG:HH11	4:19:242:ARG:CG	2.19	0.42
14:3E:155:LEU:HD23	14:3E:155:LEU:HA	1.75	0.42
9:82:10:ARG:HD2	9:82:105:ASP:HB3	2.01	0.42
15:1H:832:A:C8	15:1H:832:A:C3'	3.01	0.42
15:1H:908:G:H5'	15:1H:2283:A:O2'	2.20	0.42
15:1H:1254:G:C5	15:1H:1255:C:C5	3.08	0.42
15:1H:1366:A:H2'	15:1H:1367:C:C6	2.54	0.42
15:1H:1453:C:O2'	15:1H:1454:U:H5'	2.20	0.42
15:1H:1478:G:C5	15:1H:1618:G:C6	3.08	0.42
15:1H:2709:G:C6	15:1H:2710:C:C4	3.07	0.42
10:15:106:MET:HB3	15:14:1054:C:H1'	2.02	0.42
18:61:79:ILE:HB	18:61:142:VAL:HG12	2.00	0.42
15:14:139:A:H8	15:14:1457:C:O2'	2.02	0.42
15:14:345:A:H4'	15:14:347:A:N7	2.35	0.42
15:14:606:C:H2'	15:14:607:G:C8	2.54	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:14:724:A:N6	15:14:725:A:N6	2.68	0.42
15:14:862:U:H2'	15:14:863:C:C6	2.54	0.42
15:14:1327:A:O2'	45:55:34:ILE:HD11	2.20	0.42
15:14:1483:A:O2'	15:14:1484:G:H5'	2.19	0.42
15:14:1648:C:H2'	15:14:1649:C:C6	2.55	0.42
15:14:1782:G:C2	15:14:1783:A:C4	3.08	0.42
21:68:17:ARG:NH2	21:68:47:ILE:HD13	2.35	0.42
16:75:119:LYS:O	16:75:123:GLN:HG3	2.20	0.42
23:21:3:GLY:HA3	23:21:81:ILE:HG21	2.02	0.42
18:69:6:LEU:HA	18:69:6:LEU:HD12	1.87	0.42
27:C8:34:LYS:HA	27:C8:34:LYS:HE3	2.01	0.42
27:C8:93:LYS:H	27:C8:93:LYS:HG3	1.63	0.42
23:29:59:VAL:HB	23:29:60:ASN:HA	2.01	0.42
25:42:110:LEU:HD21	25:42:139:LEU:HD21	2.00	0.42
26:1J:113:G:H2'	26:1J:114:U:O4'	2.20	0.42
30:78:6:LEU:HD22	32:31:187:VAL:HG11	2.02	0.42
31:E5:37:LEU:HG	31:E5:60:PHE:HA	2.01	0.42
38:88:10:ARG:HH11	38:88:10:ARG:HG3	1.85	0.42
40:41:97:ASP:O	40:41:99:MET:N	2.53	0.42
41:6I:57:LEU:HA	41:6I:57:LEU:HD23	1.77	0.42
38:45:33:GLY:O	38:45:132:VAL:HG12	2.20	0.42
40:49:122:PRO:HB3	40:49:170:ARG:NH1	2.34	0.42
44:1E:80:ILE:O	44:1E:84:GLU:HG2	2.20	0.42
42:62:65:ALA:HB1	42:62:127:ALA:HB3	2.02	0.42
45:98:12:ARG:HD3	45:98:16:HIS:CD2	2.55	0.42
47:51:85:LYS:HD3	47:51:85:LYS:HA	1.83	0.42
44:12:195:ASP:O	50:72:74:PRO:HG3	2.20	0.42
45:55:79:LEU:HA	45:55:83:ILE:HB	2.01	0.42
3:F8:3:THR:CB	3:F8:6:ASP:HB2	2.49	0.42
3:F8:21:PHE:O	3:F8:23:GLU:O	2.37	0.42
1:13:898:G:C6	1:13:899:G:C5	3.06	0.42
1:13:1090:G:N7	1:13:1111:G:C6	2.87	0.42
1:13:1780:A:H4'	48:1I:13:HIS:CD2	2.55	0.42
5:L5:40:TRP:CZ3	15:14:487:U:H4'	2.54	0.42
8:22:112:SER:O	8:22:116:VAL:HG23	2.20	0.42
9:8E:92:TYR:O	9:8E:96:LEU:HB2	2.19	0.42
1:1G:992:G:H4'	1:1G:993:C:OP1	2.19	0.42
1:1G:1646:G:N3	1:1G:1647:G:H1'	2.35	0.42
1:1G:2057:C:H2'	1:1G:2058:C:C6	2.55	0.42
11:G8:33:LYS:HD3	11:G8:33:LYS:H	1.85	0.42
13:3I:113:ARG:HH21	13:3I:116:SER:HB2	1.85	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:1H:554:C:N3	15:1H:2795:U:H2'	2.34	0.42
15:1H:1044:A:H4'	27:C8:92:ARG:CG	2.49	0.42
15:1H:1306:C:OP1	32:31:75:HIS:HE1	2.03	0.42
15:1H:1309:G:C6	15:1H:1310:C:C4	3.07	0.42
15:1H:1770:A:O2'	15:1H:1771:U:O5'	2.36	0.42
15:1H:2128:C:H2'	15:1H:2129:G:C8	2.55	0.42
15:1H:2356:G:H2'	15:1H:2357:C:H6	1.85	0.42
15:1H:2407:A:H2'	15:1H:2408:A:O4'	2.19	0.42
15:1H:2737:A:H2'	15:1H:2738:G:O4'	2.19	0.42
15:1H:2874:G:C2	15:1H:2875:G:C4	3.08	0.42
10:15:32:THR:HG22	10:15:37:LYS:HB3	2.02	0.42
13:3A:47:LYS:CD	13:3A:48:PRO:HD3	2.49	0.42
14:32:101:LEU:HD23	14:32:121:VAL:HG13	2.01	0.42
15:14:662:C:O2'	15:14:666:U:OP1	2.32	0.42
15:14:800:A:P	56:14:3686:HOH:O	2.77	0.42
15:14:950:C:H2'	15:14:951:C:H6	1.85	0.42
15:14:992:A:C4	15:14:2463:A:C2	3.07	0.42
15:14:994:G:H2'	15:14:995:G:C8	2.54	0.42
15:14:1076:A:H2'	15:14:1077:A:C8	2.55	0.42
15:14:1159:A:H4'	47:59:3:ARG:HG2	2.01	0.42
15:14:1220:G:H4'	15:14:1221:G:OP1	2.20	0.42
15:14:1607:C:H5"	15:14:1608:A:OP2	2.20	0.42
15:14:1759:U:H1'	15:14:2873:A:N3	2.34	0.42
15:14:2652:U:C2'	15:14:2653:G:H5'	2.50	0.42
15:14:2698:C:OP1	16:75:53:ARG:NH2	2.51	0.42
15:14:2735:G:N7	56:14:3709:HOH:O	2.37	0.42
22:H8:19:ARG:HH22	26:16:79:U:P	2.43	0.42
26:16:5:C:H2'	26:16:6:C:C6	2.55	0.42
23:29:30:PRO:HB3	23:29:90:THR:HG22	2.01	0.42
30:78:78:PRO:HB3	30:78:111:ARG:NH2	2.34	0.42
32:31:196:LEU:HD23	32:31:196:LEU:HA	1.71	0.42
34:5E:78:GLU:O	34:5E:79:LEU:C	2.62	0.42
30:35:35:HIS:HB3	30:35:36:LYS:H	1.52	0.42
32:39:3:GLU:O	32:39:19:GLU:HB2	2.20	0.42
38:45:16:ARG:HE	38:45:16:ARG:HB3	1.44	0.42
38:45:63:LYS:HG2	38:45:65:PHE:CZ	2.55	0.42
44:1E:25:ASN:CG	44:1E:193:ASP:HB2	2.45	0.42
44:1E:238:LEU:O	44:1E:239:VAL:C	2.62	0.42
43:A5:6:ILE:HG23	43:A5:104:THR:OG1	2.20	0.42
43:A5:65:LEU:HD13	43:A5:68:ARG:CD	2.48	0.42
44:12:210:SER:O	44:12:214:ILE:HG12	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:F8:63:LYS:O	3:F8:64:LYS:HG2	2.19	0.42
8:2E:47:LEU:HD21	8:2E:76:VAL:HG12	2.02	0.42
50:72:105:ARG:HA	50:72:105:ARG:HD3	1.66	0.42
52:V4:13:C:H2'	52:V4:14:A:H5'	2.01	0.42
1:13:752:G:H2'	1:13:753:U:C6	2.54	0.42
1:13:1174:C:O2'	1:13:1178:C:OP1	2.31	0.42
1:13:1253:C:O2'	49:7I:14:ASN:ND2	2.53	0.42
1:13:1294:A:H2'	1:13:1354:G:N2	2.35	0.42
1:13:1349:C:N3	1:13:1350:G:C6	2.88	0.42
1:13:1507:U:H4'	1:13:1508:G:H5"	2.02	0.42
1:13:1628:A:C2	1:13:1649:U:H1'	2.54	0.42
1:13:1683:A:C5	1:13:1833:G:C2	3.08	0.42
2:A8:36:TYR:N	2:A8:36:TYR:CD1	2.87	0.42
4:11:232:PRO:HB3	4:11:244:ARG:CZ	2.50	0.42
8:22:18:TRP:NE1	33:5A:55:GLY:H	2.18	0.42
8:22:113:ALA:HB2	8:22:202:ILE:HG13	2.02	0.42
1:1G:683:U:O2'	1:1G:1176:A:N1	2.49	0.42
1:1G:1610:G:H1	1:1G:1845:C:H42	1.68	0.42
10:58:41:ASP:OD1	10:58:41:ASP:N	2.46	0.42
11:G8:53:PRO:O	11:G8:54:LYS:NZ	2.53	0.42
4:19:92:ILE:HA	4:19:105:ILE:O	2.20	0.42
13:3I:33:ARG:HD3	13:3I:62:SER:HB3	2.01	0.42
7:8A:7:THR:O	7:8A:23:VAL:HG13	2.19	0.42
7:8A:10:VAL:HG23	7:8A:54:GLY:N	2.35	0.42
14:3E:99:SER:O	14:3E:140:VAL:HG22	2.20	0.42
15:1H:85:C:O2'	15:1H:102:U:O2'	2.25	0.42
15:1H:347:A:C5	15:1H:365:A:C2	3.07	0.42
15:1H:817:G:C6	15:1H:818:G:C5	3.08	0.42
15:1H:1521:A:C2	15:1H:1522:A:C4	3.08	0.42
15:1H:1830:U:H2'	15:1H:1831:C:C6	2.54	0.42
15:1H:2189:C:H5"	15:1H:2190:G:OP2	2.20	0.42
15:1H:2261:G:H2'	15:1H:2262:A:C8	2.54	0.42
15:1H:2644:A:H4'	15:1H:2644:A:OP1	2.20	0.42
10:15:32:THR:HG22	10:15:37:LYS:CB	2.50	0.42
10:15:47:ALA:HB2	10:15:112:LEU:CD2	2.47	0.42
10:15:111:PRO:HA	10:15:114:ARG:NH1	2.34	0.42
11:C5:96:ILE:HG23	11:C5:102:CYS:O	2.20	0.42
18:61:144:VAL:HG22	18:61:145:VAL:HG23	2.02	0.42
13:3A:23:LYS:NZ	13:3A:23:LYS:H	2.17	0.42
14:32:24:GLU:HG2	14:32:25:ARG:N	2.31	0.42
15:14:16:G:H5"	36:J5:17:ASP:HB2	2.02	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:14:185:A:H61	15:14:188:C:H3'	1.84	0.42
15:14:431:U:H4'	15:14:432:C:H5'	2.00	0.42
15:14:601:U:H2'	15:14:602:G:C8	2.55	0.42
21:68:120:GLU:HG2	21:68:122:LEU:HG	2.01	0.42
16:75:92:GLY:HA2	16:75:116:ALA:HA	2.02	0.42
22:H8:117:LEU:HD23	22:H8:119:GLU:OE1	2.20	0.42
25:4E:91:LEU:HD12	25:4E:120:THR:CG2	2.44	0.42
26:1J:42:U:H1'	26:1J:47:A:H61	1.85	0.42
37:BI:86:ARG:HH12	37:BI:90:GLN:CB	2.33	0.42
35:95:25:LEU:HD23	35:95:25:LEU:HA	1.82	0.42
39:J8:75:GLU:O	39:J8:77:ALA:N	2.53	0.42
38:45:31:ASP:N	38:45:106:VAL:O	2.53	0.42
43:E8:96:ILE:HG23	43:E8:96:ILE:HD12	1.73	0.42
42:62:113:GLU:HB2	42:62:119:ARG:CG	2.47	0.42
46:K8:58:ALA:O	46:K8:62:THR:HG22	2.20	0.42
48:1I:90:LEU:N	48:1I:91:PRO:HD3	2.35	0.42
47:59:66:GLY:O	47:59:70:THR:OG1	2.28	0.42
6:2I:122:LYS:O	6:2I:123:LYS:C	2.63	0.42
8:2E:77:ILE:HA	8:2E:84:ILE:CG1	2.50	0.42
50:72:39:LEU:HD12	50:72:39:LEU:HA	1.91	0.42
1:13:794:C:N4	1:13:807:G:H1	2.17	0.42
1:13:1448:A:H4'	1:13:1449:U:OP2	2.18	0.42
1:13:1628:A:P	1:13:1649:U:H3	2.43	0.42
1:13:1761:G:H2'	1:13:1762:G:H8	1.81	0.42
1:13:1873:C:C4	1:13:1874:U:C4	3.08	0.42
1:13:2087:G:H2'	1:13:2088:C:H6	1.85	0.42
2:A8:106:ARG:HH22	2:A8:107:GLU:HB2	1.83	0.42
8:22:73:PRO:O	8:22:76:VAL:HG22	2.20	0.42
9:8E:118:LYS:O	9:8E:119:ALA:HB3	2.20	0.42
1:1G:786:G:N3	1:1G:787:G:C8	2.88	0.42
1:1G:913:C:H2'	1:1G:914:A:C8	2.55	0.42
10:58:62:VAL:HG22	10:58:66:LYS:HD2	2.01	0.42
11:G8:5:MET:HE2	11:G8:5:MET:HB2	1.78	0.42
11:G8:8:LYS:HE3	15:1H:83:A:O5'	2.19	0.42
15:1H:10:G:H2'	15:1H:11:G:H8	1.85	0.42
15:1H:125:A:H5"	15:1H:126:C:C6	2.55	0.42
15:1H:324:A:H62	15:1H:325:A:N6	2.18	0.42
15:1H:324:A:N6	15:1H:325:A:N6	2.68	0.42
15:1H:330:U:H2'	15:1H:331:U:C6	2.54	0.42
15:1H:785:C:O5'	15:1H:785:C:H6	2.03	0.42
15:1H:1217:G:C2	15:1H:1230:A:C2	3.07	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:1H:1337:U:H4'	15:1H:1338:C:OP2	2.20	0.42
15:1H:1465:G:O2'	15:1H:1466:C:C6	2.73	0.42
15:1H:1738:U:O2	15:1H:1750:A:H5"	2.20	0.42
15:1H:1742:U:H2'	15:1H:1744:C:C5	2.55	0.42
15:1H:1803:G:O2'	15:1H:1983:C:OP1	2.25	0.42
15:1H:2027:G:C5	56:1H:3666:HOH:O	2.69	0.42
15:1H:2442:C:H5"	15:1H:2443:G:OP1	2.20	0.42
18:61:98:ALA:O	18:61:99:GLU:C	2.63	0.42
14:32:61:LYS:HE2	14:32:206:PHE:CE2	2.55	0.42
14:32:126:ILE:HG22	14:32:127:THR:N	2.35	0.42
15:14:239:C:O2'	30:35:64:LYS:HE2	2.20	0.42
15:14:522:G:C6	15:14:523:G:C5	3.08	0.42
15:14:1032:A:H5"	15:14:1033:C:H5	1.85	0.42
15:14:1327:A:H2'	15:14:1328:G:C8	2.54	0.42
15:14:1380:A:O2'	15:14:1381:G:H8	2.02	0.42
15:14:1499:A:H5'	15:14:1500:G:OP2	2.19	0.42
15:14:1796:A:OP1	15:14:1796:A:H4'	2.20	0.42
15:14:2023:G:H4'	15:14:2740:C:O2'	2.19	0.42
15:14:2136:C:C4	15:14:2143:U:H4'	2.55	0.42
15:14:2489:C:H3'	15:14:2490:C:C5'	2.50	0.42
15:14:2567:U:C2	15:14:2569:U:H5'	2.55	0.42
16:75:3:ARG:HG2	16:75:4:GLY:N	2.35	0.42
22:H8:19:ARG:NH1	22:H8:84:GLU:HB2	2.34	0.42
17:H5:13:ILE:O	17:H5:13:ILE:HG22	2.20	0.42
23:21:119:ARG:HH11	23:21:119:ARG:HG3	1.85	0.42
18:69:112:LYS:O	18:69:113:ARG:HG2	2.20	0.42
24:4I:11:ARG:HD2	24:4I:11:ARG:HA	1.89	0.42
24:4I:45:VAL:O	24:4I:48:LEU:HD22	2.20	0.42
25:4E:77:PRO:HD2	25:4E:142:LEU:HD22	2.01	0.42
21:25:87:ILE:HD12	21:25:93:PRO:HA	2.02	0.42
23:29:53:PRO:HA	23:29:74:PRO:HB3	2.01	0.42
25:42:28:PHE:O	25:42:47:LYS:HA	2.20	0.42
30:78:83:VAL:CG1	30:78:112:LEU:HD21	2.50	0.42
31:I8:49:LYS:O	31:I8:50:ASN:HB2	2.20	0.42
29:AA:71:LEU:HD23	29:AA:71:LEU:HA	1.90	0.42
34:5E:72:VAL:HG23	34:5E:90:VAL:HG11	2.01	0.42
30:35:36:LYS:HB3	30:35:37:GLY:H	1.63	0.42
35:95:5:VAL:HB	35:95:37:VAL:HB	2.01	0.42
36:J5:31:VAL:HG13	36:J5:42:PRO:HG3	2.02	0.42
38:45:38:GLU:OE1	38:45:128:LYS:HG3	2.20	0.42
40:49:145:THR:O	40:49:146:TYR:HB3	2.20	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:98:22:ARG:HG2	45:98:69:ASP:HB3	2.00	0.42
45:98:44:LEU:HD22	45:98:48:VAL:HG13	2.01	0.42
47:51:30:LYS:HD2	47:51:81:GLU:H	1.84	0.42
1:13:983:C:N3	1:13:989:G:C2	2.88	0.41
1:13:1068:U:OP2	14:3E:36:ARG:NH1	2.50	0.41
1:13:1283:G:C4	1:13:1382:A:C6	3.08	0.41
1:13:1364:C:H2'	1:13:1365:C:C6	2.50	0.41
1:13:1447:G:O2'	1:13:1448:A:H5'	2.19	0.41
1:13:1626:G:N1	1:13:1627:G:H1'	2.35	0.41
6:2A:22:HIS:HB3	6:2A:29:ILE:HG12	2.01	0.41
6:2A:119:CYS:HB3	1:1G:1407:G:H1'	2.02	0.41
9:8E:22:GLY:HA3	9:8E:60:ASP:CG	2.45	0.41
9:8E:53:VAL:HG13	9:8E:92:TYR:OH	2.20	0.41
1:1G:907:G:N3	1:1G:907:G:H2'	2.34	0.41
1:1G:1176:A:H4'	1:1G:1177:G:O5'	2.19	0.41
1:1G:1475:G:C6	1:1G:1476:G:N7	2.88	0.41
1:1G:1691:C:H3'	1:1G:1692:G:H2'	2.02	0.41
1:1G:1890:C:H3'	1:1G:1891:C:C6	2.55	0.41
1:1G:1907:A:O2'	1:1G:1908:U:H5'	2.20	0.41
10:58:118:LYS:HA	10:58:118:LYS:HD2	1.74	0.41
11:G8:40:GLU:CB	11:G8:41:GLY:HA2	2.50	0.41
11:G8:54:LYS:NZ	11:G8:54:LYS:O	2.49	0.41
12:Q8:59:LYS:HE3	12:Q8:60:LEU:HD21	2.01	0.41
7:8A:60:ILE:HB	7:8A:74:LEU:HD23	2.02	0.41
7:8A:83:ASP:OD1	7:8A:84:LEU:N	2.53	0.41
14:3E:118:ARG:HE	14:3E:118:ARG:HB3	1.76	0.41
15:1H:1243:G:N3	15:1H:1275:A:H2	2.18	0.41
15:1H:1472:G:OP1	15:1H:1541:G:O2'	2.38	0.41
15:1H:1473:G:H2'	15:1H:1474:G:O4'	2.21	0.41
15:1H:1770:A:O2'	15:1H:1771:U:OP1	2.38	0.41
15:1H:2123:U:O2	15:1H:2216:G:N2	2.38	0.41
15:1H:2638:G:H4'	15:1H:2838:C:O2	2.19	0.41
11:C5:14:LEU:HD23	11:C5:15:VAL:N	2.34	0.41
15:14:13:A:N1	15:14:552:U:H2'	2.34	0.41
15:14:162:C:H2'	15:14:163:G:C8	2.55	0.41
15:14:242:G:P	30:35:50:ARG:HH21	2.42	0.41
15:14:594:U:H5"	56:14:3735:HOH:O	2.20	0.41
15:14:702:A:H2'	15:14:703:A:O4'	2.20	0.41
15:14:934:C:H3'	15:14:935:C:H5'	2.01	0.41
15:14:1716:G:OP1	21:25:66:LYS:HD3	2.20	0.41
15:14:1822:C:C2	15:14:1823:A:C8	3.08	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:14:2172:G:C5	15:14:2173:G:H1'	2.55	0.41
15:14:2295:G:O2'	15:14:2403:A:N1	2.46	0.41
15:14:2302:A:N6	15:14:2359:U:H3	2.14	0.41
15:14:2419:C:C2'	15:14:2420:G:H5'	2.50	0.41
16:75:105:LEU:C	16:75:107:ASP:OD1	2.63	0.41
22:H8:44:PHE:CD1	22:H8:44:PHE:C	2.98	0.41
22:H8:58:VAL:HA	22:H8:67:LEU:O	2.20	0.41
24:4A:22:ILE:HB	24:4A:25:ILE:CG1	2.46	0.41
25:42:70:PRO:O	25:42:77:PRO:HD3	2.20	0.41
25:42:101:ILE:HG12	25:42:101:ILE:O	2.20	0.41
26:1J:97:C:H2'	26:1J:98:U:C6	2.54	0.41
28:I5:1:MET:HG2	28:I5:2:LYS:N	2.35	0.41
32:39:83:PHE:O	32:39:85:GLY:N	2.53	0.41
32:39:89:VAL:HG12	32:39:90:PHE:N	2.34	0.41
34:52:3:ARG:HB2	34:52:93:SER:HB2	2.02	0.41
35:95:5:VAL:HB	35:95:37:VAL:HG11	2.00	0.41
36:J5:45:VAL:HG22	36:J5:51:TYR:CE2	2.55	0.41
42:6E:115:ARG:HB3	42:6E:118:VAL:HG12	2.02	0.41
42:62:92:SER:HB3	42:62:94:ARG:HG2	2.02	0.41
44:12:77:ALA:O	44:12:81:VAL:HG23	2.19	0.41
44:12:91:PRO:HG3	44:12:154:LEU:HB2	2.02	0.41
45:55:72:ASP:OD2	45:55:75:LEU:HB2	2.20	0.41
52:W4:75:C:C3'	52:W4:75:C:C6	3.03	0.41
1:13:1138:A:H5'	14:3E:55:ALA:HB2	2.01	0.41
1:13:1495:A:C8	1:13:1497:G:C8	3.08	0.41
1:13:2070:G:H1	1:13:2084:G:H21	1.67	0.41
6:2A:17:GLY:HA3	6:2A:77:MET:SD	2.60	0.41
8:22:54:ARG:HE	8:22:54:ARG:HB2	1.62	0.41
1:1G:1033:G:OP1	49:7A:8:ARG:NH2	2.53	0.41
1:1G:1091:A:N6	1:1G:1110:U:H2'	2.35	0.41
1:1G:1144:G:H2'	1:1G:1145:U:O4'	2.19	0.41
1:1G:1411:A:H4'	1:1G:2137:C:O2'	2.20	0.41
1:1G:1692:G:N2	1:1G:1817:G:H2'	2.35	0.41
1:1G:1873:C:H2'	1:1G:1874:U:C6	2.55	0.41
10:58:97:ARG:HA	10:58:100:GLU:HB2	2.01	0.41
4:19:273:ARG:O	4:19:274:ARG:C	2.63	0.41
12:Q8:9:GLY:HA2	12:Q8:12:LYS:CB	2.43	0.41
14:3E:33:MET:O	14:3E:37:PRO:HB3	2.20	0.41
14:3E:150:GLU:OE1	14:3E:150:GLU:N	2.48	0.41
15:1H:271:C:C4	15:1H:273:U:H5"	2.55	0.41
15:1H:510:A:OP2	15:1H:534:A:N6	2.49	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:1H:543:C:OP1	36:N8:13:LYS:NZ	2.37	0.41
15:1H:689:G:N7	15:1H:695:G:N2	2.64	0.41
15:1H:1251:G:H3'	15:1H:1252:A:H5"	2.02	0.41
10:15:132:ALA:O	10:15:133:GLN:C	2.63	0.41
11:C5:52:SER:HA	11:C5:55:TYR:C	2.45	0.41
17:L8:8:LEU:HB2	17:L8:28:LEU:HD22	2.02	0.41
19:9I:31:LEU:HD23	19:9I:31:LEU:H	1.85	0.41
15:14:136:G:H2'	15:14:138:G:N7	2.34	0.41
15:14:225:U:H2'	15:14:226:C:C6	2.55	0.41
15:14:897:G:C2	15:14:898:A:C5	3.08	0.41
15:14:1000:A:N3	15:14:1001:G:C8	2.89	0.41
15:14:1113:U:O4	15:14:1121:A:N6	2.53	0.41
15:14:2338:G:H2'	15:14:2339:C:O4'	2.20	0.41
15:14:2346:G:H4'	31:E5:43:THR:H	1.85	0.41
15:14:2370:C:O3'	31:E5:24:LYS:HE3	2.20	0.41
15:14:2482:C:H4'	38:45:123:HIS:NE2	2.34	0.41
15:14:2695:C:O2'	15:14:2696:C:H5'	2.21	0.41
15:14:2727:U:H1'	15:14:2728:A:C8	2.55	0.41
21:68:17:ARG:HG2	21:68:17:ARG:NH1	2.35	0.41
22:H8:120:ILE:HG22	22:H8:121:HIS:ND1	2.35	0.41
21:25:113:LYS:O	21:25:117:LEU:HB2	2.20	0.41
24:4A:88:ARG:HG3	24:4A:98:VAL:HB	2.02	0.41
26:1J:42:U:H1'	26:1J:47:A:N6	2.35	0.41
27:85:25:TRP:CD1	27:85:26:GLY:N	2.88	0.41
33:5I:33:VAL:HA	33:5I:40:CYS:HA	2.01	0.41
34:5E:67:MET:HB2	34:5E:68:PRO:HD2	2.01	0.41
32:39:37:VAL:HG23	32:39:183:VAL:HG22	2.02	0.41
34:52:21:LEU:HD13	34:52:21:LEU:C	2.45	0.41
38:88:59:ARG:C	38:88:61:GLY:N	2.78	0.41
40:41:4:ASP:OD2	40:41:9:ARG:NH1	2.53	0.41
40:41:37:VAL:HG23	40:41:99:MET:CE	2.50	0.41
40:41:84:LYS:O	40:41:84:LYS:HG3	2.17	0.41
40:41:97:ASP:O	40:41:98:ARG:C	2.62	0.41
40:41:139:LEU:H	40:41:139:LEU:HG	1.69	0.41
40:49:4:ASP:CG	40:49:5:VAL:N	2.77	0.41
42:62:72:ARG:HG2	42:62:142:GLU:OE2	2.20	0.41
43:A5:90:ARG:HG3	43:A5:90:ARG:NH1	2.34	0.41
48:1A:22:LYS:CE	48:1A:90:LEU:HD11	2.50	0.41
48:1A:82:ILE:HG22	48:1A:86:MET:SD	2.60	0.41
46:G5:10:LEU:CD1	46:G5:59:ARG:HD2	2.50	0.41
47:59:103:LEU:H	47:59:103:LEU:HD23	1.85	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:2E:116:VAL:HG21	8:2E:202:ILE:HD11	2.01	0.41
52:X4:18:G:O6	52:X4:55:U:H1'	2.20	0.41
52:X4:65:G:H2'	52:X4:66:U:C6	2.55	0.41
52:V4:58:A:H2	52:V4:60:U:N3	2.18	0.41
1:13:660:U:O2	1:13:662:A:C8	2.73	0.41
1:13:1465:G:C6	1:13:1474:G:C6	3.08	0.41
1:13:2051:G:P	21:68:49:ARG:HH22	2.43	0.41
2:A8:26:LEU:HD22	2:A8:87:PHE:CD2	2.55	0.41
1:1G:902:U:H2'	1:1G:904:A:OP2	2.20	0.41
1:1G:1251:A:C8	1:1G:1252:C:C6	3.07	0.41
1:1G:1289:G:H2'	1:1G:1290:G:O4'	2.20	0.41
1:1G:1295:G:H5'	1:1G:1355:C:H1'	2.01	0.41
1:1G:1932:G:O2'	1:1G:1933:A:O5'	2.39	0.41
1:1G:1969:C:H4'	9:82:125:TYR:HB3	2.02	0.41
1:1G:2014:G:C2	1:1G:2015:G:C8	3.09	0.41
12:Q8:21:LYS:HE3	12:Q8:21:LYS:HB3	1.31	0.41
13:3I:66:VAL:HG21	13:3I:98:TYR:HE1	1.85	0.41
15:1H:64:C:H2'	15:1H:65:C:H6	1.85	0.41
15:1H:311:C:N4	15:1H:380:G:H1	2.18	0.41
15:1H:347:A:H5'	15:1H:365:A:H1'	2.01	0.41
15:1H:1023:G:H1'	15:1H:1038:A:C2	2.54	0.41
15:1H:1403:A:H2'	15:1H:1404:G:O4'	2.20	0.41
15:1H:1414:A:P	39:J8:41:ARG:HH22	2.43	0.41
15:1H:1725:C:O2	23:21:128:SER:OG	2.38	0.41
15:1H:2021:C:OP1	21:68:31:LYS:HE3	2.20	0.41
15:1H:2416:U:O3'	15:1H:2417:C:O4'	2.38	0.41
15:1H:2474:A:C5	15:1H:2475:U:C5	3.08	0.41
15:1H:2653:G:P	23:21:82:ARG:HH22	2.43	0.41
15:1H:2884:C:H5"	15:1H:2885:G:OP1	2.21	0.41
16:B8:88:ILE:O	16:B8:88:ILE:HG13	2.19	0.41
11:C5:52:SER:N	11:C5:56:PRO:HA	2.34	0.41
18:61:104:GLN:HG2	18:61:105:HIS:CE1	2.56	0.41
14:32:112:VAL:HG12	14:32:116:GLN:CD	2.46	0.41
15:14:332:G:H21	15:14:355:A:N6	2.12	0.41
15:14:1254:G:C6	15:14:1255:C:C4	3.09	0.41
15:14:1475:G:OP2	15:14:1476:A:O2'	2.37	0.41
15:14:1559:A:H2'	15:14:1560:A:C8	2.55	0.41
15:14:2286:G:OP1	31:E5:18:ALA:HB1	2.20	0.41
15:14:2290:C:H5'	15:14:2290:C:H6	1.84	0.41
15:14:2744:U:H5'	21:25:70:LYS:HZ1	1.86	0.41
21:68:22:ILE:HA	21:68:22:ILE:HD12	1.74	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:21:114:ALA:HB3	23:21:119:ARG:HG2	2.02	0.41
23:21:143:ASN:HB2	23:21:147:PRO:HD2	2.02	0.41
26:16:16:U:H5'	26:16:73:C:O4'	2.20	0.41
26:16:26:G:C2	26:16:58:G:C2	3.08	0.41
21:25:7:TYR:CE1	21:25:20:MET:HB2	2.55	0.41
23:29:11:MET:SD	23:29:24:THR:HG22	2.61	0.41
29:AI:42:PRO:O	29:AI:45:VAL:HG22	2.20	0.41
30:78:83:VAL:O	30:78:114:ILE:HA	2.20	0.41
27:85:19:LYS:O	27:85:22:LYS:HG3	2.20	0.41
32:31:179:GLU:H	32:31:179:GLU:CD	2.28	0.41
35:D8:22:VAL:HG12	35:D8:23:GLU:O	2.20	0.41
36:N8:31:VAL:HB	36:N8:41:PRO:O	2.20	0.41
38:88:39:PRO:HA	38:88:97:VAL:O	2.21	0.41
40:41:57:ALA:HB2	40:41:90:LEU:HD21	2.01	0.41
42:6E:150:ALA:HB2	6:2I:50:TYR:CE2	2.49	0.41
43:E8:29:LEU:O	43:E8:29:LEU:HG	2.21	0.41
40:49:81:LYS:HD2	40:49:86:MET:HE1	2.02	0.41
44:1E:12:GLU:C	44:1E:16:HIS:CD2	2.92	0.41
45:98:67:LEU:CD1	45:98:76:VAL:HG21	2.49	0.41
45:98:104:ARG:HB3	45:98:107:ASP:HB3	2.03	0.41
44:12:68:ILE:HG12	44:12:161:ALA:HB3	2.03	0.41
44:12:88:ALA:HB2	44:12:219:VAL:HB	2.02	0.41
44:12:223:ILE:H	44:12:223:ILE:HG12	1.57	0.41
50:7E:33:GLU:HG2	50:7E:48:TYR:CE2	2.56	0.41
45:55:117:VAL:HG22	45:55:118:GLU:N	2.35	0.41
8:2E:16:ARG:HH11	8:2E:16:ARG:HB2	1.86	0.41
51:Y1:47:U:C2	52:X1:36:A:C2	3.08	0.41
52:W1:7:A:H61	52:W1:66:U:H3	1.69	0.41
52:V1:70:G:N1	52:V1:71:G:C6	2.88	0.41
1:13:655:G:C6	1:13:672:A:N6	2.89	0.41
1:13:829:G:O6	1:13:841:G:C6	2.73	0.41
1:13:881:C:H2'	1:13:882:C:H6	1.86	0.41
1:13:1050:G:H2'	1:13:1051:G:O4'	2.20	0.41
1:13:1193:C:C6	7:8I:31:LEU:HD11	2.55	0.41
1:13:1653:C:H2'	1:13:1654:C:H5	1.86	0.41
1:13:1691:C:OP2	1:13:1692:G:O2'	2.36	0.41
1:13:1936:G:H2'	1:13:1937:G:O4'	2.21	0.41
3:B5:5:TYR:HD1	46:G5:33:MET:SD	2.43	0.41
4:11:11:PRO:C	4:11:13:ARG:N	2.78	0.41
6:2A:13:GLN:HA	6:2A:75:TYR:O	2.20	0.41
1:1G:1115:G:HO2'	1:1G:1116:U:H6	1.60	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:1G:1386:U:O2'	1:1G:1502:C:O2	2.37	0.41
1:1G:1756:C:C2	1:1G:1767:G:C6	3.08	0.41
1:1G:1927:G:O2'	1:1G:1928:U:P	2.78	0.41
10:58:66:LYS:NZ	15:1H:1070:G:N7	2.68	0.41
2:65:102:ALA:HA	2:65:105:ALA:HB3	2.02	0.41
11:G8:43:ASN:OD1	11:G8:65:ALA:HB3	2.20	0.41
11:G8:83:THR:HG22	11:G8:84:ARG:NE	2.35	0.41
4:19:172:TYR:OH	15:14:2238:G:OP1	2.35	0.41
15:1H:627:G:H3'	15:1H:703:A:H61	1.85	0.41
15:1H:667:C:O2	15:1H:676:G:C2	2.74	0.41
15:1H:1252:A:H61	15:1H:1289:U:H2'	1.85	0.41
15:1H:1315:G:O4'	43:E8:15:ARG:NH2	2.50	0.41
15:1H:1327:A:O3'	45:98:34:ILE:HG12	2.20	0.41
15:1H:1425:C:H2'	15:1H:1426:G:O4'	2.21	0.41
15:1H:1590:U:H2'	15:1H:1591:G:O4'	2.20	0.41
15:1H:2104:U:O4	56:1H:3670:HOH:O	2.20	0.41
15:1H:2111:U:H2'	15:1H:2112:G:C8	2.55	0.41
15:1H:2136:C:H5	15:1H:2172:G:C6	2.38	0.41
15:1H:2323:G:N1	15:1H:2326:A:C2	2.74	0.41
15:1H:2416:U:H2'	15:1H:2417:C:O2	2.21	0.41
15:1H:2814:A:N7	15:1H:2815:A:N6	2.69	0.41
10:15:137:LYS:HA	10:15:137:LYS:HD3	1.71	0.41
12:M5:33:ASN:HA	15:14:2435:C:P	2.60	0.41
12:M5:62:LEU:O	12:M5:63:PRO:C	2.63	0.41
18:61:128:LEU:O	18:61:137:PRO:HA	2.21	0.41
15:14:496:G:O6	15:14:497:G:C2	2.73	0.41
15:14:1514:C:O2'	15:14:1577:A:C8	2.69	0.41
15:14:1883:G:H2'	15:14:1884:G:H8	1.85	0.41
15:14:2849:U:C4	15:14:2896:A:N6	2.88	0.41
22:H8:5:LEU:HD11	22:H8:39:VAL:HB	2.02	0.41
23:21:68:ALA:C	23:21:70:ALA:H	2.27	0.41
23:21:181:LEU:HD12	23:21:181:LEU:HA	1.87	0.41
23:29:80:GLU:O	23:29:81:ILE:C	2.60	0.41
26:1J:87:G:C2	26:1J:88:G:C8	3.09	0.41
28:I5:5:ILE:O	28:I5:7:PRO:HD3	2.20	0.41
35:D8:21:ARG:NH2	35:D8:91:TYR:OH	2.44	0.41
31:E5:50:ASN:HB3	31:E5:63:VAL:HG22	2.01	0.41
36:N8:16:ARG:NH1	36:N8:16:ARG:HG2	2.35	0.41
32:39:29:ASN:N	32:39:112:MET:HE3	2.34	0.41
32:39:124:LEU:O	32:39:125:LEU:C	2.63	0.41
32:39:155:LEU:HD11	32:39:176:LEU:HD23	2.03	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:5A:11:LYS:O	33:5A:13:THR:HG23	2.19	0.41
38:45:18:LYS:N	38:45:98:LYS:HZ3	2.18	0.41
38:45:35:VAL:HG12	38:45:36:ALA:H	1.84	0.41
39:F5:88:LYS:O	39:F5:93:GLU:HG3	2.20	0.41
40:49:15:VAL:HG21	40:49:176:LEU:HD23	2.02	0.41
45:98:109:ALA:HA	45:98:110:PRO:HD2	1.97	0.41
46:K8:16:LEU:C	46:K8:17:SER:OG	2.63	0.41
48:1A:30:SER:CB	48:1A:81:THR:HA	2.50	0.41
45:55:65:LEU:HD12	45:55:65:LEU:HA	1.70	0.41
46:G5:46:GLN:CD	46:G5:46:GLN:N	2.78	0.41
6:2I:99:GLN:HA	6:2I:105:VAL:CG1	2.42	0.41
52:X1:20:U:H3'	52:X1:21:A:C5'	2.49	0.41
1:13:1949:C:H6	1:13:1949:C:OP1	2.02	0.41
7:8I:48:GLU:H	7:8I:48:GLU:HG3	1.66	0.41
7:8I:52:LYS:HE3	7:8I:52:LYS:HB3	1.88	0.41
8:22:119:ARG:HH22	8:22:140:ARG:HG2	1.85	0.41
1:1G:811:A:C2	1:1G:812:A:C4	3.09	0.41
1:1G:892:G:H4'	1:1G:893:U:O5'	2.20	0.41
1:1G:918:C:P	7:8A:68:ARG:HH12	2.44	0.41
1:1G:1097:C:H2'	1:1G:1098:C:H6	1.86	0.41
1:1G:1138:A:O4'	14:32:58:LEU:HD12	2.21	0.41
1:1G:1889:C:H42	1:1G:1900:G:H1	1.68	0.41
1:1G:1914:A:H2'	1:1G:1915:A:C8	2.55	0.41
2:65:40:ILE:HD13	26:1J:10:U:O2'	2.20	0.41
15:1H:280:G:C6	15:1H:281:C:C4	3.09	0.41
15:1H:292:G:N2	15:1H:396:C:C2	2.88	0.41
15:1H:511:A:H2'	15:1H:512:C:H5'	2.03	0.41
15:1H:780:C:H5"	56:1H:3769:HOH:O	2.20	0.41
15:1H:1583:G:H22	15:1H:1587:G:H22	1.68	0.41
15:1H:1607:C:H5"	15:1H:1608:A:OP2	2.21	0.41
15:1H:1630:A:OP2	15:1H:1630:A:H8	2.03	0.41
15:1H:2326:A:HO2'	40:41:88:ILE:HG21	1.84	0.41
15:1H:2474:A:C5	15:1H:2475:U:C4	3.09	0.41
15:1H:2844:G:OP1	23:21:58:ARG:NH1	2.39	0.41
11:C5:30:VAL:HG12	11:C5:32:PRO:HD3	2.03	0.41
11:C5:54:LYS:C	11:C5:55:TYR:CG	2.98	0.41
19:9I:50:ILE:HD13	19:9I:50:ILE:HG21	1.86	0.41
15:14:73:A:H4'	15:14:74:G:O5'	2.21	0.41
15:14:132:C:H2'	15:14:133:G:O4'	2.20	0.41
15:14:644:G:H2'	15:14:645:C:O4'	2.20	0.41
15:14:1179:G:O6	15:14:2065:C:H1'	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:14:1556:A:C4	15:14:1557:A:H1'	2.55	0.41
15:14:2190:G:OP2	15:14:2191:G:N2	2.53	0.41
15:14:2391:A:H2'	15:14:2392:A:O4'	2.20	0.41
15:14:2456:C:O2'	15:14:2457:C:H5'	2.21	0.41
15:14:2586:C:H5"	15:14:2587:A:H5"	2.02	0.41
15:14:2707:C:C2	15:14:2708:A:C8	3.08	0.41
18:69:76:THR:CG2	18:69:140:LEU:HA	2.50	0.41
26:16:52:G:C2	26:16:53:G:H1'	2.56	0.41
25:42:69:VAL:O	25:42:71:LEU:HG	2.19	0.41
26:1J:120:G:H8	26:1J:120:G:O5'	2.03	0.41
33:5I:39:LEU:HD11	33:5I:47:LEU:HD12	2.02	0.41
30:35:36:LYS:HZ1	30:35:39:LYS:HB3	1.86	0.41
30:35:88:LEU:HA	30:35:88:LEU:HD12	1.80	0.41
31:E5:53:MET:HG3	31:E5:59:LEU:CD2	2.44	0.41
32:39:127:GLU:O	32:39:129:PHE:N	2.50	0.41
38:88:35:VAL:HA	38:88:101:ARG:O	2.20	0.41
37:BA:43:LEU:HD13	37:BA:51:GLU:HB3	2.02	0.41
44:1E:112:VAL:O	44:1E:115:LEU:N	2.54	0.41
44:12:70:PHE:HB2	44:12:92:TYR:CB	2.50	0.41
44:12:72:GLY:HA2	44:12:165:VAL:CG2	2.50	0.41
44:12:118:LEU:O	44:12:122:PHE:HB3	2.21	0.41
45:55:97:VAL:HB	45:55:114:VAL:HG22	2.02	0.41
49:7A:72:ARG:HD2	49:7A:73:LEU:HD23	2.02	0.41
50:72:109:ILE:HG12	50:72:110:ALA:H	1.85	0.41
52:V1:18:G:HO2'	52:V1:60:U:H3	1.69	0.41
52:V1:33:U:C3'	52:V1:34:G:H3'	2.50	0.41
52:X4:18:G:H5'	52:X4:57:G:H22	1.84	0.41
1:13:712:G:O4'	1:13:813:U:C4	2.73	0.41
1:13:821:G:N2	1:13:847:A:C4	2.88	0.41
1:13:834:U:H2'	1:13:835:U:H5'	2.03	0.41
1:13:1597:A:P	33:5I:29:ARG:HH12	2.43	0.41
5:L5:11:LYS:HE2	15:14:735:G:H5"	2.02	0.41
6:2A:26:ASN:OD1	1:1G:1321:U:H5	2.02	0.41
7:8I:88:TYR:HD1	7:8I:89:LEU:HD22	1.85	0.41
1:1G:1210:G:OP1	41:6A:61:GLY:HA3	2.21	0.41
1:1G:1421:A:H4'	1:1G:1422:U:O5'	2.21	0.41
1:1G:1853:C:H4'	29:AA:80:TYR:OH	2.21	0.41
1:1G:1918:G:H2'	1:1G:1919:U:C6	2.56	0.41
1:1G:1983:G:H2'	1:1G:1984:A:C8	2.54	0.41
1:1G:2007:G:O6	42:62:2:ALA:HA	2.20	0.41
2:65:109:GLY:O	2:65:110:LEU:HD22	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:3I:102:ARG:HG3	13:3I:120:TYR:HA	2.02	0.41
14:3E:80:GLU:O	14:3E:83:SER:N	2.54	0.41
15:1H:4:C:O2	15:1H:2911:G:N2	2.53	0.41
15:1H:105:C:H2'	15:1H:106:U:H6	1.85	0.41
15:1H:213:A:H5"	15:1H:451:A:H5'	2.03	0.41
15:1H:222:G:OP2	15:1H:222:G:C8	2.72	0.41
15:1H:311:C:H2'	15:1H:312:C:C6	2.55	0.41
15:1H:382:A:H2'	15:1H:383:U:O4'	2.20	0.41
15:1H:557:G:O4'	15:1H:557:G:N3	2.54	0.41
15:1H:633:A:C4	15:1H:648:A:C6	3.09	0.41
15:1H:718:G:C2	15:1H:850:G:C6	3.09	0.41
15:1H:875:U:H2'	15:1H:877:U:O4'	2.21	0.41
15:1H:2350:A:C8	15:1H:2352:G:N7	2.89	0.41
15:1H:2365:C:H2'	15:1H:2366:G:O4'	2.21	0.41
18:61:44:LEU:HD12	18:61:44:LEU:HA	1.76	0.41
15:14:24:G:H2'	15:14:25:U:O4'	2.19	0.41
15:14:1023:G:C6	15:14:1024:C:C4	3.09	0.41
15:14:2107:A:H3'	15:14:2108:G:H8	1.85	0.41
22:H8:36:LYS:HE3	22:H8:36:LYS:HB2	1.79	0.41
22:H8:128:VAL:HG23	22:H8:161:VAL:HG12	2.02	0.41
23:21:66:HIS:O	23:21:66:HIS:ND1	2.54	0.41
24:4I:3:ARG:HD3	24:4I:7:VAL:HG13	2.03	0.41
26:16:56:G:H2'	26:16:57:U:C6	2.56	0.41
26:16:97:C:H2'	26:16:98:U:C6	2.55	0.41
23:29:58:ARG:HA	23:29:58:ARG:HD3	1.83	0.41
23:29:120:TRP:CD2	23:29:155:LYS:HD3	2.55	0.41
24:4A:60:VAL:C	24:4A:62:ASN:H	2.29	0.41
24:4A:83:ASP:O	24:4A:84:ILE:HB	2.20	0.41
29:AI:55:LYS:HG2	29:AI:56:GLN:HG3	2.03	0.41
25:42:107:ARG:NH2	25:42:108:ALA:HB2	2.36	0.41
26:1J:12:C:N3	26:1J:13:C:C5	2.89	0.41
26:1J:41:A:O2'	26:1J:42:U:H5'	2.21	0.41
30:78:6:LEU:HA	30:78:6:LEU:HD13	1.90	0.41
28:I5:37:SER:HB3	28:I5:39:CYS:HB2	2.02	0.41
29:AA:41:VAL:O	29:AA:44:MET:HB2	2.21	0.41
29:AA:66:MET:HE3	29:AA:67:VAL:O	2.21	0.41
30:35:34:GLY:O	30:35:36:LYS:HB2	2.20	0.41
30:35:62:LEU:HA	30:35:63:PRO:HD3	1.72	0.41
32:39:5:ALA:HB1	32:39:125:LEU:HD21	2.03	0.41
34:52:72:VAL:H	34:52:72:VAL:HG12	1.64	0.41
38:45:79:LEU:H	38:45:79:LEU:HD13	1.84	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:F5:85:LEU:H	39:F5:85:LEU:HG	1.51	0.41
40:49:63:ILE:O	40:49:105:LYS:NZ	2.47	0.41
47:51:10:PRO:C	47:51:11:VAL:HG13	2.46	0.41
48:1A:27:ALA:HA	48:1A:85:LEU:HD11	2.02	0.41
44:12:17:PHE:HD1	44:12:17:PHE:HA	1.63	0.41
50:72:36:LEU:HD12	50:72:59:LEU:HD13	2.03	0.41
50:72:56:LYS:HE2	50:72:56:LYS:HB2	1.78	0.41
51:Y4:44:U:H2'	51:Y4:45:U:O5'	2.19	0.41
52:X4:18:G:C6	52:X4:57:G:C6	3.08	0.41
1:13:873:G:C5	1:13:874:C:C4	3.09	0.41
1:13:1351:A:H5'	1:13:1352:U:OP2	2.21	0.41
1:13:1374:C:OP1	1:13:1474:G:O2'	2.34	0.41
1:13:1497:G:C6	1:13:1498:C:N4	2.89	0.41
8:22:111:LEU:HD11	8:22:144:SER:O	2.20	0.41
9:8E:28:VAL:HA	9:8E:63:ILE:O	2.20	0.41
9:8E:81:ILE:H	9:8E:81:ILE:HG12	1.71	0.41
1:1G:976:C:O2'	1:1G:977:C:H5'	2.21	0.41
1:1G:1158:G:H5'	1:1G:1159:G:OP2	2.20	0.41
1:1G:1618:C:H6	1:1G:1618:C:O5'	2.04	0.41
1:1G:1775:C:O2'	9:82:16:ARG:HD3	2.21	0.41
1:1G:1999:G:OP1	9:82:11:LYS:HB3	2.20	0.41
10:58:7:LYS:H	10:58:7:LYS:HD2	1.86	0.41
11:G8:70:SER:OG	15:1H:361:C:H1'	2.21	0.41
9:82:119:ALA:O	9:82:120:ARG:HB2	2.20	0.41
15:1H:143:C:H2'	15:1H:144:C:C6	2.54	0.41
15:1H:613:U:H1'	32:31:90:PHE:CG	2.55	0.41
15:1H:655:G:H2'	15:1H:656:G:C8	2.56	0.41
15:1H:782:G:O6	56:1H:3676:HOH:O	2.21	0.41
15:1H:2385:G:C6	15:1H:2386:G:C6	3.08	0.41
15:1H:2571:C:H2'	15:1H:2572:G:O4'	2.20	0.41
15:1H:2608:U:H2'	15:1H:2609:C:H6	1.84	0.41
56:1H:3622:HOH:O	32:31:55:GLY:HA2	2.20	0.41
10:15:90:MET:HB3	10:15:98:VAL:HG12	2.03	0.41
16:B8:5:ALA:HA	16:B8:8:LYS:HE2	2.02	0.41
11:C5:87:LYS:N	11:C5:94:LYS:HB3	2.35	0.41
18:61:21:VAL:HG21	18:61:25:TYR:HD2	1.85	0.41
18:61:69:LYS:HA	18:61:136:VAL:HB	2.03	0.41
15:14:38:A:H2'	15:14:39:C:H6	1.84	0.41
15:14:785:C:H6	15:14:785:C:O5'	2.03	0.41
15:14:1841:G:N2	15:14:1844:A:OP2	2.52	0.41
15:14:2405:U:O2'	15:14:2406:G:H5'	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:14:2682:C:N3	47:59:110:SER:OG	2.49	0.41
15:14:2696:C:H5	15:14:2741:A:N6	2.02	0.41
15:14:2772:U:H4'	15:14:2773:A:OP1	2.21	0.41
16:75:7:ILE:O	16:75:10:VAL:HG12	2.20	0.41
23:21:77:ILE:C	23:21:79:ARG:H	2.18	0.41
25:4E:5:ASP:HB2	25:4E:6:PHE:H	1.72	0.41
25:4E:19:MET:SD	25:4E:24:ARG:HB3	2.61	0.41
25:4E:43:LEU:H	25:4E:65:ASN:ND2	2.17	0.41
26:16:5:C:H2'	26:16:6:C:H6	1.86	0.41
26:16:84:G:O2'	26:16:85:G:H5'	2.20	0.41
22:D5:39:VAL:HG21	22:D5:44:PHE:CD2	2.52	0.41
22:D5:45:ASP:O	22:D5:49:ARG:HG2	2.20	0.41
29:AI:70:LYS:O	29:AI:73:GLU:HG3	2.21	0.41
30:78:20:GLY:HA2	30:78:28:GLY:HA2	2.02	0.41
30:78:122:PRO:HA	30:78:142:GLY:HA3	2.01	0.41
27:85:88:ILE:HG22	27:85:90:VAL:H	1.85	0.41
27:85:88:ILE:HG23	27:85:90:VAL:HG23	2.03	0.41
31:I8:7:LEU:CD1	38:88:85:LYS:HG3	2.50	0.41
35:D8:8:GLY:O	35:D8:10:LYS:HE3	2.21	0.41
31:E5:49:LYS:HG3	31:E5:80:HIS:ND1	2.35	0.41
38:88:79:LEU:HD23	38:88:79:LEU:HA	1.78	0.41
38:45:75:THR:HG22	38:45:89:ASN:O	2.21	0.41
43:E8:12:ILE:HG13	43:E8:42:ARG:NH1	2.36	0.41
44:1E:96:ARG:HD2	44:1E:96:ARG:H	1.86	0.41
45:98:97:VAL:HG22	45:98:114:VAL:CG2	2.51	0.41
47:51:6:ARG:HA	47:51:66:GLY:HA2	2.01	0.41
47:51:16:SER:O	47:51:26:VAL:O	2.38	0.41
49:7I:5:ARG:HE	49:7I:22:THR:CG2	2.33	0.41
44:12:7:VAL:O	44:12:217:ARG:CZ	2.69	0.41
50:7E:1:MET:HB3	50:7E:2:LEU:H	1.53	0.41
6:2I:98:LEU:HD23	6:2I:98:LEU:HA	1.79	0.41
8:2E:7:PRO:HG2	8:2E:184:TYR:HB2	2.03	0.41
52:W1:60:U:H5'	52:W1:61:C:OP2	2.20	0.41
1:13:716:G:H2'	1:13:717:C:O4'	2.20	0.41
1:13:873:G:H1'	1:13:903:A:N1	2.36	0.41
1:13:1245:G:C2	1:13:1246:G:N7	2.89	0.41
1:13:1534:U:H2'	1:13:1535:C:C6	2.55	0.41
1:13:1565:G:C2	1:13:1969:C:C2	3.09	0.41
1:13:1581:A:C6	1:13:1582:A:N1	2.89	0.41
1:13:1596:G:OP1	48:1I:57:LYS:HD3	2.21	0.41
1:13:1790:C:O5'	1:13:1790:C:H6	2.03	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:13:1900:G:H5'	1:13:1901:G:OP2	2.20	0.41
1:13:1980:G:H2'	1:13:1981:C:H6	1.85	0.41
4:11:102:LYS:C	4:11:103:ARG:HG2	2.45	0.41
8:22:35:GLU:OE2	8:22:59:ARG:NH2	2.54	0.41
9:8E:49:PRO:O	9:8E:53:VAL:HB	2.20	0.41
1:1G:749:C:H2'	1:1G:750:G:O4'	2.20	0.41
1:1G:769:G:C6	1:1G:834:U:H4'	2.56	0.41
1:1G:1375:A:H2'	1:1G:1376:C:C6	2.56	0.41
1:1G:1606:A:H1'	1:1G:1677:U:O2	2.20	0.41
1:1G:1890:C:C2	1:1G:1900:G:N2	2.89	0.41
1:1G:1984:A:C8	1:1G:1985:U:C5	3.08	0.41
1:1G:2089:C:H2'	1:1G:2090:G:O4'	2.21	0.41
4:19:135:PHE:HZ	14:3E:167:GLY:H	1.68	0.41
4:19:158:ALA:O	4:19:159:ALA:C	2.62	0.41
4:19:183:ARG:HG2	4:19:184:LYS:N	2.35	0.41
4:19:237:GLU:OE1	4:19:237:GLU:N	2.50	0.41
14:3E:89:THR:O	14:3E:92:VAL:N	2.54	0.41
14:3E:138:TYR:CD1	14:3E:138:TYR:C	2.98	0.41
14:3E:194:LEU:HD12	14:3E:194:LEU:HA	1.56	0.41
15:1H:75:C:HO2'	46:K8:62:THR:HG21	1.83	0.41
15:1H:138:G:N2	15:1H:140:A:N1	2.69	0.41
15:1H:965:A:N3	15:1H:965:A:O4'	2.54	0.41
15:1H:1866:C:C2'	15:1H:1867:U:O5'	2.69	0.41
15:1H:2024:C:O2	15:1H:2702:U:O2'	2.35	0.41
15:1H:2123:U:H3	15:1H:2216:G:H1	1.67	0.41
15:1H:2465:A:C2	15:1H:2466:A:C4	3.09	0.41
15:1H:2678:G:C6	15:1H:2679:G:C4	3.09	0.41
15:1H:2795:U:O2	15:1H:2795:U:O4'	2.39	0.41
11:C5:75:ILE:CG2	11:C5:76:CYS:N	2.83	0.41
12:M5:52:LYS:N	12:M5:53:PRO:HD2	2.35	0.41
15:14:5:A:H2'	15:14:6:A:H8	1.84	0.41
15:14:49:U:H4'	15:14:50:G:OP2	2.20	0.41
15:14:1044:A:H4'	27:85:92:ARG:CZ	2.50	0.41
15:14:1961:A:C8	15:14:1965:U:O2	2.73	0.41
15:14:2287:U:H5"	15:14:2288:A:OP1	2.20	0.41
16:75:90:GLN:OE1	16:75:121:ILE:HD11	2.21	0.41
23:21:87:GLU:O	23:21:89:ASP:N	2.51	0.41
18:69:81:VAL:O	18:69:143:SER:OG	2.37	0.41
24:4I:116:THR:HG22	24:4I:117:VAL:N	2.36	0.41
21:25:7:TYR:HE1	21:25:20:MET:CE	2.34	0.41
21:25:63:VAL:HB	21:25:102:VAL:HG12	2.03	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:D5:128:VAL:HG22	22:D5:129:SER:H	1.86	0.41
23:29:81:ILE:HG21	23:29:84:PHE:CD2	2.56	0.41
27:85:90:VAL:HG22	35:95:39:LEU:CB	2.50	0.41
37:BI:100:ILE:HD12	37:BI:100:ILE:HA	1.95	0.41
38:88:110:THR:OG1	38:88:112:GLU:HG2	2.20	0.41
35:95:76:LYS:O	35:95:79:VAL:HG23	2.21	0.41
40:41:106:LEU:HD12	40:41:110:ALA:HB3	2.02	0.41
37:BA:66:ALA:HB1	37:BA:71:THR:HB	2.03	0.41
42:6E:153:HIS:CE1	6:2I:58:PRO:HG2	2.56	0.41
44:1E:187:LEU:HD22	44:1E:201:ILE:O	2.21	0.41
45:98:48:VAL:O	45:98:49:ASP:C	2.62	0.41
49:7I:40:ASP:O	49:7I:42:ARG:N	2.54	0.41
44:12:132:LYS:HA	44:12:135:GLN:NE2	2.36	0.41
44:12:168:THR:CG2	44:12:192:SER:HA	2.51	0.41
46:G5:13:ALA:HA	46:G5:16:LEU:CD2	2.48	0.41
47:59:105:LEU:HD11	47:59:115:VAL:HG21	2.03	0.41
52:V1:18:G:N2	52:V1:58:A:N7	2.68	0.41
52:V1:33:U:H2'	52:V1:34:G:H3'	2.02	0.41
52:V4:19:G:O4'	52:V4:57:G:N2	2.53	0.41
52:V4:67:C:H2'	52:V4:68:C:C6	2.55	0.41
1:13:935:U:C4	1:13:936:C:N4	2.89	0.41
1:13:1044:C:OP2	14:3E:74:GLN:NE2	2.53	0.41
1:13:1495:A:H4'	1:13:1496:A:OP1	2.21	0.41
1:13:1600:A:C8	1:13:1850:C:N3	2.88	0.41
1:13:2087:G:H2'	1:13:2088:C:C6	2.56	0.41
4:11:13:ARG:NH1	4:11:16:MET:HE1	2.35	0.41
6:2A:31:THR:HA	6:2A:42:TRP:HA	2.02	0.41
7:8I:68:ARG:H	7:8I:70:ARG:NH1	2.19	0.41
9:8E:69:GLY:O	9:8E:70:LYS:C	2.63	0.41
1:1G:1075:U:H2'	1:1G:1076:C:H6	1.85	0.41
1:1G:1189:U:H4'	1:1G:1190:U:O5'	2.21	0.41
1:1G:1220:U:C2	1:1G:1278:G:C2	3.09	0.41
1:1G:1414:G:N2	1:1G:1427:G:C4	2.89	0.41
1:1G:1595:C:O2'	48:1A:55:LYS:HB3	2.20	0.41
1:1G:1608:C:H2'	1:1G:1609:A:C8	2.56	0.41
1:1G:1781:C:H2'	1:1G:1782:G:O4'	2.20	0.41
1:1G:1853:C:O2'	24:4A:111:LYS:NZ	2.41	0.41
1:1G:1912:A:O3'	20:1B:25:LYS:HE2	2.21	0.41
1:1G:1954:C:H2'	1:1G:1955:C:H6	1.84	0.41
1:1G:1973:A:OP2	1:1G:1973:A:H3'	2.21	0.41
1:1G:2027:C:C2	1:1G:2125:A:N6	2.89	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:1G:2057:C:H2'	1:1G:2058:C:H6	1.86	0.41
2:65:54:LEU:C	2:65:56:LEU:N	2.79	0.41
2:65:80:LEU:HD23	2:65:80:LEU:HA	1.85	0.41
11:G8:68:HIS:CE1	11:G8:70:SER:HB2	2.56	0.41
11:G8:80:GLY:C	11:G8:81:LYS:HG3	2.44	0.41
4:19:117:VAL:O	4:19:118:VAL:HB	2.20	0.41
12:Q8:4:MET:HE2	12:Q8:4:MET:HB3	1.74	0.41
13:3I:54:LYS:HD2	13:3I:54:LYS:N	2.36	0.41
13:3I:87:GLY:HA2	13:3I:98:TYR:HA	2.02	0.41
14:3E:79:PHE:O	14:3E:83:SER:N	2.54	0.41
14:3E:199:ASN:OD1	14:3E:199:ASN:C	2.63	0.41
9:82:44:VAL:HG22	42:62:16:LEU:HD13	2.02	0.41
15:1H:107:G:H2'	15:1H:108:G:O4'	2.21	0.41
15:1H:184:G:H2'	15:1H:185:A:O4'	2.20	0.41
15:1H:484:C:H3'	3:F8:68:ARG:HH22	1.86	0.41
15:1H:618:G:C6	15:1H:619:U:C4	3.09	0.41
15:1H:637:C:H2'	15:1H:638:G:O4'	2.21	0.41
15:1H:805:C:C2'	15:1H:806:U:H5'	2.50	0.41
15:1H:917:U:C4	15:1H:918:G:N7	2.89	0.41
15:1H:940:G:H5"	15:1H:941:C:OP1	2.21	0.41
15:1H:1537:G:C2'	15:1H:1538:U:H5'	2.51	0.41
15:1H:1589:G:H2'	15:1H:1590:U:O4'	2.21	0.41
15:1H:2060:G:P	56:1H:3645:HOH:O	2.72	0.41
15:1H:2081:G:H2'	15:1H:2081:G:N3	2.36	0.41
15:1H:2199:C:H2'	15:1H:2200:C:C6	2.55	0.41
15:1H:2367:A:C4	15:1H:2381:A:C2	3.09	0.41
11:C5:47:LYS:HD3	15:14:509:G:OP2	2.21	0.41
17:L8:8:LEU:HD13	17:L8:31:LEU:CD2	2.51	0.41
12:M5:60:LEU:HD23	12:M5:60:LEU:HA	1.87	0.41
14:32:14:ARG:HH11	14:32:14:ARG:HG3	1.85	0.41
15:14:17:G:H2'	15:14:18:C:H6	1.84	0.41
15:14:210:G:H5"	15:14:211:A:OP1	2.21	0.41
15:14:1013:G:H2'	15:14:1014:C:C6	2.54	0.41
15:14:1046:C:OP2	27:85:58:ARG:NH2	2.46	0.41
15:14:1082:G:H2'	15:14:1083:U:O4'	2.20	0.41
15:14:1232:G:H5'	17:H5:29:ARG:NH2	2.36	0.41
15:14:1296:A:OP1	32:39:95:ARG:NH2	2.53	0.41
15:14:1646:A:H5"	15:14:1647:C:OP1	2.20	0.41
15:14:1948:U:H2'	15:14:1949:C:C6	2.56	0.41
15:14:2206:G:H2'	15:14:2207:G:O4'	2.21	0.41
15:14:2289:A:C5	15:14:2291:G:C8	3.08	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:14:2290:C:C2	38:45:85:LYS:HE3	2.56	0.41
15:14:2719:C:H2'	15:14:2720:A:O4'	2.20	0.41
16:75:24:PRO:HA	16:75:49:VAL:CG2	2.51	0.41
16:75:115:ARG:O	16:75:116:ALA:HB3	2.21	0.41
18:69:2:LYS:H	18:69:2:LYS:HG2	1.68	0.41
18:69:39:ALA:O	18:69:44:LEU:HD23	2.21	0.41
19:9A:40:LEU:HD23	19:9A:40:LEU:HA	1.80	0.41
25:4E:148:VAL:O	25:4E:151:LEU:HB2	2.21	0.41
21:25:68:GLU:H	21:25:68:GLU:CD	2.29	0.41
21:25:113:LYS:H	21:25:113:LYS:HG2	1.42	0.41
22:D5:28:MET:SD	22:D5:37:VAL:HG11	2.61	0.41
23:29:98:PRO:HD3	23:29:175:VAL:CG1	2.51	0.41
29:AI:50:ALA:HA	29:AI:58:VAL:O	2.21	0.41
25:42:47:LYS:HE2	25:42:47:LYS:HB2	1.73	0.41
26:1J:42:U:H5	28:I5:1:MET:HB3	1.85	0.41
30:78:39:LYS:CB	30:78:45:LEU:HD22	2.51	0.41
28:I5:49:PHE:CD2	28:I5:50:VAL:HG22	2.56	0.41
32:31:63:LYS:NZ	32:31:67:GLN:HB2	2.35	0.41
32:31:155:LEU:HB2	32:31:189:THR:HG21	2.03	0.41
33:5I:37:PHE:HE2	48:1I:47:PHE:CE2	2.39	0.41
29:AA:34:TRP:HD1	29:AA:52:TYR:CD2	2.39	0.41
34:5E:62:TRP:C	34:5E:63:TYR:CD1	2.99	0.41
30:35:39:LYS:CG	30:35:45:LEU:HD22	2.43	0.41
36:N8:30:LEU:HA	36:N8:41:PRO:O	2.21	0.41
36:N8:40:LYS:HG3	36:N8:47:PRO:HD2	2.03	0.41
32:39:29:ASN:HA	32:39:30:PRO:HD3	1.87	0.41
32:39:140:LEU:HD13	32:39:140:LEU:HA	1.68	0.41
34:52:11:ASN:OD1	34:52:12:PRO:HD2	2.21	0.41
34:52:16:GLN:H	34:52:16:GLN:HG2	1.54	0.41
38:88:34:LEU:HD23	38:88:104:PHE:HD2	1.86	0.41
35:95:85:LYS:HG2	35:95:86:GLY:C	2.46	0.41
40:41:103:LEU:HD23	40:41:103:LEU:HA	1.74	0.41
40:41:145:THR:C	40:41:147:ASP:H	2.29	0.41
40:41:173:LEU:HD13	40:41:178:PHE:CE2	2.56	0.41
41:6I:55:GLY:O	41:6I:56:LEU:C	2.64	0.41
37:BA:67:ALA:O	37:BA:73:HIS:CE1	2.74	0.41
42:6E:23:VAL:HG13	42:6E:43:PHE:CE2	2.56	0.41
42:6E:64:GLN:O	42:6E:67:GLU:N	2.54	0.41
38:45:75:THR:OG1	38:45:87:LYS:HE3	2.21	0.41
39:F5:16:ASN:HB3	39:F5:37:ILE:HG13	2.03	0.41
39:F5:85:LEU:O	39:F5:85:LEU:HD12	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:49:125:PHE:CB	40:49:166:ASP:HB2	2.42	0.41
40:49:162:THR:H	40:49:162:THR:HG23	1.67	0.41
40:49:172:LEU:HD23	40:49:173:LEU:HD23	2.03	0.41
44:1E:69:LEU:HD12	44:1E:70:PHE:H	1.84	0.41
44:1E:97:TRP:HH2	44:1E:176:GLU:OE2	2.03	0.41
42:62:124:LEU:HD23	42:62:124:LEU:HA	1.77	0.41
45:98:12:ARG:HG2	45:98:12:ARG:NH1	2.36	0.41
45:98:42:LYS:HA	45:98:45:ARG:HD2	2.02	0.41
46:K8:53:LEU:HD23	46:K8:53:LEU:HA	1.90	0.41
49:7I:2:VAL:H	49:7I:2:VAL:HG12	1.65	0.41
49:7I:23:ASP:OD1	49:7I:25:ARG:NH1	2.54	0.41
44:12:12:GLU:HB2	44:12:16:HIS:CG	2.56	0.41
44:12:22:LYS:HB3	44:12:40:HIS:CD2	2.56	0.41
44:12:84:GLU:O	44:12:219:VAL:HG11	2.21	0.41
49:7A:70:ALA:O	49:7A:74:LEU:HB2	2.21	0.41
52:X1:1:G:C4	52:X1:2:C:C5	3.09	0.41
1:13:678:A:H2'	1:13:679:A:C8	2.56	0.41
1:13:1404:G:O2'	1:13:1405:G:H5'	2.21	0.41
1:13:2018:U:H2'	1:13:2019:U:C6	2.55	0.41
6:2A:20:TYR:CZ	6:2A:83:ILE:HD12	2.56	0.41
1:1G:831:C:H42	1:1G:838:G:H1	1.69	0.41
1:1G:886:C:C2	1:1G:925:G:C2	3.08	0.41
1:1G:1047:G:H5'	14:32:5:ILE:CG2	2.50	0.41
1:1G:1047:G:H5'	14:32:5:ILE:HG22	2.03	0.41
1:1G:1054:G:N2	1:1G:1070:U:C6	2.89	0.41
1:1G:1716:G:H2'	1:1G:1717:G:O4'	2.21	0.41
1:1G:2128:G:H2'	51:Y4:45:U:OP2	2.21	0.41
10:58:42:TRP:HA	10:58:48:MET:CE	2.51	0.41
10:58:63:THR:O	10:58:66:LYS:HG3	2.21	0.41
4:19:69:ARG:CZ	4:19:105:ILE:HD11	2.50	0.41
14:3E:17:VAL:HG12	14:3E:18:LYS:N	2.36	0.41
14:3E:173:TRP:CE3	14:3E:193:ASP:HB3	2.56	0.41
15:1H:57:G:N2	15:1H:69:G:C4	2.89	0.41
15:1H:139:A:H8	15:1H:1457:C:O2'	2.03	0.41
15:1H:427:G:H2'	15:1H:428:G:O4'	2.21	0.41
15:1H:498:A:H2'	15:1H:499:A:O4'	2.21	0.41
15:1H:541:A:H1'	15:1H:606:C:O2'	2.20	0.41
15:1H:700:G:O2'	15:1H:701:A:H8	2.04	0.41
15:1H:711:G:H5'	30:78:15:ARG:HB3	2.03	0.41
15:1H:874:C:O2	30:78:55:ARG:NH2	2.52	0.41
15:1H:1018:C:H2'	15:1H:1019:G:O4'	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:1H:1474:G:N2	15:1H:1623:G:N7	2.69	0.41
15:1H:1557:A:H8	15:1H:1557:A:OP2	2.04	0.41
15:1H:1559:A:H1'	15:1H:1561:G:O6	2.21	0.41
15:1H:1643:G:H2'	15:1H:1644:G:O4'	2.21	0.41
15:1H:1770:A:C8	15:1H:1771:U:H5	2.39	0.41
15:1H:2090:C:H2'	15:1H:2091:C:C6	2.56	0.41
15:1H:2314:G:N2	15:1H:2333:G:H1'	2.36	0.41
16:B8:51:ARG:HG2	16:B8:62:THR:HG23	2.03	0.41
11:C5:86:ARG:HG3	11:C5:87:LYS:N	2.35	0.41
18:61:121:LYS:HD2	18:61:121:LYS:HA	1.92	0.41
15:14:284:G:O6	15:14:285:G:N1	2.54	0.41
15:14:340:G:H2'	15:14:341:C:C6	2.56	0.41
15:14:1038:A:H8	15:14:1038:A:C5'	2.26	0.41
15:14:1089:C:H2'	15:14:1090:G:C8	2.54	0.41
15:14:1761:C:H2'	15:14:1762:C:H6	1.86	0.41
15:14:2103:C:C4	15:14:2104:U:C4	3.09	0.41
15:14:2104:U:OP1	39:F5:21:ARG:NH1	2.51	0.41
15:14:2800:C:O2	23:29:37:ARG:NH2	2.54	0.41
15:14:2833:A:O2'	15:14:2834:A:OP1	2.32	0.41
15:14:2889:G:O4'	16:75:1:MET:N	2.54	0.41
16:75:3:ARG:HG3	23:29:9:VAL:HA	2.03	0.41
18:69:128:LEU:O	18:69:137:PRO:HA	2.21	0.41
22:D5:19:ARG:HE	22:D5:19:ARG:HB2	1.40	0.41
22:D5:29:TYR:O	22:D5:89:PHE:HD1	2.04	0.41
23:29:12:THR:HB	23:29:13:ARG:H	1.71	0.41
23:29:33:VAL:HG13	23:29:33:VAL:O	2.21	0.41
23:29:60:ASN:OD1	23:29:63:LEU:HA	2.21	0.41
24:4A:3:ARG:HB2	28:I5:34:GLU:CG	2.51	0.41
25:42:122:GLU:O	25:42:126:ARG:NH1	2.54	0.41
37:BI:40:ALA:HB2	37:BI:55:ILE:HG22	2.02	0.41
34:52:53:ALA:HB3	34:52:86:ARG:HD3	2.03	0.41
38:88:104:PHE:N	38:88:104:PHE:CD1	2.86	0.41
38:88:133:ARG:O	38:88:134:ARG:CB	2.67	0.41
43:E8:57:ASN:HA	43:E8:61:ASN:HD22	1.86	0.41
40:49:2:PRO:HB2	40:49:3:LEU:H	1.63	0.41
40:49:143:GLU:N	40:49:143:GLU:OE2	2.53	0.41
45:98:97:VAL:HG22	45:98:114:VAL:HG23	2.03	0.41
47:51:151:ILE:H	47:51:151:ILE:HG13	1.53	0.41
50:7E:49:GLU:HG2	50:7E:62:TYR:HE2	1.86	0.41
8:2E:12:LEU:HD23	8:2E:12:LEU:HA	1.73	0.41
52:X4:67:C:H2'	52:X4:68:C:H6	1.86	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:13:787:G:C2	1:13:788:G:C8	3.09	0.40
1:13:913:C:C2	1:13:914:A:C8	3.09	0.40
1:13:962:A:H2'	1:13:963:C:C6	2.56	0.40
1:13:1189:U:O5'	1:13:1189:U:H6	2.04	0.40
1:13:1590:C:H6	1:13:1590:C:O5'	2.04	0.40
1:13:1856:A:H2'	1:13:1857:C:C6	2.56	0.40
1:13:1913:A:N6	1:13:1981:C:H5"	2.36	0.40
1:13:2000:U:C4	1:13:2001:G:C4	3.09	0.40
2:A8:83:LYS:HE3	2:A8:83:LYS:HB3	1.95	0.40
4:11:19:ALA:HB3	4:11:21:PHE:CE1	2.56	0.40
4:11:142:VAL:HG23	4:11:193:VAL:HA	2.02	0.40
1:1G:747:G:N3	1:1G:747:G:H5"	2.36	0.40
1:1G:987:G:OP1	16:75:43:GLN:NE2	2.54	0.40
1:1G:1245:G:C2	1:1G:1246:G:C8	3.09	0.40
1:1G:1535:C:O2'	1:1G:1536:A:H5'	2.20	0.40
1:1G:1543:U:H2'	1:1G:1544:U:H6	1.86	0.40
1:1G:1803:A:C2'	1:1G:1804:G:H5'	2.51	0.40
4:19:65:ILE:HD12	4:19:66:ASP:N	2.36	0.40
4:19:68:LYS:HB3	4:19:70:TRP:CZ3	2.56	0.40
9:82:114:TYR:CD2	48:1A:60:ARG:HG3	2.56	0.40
15:1H:589:C:O2'	15:1H:590:C:H5'	2.21	0.40
15:1H:608:G:N2	15:1H:1307:C:C2	2.88	0.40
15:1H:612:C:C4'	15:1H:613:U:OP2	2.69	0.40
15:1H:969:G:H4'	15:1H:2284:A:C5	2.56	0.40
15:1H:1397:G:N2	15:1H:1648:C:C2	2.89	0.40
15:1H:1437:G:H2'	15:1H:1438:G:H8	1.85	0.40
15:1H:1463:G:C6	15:1H:1464:U:C4	3.09	0.40
15:1H:1939:C:O2	15:1H:1939:C:O4'	2.37	0.40
15:1H:2290:C:C2	38:88:85:LYS:HE3	2.55	0.40
15:1H:2323:G:N2	15:1H:2326:A:H2	2.19	0.40
15:1H:2407:A:O4'	15:1H:2407:A:N3	2.52	0.40
15:1H:2894:C:C2	15:1H:2895:A:C8	3.09	0.40
12:M5:59:LYS:NZ	30:35:50:ARG:HH11	2.19	0.40
14:32:150:GLU:HA	14:32:153:ARG:HG2	2.02	0.40
15:14:7:G:H2'	15:14:8:A:C8	2.56	0.40
15:14:417:G:N1	30:35:71:VAL:HG22	2.36	0.40
15:14:562:C:C2'	15:14:563:A:H5'	2.52	0.40
15:14:665:G:C5	15:14:666:U:C4	3.10	0.40
15:14:1039:C:N3	15:14:1213:G:C6	2.88	0.40
15:14:1207:C:O2'	15:14:1208:U:H5'	2.21	0.40
15:14:1235:G:H8	15:14:1235:G:O5'	2.04	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:14:1677:G:H2'	15:14:1678:U:C6	2.57	0.40
15:14:2436:G:C6	52:V4:76:A:C8	3.09	0.40
15:14:2617:A:N6	52:W4:76:A:H3'	2.37	0.40
15:14:2739:C:O5'	15:14:2739:C:H6	2.05	0.40
15:14:2752:G:C6	15:14:2753:G:C5	3.10	0.40
15:14:2862:U:H4'	15:14:2881:A:C2	2.56	0.40
21:68:12:ASP:OD1	21:68:14:THR:OG1	2.25	0.40
17:H5:8:LEU:HD13	17:H5:31:LEU:HD12	2.03	0.40
17:H5:35:ARG:HE	17:H5:37:LEU:HD21	1.85	0.40
23:21:4:ILE:HG12	23:21:5:LEU:N	2.36	0.40
23:21:68:ALA:C	23:21:70:ALA:N	2.78	0.40
18:69:101:LEU:HB3	18:69:105:HIS:HB2	2.02	0.40
21:25:92:GLU:HG2	21:25:113:LYS:HZ2	1.84	0.40
23:29:67:PHE:O	23:29:68:ALA:C	2.63	0.40
24:4A:89:GLY:O	24:4A:92:HIS:HB2	2.21	0.40
27:85:90:VAL:O	27:85:91:ASP:C	2.64	0.40
28:I5:18:CYS:HB3	28:I5:19:GLY:HA2	2.03	0.40
38:45:25:ASP:HA	38:45:67:ARG:HH12	1.86	0.40
38:45:116:GLU:O	38:45:117:ALA:HB3	2.20	0.40
43:E8:14:PRO:O	43:E8:15:ARG:C	2.64	0.40
44:1E:121:LEU:HA	44:1E:124:SER:OG	2.21	0.40
45:98:77:ARG:O	45:98:78:LYS:C	2.64	0.40
50:7E:34:GLU:OE1	50:7E:37:ARG:HD3	2.21	0.40
47:59:101:ARG:HG3	47:59:102:ALA:N	2.36	0.40
52:X4:7:A:H3'	52:X4:8:U:H5'	2.03	0.40
1:13:851:G:N2	1:13:852:G:H1'	2.36	0.40
1:13:1214:G:O2'	1:13:1502:C:H5"	2.21	0.40
1:13:1294:A:C2	1:13:1361:C:C4	3.09	0.40
1:13:1556:G:OP2	42:6E:3:ARG:HB2	2.21	0.40
1:13:1720:A:C6	1:13:1721:A:C6	3.08	0.40
1:13:1781:C:C2	1:13:1782:G:C8	3.10	0.40
1:13:1980:G:H2'	1:13:1981:C:C6	2.56	0.40
9:8E:5:TYR:CG	9:8E:6:GLY:N	2.88	0.40
1:1G:1294:A:H2'	1:1G:1361:C:O2	2.22	0.40
1:1G:1394:G:N2	1:1G:1442:U:OP2	2.48	0.40
1:1G:1704:C:OP1	44:12:175:ARG:NH1	2.52	0.40
1:1G:1757:C:C4	1:1G:1767:G:N1	2.89	0.40
1:1G:1761:G:H1	1:1G:1769:C:H42	1.69	0.40
1:1G:2158:C:H2'	1:1G:2159:C:O4'	2.21	0.40
10:58:56:ASN:N	10:58:125:GLY:O	2.36	0.40
10:58:58:ASP:CB	10:58:95:PRO:HB2	2.51	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:19:245:PRO:HA	4:19:246:PRO:HD3	1.98	0.40
12:Q8:45:GLY:O	12:Q8:46:ARG:CB	2.66	0.40
12:Q8:46:ARG:HB2	12:Q8:46:ARG:CZ	2.45	0.40
15:1H:332:G:H21	15:1H:355:A:H62	1.70	0.40
15:1H:1290:A:N3	15:1H:1290:A:O4'	2.53	0.40
15:1H:1328:G:N2	15:1H:1341:U:C2	2.90	0.40
15:1H:1437:G:O2'	15:1H:1438:G:H5'	2.22	0.40
15:1H:1491:G:H2'	15:1H:1492:G:C8	2.57	0.40
15:1H:1924:G:H22	15:1H:1927:C:N4	2.18	0.40
15:1H:2337:A:H2'	15:1H:2338:G:O4'	2.21	0.40
15:1H:2750:A:C8	15:1H:2750:A:C5'	3.03	0.40
15:1H:2815:A:H5'	15:1H:2907:U:C1'	2.51	0.40
10:15:16:ILE:HB	10:15:54:VAL:HG22	2.03	0.40
16:B8:23:ARG:HG3	16:B8:120:ARG:NH1	2.36	0.40
15:14:119:G:H4'	15:14:149:A:H5'	2.03	0.40
15:14:554:C:OP2	15:14:2795:U:H5	2.03	0.40
15:14:613:U:H2'	15:14:614:C:H6	1.81	0.40
15:14:626:C:O2'	15:14:630:C:H5"	2.21	0.40
15:14:830:A:H2	15:14:1810:G:N3	2.20	0.40
15:14:835:C:C2'	15:14:836:U:H5'	2.52	0.40
15:14:1215:C:O2	15:14:1232:G:C2	2.74	0.40
15:14:1295:A:OP1	32:39:38:ARG:NH1	2.54	0.40
15:14:1363:C:C2	15:14:1388:G:N2	2.89	0.40
15:14:1465:G:HO2'	15:14:1466:C:P	2.38	0.40
15:14:1545:A:C8	15:14:1627:C:O2'	2.72	0.40
15:14:1675:G:H3'	56:14:3622:HOH:O	2.21	0.40
15:14:2456:C:OP2	15:14:2601:C:O2'	2.33	0.40
15:14:2546:A:N6	15:14:2677:A:H61	2.19	0.40
15:14:2623:G:H5"	15:14:2624:U:OP1	2.21	0.40
15:14:2764:A:P	47:59:70:THR:HG21	2.61	0.40
15:14:2804:C:H5"	15:14:2805:C:OP2	2.22	0.40
16:75:88:ILE:C	16:75:88:ILE:HD12	2.46	0.40
27:C8:58:ARG:HA	27:C8:61:TRP:CE3	2.56	0.40
23:29:65:GLY:HA3	23:29:68:ALA:HB2	2.02	0.40
29:AI:40:ILE:HG21	29:AI:40:ILE:HD13	1.78	0.40
26:1J:33:C:H4'	40:49:29:TRP:CH2	2.57	0.40
27:85:52:ARG:HH11	27:85:52:ARG:HD3	1.74	0.40
27:85:75:ASN:OD1	27:85:78:THR:OG1	2.39	0.40
28:I5:22:ILE:HG12	28:I5:23:GLU:N	2.19	0.40
32:31:183:VAL:O	32:31:187:VAL:HG23	2.21	0.40
33:5I:19:ARG:O	33:5I:20:ALA:C	2.63	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:AA:78:ARG:HH11	29:AA:79:THR:H	1.67	0.40
32:39:155:LEU:HD22	32:39:185:ASP:HB3	2.02	0.40
38:88:109:VAL:HG13	38:88:113:GLN:HB3	2.02	0.40
42:6E:139:GLU:H	42:6E:139:GLU:HG3	1.72	0.40
43:A5:69:LEU:HA	43:A5:108:GLY:O	2.21	0.40
47:51:4:ILE:HD11	47:51:7:LEU:HD11	2.03	0.40
48:1A:4:ILE:HG13	48:1A:77:PRO:HB3	2.03	0.40
44:12:15:VAL:HG23	44:12:16:HIS:ND1	2.36	0.40
44:12:136:VAL:HG12	44:12:139:LYS:HD2	2.03	0.40
47:59:62:LYS:H	47:59:62:LYS:HG3	1.60	0.40
47:59:88:LEU:HD13	47:59:164:TYR:O	2.21	0.40
6:2I:18:ARG:HA	6:2I:81:ASP:H	1.87	0.40
52:W1:2:C:H2'	52:W1:3:C:C6	2.56	0.40
52:V4:38:A:H5"	52:V4:38:A:H8	1.86	0.40
1:13:741:G:C5	1:13:742:C:C5	3.09	0.40
1:13:912:C:C2	1:13:913:C:C5	3.10	0.40
1:13:1897:C:H4'	1:13:1940:U:O2'	2.22	0.40
1:1G:763:G:H2'	1:1G:764:U:C6	2.56	0.40
1:1G:1628:A:N3	1:1G:1628:A:H3'	2.37	0.40
1:1G:1845:C:H2'	1:1G:1846:U:C6	2.55	0.40
1:1G:1867:U:O3'	42:62:38:LEU:HD21	2.21	0.40
13:3I:7:ILE:HG21	50:7E:91:ARG:HB2	2.03	0.40
13:3I:85:ILE:HD13	13:3I:85:ILE:HA	1.28	0.40
15:1H:271:C:N3	15:1H:273:U:H5"	2.36	0.40
15:1H:296:C:H2'	15:1H:297:U:C6	2.56	0.40
15:1H:895:C:C2	15:1H:896:U:C5	3.10	0.40
15:1H:938:C:N3	15:1H:939:A:H1'	2.36	0.40
15:1H:1477:C:C5	15:1H:1619:A:H5"	2.57	0.40
15:1H:2351:A:H61	31:I8:43:THR:CG2	2.35	0.40
15:1H:2587:A:N7	23:21:145:LYS:HB2	2.37	0.40
15:1H:2767:G:H1	47:51:3:ARG:NH2	2.19	0.40
11:C5:87:LYS:H	11:C5:94:LYS:HG2	1.86	0.40
13:3A:53:ARG:HB3	13:3A:69:TYR:HE1	1.86	0.40
15:14:163:G:H2'	15:14:164:C:C6	2.56	0.40
15:14:903:G:H2'	15:14:904:G:H8	1.84	0.40
15:14:1059:G:C6	15:14:1061:C:C4	3.09	0.40
15:14:1512:C:H2'	15:14:1513:C:C6	2.56	0.40
15:14:1622:A:H2'	15:14:1623:G:O4'	2.21	0.40
15:14:1732:G:H5'	15:14:1796:A:O2'	2.22	0.40
15:14:2430:G:C6	15:14:2431:C:C4	3.09	0.40
15:14:2547:G:N2	15:14:2678:G:O2'	2.54	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:14:2570:U:C4	15:14:2571:C:C2	3.10	0.40
21:68:31:LYS:HB3	21:68:32:TYR:CD1	2.57	0.40
16:75:24:PRO:HD3	16:75:52:ILE:HD12	2.03	0.40
16:75:88:ILE:HD11	16:75:125:ARG:NH1	2.34	0.40
23:21:115:GLY:C	23:21:116:VAL:O	2.64	0.40
18:69:3:VAL:O	18:69:19:VAL:N	2.48	0.40
18:69:37:VAL:HG12	18:69:38:LEU:HD12	2.03	0.40
24:4I:23:TYR:CD1	24:4I:67:GLU:HA	2.41	0.40
19:9A:32:ARG:HD2	19:9A:65:ILE:HD12	2.04	0.40
26:16:31:A:C2	26:16:58:G:C2	3.09	0.40
22:D5:122:ARG:HH22	38:45:134:ARG:HH12	1.69	0.40
23:29:10:GLY:O	23:29:24:THR:O	2.39	0.40
30:78:81:GLN:OE1	30:78:107:LYS:HB2	2.21	0.40
32:31:181:LEU:HD23	32:31:181:LEU:HA	1.99	0.40
29:AA:29:ARG:NH1	29:AA:47:HIS:HA	2.36	0.40
34:5E:16:GLN:HA	34:5E:19:LEU:HD12	2.03	0.40
35:D8:52:VAL:HG22	35:D8:55:ALA:HB3	2.02	0.40
35:95:8:GLY:HA3	35:95:23:GLU:HB3	2.04	0.40
40:41:81:LYS:HA	40:41:81:LYS:HD3	1.75	0.40
42:6E:45:ASP:O	42:6E:48:LYS:HB3	2.22	0.40
42:6E:94:ARG:O	42:6E:97:GLN:HB3	2.22	0.40
43:E8:4:LYS:HB3	43:E8:106:ILE:HG12	2.03	0.40
43:E8:73:ALA:HB3	43:E8:106:ILE:HB	2.02	0.40
40:49:63:ILE:HD12	40:49:141:PHE:CG	2.56	0.40
40:49:105:LYS:HA	40:49:109:VAL:HG23	2.04	0.40
44:1E:120:ALA:O	44:1E:124:SER:OG	2.26	0.40
45:98:77:ARG:O	45:98:80:PHE:N	2.54	0.40
44:12:6:THR:HG21	44:12:217:ARG:HB3	2.02	0.40
45:55:28:LEU:HD23	45:55:28:LEU:HA	1.83	0.40
46:G5:10:LEU:O	46:G5:11:GLU:C	2.64	0.40
52:W1:63:G:H2'	52:W1:64:A:O4'	2.22	0.40
52:V1:28:G:N2	52:V1:43:C:O2	2.54	0.40
52:V4:58:A:O2'	52:V4:59:U:OP1	2.35	0.40
1:13:710:G:N2	1:13:713:C:N4	2.69	0.40
1:13:785:G:H2'	1:13:786:G:H8	1.87	0.40
1:13:980:C:H2'	1:13:981:U:H6	1.86	0.40
1:13:1315:U:O4	1:13:1332:G:H1'	2.21	0.40
1:13:1354:G:C4	1:13:1355:C:C5	3.09	0.40
1:13:1504:G:P	13:3I:12:ARG:NH2	2.94	0.40
1:13:1639:A:O5'	1:13:1639:A:H8	2.03	0.40
1:13:1700:G:C5	1:13:1701:U:C4	3.09	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:13:1780:A:C6	1:13:1781:C:C4	3.09	0.40
1:13:1795:A:H8	1:13:1795:A:OP1	2.05	0.40
1:13:1840:A:C8	1:13:1842:G:C6	3.10	0.40
2:A8:3:ARG:N	15:1H:2333:G:H22	2.18	0.40
1:1G:927:G:N7	56:1G:2414:HOH:O	2.37	0.40
1:1G:1059:C:H1'	1:1G:1169:G:O2'	2.20	0.40
1:1G:1293:G:N7	53:1G:2202:8UZ:N3	2.70	0.40
1:1G:2119:C:H2'	1:1G:2120:G:O4'	2.20	0.40
1:1G:2120:G:H2'	1:1G:2121:U:H5'	2.04	0.40
1:1G:2121:U:O2	1:1G:2122:A:N6	2.51	0.40
4:19:130:ALA:C	4:19:131:LEU:HD12	2.45	0.40
4:19:168:ARG:HG2	4:19:173:VAL:HG12	2.03	0.40
9:82:14:VAL:O	9:82:65:VAL:HA	2.21	0.40
15:1H:684:G:H2'	15:1H:685:G:O4'	2.22	0.40
15:1H:910:A:H2'	15:1H:911:G:O4'	2.21	0.40
15:1H:1214:U:H2'	15:1H:1215:C:H6	1.79	0.40
15:1H:1219:G:N2	15:1H:1228:C:C2	2.90	0.40
15:1H:1269:C:H2'	15:1H:1270:C:C6	2.56	0.40
15:1H:1531:U:O4	15:1H:1559:A:H8	2.04	0.40
15:1H:1647:C:H2'	15:1H:1648:C:H6	1.86	0.40
15:1H:1924:G:N2	15:1H:1927:C:H41	2.20	0.40
15:1H:2326:A:O2'	40:41:88:ILE:HG21	2.21	0.40
15:1H:2548:A:H2'	15:1H:2549:A:O4'	2.21	0.40
15:1H:2700:G:OP2	16:B8:51:ARG:NH2	2.54	0.40
10:15:94:HIS:O	10:15:97:ARG:HB2	2.22	0.40
11:C5:87:LYS:CG	11:C5:88:LYS:H	2.35	0.40
18:61:58:LEU:HD23	18:61:59:ALA:N	2.36	0.40
18:61:72:LEU:HD11	18:61:107:VAL:HG11	2.03	0.40
15:14:366:G:H2'	15:14:367:G:O4'	2.20	0.40
15:14:403:C:H2'	15:14:404:C:C6	2.57	0.40
15:14:512:C:H2'	15:14:513:C:H6	1.86	0.40
15:14:894:G:H8	15:14:894:G:O5'	2.04	0.40
15:14:1096:A:OP2	15:14:1158:G:N2	2.54	0.40
15:14:1193:G:C6	15:14:1194:C:C4	3.09	0.40
15:14:1436:C:C2	15:14:1437:G:C8	3.09	0.40
15:14:1453:C:O2'	15:14:1454:U:H5'	2.21	0.40
15:14:2065:C:H2'	15:14:2066:U:O4'	2.21	0.40
15:14:2120:C:C4	15:14:2121:U:C5	3.10	0.40
15:14:2178:G:N2	15:14:2179:G:O6	2.40	0.40
15:14:2480:C:O2'	15:14:2481:C:H5'	2.21	0.40
15:14:2654:A:C2	15:14:2794:A:C8	3.10	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:14:2689:G:O2'	21:25:29:ASN:OD1	2.16	0.40
15:14:2736:U:N3	15:14:2886:A:H2	2.03	0.40
22:H8:68:PRO:O	22:H8:91:LEU:HB2	2.20	0.40
23:21:119:ARG:HH11	23:21:119:ARG:CG	2.34	0.40
19:9A:74:ARG:HB3	19:9A:81:PHE:CE1	2.56	0.40
27:C8:28:ARG:O	27:C8:35:ALA:HA	2.20	0.40
25:42:30:ALA:O	25:42:45:PHE:HA	2.21	0.40
31:I8:32:ARG:O	31:I8:33:ALA:C	2.61	0.40
28:I5:23:GLU:O	28:I5:25:TYR:HD1	2.05	0.40
30:35:88:LEU:HD22	30:35:114:ILE:HD13	2.02	0.40
30:35:107:LYS:O	30:35:109:GLY:N	2.49	0.40
36:N8:40:LYS:HG2	36:N8:46:CYS:HA	2.04	0.40
38:88:37:LEU:HA	38:88:37:LEU:HD23	1.68	0.40
35:95:94:LEU:HD23	35:95:94:LEU:HA	1.86	0.40
39:J8:92:LYS:HD2	39:J8:95:LEU:HD12	2.03	0.40
40:41:107:LEU:HD23	40:41:107:LEU:HA	1.82	0.40
40:49:9:ARG:O	40:49:12:TYR:N	2.54	0.40
40:49:68:PRO:HB3	40:49:92:VAL:HB	2.04	0.40
40:49:88:ILE:HA	40:49:88:ILE:HD12	1.79	0.40
44:1E:7:VAL:HG11	44:1E:217:ARG:NH1	2.30	0.40
44:1E:189:ASP:HB2	44:1E:205:ASP:HB3	2.02	0.40
42:62:76:ARG:C	42:62:86:GLN:HB2	2.45	0.40
42:62:143:ARG:NH1	52:V4:41:C:O2'	2.54	0.40
43:A5:51:LEU:HD23	43:A5:51:LEU:HA	1.85	0.40
46:K8:47:ASN:C	46:K8:49:LYS:N	2.77	0.40
47:51:41:MET:HE3	47:51:41:MET:HB2	1.66	0.40
47:51:151:ILE:O	47:51:162:ILE:HD12	2.21	0.40
44:12:54:THR:O	44:12:57:PHE:HB3	2.22	0.40
47:59:19:VAL:O	47:59:25:LYS:HE3	2.22	0.40
8:2E:188:LEU:HD23	8:2E:188:LEU:HA	1.71	0.40
52:W1:34:G:C6	52:W1:35:A:C6	3.09	0.40
52:W1:37:A:H2'	52:W1:38:A:O4'	2.22	0.40
52:V1:40:C:H2'	52:V1:41:C:C6	2.56	0.40
1:13:1593:C:N4	9:8E:128:ARG:O	2.51	0.40
1:13:1614:U:C4	1:13:1839:U:H1'	2.57	0.40
1:13:1723:U:P	1:13:1736:G:H1	2.44	0.40
1:13:2017:C:H2'	1:13:2018:U:O4'	2.21	0.40
1:13:2159:C:H6	1:13:2159:C:OP2	2.04	0.40
4:11:50:THR:OG1	15:1H:1847:G:H1'	2.21	0.40
4:11:185:VAL:HG12	4:11:186:HIS:N	2.36	0.40
8:22:4:LYS:HB2	8:22:4:LYS:HE2	1.86	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:22:5:ILE:HG12	8:22:6:HIS:N	2.35	0.40
9:8E:97:LYS:HB2	9:8E:102:LEU:HD12	2.03	0.40
1:1G:808:G:N2	1:1G:809:C:C2	2.89	0.40
1:1G:947:G:O5'	1:1G:947:G:H8	2.03	0.40
1:1G:1098:C:H42	1:1G:1104:G:H1	1.69	0.40
1:1G:1166:G:H5"	13:3A:113:ARG:NH1	2.36	0.40
1:1G:1200:U:O4	1:1G:1487:A:N6	2.54	0.40
1:1G:1454:G:O2'	50:72:12:ARG:NH1	2.54	0.40
1:1G:1545:G:H4'	25:42:20:GLN:HA	2.03	0.40
1:1G:1755:G:H1'	1:1G:1776:U:N3	2.37	0.40
1:1G:1825:G:H2'	1:1G:1826:U:H6	1.86	0.40
1:1G:1871:C:H2'	1:1G:1872:A:C8	2.57	0.40
1:1G:1944:C:H3'	1:1G:1945:A:C8	2.57	0.40
10:58:42:TRP:O	27:C8:64:ARG:HD2	2.22	0.40
2:65:93:LYS:HE3	2:65:93:LYS:HB2	1.69	0.40
2:65:104:GLY:O	2:65:106:ARG:NH1	2.54	0.40
12:Q8:39:LYS:O	12:Q8:39:LYS:HG2	2.15	0.40
13:3I:77:LEU:HD23	13:3I:77:LEU:HA	1.72	0.40
14:3E:120:LEU:HA	14:3E:120:LEU:HD23	1.79	0.40
15:1H:50:G:N3	15:1H:117:A:C2	2.89	0.40
15:1H:320:G:C6	15:1H:369:G:C6	3.10	0.40
15:1H:512:C:H2'	15:1H:513:C:C6	2.56	0.40
15:1H:901:G:O2'	15:1H:902:G:H5'	2.21	0.40
15:1H:1076:A:N6	15:1H:1173:G:H2'	2.36	0.40
15:1H:1110:G:N7	15:1H:1112:C:C4	2.90	0.40
15:1H:1408:A:C2	15:1H:1421:U:N3	2.83	0.40
15:1H:1825:A:C8	15:1H:1826:G:C8	3.09	0.40
15:1H:1925:A:N1	15:1H:1995:A:C6	2.89	0.40
15:1H:2135:G:C6	15:1H:2145:G:N7	2.90	0.40
15:1H:2181:G:H2'	15:1H:2182:G:C2	2.56	0.40
12:M5:58:ILE:HG21	12:M5:58:ILE:HD13	1.80	0.40
18:61:77:LEU:CB	18:61:140:LEU:HB3	2.50	0.40
15:14:327:C:H2'	15:14:328:U:C6	2.57	0.40
15:14:867:G:C2	15:14:1238:G:O6	2.74	0.40
15:14:1246:U:H2'	15:14:1247:U:H6	1.86	0.40
15:14:1252:A:C2	15:14:1254:G:C2	3.09	0.40
15:14:1428:A:H4'	15:14:1429:G:OP2	2.22	0.40
15:14:1483:A:H2'	15:14:1484:G:C8	2.57	0.40
15:14:1516:G:H5'	15:14:1517:C:OP1	2.22	0.40
15:14:1582:C:H42	15:14:1586:C:H42	1.69	0.40
15:14:2513:C:P	56:14:3655:HOH:O	2.78	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:14:2521:U:C6	15:14:2600:U:O4	2.75	0.40
15:14:2652:U:C4	15:14:2653:G:C6	3.08	0.40
22:H8:46:LYS:HE3	22:H8:46:LYS:HB2	1.97	0.40
22:H8:139:VAL:HG13	22:H8:155:LEU:HD21	2.04	0.40
22:D5:60:GLU:O	22:D5:65:GLN:O	2.39	0.40
22:D5:76:LEU:HA	22:D5:84:GLU:H	1.86	0.40
22:D5:85:HIS:CE1	26:1J:77:G:H21	2.39	0.40
22:D5:138:GLU:O	22:D5:139:VAL:HG13	2.22	0.40
29:AI:41:VAL:HG11	29:AI:67:VAL:HA	2.03	0.40
30:78:97:PRO:HD3	30:78:126:VAL:O	2.22	0.40
27:85:74:LEU:HD22	27:85:79:PHE:HA	2.03	0.40
30:35:46:LYS:HB3	30:35:46:LYS:HE2	1.71	0.40
32:39:123:LEU:HA	32:39:192:LEU:C	2.46	0.40
39:J8:53:VAL:HB	39:J8:58:ILE:HD13	2.02	0.40
42:6E:27:ILE:HD11	42:6E:43:PHE:CD2	2.56	0.40
42:6E:62:PHE:CD1	42:6E:124:LEU:HD11	2.53	0.40
40:49:130:ASN:HB3	40:49:160:VAL:HA	2.04	0.40
45:98:8:ARG:O	45:98:17:ARG:HD3	2.22	0.40
3:F8:1:MET:O	3:F8:3:THR:HG23	2.22	0.40
46:G5:31:GLU:O	46:G5:35:LEU:HD23	2.22	0.40
46:G5:37:PHE:O	46:G5:41:ILE:HG23	2.21	0.40
50:72:109:ILE:CG2	50:72:137:VAL:HB	2.52	0.40
50:72:120:THR:CG2	50:72:123:GLU:H	2.34	0.40
51:Y4:49:U:H6	51:Y4:49:U:O5'	2.05	0.40
52:W4:51:U:C2	52:W4:52:G:C8	3.10	0.40
52:X4:40:C:H2'	52:X4:41:C:H6	1.87	0.40
52:V4:10:G:H1	52:V4:25:C:H42	1.70	0.40
52:V4:41:C:H2'	52:V4:42:C:O4'	2.21	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%)	86 (79%)	20 (18%)	3 (3%)	4 11
2	A8	109/112 (97%)	92 (84%)	15 (14%)	2 (2%)	6 19
3	B5	90/96 (94%)	82 (91%)	6 (7%)	2 (2%)	5 15
3	F8	92/96 (96%)	87 (95%)	3 (3%)	2 (2%)	5 15
4	11	271/276 (98%)	255 (94%)	12 (4%)	4 (2%)	8 23
4	19	271/276 (98%)	252 (93%)	13 (5%)	6 (2%)	5 15
5	L5	45/49 (92%)	43 (96%)	2 (4%)	0	100 100
5	P8	45/49 (92%)	42 (93%)	2 (4%)	1 (2%)	5 15
6	2A	114/129 (88%)	104 (91%)	8 (7%)	2 (2%)	6 19
6	2I	114/129 (88%)	102 (90%)	10 (9%)	2 (2%)	6 19
7	8A	97/105 (92%)	92 (95%)	5 (5%)	0	100 100
7	8I	98/105 (93%)	93 (95%)	5 (5%)	0	100 100
8	22	204/239 (85%)	179 (88%)	25 (12%)	0	100 100
8	2E	203/239 (85%)	182 (90%)	20 (10%)	1 (0%)	24 49
9	82	122/128 (95%)	112 (92%)	9 (7%)	1 (1%)	16 37
9	8E	125/128 (98%)	107 (86%)	17 (14%)	1 (1%)	16 37
10	15	136/140 (97%)	123 (90%)	12 (9%)	1 (1%)	18 40
10	58	136/140 (97%)	116 (85%)	17 (12%)	3 (2%)	5 15
11	C5	102/110 (93%)	72 (71%)	28 (28%)	2 (2%)	6 16
11	G8	101/110 (92%)	79 (78%)	16 (16%)	6 (6%)	1 2
12	M5	60/65 (92%)	50 (83%)	6 (10%)	4 (7%)	1 1
12	Q8	58/65 (89%)	37 (64%)	16 (28%)	5 (9%)	0 1
13	3A	123/132 (93%)	105 (85%)	15 (12%)	3 (2%)	4 13
13	3I	120/132 (91%)	105 (88%)	15 (12%)	0	100 100
14	32	206/209 (99%)	180 (87%)	26 (13%)	0	100 100
14	3E	206/209 (99%)	196 (95%)	9 (4%)	1 (0%)	24 49
16	75	135/146 (92%)	120 (89%)	13 (10%)	2 (2%)	8 23
16	B8	127/146 (87%)	118 (93%)	9 (7%)	0	100 100
17	H5	57/60 (95%)	53 (93%)	4 (7%)	0	100 100
17	L8	55/60 (92%)	48 (87%)	5 (9%)	2 (4%)	2 6
18	61	144/148 (97%)	117 (81%)	24 (17%)	3 (2%)	5 16
18	69	144/148 (97%)	111 (77%)	29 (20%)	4 (3%)	4 11

