



Full wwPDB EM Validation Report ⓘ

Mar 27, 2026 – 02:10 PM UTC

PDB ID : 7PHA / pdb_00007pha
EMDB ID : EMD-13411
Title : 70S ribosome with EF-Tu-tRNA and P-site tRNA in chloramphenicol-treated Mycoplasma pneumoniae cells
Authors : Xue, L.; Lenz, S.; Rappsilber, J.; Mahamid, J.
Deposited on : 2021-08-16
Resolution : 8.50 Å (reported)
Based on initial models : 4V5L, 7OOC, 7OOD, 4V7C

This is a Full wwPDB EM 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/EMValidationReportHelp>

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:

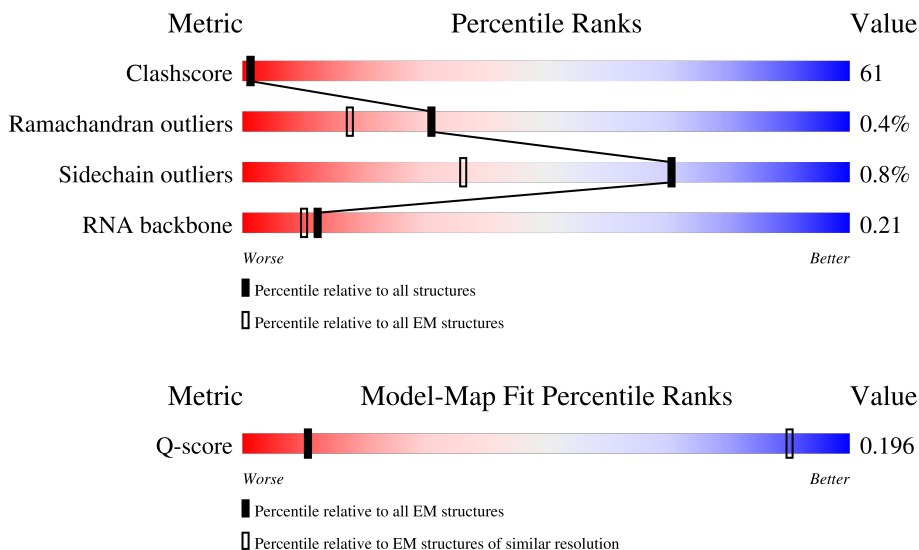
EMDB validation analysis : 0.0.1.dev132
MolProbity : 4-5-2 with Phenix2.0
Percentile statistics : 20250101.v01 (using entries in the PDB archive January 1st 2025)
EM percentile statistics : 202505.v01 (Using data in the EMDB archive up until May 2025)
MapQ : 1.9.13
Ideal geometry (proteins) : Engh & 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:
ELECTRON MICROSCOPY

The reported resolution of this entry is 8.50 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)	EM structures (#Entries)	Similar EM resolution (#Entries, resolution range(Å))
Clashscore	229148	23984	-
Ramachandran outliers	224038	23583	-
Sidechain outliers	223484	23102	-
RNA backbone	8273	3508	-
Q-score	-	25397	328 (8.00 - 9.00)

The table below summarises the geometric issues observed across the polymeric chains and their fit to the map. The red, orange, yellow and green segments of the 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 $\leq 5\%$. The upper red bar (where present) indicates the fraction of residues that have poor fit to the EM map (all-atom inclusion $< 40\%$). The numeric value is given above the bar.

Mol	Chain	Length	Quality of chain
1	0	48	 27% 71%
2	1	59	 24% 76%
3	2	37	 24% 73%


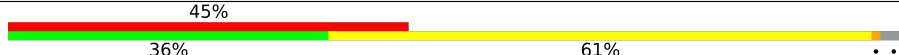

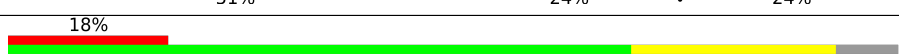
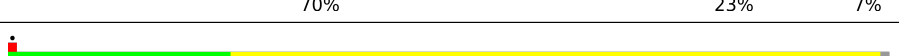
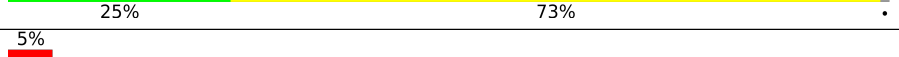
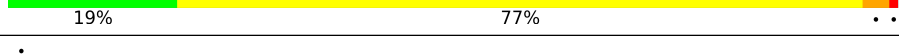
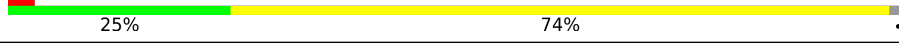
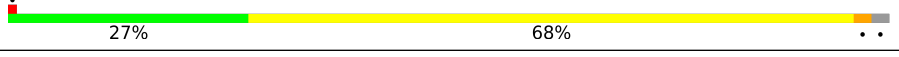