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles
19	9A	67/88 (76%)	63 (94%)	4 (6%)	0	100 100
19	9I	65/88 (74%)	63 (97%)	1 (2%)	1 (2%)	8 23
20	1B	23/27 (85%)	21 (91%)	2 (9%)	0	100 100
20	1F	21/27 (78%)	20 (95%)	1 (5%)	0	100 100
21	25	120/122 (98%)	115 (96%)	5 (4%)	0	100 100
21	68	120/122 (98%)	114 (95%)	5 (4%)	1 (1%)	16 37
22	D5	129/206 (63%)	106 (82%)	19 (15%)	4 (3%)	3 8
22	H8	169/206 (82%)	137 (81%)	24 (14%)	8 (5%)	2 4
23	21	203/206 (98%)	161 (79%)	33 (16%)	9 (4%)	2 4
23	29	203/206 (98%)	157 (77%)	34 (17%)	12 (6%)	1 2
24	4A	114/126 (90%)	94 (82%)	19 (17%)	1 (1%)	14 34
24	4I	114/126 (90%)	95 (83%)	18 (16%)	1 (1%)	14 34
25	42	149/162 (92%)	142 (95%)	7 (5%)	0	100 100
25	4E	149/162 (92%)	142 (95%)	6 (4%)	1 (1%)	18 40
27	85	115/118 (98%)	106 (92%)	9 (8%)	0	100 100
27	C8	115/118 (98%)	107 (93%)	5 (4%)	3 (3%)	4 12
28	I5	61/71 (86%)	31 (51%)	28 (46%)	2 (3%)	3 7
28	M8	64/71 (90%)	41 (64%)	21 (33%)	2 (3%)	3 8
29	AA	76/93 (82%)	62 (82%)	12 (16%)	2 (3%)	4 12
29	AI	78/93 (84%)	67 (86%)	7 (9%)	4 (5%)	1 3
30	35	148/150 (99%)	112 (76%)	28 (19%)	8 (5%)	1 3
30	78	145/150 (97%)	117 (81%)	22 (15%)	6 (4%)	2 5
31	E5	82/85 (96%)	75 (92%)	5 (6%)	2 (2%)	4 13
31	I8	81/85 (95%)	76 (94%)	5 (6%)	0	100 100
32	31	200/210 (95%)	181 (90%)	16 (8%)	3 (2%)	8 23
32	39	206/210 (98%)	164 (80%)	33 (16%)	9 (4%)	2 4
33	5A	56/61 (92%)	48 (86%)	7 (12%)	1 (2%)	6 19
33	5I	58/61 (95%)	50 (86%)	6 (10%)	2 (3%)	3 7
34	52	99/101 (98%)	94 (95%)	5 (5%)	0	100 100
34	5E	99/101 (98%)	94 (95%)	5 (5%)	0	100 100
35	95	99/101 (98%)	77 (78%)	18 (18%)	4 (4%)	2 5

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles
35	D8	99/101 (98%)	92 (93%)	5 (5%)	2 (2%)	6 16
36	J5	54/60 (90%)	48 (89%)	6 (11%)	0	100 100
36	N8	53/60 (88%)	44 (83%)	7 (13%)	2 (4%)	2 6
37	BA	97/106 (92%)	84 (87%)	11 (11%)	2 (2%)	5 16
37	BI	97/106 (92%)	85 (88%)	12 (12%)	0	100 100
38	45	138/141 (98%)	111 (80%)	25 (18%)	2 (1%)	9 24
38	88	139/141 (99%)	120 (86%)	13 (9%)	6 (4%)	2 4
39	F5	92/98 (94%)	85 (92%)	6 (6%)	1 (1%)	11 29
39	J8	93/98 (95%)	82 (88%)	8 (9%)	3 (3%)	3 8
40	41	179/182 (98%)	161 (90%)	15 (8%)	3 (2%)	7 20
40	49	179/182 (98%)	155 (87%)	22 (12%)	2 (1%)	11 29
41	6A	86/89 (97%)	81 (94%)	5 (6%)	0	100 100
41	6I	86/89 (97%)	80 (93%)	6 (7%)	0	100 100
42	62	143/156 (92%)	135 (94%)	8 (6%)	0	100 100
42	6E	140/156 (90%)	133 (95%)	6 (4%)	1 (1%)	18 40
43	A5	111/113 (98%)	104 (94%)	5 (4%)	2 (2%)	6 19
43	E8	110/113 (97%)	102 (93%)	8 (7%)	0	100 100
44	12	235/256 (92%)	199 (85%)	33 (14%)	3 (1%)	9 26
44	1E	235/256 (92%)	195 (83%)	38 (16%)	2 (1%)	14 34
45	55	115/118 (98%)	105 (91%)	7 (6%)	3 (3%)	4 12
45	98	116/118 (98%)	101 (87%)	12 (10%)	3 (3%)	4 12
46	G5	65/72 (90%)	59 (91%)	4 (6%)	2 (3%)	3 8
46	K8	66/72 (92%)	62 (94%)	1 (2%)	3 (4%)	2 4
47	51	172/180 (96%)	150 (87%)	16 (9%)	6 (4%)	3 7
47	59	168/180 (93%)	131 (78%)	32 (19%)	5 (3%)	3 9
48	1A	97/105 (92%)	91 (94%)	6 (6%)	0	100 100
48	1I	97/105 (92%)	89 (92%)	8 (8%)	0	100 100
49	7A	82/88 (93%)	76 (93%)	6 (7%)	0	100 100
49	7I	82/88 (93%)	78 (95%)	4 (5%)	0	100 100
50	72	136/138 (99%)	128 (94%)	7 (5%)	1 (1%)	18 40
50	7E	136/138 (99%)	125 (92%)	10 (7%)	1 (1%)	18 40

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles
All	All	11145/11946 (93%)	9763 (88%)	1178 (11%)	204 (2%)	6 19

All (204) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
4	11	240	ALA
6	2A	48	ILE
4	19	237	GLU
12	Q8	51	ALA
14	3E	31	CYS
9	82	118	LYS
22	H8	6	LYS
22	H8	165	VAL
23	21	78	LEU
23	21	83	ASP
22	D5	53	ILE
22	D5	165	VAL
23	29	25	VAL
23	29	59	VAL
30	78	57	THR
28	I5	5	ILE
29	AA	11	VAL
30	35	57	THR
31	E5	33	ALA
36	N8	42	PRO
32	39	22	ALA
33	5A	29	ARG
35	95	79	VAL
35	95	85	LYS
37	BA	73	HIS
38	45	27	VAL
38	45	81	VAL
39	F5	30	VAL
46	K8	48	HIS
45	55	107	ASP
6	2A	101	SER
2	65	87	PHE
11	G8	54	LYS
11	G8	81	LYS
4	19	33	LEU
4	19	273	ARG
12	Q8	6	THR

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Mol	Chain	Res	Type
12	Q8	31	HIS
17	L8	54	VAL
12	M5	40	GLU
12	M5	51	ALA
13	3A	18	VAL
19	9I	22	VAL
22	H8	60	GLU
23	21	60	ASN
23	21	118	LYS
24	4I	83	ASP
27	C8	89	GLU
27	C8	90	VAL
27	C8	93	LYS
28	M8	50	VAL
23	29	26	ILE
23	29	81	ILE
29	AI	67	VAL
32	31	197	ASP
30	35	6	LEU
30	35	108	LYS
36	N8	41	PRO
32	39	25	PRO
32	39	128	ALA
38	88	66	ILE
42	6E	152	ALA
44	12	7	VAL
50	7E	86	ILE
3	F8	2	LYS
46	G5	48	HIS
4	11	122	ASP
10	58	97	ARG
11	G8	40	GLU
12	Q8	47	LYS
11	C5	20	TYR
11	C5	29	GLU
17	L8	53	LEU
12	M5	53	PRO
18	61	145	VAL
21	68	97	ARG
16	75	2	ASN
22	H8	81	ARG
23	21	82	ARG

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Mol	Chain	Res	Type
18	69	111	PRO
18	69	145	VAL
23	29	9	VAL
23	29	51	PHE
23	29	90	THR
30	35	35	HIS
32	39	89	VAL
32	39	124	LEU
32	39	167	ALA
38	88	90	VAL
39	J8	76	ARG
40	41	97	ASP
46	K8	43	GLN
47	51	83	TYR
45	55	3	HIS
46	G5	47	ASN
47	59	131	VAL
3	B5	68	ARG
10	58	22	THR
10	58	128	HIS
12	Q8	43	GLN
18	61	12	LEU
18	61	133	HIS
16	75	107	ASP
22	H8	59	LEU
23	21	21	VAL
22	D5	161	VAL
29	AI	7	LYS
33	5I	13	THR
38	88	6	ARG
38	88	134	ARG
35	95	71	LEU
39	J8	75	GLU
40	41	98	ARG
43	A5	44	ALA
46	K8	47	ASN
44	12	6	THR
47	59	92	ILE
8	2E	4	LYS
50	72	73	ASP
2	A8	4	LEU
2	A8	88	ASP

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Mol	Chain	Res	Type
2	65	111	GLU
11	G8	76	CYS
10	15	128	HIS
13	3A	47	LYS
23	21	56	PRO
22	D5	8	TYR
30	78	12	ALA
32	31	198	ALA
30	35	16	ARG
30	35	34	GLY
31	E5	44	ARG
32	39	21	ALA
32	39	24	LEU
38	88	3	MET
40	41	5	VAL
37	BA	10	LEU
40	49	47	LYS
44	1E	13	ALA
45	98	4	LEU
45	98	45	ARG
45	98	65	LEU
43	A5	93	ALA
47	51	12	PRO
47	51	167	GLU
45	55	82	GLU
3	F8	68	ARG
6	2I	82	VAL
4	11	3	VAL
4	11	123	ALA
9	8E	112	LYS
2	65	4	LEU
4	19	118	VAL
23	21	55	ASN
23	29	45	THR
23	29	52	LEU
23	29	77	ILE
23	29	91	VAL
28	I5	33	VAL
33	5I	14	PRO
30	35	7	ARG
47	51	85	LYS
5	P8	46	VAL

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Mol	Chain	Res	Type
6	2I	91	ARG
11	G8	53	PRO
4	19	3	VAL
22	H8	141	VAL
28	M8	5	ILE
23	29	62	PRO
30	78	7	ARG
30	35	62	LEU
32	39	84	VAL
35	95	72	VAL
40	49	5	VAL
44	1E	239	VAL
3	B5	51	VAL
4	19	240	ALA
22	H8	53	ILE
23	21	72	VAL
18	69	119	PRO
25	4E	115	VAL
30	78	95	VAL
32	31	24	LEU
35	D8	49	THR
44	12	39	ILE
47	59	168	PRO
11	G8	77	PRO
24	4A	84	ILE
29	AI	9	VAL
29	AI	41	VAL
35	D8	36	PRO
39	J8	84	GLY
47	51	92	ILE
47	51	127	GLU
12	M5	52	LYS
13	3A	96	VAL
18	69	144	VAL
30	78	47	ASP
29	AA	67	VAL
38	88	27	VAL
47	59	4	ILE
47	59	99	VAL
22	H8	62	PRO
30	78	20	GLY

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%)	57 (66%)	30 (34%)	0	0
2	A8	87/88 (99%)	62 (71%)	25 (29%)	0	0
3	B5	74/78 (95%)	57 (77%)	17 (23%)	1	2
3	F8	76/78 (97%)	63 (83%)	13 (17%)	2	5
4	11	215/218 (99%)	173 (80%)	42 (20%)	1	3
4	19	214/218 (98%)	166 (78%)	48 (22%)	1	2
5	L5	40/42 (95%)	30 (75%)	10 (25%)	0	1
5	P8	40/42 (95%)	31 (78%)	9 (22%)	1	2
6	2A	88/99 (89%)	74 (84%)	14 (16%)	2	8
6	2I	88/99 (89%)	75 (85%)	13 (15%)	3	9
7	8A	94/97 (97%)	80 (85%)	14 (15%)	3	8
7	8I	95/97 (98%)	75 (79%)	20 (21%)	1	2
8	22	160/188 (85%)	120 (75%)	40 (25%)	0	1
8	2E	159/188 (85%)	119 (75%)	40 (25%)	0	1
9	82	95/99 (96%)	78 (82%)	17 (18%)	2	4
9	8E	98/99 (99%)	73 (74%)	25 (26%)	0	1
10	15	117/119 (98%)	88 (75%)	29 (25%)	1	1
10	58	117/119 (98%)	88 (75%)	29 (25%)	1	1
11	C5	85/91 (93%)	58 (68%)	27 (32%)	0	0
11	G8	84/91 (92%)	54 (64%)	30 (36%)	0	0
12	M5	52/55 (94%)	40 (77%)	12 (23%)	1	2
12	Q8	50/55 (91%)	36 (72%)	14 (28%)	0	0
13	3A	104/109 (95%)	80 (77%)	24 (23%)	1	2
13	3I	103/109 (94%)	87 (84%)	16 (16%)	2	8
14	32	180/181 (99%)	144 (80%)	36 (20%)	1	3
14	3E	180/181 (99%)	149 (83%)	31 (17%)	2	5

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
16	75	120/127 (94%)	80 (67%)	40 (33%)	0	0
16	B8	115/127 (91%)	81 (70%)	34 (30%)	0	0
17	H5	51/52 (98%)	38 (74%)	13 (26%)	0	1
17	L8	49/52 (94%)	37 (76%)	12 (24%)	1	1
18	61	122/124 (98%)	83 (68%)	39 (32%)	0	0
18	69	122/124 (98%)	93 (76%)	29 (24%)	1	1
19	9A	60/77 (78%)	45 (75%)	15 (25%)	0	1
19	9I	59/77 (77%)	45 (76%)	14 (24%)	1	1
20	1B	20/22 (91%)	19 (95%)	1 (5%)	22	47
20	1F	18/22 (82%)	17 (94%)	1 (6%)	19	43
21	25	100/100 (100%)	76 (76%)	24 (24%)	1	1
21	68	100/100 (100%)	82 (82%)	18 (18%)	2	4
22	D5	125/179 (70%)	87 (70%)	38 (30%)	0	0
22	H8	152/179 (85%)	121 (80%)	31 (20%)	1	3
23	21	165/166 (99%)	124 (75%)	41 (25%)	1	1
23	29	165/166 (99%)	123 (74%)	42 (26%)	0	1
24	4A	94/101 (93%)	77 (82%)	17 (18%)	2	4
24	4I	94/101 (93%)	76 (81%)	18 (19%)	1	3
25	42	116/123 (94%)	90 (78%)	26 (22%)	1	2
25	4E	116/123 (94%)	86 (74%)	30 (26%)	0	1
27	85	93/94 (99%)	72 (77%)	21 (23%)	1	2
27	C8	93/94 (99%)	71 (76%)	22 (24%)	1	1
28	I5	57/63 (90%)	41 (72%)	16 (28%)	0	0
28	M8	59/63 (94%)	43 (73%)	16 (27%)	0	0
29	AA	67/80 (84%)	52 (78%)	15 (22%)	1	2
29	AI	70/80 (88%)	49 (70%)	21 (30%)	0	0
30	35	116/116 (100%)	78 (67%)	38 (33%)	0	0
30	78	114/116 (98%)	80 (70%)	34 (30%)	0	0
31	E5	62/67 (92%)	51 (82%)	11 (18%)	2	4
31	I8	66/67 (98%)	59 (89%)	7 (11%)	6	19
32	31	161/166 (97%)	124 (77%)	37 (23%)	1	2

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles
32	39	165/166 (99%)	120 (73%)	45 (27%)	0 0
33	5A	48/50 (96%)	37 (77%)	11 (23%)	1 2
33	5I	49/50 (98%)	34 (69%)	15 (31%)	0 0
34	52	90/90 (100%)	69 (77%)	21 (23%)	1 2
34	5E	90/90 (100%)	73 (81%)	17 (19%)	1 3
35	95	82/82 (100%)	57 (70%)	25 (30%)	0 0
35	D8	82/82 (100%)	54 (66%)	28 (34%)	0 0
36	J5	48/52 (92%)	41 (85%)	7 (15%)	3 9
36	N8	48/52 (92%)	38 (79%)	10 (21%)	1 3
37	BA	76/82 (93%)	60 (79%)	16 (21%)	1 2
37	BI	76/82 (93%)	57 (75%)	19 (25%)	0 1
38	45	110/111 (99%)	80 (73%)	30 (27%)	0 0
38	88	111/111 (100%)	85 (77%)	26 (23%)	1 2
39	F5	79/83 (95%)	56 (71%)	23 (29%)	0 0
39	J8	80/83 (96%)	61 (76%)	19 (24%)	1 1
40	41	155/156 (99%)	119 (77%)	36 (23%)	1 2
40	49	155/156 (99%)	122 (79%)	33 (21%)	1 2
41	6A	79/80 (99%)	63 (80%)	16 (20%)	1 3
41	6I	79/80 (99%)	68 (86%)	11 (14%)	3 10
42	62	121/127 (95%)	89 (74%)	32 (26%)	0 1
42	6E	118/127 (93%)	96 (81%)	22 (19%)	1 4
43	A5	92/92 (100%)	75 (82%)	17 (18%)	1 4
43	E8	91/92 (99%)	70 (77%)	21 (23%)	1 2
44	12	205/220 (93%)	158 (77%)	47 (23%)	1 2
44	1E	205/220 (93%)	165 (80%)	40 (20%)	1 3
45	55	100/101 (99%)	76 (76%)	24 (24%)	1 1
45	98	101/101 (100%)	78 (77%)	23 (23%)	1 2
46	G5	63/67 (94%)	43 (68%)	20 (32%)	0 0
46	K8	64/67 (96%)	38 (59%)	26 (41%)	0 0
47	51	145/148 (98%)	103 (71%)	42 (29%)	0 0
47	59	142/148 (96%)	105 (74%)	37 (26%)	0 1

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles
48	1A	89/92 (97%)	68 (76%)	21 (24%)	1 1
48	1I	89/92 (97%)	68 (76%)	21 (24%)	1 1
49	7A	72/74 (97%)	59 (82%)	13 (18%)	2 4
49	7I	72/74 (97%)	58 (81%)	14 (19%)	1 3
50	72	119/119 (100%)	95 (80%)	24 (20%)	1 3
50	7E	119/119 (100%)	95 (80%)	24 (20%)	1 3
All	All	9412/9894 (95%)	7190 (76%)	2222 (24%)	1 1

All (2222) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
2	A8	4	LEU
2	A8	8	GLU
2	A8	15	ARG
2	A8	17	ARG
2	A8	19	LYS
2	A8	24	LEU
2	A8	33	LYS
2	A8	35	ILE
2	A8	36	TYR
2	A8	42	ASP
2	A8	44	LYS
2	A8	46	VAL
2	A8	50	SER
2	A8	54	LEU
2	A8	58	LEU
2	A8	69	VAL
2	A8	73	LEU
2	A8	78	LEU
2	A8	80	LEU
2	A8	89	ARG
2	A8	101	LEU
2	A8	106	ARG
2	A8	107	GLU
2	A8	111	GLU
2	A8	112	PHE
3	B5	3	THR
3	B5	12	VAL
3	B5	27	THR
3	B5	40	LYS

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Mol	Chain	Res	Type
3	B5	43	VAL
3	B5	45	THR
3	B5	48	LYS
3	B5	54	VAL
3	B5	59	VAL
3	B5	60	ARG
3	B5	62	LYS
3	B5	63	LYS
3	B5	66	LEU
3	B5	72	LYS
3	B5	76	ARG
3	B5	78	LYS
3	B5	80	ILE
4	11	4	LYS
4	11	14	ARG
4	11	16	MET
4	11	17	THR
4	11	23	GLU
4	11	27	THR
4	11	34	VAL
4	11	35	LYS
4	11	37	LEU
4	11	38	LYS
4	11	61	LEU
4	11	64	ILE
4	11	65	ILE
4	11	68	LYS
4	11	88	ARG
4	11	94	LEU
4	11	103	ARG
4	11	105	ILE
4	11	106	ILE
4	11	112	GLN
4	11	126	GLN
4	11	136	ILE
4	11	141	VAL
4	11	142	VAL
4	11	155	LEU
4	11	165	ILE
4	11	173	VAL
4	11	174	ILE
4	11	192	THR

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Mol	Chain	Res	Type
4	11	193	VAL
4	11	217	ARG
4	11	218	ARG
4	11	221	VAL
4	11	228	PRO
4	11	229	VAL
4	11	237	GLU
4	11	242	ARG
4	11	254	THR
4	11	257	LEU
4	11	261	LYS
4	11	263	ARG
4	11	273	ARG
5	L5	1	MET
5	L5	2	LYS
5	L5	4	THR
5	L5	8	ASN
5	L5	14	LYS
5	L5	33	ARG
5	L5	39	ARG
5	L5	43	THR
5	L5	46	VAL
5	L5	47	ARG
6	2A	11	LYS
6	2A	12	ARG
6	2A	14	VAL
6	2A	30	VAL
6	2A	31	THR
6	2A	80	VAL
6	2A	87	THR
6	2A	93	GLN
6	2A	105	VAL
6	2A	108	ILE
6	2A	109	VAL
6	2A	112	THR
6	2A	114	VAL
6	2A	124	LYS
7	8I	6	LEU
7	8I	19	VAL
7	8I	27	PHE
7	8I	31	LEU
7	8I	34	LYS

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Mol	Chain	Res	Type
7	8I	38	ARG
7	8I	48	GLU
7	8I	52	LYS
7	8I	60	ILE
7	8I	63	ARG
7	8I	68	ARG
7	8I	74	LEU
7	8I	78	GLU
7	8I	86	GLU
7	8I	88	TYR
7	8I	89	LEU
7	8I	91	ARG
7	8I	92	ARG
7	8I	97	SER
7	8I	101	ARG
8	22	4	LYS
8	22	5	ILE
8	22	16	ARG
8	22	21	ARG
8	22	31	HIS
8	22	34	LEU
8	22	36	ASP
8	22	42	LEU
8	22	47	LEU
8	22	54	ARG
8	22	67	THR
8	22	76	VAL
8	22	79	ARG
8	22	82	GLU
8	22	83	ARG
8	22	84	ILE
8	22	86	VAL
8	22	90	GLU
8	22	94	LEU
8	22	101	LEU
8	22	103	VAL
8	22	104	GLN
8	22	107	GLN
8	22	115	LEU
8	22	119	ARG
8	22	120	VAL
8	22	122	GLU

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Mol	Chain	Res	Type
8	22	124	ILE
8	22	131	ARG
8	22	140	ARG
8	22	144	SER
8	22	166	GLU
8	22	167	TRP
8	22	175	LEU
8	22	178	LEU
8	22	192	THR
8	22	196	LEU
8	22	198	VAL
8	22	202	ILE
8	22	207	VAL
9	8E	2	GLU
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	35	GLU
9	8E	38	GLN
9	8E	40	LEU
9	8E	42	ARG
9	8E	44	VAL
9	8E	47	LEU
9	8E	53	VAL
9	8E	70	LYS
9	8E	79	LEU
9	8E	81	ILE
9	8E	92	TYR
9	8E	93	ARG
9	8E	95	LYS
9	8E	99	LEU
9	8E	108	VAL
9	8E	112	LYS
9	8E	118	LYS
9	8E	124	GLN
10	58	2	LYS
10	58	7	LYS
10	58	9	VAL
10	58	10	GLU

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Mol	Chain	Res	Type
10	58	14	VAL
10	58	28	THR
10	58	29	LYS
10	58	32	THR
10	58	33	LEU
10	58	34	LEU
10	58	43	THR
10	58	58	ASP
10	58	60	ILE
10	58	61	ARG
10	58	62	VAL
10	58	67	LEU
10	58	68	GLU
10	58	83	LYS
10	58	87	LEU
10	58	90	MET
10	58	96	GLU
10	58	98	VAL
10	58	99	LEU
10	58	118	LYS
10	58	120	LEU
10	58	127	ASP
10	58	130	HIS
10	58	131	GLN
10	58	133	GLN
2	65	3	ARG
2	65	8	GLU
2	65	11	LYS
2	65	13	ARG
2	65	17	ARG
2	65	24	LEU
2	65	27	SER
2	65	36	TYR
2	65	38	GLN
2	65	42	ASP
2	65	46	VAL
2	65	50	SER
2	65	52	SER
2	65	56	LEU
2	65	59	LYS
2	65	63	THR
2	65	64	GLU

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Mol	Chain	Res	Type
2	65	69	VAL
2	65	73	LEU
2	65	80	LEU
2	65	82	ILE
2	65	83	LYS
2	65	88	ASP
2	65	89	ARG
2	65	93	LYS
2	65	98	VAL
2	65	101	LEU
2	65	106	ARG
2	65	107	GLU
2	65	110	LEU
11	G8	21	LYS
11	G8	24	VAL
11	G8	27	VAL
11	G8	31	LEU
11	G8	33	LYS
11	G8	38	ILE
11	G8	40	GLU
11	G8	42	VAL
11	G8	43	ASN
11	G8	44	ILE
11	G8	46	LYS
11	G8	54	LYS
11	G8	55	TYR
11	G8	57	GLN
11	G8	62	GLU
11	G8	63	LYS
11	G8	64	GLU
11	G8	67	LEU
11	G8	70	SER
11	G8	75	ILE
11	G8	82	PRO
11	G8	84	ARG
11	G8	85	VAL
11	G8	88	LYS
11	G8	94	LYS
11	G8	96	ILE
11	G8	97	ARG
11	G8	98	VAL
11	G8	99	CYS

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Mol	Chain	Res	Type
11	G8	102	CYS
4	19	10	THR
4	19	24	ILE
4	19	27	THR
4	19	28	GLU
4	19	32	SER
4	19	33	LEU
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	69	ARG
4	19	72	LYS
4	19	73	VAL
4	19	82	ILE
4	19	94	LEU
4	19	99	ASP
4	19	105	ILE
4	19	106	ILE
4	19	111	LEU
4	19	116	GLN
4	19	140	THR
4	19	141	VAL
4	19	147	LEU
4	19	155	LEU
4	19	166	GLN
4	19	174	ILE
4	19	182	LEU
4	19	192	THR
4	19	193	VAL
4	19	204	ILE
4	19	211	ARG
4	19	212	SER
4	19	217	ARG
4	19	218	ARG
4	19	232	PRO
4	19	237	GLU
4	19	242	ARG
4	19	244	ARG
4	19	257	LEU

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Mol	Chain	Res	Type
4	19	260	ARG
4	19	262	ARG
4	19	263	ARG
4	19	267	SER
4	19	268	ARG
4	19	270	ILE
4	19	271	ILE
12	Q8	11	LYS
12	Q8	22	VAL
12	Q8	27	THR
12	Q8	30	ARG
12	Q8	32	LEU
12	Q8	39	LYS
12	Q8	42	ARG
12	Q8	43	GLN
12	Q8	46	ARG
12	Q8	48	PHE
12	Q8	49	VAL
12	Q8	57	ARG
12	Q8	60	LEU
12	Q8	61	LEU
13	3I	7	ILE
13	3I	11	VAL
13	3I	20	LYS
13	3I	33	ARG
13	3I	53	ARG
13	3I	60	LEU
13	3I	81	SER
13	3I	82	VAL
13	3I	83	VAL
13	3I	85	ILE
13	3I	91	LYS
13	3I	92	ASP
13	3I	96	VAL
13	3I	114	LYS
13	3I	116	SER
13	3I	126	LYS
7	8A	10	VAL
7	8A	22	LEU
7	8A	24	GLU
7	8A	31	LEU
7	8A	38	ARG

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Mol	Chain	Res	Type
7	8A	52	LYS
7	8A	53	LEU
7	8A	60	ILE
7	8A	68	ARG
7	8A	75	ARG
7	8A	81	ARG
7	8A	89	LEU
7	8A	97	SER
7	8A	100	LYS
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	26	CYS
14	3E	35	ARG
14	3E	46	LYS
14	3E	47	ARG
14	3E	49	ARG
14	3E	53	ASP
14	3E	58	LEU
14	3E	61	LYS
14	3E	70	ILE
14	3E	83	SER
14	3E	84	LYS
14	3E	92	VAL
14	3E	96	LEU
14	3E	103	ASN
14	3E	108	LEU
14	3E	122	ARG
14	3E	127	THR
14	3E	135	LEU
14	3E	141	ARG
14	3E	155	LEU
14	3E	168	ARG
14	3E	170	VAL
14	3E	177	ASP
14	3E	184	LYS
9	82	7	THR
9	82	38	GLN

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Mol	Chain	Res	Type
9	82	41	VAL
9	82	42	ARG
9	82	64	THR
9	82	79	LEU
9	82	85	LEU
9	82	88	TYR
9	82	95	LYS
9	82	96	LEU
9	82	104	ARG
9	82	109	VAL
9	82	112	LYS
9	82	113	LYS
9	82	117	HIS
9	82	118	LYS
9	82	124	GLN
10	15	1	MET
10	15	5	VAL
10	15	9	VAL
10	15	16	ILE
10	15	28	THR
10	15	29	LYS
10	15	32	THR
10	15	33	LEU
10	15	34	LEU
10	15	37	LYS
10	15	42	TRP
10	15	46	VAL
10	15	48	MET
10	15	58	ASP
10	15	63	THR
10	15	67	LEU
10	15	68	GLU
10	15	85	ILE
10	15	87	LEU
10	15	91	LEU
10	15	93	THR
10	15	94	HIS
10	15	97	ARG
10	15	98	VAL
10	15	99	LEU
10	15	106	MET
10	15	127	ASP

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Mol	Chain	Res	Type
10	15	130	HIS
10	15	133	GLN
16	B8	1	MET
16	B8	7	ILE
16	B8	10	VAL
16	B8	13	ARG
16	B8	15	VAL
16	B8	16	ARG
16	B8	17	THR
16	B8	18	ASP
16	B8	21	GLU
16	B8	23	ARG
16	B8	27	THR
16	B8	30	VAL
16	B8	38	ASN
16	B8	42	ILE
16	B8	50	ILE
16	B8	55	ASN
16	B8	58	ASN
16	B8	59	THR
16	B8	62	THR
16	B8	65	LYS
16	B8	74	ARG
16	B8	78	LEU
16	B8	86	ILE
16	B8	87	ASP
16	B8	88	ILE
16	B8	89	VAL
16	B8	98	LYS
16	B8	99	LEU
16	B8	102	ILE
16	B8	105	LEU
16	B8	109	GLU
16	B8	110	ILE
16	B8	111	ARG
16	B8	112	ARG
11	C5	2	ARG
11	C5	3	VAL
11	C5	5	MET
11	C5	6	HIS
11	C5	19	LYS
11	C5	29	GLU

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Mol	Chain	Res	Type
11	C5	31	LEU
11	C5	33	LYS
11	C5	37	VAL
11	C5	38	ILE
11	C5	44	ILE
11	C5	47	LYS
11	C5	49	VAL
11	C5	51	VAL
11	C5	52	SER
11	C5	55	TYR
11	C5	61	ILE
11	C5	62	GLU
11	C5	63	LYS
11	C5	67	LEU
11	C5	70	SER
11	C5	76	CYS
11	C5	84	ARG
11	C5	85	VAL
11	C5	89	PHE
11	C5	94	LYS
11	C5	97	ARG
17	L8	6	VAL
17	L8	8	LEU
17	L8	13	ILE
17	L8	30	ARG
17	L8	31	LEU
17	L8	32	GLN
17	L8	37	LEU
17	L8	40	THR
17	L8	44	ARG
17	L8	48	GLU
17	L8	52	HIS
17	L8	56	VAL
12	M5	6	THR
12	M5	11	LYS
12	M5	23	VAL
12	M5	30	ARG
12	M5	32	LEU
12	M5	33	ASN
12	M5	34	TRP
12	M5	52	LYS
12	M5	57	ARG

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Mol	Chain	Res	Type
12	M5	58	ILE
12	M5	61	LEU
12	M5	62	LEU
18	61	6	LEU
18	61	7	GLU
18	61	9	LEU
18	61	21	VAL
18	61	35	LEU
18	61	38	LEU
18	61	40	THR
18	61	41	GLU
18	61	44	LEU
18	61	45	LYS
18	61	48	GLU
18	61	50	ARG
18	61	60	GLU
18	61	64	GLU
18	61	68	LEU
18	61	70	GLU
18	61	71	ILE
18	61	78	THR
18	61	81	VAL
18	61	82	ARG
18	61	86	THR
18	61	87	LYS
18	61	92	VAL
18	61	95	LYS
18	61	99	GLU
18	61	101	LEU
18	61	102	SER
18	61	105	HIS
18	61	110	ASP
18	61	114	LEU
18	61	117	GLU
18	61	118	LYS
18	61	120	ILE
18	61	122	GLU
18	61	135	GLU
18	61	136	VAL
18	61	139	GLN
18	61	140	LEU
18	61	142	VAL

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Mol	Chain	Res	Type
13	3A	17	LYS
13	3A	23	LYS
13	3A	27	LEU
13	3A	28	LYS
13	3A	33	ARG
13	3A	34	ARG
13	3A	39	VAL
13	3A	41	ARG
13	3A	42	THR
13	3A	54	LYS
13	3A	57	LYS
13	3A	58	VAL
13	3A	60	LEU
13	3A	78	GLN
13	3A	80	HIS
13	3A	81	SER
13	3A	83	VAL
13	3A	84	LEU
13	3A	85	ILE
13	3A	89	ARG
13	3A	96	VAL
13	3A	111	LYS
13	3A	118	SER
13	3A	122	THR
19	9I	26	LEU
19	9I	28	GLU
19	9I	31	LEU
19	9I	32	ARG
19	9I	44	LEU
19	9I	45	SER
19	9I	46	GLU
19	9I	49	LYS
19	9I	54	ARG
19	9I	56	THR
19	9I	76	LEU
19	9I	82	THR
19	9I	85	LEU
19	9I	86	VAL
14	32	3	ARG
14	32	5	ILE
14	32	8	VAL
14	32	17	VAL

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Mol	Chain	Res	Type
14	32	18	LYS
14	32	28	SER
14	32	30	LYS
14	32	36	ARG
14	32	42	GLN
14	32	58	LEU
14	32	76	ARG
14	32	81	GLU
14	32	83	SER
14	32	89	THR
14	32	94	LEU
14	32	96	LEU
14	32	108	LEU
14	32	115	ARG
14	32	118	ARG
14	32	122	ARG
14	32	127	THR
14	32	135	LEU
14	32	140	VAL
14	32	150	GLU
14	32	155	LEU
14	32	162	LEU
14	32	168	ARG
14	32	176	LEU
14	32	177	ASP
14	32	184	LYS
14	32	191	ARG
14	32	192	GLU
14	32	196	LEU
14	32	198	VAL
14	32	200	GLU
14	32	205	GLU
20	1F	12	LYS
21	68	8	LEU
21	68	9	GLU
21	68	17	ARG
21	68	22	ILE
21	68	23	ARG
21	68	24	VAL
21	68	31	LYS
21	68	38	VAL
21	68	47	ILE

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Mol	Chain	Res	Type
21	68	53	LYS
21	68	66	LYS
21	68	78	ARG
21	68	94	ARG
21	68	98	VAL
21	68	109	LYS
21	68	112	MET
21	68	113	LYS
21	68	115	VAL
16	75	6	LEU
16	75	7	ILE
16	75	8	LYS
16	75	9	LEU
16	75	11	GLU
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	29	ARG
16	75	30	VAL
16	75	34	VAL
16	75	35	LYS
16	75	36	GLU
16	75	38	ASN
16	75	49	VAL
16	75	50	ILE
16	75	51	ARG
16	75	54	ARG
16	75	63	VAL
16	75	64	ARG
16	75	66	VAL
16	75	67	SER
16	75	72	VAL
16	75	86	ILE
16	75	87	ASP
16	75	91	ARG
16	75	93	ARG
16	75	105	LEU
16	75	106	SER

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Mol	Chain	Res	Type
16	75	109	GLU
16	75	112	ARG
16	75	115	ARG
16	75	120	ARG
16	75	124	ASP
16	75	125	ARG
16	75	132	LYS
22	H8	1	MET
22	H8	5	LEU
22	H8	6	LYS
22	H8	11	GLU
22	H8	16	SER
22	H8	19	ARG
22	H8	23	LYS
22	H8	33	LEU
22	H8	37	VAL
22	H8	41	LEU
22	H8	42	VAL
22	H8	43	GLU
22	H8	53	ILE
22	H8	58	VAL
22	H8	60	GLU
22	H8	61	LEU
22	H8	71	VAL
22	H8	72	ARG
22	H8	74	VAL
22	H8	86	VAL
22	H8	91	LEU
22	H8	94	GLU
22	H8	96	VAL
22	H8	105	VAL
22	H8	116	VAL
22	H8	117	LEU
22	H8	129	SER
22	H8	145	GLU
22	H8	146	ILE
22	H8	154	ASP
22	H8	161	VAL
17	H5	5	LYS
17	H5	6	VAL
17	H5	8	LEU
17	H5	13	ILE

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Mol	Chain	Res	Type
17	H5	18	ASP
17	H5	24	LYS
17	H5	30	ARG
17	H5	31	LEU
17	H5	32	GLN
17	H5	33	GLN
17	H5	38	GLU
17	H5	44	ARG
17	H5	56	VAL
23	21	12	THR
23	21	13	ARG
23	21	14	ILE
23	21	16	ARG
23	21	19	ARG
23	21	25	VAL
23	21	26	ILE
23	21	33	VAL
23	21	34	VAL
23	21	38	THR
23	21	41	LYS
23	21	45	THR
23	21	47	VAL
23	21	49	LEU
23	21	54	GLN
23	21	55	ASN
23	21	63	LEU
23	21	64	LYS
23	21	66	HIS
23	21	74	PRO
23	21	78	LEU
23	21	87	GLU
23	21	90	THR
23	21	95	ILE
23	21	107	THR
23	21	116	VAL
23	21	119	ARG
23	21	138	PRO
23	21	146	THR
23	21	167	VAL
23	21	170	LEU
23	21	175	VAL
23	21	179	GLU

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Mol	Chain	Res	Type
23	21	181	LEU
23	21	188	VAL
23	21	195	LEU
23	21	196	VAL
23	21	197	ILE
23	21	200	GLU
23	21	201	THR
23	21	202	LYS
18	69	1	MET
18	69	6	LEU
18	69	9	LEU
18	69	37	VAL
18	69	38	LEU
18	69	44	LEU
18	69	47	LEU
18	69	51	ILE
18	69	58	LEU
18	69	60	GLU
18	69	67	ARG
18	69	69	LYS
18	69	75	LEU
18	69	77	LEU
18	69	78	THR
18	69	79	ILE
18	69	81	VAL
18	69	87	LYS
18	69	101	LEU
18	69	109	ILE
18	69	114	LEU
18	69	117	GLU
18	69	125	GLU
18	69	129	THR
18	69	131	LYS
18	69	133	HIS
18	69	135	GLU
18	69	136	VAL
18	69	138	ILE
24	4I	19	LEU
24	4I	31	LYS
24	4I	37	THR
24	4I	44	ARG
24	4I	45	VAL

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Mol	Chain	Res	Type
24	4I	54	VAL
24	4I	56	LEU
24	4I	57	ARG
24	4I	64	TRP
24	4I	67	GLU
24	4I	70	LEU
24	4I	78	ILE
24	4I	88	ARG
24	4I	99	ARG
24	4I	105	THR
24	4I	106	ASN
24	4I	108	ARG
24	4I	115	LYS
19	9A	26	LEU
19	9A	28	GLU
19	9A	29	PHE
19	9A	31	LEU
19	9A	32	ARG
19	9A	36	ASN
19	9A	44	LEU
19	9A	47	THR
19	9A	53	ARG
19	9A	54	ARG
19	9A	65	ILE
19	9A	82	THR
19	9A	84	LYS
19	9A	86	VAL
19	9A	87	ARG
25	4E	5	ASP
25	4E	9	LYS
25	4E	10	MET
25	4E	11	ILE
25	4E	12	LEU
25	4E	13	ILE
25	4E	16	THR
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	56	GLN

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Mol	Chain	Res	Type
25	4E	65	ASN
25	4E	67	VAL
25	4E	68	GLU
25	4E	71	LEU
25	4E	72	GLN
25	4E	75	THR
25	4E	80	ILE
25	4E	90	VAL
25	4E	91	LEU
25	4E	98	THR
25	4E	100	VAL
25	4E	112	LEU
25	4E	116	THR
25	4E	131	ILE
25	4E	152	ARG
25	4E	153	LYS
20	1B	9	ARG
21	25	5	GLN
21	25	8	LEU
21	25	9	GLU
21	25	10	VAL
21	25	22	ILE
21	25	24	VAL
21	25	28	SER
21	25	29	ASN
21	25	38	VAL
21	25	47	ILE
21	25	49	ARG
21	25	53	LYS
21	25	70	LYS
21	25	78	ARG
21	25	85	VAL
21	25	86	ILE
21	25	87	ILE
21	25	91	LEU
21	25	94	ARG
21	25	96	THR
21	25	97	ARG
21	25	104	ARG
21	25	108	GLU
21	25	117	LEU
27	C8	5	LYS

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Mol	Chain	Res	Type
27	C8	8	VAL
27	C8	9	VAL
27	C8	13	LYS
27	C8	31	SER
27	C8	33	ARG
27	C8	34	LYS
27	C8	60	LEU
27	C8	64	ARG
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	97	ASP
27	C8	98	LEU
27	C8	100	VAL
27	C8	104	GLN
27	C8	108	GLU
27	C8	111	GLU
22	D5	10	ARG
22	D5	16	SER
22	D5	18	LEU
22	D5	19	ARG
22	D5	24	LEU
22	D5	28	MET
22	D5	31	ARG
22	D5	32	HIS
22	D5	35	ARG
22	D5	36	LYS
22	D5	41	LEU
22	D5	42	VAL
22	D5	45	ASP
22	D5	50	GLN
22	D5	52	SER
22	D5	57	ILE
22	D5	59	LEU
22	D5	63	ASP
22	D5	70	LEU
22	D5	71	VAL
22	D5	72	ARG

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Mol	Chain	Res	Type
22	D5	73	GLN
22	D5	74	VAL
22	D5	76	LEU
22	D5	77	ASP
22	D5	90	VAL
22	D5	93	ASP
22	D5	96	VAL
22	D5	103	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	15	ILE
28	M8	20	ASN
28	M8	27	THR
28	M8	31	ILE
28	M8	38	LYS
28	M8	43	TYR
28	M8	44	THR
28	M8	46	GLN
28	M8	50	VAL
28	M8	51	ASP
28	M8	55	ARG
28	M8	61	ARG
28	M8	62	ARG
28	M8	63	TYR
28	M8	66	SER
23	29	1	MET
23	29	4	ILE
23	29	5	LEU
23	29	7	VAL
23	29	14	ILE
23	29	16	ARG
23	29	27	LEU
23	29	37	ARG
23	29	45	THR

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Mol	Chain	Res	Type
23	29	47	VAL
23	29	48	GLN
23	29	49	LEU
23	29	57	LYS
23	29	58	ARG
23	29	59	VAL
23	29	60	ASN
23	29	63	LEU
23	29	64	LYS
23	29	69	LYS
23	29	76	ARG
23	29	78	LEU
23	29	79	ARG
23	29	87	GLU
23	29	90	THR
23	29	93	VAL
23	29	97	LYS
23	29	107	THR
23	29	116	VAL
23	29	117	MET
23	29	119	ARG
23	29	121	ASN
23	29	134	ILE
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	197	ILE
23	29	201	THR
24	4A	4	ILE
24	4A	7	VAL
24	4A	9	ILE
24	4A	39	ILE
24	4A	43	THR
24	4A	47	ASP
24	4A	48	LEU
24	4A	63	THR
24	4A	66	LEU

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Mol	Chain	Res	Type
24	4A	69	GLU
24	4A	77	ASN
24	4A	79	LYS
24	4A	82	MET
24	4A	94	ARG
24	4A	101	GLN
24	4A	102	ARG
24	4A	108	ARG
29	AI	5	LEU
29	AI	6	LYS
29	AI	7	LYS
29	AI	11	VAL
29	AI	25	LYS
29	AI	27	GLU
29	AI	29	ARG
29	AI	30	LEU
29	AI	31	ILE
29	AI	32	LYS
29	AI	36	ARG
29	AI	37	ARG
29	AI	41	VAL
29	AI	43	GLU
29	AI	51	VAL
29	AI	56	GLN
29	AI	58	VAL
29	AI	61	TYR
29	AI	66	MET
29	AI	67	VAL
29	AI	78	ARG
25	42	10	MET
25	42	12	LEU
25	42	15	ARG
25	42	20	GLN
25	42	24	ARG
25	42	31	LEU
25	42	40	ARG
25	42	43	LEU
25	42	47	LYS
25	42	51	VAL
25	42	65	ASN
25	42	66	MET
25	42	68	GLU

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Mol	Chain	Res	Type
25	42	72	GLN
25	42	75	THR
25	42	78	HIS
25	42	79	GLU
25	42	82	VAL
25	42	87	SER
25	42	91	LEU
25	42	101	ILE
25	42	141	GLN
25	42	143	ARG
25	42	144	THR
25	42	148	VAL
25	42	151	LEU
30	78	1	MET
30	78	2	LYS
30	78	6	LEU
30	78	7	ARG
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	58	THR
30	78	74	GLU
30	78	75	ILE
30	78	76	LYS
30	78	77	ARG
30	78	83	VAL
30	78	88	LEU
30	78	98	GLU
30	78	99	LEU
30	78	100	LEU
30	78	101	VAL
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	132	LYS

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Mol	Chain	Res	Type
30	78	135	LEU
30	78	138	LEU
30	78	144	GLU
30	78	146	VAL
30	78	147	LEU
27	85	3	ARG
27	85	5	LYS
27	85	19	LYS
27	85	20	LEU
27	85	27	LEU
27	85	52	ARG
27	85	55	ARG
27	85	60	LEU
27	85	62	ILE
27	85	64	ARG
27	85	74	LEU
27	85	78	THR
27	85	83	LEU
27	85	92	ARG
27	85	93	LYS
27	85	97	ASP
27	85	100	VAL
27	85	101	ARG
27	85	105	VAL
27	85	111	GLU
27	85	114	LYS
31	I8	3	HIS
31	I8	31	VAL
31	I8	36	ILE
31	I8	38	VAL
31	I8	46	LYS
31	I8	66	VAL
31	I8	74	ARG
28	I5	1	MET
28	I5	8	LYS
28	I5	20	ASN
28	I5	22	ILE
28	I5	25	TYR
28	I5	30	GLU
28	I5	33	VAL
28	I5	34	GLU
28	I5	39	CYS

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Mol	Chain	Res	Type
28	I5	44	THR
28	I5	46	GLN
28	I5	55	ARG
28	I5	59	PHE
28	I5	60	GLN
28	I5	61	ARG
28	I5	62	ARG
32	31	7	TYR
32	31	8	GLN
32	31	9	ILE
32	31	12	LEU
32	31	13	SER
32	31	15	SER
32	31	17	ARG
32	31	32	LEU
32	31	33	LEU
32	31	48	THR
32	31	57	VAL
32	31	64	ILE
32	31	67	GLN
32	31	70	THR
32	31	74	ARG
32	31	78	ILE
32	31	82	ILE
32	31	93	LYS
32	31	101	LEU
32	31	117	ARG
32	31	119	ARG
32	31	127	GLU
32	31	136	THR
32	31	137	LYS
32	31	140	LEU
32	31	152	GLU
32	31	158	THR
32	31	161	GLU
32	31	165	ARG
32	31	170	LEU
32	31	174	VAL
32	31	181	LEU
32	31	183	VAL
32	31	191	ARG
32	31	192	LEU

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Mol	Chain	Res	Type
32	31	200	GLU
32	31	201	VAL
33	5I	3	ARG
33	5I	4	LYS
33	5I	8	GLU
33	5I	12	ARG
33	5I	18	VAL
33	5I	22	THR
33	5I	25	VAL
33	5I	29	ARG
33	5I	32	SER
33	5I	33	VAL
33	5I	41	ARG
33	5I	44	LEU
33	5I	46	GLU
33	5I	50	LYS
33	5I	58	LYS
29	AA	11	VAL
29	AA	13	ASP
29	AA	20	LEU
29	AA	22	LEU
29	AA	23	ASN
29	AA	28	LYS
29	AA	29	ARG
29	AA	31	ILE
29	AA	39	THR
29	AA	41	VAL
29	AA	51	VAL
29	AA	58	VAL
29	AA	60	VAL
29	AA	79	THR
29	AA	81	ARG
34	5E	21	LEU
34	5E	40	VAL
34	5E	43	LEU
34	5E	45	LEU
34	5E	54	LYS
34	5E	57	GLN
34	5E	64	GLN
34	5E	65	VAL
34	5E	70	ASP
34	5E	71	ARG

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Mol	Chain	Res	Type
34	5E	72	VAL
34	5E	75	LEU
34	5E	80	ARG
34	5E	81	ILE
34	5E	86	ARG
34	5E	91	VAL
34	5E	92	LYS
30	35	4	SER
30	35	6	LEU
30	35	15	ARG
30	35	19	VAL
30	35	21	ARG
30	35	30	THR
30	35	36	LYS
30	35	41	ARG
30	35	45	LEU
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	68	GLN
30	35	75	ILE
30	35	81	GLN
30	35	85	LEU
30	35	88	LEU
30	35	90	ARG
30	35	91	PHE
30	35	92	GLU
30	35	98	GLU
30	35	100	LEU
30	35	105	LEU
30	35	110	TYR
30	35	111	ARG
30	35	112	LEU
30	35	114	ILE
30	35	125	VAL
30	35	133	SER
30	35	138	LEU
30	35	144	GLU
30	35	146	VAL

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Mol	Chain	Res	Type
30	35	147	LEU
30	35	148	LEU
30	35	149	GLU
35	D8	5	VAL
35	D8	6	LYS
35	D8	7	THR
35	D8	12	TYR
35	D8	18	LEU
35	D8	20	LEU
35	D8	22	VAL
35	D8	24	LYS
35	D8	25	LEU
35	D8	33	VAL
35	D8	34	GLU
35	D8	35	LEU
35	D8	37	VAL
35	D8	39	LEU
35	D8	40	LEU
35	D8	44	LYS
35	D8	47	VAL
35	D8	49	THR
35	D8	51	VAL
35	D8	52	VAL
35	D8	62	LEU
35	D8	72	VAL
35	D8	73	SER
35	D8	78	LYS
35	D8	79	VAL
35	D8	89	GLN
35	D8	95	LEU
35	D8	98	GLU
31	E5	9	SER
31	E5	11	ARG
31	E5	12	ASN
31	E5	32	ARG
31	E5	36	ILE
31	E5	43	THR
31	E5	46	LYS
31	E5	49	LYS
31	E5	68	GLU
31	E5	70	GLN
31	E5	82	ARG

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Mol	Chain	Res	Type
36	N8	3	LYS
36	N8	6	VAL
36	N8	16	ARG
36	N8	29	THR
36	N8	31	VAL
36	N8	35	GLU
36	N8	40	LYS
36	N8	49	CYS
36	N8	52	TYR
36	N8	56	LYS
32	39	2	LYS
32	39	3	GLU
32	39	7	TYR
32	39	8	GLN
32	39	20	LEU
32	39	24	LEU
32	39	27	GLU
32	39	29	ASN
32	39	33	LEU
32	39	36	VAL
32	39	38	ARG
32	39	40	GLN
32	39	43	LYS
32	39	53	THR
32	39	57	VAL
32	39	67	GLN
32	39	72	ARG
32	39	74	ARG
32	39	82	ILE
32	39	88	VAL
32	39	106	ARG
32	39	110	LEU
32	39	112	MET
32	39	123	LEU
32	39	124	LEU
32	39	127	GLU
32	39	135	LYS
32	39	136	THR
32	39	140	LEU
32	39	153	SER
32	39	154	VAL
32	39	158	THR

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Mol	Chain	Res	Type
32	39	162	LEU
32	39	165	ARG
32	39	168	ARG
32	39	181	LEU
32	39	183	VAL
32	39	190	GLU
32	39	192	LEU
32	39	193	VAL
32	39	194	MET
32	39	196	LEU
32	39	200	GLU
32	39	201	VAL
32	39	205	ARG
33	5A	6	LEU
33	5A	8	GLU
33	5A	11	LYS
33	5A	12	ARG
33	5A	22	THR
33	5A	27	CYS
33	5A	31	ARG
33	5A	33	VAL
33	5A	44	LEU
33	5A	50	LYS
33	5A	58	LYS
37	BI	10	LEU
37	BI	13	LEU
37	BI	24	LEU
37	BI	33	ILE
37	BI	37	SER
37	BI	41	ILE
37	BI	50	GLU
37	BI	51	GLU
37	BI	56	MET
37	BI	57	ARG
37	BI	62	LEU
37	BI	65	LYS
37	BI	72	LEU
37	BI	75	ASN
37	BI	87	LYS
37	BI	89	ARG
37	BI	99	LEU
37	BI	100	ILE

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Mol	Chain	Res	Type
37	BI	104	LEU
34	52	1	MET
34	52	3	ARG
34	52	7	ASN
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	46	ARG
34	52	54	LYS
34	52	61	LEU
34	52	63	TYR
34	52	64	GLN
34	52	72	VAL
34	52	74	ASP
34	52	83	ASP
34	52	92	LYS
34	52	93	SER
34	52	98	LEU
38	88	1	MET
38	88	3	MET
38	88	5	ARG
38	88	6	ARG
38	88	10	ARG
38	88	11	LYS
38	88	18	LYS
38	88	25	ASP
38	88	26	TYR
38	88	35	VAL
38	88	45	GLN
38	88	48	GLU
38	88	55	VAL
38	88	56	ARG
38	88	59	ARG
38	88	79	LEU
38	88	80	GLU
38	88	81	VAL
38	88	85	LYS
38	88	91	GLU