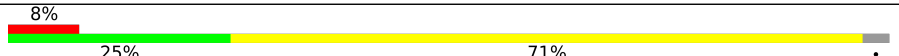
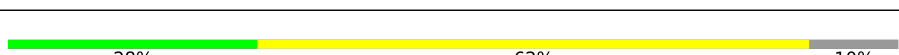
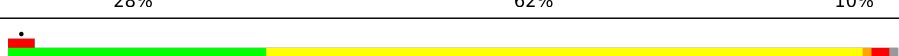
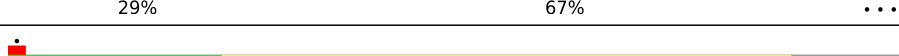


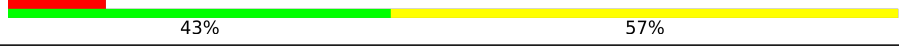
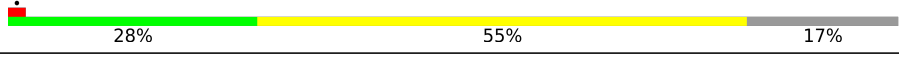



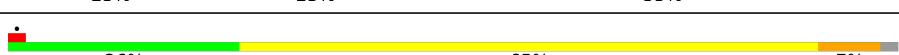
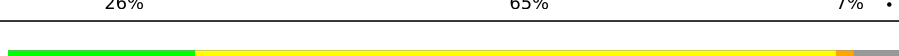

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Mol	Chain	Length	Quality of chain
4	9	394	50% 28% 71%
5	A	294	22% 59% 18%
6	B	273	25% 53% 21%
7	C	205	29% 70%
8	D	219	18% 52% 30%
9	E	215	5% 24% 53% 22%
10	F	155	6% 26% 73%
11	G	142	28% 70%
12	H	132	20% 75%
13	I	108	11% 30% 62% 6%
14	J	121	7% 32% 62% 6%
15	K	139	28% 69%
16	L	124	33% 62% 5%
17	M	61	33% 66%
18	N	86	5% 33% 63%
19	O	94	35% 50% 15%
20	P	85	7% 24% 72%
21	Q	104	8% 52% 38%
22	R	87	33% 62%
23	S	87	25% 62% 11%
24	T	60	42% 47% 12%
25	a	287	29% 70%
26	b	287	27% 53% 20%
27	c	212	5% 28% 68%
28	d	180	7% 38% 59%

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Mol	Chain	Length	Quality of chain
29	e	184	
30	f	149	
31	g	161	
32	h	137	
33	i	146	
34	j	122	
35	k	151	
36	l	139	
37	m	124	
38	n	116	
39	o	119	
40	p	127	
41	q	100	
42	r	159	
43	s	237	
44	t	111	
45	u	104	
46	v	65	
47	w	111	
48	x	97	
49	y	57	
50	z	53	
51	3	2907	
52	4	108	
53	5	1520	

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Mol	Chain	Length	Quality of chain
54	6	76	54% 42%
54	7	76	33% 64%

2 Entry composition

There are 54 unique types of molecules in this entry. The entry contains 149139 atoms, of which 0 are hydrogens and 0 are deuteriums.

In the tables below, 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 protein called 50S ribosomal protein L34.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
1	0	47	380	236	81	61	2	0	0

- Molecule 2 is a protein called 50S ribosomal protein L35.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
2	1	59	477	300	99	77	1	0	0

- Molecule 3 is a protein called 50S ribosomal protein L36.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
3	2	37	304	189	65	46	4	0	0

- Molecule 4 is a protein called Elongation factor Tu.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
4	9	393	3021	1892	533	583	13	0	0

- Molecule 5 is a protein called 30S ribosomal protein S2.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
5	A	240	1921	1226	334	352	9	0	0

- Molecule 6 is a protein called 30S ribosomal protein S3.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
6	B	215	1698	1073	313	307	5	0	0

- Molecule 7 is a protein called 30S ribosomal protein S4.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
7	C	203	Total	C	N	O	S	0	0
			1660	1051	314	290	5		

- Molecule 8 is a protein called 30S ribosomal protein S5.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
8	D	153	Total	C	N	O	S	0	0
			1173	742	226	202	3		

- Molecule 9 is a protein called 30S ribosomal protein S6.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
9	E	167	Total	C	N	O	S	0	0
			1362	857	240	263	2		