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Mol	Chain	Res	Type
38	88	102	VAL
38	88	109	VAL
38	88	110	THR
38	88	112	GLU
38	88	115	MET
38	88	130	LYS
35	95	7	THR
35	95	10	LYS
35	95	15	GLU
35	95	19	LYS
35	95	32	THR
35	95	33	VAL
35	95	38	LEU
35	95	39	LEU
35	95	40	LEU
35	95	43	GLU
35	95	44	LYS
35	95	46	VAL
35	95	47	VAL
35	95	49	THR
35	95	52	VAL
35	95	57	VAL
35	95	62	LEU
35	95	66	ARG
35	95	68	LYS
35	95	71	LEU
35	95	76	LYS
35	95	83	ARG
35	95	84	LYS
35	95	85	LYS
35	95	95	LEU
39	J8	4	VAL
39	J8	7	ILE
39	J8	19	GLN
39	J8	21	ARG
39	J8	25	LYS
39	J8	26	ARG
39	J8	30	VAL
39	J8	41	ARG
39	J8	48	LYS
39	J8	52	ARG
39	J8	68	PRO

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Mol	Chain	Res	Type
39	J8	69	LYS
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
36	J5	6	VAL
36	J5	9	LYS
36	J5	15	ARG
36	J5	29	THR
36	J5	35	GLU
36	J5	48	GLU
36	J5	55	ARG
40	41	3	LEU
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	60	LEU
40	41	63	ILE
40	41	64	THR
40	41	67	LYS
40	41	70	VAL
40	41	72	ARG
40	41	77	ILE
40	41	80	PHE
40	41	82	LEU
40	41	84	LYS
40	41	86	MET
40	41	88	ILE
40	41	90	LEU
40	41	94	LEU
40	41	96	ARG

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Mol	Chain	Res	Type
40	41	101	ILE
40	41	105	LYS
40	41	130	ASN
40	41	139	LEU
40	41	149	VAL
40	41	161	THR
40	41	162	THR
40	41	165	THR
40	41	168	GLU
41	6I	3	ILE
41	6I	6	GLU
41	6I	10	LYS
41	6I	24	SER
41	6I	26	GLU
41	6I	39	LEU
41	6I	47	LYS
41	6I	48	LYS
41	6I	59	MET
41	6I	66	LEU
41	6I	87	ILE
37	BA	8	ARG
37	BA	10	LEU
37	BA	11	SER
37	BA	13	LEU
37	BA	24	LEU
37	BA	31	SER
37	BA	38	LYS
37	BA	41	ILE
37	BA	53	LEU
37	BA	58	LYS
37	BA	72	LEU
37	BA	74	LYS
37	BA	84	LEU
37	BA	88	VAL
37	BA	90	GLN
37	BA	93	GLU
42	6E	16	LEU
42	6E	30	ILE
42	6E	32	ARG
42	6E	38	LEU
42	6E	45	ASP
42	6E	54	THR

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Mol	Chain	Res	Type
42	6E	56	GLN
42	6E	66	VAL
42	6E	89	MET
42	6E	90	GLU
42	6E	94	ARG
42	6E	97	GLN
42	6E	104	LEU
42	6E	111	ARG
42	6E	113	GLU
42	6E	115	ARG
42	6E	118	VAL
42	6E	124	LEU
42	6E	135	VAL
42	6E	139	GLU
42	6E	143	ARG
42	6E	153	HIS
38	45	2	LEU
38	45	3	MET
38	45	5	ARG
38	45	16	ARG
38	45	22	LYS
38	45	35	VAL
38	45	45	GLN
38	45	55	VAL
38	45	59	ARG
38	45	66	ILE
38	45	75	THR
38	45	79	LEU
38	45	80	GLU
38	45	81	VAL
38	45	90	VAL
38	45	91	GLU
38	45	98	LYS
38	45	105	GLU
38	45	106	VAL
38	45	110	THR
38	45	112	GLU
38	45	116	GLU
38	45	118	LEU
38	45	125	LEU
38	45	127	ILE
38	45	133	ARG

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Mol	Chain	Res	Type
38	45	134	ARG
38	45	138	ASP
38	45	139	GLU
38	45	141	GLN
43	E8	11	ARG
43	E8	15	ARG
43	E8	18	ARG
43	E8	20	VAL
43	E8	23	LEU
43	E8	24	ILE
43	E8	28	SER
43	E8	41	LYS
43	E8	42	ARG
43	E8	51	LEU
43	E8	52	GLU
43	E8	62	HIS
43	E8	65	LEU
43	E8	67	ASP
43	E8	69	LEU
43	E8	76	VAL
43	E8	88	ARG
43	E8	96	ILE
43	E8	100	THR
43	E8	107	LEU
43	E8	111	HIS
39	F5	3	LYS
39	F5	4	VAL
39	F5	11	ARG
39	F5	19	GLN
39	F5	25	LYS
39	F5	26	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	74	VAL
39	F5	76	ARG
39	F5	78	LYS
39	F5	80	LEU
39	F5	82	LEU

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Mol	Chain	Res	Type
39	F5	83	GLU
39	F5	85	LEU
39	F5	89	GLU
39	F5	90	ILE
39	F5	91	LYS
39	F5	92	LYS
40	49	3	LEU
40	49	7	LEU
40	49	9	ARG
40	49	13	GLU
40	49	14	GLU
40	49	20	ILE
40	49	28	VAL
40	49	40	ASN
40	49	48	GLU
40	49	53	LEU
40	49	59	GLU
40	49	60	LEU
40	49	63	ILE
40	49	64	THR
40	49	67	LYS
40	49	71	THR
40	49	77	ILE
40	49	81	LYS
40	49	82	LEU
40	49	88	ILE
40	49	96	ARG
40	49	97	ASP
40	49	109	VAL
40	49	115	ARG
40	49	118	ARG
40	49	130	ASN
40	49	152	LEU
40	49	153	ARG
40	49	156	ASP
40	49	159	VAL
40	49	162	THR
40	49	165	THR
40	49	167	GLU
41	6A	5	LYS
41	6A	6	GLU
41	6A	10	LYS

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Mol	Chain	Res	Type
41	6A	17	ARG
41	6A	24	SER
41	6A	31	LEU
41	6A	38	ARG
41	6A	39	LEU
41	6A	41	GLU
41	6A	47	LYS
41	6A	48	LYS
41	6A	68	ARG
41	6A	82	ILE
41	6A	83	GLU
41	6A	84	LYS
41	6A	87	ILE
44	1E	4	GLU
44	1E	7	VAL
44	1E	8	LYS
44	1E	17	PHE
44	1E	32	ILE
44	1E	37	ASN
44	1E	39	ILE
44	1E	41	ILE
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	76	GLN
44	1E	96	ARG
44	1E	113	HIS
44	1E	121	LEU
44	1E	135	GLN
44	1E	145	LEU
44	1E	153	ARG
44	1E	155	LEU
44	1E	162	ILE
44	1E	164	VAL
44	1E	172	ILE
44	1E	178	ARG
44	1E	179	LYS

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Mol	Chain	Res	Type
44	1E	193	ASP
44	1E	196	LEU
44	1E	197	VAL
44	1E	200	ILE
44	1E	205	ASP
44	1E	215	LEU
44	1E	217	ARG
44	1E	223	ILE
44	1E	230	VAL
44	1E	231	GLU
44	1E	240	GLN
42	62	4	ARG
42	62	8	GLU
42	62	9	VAL
42	62	11	GLN
42	62	16	LEU
42	62	20	ASP
42	62	24	THR
42	62	27	ILE
42	62	31	MET
42	62	36	LYS
42	62	45	ASP
42	62	54	THR
42	62	61	VAL
42	62	63	LYS
42	62	69	VAL
42	62	73	MET
42	62	75	VAL
42	62	85	TYR
42	62	87	VAL
42	62	90	GLU
42	62	94	ARG
42	62	97	GLN
42	62	104	LEU
42	62	114	ARG
42	62	115	ARG
42	62	118	VAL
42	62	129	GLU
42	62	135	VAL
42	62	140	ASP
42	62	146	GLU
42	62	149	ARG

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Mol	Chain	Res	Type
42	62	153	HIS
45	98	4	LEU
45	98	12	ARG
45	98	18	LEU
45	98	24	GLN
45	98	28	LEU
45	98	29	LEU
45	98	30	THR
45	98	33	ARG
45	98	34	ILE
45	98	44	LEU
45	98	45	ARG
45	98	59	ASP
45	98	64	ARG
45	98	65	LEU
45	98	67	LEU
45	98	75	LEU
45	98	79	LEU
45	98	82	GLU
45	98	91	GLN
45	98	95	THR
45	98	105	ARG
45	98	114	VAL
45	98	118	GLU
43	A5	1	MET
43	A5	11	ARG
43	A5	18	ARG
43	A5	23	LEU
43	A5	37	ARG
43	A5	39	THR
43	A5	41	LYS
43	A5	51	LEU
43	A5	59	VAL
43	A5	65	LEU
43	A5	76	VAL
43	A5	95	ILE
43	A5	96	ILE
43	A5	97	LYS
43	A5	100	THR
43	A5	106	ILE
43	A5	107	LEU
46	K8	3	LEU

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Mol	Chain	Res	Type
46	K8	6	VAL
46	K8	8	LYS
46	K8	9	GLN
46	K8	15	LYS
46	K8	16	LEU
46	K8	17	SER
46	K8	23	LYS
46	K8	24	LEU
46	K8	28	LYS
46	K8	32	LEU
46	K8	34	GLU
46	K8	40	SER
46	K8	41	ILE
46	K8	43	GLN
46	K8	45	SER
46	K8	46	GLN
46	K8	48	HIS
46	K8	50	ILE
46	K8	53	LEU
46	K8	55	ARG
46	K8	59	ARG
46	K8	62	THR
46	K8	64	LEU
46	K8	65	ASN
46	K8	67	LYS
47	51	2	SER
47	51	4	ILE
47	51	6	ARG
47	51	7	LEU
47	51	10	PRO
47	51	15	VAL
47	51	23	ARG
47	51	24	VAL
47	51	37	VAL
47	51	40	GLU
47	51	44	VAL
47	51	45	VAL
47	51	50	VAL
47	51	52	VAL
47	51	53	GLU
47	51	57	ASP
47	51	58	GLU

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Mol	Chain	Res	Type
47	51	68	THR
47	51	71	LEU
47	51	77	LYS
47	51	80	SER
47	51	81	GLU
47	51	83	TYR
47	51	86	GLU
47	51	88	LEU
47	51	95	ARG
47	51	97	ARG
47	51	103	LEU
47	51	104	GLU
47	51	107	VAL
47	51	119	GLU
47	51	129	THR
47	51	130	ARG
47	51	131	VAL
47	51	132	ARG
47	51	134	SER
47	51	136	ILE
47	51	139	GLN
47	51	151	ILE
47	51	153	LYS
47	51	160	LYS
47	51	169	VAL
48	1A	5	ARG
48	1A	8	LEU
48	1A	17	ASP
48	1A	22	LYS
48	1A	23	ILE
48	1A	24	VAL
48	1A	34	VAL
48	1A	40	LEU
48	1A	46	ARG
48	1A	57	LYS
48	1A	58	ASP
48	1A	59	SER
48	1A	60	ARG
48	1A	70	ARG
48	1A	72	VAL
48	1A	75	ILE
48	1A	79	ARG

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Mol	Chain	Res	Type
48	1A	89	ASP
48	1A	96	ILE
48	1A	98	ILE
48	1A	99	LYS
48	1I	5	ARG
48	1I	29	ARG
48	1I	38	ILE
48	1I	40	LEU
48	1I	43	ARG
48	1I	44	VAL
48	1I	51	ARG
48	1I	58	ASP
48	1I	60	ARG
48	1I	62	HIS
48	1I	67	THR
48	1I	70	ARG
48	1I	72	VAL
48	1I	75	ILE
48	1I	88	LEU
48	1I	89	ASP
48	1I	92	THR
48	1I	94	VAL
48	1I	95	GLU
48	1I	96	ILE
48	1I	101	VAL
49	7I	2	VAL
49	7I	4	ILE
49	7I	8	ARG
49	7I	11	SER
49	7I	18	ARG
49	7I	20	VAL
49	7I	26	ARG
49	7I	50	LYS
49	7I	54	GLU
49	7I	67	THR
49	7I	69	THR
49	7I	72	ARG
49	7I	82	GLN
49	7I	83	GLU
44	12	5	ILE
44	12	12	GLU
44	12	15	VAL

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Mol	Chain	Res	Type
44	12	17	PHE
44	12	20	GLU
44	12	22	LYS
44	12	31	TYR
44	12	39	ILE
44	12	42	ILE
44	12	44	LEU
44	12	47	THR
44	12	48	MET
44	12	55	PHE
44	12	58	ILE
44	12	69	LEU
44	12	71	VAL
44	12	80	ILE
44	12	83	MET
44	12	84	GLU
44	12	94	ASN
44	12	98	LEU
44	12	107	THR
44	12	108	ILE
44	12	110	GLN
44	12	111	ARG
44	12	122	PHE
44	12	127	ILE
44	12	136	VAL
44	12	139	LYS
44	12	142	LEU
44	12	143	GLU
44	12	144	ARG
44	12	147	LYS
44	12	155	LEU
44	12	164	VAL
44	12	170	GLU
44	12	172	ILE
44	12	178	ARG
44	12	185	ILE
44	12	189	ASP
44	12	191	ASP
44	12	200	ILE
44	12	205	ASP
44	12	209	ARG
44	12	213	LEU

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Mol	Chain	Res	Type
44	12	219	VAL
44	12	223	ILE
50	7E	1	MET
50	7E	2	LEU
50	7E	6	ILE
50	7E	10	LEU
50	7E	24	THR
50	7E	25	ASP
50	7E	26	VAL
50	7E	39	LEU
50	7E	49	GLU
50	7E	53	VAL
50	7E	60	ARG
50	7E	68	ARG
50	7E	70	GLN
50	7E	77	GLU
50	7E	80	ILE
50	7E	84	ARG
50	7E	85	ARG
50	7E	91	ARG
50	7E	95	VAL
50	7E	98	LYS
50	7E	102	ARG
50	7E	109	ILE
50	7E	127	LEU
50	7E	137	VAL
45	55	9	LYS
45	55	15	SER
45	55	17	ARG
45	55	18	LEU
45	55	24	GLN
45	55	27	SER
45	55	28	LEU
45	55	29	LEU
45	55	34	ILE
45	55	44	LEU
45	55	54	LEU
45	55	56	LYS
45	55	63	ARG
45	55	65	LEU
45	55	67	LEU
45	55	75	LEU

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Mol	Chain	Res	Type
45	55	76	VAL
45	55	79	LEU
45	55	81	ASP
45	55	91	GLN
45	55	96	ARG
45	55	97	VAL
45	55	98	LEU
45	55	113	LEU
3	F8	2	LYS
3	F8	12	VAL
3	F8	38	GLU
3	F8	45	THR
3	F8	49	VAL
3	F8	65	ARG
3	F8	70	LEU
3	F8	72	LYS
3	F8	76	ARG
3	F8	80	ILE
3	F8	81	VAL
3	F8	87	GLN
3	F8	93	GLU
46	G5	5	GLU
46	G5	6	VAL
46	G5	10	LEU
46	G5	14	ARG
46	G5	15	LYS
46	G5	16	LEU
46	G5	17	SER
46	G5	24	LEU
46	G5	25	VAL
46	G5	27	GLU
46	G5	34	GLU
46	G5	44	LEU
46	G5	46	GLN
46	G5	47	ASN
46	G5	48	HIS
46	G5	53	LEU
46	G5	55	ARG
46	G5	60	LEU
46	G5	68	ARG
46	G5	70	GLN
5	P8	8	ASN

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Mol	Chain	Res	Type
5	P8	9	ARG
5	P8	14	LYS
5	P8	23	ARG
5	P8	24	THR
5	P8	37	LYS
5	P8	43	THR
5	P8	46	VAL
5	P8	47	ARG
47	59	3	ARG
47	59	4	ILE
47	59	6	ARG
47	59	7	LEU
47	59	11	VAL
47	59	24	VAL
47	59	26	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	49	VAL
47	59	52	VAL
47	59	62	LYS
47	59	67	LEU
47	59	68	THR
47	59	69	ARG
47	59	89	ILE
47	59	94	TYR
47	59	98	LEU
47	59	99	VAL
47	59	101	ARG
47	59	104	GLU
47	59	105	LEU
47	59	125	VAL
47	59	127	GLU
47	59	129	THR
47	59	134	SER
47	59	136	ILE
47	59	139	GLN
47	59	144	VAL

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Mol	Chain	Res	Type
47	59	147	ASN
47	59	158	HIS
47	59	167	GLU
6	2I	12	ARG
6	2I	30	VAL
6	2I	31	THR
6	2I	32	ILE
6	2I	48	ILE
6	2I	83	ILE
6	2I	84	VAL
6	2I	93	GLN
6	2I	103	LEU
6	2I	105	VAL
6	2I	106	LYS
6	2I	109	VAL
6	2I	114	VAL
49	7A	1	MET
49	7A	2	VAL
49	7A	5	ARG
49	7A	21	VAL
49	7A	25	ARG
49	7A	27	LYS
49	7A	36	ILE
49	7A	43	LYS
49	7A	54	GLU
49	7A	55	ARG
49	7A	61	SER
49	7A	67	THR
49	7A	82	GLN
8	2E	3	ASN
8	2E	4	LYS
8	2E	5	ILE
8	2E	8	ILE
8	2E	12	LEU
8	2E	14	ILE
8	2E	16	ARG
8	2E	17	ASP
8	2E	21	ARG
8	2E	30	ARG
8	2E	34	LEU
8	2E	36	ASP
8	2E	45	LYS

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Mol	Chain	Res	Type
8	2E	58	GLU
8	2E	63	ASN
8	2E	72	LYS
8	2E	79	ARG
8	2E	82	GLU
8	2E	83	ARG
8	2E	84	ILE
8	2E	99	VAL
8	2E	102	ASN
8	2E	105	GLU
8	2E	108	ASN
8	2E	111	LEU
8	2E	116	VAL
8	2E	127	ARG
8	2E	132	ARG
8	2E	138	VAL
8	2E	150	LYS
8	2E	161	GLU
8	2E	165	THR
8	2E	166	GLU
8	2E	167	TRP
8	2E	178	LEU
8	2E	179	ARG
8	2E	190	ARG
8	2E	196	LEU
8	2E	202	ILE
8	2E	206	GLU
50	72	1	MET
50	72	2	LEU
50	72	12	ARG
50	72	17	THR
50	72	18	ARG
50	72	22	GLU
50	72	26	VAL
50	72	41	ARG
50	72	51	VAL
50	72	52	ASP
50	72	73	ASP
50	72	82	HIS
50	72	91	ARG
50	72	92	ARG
50	72	97	VAL

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Mol	Chain	Res	Type
50	72	99	GLU
50	72	100	ILE
50	72	102	ARG
50	72	107	LEU
50	72	109	ILE
50	72	112	LEU
50	72	116	LYS
50	72	125	ARG
50	72	127	LEU

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (81) such sidechains are listed below:

Mol	Chain	Res	Type
2	A8	34	HIS
4	11	112	GLN
4	11	115	GLN
4	11	126	GLN
4	11	129	ASN
6	2A	38	ASN
9	8E	87	GLN
9	8E	89	ASN
10	58	94	HIS
2	65	34	HIS
2	65	84	GLN
4	19	143	HIS
4	19	220	HIS
14	3E	43	HIS
10	15	56	ASN
16	B8	55	ASN
16	B8	58	ASN
12	M5	43	GLN
14	32	77	ASN
14	32	161	ASN
21	68	5	GLN
21	68	88	ASN
16	75	38	ASN
16	75	58	ASN
23	21	55	ASN
18	69	104	GLN
24	4I	77	ASN
19	9A	63	GLN
25	4E	65	ASN

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Mol	Chain	Res	Type
21	25	5	GLN
27	C8	81	HIS
27	C8	104	GLN
22	D5	55	HIS
28	M8	6	HIS
28	M8	46	GLN
23	29	54	GLN
23	29	180	ASN
25	42	20	GLN
25	42	141	GLN
27	85	117	GLN
28	I5	20	ASN
28	I5	47	GLN
28	I5	60	GLN
34	5E	13	ASN
34	5E	64	GLN
31	E5	50	ASN
32	39	29	ASN
32	39	203	GLN
34	52	57	GLN
38	88	12	GLN
38	88	45	GLN
41	6I	50	HIS
42	6E	11	GLN
42	6E	13	GLN
38	45	45	GLN
38	45	57	HIS
43	E8	60	ASN
40	49	132	ASN
44	1E	78	GLN
42	62	13	GLN
42	62	28	ASN
45	98	24	GLN
45	98	61	HIS
43	A5	60	ASN
46	K8	38	GLN
46	K8	65	ASN
48	1I	76	ASN
49	7I	14	ASN
49	7I	16	HIS
44	12	94	ASN
45	55	13	HIS

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Mol	Chain	Res	Type
45	55	23	ASN
45	55	31	HIS
3	F8	31	HIS
3	F8	55	ASN
46	G5	65	ASN
47	59	61	HIS
47	59	147	ASN
6	2I	13	GLN
6	2I	104	GLN
8	2E	139	GLN

5.3.3 RNA (i)

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
1	13	1506/1522 (98%)	314 (20%)	31 (2%)
1	1G	1512/1522 (99%)	325 (21%)	36 (2%)
15	14	2908/2917 (99%)	651 (22%)	49 (1%)
15	1H	2911/2917 (99%)	620 (21%)	54 (1%)
26	16	121/122 (99%)	19 (15%)	0
26	1J	121/122 (99%)	29 (23%)	2 (1%)
51	Y1	24/25 (96%)	8 (33%)	3 (12%)
51	Y4	24/25 (96%)	13 (54%)	1 (4%)
52	V1	75/76 (98%)	38 (50%)	6 (8%)
52	V4	75/76 (98%)	35 (46%)	4 (5%)
52	W1	75/76 (98%)	18 (24%)	0
52	W4	75/76 (98%)	19 (25%)	0
52	X1	75/76 (98%)	20 (26%)	1 (1%)
52	X4	75/76 (98%)	20 (26%)	3 (4%)
All	All	9577/9628 (99%)	2129 (22%)	190 (1%)

All (2129) 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	667	G
1	13	678	A
1	13	685	G
1	13	694	C

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Mol	Chain	Res	Type
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	720	C
1	13	721	G
1	13	733	C
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	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
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	857	G
1	13	858	C
1	13	863	U
1	13	868	G
1	13	874	C
1	13	885	U

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Mol	Chain	Res	Type
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	911	A
1	13	914	A
1	13	922	G
1	13	930	G
1	13	940	G
1	13	957	G
1	13	958	G
1	13	962	A
1	13	969	C
1	13	970	A
1	13	971	C
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	1008	U
1	13	1013	C
1	13	1014	A
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	1051	G
1	13	1052	A
1	13	1053	A
1	13	1054	G
1	13	1055	A
1	13	1060	C

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Mol	Chain	Res	Type
1	13	1064	G
1	13	1065	G
1	13	1070	U
1	13	1071	A
1	13	1100	A
1	13	1101	C
1	13	1102	G
1	13	1115	G
1	13	1126	A
1	13	1127	U
1	13	1134	G
1	13	1140	C
1	13	1147	C
1	13	1150	G
1	13	1156	G
1	13	1160	U
1	13	1161	A
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
1	13	1225	C
1	13	1245	G
1	13	1248	U
1	13	1252	C
1	13	1259	G
1	13	1260	G
1	13	1261	A
1	13	1262	G
1	13	1268	G
1	13	1275	U
1	13	1279	G
1	13	1282	A
1	13	1294	A
1	13	1295	G
1	13	1316	A
1	13	1331	A
1	13	1333	A

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Mol	Chain	Res	Type
1	13	1351	A
1	13	1352	U
1	13	1353	G
1	13	1357	A
1	13	1377	C
1	13	1378	C
1	13	1382	A
1	13	1384	G
1	13	1388	A
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	1431	A
1	13	1438	G
1	13	1446	C
1	13	1457	A
1	13	1465	G
1	13	1468	U
1	13	1469	C
1	13	1470	U
1	13	1471	C
1	13	1476	G
1	13	1482	A
1	13	1493	U
1	13	1496	A
1	13	1497	G
1	13	1514	U
1	13	1525	G
1	13	1537	A
1	13	1549	G
1	13	1550	G
1	13	1557	C
1	13	1558	A
1	13	1563	C
1	13	1565	G
1	13	1583	U
1	13	1591	A
1	13	1592	A
1	13	1594	G

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Mol	Chain	Res	Type
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	1661	G
1	13	1665	C
1	13	1668	U
1	13	1670	G
1	13	1674	A
1	13	1681	G
1	13	1692	G
1	13	1693	U
1	13	1694	C
1	13	1709	G
1	13	1722	G
1	13	1723	U
1	13	1729	A
1	13	1750	U
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

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Mol	Chain	Res	Type
1	13	1761	G
1	13	1762	G
1	13	1764	U
1	13	1765	C
1	13	1766	G
1	13	1767	G
1	13	1772	G
1	13	1774	A
1	13	1777	C
1	13	1780	A
1	13	1782	G
1	13	1785	A
1	13	1786	C
1	13	1787	U
1	13	1804	G
1	13	1805	G
1	13	1808	G
1	13	1817	G
1	13	1818	A
1	13	1823	U
1	13	1824	G
1	13	1828	A
1	13	1839	U
1	13	1840	A
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
1	13	1884	U
1	13	1885	G
1	13	1893	G
1	13	1897	C
1	13	1900	G
1	13	1905	U
1	13	1906	A
1	13	1907	A
1	13	1908	U

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Mol	Chain	Res	Type
1	13	1909	C
1	13	1912	A
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	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	1980	G
1	13	1987	A
1	13	1990	C
1	13	1992	U
1	13	1998	G
1	13	2009	U
1	13	2010	C
1	13	2047	G
1	13	2070	G
1	13	2071	G
1	13	2072	A
1	13	2073	G
1	13	2077	A
1	13	2078	C
1	13	2079	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

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Mol	Chain	Res	Type
1	13	2140	G
1	13	2148	G
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	2163	U
1	13	2164	U
1	1G	651	U
1	1G	655	G
1	1G	668	G
1	1G	677	G
1	1G	678	A
1	1G	685	G
1	1G	693	C
1	1G	694	C
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	734	G
1	1G	736	G
1	1G	739	C
1	1G	740	A
1	1G	747	G
1	1G	755	A
1	1G	760	C
1	1G	771	C
1	1G	784	G
1	1G	803	C
1	1G	809	C
1	1G	813	U
1	1G	814	C
1	1G	822	U

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Mol	Chain	Res	Type
1	1G	825	A
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	854	U
1	1G	855	U
1	1G	856	U
1	1G	857	G
1	1G	872	G
1	1G	885	U
1	1G	888	G
1	1G	891	A
1	1G	892	G
1	1G	907	G
1	1G	908	C
1	1G	911	A
1	1G	922	G
1	1G	930	G
1	1G	955	C
1	1G	957	G
1	1G	960	G
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	1029	G

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Mol	Chain	Res	Type
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	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
1	1G	1105	G
1	1G	1108	A
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	1159	G
1	1G	1160	U
1	1G	1161	A
1	1G	1162	A
1	1G	1176	A
1	1G	1188	A
1	1G	1190	U
1	1G	1201	A
1	1G	1202	A

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Mol	Chain	Res	Type
1	1G	1205	G
1	1G	1206	G
1	1G	1210	G
1	1G	1236	A
1	1G	1244	C
1	1G	1251	A
1	1G	1259	G
1	1G	1261	A
1	1G	1262	G
1	1G	1268	G
1	1G	1280	C
1	1G	1282	A
1	1G	1287	G
1	1G	1294	A
1	1G	1295	G
1	1G	1300	G
1	1G	1316	A
1	1G	1317	G
1	1G	1332	G
1	1G	1333	A
1	1G	1351	A
1	1G	1352	U
1	1G	1353	G
1	1G	1357	A
1	1G	1360	G
1	1G	1378	C
1	1G	1379	G
1	1G	1383	C
1	1G	1384	G
1	1G	1406	A
1	1G	1421	A
1	1G	1423	A
1	1G	1441	C
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

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Mol	Chain	Res	Type
1	1G	1470	U
1	1G	1471	C
1	1G	1482	A
1	1G	1496	A
1	1G	1510	G
1	1G	1537	A
1	1G	1539	G
1	1G	1549	G
1	1G	1550	G
1	1G	1557	C
1	1G	1558	A
1	1G	1571	C
1	1G	1581	A
1	1G	1583	U
1	1G	1584	U
1	1G	1591	A
1	1G	1592	A
1	1G	1594	G
1	1G	1595	C
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	1612	C
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

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Mol	Chain	Res	Type
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	1671	C
1	1G	1681	G
1	1G	1682	C
1	1G	1684	U
1	1G	1691	C
1	1G	1709	G
1	1G	1722	G
1	1G	1723	U
1	1G	1724	C
1	1G	1729	A
1	1G	1743	C
1	1G	1746	C
1	1G	1751	A
1	1G	1753	U
1	1G	1755	G
1	1G	1756	C
1	1G	1757	C
1	1G	1758	A
1	1G	1759	G
1	1G	1763	U
1	1G	1764	U
1	1G	1765	C
1	1G	1766	G
1	1G	1767	G
1	1G	1768	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	1810	A

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Mol	Chain	Res	Type
1	1G	1811	G
1	1G	1812	G
1	1G	1817	G
1	1G	1823	U
1	1G	1824	G
1	1G	1827	C
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	1853	C
1	1G	1854	A
1	1G	1863	A
1	1G	1865	A
1	1G	1867	U
1	1G	1868	G
1	1G	1882	G
1	1G	1884	U
1	1G	1885	G
1	1G	1887	C
1	1G	1890	C
1	1G	1894	C
1	1G	1896	A
1	1G	1897	C
1	1G	1902	A
1	1G	1905	U
1	1G	1906	A
1	1G	1907	A
1	1G	1913	A
1	1G	1914	A
1	1G	1915	A
1	1G	1922	G
1	1G	1924	C
1	1G	1925	C
1	1G	1926	A
1	1G	1928	U
1	1G	1929	U
1	1G	1932	G
1	1G	1933	A

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Mol	Chain	Res	Type
1	1G	1939	G
1	1G	1944	C
1	1G	1946	A
1	1G	1947	C
1	1G	1949	C
1	1G	1950	G
1	1G	1956	A
1	1G	1958	G
1	1G	1962	C
1	1G	1973	A
1	1G	1974	G
1	1G	1980	G
1	1G	1992	U
1	1G	1998	G
1	1G	2007	G
1	1G	2025	C
1	1G	2026	A
1	1G	2034	U
1	1G	2047	G
1	1G	2070	G
1	1G	2071	G
1	1G	2072	A
1	1G	2073	G
1	1G	2076	U
1	1G	2077	A
1	1G	2078	C
1	1G	2079	G
1	1G	2092	G
1	1G	2115	A
1	1G	2121	U
1	1G	2122	A
1	1G	2125	A
1	1G	2127	G
1	1G	2129	U
1	1G	2140	G
1	1G	2142	A
1	1G	2143	G
1	1G	2148	G
1	1G	2152	G
1	1G	2153	G
1	1G	2154	A
1	1G	2161	C

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Mol	Chain	Res	Type
1	1G	2164	U
15	1H	2	G
15	1H	5	A
15	1H	7	G
15	1H	9	U
15	1H	10	G
15	1H	12	U
15	1H	33	U
15	1H	34	C
15	1H	36	G
15	1H	45	C
15	1H	70	A
15	1H	73	A
15	1H	74	G
15	1H	84	G
15	1H	93	G
15	1H	94	G
15	1H	116	A
15	1H	117	A
15	1H	118	U
15	1H	123	G
15	1H	137	G
15	1H	155	C
15	1H	158	U
15	1H	159	U
15	1H	161	G
15	1H	171	A
15	1H	178	G
15	1H	186	A
15	1H	187	A
15	1H	189	A
15	1H	203	A
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

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Mol	Chain	Res	Type
15	1H	239	C
15	1H	240	G
15	1H	242	G
15	1H	251	G
15	1H	259	U
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	358	G
15	1H	359	C
15	1H	367	G
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	410	G
15	1H	414	G
15	1H	417	G
15	1H	424	G
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

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Mol	Chain	Res	Type
15	1H	475	A
15	1H	476	U
15	1H	483	C
15	1H	485	A
15	1H	498	A
15	1H	499	A
15	1H	509	G
15	1H	510	A
15	1H	518	G
15	1H	528	A
15	1H	529	A
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	598	G
15	1H	600	A
15	1H	605	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
15	1H	639	U
15	1H	641	G
15	1H	643	G
15	1H	646	G
15	1H	648	A
15	1H	649	G
15	1H	654	A
15	1H	659	A

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Mol	Chain	Res	Type
15	1H	664	A
15	1H	671	A
15	1H	672	C
15	1H	673	A
15	1H	681	A
15	1H	683	C
15	1H	687	C
15	1H	689	G
15	1H	690	C
15	1H	691	A
15	1H	692	C
15	1H	694	C
15	1H	696	G
15	1H	703	A
15	1H	713	C
15	1H	734	A
15	1H	735	G
15	1H	739	G
15	1H	766	G
15	1H	779	C
15	1H	787	G
15	1H	794	G
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	838	A
15	1H	839	C
15	1H	841	G
15	1H	854	G
15	1H	861	C
15	1H	876	U
15	1H	877	U
15	1H	879	G
15	1H	895	C
15	1H	896	U
15	1H	907	U

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Mol	Chain	Res	Type
15	1H	908	G
15	1H	915	A
15	1H	927	A
15	1H	931	G
15	1H	932	G
15	1H	933	C
15	1H	934	C
15	1H	937	C
15	1H	939	A
15	1H	940	G
15	1H	941	C
15	1H	943	U
15	1H	944	A
15	1H	955	U
15	1H	958	A
15	1H	965	A
15	1H	974	A
15	1H	979	G
15	1H	988	A
15	1H	993	G
15	1H	1005	U
15	1H	1006	A
15	1H	1008	C
15	1H	1015	G
15	1H	1021	G
15	1H	1022	C
15	1H	1031	A
15	1H	1044	A
15	1H	1051	G
15	1H	1053	C
15	1H	1059	G
15	1H	1060	U
15	1H	1061	C
15	1H	1070	G
15	1H	1071	U
15	1H	1073	G
15	1H	1074	U
15	1H	1075	A
15	1H	1079	G
15	1H	1081	U
15	1H	1085	G
15	1H	1086	C

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Mol	Chain	Res	Type
15	1H	1089	C
15	1H	1094	A
15	1H	1095	G
15	1H	1103	G
15	1H	1104	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	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	1143	A
15	1H	1144	A
15	1H	1145	U
15	1H	1152	C
15	1H	1159	A
15	1H	1160	G
15	1H	1177	A
15	1H	1179	G
15	1H	1183	C
15	1H	1184	G
15	1H	1187	G
15	1H	1190	U
15	1H	1191	A

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Mol	Chain	Res	Type
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	1238	G
15	1H	1243	G
15	1H	1252	A
15	1H	1253	U
15	1H	1266	C
15	1H	1268	A
15	1H	1269	C
15	1H	1273	C
15	1H	1276	G
15	1H	1279	C
15	1H	1286	A
15	1H	1293	G
15	1H	1302	A
15	1H	1305	G
15	1H	1314	A
15	1H	1316	U
15	1H	1317	A
15	1H	1320	G
15	1H	1321	A
15	1H	1324	A
15	1H	1331	U
15	1H	1349	U
15	1H	1350	A
15	1H	1352	G
15	1H	1362	U
15	1H	1363	C
15	1H	1378	U
15	1H	1391	A
15	1H	1398	A
15	1H	1401	U
15	1H	1408	A
15	1H	1409	A
15	1H	1414	A

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Mol	Chain	Res	Type
15	1H	1419	C
15	1H	1427	A
15	1H	1428	A
15	1H	1429	G
15	1H	1433	A
15	1H	1434	G
15	1H	1435	C
15	1H	1444	A
15	1H	1445	U
15	1H	1446	U
15	1H	1465	G
15	1H	1466	C
15	1H	1469	U
15	1H	1470	G
15	1H	1477	C
15	1H	1486	C
15	1H	1494	A
15	1H	1499	A
15	1H	1500	G
15	1H	1503	A
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	1532	G
15	1H	1538	U
15	1H	1542	C
15	1H	1543	A
15	1H	1544	A
15	1H	1546	U
15	1H	1557	A
15	1H	1559	A
15	1H	1560	A
15	1H	1566	G
15	1H	1571	G
15	1H	1574	G
15	1H	1583	G
15	1H	1584	U
15	1H	1585	A

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Mol	Chain	Res	Type
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	1605	G
15	1H	1608	A
15	1H	1609	G
15	1H	1610	G
15	1H	1616	A
15	1H	1619	A
15	1H	1628	U
15	1H	1630	A
15	1H	1634	C
15	1H	1635	A
15	1H	1636	A
15	1H	1643	G
15	1H	1649	C
15	1H	1657	A
15	1H	1658	A
15	1H	1659	A
15	1H	1665	A
15	1H	1666	C
15	1H	1678	U
15	1H	1684	A
15	1H	1697	G
15	1H	1698	C
15	1H	1701	G
15	1H	1724	G
15	1H	1725	C
15	1H	1735	C
15	1H	1769	G
15	1H	1770	A
15	1H	1771	U
15	1H	1773	A
15	1H	1790	G
15	1H	1796	A
15	1H	1797	G
15	1H	1798	G
15	1H	1807	A

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Mol	Chain	Res	Type
15	1H	1819	A
15	1H	1825	A
15	1H	1833	G
15	1H	1834	C
15	1H	1835	G
15	1H	1845	G
15	1H	1850	G
15	1H	1853	A
15	1H	1881	A
15	1H	1892	G
15	1H	1893	A
15	1H	1894	G
15	1H	1914	A
15	1H	1920	C
15	1H	1921	G
15	1H	1925	A
15	1H	1926	A
15	1H	1931	G
15	1H	1939	C
15	1H	1944	A
15	1H	1954	G
15	1H	1955	G
15	1H	1956	U
15	1H	1957	A
15	1H	1961	A
15	1H	1963	A
15	1H	1977	A
15	1H	1980	U
15	1H	1988	U
15	1H	1990	C
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	2008	C
15	1H	2011	A
15	1H	2017	G
15	1H	2018	U
15	1H	2045	A
15	1H	2046	C

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Mol	Chain	Res	Type
15	1H	2048	G
15	1H	2056	A
15	1H	2057	G
15	1H	2058	A
15	1H	2068	C
15	1H	2080	C
15	1H	2081	G
15	1H	2085	A
15	1H	2086	G
15	1H	2087	A
15	1H	2094	G
15	1H	2095	G
15	1H	2110	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	2142	A
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	2154	C
15	1H	2156	G
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	2169	U
15	1H	2170	C
15	1H	2172	G
15	1H	2173	G
15	1H	2176	G
15	1H	2182	G

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Mol	Chain	Res	Type
15	1H	2183	A
15	1H	2187	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	2216	G
15	1H	2223	A
15	1H	2225	C
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	2253	G
15	1H	2255	C
15	1H	2282	A
15	1H	2284	A
15	1H	2288	A
15	1H	2290	C
15	1H	2295	G
15	1H	2298	C
15	1H	2301	A
15	1H	2302	A
15	1H	2303	A
15	1H	2320	A
15	1H	2322	G
15	1H	2323	G
15	1H	2324	A
15	1H	2325	A
15	1H	2326	A
15	1H	2327	U
15	1H	2329	C
15	1H	2334	G

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Mol	Chain	Res	Type
15	1H	2335	A
15	1H	2336	G
15	1H	2337	A
15	1H	2339	C
15	1H	2340	G
15	1H	2341	C
15	1H	2342	A
15	1H	2350	A
15	1H	2351	A
15	1H	2357	C
15	1H	2358	C
15	1H	2361	A
15	1H	2362	C
15	1H	2365	C
15	1H	2376	A
15	1H	2392	A
15	1H	2398	G
15	1H	2400	C
15	1H	2407	A
15	1H	2408	A
15	1H	2410	C
15	1H	2421	U
15	1H	2425	G
15	1H	2439	C
15	1H	2440	A
15	1H	2444	G
15	1H	2445	A
15	1H	2446	U
15	1H	2450	A
15	1H	2454	A
15	1H	2455	C
15	1H	2456	C
15	1H	2463	A
15	1H	2483	G
15	1H	2484	A
15	1H	2490	C
15	1H	2491	A
15	1H	2493	A
15	1H	2495	C
15	1H	2517	G
15	1H	2520	G
15	1H	2521	U

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Mol	Chain	Res	Type
15	1H	2522	C
15	1H	2533	A
15	1H	2544	G
15	1H	2564	G
15	1H	2569	U
15	1H	2581	A
15	1H	2582	G
15	1H	2588	C
15	1H	2599	U
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	2661	C
15	1H	2669	A
15	1H	2676	G
15	1H	2680	A
15	1H	2684	G
15	1H	2688	G
15	1H	2704	U
15	1H	2705	C
15	1H	2717	U
15	1H	2720	A
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	2760	G
15	1H	2773	A
15	1H	2774	A
15	1H	2778	G
15	1H	2780	A
15	1H	2781	A
15	1H	2782	G

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Mol	Chain	Res	Type
15	1H	2794	A
15	1H	2795	U
15	1H	2803	C
15	1H	2805	C
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	2827	C
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	2862	U
15	1H	2885	G
15	1H	2886	A
15	1H	2904	A
15	1H	2905	G
15	1H	2907	U
15	1H	2911	G
15	1H	2912	A
15	1H	2913	C
15	1H	2914	C
15	14	3	U
15	14	4	C
15	14	5	A
15	14	9	U
15	14	13	A
15	14	34	C
15	14	35	G
15	14	36	G
15	14	45	C

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Mol	Chain	Res	Type
15	14	48	A
15	14	49	U
15	14	57	G
15	14	60	G
15	14	70	A
15	14	71	U
15	14	73	A
15	14	74	G
15	14	77	A
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	110	U
15	14	117	A
15	14	118	U
15	14	123	G
15	14	127	C
15	14	139	A
15	14	152	G
15	14	154	G
15	14	155	C
15	14	156	U
15	14	157	U
15	14	162	C
15	14	163	G
15	14	164	C
15	14	165	G
15	14	172	A
15	14	178	G
15	14	186	A
15	14	187	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

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Mol	Chain	Res	Type
15	14	219	A
15	14	222	G
15	14	223	A
15	14	238	G
15	14	239	C
15	14	240	G
15	14	271	C
15	14	272	U
15	14	273	U
15	14	275	U
15	14	276	C
15	14	288	G
15	14	290	G
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
15	14	304	C
15	14	314	A
15	14	335	A
15	14	336	A
15	14	349	A
15	14	352	G
15	14	354	G
15	14	355	A
15	14	377	G
15	14	387	U
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

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Mol	Chain	Res	Type
15	14	444	C
15	14	457	A
15	14	471	A
15	14	472	C
15	14	476	U
15	14	482	A
15	14	483	C
15	14	484	C
15	14	485	A
15	14	498	A
15	14	509	G
15	14	528	A
15	14	531	U
15	14	532	A
15	14	536	C
15	14	540	A
15	14	555	A
15	14	556	A
15	14	558	C
15	14	559	A
15	14	560	G
15	14	563	A
15	14	575	G
15	14	581	G
15	14	588	G
15	14	593	U
15	14	598	G
15	14	600	A
15	14	605	C
15	14	611	A
15	14	628	A
15	14	632	U
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	672	C
15	14	673	A

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Mol	Chain	Res	Type
15	14	681	A
15	14	685	G
15	14	689	G
15	14	690	C
15	14	693	G
15	14	694	C
15	14	695	G
15	14	701	A
15	14	735	G
15	14	758	U
15	14	764	G
15	14	766	G
15	14	770	C
15	14	771	A
15	14	779	C
15	14	790	G
15	14	801	A
15	14	802	C
15	14	811	U
15	14	813	A
15	14	814	G
15	14	820	G
15	14	824	G
15	14	825	G
15	14	828	U
15	14	831	A
15	14	833	A
15	14	834	G
15	14	836	U
15	14	841	G
15	14	846	C
15	14	854	G
15	14	861	C
15	14	865	C
15	14	868	A
15	14	871	U
15	14	876	U
15	14	877	U
15	14	879	G
15	14	880	G
15	14	881	G
15	14	889	C

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Mol	Chain	Res	Type
15	14	895	C
15	14	907	U
15	14	908	G
15	14	912	A
15	14	915	A
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	965	A
15	14	967	G
15	14	972	C
15	14	974	A
15	14	979	G
15	14	980	A
15	14	985	G
15	14	988	A
15	14	992	A
15	14	993	G
15	14	1008	C
15	14	1015	G
15	14	1021	G
15	14	1022	C
15	14	1031	A
15	14	1037	G
15	14	1038	A
15	14	1039	C
15	14	1044	A
15	14	1057	A
15	14	1060	U
15	14	1061	C
15	14	1070	G
15	14	1071	U
15	14	1072	G
15	14	1073	G
15	14	1074	U
15	14	1075	A

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Mol	Chain	Res	Type
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	1097	C
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	1121	A
15	14	1125	A
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	1137	G
15	14	1138	U
15	14	1139	G
15	14	1141	G
15	14	1143	A
15	14	1144	A
15	14	1145	U
15	14	1147	G
15	14	1153	U
15	14	1159	A
15	14	1160	G
15	14	1170	G
15	14	1176	A
15	14	1177	A
15	14	1178	U

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Mol	Chain	Res	Type
15	14	1183	C
15	14	1184	G
15	14	1185	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	1221	G
15	14	1222	A
15	14	1223	U
15	14	1225	A
15	14	1226	C
15	14	1234	G
15	14	1252	A
15	14	1253	U
15	14	1259	U
15	14	1260	G
15	14	1268	A
15	14	1286	A
15	14	1293	G
15	14	1298	U
15	14	1302	A
15	14	1305	G
15	14	1316	U
15	14	1317	A
15	14	1320	G
15	14	1321	A
15	14	1322	U
15	14	1324	A
15	14	1333	A
15	14	1349	U
15	14	1350	A
15	14	1355	C
15	14	1362	U
15	14	1381	G
15	14	1394	C
15	14	1397	G
15	14	1398	A
15	14	1408	A
15	14	1414	A

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Mol	Chain	Res	Type
15	14	1417	G
15	14	1418	G
15	14	1419	C
15	14	1426	G
15	14	1427	A
15	14	1428	A
15	14	1429	G
15	14	1434	G
15	14	1435	C
15	14	1442	A
15	14	1449	G
15	14	1455	U
15	14	1456	C
15	14	1464	U
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	1485	G
15	14	1486	C
15	14	1494	A
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	1509	G
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	1530	G
15	14	1531	U
15	14	1532	G
15	14	1539	A
15	14	1542	C
15	14	1543	A

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Mol	Chain	Res	Type
15	14	1557	A
15	14	1558	C
15	14	1559	A
15	14	1571	G
15	14	1577	A
15	14	1582	C
15	14	1583	G
15	14	1584	U
15	14	1586	C
15	14	1592	A
15	14	1604	A
15	14	1605	G
15	14	1608	A
15	14	1609	G
15	14	1610	G
15	14	1616	A
15	14	1619	A
15	14	1628	U
15	14	1634	C
15	14	1635	A
15	14	1636	A
15	14	1637	C
15	14	1646	A
15	14	1647	C
15	14	1657	A
15	14	1658	A
15	14	1659	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	1725	C
15	14	1750	A
15	14	1751	A
15	14	1753	G
15	14	1766	G
15	14	1767	G
15	14	1770	A
15	14	1771	U

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Mol	Chain	Res	Type
15	14	1772	G
15	14	1773	A
15	14	1779	G
15	14	1787	G
15	14	1796	A
15	14	1797	G
15	14	1798	G
15	14	1807	A
15	14	1813	U
15	14	1814	A
15	14	1816	C
15	14	1825	A
15	14	1834	C
15	14	1835	G
15	14	1845	G
15	14	1850	G
15	14	1863	A
15	14	1873	G
15	14	1881	A
15	14	1882	A
15	14	1892	G
15	14	1903	G
15	14	1913	G
15	14	1914	A
15	14	1925	A
15	14	1931	G
15	14	1934	C
15	14	1954	G
15	14	1955	G
15	14	1956	U
15	14	1961	A
15	14	1980	U
15	14	1985	A
15	14	1988	U
15	14	1989	G
15	14	1992	C
15	14	1995	A
15	14	1996	A
15	14	1997	A
15	14	2009	G
15	14	2017	G
15	14	2018	U

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Mol	Chain	Res	Type
15	14	2041	U
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	2084	A
15	14	2085	A
15	14	2086	G
15	14	2087	A
15	14	2094	G
15	14	2095	G
15	14	2097	G
15	14	2107	A
15	14	2118	G
15	14	2122	C
15	14	2124	U
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

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Mol	Chain	Res	Type
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	2178	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
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	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	2274	G
15	14	2284	A
15	14	2290	C
15	14	2291	G
15	14	2293	A
15	14	2298	C

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Mol	Chain	Res	Type
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	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	2351	A
15	14	2361	A
15	14	2362	C
15	14	2365	C
15	14	2369	G
15	14	2398	G
15	14	2400	C
15	14	2403	A
15	14	2408	A
15	14	2411	G
15	14	2414	G
15	14	2416	U
15	14	2417	C
15	14	2418	C
15	14	2421	U
15	14	2422	G
15	14	2426	A
15	14	2428	G
15	14	2429	G
15	14	2437	A
15	14	2439	C
15	14	2440	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

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Mol	Chain	Res	Type
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	2498	C
15	14	2499	G
15	14	2509	G
15	14	2510	G
15	14	2517	G
15	14	2520	G
15	14	2533	A
15	14	2535	C
15	14	2544	G
15	14	2547	G
15	14	2556	A
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	2594	C
15	14	2597	G
15	14	2617	A
15	14	2624	U
15	14	2626	U
15	14	2627	C
15	14	2628	U
15	14	2630	U
15	14	2645	G
15	14	2651	U
15	14	2653	G
15	14	2661	C
15	14	2675	A
15	14	2679	G

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Mol	Chain	Res	Type
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	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	2778	G
15	14	2781	A
15	14	2782	G
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	2810	C
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	2836	A
15	14	2846	G
15	14	2847	G
15	14	2848	A
15	14	2849	U

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Mol	Chain	Res	Type
15	14	2852	G
15	14	2857	G
15	14	2858	G
15	14	2873	A
15	14	2885	G
15	14	2892	C
15	14	2893	C
15	14	2902	C
15	14	2906	G
15	14	2908	C
15	14	2910	U
15	14	2911	G
26	16	2	A
26	16	9	G
26	16	10	U
26	16	15	A
26	16	17	A
26	16	27	A
26	16	33	C
26	16	40	C
26	16	42	U
26	16	43	U
26	16	47	A
26	16	58	G
26	16	60	A
26	16	67	C
26	16	75	A
26	16	76	U
26	16	108	G
26	16	112	G
26	16	122	A
26	1J	2	A
26	1J	7	C
26	1J	10	U
26	1J	11	G
26	1J	15	A
26	1J	17	A
26	1J	18	G
26	1J	24	U
26	1J	28	A
26	1J	32	C
26	1J	42	U

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Mol	Chain	Res	Type
26	1J	44	C
26	1J	47	A
26	1J	49	C
26	1J	55	A
26	1J	58	G
26	1J	60	A
26	1J	61	A
26	1J	63	G
26	1J	75	A
26	1J	76	U
26	1J	83	G
26	1J	90	C
26	1J	91	G
26	1J	92	A
26	1J	93	C
26	1J	102	A
26	1J	111	C
26	1J	112	G
51	Y1	30	C
51	Y1	32	A
51	Y1	33	G
51	Y1	34	G
51	Y1	36	G
51	Y1	37	G
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	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	74	C

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Mol	Chain	Res	Type
52	W1	75	C
52	W1	76	A
52	X1	2	C
52	X1	13	C
52	X1	14	A
52	X1	17	C
52	X1	18	G
52	X1	20	U
52	X1	21	A
52	X1	22	G
52	X1	30	G
52	X1	37	A
52	X1	44	G
52	X1	45	U
52	X1	46	G
52	X1	48	C
52	X1	58	A
52	X1	61	C
52	X1	64	A
52	X1	69	G
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
52	V1	42	C
52	V1	43	C

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Mol	Chain	Res	Type
52	V1	44	G
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	74	C
52	V1	76	A
51	Y4	31	A
51	Y4	35	A
51	Y4	37	G
51	Y4	38	U
51	Y4	39	U
51	Y4	41	U
51	Y4	42	U
51	Y4	43	U
51	Y4	44	U
51	Y4	45	U
51	Y4	49	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	41	C
52	W4	47	U
52	W4	49	C

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Mol	Chain	Res	Type
52	W4	56	C
52	W4	64	A
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	41	C
52	X4	42	C
52	X4	43	C
52	X4	44	G
52	X4	45	U
52	X4	46	G
52	X4	48	C
52	X4	49	C
52	X4	58	A
52	X4	70	G
52	X4	74	C
52	X4	76	A
52	V4	3	C
52	V4	4	C
52	V4	8	U
52	V4	9	A
52	V4	10	G
52	V4	13	C
52	V4	14	A
52	V4	17	C
52	V4	19	G
52	V4	21	A
52	V4	22	G
52	V4	26	A
52	V4	31	A
52	V4	32	U

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Mol	Chain	Res	Type
52	V4	33	U
52	V4	34	G
52	V4	35	A
52	V4	37	A
52	V4	38	A
52	V4	42	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	73	A
52	V4	76	A

All (190) RNA pucker outliers are listed below:

Mol	Chain	Res	Type
1	13	651	U
1	13	696	A
1	13	754	G
1	13	803	C
1	13	821	G
1	13	885	U
1	13	892	G
1	13	907	G
1	13	1053	A
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

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Mol	Chain	Res	Type
1	13	1651	C
1	13	1692	G
1	13	1693	U
1	13	1773	C
1	13	1804	G
1	13	1867	U
1	13	1912	A
1	13	1927	G
1	13	1963	C
1	13	2071	G
1	13	2078	C
1	13	2121	U
1	13	2126	A
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	968	A
1	1G	986	C
1	1G	1053	A
1	1G	1070	U
1	1G	1115	G
1	1G	1138	A
1	1G	1157	C
1	1G	1189	U
1	1G	1204	G
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	1597	A
1	1G	1615	U
1	1G	1649	U
1	1G	1681	G
1	1G	1756	C
1	1G	1773	C
1	1G	1785	A
1	1G	1852	A

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Mol	Chain	Res	Type
1	1G	1912	A
1	1G	1925	C
1	1G	1927	G
1	1G	1928	U
1	1G	1973	A
1	1G	2025	C
1	1G	2121	U
1	1G	2152	G
15	1H	33	U
15	1H	185	A
15	1H	186	A
15	1H	239	C
15	1H	288	G
15	1H	432	C
15	1H	509	G
15	1H	535	G
15	1H	555	A
15	1H	612	C
15	1H	734	A
15	1H	787	G
15	1H	801	A
15	1H	813	A
15	1H	825	G
15	1H	907	U
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	1176	A
15	1H	1226	C
15	1H	1361	U
15	1H	1427	A
15	1H	1428	A
15	1H	1445	U
15	1H	1469	U
15	1H	1608	A
15	1H	1657	A
15	1H	1658	A

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Mol	Chain	Res	Type
15	1H	1666	C
15	1H	1770	A
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	2232	A
15	1H	2290	C
15	1H	2334	G
15	1H	2361	A
15	1H	2454	A
15	1H	2490	C
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	484	C
15	14	498	A
15	14	640	U
15	14	734	A
15	14	801	A
15	14	813	A
15	14	1021	G
15	14	1038	A
15	14	1059	G
15	14	1070	G
15	14	1133	A
15	14	1427	A
15	14	1428	A
15	14	1469	U

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Mol	Chain	Res	Type
15	14	1608	A
15	14	1657	A
15	14	1658	A
15	14	1697	G
15	14	1772	G
15	14	1961	A
15	14	1988	U
15	14	2182	G
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	2425	G
15	14	2437	A
15	14	2443	G
15	14	2454	A
15	14	2533	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	2872	G
15	14	2905	G
26	1J	17	A
26	1J	90	C
51	Y1	31	A
51	Y1	36	G
51	Y1	42	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
51	Y4	44	U
52	X4	18	G
52	X4	43	C

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Mol	Chain	Res	Type
52	X4	48	C
52	V4	8	U
52	V4	18	G
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 oligosaccharides in this entry.