- Molecule 10 is a protein called 30S ribosomal protein S7.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
10	F	154	Total	C	N	O	S	0	0
			1246	785	239	216	6		

- Molecule 11 is a protein called 30S ribosomal protein S8.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
11	G	141	Total	C	N	O	S	0	0
			1110	723	193	192	2		

- Molecule 12 is a protein called 30S ribosomal protein S9.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
12	H	128	Total	C	N	O	S	0	0
			1028	655	191	181	1		

- Molecule 13 is a protein called 30S ribosomal protein S10.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
13	I	101	Total	C	N	O	S	0	0
			809	523	142	143	1		

- Molecule 14 is a protein called 30S ribosomal protein S11.

Mol	Chain	Residues	Atoms					AltConf	Trace
14	J	114	Total	C	N	O	S	0	0
			829	514	153	156	6		

- Molecule 15 is a protein called 30S ribosomal protein S12.

Mol	Chain	Residues	Atoms					AltConf	Trace
15	K	136	Total	C	N	O	S	0	0
			1076	680	213	181	2		

- Molecule 16 is a protein called 30S ribosomal protein S13.

Mol	Chain	Residues	Atoms					AltConf	Trace
16	L	118	Total	C	N	O	S	0	0
			951	594	191	166			

- Molecule 17 is a protein called 30S ribosomal protein S14 type Z.

Mol	Chain	Residues	Atoms					AltConf	Trace
17	M	60	Total	C	N	O	S	0	0
			474	302	96	72	4		

- Molecule 18 is a protein called 30S ribosomal protein S15.

Mol	Chain	Residues	Atoms					AltConf	Trace
18	N	83	Total	C	N	O	S	0	0
			673	428	125	120			

- Molecule 19 is a protein called 30S ribosomal protein S16.

Mol	Chain	Residues	Atoms					AltConf	Trace
19	O	80	Total	C	N	O	S	0	0
			646	414	119	111	2		

- Molecule 20 is a protein called 30S ribosomal protein S17.

Mol	Chain	Residues	Atoms					AltConf	Trace
20	P	83	Total	C	N	O	S	0	0
			675	425	135	115			

- Molecule 21 is a protein called 30S ribosomal protein S18.

Mol	Chain	Residues	Atoms					AltConf	Trace
21	Q	65	Total	C	N	O	S	0	0
			535	342	103	86	4		

- Molecule 22 is a protein called 30S ribosomal protein S19.

Mol	Chain	Residues	Atoms					AltConf	Trace
22	R	84	Total	C	N	O	S	0	0
			682	435	127	118	2		

- Molecule 23 is a protein called 30S ribosomal protein S20.

Mol	Chain	Residues	Atoms				AltConf	Trace
23	S	77	Total	C	N	O	0	0
			629	383	135	111		

- Molecule 24 is a protein called 30S ribosomal protein S21.

Mol	Chain	Residues	Atoms					AltConf	Trace
24	T	53	Total	C	N	O	S	0	0
			471	295	103	72	1		

- Molecule 25 is a protein called 50S ribosomal protein L2.

Mol	Chain	Residues	Atoms					AltConf	Trace
25	a	285	Total	C	N	O	S	0	0
			2225	1385	437	397	6		

- Molecule 26 is a protein called 50S ribosomal protein L3.

Mol	Chain	Residues	Atoms					AltConf	Trace
26	b	229	Total	C	N	O	S	0	0
			1762	1119	318	318	7		

- Molecule 27 is a protein called 50S ribosomal protein L4.

Mol	Chain	Residues	Atoms					AltConf	Trace
27	c	210	Total	C	N	O	S	0	0
			1644	1047	297	297	3		

- Molecule 28 is a protein called 50S ribosomal protein L5.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
28	d	175	1388	893	245	246	4	0	0

- Molecule 29 is a protein called 50S ribosomal protein L6.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
29	e	176	1396	899	247	250		0	0

- Molecule 30 is a protein called 50S ribosomal protein L9.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
30	f	145	1182	763	206	210	3	0	0

- Molecule 31 is a protein called 50S ribosomal protein L10.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
31	g	123	936	599	160	174	3	0	0

- Molecule 32 is a protein called 50S ribosomal protein L11.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
32	h	128	959	616	160	177	6	0	0

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

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
33	i	144	1164	737	213	209	5	0	0

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

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
34	j	122	944	595	178	167	4	0	0

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

Mol	Chain	Residues	Atoms				AltConf	Trace
			Total	C	N	O		
35	k	148	1153	731	226	196	0	0

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

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
36	l	136	1079	694	196	182	7	0	0

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

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
37	m	119	958	609	175	171	3	0	0

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

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
38	n	112	889	557	175	155	2	0	0

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

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
39	o	115	938	592	180	165	1	0	0

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

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
40	p	114	947	603	188	154	2	0	0

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

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
41	q	99	811	525	148	134	4	0	0

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

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
42	r	139	1068	663	207	191	7	0	0

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

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
43	s	92	720	475	122	122	1	0	0

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

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
44	t	111	872	550	166	153	3	0	0

- Molecule 45 is a protein called 50S ribosomal protein L27.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
45	u	86	657	409	130	117	1	0	0

- Molecule 46 is a protein called 50S ribosomal protein L28.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
46	v	63	513	317	108	87	1	0	0

- Molecule 47 is a protein called 50S ribosomal protein L29.

Mol	Chain	Residues	Atoms				AltConf	Trace
			Total	C	N	O		
47	w	100	818	517	153	148	0	0

- Molecule 48 is a protein called 50S ribosomal protein L31.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
48	x	44	344	221	55	64	4	0	0

- Molecule 49 is a protein called 50S ribosomal protein L32.

Mol	Chain	Residues	Atoms					AltConf	Trace
49	y	56	Total	C	N	O	S	0	0
			452	274	98	75	5		

- Molecule 50 is a protein called 50S ribosomal protein L33 1.

Mol	Chain	Residues	Atoms					AltConf	Trace
50	z	50	Total	C	N	O	S	0	0
			408	255	81	68	4		

- Molecule 51 is a RNA chain called 23S ribosomal RNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
51	3	2878	Total	C	N	O	P	0	0
			61664	27558	11236	19995	2875		

- Molecule 52 is a RNA chain called 5S ribosomal RNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
52	4	105	Total	C	N	O	P	0	0
			2239	1003	409	724	103		

- Molecule 53 is a RNA chain called 16S ribosomal RNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
53	5	1493	Total	C	N	O	P	0	0
			31943	14279	5792	10382	1490		

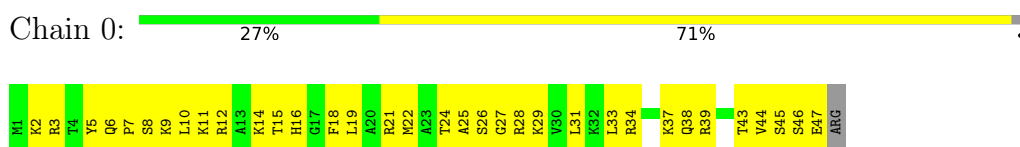
- Molecule 54 is a RNA chain called tRNA-Phe.

Mol	Chain	Residues	Atoms					AltConf	Trace
54	6	76	Total	C	N	O	P	0	0
			1618	723	289	531	75		
54	7	76	Total	C	N	O	P	0	0
			1618	723	289	531	75		

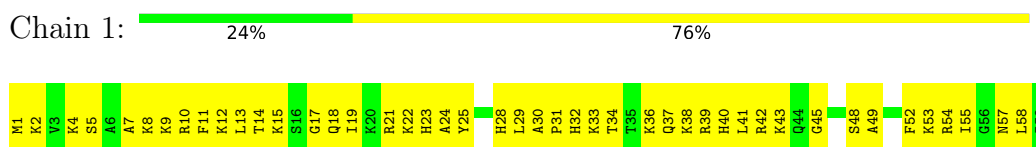
3 Residue-property plots

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 atom inclusion in map 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 diamond above a residue indicates a poor fit to the EM map for this residue (all-atom inclusion < 40%). 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.