5.6 Ligand geometry (i)

Of 1656 ligands modelled in this entry, 1652 are monoatomic - leaving 4 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	13	2202	54	34,35,35	0.34	0	50,52,52	1.56	3 (6%)
53	8UZ	1G	2202	54	34,35,35	0.16	0	50,52,52	0.85	3 (6%)
53	8UZ	1G	2201	-	34,35,35	0.33	0	50,52,52	1.25	2 (4%)
53	8UZ	13	2201	-	34,35,35	0.41	0	50,52,52	1.27	4 (8%)

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	13	2202	54	-	2/12/72/72	0/3/3/3

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
53	8UZ	1G	2202	54	-	3/12/72/72	0/3/3/3
53	8UZ	1G	2201	-	-	4/12/72/72	0/3/3/3
53	8UZ	13	2201	-	-	0/12/72/72	0/3/3/3

There are no bond length outliers.

All (12) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
53	13	2202	8UZ	C10-C12-C13	8.95	120.57	110.67
53	1G	2201	8UZ	C10-C12-C13	6.12	117.44	110.67
53	13	2201	8UZ	O1-C2-C15	-4.46	100.78	108.08
53	13	2202	8UZ	O1-C2-C15	-3.55	102.26	108.08
53	1G	2202	8UZ	C2-C15-N4	2.88	115.40	110.20
53	1G	2202	8UZ	C10-C12-C13	2.71	113.67	110.67
53	13	2202	8UZ	C2-C15-N4	2.59	114.87	110.20
53	13	2201	8UZ	C17-C16-C15	2.37	114.93	110.99
53	1G	2201	8UZ	O2-C7-C8	2.18	115.53	109.94
53	13	2201	8UZ	O6-C12-C10	-2.17	103.99	109.32
53	13	2201	8UZ	C2-C15-C16	2.15	115.67	110.29
53	1G	2202	8UZ	O1-C2-C15	-2.07	104.69	108.08

There are no chirality outliers.

All (9) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
53	1G	2202	8UZ	N-C-C1-C17
53	1G	2202	8UZ	N-C-C1-O
53	13	2202	8UZ	C12-C10-C11-O5
53	13	2202	8UZ	O4-C10-C11-O5
53	1G	2201	8UZ	N-C-C1-O
53	1G	2201	8UZ	O4-C10-C11-O5
53	1G	2202	8UZ	C15-C2-O1-C3
53	1G	2201	8UZ	C3-C8-O3-C9
53	1G	2201	8UZ	C8-C3-O1-C2

There are no ring outliers.

2 monomers are involved in 4 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
53	1G	2202	8UZ	3	0

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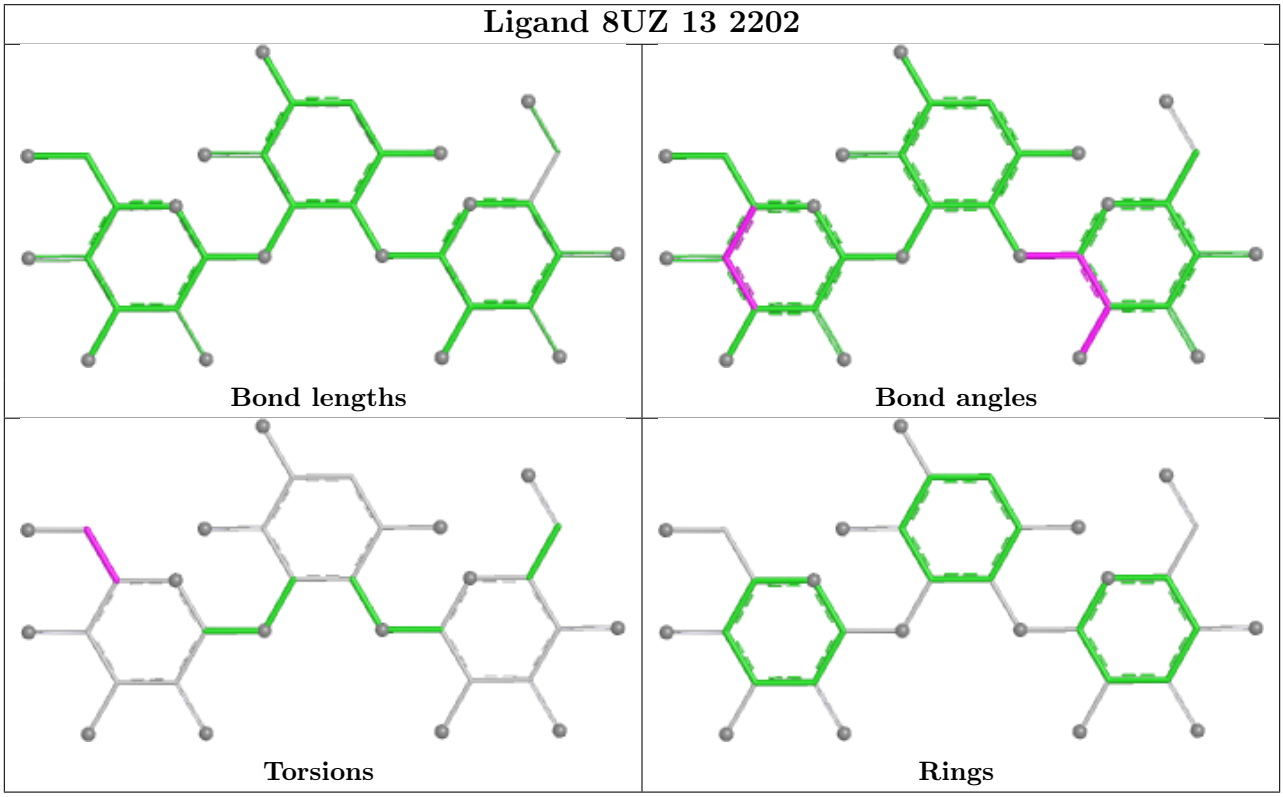
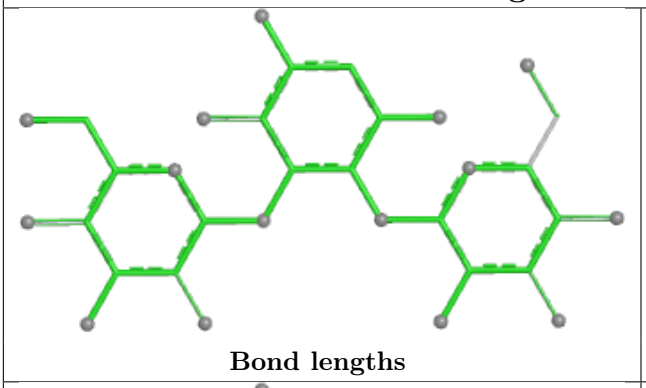
Mol	Chain	Res	Type	Clashes	Symm-Clashes
53	1G	2201	8UZ	1	0

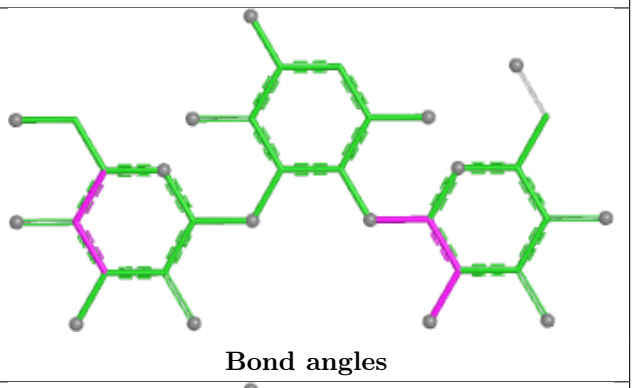
The following is a two-dimensional graphical depiction of Mogul quality analysis of bond lengths, bond angles, torsion angles, and ring geometry for all instances of the Ligand of Interest. In addition, ligands with molecular weight > 250 and outliers as shown on the validation Tables will also be included. For torsion angles, if less then 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.



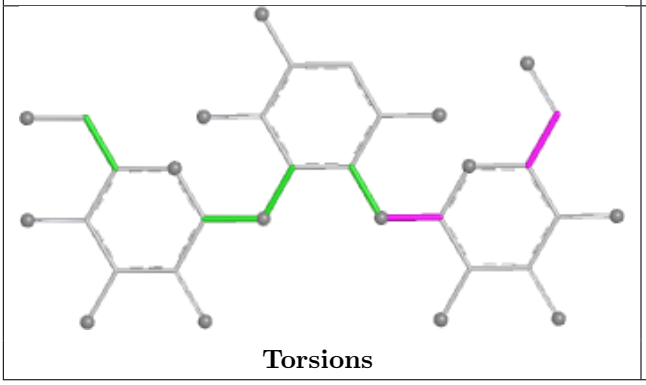
Ligand 8UZ 1G 2202



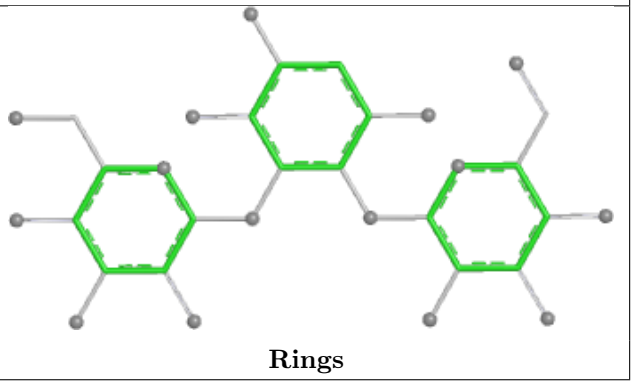
Bond lengths



Bond angles

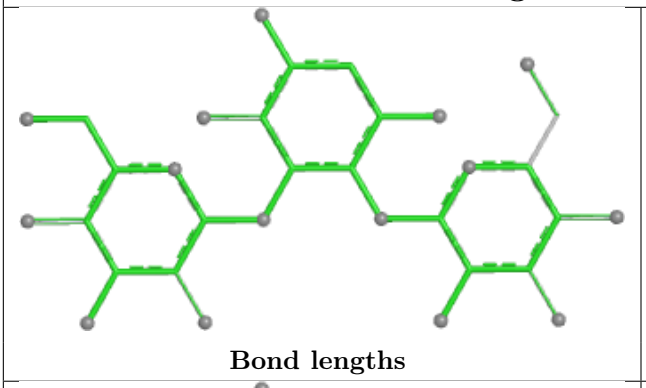


Torsions

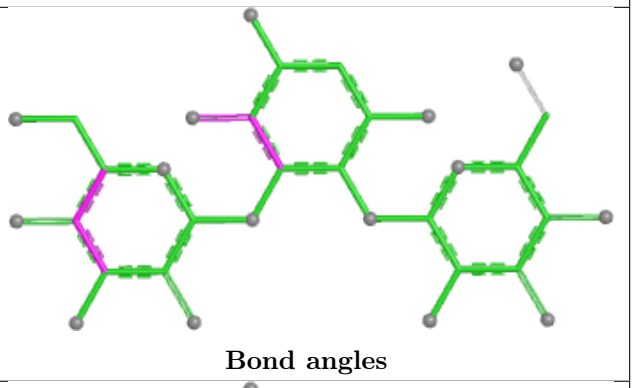


Rings

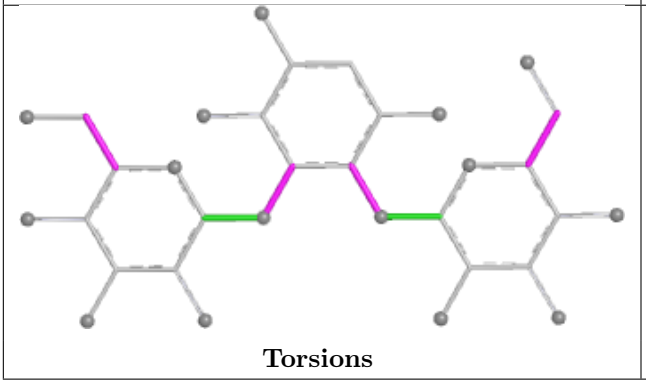
Ligand 8UZ 1G 2201



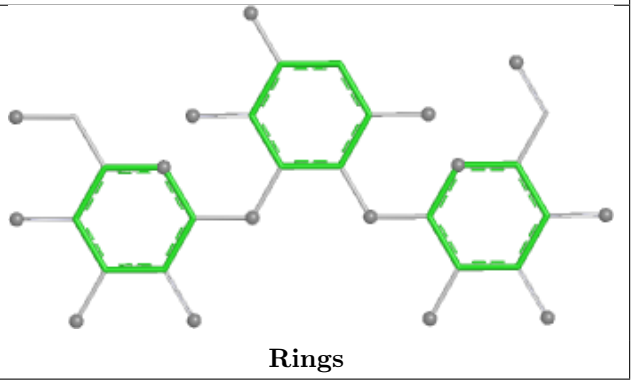
Bond lengths



Bond angles

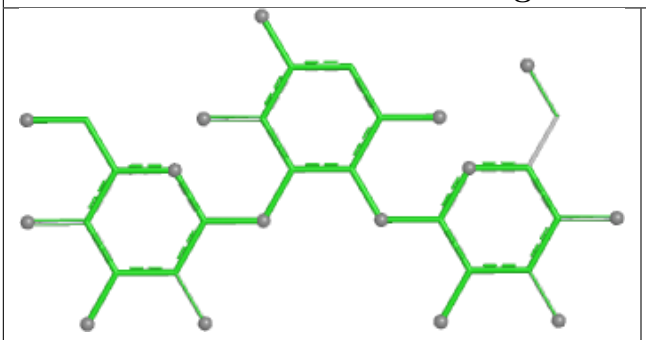


Torsions

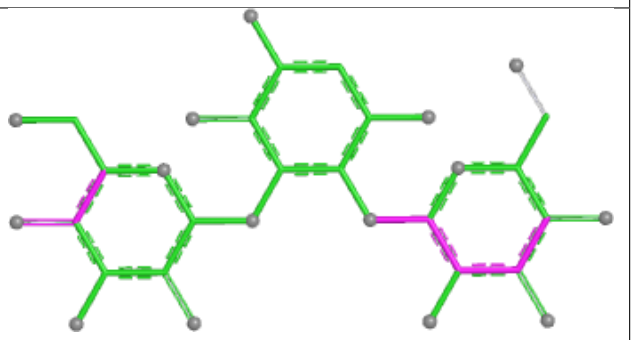


Rings

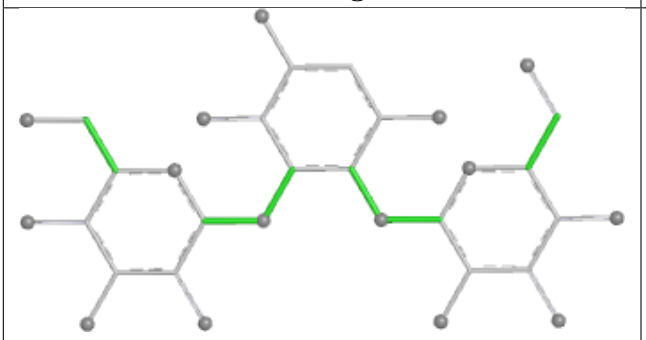
Ligand 8UZ 13 2201



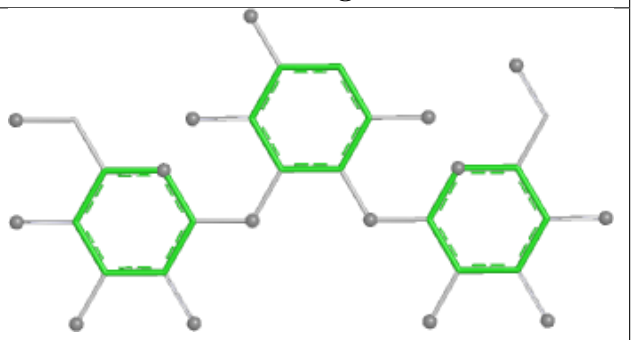
Bond lengths



Bond angles



Torsions



Rings

5.7 Other polymers

There are no such residues in this entry.

5.8 Polymer linkage issues

There are no chain breaks in this entry.

6 Fit of model and data

6.1 Protein, DNA and RNA chains

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

Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å^2)	Q<0.9
1	13	1508/1522 (99%)	0.09	21 (1%) 73 67	44, 79, 139, 211	0
1	1G	1513/1522 (99%)	0.23	49 (3%) 50 43	52, 86, 129, 216	0
2	65	111/112 (99%)	0.72	11 (9%) 13 11	69, 76, 82, 83	0
2	A8	111/112 (99%)	0.34	2 (1%) 67 59	58, 64, 72, 74	0
3	B5	92/96 (95%)	0.64	6 (6%) 25 21	54, 63, 71, 74	0
3	F8	94/96 (97%)	0.13	3 (3%) 50 43	44, 51, 59, 62	0
4	11	273/276 (98%)	0.29	8 (2%) 53 46	33, 48, 55, 60	0
4	19	273/276 (98%)	0.49	11 (4%) 42 35	39, 53, 61, 65	0
5	L5	47/49 (95%)	0.31	3 (6%) 25 21	40, 45, 49, 55	0
5	P8	47/49 (95%)	-0.35	0 100 100	34, 37, 43, 47	0
6	2A	116/129 (89%)	0.74	6 (5%) 33 28	64, 86, 97, 108	0
6	2I	116/129 (89%)	0.88	9 (7%) 19 17	56, 83, 93, 111	0
7	8A	99/105 (94%)	0.51	6 (6%) 27 22	71, 80, 87, 88	0
7	8I	100/105 (95%)	1.11	11 (11%) 10 9	67, 82, 87, 89	0
8	22	206/239 (86%)	1.18	34 (16%) 4 4	94, 108, 130, 132	0
8	2E	205/239 (85%)	0.81	13 (6%) 26 22	70, 85, 108, 111	0
9	82	124/128 (96%)	1.43	24 (19%) 3 3	86, 123, 131, 133	0
9	8E	127/128 (99%)	1.04	17 (13%) 7 7	64, 114, 123, 126	0
10	15	138/140 (98%)	1.08	18 (13%) 7 7	55, 76, 95, 107	0
10	58	138/140 (98%)	0.56	5 (3%) 46 38	48, 64, 91, 100	0
11	C5	104/110 (94%)	1.56	30 (28%) 1 1	70, 81, 97, 101	0
11	G8	103/110 (93%)	0.93	14 (13%) 7 6	59, 67, 81, 84	0
12	M5	62/65 (95%)	0.83	7 (11%) 10 9	52, 58, 69, 79	0
12	Q8	60/65 (92%)	1.31	16 (26%) 1 1	40, 49, 60, 62	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å^2)	Q<0.9
13	3A	125/132 (94%)	1.20	24 (19%) 3 3	68, 71, 81, 108	0
13	3I	122/132 (92%)	0.30	9 (7%) 20 18	53, 57, 65, 78	0
14	32	208/209 (99%)	1.40	45 (21%) 2 2	78, 88, 100, 103	0
14	3E	208/209 (99%)	0.94	21 (10%) 12 11	67, 79, 88, 94	0
15	14	2909/2917 (99%)	-0.17	50 (1%) 69 62	39, 63, 177, 242	0
15	1H	2912/2917 (99%)	-0.30	36 (1%) 76 71	31, 53, 154, 220	0
16	75	137/146 (93%)	0.95	20 (14%) 6 5	61, 71, 110, 130	0
16	B8	129/146 (88%)	0.53	11 (8%) 16 15	57, 66, 82, 90	0
17	H5	59/60 (98%)	0.64	5 (8%) 16 15	62, 72, 95, 103	0
17	L8	57/60 (95%)	0.18	1 (1%) 67 59	47, 56, 64, 69	0
18	61	146/148 (98%)	1.00	23 (15%) 5 4	61, 94, 112, 114	0
18	69	146/148 (98%)	1.09	19 (13%) 7 7	67, 97, 119, 121	0
19	9A	69/88 (78%)	0.50	6 (8%) 16 14	73, 82, 90, 98	0
19	9I	67/88 (76%)	0.81	6 (8%) 15 13	72, 81, 90, 93	0
20	1B	25/27 (92%)	2.23	14 (56%) 0 0	98, 108, 114, 118	0
20	1F	23/27 (85%)	0.64	1 (4%) 40 32	85, 89, 91, 92	0
21	25	122/122 (100%)	0.29	1 (0%) 82 78	52, 63, 72, 73	0
21	68	122/122 (100%)	0.06	0 100 100	44, 56, 66, 70	0
22	D5	135/206 (65%)	0.68	9 (6%) 24 20	80, 98, 117, 120	0
22	H8	171/206 (83%)	1.09	26 (15%) 5 5	64, 86, 138, 142	0
23	21	205/206 (99%)	0.67	19 (9%) 14 12	39, 64, 85, 92	0
23	29	205/206 (99%)	0.66	17 (8%) 17 15	46, 69, 90, 98	0
24	4A	116/126 (92%)	1.43	25 (21%) 2 2	88, 115, 121, 122	0
24	4I	116/126 (92%)	1.34	25 (21%) 2 2	73, 103, 110, 112	0
25	42	151/162 (93%)	0.89	13 (8%) 16 14	77, 88, 97, 106	0
25	4E	151/162 (93%)	0.97	12 (7%) 18 16	65, 74, 85, 97	0
26	16	122/122 (100%)	-0.28	4 (3%) 49 42	52, 67, 78, 116	0
26	1J	122/122 (100%)	-0.13	2 (1%) 70 63	67, 80, 93, 118	0
27	85	117/118 (99%)	0.69	4 (3%) 48 41	50, 72, 92, 99	0
27	C8	117/118 (99%)	0.29	5 (4%) 40 32	40, 58, 73, 76	0
28	I5	63/71 (88%)	2.14	28 (44%) 0 0	96, 130, 139, 143	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å^2)	Q<0.9
28	M8	66/71 (92%)	2.15	35 (53%) 0 0	83, 114, 122, 123	0
29	AA	78/93 (83%)	2.09	34 (43%) 0 0	96, 123, 136, 137	0
29	AI	80/93 (86%)	1.05	11 (13%) 6 6	76, 98, 106, 108	0
30	35	150/150 (100%)	0.70	17 (11%) 10 9	45, 72, 95, 103	0
30	78	147/150 (98%)	0.24	5 (3%) 48 41	34, 57, 71, 74	0
31	E5	84/85 (98%)	0.71	8 (9%) 14 12	54, 63, 71, 80	0
31	I8	83/85 (97%)	0.39	6 (7%) 21 19	44, 51, 58, 64	0
32	31	202/210 (96%)	0.31	9 (4%) 38 31	35, 58, 73, 83	0
32	39	208/210 (99%)	0.56	14 (6%) 24 20	42, 77, 103, 110	0
33	5A	58/61 (95%)	1.96	26 (44%) 0 0	98, 104, 118, 119	0
33	5I	60/61 (98%)	0.70	4 (6%) 24 20	72, 80, 89, 89	0
34	52	101/101 (100%)	0.33	3 (2%) 52 45	69, 76, 84, 93	0
34	5E	101/101 (100%)	0.71	5 (4%) 34 28	71, 77, 86, 92	0
35	95	101/101 (100%)	1.55	28 (27%) 1 1	49, 86, 93, 97	0
35	D8	101/101 (100%)	0.85	12 (11%) 9 8	39, 74, 82, 84	0
36	J5	56/60 (93%)	0.58	7 (12%) 8 7	43, 65, 81, 83	0
36	N8	55/60 (91%)	0.63	7 (12%) 8 7	39, 69, 89, 91	0
37	BA	99/106 (93%)	0.78	7 (7%) 22 19	74, 87, 99, 105	0
37	BI	99/106 (93%)	1.09	14 (14%) 6 6	86, 101, 112, 116	0
38	45	140/141 (99%)	0.83	17 (12%) 8 8	52, 74, 90, 100	0
38	88	141/141 (100%)	0.65	11 (7%) 19 17	42, 59, 75, 91	0
39	F5	94/98 (95%)	0.83	9 (9%) 13 12	45, 60, 90, 97	0
39	J8	95/98 (96%)	0.48	6 (6%) 26 22	37, 53, 81, 86	0
40	41	181/182 (99%)	1.01	20 (11%) 10 9	69, 84, 102, 106	0
40	49	181/182 (99%)	1.16	23 (12%) 8 7	86, 100, 117, 122	0
41	6A	88/89 (98%)	0.15	2 (2%) 61 53	67, 81, 88, 88	0
41	6I	88/89 (98%)	0.43	5 (5%) 29 24	63, 77, 82, 84	0
42	62	147/156 (94%)	0.74	9 (6%) 27 22	95, 103, 110, 113	0
42	6E	144/156 (92%)	0.66	4 (2%) 55 47	86, 96, 105, 109	0
43	A5	113/113 (100%)	0.25	6 (5%) 32 27	44, 55, 72, 102	0
43	E8	112/113 (99%)	0.08	5 (4%) 38 31	40, 54, 67, 83	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å^2)	Q<0.9
44	12	237/256 (92%)	1.29	46 (19%) 3 3	104, 124, 135, 141	0
44	1E	237/256 (92%)	1.47	57 (24%) 2 2	90, 112, 129, 135	0
45	55	117/118 (99%)	0.20	1 (0%) 81 76	49, 58, 66, 72	0
45	98	118/118 (100%)	0.44	2 (1%) 69 62	47, 60, 68, 70	0
46	G5	67/72 (93%)	0.58	4 (5%) 27 23	67, 74, 81, 84	0
46	K8	68/72 (94%)	0.32	2 (2%) 53 46	51, 56, 61, 67	0
47	51	174/180 (96%)	0.88	22 (12%) 8 7	70, 81, 86, 100	0
47	59	170/180 (94%)	2.05	78 (45%) 0 0	116, 145, 162, 170	0
48	1A	99/105 (94%)	2.02	43 (43%) 0 0	92, 124, 132, 133	0
48	1I	99/105 (94%)	1.12	13 (13%) 7 7	68, 111, 126, 127	0
49	7A	84/88 (95%)	1.05	9 (10%) 11 10	71, 81, 94, 117	0
49	7I	84/88 (95%)	1.51	24 (28%) 1 1	76, 88, 103, 123	0
50	72	138/138 (100%)	0.68	6 (4%) 40 32	75, 91, 101, 107	0
50	7E	138/138 (100%)	1.24	22 (15%) 5 4	68, 82, 87, 92	0
51	Y1	25/25 (100%)	1.52	10 (40%) 1 0	55, 111, 161, 168	0
51	Y4	25/25 (100%)	1.62	10 (40%) 1 0	70, 122, 156, 160	0
52	V1	76/76 (100%)	1.70	26 (34%) 1 1	50, 161, 195, 197	0
52	V4	76/76 (100%)	1.41	17 (22%) 2 2	57, 168, 201, 204	0
52	W1	76/76 (100%)	1.09	13 (17%) 4 3	52, 137, 156, 158	0
52	W4	76/76 (100%)	1.12	11 (14%) 6 5	67, 149, 162, 163	0
52	X1	76/76 (100%)	0.75	8 (10%) 11 10	46, 76, 90, 99	0
52	X4	76/76 (100%)	0.73	6 (7%) 18 16	54, 85, 102, 108	0
All	All	20933/21574 (97%)	0.44	1604 (7%) 19 17	31, 74, 132, 242	0

All (1604) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
35	95	45	THR	8.4
33	5A	6	LEU	8.2
29	AA	82	GLY	7.9
52	W1	72	C	7.6
29	AA	78	ARG	7.5
52	W1	73	A	7.2
47	59	171	LEU	7.0

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Mol	Chain	Res	Type	RSRZ
52	W1	71	G	7.0
35	D8	36	PRO	6.9
1	1G	2165	G	6.6
40	41	2	PRO	6.5
48	1A	55	LYS	6.4
52	W4	71	G	6.4
11	C5	59	GLY	6.3
29	AA	80	TYR	6.3
47	59	155	SER	6.3
35	95	36	PRO	6.2
18	61	116	LEU	6.2
13	3A	27	LEU	6.1
9	82	115	GLY	6.1
24	4A	117	VAL	6.0
40	41	26	GLN	6.0
1	1G	2162	C	5.9
47	59	154	PRO	5.9
29	AI	78	ARG	5.9
11	C5	49	VAL	5.8
40	41	80	PHE	5.8
48	1A	59	SER	5.8
12	Q8	48	PHE	5.7
47	59	168	PRO	5.7
30	35	110	TYR	5.7
14	32	23	GLY	5.7
4	11	274	ARG	5.6
38	45	2	LEU	5.5
24	4A	88	ARG	5.5
47	59	86	GLU	5.5
52	W4	72	C	5.5
52	W1	76	A	5.5
30	78	71	VAL	5.4
23	21	204	ALA	5.4
9	8E	126	SER	5.4
52	W4	76	A	5.4
14	32	31	CYS	5.4
48	1A	62	HIS	5.4
18	69	11	ASN	5.3
31	I8	2	ALA	5.3
35	95	91	TYR	5.3
35	95	84	LYS	5.3
11	C5	58	GLY	5.3

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Mol	Chain	Res	Type	RSRZ
22	H8	165	VAL	5.3
28	M8	21	VAL	5.3
47	59	169	VAL	5.2
29	AA	83	HIS	5.2
28	I5	35	VAL	5.2
47	51	9	ILE	5.2
11	C5	44	ILE	5.2
24	4A	102	ARG	5.1
48	1A	47	PHE	5.1
29	AA	81	ARG	5.1
52	W4	73	A	5.1
14	3E	9	CYS	5.1
28	I5	9	LEU	5.0
28	I5	5	ILE	5.0
24	4I	100	GLY	5.0
2	A8	2	ALA	5.0
14	3E	26	CYS	4.9
14	3E	31	CYS	4.9
44	1E	14	GLY	4.9
28	M8	22	ILE	4.9
30	35	71	VAL	4.9
44	1E	96	ARG	4.9
13	3A	28	LYS	4.8
46	K8	43	GLN	4.8
29	AA	84	GLY	4.8
24	4A	4	ILE	4.8
11	C5	105	ALA	4.8
33	5A	39	LEU	4.8
36	N8	57	VAL	4.8
42	62	85	TYR	4.8
10	58	138	LEU	4.8
13	3A	61	THR	4.7
48	1A	54	PHE	4.7
6	2I	12	ARG	4.7
47	59	131	VAL	4.7
23	21	205	ALA	4.7
39	J8	92	LYS	4.6
15	14	1586	C	4.6
12	M5	34	TRP	4.6
1	13	1260	G	4.6
1	1G	2152	G	4.6
31	I8	3	HIS	4.6

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Mol	Chain	Res	Type	RSRZ
48	1A	58	ASP	4.6
48	1A	46	ARG	4.6
28	M8	42	PHE	4.6
24	4I	114	ARG	4.6
18	61	146	ALA	4.5
9	82	110	GLU	4.5
44	1E	15	VAL	4.5
47	59	43	VAL	4.5
52	V4	36	A	4.5
24	4I	102	ARG	4.5
24	4I	103	THR	4.5
23	29	205	ALA	4.5
44	12	71	VAL	4.5
47	59	26	VAL	4.5
40	49	82	LEU	4.5
13	3A	19	ARG	4.5
15	14	2912	A	4.5
15	1H	692	C	4.4
52	W4	74	C	4.4
24	4A	7	VAL	4.4
8	22	87	LEU	4.4
20	1B	3	LYS	4.4
14	32	178	VAL	4.4
1	1G	1656	C	4.4
15	14	2914	C	4.4
37	BI	18	GLN	4.4
24	4A	114	ARG	4.4
40	41	3	LEU	4.4
52	V1	71	G	4.4
38	88	21	THR	4.4
13	3A	14	GLY	4.4
12	Q8	49	VAL	4.3
25	4E	18	ARG	4.3
49	7I	84	ALA	4.3
44	1E	13	ALA	4.3
36	J5	54	GLY	4.3
47	59	98	LEU	4.3
13	3A	62	SER	4.3
16	75	106	SER	4.3
47	59	89	ILE	4.3
8	2E	193	TYR	4.3
19	9A	84	LYS	4.3

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Mol	Chain	Res	Type	RSRZ
11	C5	29	GLU	4.3
24	4I	8	GLU	4.3
28	I5	59	PHE	4.2
20	1B	11	GLY	4.2
28	I5	54	GLY	4.2
32	39	133	ASN	4.2
14	32	149	ALA	4.2
12	M5	56	GLU	4.2
52	V1	72	C	4.2
52	V4	34	G	4.2
44	1E	122	PHE	4.2
28	I5	56	VAL	4.2
30	35	150	ALA	4.2
26	1J	90	C	4.1
48	1I	55	LYS	4.1
52	W1	1	G	4.1
13	3A	64	TYR	4.1
16	75	105	LEU	4.1
51	Y1	28	G	4.1
25	4E	21	ALA	4.1
16	75	12	SER	4.1
52	W1	70	G	4.1
10	15	138	LEU	4.1
4	11	236	GLY	4.1
47	59	44	VAL	4.0
13	3A	16	GLU	4.0
18	69	78	THR	4.0
47	59	5	GLY	4.0
16	B8	11	GLU	4.0
47	59	132	ARG	4.0
25	42	123	LEU	4.0
44	12	39	ILE	4.0
52	X1	1	G	4.0
47	59	103	LEU	4.0
18	61	144	VAL	4.0
47	59	17	VAL	4.0
16	75	129	ARG	4.0
24	4A	104	ARG	4.0
28	M8	56	VAL	4.0
44	12	26	PRO	4.0
46	G5	44	LEU	3.9
11	C5	45	VAL	3.9

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Mol	Chain	Res	Type	RSRZ
28	I5	10	VAL	3.9
14	32	162	LEU	3.9
9	82	125	TYR	3.9
15	1H	302	C	3.9
49	7I	66	PRO	3.9
33	5A	35	ARG	3.9
12	M5	32	LEU	3.9
14	32	155	LEU	3.9
18	69	144	VAL	3.9
24	4I	94	ARG	3.9
24	4A	76	ALA	3.9
35	D8	73	SER	3.9
47	51	3	ARG	3.9
15	14	219	A	3.9
7	8A	100	LYS	3.9
44	1E	213	LEU	3.9
13	3A	128	ALA	3.9
20	1B	22	ARG	3.8
22	H8	20	ARG	3.8
47	51	83	TYR	3.8
13	3A	26	ALA	3.8
36	N8	53	ALA	3.8
29	AA	79	THR	3.8
25	4E	154	GLY	3.8
36	N8	54	GLY	3.8
47	59	105	LEU	3.8
47	59	35	VAL	3.8
51	Y1	39	U	3.8
14	32	5	ILE	3.8
28	M8	5	ILE	3.8
38	88	104	PHE	3.8
52	V4	17	C	3.8
28	I5	21	VAL	3.8
29	AA	9	VAL	3.8
37	BI	23	ARG	3.8
1	1G	1507	U	3.8
38	88	141	GLN	3.8
1	13	2154	A	3.8
11	C5	63	LYS	3.8
52	W1	74	C	3.8
16	75	135	ALA	3.8
22	H8	11	GLU	3.7

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Mol	Chain	Res	Type	RSRZ
9	82	120	ARG	3.7
25	42	20	GLN	3.7
22	D5	157	LEU	3.7
49	7I	32	TYR	3.7
52	W4	70	G	3.7
15	1H	556	A	3.7
28	M8	35	VAL	3.7
29	AA	76	PRO	3.7
42	62	153	HIS	3.7
43	A5	93	ALA	3.7
23	29	76	ARG	3.7
52	V4	6	G	3.7
23	29	116	VAL	3.7
48	1A	65	LEU	3.7
25	4E	23	GLY	3.7
38	45	6	ARG	3.7
8	22	39	ILE	3.7
11	C5	51	VAL	3.7
38	45	102	VAL	3.7
1	1G	2154	A	3.7
46	G5	4	SER	3.7
24	4A	92	HIS	3.7
40	49	3	LEU	3.7
18	69	145	VAL	3.7
29	AA	31	ILE	3.7
44	1E	172	ILE	3.7
47	59	39	PRO	3.6
47	59	165	ALA	3.6
2	65	60	GLY	3.6
22	H8	82	ARG	3.6
44	12	14	GLY	3.6
39	F5	85	LEU	3.6
24	4A	101	GLN	3.6
14	32	73	ARG	3.6
20	1B	26	LYS	3.6
39	J8	91	LYS	3.6
24	4A	100	GLY	3.6
41	6I	89	GLY	3.6
8	2E	184	TYR	3.6
25	42	81	GLU	3.6
38	45	27	VAL	3.6
52	V1	5	G	3.6

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Mol	Chain	Res	Type	RSRZ
1	1G	2160	U	3.6
14	3E	21	LEU	3.6
44	12	19	HIS	3.6
47	59	85	LYS	3.6
44	12	41	ILE	3.6
47	59	148	ILE	3.6
35	D8	37	VAL	3.6
44	1E	7	VAL	3.6
16	75	104	ASN	3.6
47	59	128	PRO	3.6
9	8E	117	HIS	3.6
15	14	2812	U	3.6
15	14	2911	G	3.6
13	3A	21	LYS	3.6
13	3I	19	ARG	3.6
33	5A	37	PHE	3.6
31	I8	6	GLY	3.6
9	82	123	PRO	3.6
51	Y4	52	U	3.5
8	2E	77	ILE	3.5
11	C5	61	ILE	3.5
11	G8	98	VAL	3.5
29	AI	41	VAL	3.5
32	31	65	TRP	3.5
28	I5	24	THR	3.5
1	1G	2161	C	3.5
52	W1	3	C	3.5
7	8I	101	ARG	3.5
33	5A	10	ALA	3.5
47	59	73	ALA	3.5
51	Y1	41	U	3.5
28	M8	59	PHE	3.5
47	59	4	ILE	3.5
9	82	71	SER	3.5
38	88	80	GLU	3.5
12	Q8	32	LEU	3.5
52	X1	44	G	3.5
4	19	5	LYS	3.5
46	K8	15	LYS	3.5
6	2I	25	TYR	3.5
43	A5	92	ARG	3.5
8	22	162	GLN	3.5

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Mol	Chain	Res	Type	RSRZ
14	32	9	CYS	3.5
14	32	12	CYS	3.5
9	82	33	PHE	3.5
28	M8	14	ILE	3.5
44	12	127	ILE	3.5
16	B8	12	SER	3.5
37	BA	11	SER	3.5
9	82	114	TYR	3.5
19	9A	87	ARG	3.5
28	M8	32	TYR	3.5
44	1E	33	TYR	3.5
48	1A	42	THR	3.5
48	1A	56	HIS	3.5
24	4I	2	ALA	3.5
42	62	2	ALA	3.5
11	G8	99	CYS	3.5
29	AA	74	PHE	3.5
47	51	11	VAL	3.5
47	59	50	VAL	3.5
1	13	2164	U	3.5
50	72	1	MET	3.5
23	21	64	LYS	3.5
44	12	44	LEU	3.5
1	1G	2076	U	3.4
1	1G	2164	U	3.4
52	W4	75	C	3.4
28	I5	63	TYR	3.4
38	45	140	ALA	3.4
24	4I	25	ILE	3.4
28	I5	31	ILE	3.4
32	39	131	GLY	3.4
44	1E	11	LEU	3.4
14	32	168	ARG	3.4
15	14	1609	G	3.4
24	4I	104	ARG	3.4
32	39	69	HIS	3.4
7	8I	32	TYR	3.4
5	L5	1	MET	3.4
27	C8	118	GLY	3.4
10	15	134	ARG	3.4
11	G8	105	ALA	3.4
36	J5	53	ALA	3.4

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Mol	Chain	Res	Type	RSRZ
52	X4	1	G	3.4
29	AA	7	LYS	3.4
37	BA	9	ASN	3.4
6	2I	14	VAL	3.4
44	12	165	VAL	3.4
48	1A	94	VAL	3.4
47	59	129	THR	3.4
31	E5	7	LEU	3.3
16	B8	104	ASN	3.3
23	29	159	HIS	3.3
27	C8	116	ALA	3.3
1	13	2160	U	3.3
18	61	140	LEU	3.3
27	85	90	VAL	3.3
28	M8	10	VAL	3.3
29	AI	9	VAL	3.3
38	88	90	VAL	3.3
49	7I	21	VAL	3.3
11	C5	50	ARG	3.3
39	F5	84	GLY	3.3
40	49	20	ILE	3.3
9	82	124	GLN	3.3
13	3A	60	LEU	3.3
23	21	78	LEU	3.3
48	1A	71	LEU	3.3
48	1A	92	THR	3.3
45	55	2	ARG	3.3
10	58	72	TYR	3.3
38	45	33	GLY	3.3
43	E8	91	GLY	3.3
47	59	164	TYR	3.3
40	41	35	GLU	3.3
23	29	204	ALA	3.3
39	F5	77	ALA	3.3
47	59	92	ILE	3.3
37	BA	23	ARG	3.3
39	F5	28	GLY	3.3
18	69	85	GLU	3.3
4	19	38	LYS	3.3
37	BI	74	LYS	3.3
47	59	150	ALA	3.3
47	51	7	LEU	3.3

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Mol	Chain	Res	Type	RSRZ
13	3A	15	ARG	3.3
15	1H	690	C	3.3
8	22	15	THR	3.3
12	Q8	34	TRP	3.3
40	41	177	GLY	3.3
1	1G	2163	U	3.2
35	95	85	LYS	3.2
22	D5	167	PRO	3.2
23	21	56	PRO	3.2
16	75	6	LEU	3.2
47	59	88	LEU	3.2
49	7A	9	PHE	3.2
49	7A	76	GLN	3.2
8	22	2	GLY	3.2
24	4A	95	GLY	3.2
12	Q8	5	LYS	3.2
30	35	47	ASP	3.2
1	1G	724	G	3.2
24	4I	9	ILE	3.2
8	2E	65	ALA	3.2
27	C8	95	LEU	3.2
35	95	83	ARG	3.2
28	I5	42	PHE	3.2
42	62	86	GLN	3.2
6	2I	11	LYS	3.2
15	1H	691	A	3.2
26	16	1	A	3.2
52	V1	36	A	3.2
14	32	28	SER	3.2
15	1H	34	C	3.2
47	59	84	SER	3.2
9	82	111	ARG	3.2
11	C5	48	ALA	3.2
25	42	86	ALA	3.2
48	1A	60	ARG	3.2
51	Y4	28	G	3.2
29	AA	11	VAL	3.2
30	35	36	LYS	3.2
24	4A	116	THR	3.2
48	1I	95	GLU	3.2
52	V1	35	A	3.2
24	4A	87	TYR	3.2

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Mol	Chain	Res	Type	RSRZ
44	1E	127	ILE	3.2
35	95	74	LYS	3.2
48	1A	49	VAL	3.2
15	14	1	G	3.2
23	21	88	GLY	3.2
4	11	262	ARG	3.1
29	AA	30	LEU	3.1
44	1E	169	LYS	3.1
1	1G	1506	C	3.1
52	V1	4	C	3.1
14	32	179	GLU	3.1
47	59	72	ILE	3.1
18	61	113	ARG	3.1
18	61	114	LEU	3.1
19	9I	44	LEU	3.1
32	31	72	ARG	3.1
28	I5	8	LYS	3.1
22	H8	116	VAL	3.1
15	14	2171	C	3.1
23	21	1	MET	3.1
48	1A	4	ILE	3.1
23	21	63	LEU	3.1
37	BA	99	LEU	3.1
47	59	64	LEU	3.1
48	1I	60	ARG	3.1
49	7A	26	ARG	3.1
31	I8	5	LYS	3.1
40	49	81	LYS	3.1
43	E8	111	HIS	3.1
11	C5	60	PHE	3.1
14	32	110	PHE	3.1
33	5A	18	VAL	3.1
42	6E	77	SER	3.1
47	59	49	VAL	3.1
52	V4	37	A	3.1
15	14	2910	U	3.1
10	58	136	GLU	3.1
11	G8	91	GLU	3.1
46	G5	41	ILE	3.1
10	15	129	PRO	3.1
11	C5	84	ARG	3.1
28	M8	11	PRO	3.1

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Mol	Chain	Res	Type	RSRZ
29	AA	16	LEU	3.1
32	31	66	PRO	3.1
43	E8	92	ARG	3.1
28	M8	8	LYS	3.1
28	M8	38	LYS	3.1
44	12	24	TRP	3.1
49	7A	84	ALA	3.1
7	8I	95	TYR	3.1
35	95	81	TYR	3.1
43	A5	111	HIS	3.1
11	C5	98	VAL	3.1
48	1A	10	GLY	3.1
14	32	209	ARG	3.1
18	69	10	GLU	3.1
11	C5	47	LYS	3.1
23	29	70	ALA	3.0
20	1F	14	TRP	3.0
20	1B	14	TRP	3.0
13	3A	39	VAL	3.0
14	32	27	TYR	3.0
35	95	79	VAL	3.0
40	49	25	TYR	3.0
16	B8	1	MET	3.0
50	7E	54	ASP	3.0
31	E5	8	GLY	3.0
37	BA	8	ARG	3.0
42	6E	120	ILE	3.0
39	J8	96	LYS	3.0
9	8E	90	PRO	3.0
44	1E	10	LEU	3.0
15	1H	2491	A	3.0
4	19	40	THR	3.0
52	V1	70	G	3.0
12	Q8	55	ALA	3.0
10	15	130	HIS	3.0
13	3I	18	VAL	3.0
47	59	45	VAL	3.0
52	V1	17	C	3.0
7	8I	91	ARG	3.0
14	32	26	CYS	3.0
8	22	43	LEU	3.0
16	B8	6	LEU	3.0

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Mol	Chain	Res	Type	RSRZ
17	H5	2	PRO	3.0
44	12	125	PRO	3.0
47	51	12	PRO	3.0
47	59	10	PRO	3.0
47	59	36	PRO	3.0
28	M8	44	THR	3.0
1	1G	2077	A	3.0
23	21	187	ALA	3.0
33	5A	30	ALA	3.0
52	V1	7	A	3.0
47	59	19	VAL	3.0
49	7I	20	VAL	3.0
52	V4	5	G	3.0
44	1E	148	TYR	3.0
1	13	986	C	3.0
11	C5	2	ARG	3.0
14	32	22	LYS	3.0
15	14	2813	C	3.0
31	E5	4	LYS	3.0
44	1E	80	ILE	3.0
44	12	23	ARG	3.0
37	BI	12	ALA	3.0
51	Y4	42	U	3.0
40	49	23	PHE	3.0
47	59	37	VAL	3.0
6	2A	126	ARG	3.0
9	8E	114	TYR	3.0
17	H5	30	ARG	3.0
30	35	22	GLY	3.0
33	5A	55	GLY	3.0
47	59	33	LEU	3.0
1	1G	1197	G	3.0
51	Y1	29	G	3.0
14	3E	12	CYS	3.0
9	8E	119	ALA	3.0
39	J8	77	ALA	3.0
22	D5	104	PHE	3.0
36	J5	57	VAL	3.0
1	1G	2155	U	3.0
9	82	117	HIS	3.0
13	3A	85	ILE	2.9
15	1H	936	A	2.9

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Mol	Chain	Res	Type	RSRZ
20	1B	13	ILE	2.9
19	9A	85	LEU	2.9
28	I5	25	TYR	2.9
49	7I	17	TYR	2.9
24	4I	6	GLY	2.9
35	95	34	GLU	2.9
40	41	150	ASP	2.9
44	12	193	ASP	2.9
50	7E	136	GLU	2.9
15	1H	1	G	2.9
15	1H	931	G	2.9
47	59	96	ALA	2.9
7	8I	77	VAL	2.9
27	C8	90	VAL	2.9
29	AA	10	PHE	2.9
14	32	141	ARG	2.9
40	49	136	ARG	2.9
49	7I	26	ARG	2.9
52	X4	45	U	2.9
25	4E	13	ILE	2.9
50	7E	83	ILE	2.9
19	9I	85	LEU	2.9
48	1A	88	LEU	2.9
19	9I	48	GLY	2.9
20	1B	16	GLY	2.9
47	59	94	TYR	2.9
50	7E	58	TYR	2.9
27	85	91	ASP	2.9
29	AI	67	VAL	2.9
42	6E	43	PHE	2.9
44	1E	22	LYS	2.9
52	V4	4	C	2.9
52	V4	11	C	2.9
1	1G	1657	G	2.9
48	1A	50	ILE	2.9
50	7E	138	TRP	2.9
47	51	8	PRO	2.9
35	95	26	ASP	2.9
12	M5	52	LYS	2.9
29	AA	67	VAL	2.9
4	19	274	ARG	2.9
50	7E	84	ARG	2.9

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Mol	Chain	Res	Type	RSRZ
28	M8	31	ILE	2.9
48	1A	23	ILE	2.9
4	19	147	LEU	2.9
39	J8	85	LEU	2.9
4	19	238	GLY	2.9
47	59	8	PRO	2.9
52	V1	69	G	2.9
7	8A	32	TYR	2.9
44	1E	48	MET	2.9
49	7A	32	TYR	2.9
9	82	44	VAL	2.9
48	1A	101	VAL	2.9
48	1A	63	PHE	2.9
29	AA	77	THR	2.9
44	12	196	LEU	2.9
24	4A	85	GLY	2.8
28	M8	41	PRO	2.8
42	62	156	TRP	2.8
15	14	1074	U	2.8
52	W1	17	C	2.8
16	75	137	LYS	2.8
30	35	14	LYS	2.8
1	13	1259	G	2.8
38	88	20	ALA	2.8
44	12	93	VAL	2.8
23	21	67	PHE	2.8
23	21	79	ARG	2.8
44	12	70	PHE	2.8
3	F8	3	THR	2.8
14	32	19	LEU	2.8
18	69	72	LEU	2.8
29	AA	63	THR	2.8
44	12	172	ILE	2.8
15	1H	219	A	2.8
11	G8	41	GLY	2.8
14	32	2	GLY	2.8
40	49	2	PRO	2.8
44	1E	202	PRO	2.8
13	3I	64	TYR	2.8
28	I5	43	TYR	2.8
52	X1	45	U	2.8
6	2A	14	VAL	2.8

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Mol	Chain	Res	Type	RSRZ
8	22	129	ALA	2.8
9	82	65	VAL	2.8
15	14	2492	C	2.8
16	75	94	ALA	2.8
24	4A	98	VAL	2.8
37	BI	25	ARG	2.8
44	12	163	PHE	2.8
52	V1	49	C	2.8
31	E5	84	LEU	2.8
37	BI	72	LEU	2.8
48	1I	90	LEU	2.8
28	I5	52	THR	2.8
33	5I	13	THR	2.8
44	1E	73	THR	2.8
52	X1	71	G	2.8
12	Q8	59	LYS	2.8
14	3E	86	LYS	2.8
28	I5	60	GLN	2.8
47	51	39	PRO	2.8
47	59	118	PRO	2.8
13	3I	16	GLU	2.8
32	39	65	TRP	2.8
9	82	109	VAL	2.8
11	C5	55	TYR	2.8
14	32	128	VAL	2.8
24	4I	98	VAL	2.8
25	4E	133	TYR	2.8
30	35	19	VAL	2.8
44	1E	123	ALA	2.8
47	59	102	ALA	2.8
8	22	32	LEU	2.8
24	4I	96	LEU	2.8
52	X1	17	C	2.8
49	7I	69	THR	2.8
29	AA	68	GLY	2.8
1	1G	1589	G	2.8
11	C5	77	PRO	2.8
15	1H	1224	G	2.8
20	1B	23	PRO	2.8
46	G5	43	GLN	2.8
52	V1	37	A	2.8
14	3E	209	ARG	2.8