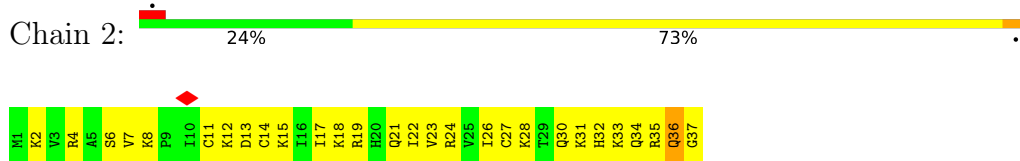
- Molecule 1: 50S ribosomal protein L34



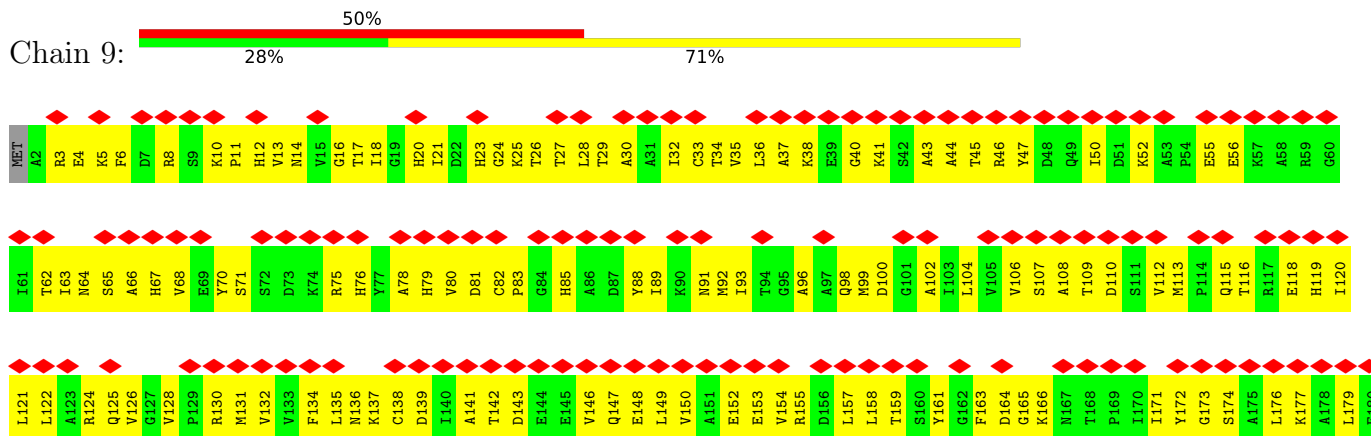
- Molecule 2: 50S ribosomal protein L35

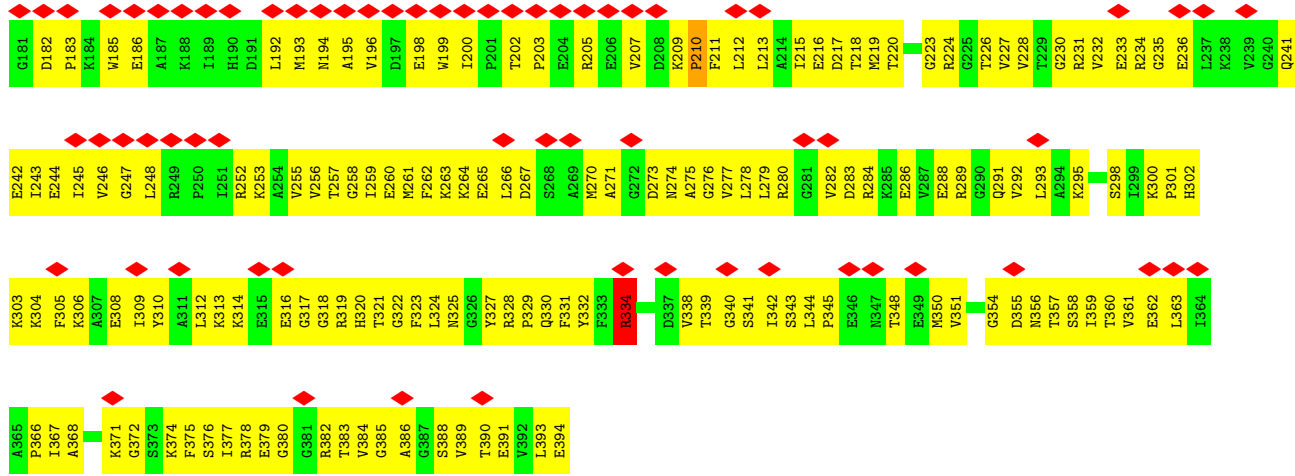


- Molecule 3: 50S ribosomal protein L36