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Mol	Chain	Res	Type	RSRZ
28	I5	55	ARG	2.8
22	H8	38	TYR	2.8
44	1E	34	ALA	2.8
8	2E	91	LEU	2.8
35	95	38	LEU	2.8
42	62	12	LEU	2.8
6	2A	11	LYS	2.8
1	1G	730	C	2.8
52	V4	72	C	2.8
28	M8	19	GLY	2.8
35	95	30	GLY	2.8
44	12	202	PRO	2.8
47	59	12	PRO	2.8
30	35	149	GLU	2.7
44	1E	217	ARG	2.7
28	M8	36	CYS	2.7
13	3A	18	VAL	2.7
18	69	3	VAL	2.7
24	4A	2	ALA	2.7
30	78	141	ALA	2.7
1	1G	1511	G	2.7
44	12	28	PHE	2.7
31	I8	84	LEU	2.7
40	49	19	LEU	2.7
44	1E	238	LEU	2.7
44	12	238	LEU	2.7
45	98	113	LEU	2.7
52	V4	12	U	2.7
10	15	109	LYS	2.7
11	C5	54	LYS	2.7
11	C5	92	ASN	2.7
38	88	19	GLY	2.7
50	7E	47	GLY	2.7
11	C5	53	PRO	2.7
3	B5	68	ARG	2.7
1	1G	1563	C	2.7
15	14	2913	C	2.7
22	D5	169	GLU	2.7
40	49	48	GLU	2.7
52	W1	2	C	2.7
44	12	33	TYR	2.7
1	1G	729	A	2.7

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Mol	Chain	Res	Type	RSRZ
11	C5	28	LYS	2.7
15	1H	2087	A	2.7
48	1A	57	LYS	2.7
52	V1	63	G	2.7
48	1I	48	THR	2.7
20	1B	2	GLY	2.7
33	5A	38	GLY	2.7
12	M5	63	PRO	2.7
28	I5	11	PRO	2.7
28	I5	29	PRO	2.7
7	8I	24	GLU	2.7
47	59	52	VAL	2.7
38	45	104	PHE	2.7
44	12	17	PHE	2.7
11	G8	102	CYS	2.7
27	85	25	TRP	2.7
29	AA	32	LYS	2.7
44	1E	27	LYS	2.7
42	6E	153	HIS	2.7
50	72	58	TYR	2.7
15	14	1585	A	2.7
1	13	1823	U	2.7
3	B5	94	GLY	2.7
8	22	80	GLY	2.7
14	32	122	ARG	2.7
24	4A	91	ARG	2.7
31	E5	22	GLY	2.7
6	2A	13	GLN	2.7
27	C8	117	GLN	2.7
44	1E	45	GLN	2.7
11	C5	42	VAL	2.7
18	61	145	VAL	2.7
18	69	68	LEU	2.7
22	H8	117	LEU	2.7
8	2E	128	PHE	2.7
14	32	32	ALA	2.7
22	H8	146	ILE	2.7
29	AA	20	LEU	2.7
47	59	9	ILE	2.7
7	8I	100	LYS	2.7
9	82	112	LYS	2.7
12	Q8	52	LYS	2.7

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Mol	Chain	Res	Type	RSRZ
13	3I	20	LYS	2.7
38	45	103	MET	2.7
30	35	35	HIS	2.7
1	13	952	C	2.7
15	14	933	C	2.7
8	22	38	ARG	2.7
3	B5	61	GLY	2.7
20	1B	4	GLY	2.7
32	31	133	ASN	2.7
33	5A	22	THR	2.7
40	49	142	PRO	2.7
47	51	5	GLY	2.7
12	Q8	23	VAL	2.7
49	7I	2	VAL	2.7
8	22	77	ILE	2.6
11	G8	90	LEU	2.7
14	32	137	SER	2.7
44	12	155	LEU	2.7
48	1A	90	LEU	2.7
34	5E	54	LYS	2.6
48	1I	4	ILE	2.6
8	2E	53	ALA	2.6
24	4I	5	ALA	2.6
15	14	299	G	2.6
15	14	300	G	2.6
50	7E	1	MET	2.6
52	W4	1	G	2.6
52	X4	70	G	2.6
33	5A	34	TYR	2.6
41	6A	88	ARG	2.6
52	X4	17	C	2.6
18	69	76	THR	2.6
14	3E	24	GLU	2.6
14	32	21	LEU	2.6
16	75	11	GLU	2.6
33	5A	33	VAL	2.6
40	41	182	LYS	2.6
40	49	97	ASP	2.6
40	49	137	GLU	2.6
50	7E	88	LYS	2.6
24	4I	33	ALA	2.6
36	J5	2	ALA	2.6

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Mol	Chain	Res	Type	RSRZ
38	45	7	MET	2.6
3	F8	68	ARG	2.6
7	8A	91	ARG	2.6
12	Q8	57	ARG	2.6
44	12	21	ARG	2.6
52	V1	6	G	2.6
13	3A	5	PRO	2.6
1	1G	1995	C	2.6
14	32	169	LYS	2.6
44	1E	6	THR	2.6
9	8E	56	LEU	2.6
6	2I	93	GLN	2.6
22	H8	141	VAL	2.6
22	H8	163	LEU	2.6
18	61	122	GLU	2.6
22	D5	139	VAL	2.6
47	51	17	VAL	2.6
48	1A	40	LEU	2.6
23	29	77	ILE	2.6
38	45	66	ILE	2.6
44	1E	86	GLU	2.6
1	13	2163	U	2.6
34	52	101	ALA	2.6
40	41	178	PHE	2.6
51	Y4	40	U	2.6
1	1G	1203	A	2.6
15	1H	1585	A	2.6
37	BI	22	ARG	2.6
50	7E	122	ARG	2.6
2	65	33	LYS	2.6
14	3E	84	LYS	2.6
24	4I	111	LYS	2.6
1	1G	1510	G	2.6
10	58	73	THR	2.6
15	1H	693	G	2.6
16	75	15	VAL	2.6
23	29	63	LEU	2.6
28	M8	52	THR	2.6
47	59	136	ILE	2.6
47	59	141	VAL	2.6
48	1A	85	LEU	2.6
47	59	34	GLU	2.6

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Mol	Chain	Res	Type	RSRZ
38	45	117	ALA	2.6
42	62	43	PHE	2.6
15	14	1584	U	2.6
16	B8	111	ARG	2.6
37	BI	17	ARG	2.6
38	45	10	ARG	2.6
41	6I	72	ARG	2.6
49	7A	48	TRP	2.6
9	8E	116	LYS	2.6
35	95	76	LYS	2.6
11	G8	80	GLY	2.6
35	D8	48	GLY	2.6
40	49	17	PRO	2.6
47	51	10	PRO	2.6
50	7E	2	LEU	2.6
19	9A	86	VAL	2.6
44	1E	165	VAL	2.6
47	59	11	VAL	2.6
49	7I	4	ILE	2.6
8	22	10	PHE	2.6
9	8E	15	ALA	2.6
13	3A	32	PHE	2.6
44	12	29	ALA	2.6
47	59	60	ARG	2.5
15	14	937	C	2.5
11	C5	46	LYS	2.5
1	13	1913	A	2.5
2	65	108	GLY	2.5
24	4I	97	PRO	2.5
44	12	232	PRO	2.5
49	7A	6	LEU	2.5
44	12	42	ILE	2.5
48	1A	34	VAL	2.5
48	1A	75	ILE	2.5
12	Q8	27	THR	2.5
14	32	93	PHE	2.5
13	3A	33	ARG	2.5
8	22	6	HIS	2.5
14	32	151	LYS	2.5
51	Y1	40	U	2.5
52	V4	1	G	2.5
15	14	4	C	2.5

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Mol	Chain	Res	Type	RSRZ
28	I5	7	PRO	2.5
29	AI	68	GLY	2.5
32	31	131	GLY	2.5
33	5A	53	LEU	2.5
44	12	99	GLY	2.5
16	75	48	ILE	2.5
29	AA	66	MET	2.5
25	42	51	VAL	2.5
32	31	6	VAL	2.5
42	62	154	TYR	2.5
47	59	24	VAL	2.5
15	1H	2912	A	2.5
26	16	122	A	2.5
13	3I	61	THR	2.5
14	32	34	GLU	2.5
30	35	30	THR	2.5
47	59	119	GLU	2.5
49	7A	64	ALA	2.5
38	88	6	ARG	2.5
13	3A	23	LYS	2.5
50	7E	98	LYS	2.5
35	95	73	SER	2.5
22	D5	68	PRO	2.5
28	M8	9	LEU	2.5
35	95	40	LEU	2.5
35	95	50	PRO	2.5
48	1I	71	LEU	2.5
9	8E	8	GLY	2.5
47	59	48	GLY	2.5
48	1A	82	ILE	2.5
10	15	9	VAL	2.5
10	15	42	TRP	2.5
10	15	46	VAL	2.5
49	7I	48	TRP	2.5
1	1G	2159	C	2.5
8	22	184	TYR	2.5
15	1H	2492	C	2.5
23	21	151	TYR	2.5
24	4I	87	TYR	2.5
52	W1	4	C	2.5
51	Y1	37	G	2.5
9	8E	33	PHE	2.5

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Mol	Chain	Res	Type	RSRZ
40	41	137	GLU	2.5
35	D8	49	THR	2.5
47	59	123	PHE	2.5
23	29	131	ALA	2.5
25	42	21	ALA	2.5
37	BA	12	ALA	2.5
2	A8	3	ARG	2.5
33	5A	4	LYS	2.5
44	1E	195	ASP	2.5
8	22	142	MET	2.5
22	H8	5	LEU	2.5
47	59	71	LEU	2.5
1	1G	728	U	2.5
12	Q8	45	GLY	2.5
13	3I	63	GLY	2.5
36	J5	50	GLY	2.5
40	49	39	ILE	2.5
49	7I	37	GLY	2.5
24	4I	7	VAL	2.5
8	22	167	TRP	2.5
44	12	97	TRP	2.5
14	3E	54	TYR	2.5
14	32	145	GLU	2.5
25	4E	24	ARG	2.5
47	59	101	ARG	2.5
1	1G	1654	C	2.5
28	M8	28	LYS	2.5
52	V1	48	C	2.5
15	14	932	G	2.5
51	Y4	33	G	2.5
52	V1	34	G	2.5
52	W4	65	G	2.5
15	14	691	A	2.5
51	Y1	35	A	2.5
9	82	75	ASP	2.4
22	H8	25	PRO	2.4
33	5A	7	ILE	2.4
8	22	141	VAL	2.4
14	3E	88	VAL	2.4
39	J8	84	GLY	2.4
47	59	100	GLY	2.4
48	1A	35	SER	2.4

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Mol	Chain	Res	Type	RSRZ
50	72	93	VAL	2.4
51	Y1	38	U	2.4
41	6I	68	ARG	2.4
3	B5	69	TYR	2.4
10	15	131	GLN	2.4
13	3A	20	LYS	2.4
18	61	118	LYS	2.4
33	5A	5	ALA	2.4
44	12	34	ALA	2.4
47	51	175	LYS	2.4
49	7I	35	LYS	2.4
31	E5	3	HIS	2.4
2	65	110	LEU	2.4
15	1H	1796	A	2.4
15	14	2182	G	2.4
15	14	2816	G	2.4
40	41	116	ASP	2.4
40	49	4	ASP	2.4
43	E8	96	ILE	2.4
44	1E	42	ILE	2.4
23	21	23	VAL	2.4
23	21	72	VAL	2.4
35	D8	101	GLY	2.4
47	59	91	GLY	2.4
9	8E	37	PHE	2.4
15	1H	289	U	2.4
18	69	22	LYS	2.4
22	H8	14	LYS	2.4
44	12	74	LYS	2.4
3	B5	18	TYR	2.4
14	3E	138	TYR	2.4
36	N8	51	TYR	2.4
2	65	5	THR	2.4
35	D8	1	MET	2.4
41	6A	57	LEU	2.4
44	1E	138	LEU	2.4
44	12	98	LEU	2.4
50	7E	133	LEU	2.4
44	1E	159	PRO	2.4
50	72	86	ILE	2.4
15	1H	2913	C	2.4
4	11	110	GLY	2.4

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Mol	Chain	Res	Type	RSRZ
23	29	72	VAL	2.4
30	35	28	GLY	2.4
1	1G	1444	A	2.4
6	2I	123	LYS	2.4
10	15	84	LYS	2.4
16	75	112	ARG	2.4
25	42	88	LYS	2.4
47	51	77	LYS	2.4
48	1I	5	ARG	2.4
49	7I	31	LYS	2.4
1	1G	1655	G	2.4
2	65	43	GLU	2.4
15	14	11	G	2.4
15	14	929	G	2.4
44	1E	152	PHE	2.4
48	1I	59	SER	2.4
37	BI	95	ALA	2.4
36	J5	51	TYR	2.4
18	61	86	THR	2.4
22	H8	125	LEU	2.4
25	42	12	LEU	2.4
44	1E	44	LEU	2.4
47	59	7	LEU	2.4
48	1I	85	LEU	2.4
35	95	99	ILE	2.4
48	1A	98	ILE	2.4
48	1I	6	ILE	2.4
50	7E	45	ILE	2.4
14	3E	172	PRO	2.4
29	AA	65	ASN	2.4
2	65	109	GLY	2.4
14	3E	178	VAL	2.4
14	32	170	VAL	2.4
24	4I	74	VAL	2.4
32	39	6	VAL	2.4
2	65	20	ARG	2.4
23	21	76	ARG	2.4
24	4A	80	ARG	2.4
25	42	121	LYS	2.4
48	1A	7	LYS	2.4
15	1H	2914	C	2.4
52	V1	68	C	2.4

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Mol	Chain	Res	Type	RSRZ
10	15	51	PHE	2.4
15	14	303	A	2.4
15	14	2087	A	2.4
26	16	2	A	2.4
47	59	40	GLU	2.4
3	F8	4	ALA	2.4
18	61	65	ALA	2.4
31	E5	2	ALA	2.4
48	1A	84	GLN	2.4
1	1G	1260	G	2.4
1	1G	1829	G	2.4
15	1H	1074	U	2.4
16	75	1	MET	2.4
52	V4	66	U	2.4
8	22	91	LEU	2.4
8	22	178	LEU	2.4
11	C5	90	LEU	2.4
37	BI	99	LEU	2.4
22	D5	57	ILE	2.4
44	12	80	ILE	2.4
24	4A	113	PRO	2.4
8	22	21	ARG	2.3
8	22	207	VAL	2.3
12	M5	33	ASN	2.3
28	I5	38	LYS	2.3
43	A5	113	LYS	2.3
8	22	158	GLY	2.3
11	G8	93	GLY	2.3
47	59	170	ARG	2.3
28	M8	18	CYS	2.3
4	19	23	GLU	2.3
18	61	117	GLU	2.3
37	BI	77	ALA	2.3
14	32	74	GLN	2.3
1	13	2077	A	2.3
6	2I	42	TRP	2.3
14	3E	83	SER	2.3
15	14	1094	A	2.3
23	29	1	MET	2.3
9	82	36	TYR	2.3
14	32	108	LEU	2.3
28	M8	24	THR	2.3

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Mol	Chain	Res	Type	RSRZ
33	5A	44	LEU	2.3
49	7I	22	THR	2.3
1	13	650	U	2.3
1	1G	1352	U	2.3
51	Y4	41	U	2.3
52	W1	16	U	2.3
22	H8	171	ILE	2.3
40	41	88	ILE	2.3
9	82	116	LYS	2.3
12	M5	53	PRO	2.3
18	69	118	LYS	2.3
29	AA	18	LYS	2.3
1	1G	1199	G	2.3
15	14	1587	G	2.3
23	29	75	VAL	2.3
31	E5	82	ARG	2.3
35	95	14	VAL	2.3
48	1A	66	ARG	2.3
10	15	125	GLY	2.3
22	H8	115	GLY	2.3
23	29	65	GLY	2.3
47	59	93	GLY	2.3
4	19	15	PHE	2.3
28	I5	49	PHE	2.3
31	I8	68	GLU	2.3
38	45	141	GLN	2.3
30	35	59	LEU	2.3
44	1E	51	LEU	2.3
44	12	235	SER	2.3
1	13	1822	C	2.3
15	1H	2818	C	2.3
15	14	302	C	2.3
28	I5	22	ILE	2.3
38	45	137	TYR	2.3
52	V1	67	C	2.3
4	19	271	ILE	2.3
10	15	60	ILE	2.3
15	1H	2325	A	2.3
15	14	1132	A	2.3
11	G8	84	ARG	2.3
18	69	103	ARG	2.3
51	Y1	42	U	2.3

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Mol	Chain	Res	Type	RSRZ
32	39	10	PRO	2.3
33	5I	14	PRO	2.3
48	1A	37	PRO	2.3
22	H8	111	VAL	2.3
24	4I	54	VAL	2.3
35	95	5	VAL	2.3
47	59	15	VAL	2.3
11	G8	92	ASN	2.3
1	1G	1509	G	2.3
15	1H	557	G	2.3
15	1H	718	G	2.3
33	5I	8	GLU	2.3
35	D8	98	GLU	2.3
35	95	93	GLU	2.3
44	1E	170	GLU	2.3
47	59	81	GLU	2.3
52	X4	18	G	2.3
52	V4	46	G	2.3
8	22	47	LEU	2.3
40	49	114	ILE	2.3
44	1E	132	LYS	2.3
47	51	4	ILE	2.3
49	7I	59	TRP	2.3
49	7A	59	TRP	2.3
20	1B	9	ARG	2.3
20	1B	21	TYR	2.3
28	M8	13	ARG	2.3
28	M8	63	TYR	2.3
29	AI	80	TYR	2.3
7	8A	11	VAL	2.3
18	61	142	VAL	2.3
24	4A	10	PRO	2.3
44	1E	239	VAL	2.3
47	51	173	PRO	2.3
47	59	29	PRO	2.3
14	32	130	GLY	2.3
25	4E	22	GLY	2.3
47	59	166	GLY	2.3
48	1A	52	GLY	2.3
8	22	3	ASN	2.3
14	32	79	PHE	2.3
25	42	130	ASN	2.3

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Mol	Chain	Res	Type	RSRZ
44	1E	17	PHE	2.3
44	12	25	ASN	2.3
21	25	1	MET	2.3
24	4A	82	MET	2.3
8	22	175	LEU	2.3
30	35	148	LEU	2.3
35	95	80	GLN	2.3
44	12	149	LEU	2.3
49	7I	68	ASP	2.3
9	82	118	LYS	2.3
19	9A	88	LYS	2.3
20	1B	25	LYS	2.3
33	5A	50	LYS	2.3
36	J5	56	LYS	2.3
44	1E	75	LYS	2.3
15	14	535	G	2.3
15	14	931	G	2.3
18	69	133	HIS	2.3
44	1E	5	ILE	2.3
51	Y4	29	G	2.3
52	V4	27	G	2.3
16	75	27	THR	2.3
24	4I	91	ARG	2.3
37	BI	70	SER	2.3
39	F5	8	SER	2.3
6	2A	25	TYR	2.3
18	61	111	PRO	2.3
22	H8	15	PRO	2.3
28	M8	50	VAL	2.3
28	I5	4	GLY	2.3
1	13	1753	U	2.3
1	1G	1908	U	2.3
1	13	2078	C	2.2
1	1G	1538	A	2.2
15	14	942	C	2.2
4	11	28	GLU	2.2
17	L8	38	GLU	2.2
19	9I	83	GLU	2.2
24	4I	107	ALA	2.2
47	51	86	GLU	2.2
8	22	33	LEU	2.2
8	2E	42	LEU	2.2

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Mol	Chain	Res	Type	RSRZ
18	69	77	LEU	2.2
48	1I	88	LEU	2.2
8	2E	4	LYS	2.2
22	H8	118	GLN	2.2
39	F5	10	LYS	2.2
43	A5	110	LYS	2.2
49	7I	27	LYS	2.2
7	8I	25	ARG	2.2
13	3I	33	ARG	2.2
16	B8	129	ARG	2.2
11	G8	79	CYS	2.2
10	58	55	VAL	2.2
32	39	15	SER	2.2
40	49	28	VAL	2.2
40	49	160	VAL	2.2
44	12	239	VAL	2.2
23	29	151	TYR	2.2
47	59	38	SER	2.2
15	1H	2911	G	2.2
30	35	20	GLY	2.2
4	11	15	PHE	2.2
25	4E	45	PHE	2.2
48	1A	11	PHE	2.2
12	Q8	18	ALA	2.2
19	9A	20	ALA	2.2
39	F5	93	GLU	2.2
44	1E	9	GLU	2.2
44	12	9	GLU	2.2
14	32	86	LYS	2.2
15	1H	1559	A	2.2
15	1H	2627	C	2.2
33	5I	15	LYS	2.2
51	Y4	32	A	2.2
52	X1	73	A	2.2
52	V1	13	C	2.2
44	1E	222	ILE	2.2
44	12	146	GLN	2.2
5	L5	47	ARG	2.2
7	8I	29	HIS	2.2
17	H5	29	ARG	2.2
28	I5	40	HIS	2.2
29	AA	69	HIS	2.2

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Mol	Chain	Res	Type	RSRZ
37	BI	80	ARG	2.2
38	45	138	ASP	2.2
44	1E	30	ARG	2.2
48	1I	58	ASP	2.2
50	72	84	ARG	2.2
32	39	4	VAL	2.2
47	59	115	VAL	2.2
48	1A	72	VAL	2.2
49	7I	51	VAL	2.2
35	D8	41	GLY	2.2
47	51	174	GLY	2.2
47	59	41	MET	2.2
29	AI	74	PHE	2.2
4	19	177	LEU	2.2
8	22	101	LEU	2.2
15	14	1583	G	2.2
19	9I	31	LEU	2.2
19	9I	76	LEU	2.2
29	AA	15	LEU	2.2
32	39	22	ALA	2.2
35	D8	38	LEU	2.2
38	45	80	GLU	2.2
44	12	138	LEU	2.2
52	W1	15	G	2.2
52	X1	70	G	2.2
1	13	2155	U	2.2
1	1G	854	U	2.2
52	V1	47	U	2.2
8	2E	28	GLN	2.2
24	4A	78	ILE	2.2
32	39	72	ARG	2.2
40	41	101	ILE	2.2
1	13	2159	C	2.2
1	1G	921	C	2.2
29	AI	83	HIS	2.2
52	V1	11	C	2.2
23	29	59	VAL	2.2
29	AA	60	VAL	2.2
35	D8	50	PRO	2.2
47	59	76	VAL	2.2
50	7E	137	VAL	2.2
8	2E	23	TYR	2.2

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Mol	Chain	Res	Type	RSRZ
14	32	165	MET	2.2
16	B8	4	GLY	2.2
25	42	22	GLY	2.2
43	A5	112	GLY	2.2
50	7E	48	TYR	2.2
8	22	128	PHE	2.2
9	82	101	PHE	2.2
14	3E	110	PHE	2.2
38	88	76	LYS	2.2
40	49	75	LYS	2.2
44	12	122	PHE	2.2
29	AA	22	LEU	2.2
30	78	106	LEU	2.2
35	95	35	LEU	2.2
44	1E	158	LEU	2.2
2	65	2	ALA	2.2
6	2I	15	ALA	2.2
32	31	130	ALA	2.2
44	1E	128	GLU	2.2
44	1E	186	ALA	2.2
44	12	143	GLU	2.2
47	51	119	GLU	2.2
25	42	89	ILE	2.2
40	41	63	ILE	2.2
13	3A	78	GLN	2.2
15	14	2138	U	2.2
40	41	96	ARG	2.2
50	7E	102	ARG	2.2
15	14	1892	G	2.2
1	1G	1598	A	2.2
14	32	17	VAL	2.2
14	32	29	PRO	2.2
18	61	20	ASP	2.2
29	AA	42	PRO	2.2
33	5A	14	PRO	2.2
52	V4	7	A	2.2
1	1G	1198	C	2.2
7	8A	7	THR	2.2
30	78	57	THR	2.2
12	Q8	21	LYS	2.2
35	95	9	GLY	2.2
44	12	8	LYS	2.2

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Mol	Chain	Res	Type	RSRZ
8	22	193	TYR	2.2
11	C5	89	PHE	2.2
32	39	7	TYR	2.2
50	7E	62	TYR	2.2
10	15	67	LEU	2.2
10	15	116	LEU	2.2
14	3E	135	LEU	2.2
22	H8	18	LEU	2.2
34	5E	45	LEU	2.2
39	F5	2	SER	2.2
14	3E	15	GLU	2.2
37	BI	78	ALA	2.2
40	49	45	GLU	2.2
16	75	108	ARG	2.1
29	AA	49	ILE	2.1
33	5A	29	ARG	2.1
44	1E	32	ILE	2.1
48	1A	96	ILE	2.1
7	8A	85	VAL	2.1
1	1G	1766	G	2.1
10	15	20	GLY	2.1
14	3E	89	THR	2.1
15	14	2	G	2.1
15	14	1093	A	2.1
15	14	2322	G	2.1
28	M8	2	LYS	2.1
37	BA	74	LYS	2.1
47	51	27	LYS	2.1
51	Y4	34	G	2.1
32	39	83	PHE	2.1
44	1E	24	TRP	2.1
1	1G	2025	C	2.1
1	1G	2158	C	2.1
8	22	196	LEU	2.1
22	H8	8	TYR	2.1
44	1E	31	TYR	2.1
49	7I	39	TYR	2.1
3	B5	91	ALA	2.1
22	H8	166	SER	2.1
44	1E	171	ALA	2.1
44	12	13	ALA	2.1
47	59	145	ALA	2.1

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Mol	Chain	Res	Type	RSRZ
48	1A	32	ALA	2.1
16	B8	3	ARG	2.1
16	75	125	ARG	2.1
20	1B	10	ARG	2.1
25	42	24	ARG	2.1
4	11	105	ILE	2.1
1	1G	1754	U	2.1
17	H5	12	PRO	2.1
34	52	51	PRO	2.1
36	N8	47	PRO	2.1
47	59	117	PRO	2.1
11	G8	95	LYS	2.1
23	21	57	LYS	2.1
38	45	22	LYS	2.1
41	6I	47	LYS	2.1
48	1A	3	LYS	2.1
23	21	130	GLY	2.1
28	M8	27	THR	2.1
28	M8	64	GLY	2.1
35	95	101	GLY	2.1
16	75	9	LEU	2.1
28	M8	49	PHE	2.1
49	7I	9	PHE	2.1
50	7E	112	LEU	2.1
9	82	62	TYR	2.1
16	75	5	ALA	2.1
30	35	65	ARG	2.1
47	51	6	ARG	2.1
50	7E	18	ARG	2.1
1	13	747	G	2.1
4	19	237	GLU	2.1
11	C5	17	SER	2.1
25	4E	155	GLU	2.1
26	1J	91	G	2.1
28	M8	37	SER	2.1
35	95	70	ILE	2.1
47	59	121	ILE	2.1
50	72	87	SER	2.1
52	V1	62	C	2.1
5	L5	46	VAL	2.1
7	8I	35	VAL	2.1
9	82	25	LYS	2.1

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Mol	Chain	Res	Type	RSRZ
11	C5	39	VAL	2.1
18	61	107	VAL	2.1
18	69	18	VAL	2.1
13	3I	94	PRO	2.1
18	61	134	PRO	2.1
18	61	141	LYS	2.1
28	M8	29	PRO	2.1
29	AI	76	PRO	2.1
42	62	36	LYS	2.1
44	1E	74	LYS	2.1
47	59	77	LYS	2.1
1	1G	1975	U	2.1
51	Y4	43	U	2.1
52	V1	59	U	2.1
52	V1	66	U	2.1
2	65	90	GLY	2.1
8	22	34	LEU	2.1
49	7I	74	LEU	2.1
25	4E	28	PHE	2.1
40	41	23	PHE	2.1
9	8E	94	ALA	2.1
9	82	106	ALA	2.1
10	15	132	ALA	2.1
22	H8	109	ALA	2.1
22	D5	164	ALA	2.1
11	C5	64	GLU	2.1
16	B8	21	GLU	2.1
23	29	134	ILE	2.1
24	4A	9	ILE	2.1
44	1E	188	ALA	2.1
32	31	59	TYR	2.1
40	49	13	GLU	2.1
1	1G	891	A	2.1
15	1H	1143	A	2.1
15	1H	1225	A	2.1
15	14	936	A	2.1
16	75	136	GLN	2.1
1	13	1224	G	2.1
1	13	2161	C	2.1
9	8E	118	LYS	2.1
10	15	1	MET	2.1
12	Q8	15	LYS	2.1

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Mol	Chain	Res	Type	RSRZ
29	AA	55	LYS	2.1
33	5A	58	LYS	2.1
52	V1	2	C	2.1
52	W4	3	C	2.1
34	52	6	VAL	2.1
52	V4	63	G	2.1
18	69	132	PRO	2.1
33	5A	54	PRO	2.1
36	N8	5	PRO	2.1
35	D8	35	LEU	2.1
9	8E	115	GLY	2.1
14	32	185	PHE	2.1
22	H8	147	GLY	2.1
34	5E	60	PHE	2.1
38	88	23	GLY	2.1
40	49	85	GLY	2.1
43	E8	112	GLY	2.1
4	11	27	THR	2.1
6	2A	12	ARG	2.1
24	4I	105	THR	2.1
30	35	15	ARG	2.1
34	5E	46	ARG	2.1
41	6I	88	ARG	2.1
47	51	42	ARG	2.1
8	2E	39	ILE	2.1
24	4I	51	ALA	2.1
18	69	66	GLU	2.1
23	29	73	GLU	2.1
18	61	126	TYR	2.1
18	61	121	LYS	2.0
18	61	143	SER	2.0
48	1A	19	SER	2.0
27	85	72	HIS	2.0
15	14	90	A	2.0
22	D5	58	VAL	2.0
23	21	59	VAL	2.0
50	7E	103	VAL	2.0
52	V4	35	A	2.0
1	1G	1981	C	2.0
17	H5	53	LEU	2.0
23	21	182	LEU	2.0
38	88	79	LEU	2.0

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Mol	Chain	Res	Type	RSRZ
39	F5	80	LEU	2.0
47	51	171	LEU	2.0
52	W4	2	C	2.0
1	1G	723	G	2.0
7	8I	92	ARG	2.0
9	8E	93	ARG	2.0
9	82	37	PHE	2.0
11	G8	89	PHE	2.0
14	3E	167	GLY	2.0
15	14	928	G	2.0
15	14	930	G	2.0
15	14	2049	G	2.0
22	H8	104	PHE	2.0
29	AI	10	PHE	2.0
45	98	33	ARG	2.0
49	7I	28	ARG	2.0
51	Y1	33	G	2.0
52	X4	71	G	2.0
8	22	202	ILE	2.0
14	32	158	ILE	2.0
15	1H	158	U	2.0
15	1H	2192	U	2.0
26	16	3	U	2.0
32	31	82	ILE	2.0
40	41	64	THR	2.0
44	1E	190	THR	2.0
6	2I	89	ALA	2.0
9	8E	122	ALA	2.0
12	Q8	51	ALA	2.0
13	3A	129	ALA	2.0
14	32	177	ASP	2.0
28	M8	65	ASP	2.0
49	7I	19	ILE	2.0
50	7E	111	ILE	2.0
30	78	140	ALA	2.0
18	61	85	GLU	2.0
24	4A	8	GLU	2.0
34	5E	31	GLU	2.0
28	M8	25	TYR	2.0
40	41	81	LYS	2.0
9	8E	108	VAL	2.0
32	39	8	GLN	2.0

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Mol	Chain	Res	Type	RSRZ
33	5A	32	SER	2.0
13	3A	94	PRO	2.0
1	13	1261	A	2.0
2	65	32	LEU	2.0
8	22	52	LEU	2.0
15	1H	301	A	2.0
22	H8	150	LEU	2.0
29	AI	30	LEU	2.0
32	39	12	LEU	2.0
35	95	71	LEU	2.0
52	V1	23	A	2.0
14	32	154	ASN	2.0
16	B8	108	ARG	2.0
33	5A	31	ARG	2.0
44	1E	21	ARG	2.0
33	5A	36	PHE	2.0
44	1E	72	GLY	2.0
15	14	2167	C	2.0
29	AA	62	ILE	2.0
44	12	200	ILE	2.0
52	X1	72	C	2.0
14	32	164	ALA	2.0
18	61	129	THR	2.0
18	69	146	ALA	2.0
28	I5	44	THR	2.0
44	1E	62	ALA	2.0
14	3E	18	LYS	2.0
15	1H	2231	G	2.0
15	1H	2808	G	2.0
15	14	1141	G	2.0
15	14	2811	G	2.0
25	4E	88	LYS	2.0
33	5A	11	LYS	2.0
36	N8	56	LYS	2.0
48	1A	64	GLU	2.0
40	41	148	MET	2.0
8	22	23	TYR	2.0
28	M8	43	TYR	2.0
29	AA	52	TYR	2.0
40	41	146	TYR	2.0
8	2E	64	VAL	2.0
28	I5	50	VAL	2.0

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Mol	Chain	Res	Type	RSRZ
35	95	46	VAL	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 oligosaccharides in this entry.

6.4 Ligands (i)

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

Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
54	MG	W4	104	1/1	0.33	0.40	124,124,124,124	0
54	MG	14	3314	1/1	0.39	0.32	104,104,104,104	0
54	MG	W1	104	1/1	0.47	0.26	120,120,120,120	0
54	MG	13	2333	1/1	0.48	0.31	86,86,86,86	0
54	MG	14	3231	1/1	0.52	0.34	77,77,77,77	0
54	MG	13	2293	1/1	0.54	0.47	109,109,109,109	0
54	MG	13	2281	1/1	0.54	0.28	61,61,61,61	0
54	MG	1G	2269	1/1	0.55	0.47	103,103,103,103	0
54	MG	1G	2264	1/1	0.59	0.52	94,94,94,94	0
54	MG	13	2322	1/1	0.59	0.48	81,81,81,81	0
54	MG	1H	3383	1/1	0.60	0.33	88,88,88,88	0
54	MG	11	303	1/1	0.61	0.35	79,79,79,79	0
54	MG	14	3465	1/1	0.61	0.34	92,92,92,92	0
54	MG	1G	2368	1/1	0.62	0.25	82,82,82,82	0
54	MG	14	3469	1/1	0.62	0.22	78,78,78,78	0
54	MG	13	2287	1/1	0.63	0.54	89,89,89,89	0
54	MG	1H	3304	1/1	0.64	0.36	77,77,77,77	0
54	MG	1G	2376	1/1	0.64	0.24	99,99,99,99	0
54	MG	13	2376	1/1	0.65	0.25	75,75,75,75	0
54	MG	14	3328	1/1	0.65	0.31	84,84,84,84	0
54	MG	1H	3388	1/1	0.66	0.15	62,62,62,62	0
54	MG	13	2234	1/1	0.66	0.30	84,84,84,84	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
54	MG	1G	2364	1/1	0.66	0.29	93,93,93,93	0
54	MG	13	2331	1/1	0.66	0.39	69,69,69,69	0
54	MG	13	2296	1/1	0.67	0.31	110,110,110,110	0
54	MG	14	3518	1/1	0.67	0.33	86,86,86,86	0
54	MG	14	3412	1/1	0.67	0.13	73,73,73,73	0
54	MG	13	2327	1/1	0.67	0.30	81,81,81,81	0
54	MG	49	201	1/1	0.68	0.23	86,86,86,86	0
54	MG	1G	2366	1/1	0.68	0.33	100,100,100,100	0
54	MG	1G	2378	1/1	0.68	0.28	81,81,81,81	0
54	MG	14	3308	1/1	0.69	0.33	93,93,93,93	0
54	MG	13	2233	1/1	0.69	0.39	84,84,84,84	0
54	MG	88	305	1/1	0.69	0.33	76,76,76,76	0
54	MG	13	2338	1/1	0.69	0.38	69,69,69,69	0
54	MG	14	3092	1/1	0.69	0.27	44,44,44,44	0
54	MG	1G	2349	1/1	0.69	0.23	83,83,83,83	0
54	MG	X4	104	1/1	0.69	0.40	91,91,91,91	0
54	MG	13	2238	1/1	0.70	0.41	75,75,75,75	0
54	MG	13	2371	1/1	0.70	0.21	92,92,92,92	0
54	MG	1G	2262	1/1	0.70	0.30	87,87,87,87	0
54	MG	14	3439	1/1	0.70	0.38	77,77,77,77	0
54	MG	1H	3300	1/1	0.70	0.33	79,79,79,79	0
54	MG	X4	101	1/1	0.70	0.17	91,91,91,91	0
54	MG	13	2375	1/1	0.70	0.33	83,83,83,83	0
54	MG	1G	2249	1/1	0.71	0.30	66,66,66,66	0
54	MG	1G	2360	1/1	0.71	0.22	68,68,68,68	0
54	MG	1H	3235	1/1	0.71	0.45	76,76,76,76	0
54	MG	1H	3281	1/1	0.71	0.22	61,61,61,61	0
54	MG	1G	2363	1/1	0.71	0.29	92,92,92,92	0
54	MG	13	2335	1/1	0.71	0.45	75,75,75,75	0
54	MG	1G	2311	1/1	0.71	0.25	87,87,87,87	0
54	MG	X4	103	1/1	0.71	0.28	92,92,92,92	0
54	MG	1G	2344	1/1	0.71	0.20	76,76,76,76	0
54	MG	14	3537	1/1	0.72	0.24	70,70,70,70	0
54	MG	1J	209	1/1	0.72	0.14	69,69,69,69	0
54	MG	1G	2329	1/1	0.72	0.48	87,87,87,87	0
54	MG	14	3341	1/1	0.72	0.25	65,65,65,65	0
54	MG	14	3195	1/1	0.72	0.34	63,63,63,63	0
54	MG	14	3221	1/1	0.72	0.33	61,61,61,61	0
54	MG	13	2334	1/1	0.72	0.25	85,85,85,85	0
54	MG	13	2263	1/1	0.72	0.34	77,77,77,77	0
54	MG	13	2290	1/1	0.72	0.28	67,67,67,67	0
54	MG	14	3393	1/1	0.73	0.15	71,71,71,71	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
54	MG	13	2377	1/1	0.73	0.20	81,81,81,81	0
54	MG	1H	3384	1/1	0.73	0.20	57,57,57,57	0
54	MG	1G	2367	1/1	0.73	0.27	92,92,92,92	0
54	MG	1H	3413	1/1	0.73	0.23	77,77,77,77	0
54	MG	1H	3491	1/1	0.73	0.11	55,55,55,55	0
54	MG	1G	2325	1/1	0.73	0.28	71,71,71,71	0
54	MG	13	2258	1/1	0.73	0.35	76,76,76,76	0
54	MG	1J	210	1/1	0.73	0.19	70,70,70,70	0
54	MG	85	201	1/1	0.73	0.22	90,90,90,90	0
54	MG	13	2341	1/1	0.73	0.21	89,89,89,89	0
54	MG	13	2321	1/1	0.73	0.45	81,81,81,81	0
54	MG	A5	201	1/1	0.73	0.33	45,45,45,45	0
54	MG	13	2222	1/1	0.73	0.32	75,75,75,75	0
54	MG	13	2294	1/1	0.73	0.26	57,57,57,57	0
54	MG	1G	2284	1/1	0.73	0.35	90,90,90,90	0
54	MG	1H	3319	1/1	0.73	0.22	62,62,62,62	0
54	MG	14	3388	1/1	0.73	0.29	70,70,70,70	0
54	MG	13	2365	1/1	0.74	0.34	75,75,75,75	0
54	MG	14	3558	1/1	0.74	0.30	88,88,88,88	0
54	MG	C5	202	1/1	0.74	0.29	70,70,70,70	0
54	MG	14	3362	1/1	0.74	0.29	59,59,59,59	0
54	MG	1G	2361	1/1	0.74	0.32	92,92,92,92	0
54	MG	39	302	1/1	0.74	0.16	49,49,49,49	0
54	MG	13	2298	1/1	0.74	0.27	87,87,87,87	0
54	MG	1G	2289	1/1	0.74	0.26	80,80,80,80	0
54	MG	14	3433	1/1	0.74	0.41	67,67,67,67	0
54	MG	13	2250	1/1	0.74	0.39	70,70,70,70	0
54	MG	14	3250	1/1	0.74	0.44	83,83,83,83	0
54	MG	1G	2355	1/1	0.74	0.44	76,76,76,76	0
54	MG	14	3482	1/1	0.74	0.13	58,58,58,58	0
54	MG	1H	3442	1/1	0.74	0.26	55,55,55,55	0
54	MG	X4	106	1/1	0.74	0.31	73,73,73,73	0
54	MG	14	3353	1/1	0.75	0.33	82,82,82,82	0
54	MG	1H	3358	1/1	0.75	0.14	49,49,49,49	0
54	MG	14	3548	1/1	0.75	0.15	53,53,53,53	0
54	MG	14	3549	1/1	0.75	0.33	72,72,72,72	0
54	MG	1G	2339	1/1	0.75	0.36	76,76,76,76	0
54	MG	16	204	1/1	0.75	0.23	63,63,63,63	0
54	MG	1J	201	1/1	0.75	0.24	78,78,78,78	0
54	MG	1G	2320	1/1	0.75	0.26	70,70,70,70	0
54	MG	14	3402	1/1	0.75	0.30	70,70,70,70	0
54	MG	13	2247	1/1	0.75	0.26	61,61,61,61	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
54	MG	1G	2372	1/1	0.75	0.28	67,67,67,67	0
54	MG	14	3434	1/1	0.75	0.14	57,57,57,57	0
54	MG	1G	2373	1/1	0.75	0.32	94,94,94,94	0
54	MG	14	3442	1/1	0.75	0.30	73,73,73,73	0
54	MG	14	3445	1/1	0.75	0.16	58,58,58,58	0
54	MG	X1	101	1/1	0.75	0.32	84,84,84,84	0
54	MG	X1	109	1/1	0.75	0.23	71,71,71,71	0
54	MG	1G	2317	1/1	0.75	0.26	91,91,91,91	0
54	MG	1H	3549	1/1	0.75	0.25	61,61,61,61	0
54	MG	1H	3335	1/1	0.75	0.39	75,75,75,75	0
54	MG	14	3485	1/1	0.75	0.25	73,73,73,73	0
54	MG	14	3495	1/1	0.75	0.41	64,64,64,64	0
54	MG	1G	2319	1/1	0.76	0.27	77,77,77,77	0
54	MG	1G	2259	1/1	0.76	0.40	80,80,80,80	0
54	MG	14	3192	1/1	0.76	0.27	66,66,66,66	0
54	MG	1G	2239	1/1	0.76	0.35	82,82,82,82	0
54	MG	1G	2244	1/1	0.76	0.31	72,72,72,72	0
54	MG	1H	3424	1/1	0.76	0.25	59,59,59,59	0
54	MG	1H	3225	1/1	0.76	0.19	51,51,51,51	0
54	MG	14	3251	1/1	0.76	0.37	88,88,88,88	0
54	MG	X1	106	1/1	0.76	0.38	84,84,84,84	0
54	MG	13	2271	1/1	0.76	0.30	65,65,65,65	0
54	MG	14	3553	1/1	0.76	0.15	60,60,60,60	0
54	MG	1H	3540	1/1	0.76	0.29	82,82,82,82	0
54	MG	14	3325	1/1	0.76	0.28	65,65,65,65	0
54	MG	1H	3379	1/1	0.76	0.15	64,64,64,64	0
54	MG	14	3464	1/1	0.76	0.23	53,53,53,53	0
54	MG	13	2275	1/1	0.77	0.20	75,75,75,75	0
54	MG	1G	2287	1/1	0.77	0.21	77,77,77,77	0
54	MG	14	3306	1/1	0.77	0.28	68,68,68,68	0
54	MG	13	2267	1/1	0.77	0.28	82,82,82,82	0
54	MG	1H	3492	1/1	0.77	0.42	84,84,84,84	0
54	MG	1H	3343	1/1	0.77	0.30	50,50,50,50	0
54	MG	1H	3354	1/1	0.77	0.22	71,71,71,71	0
54	MG	1H	3567	1/1	0.77	0.32	65,65,65,65	0
54	MG	14	3344	1/1	0.77	0.25	81,81,81,81	0
54	MG	1G	2379	1/1	0.77	0.20	85,85,85,85	0
54	MG	1H	3141	1/1	0.77	0.42	67,67,67,67	0
54	MG	14	3364	1/1	0.77	0.18	67,67,67,67	0
54	MG	14	3107	1/1	0.77	0.33	55,55,55,55	0
54	MG	1G	2261	1/1	0.77	0.35	95,95,95,95	0
54	MG	1G	2226	1/1	0.77	0.18	97,97,97,97	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
54	MG	13	2308	1/1	0.77	0.26	78,78,78,78	0
54	MG	13	2227	1/1	0.77	0.26	55,55,55,55	0
54	MG	1H	3301	1/1	0.78	0.30	69,69,69,69	0
54	MG	1H	3516	1/1	0.78	0.31	62,62,62,62	0
54	MG	14	3330	1/1	0.78	0.19	76,76,76,76	0
54	MG	14	3334	1/1	0.78	0.27	75,75,75,75	0
54	MG	13	2323	1/1	0.78	0.14	85,85,85,85	0
54	MG	1H	3318	1/1	0.78	0.29	58,58,58,58	0
54	MG	1G	2330	1/1	0.78	0.23	93,93,93,93	0
54	MG	14	3555	1/1	0.78	0.16	71,71,71,71	0
54	MG	1G	2338	1/1	0.78	0.33	72,72,72,72	0
54	MG	13	2299	1/1	0.78	0.36	85,85,85,85	0
54	MG	16	213	1/1	0.78	0.28	66,66,66,66	0
54	MG	14	3369	1/1	0.78	0.39	62,62,62,62	0
54	MG	14	3383	1/1	0.78	0.33	66,66,66,66	0
54	MG	1G	2343	1/1	0.78	0.31	75,75,75,75	0
54	MG	1J	213	1/1	0.78	0.21	78,78,78,78	0
54	MG	14	3116	1/1	0.78	0.29	70,70,70,70	0
54	MG	1G	2297	1/1	0.78	0.15	90,90,90,90	0
54	MG	1G	2310	1/1	0.78	0.28	75,75,75,75	0
54	MG	13	2300	1/1	0.78	0.30	76,76,76,76	0
54	MG	1G	2356	1/1	0.78	0.18	74,74,74,74	0
54	MG	14	3437	1/1	0.78	0.32	69,69,69,69	0
54	MG	13	2239	1/1	0.78	0.45	70,70,70,70	0
54	MG	13	2228	1/1	0.78	0.24	50,50,50,50	0
54	MG	14	3270	1/1	0.78	0.32	78,78,78,78	0
54	MG	14	3460	1/1	0.78	0.42	91,91,91,91	0
54	MG	14	3294	1/1	0.78	0.34	62,62,62,62	0
54	MG	1H	3238	1/1	0.78	0.35	57,57,57,57	0
54	MG	1G	2272	1/1	0.78	0.27	66,66,66,66	0
54	MG	13	2268	1/1	0.78	0.23	55,55,55,55	0
54	MG	14	3490	1/1	0.79	0.28	52,52,52,52	0
54	MG	1H	3094	1/1	0.79	0.43	36,36,36,36	0
54	MG	1G	2258	1/1	0.79	0.33	82,82,82,82	0
54	MG	14	3342	1/1	0.79	0.15	66,66,66,66	0
54	MG	1H	3584	1/1	0.79	0.23	54,54,54,54	0
54	MG	13	2307	1/1	0.79	0.42	77,77,77,77	0
54	MG	1H	3359	1/1	0.79	0.33	54,54,54,54	0
54	MG	1H	3363	1/1	0.79	0.12	57,57,57,57	0
54	MG	14	3113	1/1	0.79	0.23	63,63,63,63	0
54	MG	1H	3376	1/1	0.79	0.22	44,44,44,44	0
54	MG	13	2372	1/1	0.79	0.52	87,87,87,87	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
54	MG	13	2362	1/1	0.79	0.33	77,77,77,77	0
54	MG	14	3396	1/1	0.79	0.47	77,77,77,77	0
54	MG	14	3220	1/1	0.79	0.17	70,70,70,70	0
54	MG	14	3407	1/1	0.79	0.25	68,68,68,68	0
54	MG	1H	3257	1/1	0.79	0.16	46,46,46,46	0
54	MG	1G	2369	1/1	0.79	0.18	82,82,82,82	0
54	MG	1H	3291	1/1	0.79	0.36	68,68,68,68	0
54	MG	1H	3414	1/1	0.79	0.11	62,62,62,62	0
54	MG	14	3269	1/1	0.79	0.15	55,55,55,55	0
54	MG	1G	2290	1/1	0.79	0.36	70,70,70,70	0
54	MG	1G	2294	1/1	0.79	0.38	75,75,75,75	0
54	MG	X1	104	1/1	0.79	0.27	79,79,79,79	0
54	MG	14	3457	1/1	0.79	0.43	84,84,84,84	0
54	MG	1G	2374	1/1	0.79	0.48	86,86,86,86	0
54	MG	W4	102	1/1	0.79	0.22	83,83,83,83	0
54	MG	13	2324	1/1	0.79	0.29	63,63,63,63	0
54	MG	1G	2334	1/1	0.79	0.28	86,86,86,86	0
54	MG	1H	3536	1/1	0.79	0.16	43,43,43,43	0
54	MG	13	2367	1/1	0.79	0.18	58,58,58,58	0
54	MG	1H	3546	1/1	0.79	0.28	69,69,69,69	0
54	MG	1G	2328	1/1	0.80	0.48	69,69,69,69	0
54	MG	14	3284	1/1	0.80	0.30	82,82,82,82	0
54	MG	13	2283	1/1	0.80	0.38	63,63,63,63	0
54	MG	14	3298	1/1	0.80	0.29	69,69,69,69	0
54	MG	14	3567	1/1	0.80	0.17	73,73,73,73	0
54	MG	21	303	1/1	0.80	0.18	72,72,72,72	0
54	MG	14	3419	1/1	0.80	0.46	41,41,41,41	0
54	MG	13	2328	1/1	0.80	0.37	76,76,76,76	0
54	MG	25	201	1/1	0.80	0.29	79,79,79,79	0
54	MG	1H	3410	1/1	0.80	0.15	57,57,57,57	0
54	MG	1J	208	1/1	0.80	0.17	71,71,71,71	0
54	MG	1G	2362	1/1	0.80	0.29	91,91,91,91	0
54	MG	14	3317	1/1	0.80	0.31	79,79,79,79	0
54	MG	1G	2278	1/1	0.80	0.30	81,81,81,81	0
54	MG	13	2235	1/1	0.80	0.24	81,81,81,81	0
54	MG	14	3451	1/1	0.80	0.12	52,52,52,52	0
54	MG	1H	3188	1/1	0.80	0.14	35,35,35,35	0
54	MG	14	3118	1/1	0.80	0.29	62,62,62,62	0
54	MG	14	3153	1/1	0.80	0.30	60,60,60,60	0
54	MG	1H	3487	1/1	0.80	0.17	54,54,54,54	0
54	MG	13	2225	1/1	0.80	0.30	67,67,67,67	0
54	MG	14	3474	1/1	0.80	0.15	50,50,50,50	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
54	MG	1G	2288	1/1	0.80	0.32	84,84,84,84	0
54	MG	1H	3495	1/1	0.80	0.20	59,59,59,59	0
54	MG	13	2342	1/1	0.80	0.32	73,73,73,73	0
54	MG	14	3233	1/1	0.80	0.16	58,58,58,58	0
54	MG	1G	2346	1/1	0.80	0.14	69,69,69,69	0
54	MG	X4	102	1/1	0.80	0.56	79,79,79,79	0
54	MG	13	2361	1/1	0.80	0.20	81,81,81,81	0
54	MG	14	3543	1/1	0.80	0.32	59,59,59,59	0
54	MG	1G	2326	1/1	0.80	0.37	84,84,84,84	0
54	MG	1H	3471	1/1	0.81	0.08	71,71,71,71	0
54	MG	14	3304	1/1	0.81	0.21	46,46,46,46	0
54	MG	13	2320	1/1	0.81	0.40	75,75,75,75	0
54	MG	14	3307	1/1	0.81	0.23	71,71,71,71	0
54	MG	13	2366	1/1	0.81	0.30	65,65,65,65	0
54	MG	1H	3370	1/1	0.81	0.28	62,62,62,62	0
54	MG	14	3189	1/1	0.81	0.34	76,76,76,76	0
54	MG	1G	2291	1/1	0.81	0.39	79,79,79,79	0
54	MG	1J	204	1/1	0.81	0.24	67,67,67,67	0
54	MG	14	3448	1/1	0.81	0.13	60,60,60,60	0
54	MG	13	2381	1/1	0.81	0.23	87,87,87,87	0
54	MG	14	3208	1/1	0.81	0.24	50,50,50,50	0
54	MG	14	3215	1/1	0.81	0.21	49,49,49,49	0
54	MG	14	3219	1/1	0.81	0.21	53,53,53,53	0
54	MG	1G	2295	1/1	0.81	0.18	75,75,75,75	0
54	MG	1H	3131	1/1	0.81	0.29	62,62,62,62	0
54	MG	41	202	1/1	0.81	0.26	73,73,73,73	0
54	MG	14	3346	1/1	0.81	0.10	83,83,83,83	0
54	MG	14	3477	1/1	0.81	0.43	64,64,64,64	0
54	MG	55	201	1/1	0.81	0.22	53,53,53,53	0
54	MG	W1	101	1/1	0.81	0.35	64,64,64,64	0
54	MG	13	2313	1/1	0.81	0.23	78,78,78,78	0
54	MG	1G	2351	1/1	0.81	0.25	66,66,66,66	0
54	MG	1H	3211	1/1	0.81	0.13	50,50,50,50	0
54	MG	X1	105	1/1	0.81	0.46	79,79,79,79	0
54	MG	1G	2301	1/1	0.81	0.33	88,88,88,88	0
54	MG	14	3516	1/1	0.81	0.22	61,61,61,61	0
54	MG	14	3258	1/1	0.81	0.32	39,39,39,39	0
54	MG	14	3529	1/1	0.81	0.14	63,63,63,63	0
54	MG	14	3259	1/1	0.81	0.35	46,46,46,46	0
54	MG	1G	2251	1/1	0.81	0.36	67,67,67,67	0
54	MG	C5	203	1/1	0.81	0.25	86,86,86,86	0
54	MG	1H	3440	1/1	0.81	0.10	39,39,39,39	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
54	MG	X4	105	1/1	0.81	0.47	83,83,83,83	0
54	MG	1G	2267	1/1	0.81	0.28	81,81,81,81	0
54	MG	1H	3583	1/1	0.82	0.16	53,53,53,53	0
54	MG	13	2373	1/1	0.82	0.18	88,88,88,88	0
54	MG	13	2374	1/1	0.82	0.14	79,79,79,79	0
54	MG	13	2314	1/1	0.82	0.27	67,67,67,67	0
54	MG	14	3405	1/1	0.82	0.24	65,65,65,65	0
54	MG	1H	3351	1/1	0.82	0.29	71,71,71,71	0
54	MG	13	2352	1/1	0.82	0.18	52,52,52,52	0
54	MG	1H	3448	1/1	0.82	0.18	50,50,50,50	0
54	MG	1G	2256	1/1	0.82	0.30	67,67,67,67	0
54	MG	14	3299	1/1	0.82	0.25	57,57,57,57	0
54	MG	25	202	1/1	0.82	0.17	67,67,67,67	0
54	MG	14	3302	1/1	0.82	0.25	52,52,52,52	0
54	MG	13	2353	1/1	0.82	0.39	60,60,60,60	0
54	MG	14	3152	1/1	0.82	0.19	53,53,53,53	0
54	MG	1H	3490	1/1	0.82	0.11	45,45,45,45	0
54	MG	14	3158	1/1	0.82	0.41	56,56,56,56	0
54	MG	14	3177	1/1	0.82	0.29	67,67,67,67	0
54	MG	78	201	1/1	0.82	0.16	47,47,47,47	0
54	MG	14	3452	1/1	0.82	0.28	59,59,59,59	0
54	MG	1G	2323	1/1	0.82	0.48	67,67,67,67	0
54	MG	13	2369	1/1	0.82	0.24	51,51,51,51	0
54	MG	1H	3283	1/1	0.82	0.31	76,76,76,76	0
54	MG	13	2317	1/1	0.82	0.23	69,69,69,69	0
54	MG	1G	2224	1/1	0.82	0.36	72,72,72,72	0
54	MG	13	2282	1/1	0.82	0.32	57,57,57,57	0
54	MG	1G	2236	1/1	0.82	0.23	70,70,70,70	0
54	MG	1H	3395	1/1	0.82	0.26	72,72,72,72	0
54	MG	14	3483	1/1	0.82	0.14	55,55,55,55	0
54	MG	1H	3566	1/1	0.82	0.22	48,48,48,48	0
54	MG	1G	2268	1/1	0.82	0.13	77,77,77,77	0
54	MG	14	3236	1/1	0.82	0.23	56,56,56,56	0
54	MG	14	3496	1/1	0.82	0.18	58,58,58,58	0
54	MG	14	3242	1/1	0.82	0.29	59,59,59,59	0
54	MG	14	3367	1/1	0.82	0.37	51,51,51,51	0
54	MG	14	3521	1/1	0.82	0.11	58,58,58,58	0
54	MG	14	3525	1/1	0.82	0.13	51,51,51,51	0
54	MG	14	3246	1/1	0.82	0.45	64,64,64,64	0
54	MG	14	3530	1/1	0.82	0.15	49,49,49,49	0
54	MG	1H	3576	1/1	0.82	0.08	64,64,64,64	0
54	MG	14	3387	1/1	0.82	0.18	64,64,64,64	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
54	MG	14	3384	1/1	0.83	0.16	47,47,47,47	0
54	MG	14	3541	1/1	0.83	0.23	71,71,71,71	0
54	MG	14	3385	1/1	0.83	0.23	50,50,50,50	0
54	MG	1H	3400	1/1	0.83	0.33	66,66,66,66	0
54	MG	1G	2365	1/1	0.83	0.62	84,84,84,84	0
54	MG	1H	3585	1/1	0.83	0.18	39,39,39,39	0
54	MG	14	3252	1/1	0.83	0.33	62,62,62,62	0
54	MG	1G	2321	1/1	0.83	0.45	75,75,75,75	0
54	MG	14	3562	1/1	0.83	0.21	61,61,61,61	0
54	MG	1H	3157	1/1	0.83	0.29	61,61,61,61	0
54	MG	14	3001	1/1	0.83	0.27	57,57,57,57	0
54	MG	1H	3158	1/1	0.83	0.23	61,61,61,61	0
54	MG	1H	3434	1/1	0.83	0.34	59,59,59,59	0
54	MG	14	3423	1/1	0.83	0.19	68,68,68,68	0
54	MG	14	3291	1/1	0.83	0.28	49,49,49,49	0
54	MG	1H	3342	1/1	0.83	0.21	62,62,62,62	0
54	MG	1H	3174	1/1	0.83	0.27	50,50,50,50	0
54	MG	1G	2253	1/1	0.83	0.31	87,87,87,87	0
54	MG	14	3134	1/1	0.83	0.26	53,53,53,53	0
54	MG	1H	3452	1/1	0.83	0.28	52,52,52,52	0
54	MG	1G	2265	1/1	0.83	0.27	81,81,81,81	0
54	MG	14	3154	1/1	0.83	0.25	53,53,53,53	0
54	MG	13	2356	1/1	0.83	0.26	67,67,67,67	0
54	MG	I8	102	1/1	0.83	0.27	61,61,61,61	0
54	MG	39	301	1/1	0.83	0.20	74,74,74,74	0
54	MG	14	3311	1/1	0.83	0.30	71,71,71,71	0
54	MG	88	301	1/1	0.83	0.19	59,59,59,59	0
54	MG	14	3164	1/1	0.83	0.30	49,49,49,49	0
54	MG	14	3166	1/1	0.83	0.22	52,52,52,52	0
54	MG	1G	2302	1/1	0.83	0.20	86,86,86,86	0
54	MG	1G	2309	1/1	0.83	0.13	75,75,75,75	0
54	MG	1H	3366	1/1	0.83	0.18	68,68,68,68	0
54	MG	1H	3368	1/1	0.83	0.18	57,57,57,57	0
54	MG	14	3481	1/1	0.83	0.23	82,82,82,82	0
54	MG	13	2325	1/1	0.83	0.42	77,77,77,77	0
54	MG	1H	3280	1/1	0.83	0.15	46,46,46,46	0
54	MG	13	2368	1/1	0.83	0.25	84,84,84,84	0
54	MG	13	2269	1/1	0.83	0.32	57,57,57,57	0
54	MG	14	3351	1/1	0.83	0.25	61,61,61,61	0
54	MG	1G	2293	1/1	0.83	0.20	83,83,83,83	0
54	MG	W4	103	1/1	0.83	0.47	81,81,81,81	0
54	MG	14	3509	1/1	0.83	0.23	62,62,62,62	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
54	MG	14	3357	1/1	0.83	0.15	53,53,53,53	0
54	MG	14	3223	1/1	0.83	0.25	58,58,58,58	0
54	MG	1H	3553	1/1	0.83	0.08	46,46,46,46	0
54	MG	3E	303	1/1	0.83	0.23	81,81,81,81	0
54	MG	1H	3393	1/1	0.83	0.13	51,51,51,51	0
54	MG	13	2355	1/1	0.83	0.29	65,65,65,65	0
54	MG	13	2262	1/1	0.84	0.28	70,70,70,70	0
54	MG	14	3355	1/1	0.84	0.28	61,61,61,61	0
54	MG	1H	3355	1/1	0.84	0.08	57,57,57,57	0
54	MG	1H	3245	1/1	0.84	0.23	49,49,49,49	0
54	MG	14	3239	1/1	0.84	0.36	58,58,58,58	0
54	MG	1H	3591	1/1	0.84	0.17	62,62,62,62	0
54	MG	1H	3594	1/1	0.84	0.29	41,41,41,41	0
54	MG	14	3247	1/1	0.84	0.30	68,68,68,68	0
54	MG	1H	3441	1/1	0.84	0.30	59,59,59,59	0
54	MG	1G	2221	1/1	0.84	0.33	68,68,68,68	0
54	MG	58	201	1/1	0.84	0.43	88,88,88,88	0
54	MG	14	3070	1/1	0.84	0.27	49,49,49,49	0
54	MG	13	2319	1/1	0.84	0.30	77,77,77,77	0
54	MG	14	3093	1/1	0.84	0.30	40,40,40,40	0
54	MG	14	3398	1/1	0.84	0.11	75,75,75,75	0
54	MG	13	2304	1/1	0.84	0.23	55,55,55,55	0
54	MG	4E	201	1/1	0.84	0.22	78,78,78,78	0
54	MG	14	3271	1/1	0.84	0.22	68,68,68,68	0
54	MG	14	3276	1/1	0.84	0.29	45,45,45,45	0
54	MG	14	3409	1/1	0.84	0.12	51,51,51,51	0
54	MG	14	3411	1/1	0.84	0.28	66,66,66,66	0
54	MG	1H	3479	1/1	0.84	0.15	67,67,67,67	0
54	MG	14	3413	1/1	0.84	0.34	79,79,79,79	0
54	MG	1J	207	1/1	0.84	0.16	80,80,80,80	0
54	MG	14	3289	1/1	0.84	0.25	63,63,63,63	0
54	MG	1H	3286	1/1	0.84	0.32	79,79,79,79	0
54	MG	14	3426	1/1	0.84	0.29	56,56,56,56	0
54	MG	14	3293	1/1	0.84	0.27	57,57,57,57	0
54	MG	1J	214	1/1	0.84	0.20	71,71,71,71	0
54	MG	1H	3375	1/1	0.84	0.29	53,53,53,53	0
54	MG	1G	2233	1/1	0.84	0.34	59,59,59,59	0
54	MG	14	3438	1/1	0.84	0.26	64,64,64,64	0
54	MG	1H	3296	1/1	0.84	0.36	77,77,77,77	0
54	MG	1G	2270	1/1	0.84	0.39	67,67,67,67	0
54	MG	1H	3506	1/1	0.84	0.31	59,59,59,59	0
54	MG	14	3305	1/1	0.84	0.15	52,52,52,52	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
54	MG	14	3156	1/1	0.84	0.33	41,41,41,41	0
54	MG	1H	3507	1/1	0.84	0.24	68,68,68,68	0
54	MG	1H	3513	1/1	0.84	0.15	63,63,63,63	0
54	MG	14	3310	1/1	0.84	0.16	59,59,59,59	0
54	MG	7A	101	1/1	0.84	0.35	70,70,70,70	0
54	MG	14	3461	1/1	0.84	0.27	70,70,70,70	0
54	MG	1H	3514	1/1	0.84	0.23	57,57,57,57	0
54	MG	13	2339	1/1	0.84	0.17	79,79,79,79	0
54	MG	1G	2348	1/1	0.84	0.31	71,71,71,71	0
54	MG	14	3318	1/1	0.84	0.16	78,78,78,78	0
54	MG	14	3475	1/1	0.84	0.14	64,64,64,64	0
54	MG	14	3320	1/1	0.84	0.27	59,59,59,59	0
54	MG	1G	2273	1/1	0.84	0.12	69,69,69,69	0
54	MG	13	2276	1/1	0.84	0.31	62,62,62,62	0
54	MG	1H	3192	1/1	0.84	0.26	38,38,38,38	0
54	MG	1H	3406	1/1	0.84	0.26	63,63,63,63	0
54	MG	14	3218	1/1	0.84	0.24	50,50,50,50	0
54	MG	1G	2300	1/1	0.84	0.20	86,86,86,86	0
54	MG	1G	2279	1/1	0.84	0.29	76,76,76,76	0
54	MG	13	2384	1/1	0.84	0.22	70,70,70,70	0
54	MG	1H	3581	1/1	0.84	0.11	54,54,54,54	0
54	MG	13	2260	1/1	0.85	0.29	63,63,63,63	0
54	MG	14	3425	1/1	0.85	0.26	54,54,54,54	0
54	MG	14	3556	1/1	0.85	0.14	59,59,59,59	0
54	MG	1H	3597	1/1	0.85	0.19	45,45,45,45	0
54	MG	14	3222	1/1	0.85	0.39	70,70,70,70	0
54	MG	14	3564	1/1	0.85	0.09	50,50,50,50	0
54	MG	1H	3041	1/1	0.85	0.09	40,40,40,40	0
54	MG	14	3225	1/1	0.85	0.11	57,57,57,57	0
54	MG	4I	201	1/1	0.85	0.14	75,75,75,75	0
54	MG	14	3226	1/1	0.85	0.27	64,64,64,64	0
54	MG	16	203	1/1	0.85	0.18	62,62,62,62	0
54	MG	1G	2336	1/1	0.85	0.31	72,72,72,72	0
54	MG	16	211	1/1	0.85	0.24	59,59,59,59	0
54	MG	1H	3103	1/1	0.85	0.26	42,42,42,42	0
54	MG	14	3444	1/1	0.85	0.24	62,62,62,62	0
54	MG	14	3014	1/1	0.85	0.14	41,41,41,41	0
54	MG	13	2382	1/1	0.85	0.22	60,60,60,60	0
54	MG	1H	3135	1/1	0.85	0.19	49,49,49,49	0
54	MG	13	2383	1/1	0.85	0.29	70,70,70,70	0
54	MG	1H	3155	1/1	0.85	0.23	56,56,56,56	0
54	MG	1G	2341	1/1	0.85	0.25	86,86,86,86	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
54	MG	13	2257	1/1	0.85	0.25	82,82,82,82	0
54	MG	1H	3396	1/1	0.85	0.28	75,75,75,75	0
54	MG	14	3254	1/1	0.85	0.25	66,66,66,66	0
54	MG	14	3128	1/1	0.85	0.22	39,39,39,39	0
54	MG	14	3473	1/1	0.85	0.23	77,77,77,77	0
54	MG	13	2309	1/1	0.85	0.24	54,54,54,54	0
54	MG	1H	3521	1/1	0.85	0.18	43,43,43,43	0
54	MG	1H	3403	1/1	0.85	0.16	46,46,46,46	0
54	MG	14	3478	1/1	0.85	0.25	60,60,60,60	0
54	MG	13	2363	1/1	0.85	0.18	76,76,76,76	0
54	MG	13	2346	1/1	0.85	0.15	56,56,56,56	0
54	MG	13	2221	1/1	0.85	0.26	63,63,63,63	0
54	MG	1H	3217	1/1	0.85	0.11	36,36,36,36	0
54	MG	1H	3562	1/1	0.85	0.22	56,56,56,56	0
54	MG	14	3390	1/1	0.85	0.31	44,44,44,44	0
54	MG	14	3175	1/1	0.85	0.38	72,72,72,72	0
54	MG	14	3395	1/1	0.85	0.27	67,67,67,67	0
54	MG	1H	3421	1/1	0.85	0.23	62,62,62,62	0
54	MG	1G	2296	1/1	0.85	0.21	69,69,69,69	0
54	MG	14	3519	1/1	0.85	0.18	71,71,71,71	0
54	MG	1G	2260	1/1	0.85	0.34	77,77,77,77	0
54	MG	X1	107	1/1	0.85	0.40	78,78,78,78	0
54	MG	13	2336	1/1	0.85	0.44	54,54,54,54	0
54	MG	14	3203	1/1	0.85	0.31	75,75,75,75	0
54	MG	1H	3239	1/1	0.85	0.36	59,59,59,59	0
54	MG	14	3213	1/1	0.85	0.28	52,52,52,52	0
54	MG	14	3540	1/1	0.85	0.24	81,81,81,81	0
54	MG	13	2277	1/1	0.85	0.22	66,66,66,66	0
54	MG	14	3542	1/1	0.85	0.10	65,65,65,65	0
54	MG	1H	3365	1/1	0.85	0.21	63,63,63,63	0
54	MG	1G	2286	1/1	0.85	0.13	68,68,68,68	0
54	MG	14	3422	1/1	0.85	0.30	66,66,66,66	0
54	MG	14	3501	1/1	0.86	0.11	47,47,47,47	0
54	MG	14	3506	1/1	0.86	0.17	91,91,91,91	0
54	MG	13	2288	1/1	0.86	0.19	80,80,80,80	0
54	MG	14	3514	1/1	0.86	0.12	60,60,60,60	0
54	MG	13	2306	1/1	0.86	0.36	46,46,46,46	0
54	MG	1H	3339	1/1	0.86	0.23	62,62,62,62	0
54	MG	14	3193	1/1	0.86	0.21	49,49,49,49	0
54	MG	13	2337	1/1	0.86	0.36	56,56,56,56	0
54	MG	14	3352	1/1	0.86	0.19	74,74,74,74	0
54	MG	1H	3127	1/1	0.86	0.15	60,60,60,60	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
54	MG	1H	3345	1/1	0.86	0.17	45,45,45,45	0
54	MG	14	3534	1/1	0.86	0.18	70,70,70,70	0
54	MG	14	3212	1/1	0.86	0.37	59,59,59,59	0
54	MG	1G	2347	1/1	0.86	0.22	74,74,74,74	0
54	MG	1G	2240	1/1	0.86	0.25	81,81,81,81	0
54	MG	13	2249	1/1	0.86	0.28	56,56,56,56	0
54	MG	1H	3142	1/1	0.86	0.20	64,64,64,64	0
54	MG	14	3372	1/1	0.86	0.22	62,62,62,62	0
54	MG	14	3381	1/1	0.86	0.25	65,65,65,65	0
54	MG	14	3550	1/1	0.86	0.17	63,63,63,63	0
54	MG	1G	2350	1/1	0.86	0.11	80,80,80,80	0
54	MG	13	2224	1/1	0.86	0.31	59,59,59,59	0
54	MG	1G	2315	1/1	0.86	0.15	93,93,93,93	0
54	MG	1G	2282	1/1	0.86	0.34	75,75,75,75	0
54	MG	1H	3180	1/1	0.86	0.16	52,52,52,52	0
54	MG	1H	3554	1/1	0.86	0.15	53,53,53,53	0
54	MG	1H	3369	1/1	0.86	0.19	71,71,71,71	0
54	MG	1G	2358	1/1	0.86	0.29	68,68,68,68	0
54	MG	1G	2318	1/1	0.86	0.24	73,73,73,73	0
54	MG	13	2266	1/1	0.86	0.22	77,77,77,77	0
54	MG	16	201	1/1	0.86	0.22	69,69,69,69	0
54	MG	1H	3578	1/1	0.86	0.35	75,75,75,75	0
54	MG	14	3245	1/1	0.86	0.33	64,64,64,64	0
54	MG	1H	3579	1/1	0.86	0.26	72,72,72,72	0
54	MG	13	2255	1/1	0.86	0.33	53,53,53,53	0
54	MG	1H	3220	1/1	0.86	0.18	44,44,44,44	0
54	MG	1H	3223	1/1	0.86	0.34	48,48,48,48	0
54	MG	1H	3386	1/1	0.86	0.13	65,65,65,65	0
53	8UZ	13	2202	33/33	0.86	0.10	70,70,70,70	0
54	MG	1J	206	1/1	0.86	0.18	75,75,75,75	0
54	MG	1H	3392	1/1	0.86	0.10	50,50,50,50	0
54	MG	1H	3226	1/1	0.86	0.19	43,43,43,43	0
54	MG	1H	3228	1/1	0.86	0.28	45,45,45,45	0
54	MG	1G	2322	1/1	0.86	0.23	63,63,63,63	0
54	MG	B5	101	1/1	0.86	0.28	63,63,63,63	0
54	MG	14	3272	1/1	0.86	0.21	67,67,67,67	0
54	MG	13	2349	1/1	0.86	0.31	53,53,53,53	0
54	MG	1G	2217	1/1	0.86	0.25	66,66,66,66	0
54	MG	I8	101	1/1	0.86	0.27	43,43,43,43	0
54	MG	14	3075	1/1	0.86	0.17	63,63,63,63	0
54	MG	5I	102	1/1	0.86	0.20	72,72,72,72	0
54	MG	1H	3256	1/1	0.86	0.30	69,69,69,69	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
54	MG	13	2243	1/1	0.86	0.26	48,48,48,48	0
54	MG	14	3105	1/1	0.86	0.24	63,63,63,63	0
54	MG	88	302	1/1	0.86	0.19	58,58,58,58	0
54	MG	14	3295	1/1	0.86	0.23	56,56,56,56	0
54	MG	41	201	1/1	0.86	0.23	68,68,68,68	0
54	MG	1H	3266	1/1	0.86	0.25	46,46,46,46	0
54	MG	45	202	1/1	0.86	0.26	65,65,65,65	0
54	MG	1G	2292	1/1	0.86	0.20	67,67,67,67	0
54	MG	6A	101	1/1	0.86	0.34	86,86,86,86	0
54	MG	13	2232	1/1	0.86	0.29	64,64,64,64	0
54	MG	1G	2333	1/1	0.86	0.36	85,85,85,85	0
54	MG	14	3124	1/1	0.86	0.24	67,67,67,67	0
54	MG	14	3126	1/1	0.86	0.34	63,63,63,63	0
54	MG	W1	102	1/1	0.86	0.24	67,67,67,67	0
54	MG	14	3127	1/1	0.86	0.37	66,66,66,66	0
54	MG	13	2302	1/1	0.86	0.36	69,69,69,69	0
54	MG	1G	2375	1/1	0.86	0.14	85,85,85,85	0
54	MG	14	3147	1/1	0.86	0.36	53,53,53,53	0
54	MG	1G	2335	1/1	0.86	0.16	71,71,71,71	0
54	MG	1G	2228	1/1	0.86	0.19	71,71,71,71	0
54	MG	1G	2229	1/1	0.86	0.32	84,84,84,84	0
54	MG	1H	3455	1/1	0.86	0.30	36,36,36,36	0
54	MG	1H	3303	1/1	0.86	0.28	59,59,59,59	0
54	MG	1G	2231	1/1	0.86	0.34	57,57,57,57	0
54	MG	1G	2299	1/1	0.86	0.14	60,60,60,60	0
54	MG	14	3333	1/1	0.86	0.14	61,61,61,61	0
54	MG	1H	3489	1/1	0.86	0.17	53,53,53,53	0
54	MG	14	3338	1/1	0.86	0.22	63,63,63,63	0
54	MG	14	3497	1/1	0.86	0.16	59,59,59,59	0
54	MG	14	3499	1/1	0.86	0.17	80,80,80,80	0
54	MG	14	3228	1/1	0.87	0.30	65,65,65,65	0
54	MG	14	3361	1/1	0.87	0.17	64,64,64,64	0
54	MG	14	3520	1/1	0.87	0.30	77,77,77,77	0
54	MG	1H	3137	1/1	0.87	0.22	42,42,42,42	0
54	MG	1H	3242	1/1	0.87	0.17	51,51,51,51	0
54	MG	1H	3140	1/1	0.87	0.16	42,42,42,42	0
54	MG	14	3238	1/1	0.87	0.25	60,60,60,60	0
54	MG	1H	3463	1/1	0.87	0.30	60,60,60,60	0
54	MG	14	3378	1/1	0.87	0.25	59,59,59,59	0
54	MG	1H	3464	1/1	0.87	0.24	53,53,53,53	0
54	MG	1H	3465	1/1	0.87	0.25	47,47,47,47	0
54	MG	1H	3361	1/1	0.87	0.26	51,51,51,51	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
54	MG	1H	3362	1/1	0.87	0.27	59,59,59,59	0
54	MG	1H	3247	1/1	0.87	0.24	46,46,46,46	0
54	MG	13	2251	1/1	0.87	0.20	62,62,62,62	0
54	MG	14	3389	1/1	0.87	0.30	63,63,63,63	0
54	MG	14	3112	1/1	0.87	0.28	47,47,47,47	0
54	MG	1G	2237	1/1	0.87	0.25	70,70,70,70	0
54	MG	14	3257	1/1	0.87	0.18	42,42,42,42	0
54	MG	1H	3263	1/1	0.87	0.29	65,65,65,65	0
54	MG	1G	2225	1/1	0.87	0.42	72,72,72,72	0
54	MG	14	3401	1/1	0.87	0.30	73,73,73,73	0
54	MG	14	3565	1/1	0.87	0.31	69,69,69,69	0
54	MG	14	3263	1/1	0.87	0.41	77,77,77,77	0
54	MG	14	3265	1/1	0.87	0.32	64,64,64,64	0
54	MG	14	3406	1/1	0.87	0.26	79,79,79,79	0
54	MG	1G	2337	1/1	0.87	0.29	70,70,70,70	0
54	MG	1H	3500	1/1	0.87	0.18	71,71,71,71	0
54	MG	13	2312	1/1	0.87	0.38	52,52,52,52	0
54	MG	1H	3159	1/1	0.87	0.17	52,52,52,52	0
54	MG	16	209	1/1	0.87	0.16	54,54,54,54	0
54	MG	1H	3161	1/1	0.87	0.22	32,32,32,32	0
54	MG	14	3417	1/1	0.87	0.12	51,51,51,51	0
54	MG	14	3139	1/1	0.87	0.19	46,46,46,46	0
54	MG	14	3142	1/1	0.87	0.28	51,51,51,51	0
54	MG	14	3290	1/1	0.87	0.28	73,73,73,73	0
54	MG	1G	2241	1/1	0.87	0.29	71,71,71,71	0
54	MG	14	3149	1/1	0.87	0.30	42,42,42,42	0
54	MG	14	3432	1/1	0.87	0.10	55,55,55,55	0
54	MG	1H	3177	1/1	0.87	0.27	46,46,46,46	0
54	MG	13	2217	1/1	0.87	0.18	66,66,66,66	0
54	MG	14	3296	1/1	0.87	0.15	59,59,59,59	0
54	MG	1G	2248	1/1	0.87	0.47	61,61,61,61	0
54	MG	1H	3537	1/1	0.87	0.23	60,60,60,60	0
54	MG	13	2231	1/1	0.87	0.23	64,64,64,64	0
54	MG	14	3443	1/1	0.87	0.19	52,52,52,52	0
54	MG	14	3303	1/1	0.87	0.20	62,62,62,62	0
54	MG	14	3163	1/1	0.87	0.48	44,44,44,44	0
54	MG	1G	2266	1/1	0.87	0.12	71,71,71,71	0
54	MG	E5	201	1/1	0.87	0.32	55,55,55,55	0
54	MG	1H	3305	1/1	0.87	0.23	46,46,46,46	0
54	MG	14	3167	1/1	0.87	0.32	39,39,39,39	0
54	MG	1H	3312	1/1	0.87	0.12	41,41,41,41	0
54	MG	14	3458	1/1	0.87	0.08	70,70,70,70	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
54	MG	1H	3397	1/1	0.87	0.37	60,60,60,60	0
54	MG	14	3178	1/1	0.87	0.20	61,61,61,61	0
54	MG	14	3463	1/1	0.87	0.26	65,65,65,65	0
54	MG	14	3180	1/1	0.87	0.25	65,65,65,65	0
54	MG	1H	3560	1/1	0.87	0.16	69,69,69,69	0
54	MG	1H	3313	1/1	0.87	0.38	51,51,51,51	0
54	MG	14	3471	1/1	0.87	0.18	62,62,62,62	0
54	MG	14	3319	1/1	0.87	0.10	67,67,67,67	0
54	MG	1H	3317	1/1	0.87	0.18	56,56,56,56	0
54	MG	1H	3067	1/1	0.87	0.14	42,42,42,42	0
54	MG	1H	3575	1/1	0.87	0.07	59,59,59,59	0
54	MG	1H	3081	1/1	0.87	0.29	49,49,49,49	0
54	MG	1H	3325	1/1	0.87	0.21	60,60,60,60	0
54	MG	1G	2250	1/1	0.87	0.26	66,66,66,66	0
54	MG	1H	3419	1/1	0.87	0.15	63,63,63,63	0
54	MG	1H	3582	1/1	0.87	0.28	71,71,71,71	0
54	MG	1H	3097	1/1	0.87	0.19	38,38,38,38	0
54	MG	14	3493	1/1	0.87	0.20	57,57,57,57	0
53	8UZ	1G	2202	33/33	0.87	0.08	78,78,78,78	0
54	MG	14	3345	1/1	0.87	0.07	60,60,60,60	0
54	MG	13	2318	1/1	0.87	0.39	68,68,68,68	0
54	MG	14	3349	1/1	0.87	0.21	63,63,63,63	0
54	MG	1H	3588	1/1	0.87	0.16	51,51,51,51	0
54	MG	1H	3232	1/1	0.87	0.11	34,34,34,34	0
54	MG	1G	2255	1/1	0.87	0.23	67,67,67,67	0
54	MG	14	3354	1/1	0.87	0.25	68,68,68,68	0
54	MG	1G	2370	1/1	0.87	0.27	59,59,59,59	0
54	MG	14	3508	1/1	0.88	0.16	57,57,57,57	0
54	MG	1H	3315	1/1	0.88	0.30	68,68,68,68	0
54	MG	14	3513	1/1	0.88	0.24	66,66,66,66	0
54	MG	1G	2246	1/1	0.88	0.26	68,68,68,68	0
54	MG	14	3515	1/1	0.88	0.22	60,60,60,60	0
54	MG	13	2329	1/1	0.88	0.37	73,73,73,73	0
54	MG	14	3517	1/1	0.88	0.21	65,65,65,65	0
54	MG	1H	3197	1/1	0.88	0.15	46,46,46,46	0
54	MG	1H	3428	1/1	0.88	0.12	40,40,40,40	0
54	MG	1H	3590	1/1	0.88	0.26	67,67,67,67	0
54	MG	1H	3432	1/1	0.88	0.09	43,43,43,43	0
54	MG	14	3524	1/1	0.88	0.17	65,65,65,65	0
54	MG	14	3368	1/1	0.88	0.14	50,50,50,50	0
54	MG	14	3232	1/1	0.88	0.41	74,74,74,74	0
54	MG	3E	302	1/1	0.88	0.32	84,84,84,84	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
54	MG	14	3532	1/1	0.88	0.16	59,59,59,59	0
54	MG	1H	3331	1/1	0.88	0.22	50,50,50,50	0
54	MG	1H	3332	1/1	0.88	0.27	75,75,75,75	0
54	MG	1H	3212	1/1	0.88	0.18	35,35,35,35	0
54	MG	13	2226	1/1	0.88	0.27	82,82,82,82	0
54	MG	1H	3450	1/1	0.88	0.21	50,50,50,50	0
54	MG	1H	3037	1/1	0.88	0.21	44,44,44,44	0
54	MG	1H	3453	1/1	0.88	0.14	43,43,43,43	0
54	MG	14	3249	1/1	0.88	0.20	55,55,55,55	0
54	MG	13	2364	1/1	0.88	0.18	69,69,69,69	0
54	MG	14	3551	1/1	0.88	0.12	47,47,47,47	0
54	MG	1H	3461	1/1	0.88	0.14	51,51,51,51	0
54	MG	14	3394	1/1	0.88	0.21	54,54,54,54	0
54	MG	14	3099	1/1	0.88	0.26	45,45,45,45	0
54	MG	1H	3344	1/1	0.88	0.08	42,42,42,42	0
54	MG	14	3397	1/1	0.88	0.21	57,57,57,57	0
54	MG	14	3106	1/1	0.88	0.24	52,52,52,52	0
54	MG	14	3399	1/1	0.88	0.32	70,70,70,70	0
54	MG	14	3400	1/1	0.88	0.17	71,71,71,71	0
54	MG	21	301	1/1	0.88	0.27	40,40,40,40	0
54	MG	1H	3046	1/1	0.88	0.15	38,38,38,38	0
54	MG	1H	3350	1/1	0.88	0.20	57,57,57,57	0
54	MG	13	2345	1/1	0.88	0.16	47,47,47,47	0
54	MG	1H	3227	1/1	0.88	0.39	44,44,44,44	0
54	MG	13	2289	1/1	0.88	0.31	71,71,71,71	0
54	MG	1H	3488	1/1	0.88	0.22	54,54,54,54	0
54	MG	16	207	1/1	0.88	0.37	53,53,53,53	0
54	MG	1H	3230	1/1	0.88	0.41	62,62,62,62	0
54	MG	1G	2359	1/1	0.88	0.41	62,62,62,62	0
54	MG	1H	3234	1/1	0.88	0.09	39,39,39,39	0
54	MG	14	3277	1/1	0.88	0.22	46,46,46,46	0
54	MG	14	3131	1/1	0.88	0.42	44,44,44,44	0
54	MG	14	3421	1/1	0.88	0.42	42,42,42,42	0
54	MG	1G	2271	1/1	0.88	0.35	81,81,81,81	0
54	MG	1J	205	1/1	0.88	0.29	64,64,64,64	0
54	MG	1H	3099	1/1	0.88	0.25	36,36,36,36	0
54	MG	14	3424	1/1	0.88	0.32	44,44,44,44	0
54	MG	1G	2254	1/1	0.88	0.34	62,62,62,62	0
54	MG	14	3292	1/1	0.88	0.11	39,39,39,39	0
54	MG	14	3143	1/1	0.88	0.24	56,56,56,56	0
54	MG	1H	3502	1/1	0.88	0.07	52,52,52,52	0
54	MG	1H	3505	1/1	0.88	0.25	66,66,66,66	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
54	MG	1H	3114	1/1	0.88	0.25	43,43,43,43	0
54	MG	13	2216	1/1	0.88	0.32	53,53,53,53	0
54	MG	1G	2277	1/1	0.88	0.24	56,56,56,56	0
54	MG	14	3440	1/1	0.88	0.36	61,61,61,61	0
54	MG	13	2272	1/1	0.88	0.30	54,54,54,54	0
54	MG	1H	3373	1/1	0.88	0.13	55,55,55,55	0
54	MG	14	3159	1/1	0.88	0.30	43,43,43,43	0
54	MG	13	2316	1/1	0.88	0.39	74,74,74,74	0
54	MG	13	2252	1/1	0.88	0.49	68,68,68,68	0
54	MG	13	2284	1/1	0.88	0.27	73,73,73,73	0
54	MG	1G	2285	1/1	0.88	0.25	67,67,67,67	0
54	MG	1H	3545	1/1	0.88	0.19	66,66,66,66	0
54	MG	1H	3146	1/1	0.88	0.35	55,55,55,55	0
54	MG	1G	2313	1/1	0.88	0.26	62,62,62,62	0
54	MG	1G	2340	1/1	0.88	0.37	81,81,81,81	0
54	MG	14	3181	1/1	0.88	0.27	41,41,41,41	0
54	MG	1H	3287	1/1	0.88	0.19	59,59,59,59	0
54	MG	14	3191	1/1	0.88	0.28	60,60,60,60	0
54	MG	14	3321	1/1	0.88	0.14	68,68,68,68	0
54	MG	1G	2314	1/1	0.88	0.29	74,74,74,74	0
54	MG	14	3326	1/1	0.88	0.20	70,70,70,70	0
54	MG	W1	103	1/1	0.88	0.29	73,73,73,73	0
54	MG	1H	3561	1/1	0.88	0.19	72,72,72,72	0
54	MG	13	2359	1/1	0.88	0.17	78,78,78,78	0
54	MG	X1	103	1/1	0.88	0.36	76,76,76,76	0
54	MG	14	3331	1/1	0.88	0.19	54,54,54,54	0
54	MG	14	3196	1/1	0.88	0.21	68,68,68,68	0
54	MG	1H	3565	1/1	0.88	0.24	67,67,67,67	0
54	MG	14	3204	1/1	0.88	0.38	59,59,59,59	0
54	MG	14	3207	1/1	0.88	0.24	63,63,63,63	0
54	MG	W4	101	1/1	0.88	0.42	88,88,88,88	0
54	MG	1G	2316	1/1	0.88	0.11	58,58,58,58	0
54	MG	14	3209	1/1	0.88	0.22	47,47,47,47	0
54	MG	1H	3167	1/1	0.88	0.24	40,40,40,40	0
54	MG	1G	2242	1/1	0.88	0.48	81,81,81,81	0
54	MG	14	3348	1/1	0.88	0.19	59,59,59,59	0
54	MG	1G	2263	1/1	0.88	0.28	61,61,61,61	0
54	MG	13	2241	1/1	0.88	0.32	45,45,45,45	0
54	MG	1H	3181	1/1	0.88	0.32	37,37,37,37	0
54	MG	1H	3182	1/1	0.88	0.09	39,39,39,39	0
54	MG	1H	3437	1/1	0.89	0.28	73,73,73,73	0
54	MG	14	3528	1/1	0.89	0.23	66,66,66,66	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
54	MG	14	3157	1/1	0.89	0.23	45,45,45,45	0
54	MG	1H	3148	1/1	0.89	0.26	30,30,30,30	0
54	MG	14	3282	1/1	0.89	0.29	47,47,47,47	0
54	MG	1H	3288	1/1	0.89	0.27	55,55,55,55	0
54	MG	14	3535	1/1	0.89	0.07	60,60,60,60	0
54	MG	14	3536	1/1	0.89	0.20	62,62,62,62	0
54	MG	14	3161	1/1	0.89	0.20	45,45,45,45	0
54	MG	1H	3150	1/1	0.89	0.24	51,51,51,51	0
54	MG	1H	3293	1/1	0.89	0.09	37,37,37,37	0
54	MG	1H	3154	1/1	0.89	0.20	37,37,37,37	0
54	MG	1H	3074	1/1	0.89	0.20	43,43,43,43	0
54	MG	14	3545	1/1	0.89	0.13	47,47,47,47	0
54	MG	14	3173	1/1	0.89	0.28	60,60,60,60	0
54	MG	13	2274	1/1	0.89	0.21	50,50,50,50	0
54	MG	13	2246	1/1	0.89	0.42	62,62,62,62	0
54	MG	14	3297	1/1	0.89	0.14	61,61,61,61	0
54	MG	14	3552	1/1	0.89	0.16	49,49,49,49	0
54	MG	13	2301	1/1	0.89	0.14	72,72,72,72	0
54	MG	1G	2331	1/1	0.89	0.31	72,72,72,72	0
54	MG	1H	3307	1/1	0.89	0.24	31,31,31,31	0
54	MG	14	3415	1/1	0.89	0.25	59,59,59,59	0
54	MG	14	3183	1/1	0.89	0.39	57,57,57,57	0
54	MG	1H	3309	1/1	0.89	0.18	37,37,37,37	0
54	MG	1H	3466	1/1	0.89	0.33	65,65,65,65	0
54	MG	1H	3586	1/1	0.89	0.24	62,62,62,62	0
54	MG	14	3568	1/1	0.89	0.20	53,53,53,53	0
54	MG	1H	3470	1/1	0.89	0.10	43,43,43,43	0
54	MG	1H	3165	1/1	0.89	0.23	46,46,46,46	0
54	MG	1H	3378	1/1	0.89	0.15	51,51,51,51	0
54	MG	1H	3481	1/1	0.89	0.18	57,57,57,57	0
54	MG	14	3427	1/1	0.89	0.32	52,52,52,52	0
54	MG	14	3312	1/1	0.89	0.29	64,64,64,64	0
54	MG	1H	3486	1/1	0.89	0.17	40,40,40,40	0
54	MG	14	3315	1/1	0.89	0.26	62,62,62,62	0
54	MG	14	3316	1/1	0.89	0.26	59,59,59,59	0
54	MG	14	3205	1/1	0.89	0.33	61,61,61,61	0
54	MG	13	2223	1/1	0.89	0.34	48,48,48,48	0
54	MG	1H	3168	1/1	0.89	0.15	34,34,34,34	0
54	MG	1G	2276	1/1	0.89	0.17	82,82,82,82	0
54	MG	42	201	1/1	0.89	0.12	92,92,92,92	0
54	MG	14	3005	1/1	0.89	0.21	51,51,51,51	0
54	MG	1J	202	1/1	0.89	0.20	79,79,79,79	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
54	MG	14	3322	1/1	0.89	0.13	51,51,51,51	0
54	MG	13	2265	1/1	0.89	0.36	51,51,51,51	0
54	MG	14	3015	1/1	0.89	0.10	40,40,40,40	0
54	MG	14	3216	1/1	0.89	0.23	56,56,56,56	0
54	MG	14	3022	1/1	0.89	0.11	45,45,45,45	0
54	MG	14	3453	1/1	0.89	0.23	44,44,44,44	0
54	MG	14	3454	1/1	0.89	0.22	72,72,72,72	0
54	MG	1J	211	1/1	0.89	0.26	73,73,73,73	0
54	MG	14	3048	1/1	0.89	0.11	43,43,43,43	0
54	MG	1H	3129	1/1	0.89	0.23	49,49,49,49	0
54	MG	1H	3320	1/1	0.89	0.27	46,46,46,46	0
54	MG	1H	3323	1/1	0.89	0.24	62,62,62,62	0
54	MG	13	2344	1/1	0.89	0.21	66,66,66,66	0
54	MG	1H	3329	1/1	0.89	0.06	46,46,46,46	0
54	MG	14	3343	1/1	0.89	0.20	62,62,62,62	0
54	MG	5E	201	1/1	0.89	0.26	66,66,66,66	0
54	MG	14	3466	1/1	0.89	0.26	68,68,68,68	0
54	MG	1H	3248	1/1	0.89	0.30	56,56,56,56	0
54	MG	1H	3251	1/1	0.89	0.12	47,47,47,47	0
54	MG	14	3229	1/1	0.89	0.34	64,64,64,64	0
54	MG	1H	3254	1/1	0.89	0.18	47,47,47,47	0
54	MG	88	303	1/1	0.89	0.30	56,56,56,56	0
54	MG	1H	3510	1/1	0.89	0.37	48,48,48,48	0
54	MG	14	3350	1/1	0.89	0.12	77,77,77,77	0
54	MG	1H	3133	1/1	0.89	0.36	47,47,47,47	0
54	MG	14	3479	1/1	0.89	0.17	56,56,56,56	0
54	MG	14	3115	1/1	0.89	0.22	54,54,54,54	0
54	MG	1H	3407	1/1	0.89	0.17	65,65,65,65	0
54	MG	98	201	1/1	0.89	0.14	56,56,56,56	0
54	MG	1H	3340	1/1	0.89	0.34	59,59,59,59	0
54	MG	14	3123	1/1	0.89	0.19	45,45,45,45	0
54	MG	55	202	1/1	0.89	0.13	57,57,57,57	0
54	MG	14	3489	1/1	0.89	0.18	49,49,49,49	0
54	MG	13	2378	1/1	0.89	0.33	73,73,73,73	0
54	MG	1H	3258	1/1	0.89	0.22	55,55,55,55	0
54	MG	1H	3417	1/1	0.89	0.22	38,38,38,38	0
54	MG	14	3363	1/1	0.89	0.39	63,63,63,63	0
54	MG	1H	3538	1/1	0.89	0.10	45,45,45,45	0
54	MG	1H	3539	1/1	0.89	0.28	76,76,76,76	0
54	MG	1H	3020	1/1	0.89	0.14	39,39,39,39	0
54	MG	14	3504	1/1	0.89	0.21	71,71,71,71	0
54	MG	1H	3544	1/1	0.89	0.12	57,57,57,57	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
54	MG	14	3371	1/1	0.89	0.09	50,50,50,50	0
54	MG	X1	108	1/1	0.89	0.33	77,77,77,77	0
54	MG	14	3141	1/1	0.89	0.24	51,51,51,51	0
54	MG	14	3377	1/1	0.89	0.11	49,49,49,49	0
54	MG	1G	2354	1/1	0.89	0.35	62,62,62,62	0
54	MG	1G	2281	1/1	0.89	0.15	70,70,70,70	0
54	MG	14	3146	1/1	0.89	0.32	54,54,54,54	0