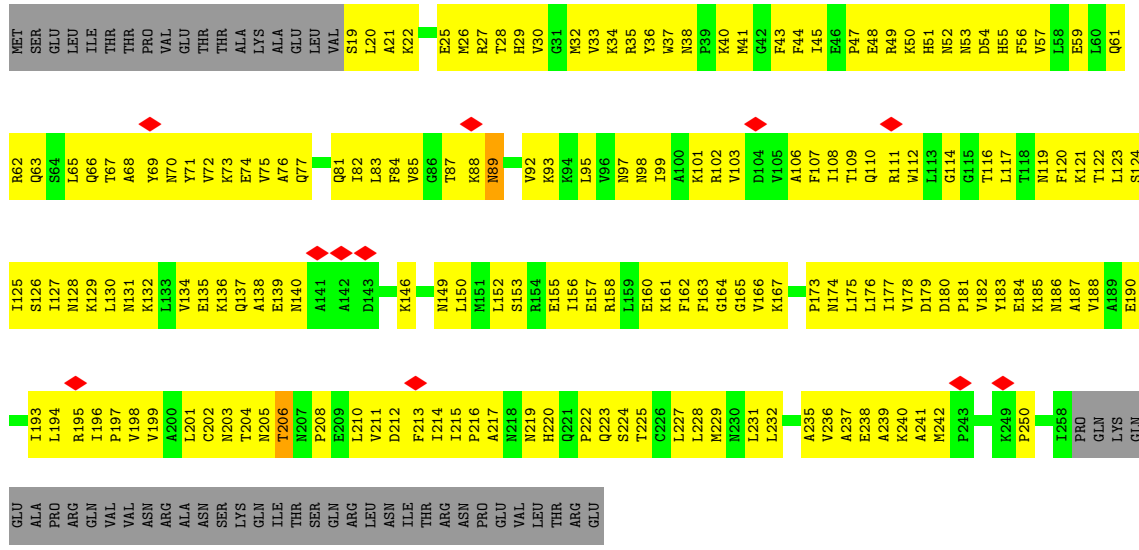


- Molecule 4: Elongation factor Tu

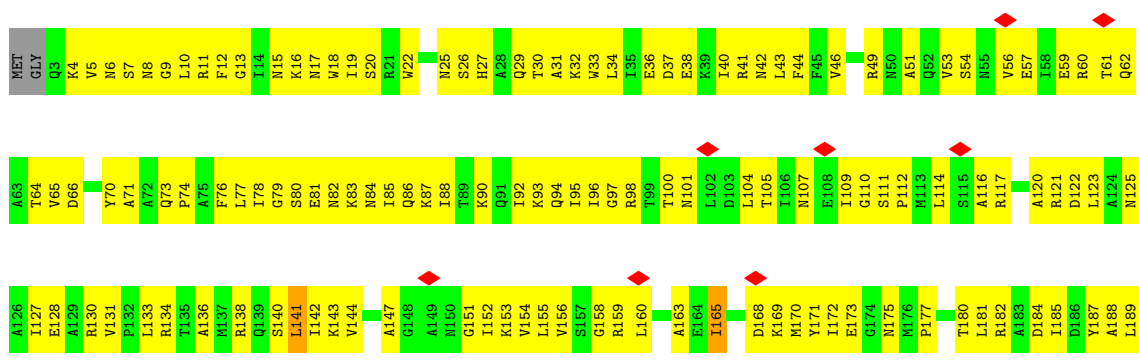


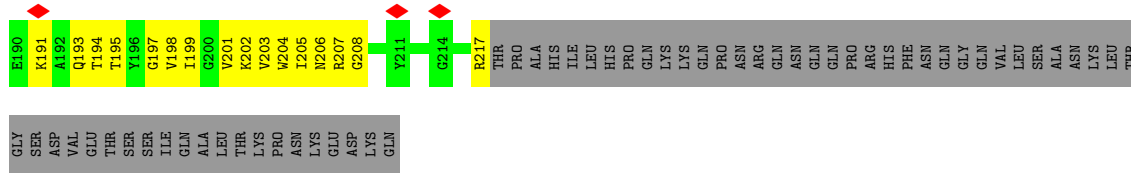


• Molecule 5: 30S ribosomal protein S2

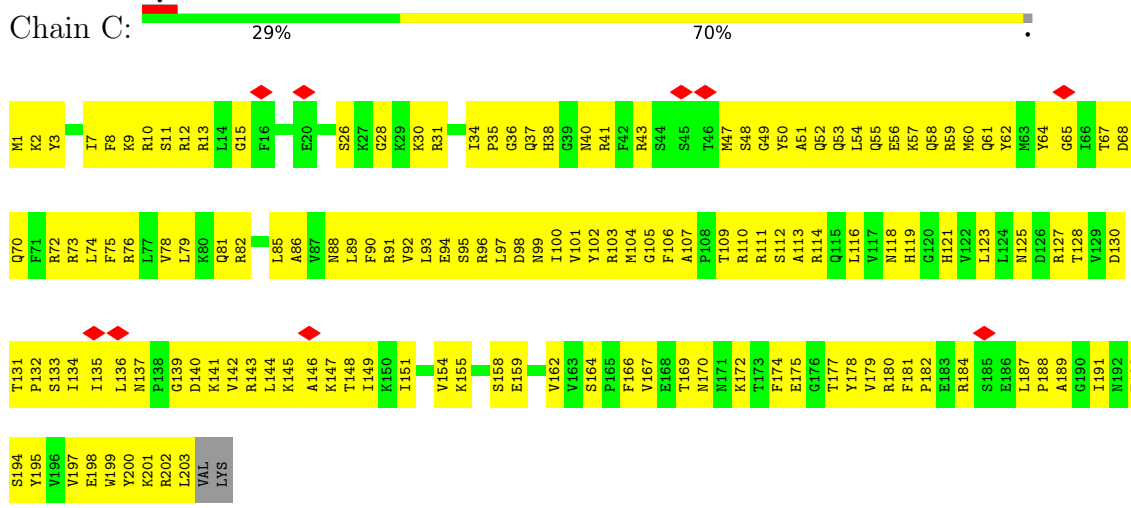