54	MG	1G	2218	1/1	0.89	0.35	54,54,54,54	0
54	MG	14	3264	1/1	0.89	0.28	44,44,44,44	0
54	MG	1H	3429	1/1	0.89	0.13	41,41,41,41	0
54	MG	1H	3213	1/1	0.89	0.33	34,34,34,34	0
54	MG	1H	3558	1/1	0.89	0.10	56,56,56,56	0
54	MG	1G	2219	1/1	0.89	0.27	59,59,59,59	0
54	MG	14	3201	1/1	0.90	0.21	42,42,42,42	0
54	MG	1H	3399	1/1	0.90	0.15	55,55,55,55	0
54	MG	14	3418	1/1	0.90	0.24	59,59,59,59	0
54	MG	11	302	1/1	0.90	0.17	46,46,46,46	0
54	MG	1H	3210	1/1	0.90	0.17	44,44,44,44	0
54	MG	13	2264	1/1	0.90	0.32	74,74,74,74	0
54	MG	1H	3271	1/1	0.90	0.23	57,57,57,57	0
54	MG	1H	3272	1/1	0.90	0.15	47,47,47,47	0
54	MG	1H	3411	1/1	0.90	0.09	50,50,50,50	0
54	MG	1H	3508	1/1	0.90	0.30	36,36,36,36	0
54	MG	1G	2283	1/1	0.90	0.20	68,68,68,68	0
54	MG	13	2326	1/1	0.90	0.24	59,59,59,59	0
54	MG	1H	3415	1/1	0.90	0.11	61,61,61,61	0
54	MG	1H	3416	1/1	0.90	0.27	72,72,72,72	0
54	MG	14	3324	1/1	0.90	0.24	67,67,67,67	0
54	MG	14	3108	1/1	0.90	0.29	47,47,47,47	0
54	MG	14	3111	1/1	0.90	0.17	41,41,41,41	0
54	MG	1H	3518	1/1	0.90	0.14	41,41,41,41	0
54	MG	1H	3348	1/1	0.90	0.23	47,47,47,47	0
54	MG	1H	3528	1/1	0.90	0.22	58,58,58,58	0
54	MG	1H	3533	1/1	0.90	0.23	46,46,46,46	0
54	MG	1H	3534	1/1	0.90	0.11	43,43,43,43	0
54	MG	1H	3057	1/1	0.90	0.16	46,46,46,46	0
54	MG	14	3449	1/1	0.90	0.13	53,53,53,53	0
54	MG	1H	3285	1/1	0.90	0.17	69,69,69,69	0
54	MG	1G	2235	1/1	0.90	0.37	64,64,64,64	0
54	MG	1H	3222	1/1	0.90	0.23	40,40,40,40	0
54	MG	16	214	1/1	0.90	0.36	66,66,66,66	0
54	MG	1G	2305	1/1	0.90	0.09	77,77,77,77	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
54	MG	13	2229	1/1	0.90	0.23	68,68,68,68	0
54	MG	13	2280	1/1	0.90	0.49	63,63,63,63	0
54	MG	14	3240	1/1	0.90	0.22	59,59,59,59	0
54	MG	1G	2238	1/1	0.90	0.26	69,69,69,69	0
54	MG	1G	2353	1/1	0.90	0.46	65,65,65,65	0
54	MG	1H	3364	1/1	0.90	0.23	57,57,57,57	0
54	MG	13	2253	1/1	0.90	0.23	49,49,49,49	0
54	MG	1H	3162	1/1	0.90	0.38	55,55,55,55	0
54	MG	1H	3367	1/1	0.90	0.19	57,57,57,57	0
54	MG	1H	3451	1/1	0.90	0.30	37,37,37,37	0
54	MG	14	3472	1/1	0.90	0.17	58,58,58,58	0
54	MG	14	3356	1/1	0.90	0.15	51,51,51,51	0
54	MG	1H	3164	1/1	0.90	0.21	45,45,45,45	0
54	MG	14	3360	1/1	0.90	0.34	59,59,59,59	0
54	MG	14	3476	1/1	0.90	0.17	57,57,57,57	0
54	MG	1H	3564	1/1	0.90	0.26	47,47,47,47	0
54	MG	14	3256	1/1	0.90	0.20	38,38,38,38	0
54	MG	1H	3104	1/1	0.90	0.20	30,30,30,30	0
54	MG	31	301	1/1	0.90	0.08	37,37,37,37	0
54	MG	1H	3107	1/1	0.90	0.24	33,33,33,33	0
54	MG	14	3365	1/1	0.90	0.17	56,56,56,56	0
54	MG	1H	3457	1/1	0.90	0.29	35,35,35,35	0
54	MG	1H	3460	1/1	0.90	0.14	61,61,61,61	0
54	MG	1G	2223	1/1	0.90	0.18	66,66,66,66	0
54	MG	1H	3462	1/1	0.90	0.20	53,53,53,53	0
54	MG	14	3492	1/1	0.90	0.18	42,42,42,42	0
54	MG	1H	3240	1/1	0.90	0.28	56,56,56,56	0
54	MG	1H	3241	1/1	0.90	0.26	48,48,48,48	0
54	MG	13	2220	1/1	0.90	0.34	60,60,60,60	0
54	MG	1H	3243	1/1	0.90	0.30	59,59,59,59	0
54	MG	14	3274	1/1	0.90	0.26	59,59,59,59	0
54	MG	14	3170	1/1	0.90	0.36	42,42,42,42	0
54	MG	14	3171	1/1	0.90	0.23	40,40,40,40	0
54	MG	14	3386	1/1	0.90	0.13	47,47,47,47	0
54	MG	1H	3244	1/1	0.90	0.34	33,33,33,33	0
54	MG	13	2340	1/1	0.90	0.14	52,52,52,52	0
54	MG	14	3287	1/1	0.90	0.39	56,56,56,56	0
54	MG	1H	3474	1/1	0.90	0.23	51,51,51,51	0
54	MG	1H	3478	1/1	0.90	0.09	52,52,52,52	0
54	MG	14	3179	1/1	0.90	0.22	53,53,53,53	0
54	MG	1H	3589	1/1	0.90	0.10	45,45,45,45	0
54	MG	1H	3385	1/1	0.90	0.17	61,61,61,61	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
54	MG	A8	201	1/1	0.90	0.26	60,60,60,60	0
54	MG	14	3184	1/1	0.90	0.23	45,45,45,45	0
54	MG	14	3185	1/1	0.90	0.18	48,48,48,48	0
54	MG	14	3188	1/1	0.90	0.29	53,53,53,53	0
54	MG	13	2248	1/1	0.90	0.41	57,57,57,57	0
54	MG	1G	2247	1/1	0.90	0.41	74,74,74,74	0
54	MG	14	3403	1/1	0.90	0.21	63,63,63,63	0
54	MG	14	3404	1/1	0.90	0.20	60,60,60,60	0
54	MG	14	3301	1/1	0.90	0.23	65,65,65,65	0
54	MG	14	3533	1/1	0.90	0.32	58,58,58,58	0
54	MG	1H	3327	1/1	0.90	0.14	54,54,54,54	0
54	MG	1H	3136	1/1	0.90	0.24	47,47,47,47	0
54	MG	14	3194	1/1	0.90	0.16	52,52,52,52	0
54	MG	1G	2280	1/1	0.90	0.24	62,62,62,62	0
54	MG	14	3538	1/1	0.90	0.29	74,74,74,74	0
54	MG	1H	3194	1/1	0.90	0.27	46,46,46,46	0
54	MG	14	3197	1/1	0.90	0.26	45,45,45,45	0
54	MG	14	3414	1/1	0.90	0.25	67,67,67,67	0
54	MG	1H	3443	1/1	0.91	0.20	52,52,52,52	0
54	MG	1H	3447	1/1	0.91	0.11	59,59,59,59	0
54	MG	14	3435	1/1	0.91	0.10	58,58,58,58	0
54	MG	1H	3371	1/1	0.91	0.19	60,60,60,60	0
54	MG	14	3230	1/1	0.91	0.13	67,67,67,67	0
54	MG	14	3129	1/1	0.91	0.35	45,45,45,45	0
54	MG	1H	3001	1/1	0.91	0.33	33,33,33,33	0
54	MG	14	3441	1/1	0.91	0.14	76,76,76,76	0
54	MG	1H	3260	1/1	0.91	0.18	37,37,37,37	0
54	MG	1G	2230	1/1	0.91	0.14	57,57,57,57	0
54	MG	14	3237	1/1	0.91	0.22	56,56,56,56	0
54	MG	1H	3550	1/1	0.91	0.29	58,58,58,58	0
54	MG	1H	3265	1/1	0.91	0.20	58,58,58,58	0
54	MG	1H	3326	1/1	0.91	0.36	68,68,68,68	0
54	MG	14	3450	1/1	0.91	0.21	57,57,57,57	0
54	MG	1H	3456	1/1	0.91	0.35	62,62,62,62	0
54	MG	14	3243	1/1	0.91	0.31	76,76,76,76	0
54	MG	1H	3559	1/1	0.91	0.08	61,61,61,61	0
54	MG	16	202	1/1	0.91	0.29	64,64,64,64	0
54	MG	1H	3381	1/1	0.91	0.31	58,58,58,58	0
54	MG	1H	3382	1/1	0.91	0.19	53,53,53,53	0
54	MG	1H	3108	1/1	0.91	0.30	30,30,30,30	0
54	MG	1H	3328	1/1	0.91	0.21	49,49,49,49	0
54	MG	16	210	1/1	0.91	0.18	58,58,58,58	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
54	MG	14	3155	1/1	0.91	0.30	39,39,39,39	0
54	MG	16	212	1/1	0.91	0.16	67,67,67,67	0
54	MG	1H	3270	1/1	0.91	0.16	55,55,55,55	0
54	MG	1H	3110	1/1	0.91	0.28	47,47,47,47	0
54	MG	1H	3035	1/1	0.91	0.11	60,60,60,60	0
54	MG	13	2240	1/1	0.91	0.46	74,74,74,74	0
54	MG	14	3467	1/1	0.91	0.21	66,66,66,66	0
54	MG	14	3160	1/1	0.91	0.18	54,54,54,54	0
54	MG	1H	3469	1/1	0.91	0.14	47,47,47,47	0
54	MG	14	3162	1/1	0.91	0.35	44,44,44,44	0
54	MG	1H	3577	1/1	0.91	0.09	51,51,51,51	0
54	MG	1H	3337	1/1	0.91	0.17	55,55,55,55	0
54	MG	1H	3338	1/1	0.91	0.13	48,48,48,48	0
54	MG	13	2348	1/1	0.91	0.22	58,58,58,58	0
54	MG	1H	3475	1/1	0.91	0.10	49,49,49,49	0
54	MG	14	3375	1/1	0.91	0.22	71,71,71,71	0
54	MG	14	3376	1/1	0.91	0.17	51,51,51,51	0
54	MG	1J	212	1/1	0.91	0.08	81,81,81,81	0
54	MG	13	2236	1/1	0.91	0.17	54,54,54,54	0
54	MG	14	3172	1/1	0.91	0.28	48,48,48,48	0
54	MG	14	3379	1/1	0.91	0.13	67,67,67,67	0
54	MG	1H	3284	1/1	0.91	0.13	44,44,44,44	0
54	MG	14	3174	1/1	0.91	0.23	53,53,53,53	0
54	MG	13	2315	1/1	0.91	0.34	67,67,67,67	0
54	MG	14	3491	1/1	0.91	0.15	52,52,52,52	0
54	MG	31	303	1/1	0.91	0.23	63,63,63,63	0
54	MG	1H	3401	1/1	0.91	0.23	31,31,31,31	0
54	MG	14	3285	1/1	0.91	0.21	59,59,59,59	0
54	MG	1H	3170	1/1	0.91	0.24	32,32,32,32	0
54	MG	E5	202	1/1	0.91	0.28	60,60,60,60	0
54	MG	1H	3405	1/1	0.91	0.28	62,62,62,62	0
54	MG	1H	3061	1/1	0.91	0.09	68,68,68,68	0
54	MG	1G	2306	1/1	0.91	0.16	76,76,76,76	0
54	MG	1H	3408	1/1	0.91	0.17	51,51,51,51	0
54	MG	1H	3349	1/1	0.91	0.12	39,39,39,39	0
54	MG	13	2219	1/1	0.91	0.21	60,60,60,60	0
54	MG	14	3507	1/1	0.91	0.20	50,50,50,50	0
54	MG	14	3187	1/1	0.91	0.27	47,47,47,47	0
54	MG	1H	3499	1/1	0.91	0.32	49,49,49,49	0
54	MG	1H	3079	1/1	0.91	0.21	59,59,59,59	0
54	MG	13	2354	1/1	0.91	0.17	70,70,70,70	0
54	MG	1H	3298	1/1	0.91	0.20	45,45,45,45	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
54	MG	1H	3356	1/1	0.91	0.15	45,45,45,45	0
54	MG	1H	3082	1/1	0.91	0.32	57,57,57,57	0
54	MG	1H	3143	1/1	0.91	0.21	64,64,64,64	0
54	MG	14	3049	1/1	0.91	0.15	52,52,52,52	0
54	MG	14	3051	1/1	0.91	0.13	71,71,71,71	0
54	MG	14	3198	1/1	0.91	0.40	40,40,40,40	0
54	MG	14	3523	1/1	0.91	0.12	52,52,52,52	0
54	MG	1H	3089	1/1	0.91	0.13	38,38,38,38	0
54	MG	1H	3423	1/1	0.91	0.24	55,55,55,55	0
54	MG	1H	3196	1/1	0.91	0.29	35,35,35,35	0
54	MG	1H	3515	1/1	0.91	0.17	38,38,38,38	0
54	MG	1H	3426	1/1	0.91	0.16	56,56,56,56	0
54	MG	1G	2210	1/1	0.91	0.17	67,67,67,67	0
54	MG	1H	3520	1/1	0.91	0.13	51,51,51,51	0
54	MG	1H	3200	1/1	0.91	0.33	37,37,37,37	0
54	MG	1G	2324	1/1	0.91	0.20	60,60,60,60	0
54	MG	1H	3529	1/1	0.91	0.11	42,42,42,42	0
54	MG	1H	3530	1/1	0.91	0.18	48,48,48,48	0
54	MG	1H	3250	1/1	0.91	0.11	47,47,47,47	0
54	MG	14	3539	1/1	0.91	0.27	72,72,72,72	0
54	MG	1H	3153	1/1	0.91	0.23	45,45,45,45	0
54	MG	1H	3535	1/1	0.91	0.13	39,39,39,39	0
54	MG	1G	2212	1/1	0.91	0.11	104,104,104,104	0
54	MG	14	3120	1/1	0.91	0.25	45,45,45,45	0
53	8UZ	13	2201	33/33	0.91	0.10	55,55,55,55	0
54	MG	1H	3216	1/1	0.91	0.23	48,48,48,48	0
55	ZN	G8	201	1/1	0.91	0.16	95,95,95,95	0
54	MG	1H	3425	1/1	0.92	0.09	46,46,46,46	0
54	MG	14	3140	1/1	0.92	0.25	44,44,44,44	0
54	MG	14	3253	1/1	0.92	0.51	55,55,55,55	0
54	MG	1H	3144	1/1	0.92	0.10	47,47,47,47	0
54	MG	1H	3273	1/1	0.92	0.26	60,60,60,60	0
54	MG	14	3526	1/1	0.92	0.24	50,50,50,50	0
54	MG	1H	3276	1/1	0.92	0.22	57,57,57,57	0
54	MG	14	3145	1/1	0.92	0.34	60,60,60,60	0
54	MG	1H	3431	1/1	0.92	0.12	45,45,45,45	0
54	MG	14	3261	1/1	0.92	0.31	51,51,51,51	0
54	MG	14	3392	1/1	0.92	0.24	49,49,49,49	0
54	MG	1H	3352	1/1	0.92	0.27	61,61,61,61	0
54	MG	13	2210	1/1	0.92	0.08	82,82,82,82	0
54	MG	1H	3215	1/1	0.92	0.19	45,45,45,45	0
54	MG	1H	3547	1/1	0.92	0.07	41,41,41,41	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
54	MG	1H	3438	1/1	0.92	0.12	54,54,54,54	0
54	MG	1H	3282	1/1	0.92	0.26	61,61,61,61	0
54	MG	1H	3552	1/1	0.92	0.07	52,52,52,52	0
54	MG	1H	3090	1/1	0.92	0.24	49,49,49,49	0
54	MG	11	301	1/1	0.92	0.17	34,34,34,34	0
54	MG	1H	3360	1/1	0.92	0.12	46,46,46,46	0
54	MG	14	3279	1/1	0.92	0.28	66,66,66,66	0
54	MG	14	3547	1/1	0.92	0.09	48,48,48,48	0
54	MG	14	3280	1/1	0.92	0.16	56,56,56,56	0
54	MG	14	3281	1/1	0.92	0.22	61,61,61,61	0
54	MG	1G	2380	1/1	0.92	0.11	70,70,70,70	0
54	MG	1H	3221	1/1	0.92	0.29	42,42,42,42	0
54	MG	14	3408	1/1	0.92	0.07	52,52,52,52	0
54	MG	1H	3098	1/1	0.92	0.14	35,35,35,35	0
54	MG	13	2350	1/1	0.92	0.12	53,53,53,53	0
54	MG	1H	3563	1/1	0.92	0.23	57,57,57,57	0
54	MG	1H	3289	1/1	0.92	0.21	56,56,56,56	0
54	MG	1H	3290	1/1	0.92	0.29	39,39,39,39	0
54	MG	14	3168	1/1	0.92	0.29	47,47,47,47	0
54	MG	1H	3224	1/1	0.92	0.25	42,42,42,42	0
54	MG	1H	3292	1/1	0.92	0.09	45,45,45,45	0
54	MG	1H	3568	1/1	0.92	0.13	61,61,61,61	0
54	MG	68	201	1/1	0.92	0.26	62,62,62,62	0
54	MG	68	202	1/1	0.92	0.18	63,63,63,63	0
54	MG	14	3420	1/1	0.92	0.31	44,44,44,44	0
54	MG	19	301	1/1	0.92	0.14	54,54,54,54	0
54	MG	19	303	1/1	0.92	0.28	37,37,37,37	0
54	MG	13	2303	1/1	0.92	0.25	70,70,70,70	0
54	MG	1G	2303	1/1	0.92	0.16	72,72,72,72	0
54	MG	1G	2257	1/1	0.92	0.22	66,66,66,66	0
54	MG	1H	3302	1/1	0.92	0.37	44,44,44,44	0
54	MG	1H	3163	1/1	0.92	0.17	43,43,43,43	0
54	MG	16	205	1/1	0.92	0.34	58,58,58,58	0
54	MG	1H	3233	1/1	0.92	0.16	36,36,36,36	0
54	MG	1G	2243	1/1	0.92	0.37	76,76,76,76	0
54	MG	1H	3116	1/1	0.92	0.24	43,43,43,43	0
54	MG	1H	3117	1/1	0.92	0.34	42,42,42,42	0
54	MG	1H	3118	1/1	0.92	0.28	38,38,38,38	0
54	MG	1H	3169	1/1	0.92	0.16	36,36,36,36	0
54	MG	1H	3119	1/1	0.92	0.17	36,36,36,36	0
54	MG	14	3190	1/1	0.92	0.21	38,38,38,38	0
54	MG	14	3313	1/1	0.92	0.15	50,50,50,50	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
54	MG	29	302	1/1	0.92	0.27	47,47,47,47	0
54	MG	1H	3387	1/1	0.92	0.20	55,55,55,55	0
54	MG	1H	3173	1/1	0.92	0.24	50,50,50,50	0
54	MG	1H	3596	1/1	0.92	0.22	49,49,49,49	0
54	MG	1J	203	1/1	0.92	0.32	67,67,67,67	0
54	MG	1H	3391	1/1	0.92	0.22	56,56,56,56	0
54	MG	14	3447	1/1	0.92	0.15	59,59,59,59	0
54	MG	1H	3123	1/1	0.92	0.24	40,40,40,40	0
54	MG	1G	2307	1/1	0.92	0.34	70,70,70,70	0
54	MG	L8	101	1/1	0.92	0.29	54,54,54,54	0
54	MG	1H	3179	1/1	0.92	0.24	55,55,55,55	0
54	MG	1G	2232	1/1	0.92	0.24	52,52,52,52	0
54	MG	14	3323	1/1	0.92	0.07	46,46,46,46	0
54	MG	14	3009	1/1	0.92	0.21	53,53,53,53	0
54	MG	14	3455	1/1	0.92	0.27	60,60,60,60	0
54	MG	14	3456	1/1	0.92	0.18	56,56,56,56	0
54	MG	1G	2275	1/1	0.92	0.31	52,52,52,52	0
54	MG	78	203	1/1	0.92	0.23	40,40,40,40	0
54	MG	1H	3398	1/1	0.92	0.08	55,55,55,55	0
54	MG	1H	3494	1/1	0.92	0.28	62,62,62,62	0
54	MG	14	3038	1/1	0.92	0.12	54,54,54,54	0
54	MG	1H	3132	1/1	0.92	0.14	65,65,65,65	0
54	MG	14	3332	1/1	0.92	0.30	52,52,52,52	0
54	MG	14	3210	1/1	0.92	0.17	50,50,50,50	0
54	MG	1H	3496	1/1	0.92	0.17	52,52,52,52	0
54	MG	35	201	1/1	0.92	0.28	60,60,60,60	0
54	MG	1G	2245	1/1	0.92	0.29	67,67,67,67	0
54	MG	14	3214	1/1	0.92	0.30	62,62,62,62	0
54	MG	14	3470	1/1	0.92	0.08	51,51,51,51	0
54	MG	1H	3252	1/1	0.92	0.19	47,47,47,47	0
54	MG	1H	3253	1/1	0.92	0.23	63,63,63,63	0
54	MG	1H	3504	1/1	0.92	0.15	55,55,55,55	0
54	MG	1H	3404	1/1	0.92	0.26	68,68,68,68	0
54	MG	1H	3330	1/1	0.92	0.15	51,51,51,51	0
54	MG	1H	3189	1/1	0.92	0.09	32,32,32,32	0
54	MG	11	305	1/1	0.92	0.22	31,31,31,31	0
54	MG	1H	3193	1/1	0.92	0.18	46,46,46,46	0
54	MG	14	3224	1/1	0.92	0.33	55,55,55,55	0
54	MG	1H	3511	1/1	0.92	0.20	56,56,56,56	0
54	MG	14	3109	1/1	0.92	0.23	44,44,44,44	0
54	MG	1G	2371	1/1	0.92	0.11	58,58,58,58	0
54	MG	14	3484	1/1	0.92	0.10	62,62,62,62	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
54	MG	1G	2234	1/1	0.92	0.26	66,66,66,66	0
54	MG	1H	3412	1/1	0.92	0.18	49,49,49,49	0
54	MG	1H	3262	1/1	0.92	0.34	68,68,68,68	0
54	MG	14	3359	1/1	0.92	0.31	62,62,62,62	0
54	MG	1G	2203	1/1	0.92	0.43	68,68,68,68	0
54	MG	14	3117	1/1	0.92	0.15	64,64,64,64	0
54	MG	1H	3341	1/1	0.92	0.22	61,61,61,61	0
54	MG	1H	3264	1/1	0.92	0.15	52,52,52,52	0
54	MG	14	3121	1/1	0.92	0.24	57,57,57,57	0
54	MG	14	3122	1/1	0.92	0.42	52,52,52,52	0
54	MG	1H	3524	1/1	0.92	0.13	45,45,45,45	0
54	MG	14	3503	1/1	0.92	0.10	45,45,45,45	0
54	MG	14	3241	1/1	0.92	0.20	72,72,72,72	0
54	MG	1H	3527	1/1	0.92	0.07	45,45,45,45	0
54	MG	14	3370	1/1	0.92	0.21	43,43,43,43	0
54	MG	13	2297	1/1	0.92	0.28	62,62,62,62	0
54	MG	1H	3418	1/1	0.92	0.28	54,54,54,54	0
54	MG	14	3511	1/1	0.92	0.09	48,48,48,48	0
54	MG	14	3374	1/1	0.92	0.22	70,70,70,70	0
54	MG	1H	3202	1/1	0.92	0.27	38,38,38,38	0
54	MG	13	2230	1/1	0.92	0.17	71,71,71,71	0
54	MG	14	3248	1/1	0.92	0.35	54,54,54,54	0
54	MG	1H	3346	1/1	0.92	0.31	61,61,61,61	0
54	MG	1G	2227	1/1	0.92	0.07	67,67,67,67	0
54	MG	14	3380	1/1	0.92	0.27	57,57,57,57	0
54	MG	14	3446	1/1	0.93	0.19	48,48,48,48	0
54	MG	1H	3374	1/1	0.93	0.20	36,36,36,36	0
54	MG	B8	201	1/1	0.93	0.13	60,60,60,60	0
54	MG	1H	3219	1/1	0.93	0.23	44,44,44,44	0
54	MG	14	3561	1/1	0.93	0.18	60,60,60,60	0
54	MG	1H	3439	1/1	0.93	0.14	53,53,53,53	0
54	MG	14	3563	1/1	0.93	0.15	65,65,65,65	0
54	MG	1H	3322	1/1	0.93	0.31	58,58,58,58	0
54	MG	1H	3519	1/1	0.93	0.08	34,34,34,34	0
54	MG	13	2332	1/1	0.93	0.24	58,58,58,58	0
54	MG	1H	3078	1/1	0.93	0.16	64,64,64,64	0
54	MG	14	3266	1/1	0.93	0.18	46,46,46,46	0
54	MG	13	2256	1/1	0.93	0.32	64,64,64,64	0
54	MG	1H	3525	1/1	0.93	0.10	43,43,43,43	0
54	MG	13	2218	1/1	0.93	0.20	58,58,58,58	0
53	8UZ	1G	2201	33/33	0.93	0.11	65,65,65,65	0
54	MG	14	3273	1/1	0.93	0.08	46,46,46,46	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
54	MG	1H	3171	1/1	0.93	0.09	39,39,39,39	0
54	MG	1G	2274	1/1	0.93	0.21	63,63,63,63	0
54	MG	1H	3532	1/1	0.93	0.10	41,41,41,41	0
54	MG	14	3053	1/1	0.93	0.11	67,67,67,67	0
54	MG	14	3373	1/1	0.93	0.09	46,46,46,46	0
54	MG	14	3057	1/1	0.93	0.20	48,48,48,48	0
54	MG	1H	3274	1/1	0.93	0.27	56,56,56,56	0
54	MG	14	3073	1/1	0.93	0.23	53,53,53,53	0
54	MG	13	2244	1/1	0.93	0.20	45,45,45,45	0
54	MG	14	3091	1/1	0.93	0.07	82,82,82,82	0
54	MG	1H	3333	1/1	0.93	0.18	46,46,46,46	0
54	MG	1H	3277	1/1	0.93	0.24	51,51,51,51	0
54	MG	1H	3336	1/1	0.93	0.10	45,45,45,45	0
54	MG	14	3382	1/1	0.93	0.29	54,54,54,54	0
54	MG	14	3101	1/1	0.93	0.26	40,40,40,40	0
54	MG	29	303	1/1	0.93	0.13	51,51,51,51	0
54	MG	14	3102	1/1	0.93	0.30	45,45,45,45	0
54	MG	1H	3459	1/1	0.93	0.08	44,44,44,44	0
54	MG	1H	3278	1/1	0.93	0.20	48,48,48,48	0
54	MG	1H	3175	1/1	0.93	0.34	57,57,57,57	0
54	MG	1H	3229	1/1	0.93	0.16	52,52,52,52	0
54	MG	13	2360	1/1	0.93	0.09	71,71,71,71	0
54	MG	14	3486	1/1	0.93	0.09	55,55,55,55	0
54	MG	14	3487	1/1	0.93	0.14	45,45,45,45	0
54	MG	14	3488	1/1	0.93	0.22	55,55,55,55	0
54	MG	13	2311	1/1	0.93	0.36	71,71,71,71	0
54	MG	14	3391	1/1	0.93	0.22	47,47,47,47	0
54	MG	13	2295	1/1	0.93	0.17	65,65,65,65	0
54	MG	14	3300	1/1	0.93	0.14	67,67,67,67	0
54	MG	1H	3548	1/1	0.93	0.08	51,51,51,51	0
54	MG	13	2278	1/1	0.93	0.26	62,62,62,62	0
54	MG	1H	3468	1/1	0.93	0.11	51,51,51,51	0
54	MG	1H	3551	1/1	0.93	0.22	57,57,57,57	0
54	MG	1H	3017	1/1	0.93	0.09	41,41,41,41	0
54	MG	1H	3402	1/1	0.93	0.09	40,40,40,40	0
54	MG	14	3502	1/1	0.93	0.22	51,51,51,51	0
54	MG	1H	3237	1/1	0.93	0.27	50,50,50,50	0
54	MG	31	302	1/1	0.93	0.13	56,56,56,56	0
54	MG	1H	3557	1/1	0.93	0.09	45,45,45,45	0
54	MG	14	3505	1/1	0.93	0.30	64,64,64,64	0
54	MG	14	3217	1/1	0.93	0.11	58,58,58,58	0
54	MG	1H	3473	1/1	0.93	0.11	48,48,48,48	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
54	MG	13	2351	1/1	0.93	0.33	59,59,59,59	0
54	MG	1G	2252	1/1	0.93	0.40	78,78,78,78	0
54	MG	14	3510	1/1	0.93	0.12	50,50,50,50	0
54	MG	1H	3477	1/1	0.93	0.28	51,51,51,51	0
54	MG	14	3512	1/1	0.93	0.26	57,57,57,57	0
54	MG	1H	3147	1/1	0.93	0.16	54,54,54,54	0
54	MG	1G	2352	1/1	0.93	0.41	65,65,65,65	0
54	MG	11	304	1/1	0.93	0.07	48,48,48,48	0
54	MG	14	3410	1/1	0.93	0.14	59,59,59,59	0
54	MG	14	3132	1/1	0.93	0.27	38,38,38,38	0
54	MG	45	201	1/1	0.93	0.29	53,53,53,53	0
54	MG	1H	3111	1/1	0.93	0.29	45,45,45,45	0
54	MG	1H	3295	1/1	0.93	0.27	49,49,49,49	0
54	MG	1H	3113	1/1	0.93	0.28	34,34,34,34	0
54	MG	1H	3198	1/1	0.93	0.25	36,36,36,36	0
54	MG	14	3522	1/1	0.93	0.11	54,54,54,54	0
54	MG	K8	101	1/1	0.93	0.12	57,57,57,57	0
54	MG	1H	3570	1/1	0.93	0.14	51,51,51,51	0
54	MG	1H	3571	1/1	0.93	0.10	57,57,57,57	0
54	MG	1H	3572	1/1	0.93	0.13	60,60,60,60	0
54	MG	14	3235	1/1	0.93	0.20	45,45,45,45	0
54	MG	14	3327	1/1	0.93	0.33	66,66,66,66	0
54	MG	1H	3357	1/1	0.93	0.07	58,58,58,58	0
54	MG	1H	3246	1/1	0.93	0.27	58,58,58,58	0
54	MG	1G	2298	1/1	0.93	0.24	71,71,71,71	0
54	MG	X1	102	1/1	0.93	0.56	66,66,66,66	0
54	MG	1H	3047	1/1	0.93	0.11	37,37,37,37	0
54	MG	1H	3203	1/1	0.93	0.20	40,40,40,40	0
54	MG	1H	3205	1/1	0.93	0.29	45,45,45,45	0
54	MG	14	3430	1/1	0.93	0.25	46,46,46,46	0
54	MG	14	3431	1/1	0.93	0.36	57,57,57,57	0
54	MG	14	3337	1/1	0.93	0.27	69,69,69,69	0
54	MG	13	2261	1/1	0.93	0.39	53,53,53,53	0
54	MG	1H	3306	1/1	0.93	0.21	36,36,36,36	0
54	MG	1H	3060	1/1	0.93	0.08	45,45,45,45	0
54	MG	1H	3160	1/1	0.93	0.19	53,53,53,53	0
54	MG	2A	201	1/1	0.93	0.14	74,74,74,74	0
54	MG	1H	3214	1/1	0.93	0.17	44,44,44,44	0
54	MG	1H	3122	1/1	0.93	0.19	30,30,30,30	0
54	MG	1G	2357	1/1	0.93	0.15	74,74,74,74	0
54	MG	1H	3261	1/1	0.93	0.13	39,39,39,39	0
54	MG	1H	3433	1/1	0.93	0.09	45,45,45,45	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
54	MG	14	3165	1/1	0.93	0.29	52,52,52,52	0
54	MG	1H	3124	1/1	0.93	0.10	38,38,38,38	0
55	ZN	C5	201	1/1	0.93	0.15	110,110,110,110	0
54	MG	13	2237	1/1	0.94	0.24	61,61,61,61	0
54	MG	1H	3422	1/1	0.94	0.11	45,45,45,45	0
54	MG	1H	3172	1/1	0.94	0.26	36,36,36,36	0
54	MG	3I	201	1/1	0.94	0.24	52,52,52,52	0
54	MG	13	2343	1/1	0.94	0.21	62,62,62,62	0
54	MG	1H	3268	1/1	0.94	0.29	65,65,65,65	0
54	MG	1H	3497	1/1	0.94	0.14	50,50,50,50	0
54	MG	1H	3498	1/1	0.94	0.26	52,52,52,52	0
54	MG	1H	3085	1/1	0.94	0.17	45,45,45,45	0
54	MG	1H	3574	1/1	0.94	0.11	58,58,58,58	0
54	MG	1H	3372	1/1	0.94	0.24	54,54,54,54	0
54	MG	1H	3430	1/1	0.94	0.21	56,56,56,56	0
54	MG	1H	3503	1/1	0.94	0.12	52,52,52,52	0
54	MG	1H	3176	1/1	0.94	0.21	40,40,40,40	0
54	MG	14	3309	1/1	0.94	0.36	39,39,39,39	0
54	MG	14	3133	1/1	0.94	0.24	49,49,49,49	0
54	MG	1G	2332	1/1	0.94	0.26	64,64,64,64	0
54	MG	13	2254	1/1	0.94	0.10	64,64,64,64	0
54	MG	13	2270	1/1	0.94	0.17	59,59,59,59	0
54	MG	1H	3275	1/1	0.94	0.41	51,51,51,51	0
54	MG	29	304	1/1	0.94	0.34	67,67,67,67	0
54	MG	29	305	1/1	0.94	0.11	64,64,64,64	0
54	MG	1H	3095	1/1	0.94	0.29	46,46,46,46	0
54	MG	13	2292	1/1	0.94	0.29	54,54,54,54	0
54	MG	1H	3186	1/1	0.94	0.13	38,38,38,38	0
54	MG	1H	3031	1/1	0.94	0.08	49,49,49,49	0
54	MG	14	3498	1/1	0.94	0.37	44,44,44,44	0
54	MG	13	2379	1/1	0.94	0.26	68,68,68,68	0
54	MG	1H	3334	1/1	0.94	0.20	50,50,50,50	0
54	MG	1H	3445	1/1	0.94	0.27	73,73,73,73	0
54	MG	1H	3593	1/1	0.94	0.10	46,46,46,46	0
54	MG	1H	3236	1/1	0.94	0.12	62,62,62,62	0
54	MG	13	2380	1/1	0.94	0.07	50,50,50,50	0
54	MG	1H	3449	1/1	0.94	0.18	48,48,48,48	0
54	MG	1H	3522	1/1	0.94	0.23	50,50,50,50	0
54	MG	1H	3040	1/1	0.94	0.13	49,49,49,49	0
54	MG	14	3416	1/1	0.94	0.13	46,46,46,46	0
54	MG	1H	3389	1/1	0.94	0.16	55,55,55,55	0
54	MG	1H	3105	1/1	0.94	0.25	41,41,41,41	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
54	MG	14	3244	1/1	0.94	0.27	48,48,48,48	0
54	MG	13	2357	1/1	0.94	0.17	59,59,59,59	0
54	MG	1H	3454	1/1	0.94	0.23	41,41,41,41	0
54	MG	14	3008	1/1	0.94	0.11	53,53,53,53	0
54	MG	13	2330	1/1	0.94	0.25	55,55,55,55	0
54	MG	13	2211	1/1	0.94	0.08	67,67,67,67	0
54	MG	14	3339	1/1	0.94	0.11	46,46,46,46	0
54	MG	1H	3199	1/1	0.94	0.23	38,38,38,38	0
54	MG	1H	3458	1/1	0.94	0.08	51,51,51,51	0
54	MG	14	3429	1/1	0.94	0.18	50,50,50,50	0
54	MG	14	3036	1/1	0.94	0.07	53,53,53,53	0
54	MG	1H	3054	1/1	0.94	0.11	46,46,46,46	0
54	MG	1H	3055	1/1	0.94	0.17	56,56,56,56	0
54	MG	14	3255	1/1	0.94	0.23	57,57,57,57	0
54	MG	1G	2214	1/1	0.94	0.13	74,74,74,74	0
54	MG	14	3527	1/1	0.94	0.08	52,52,52,52	0
54	MG	1H	3204	1/1	0.94	0.19	40,40,40,40	0
54	MG	1H	3294	1/1	0.94	0.18	37,37,37,37	0
54	MG	1H	3115	1/1	0.94	0.18	30,30,30,30	0
54	MG	14	3260	1/1	0.94	0.13	41,41,41,41	0
54	MG	14	3176	1/1	0.94	0.34	60,60,60,60	0
54	MG	14	3262	1/1	0.94	0.21	53,53,53,53	0
54	MG	14	3068	1/1	0.94	0.10	77,77,77,77	0
54	MG	1H	3541	1/1	0.94	0.06	52,52,52,52	0
54	MG	1H	3249	1/1	0.94	0.29	44,44,44,44	0
54	MG	14	3358	1/1	0.94	0.15	46,46,46,46	0
54	MG	1H	3297	1/1	0.94	0.09	51,51,51,51	0
54	MG	14	3083	1/1	0.94	0.07	66,66,66,66	0
54	MG	P8	101	1/1	0.94	0.12	51,51,51,51	0
54	MG	14	3087	1/1	0.94	0.08	49,49,49,49	0
54	MG	1H	3207	1/1	0.94	0.13	56,56,56,56	0
54	MG	1H	3353	1/1	0.94	0.27	57,57,57,57	0
54	MG	1G	2342	1/1	0.94	0.22	73,73,73,73	0
54	MG	14	3094	1/1	0.94	0.17	50,50,50,50	0
54	MG	14	3097	1/1	0.94	0.19	41,41,41,41	0
54	MG	1G	2312	1/1	0.94	0.10	63,63,63,63	0
54	MG	1H	3066	1/1	0.94	0.07	64,64,64,64	0
54	MG	1G	2327	1/1	0.94	0.14	69,69,69,69	0
54	MG	1H	3255	1/1	0.94	0.26	51,51,51,51	0
54	MG	1H	3069	1/1	0.94	0.22	45,45,45,45	0
54	MG	14	3459	1/1	0.94	0.23	49,49,49,49	0
54	MG	14	3283	1/1	0.94	0.21	44,44,44,44	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
54	MG	13	2259	1/1	0.94	0.39	55,55,55,55	0
54	MG	14	3559	1/1	0.94	0.26	70,70,70,70	0
54	MG	14	3560	1/1	0.94	0.13	51,51,51,51	0
54	MG	14	3462	1/1	0.94	0.06	55,55,55,55	0
54	MG	1H	3075	1/1	0.94	0.25	48,48,48,48	0
54	MG	1H	3125	1/1	0.94	0.15	40,40,40,40	0
54	MG	14	3110	1/1	0.94	0.23	56,56,56,56	0
54	MG	14	3199	1/1	0.94	0.16	47,47,47,47	0
54	MG	14	3566	1/1	0.94	0.21	68,68,68,68	0
54	MG	1H	3076	1/1	0.94	0.10	62,62,62,62	0
54	MG	13	2279	1/1	0.94	0.24	55,55,55,55	0
54	MG	1H	3314	1/1	0.94	0.28	44,44,44,44	0
55	ZN	3E	301	1/1	0.94	0.32	81,81,81,81	0
54	MG	1H	3420	1/1	0.94	0.24	46,46,46,46	0
54	MG	1H	3015	1/1	0.95	0.10	41,41,41,41	0
54	MG	14	3088	1/1	0.95	0.26	59,59,59,59	0
54	MG	14	3090	1/1	0.95	0.16	51,51,51,51	0
54	MG	16	208	1/1	0.95	0.41	58,58,58,58	0
54	MG	1H	3512	1/1	0.95	0.26	56,56,56,56	0
54	MG	14	3494	1/1	0.95	0.48	62,62,62,62	0
54	MG	1H	3178	1/1	0.95	0.22	46,46,46,46	0
54	MG	1H	3218	1/1	0.95	0.37	48,48,48,48	0
54	MG	1H	3091	1/1	0.95	0.07	37,37,37,37	0
54	MG	1H	3149	1/1	0.95	0.25	53,53,53,53	0
54	MG	14	3335	1/1	0.95	0.18	57,57,57,57	0
54	MG	14	3336	1/1	0.95	0.27	51,51,51,51	0
54	MG	1H	3517	1/1	0.95	0.16	53,53,53,53	0
54	MG	1H	3093	1/1	0.95	0.18	54,54,54,54	0
54	MG	1H	3059	1/1	0.95	0.15	51,51,51,51	0
54	MG	14	3340	1/1	0.95	0.20	54,54,54,54	0
54	MG	14	3103	1/1	0.95	0.31	43,43,43,43	0
54	MG	1H	3184	1/1	0.95	0.24	35,35,35,35	0
54	MG	1H	3377	1/1	0.95	0.16	51,51,51,51	0
54	MG	14	3186	1/1	0.95	0.22	45,45,45,45	0
54	MG	1H	3185	1/1	0.95	0.21	39,39,39,39	0
54	MG	1H	3523	1/1	0.95	0.10	42,42,42,42	0
54	MG	14	3347	1/1	0.95	0.18	65,65,65,65	0
54	MG	14	3428	1/1	0.95	0.20	47,47,47,47	0
54	MG	1H	3580	1/1	0.95	0.18	58,58,58,58	0
54	MG	1H	3259	1/1	0.95	0.19	49,49,49,49	0
54	MG	14	3267	1/1	0.95	0.23	53,53,53,53	0
54	MG	1H	3380	1/1	0.95	0.29	55,55,55,55	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
54	MG	1H	3472	1/1	0.95	0.28	57,57,57,57	0
54	MG	13	2214	1/1	0.95	0.08	88,88,88,88	0
54	MG	14	3114	1/1	0.95	0.23	36,36,36,36	0
54	MG	1H	3187	1/1	0.95	0.10	35,35,35,35	0
54	MG	78	202	1/1	0.95	0.21	54,54,54,54	0
54	MG	1H	3299	1/1	0.95	0.25	53,53,53,53	0
54	MG	14	3275	1/1	0.95	0.13	46,46,46,46	0
54	MG	1H	3587	1/1	0.95	0.09	47,47,47,47	0
54	MG	1H	3096	1/1	0.95	0.25	37,37,37,37	0
54	MG	1H	3156	1/1	0.95	0.18	42,42,42,42	0
54	MG	14	3200	1/1	0.95	0.12	50,50,50,50	0
54	MG	1H	3190	1/1	0.95	0.33	38,38,38,38	0
54	MG	13	2305	1/1	0.95	0.48	53,53,53,53	0
54	MG	1H	3483	1/1	0.95	0.17	42,42,42,42	0
54	MG	14	3531	1/1	0.95	0.07	59,59,59,59	0
54	MG	1H	3484	1/1	0.95	0.17	52,52,52,52	0
54	MG	14	3125	1/1	0.95	0.41	48,48,48,48	0
54	MG	1H	3485	1/1	0.95	0.10	52,52,52,52	0
54	MG	14	3288	1/1	0.95	0.24	43,43,43,43	0
54	MG	1H	3027	1/1	0.95	0.20	51,51,51,51	0
54	MG	1G	2222	1/1	0.95	0.11	66,66,66,66	0
54	MG	1H	3128	1/1	0.95	0.14	29,29,29,29	0
54	MG	1H	3542	1/1	0.95	0.17	48,48,48,48	0
54	MG	1H	3100	1/1	0.95	0.12	43,43,43,43	0
54	MG	1H	3308	1/1	0.95	0.11	32,32,32,32	0
54	MG	1H	3130	1/1	0.95	0.41	71,71,71,71	0
54	MG	14	3006	1/1	0.95	0.07	46,46,46,46	0
54	MG	14	3544	1/1	0.95	0.27	57,57,57,57	0
54	MG	1H	3311	1/1	0.95	0.10	34,34,34,34	0
54	MG	14	3546	1/1	0.95	0.07	42,42,42,42	0
54	MG	1H	3101	1/1	0.95	0.25	43,43,43,43	0
54	MG	13	2286	1/1	0.95	0.32	59,59,59,59	0
54	MG	13	2291	1/1	0.95	0.39	59,59,59,59	0
54	MG	14	3144	1/1	0.95	0.42	63,63,63,63	0
54	MG	13	2245	1/1	0.95	0.12	49,49,49,49	0
54	MG	14	3025	1/1	0.95	0.10	45,45,45,45	0
54	MG	14	3027	1/1	0.95	0.11	40,40,40,40	0
54	MG	14	3554	1/1	0.95	0.15	62,62,62,62	0
54	MG	13	2213	1/1	0.95	0.18	62,62,62,62	0
54	MG	14	3468	1/1	0.95	0.18	66,66,66,66	0
54	MG	14	3557	1/1	0.95	0.08	68,68,68,68	0
54	MG	14	3227	1/1	0.95	0.33	51,51,51,51	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
54	MG	14	3151	1/1	0.95	0.28	56,56,56,56	0
54	MG	1H	3042	1/1	0.95	0.13	33,33,33,33	0
54	MG	14	3039	1/1	0.95	0.10	43,43,43,43	0
54	MG	1H	3279	1/1	0.95	0.12	40,40,40,40	0
54	MG	1H	3556	1/1	0.95	0.14	59,59,59,59	0
54	MG	14	3050	1/1	0.95	0.06	61,61,61,61	0
54	MG	1H	3138	1/1	0.95	0.10	38,38,38,38	0
54	MG	1H	3321	1/1	0.95	0.10	44,44,44,44	0
54	MG	1G	2308	1/1	0.95	0.09	56,56,56,56	0
54	MG	14	3058	1/1	0.95	0.08	50,50,50,50	0
54	MG	14	3062	1/1	0.95	0.15	51,51,51,51	0
54	MG	14	3066	1/1	0.95	0.06	86,86,86,86	0
54	MG	1G	2345	1/1	0.95	0.31	55,55,55,55	0
54	MG	21	302	1/1	0.95	0.09	47,47,47,47	0
54	MG	1H	3112	1/1	0.95	0.37	36,36,36,36	0
54	MG	1H	3052	1/1	0.95	0.14	36,36,36,36	0
54	MG	14	3074	1/1	0.95	0.14	52,52,52,52	0
54	MG	13	2347	1/1	0.95	0.16	57,57,57,57	0
54	MG	1H	3005	1/1	0.95	0.09	41,41,41,41	0
54	MG	14	3084	1/1	0.95	0.07	54,54,54,54	0
55	ZN	32	301	1/1	0.95	0.27	90,90,90,90	0
54	MG	1H	3347	1/1	0.96	0.15	36,36,36,36	0
54	MG	19	302	1/1	0.96	0.07	55,55,55,55	0
54	MG	14	3056	1/1	0.96	0.10	48,48,48,48	0
54	MG	14	3130	1/1	0.96	0.39	48,48,48,48	0
54	MG	1H	3126	1/1	0.96	0.23	52,52,52,52	0
54	MG	1H	3021	1/1	0.96	0.09	46,46,46,46	0
54	MG	14	3060	1/1	0.96	0.15	57,57,57,57	0
54	MG	14	3329	1/1	0.96	0.17	46,46,46,46	0
54	MG	1H	3151	1/1	0.96	0.21	42,42,42,42	0
54	MG	14	3135	1/1	0.96	0.23	45,45,45,45	0
54	MG	14	3136	1/1	0.96	0.28	44,44,44,44	0
54	MG	14	3137	1/1	0.96	0.22	46,46,46,46	0
54	MG	14	3138	1/1	0.96	0.18	47,47,47,47	0
54	MG	1H	3086	1/1	0.96	0.12	42,42,42,42	0
54	MG	14	3268	1/1	0.96	0.35	51,51,51,51	0
54	MG	13	2285	1/1	0.96	0.08	72,72,72,72	0
54	MG	1H	3206	1/1	0.96	0.34	44,44,44,44	0
54	MG	14	3206	1/1	0.96	0.27	57,57,57,57	0
54	MG	1H	3324	1/1	0.96	0.07	59,59,59,59	0
54	MG	1H	3109	1/1	0.96	0.21	38,38,38,38	0
54	MG	13	2370	1/1	0.96	0.05	86,86,86,86	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
54	MG	14	3480	1/1	0.96	0.14	58,58,58,58	0
54	MG	14	3079	1/1	0.96	0.09	54,54,54,54	0
54	MG	14	3211	1/1	0.96	0.19	44,44,44,44	0
54	MG	1H	3501	1/1	0.96	0.04	44,44,44,44	0
54	MG	1G	2377	1/1	0.96	0.09	78,78,78,78	0
54	MG	14	3148	1/1	0.96	0.28	45,45,45,45	0
54	MG	52	201	1/1	0.96	0.16	63,63,63,63	0
54	MG	14	3085	1/1	0.96	0.07	49,49,49,49	0
54	MG	14	3150	1/1	0.96	0.18	46,46,46,46	0
54	MG	1H	3267	1/1	0.96	0.13	44,44,44,44	0
54	MG	88	304	1/1	0.96	0.30	48,48,48,48	0
54	MG	1H	3064	1/1	0.96	0.22	47,47,47,47	0
54	MG	1H	3269	1/1	0.96	0.27	46,46,46,46	0
54	MG	14	3286	1/1	0.96	0.14	40,40,40,40	0
54	MG	1H	3394	1/1	0.96	0.19	55,55,55,55	0
54	MG	1H	3183	1/1	0.96	0.25	43,43,43,43	0
54	MG	1H	3467	1/1	0.96	0.07	37,37,37,37	0
54	MG	1H	3134	1/1	0.96	0.12	43,43,43,43	0
54	MG	14	3095	1/1	0.96	0.18	44,44,44,44	0
54	MG	14	3096	1/1	0.96	0.23	44,44,44,44	0
54	MG	1H	3595	1/1	0.96	0.15	43,43,43,43	0
54	MG	14	3098	1/1	0.96	0.20	46,46,46,46	0
54	MG	14	3500	1/1	0.96	0.18	42,42,42,42	0
54	MG	13	2242	1/1	0.96	0.42	59,59,59,59	0
54	MG	14	3100	1/1	0.96	0.20	45,45,45,45	0
54	MG	13	2207	1/1	0.96	0.09	69,69,69,69	0
54	MG	13	2212	1/1	0.96	0.06	89,89,89,89	0
54	MG	14	3366	1/1	0.96	0.16	53,53,53,53	0
54	MG	1H	3555	1/1	0.96	0.30	53,53,53,53	0
54	MG	1H	3008	1/1	0.96	0.09	40,40,40,40	0
54	MG	14	3234	1/1	0.96	0.42	57,57,57,57	0
54	MG	1H	3435	1/1	0.96	0.04	40,40,40,40	0
54	MG	1H	3139	1/1	0.96	0.07	37,37,37,37	0
54	MG	16	206	1/1	0.96	0.45	52,52,52,52	0
54	MG	1H	3010	1/1	0.96	0.07	58,58,58,58	0
54	MG	1H	3191	1/1	0.96	0.27	29,29,29,29	0
54	MG	1H	3011	1/1	0.96	0.07	46,46,46,46	0
54	MG	1H	3050	1/1	0.96	0.12	42,42,42,42	0
54	MG	1H	3480	1/1	0.96	0.17	46,46,46,46	0
54	MG	1H	3121	1/1	0.96	0.20	44,44,44,44	0
54	MG	14	3019	1/1	0.96	0.08	50,50,50,50	0
54	MG	1H	3195	1/1	0.96	0.10	34,34,34,34	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
54	MG	1H	3444	1/1	0.96	0.08	50,50,50,50	0
54	MG	13	2358	1/1	0.96	0.10	74,74,74,74	0
54	MG	14	3030	1/1	0.96	0.09	42,42,42,42	0
54	MG	1H	3526	1/1	0.96	0.22	56,56,56,56	0
54	MG	1H	3569	1/1	0.96	0.09	47,47,47,47	0
54	MG	1H	3409	1/1	0.96	0.05	30,30,30,30	0
54	MG	14	3043	1/1	0.96	0.11	47,47,47,47	0
54	MG	1H	3102	1/1	0.96	0.12	41,41,41,41	0
54	MG	1G	2304	1/1	0.96	0.39	85,85,85,85	0
54	MG	1H	3573	1/1	0.96	0.06	47,47,47,47	0
54	MG	14	3028	1/1	0.97	0.06	59,59,59,59	0
54	MG	1G	2209	1/1	0.97	0.09	68,68,68,68	0
54	MG	14	3182	1/1	0.97	0.38	44,44,44,44	0
54	MG	14	3032	1/1	0.97	0.11	46,46,46,46	0
54	MG	1H	3427	1/1	0.97	0.07	43,43,43,43	0
54	MG	1H	3201	1/1	0.97	0.33	33,33,33,33	0
54	MG	1H	3007	1/1	0.97	0.07	72,72,72,72	0
54	MG	14	3042	1/1	0.97	0.05	51,51,51,51	0
54	MG	1H	3476	1/1	0.97	0.26	52,52,52,52	0
54	MG	14	3046	1/1	0.97	0.05	71,71,71,71	0
54	MG	29	301	1/1	0.97	0.08	52,52,52,52	0
54	MG	1G	2220	1/1	0.97	0.07	66,66,66,66	0
54	MG	14	3104	1/1	0.97	0.10	47,47,47,47	0
54	MG	1H	3531	1/1	0.97	0.14	52,52,52,52	0
54	MG	1H	3390	1/1	0.97	0.07	39,39,39,39	0
54	MG	1H	3120	1/1	0.97	0.13	33,33,33,33	0
54	MG	14	3052	1/1	0.97	0.06	50,50,50,50	0
54	MG	1H	3592	1/1	0.97	0.10	57,57,57,57	0
54	MG	1H	3145	1/1	0.97	0.19	45,45,45,45	0
54	MG	1H	3316	1/1	0.97	0.17	40,40,40,40	0
54	MG	1H	3482	1/1	0.97	0.06	48,48,48,48	0
54	MG	14	3059	1/1	0.97	0.08	58,58,58,58	0
54	MG	1H	3509	1/1	0.97	0.18	34,34,34,34	0
54	MG	14	3061	1/1	0.97	0.10	48,48,48,48	0
54	MG	1H	3009	1/1	0.97	0.14	50,50,50,50	0
54	MG	1H	3436	1/1	0.97	0.13	47,47,47,47	0
54	MG	1H	3030	1/1	0.97	0.07	48,48,48,48	0
54	MG	1H	3208	1/1	0.97	0.21	32,32,32,32	0
54	MG	14	3072	1/1	0.97	0.20	52,52,52,52	0
54	MG	1H	3209	1/1	0.97	0.21	52,52,52,52	0
54	MG	1H	3543	1/1	0.97	0.08	44,44,44,44	0
54	MG	1G	2215	1/1	0.97	0.14	71,71,71,71	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
54	MG	14	3076	1/1	0.97	0.18	55,55,55,55	0
54	MG	1H	3051	1/1	0.97	0.07	59,59,59,59	0
54	MG	14	3169	1/1	0.97	0.39	57,57,57,57	0
54	MG	14	3436	1/1	0.97	0.08	39,39,39,39	0
54	MG	14	3007	1/1	0.97	0.06	43,43,43,43	0
54	MG	1H	3068	1/1	0.97	0.09	64,64,64,64	0
54	MG	13	2310	1/1	0.97	0.39	54,54,54,54	0
54	MG	14	3086	1/1	0.97	0.06	49,49,49,49	0
54	MG	1H	3166	1/1	0.97	0.32	34,34,34,34	0
54	MG	1H	3493	1/1	0.97	0.23	62,62,62,62	0
54	MG	1H	3152	1/1	0.97	0.10	41,41,41,41	0
54	MG	1H	3446	1/1	0.97	0.14	39,39,39,39	0
54	MG	13	2273	1/1	0.97	0.25	62,62,62,62	0
54	MG	1H	3039	1/1	0.97	0.07	41,41,41,41	0
54	MG	14	3041	1/1	0.98	0.06	44,44,44,44	0
54	MG	1H	3016	1/1	0.98	0.15	40,40,40,40	0
54	MG	13	2209	1/1	0.98	0.05	67,67,67,67	0
54	MG	14	3044	1/1	0.98	0.05	75,75,75,75	0
54	MG	1H	3106	1/1	0.98	0.09	44,44,44,44	0
54	MG	14	3047	1/1	0.98	0.05	64,64,64,64	0
54	MG	G8	202	1/1	0.98	0.39	53,53,53,53	0
54	MG	1G	2207	1/1	0.98	0.07	70,70,70,70	0
54	MG	1H	3049	1/1	0.98	0.14	35,35,35,35	0
54	MG	14	3278	1/1	0.98	0.18	39,39,39,39	0
54	MG	1H	3080	1/1	0.98	0.13	58,58,58,58	0
54	MG	1H	3022	1/1	0.98	0.05	45,45,45,45	0
54	MG	1H	3023	1/1	0.98	0.05	39,39,39,39	0
54	MG	1H	3310	1/1	0.98	0.06	30,30,30,30	0
54	MG	1H	3083	1/1	0.98	0.23	50,50,50,50	0
54	MG	1H	3084	1/1	0.98	0.13	41,41,41,41	0
54	MG	1H	3024	1/1	0.98	0.06	40,40,40,40	0
54	MG	1G	2208	1/1	0.98	0.07	70,70,70,70	0
54	MG	1H	3088	1/1	0.98	0.05	37,37,37,37	0
54	MG	1H	3029	1/1	0.98	0.04	52,52,52,52	0
54	MG	14	3063	1/1	0.98	0.08	46,46,46,46	0
54	MG	14	3064	1/1	0.98	0.12	68,68,68,68	0
54	MG	1G	2216	1/1	0.98	0.07	73,73,73,73	0
54	MG	14	3012	1/1	0.98	0.10	43,43,43,43	0
54	MG	14	3013	1/1	0.98	0.07	41,41,41,41	0
54	MG	14	3071	1/1	0.98	0.18	54,54,54,54	0
54	MG	1H	3058	1/1	0.98	0.11	39,39,39,39	0
54	MG	13	2206	1/1	0.98	0.04	79,79,79,79	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
54	MG	14	3119	1/1	0.98	0.32	39,39,39,39	0
54	MG	14	3018	1/1	0.98	0.15	58,58,58,58	0
54	MG	1H	3034	1/1	0.98	0.08	47,47,47,47	0
54	MG	14	3021	1/1	0.98	0.17	45,45,45,45	0
54	MG	14	3078	1/1	0.98	0.04	46,46,46,46	0
54	MG	13	2208	1/1	0.98	0.12	78,78,78,78	0
54	MG	14	3080	1/1	0.98	0.14	60,60,60,60	0
54	MG	14	3082	1/1	0.98	0.07	47,47,47,47	0
54	MG	1H	3063	1/1	0.98	0.06	71,71,71,71	0
54	MG	1H	3036	1/1	0.98	0.06	48,48,48,48	0
54	MG	1H	3013	1/1	0.98	0.05	52,52,52,52	0
54	MG	1H	3038	1/1	0.98	0.08	51,51,51,51	0
54	MG	1H	3014	1/1	0.98	0.11	42,42,42,42	0
54	MG	1G	2211	1/1	0.98	0.04	63,63,63,63	0
54	MG	14	3089	1/1	0.98	0.13	56,56,56,56	0
54	MG	1H	3070	1/1	0.98	0.18	36,36,36,36	0
54	MG	1H	3071	1/1	0.98	0.05	102,102,102,102	0
54	MG	1H	3092	1/1	0.99	0.04	54,54,54,54	0
54	MG	1H	3065	1/1	0.99	0.04	70,70,70,70	0
54	MG	14	3065	1/1	0.99	0.10	68,68,68,68	0
54	MG	14	3016	1/1	0.99	0.08	47,47,47,47	0
54	MG	14	3067	1/1	0.99	0.15	43,43,43,43	0
54	MG	14	3017	1/1	0.99	0.03	51,51,51,51	0
54	MG	14	3069	1/1	0.99	0.04	70,70,70,70	0
54	MG	13	2205	1/1	0.99	0.08	64,64,64,64	0
54	MG	13	2215	1/1	0.99	0.06	63,63,63,63	0
54	MG	1H	3043	1/1	0.99	0.03	45,45,45,45	0
54	MG	1H	3044	1/1	0.99	0.04	38,38,38,38	0
54	MG	14	3023	1/1	0.99	0.04	46,46,46,46	0
54	MG	14	3024	1/1	0.99	0.06	48,48,48,48	0
54	MG	1H	3045	1/1	0.99	0.03	41,41,41,41	0
54	MG	14	3077	1/1	0.99	0.09	59,59,59,59	0
54	MG	14	3026	1/1	0.99	0.09	41,41,41,41	0
54	MG	13	2203	1/1	0.99	0.04	80,80,80,80	0
54	MG	1H	3072	1/1	0.99	0.04	55,55,55,55	0
54	MG	14	3029	1/1	0.99	0.07	50,50,50,50	0
54	MG	1H	3073	1/1	0.99	0.06	44,44,44,44	0
54	MG	14	3031	1/1	0.99	0.03	52,52,52,52	0
54	MG	1H	3025	1/1	0.99	0.04	39,39,39,39	0
54	MG	14	3033	1/1	0.99	0.07	52,52,52,52	0
54	MG	14	3034	1/1	0.99	0.04	46,46,46,46	0
54	MG	1H	3048	1/1	0.99	0.08	42,42,42,42	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
54	MG	14	3037	1/1	0.99	0.05	59,59,59,59	0
54	MG	13	2204	1/1	0.99	0.03	61,61,61,61	0
54	MG	1H	3077	1/1	0.99	0.15	43,43,43,43	0
54	MG	14	3040	1/1	0.99	0.04	70,70,70,70	0
54	MG	1G	2204	1/1	0.99	0.06	58,58,58,58	0
54	MG	1H	3012	1/1	0.99	0.03	36,36,36,36	0
54	MG	1G	2205	1/1	0.99	0.12	71,71,71,71	0
54	MG	1H	3032	1/1	0.99	0.07	43,43,43,43	0
54	MG	14	3045	1/1	0.99	0.05	64,64,64,64	0
54	MG	1H	3033	1/1	0.99	0.10	46,46,46,46	0
54	MG	1G	2213	1/1	0.99	0.07	60,60,60,60	0
54	MG	1H	3002	1/1	0.99	0.04	36,36,36,36	0
54	MG	1H	3003	1/1	0.99	0.03	43,43,43,43	0
54	MG	14	3202	1/1	0.99	0.22	42,42,42,42	0
54	MG	14	3002	1/1	0.99	0.07	41,41,41,41	0
54	MG	14	3003	1/1	0.99	0.05	44,44,44,44	0
54	MG	14	3004	1/1	0.99	0.04	48,48,48,48	0
54	MG	1H	3004	1/1	0.99	0.04	40,40,40,40	0
54	MG	14	3054	1/1	0.99	0.03	48,48,48,48	0
54	MG	1H	3087	1/1	0.99	0.05	45,45,45,45	0
54	MG	1H	3019	1/1	0.99	0.03	38,38,38,38	0
54	MG	1H	3062	1/1	0.99	0.07	51,51,51,51	0
54	MG	1G	2206	1/1	0.99	0.05	80,80,80,80	0
54	MG	14	3010	1/1	0.99	0.03	42,42,42,42	0
54	MG	1H	3231	1/1	0.99	0.16	35,35,35,35	0
54	MG	1H	3006	1/1	0.99	0.05	45,45,45,45	0
55	ZN	5I	101	1/1	0.99	0.02	74,74,74,74	0
55	ZN	5A	101	1/1	0.99	0.04	99,99,99,99	0
54	MG	1H	3053	1/1	1.00	0.03	36,36,36,36	0
54	MG	14	3020	1/1	1.00	0.04	45,45,45,45	0
54	MG	14	3035	1/1	1.00	0.05	46,46,46,46	0
54	MG	1H	3026	1/1	1.00	0.02	40,40,40,40	0
54	MG	1H	3018	1/1	1.00	0.04	36,36,36,36	0
54	MG	14	3081	1/1	1.00	0.10	48,48,48,48	0
54	MG	1H	3056	1/1	1.00	0.03	45,45,45,45	0
54	MG	14	3055	1/1	1.00	0.04	54,54,54,54	0
54	MG	14	3011	1/1	1.00	0.03	42,42,42,42	0
54	MG	1H	3028	1/1	1.00	0.04	49,49,49,49	0

6.5 Other polymers (i)

There are no such residues in this entry.