• Molecule 6: 30S ribosomal protein S3

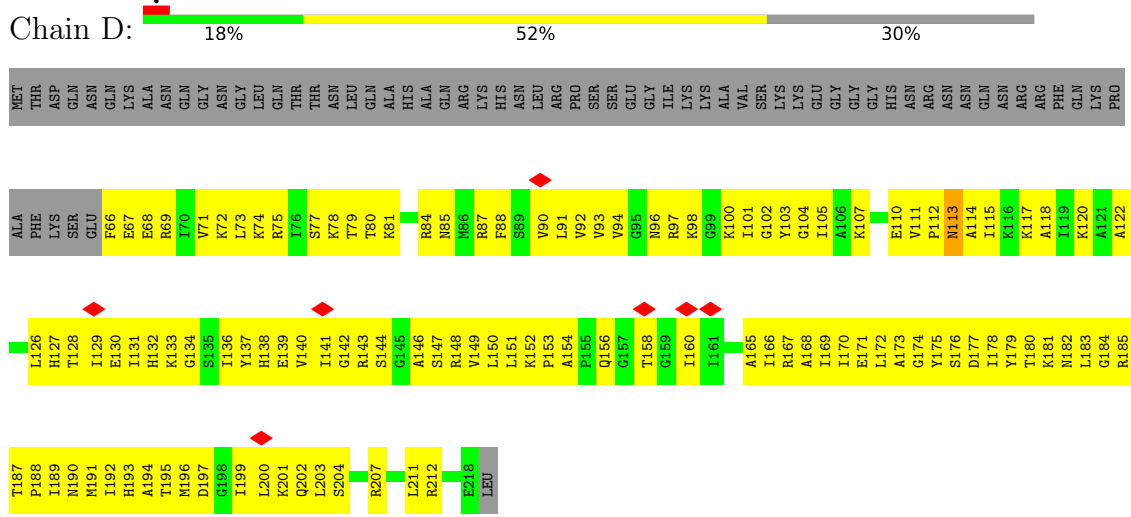




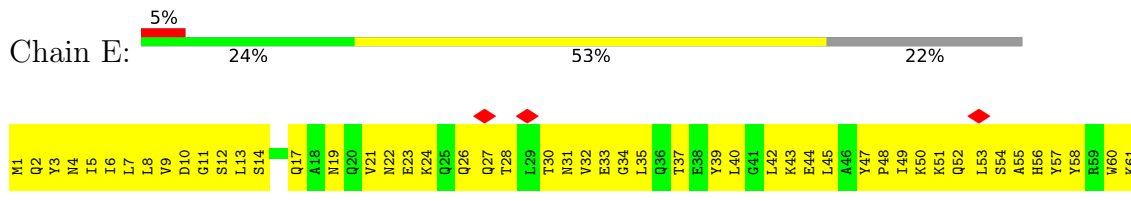
• Molecule 7: 30S ribosomal protein S4

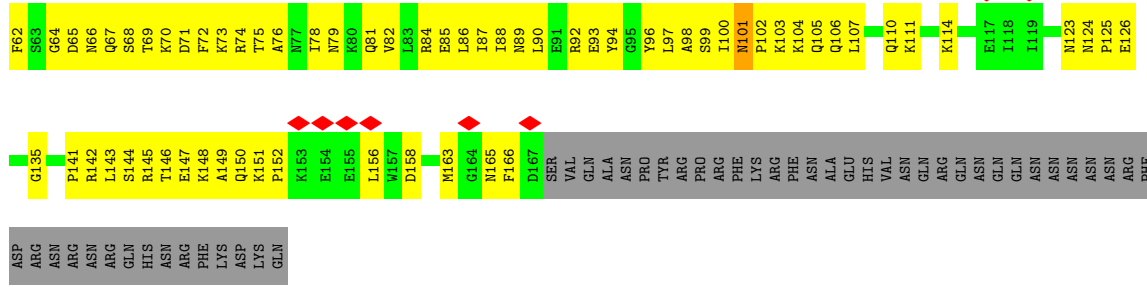


• Molecule 8: 30S ribosomal protein S5

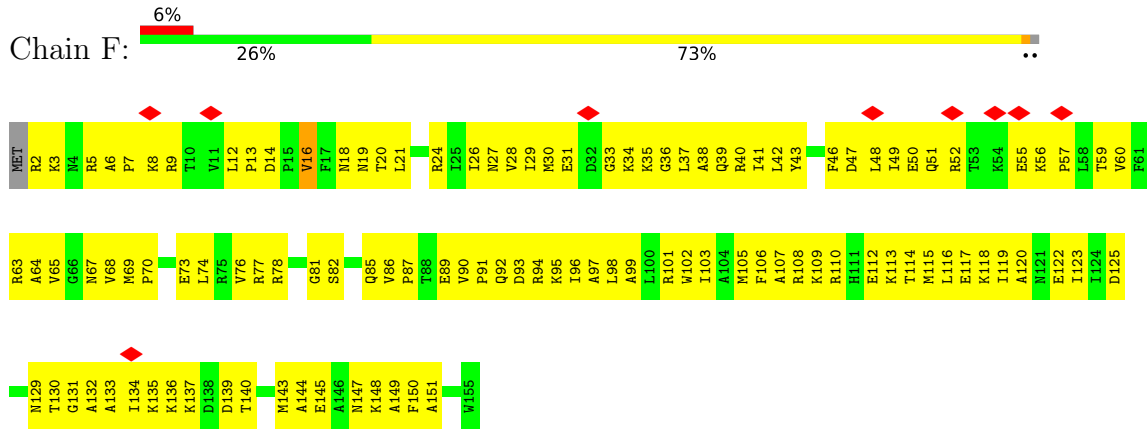


• Molecule 9: 30S ribosomal protein S6

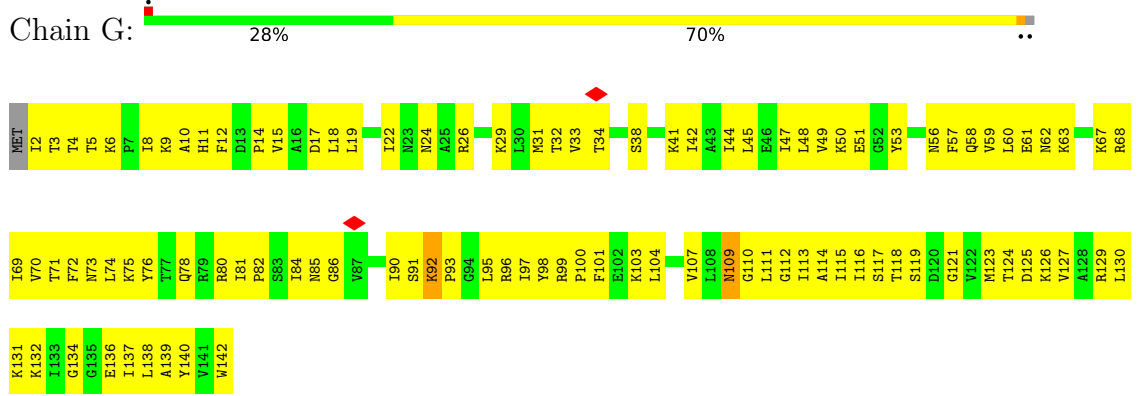




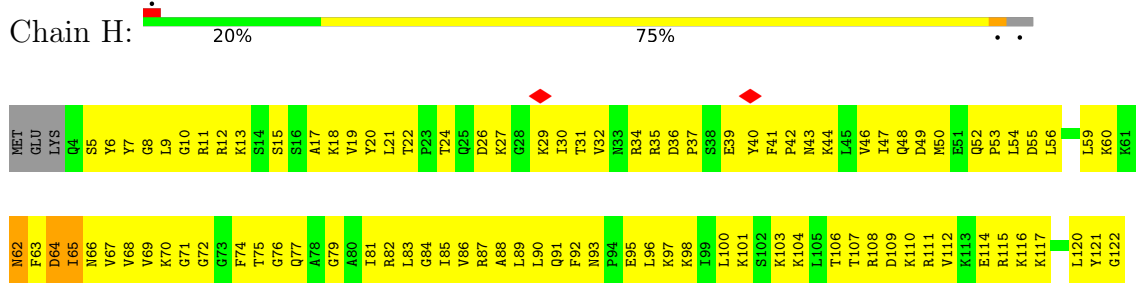
• Molecule 10: 30S ribosomal protein S7



• Molecule 11: 30S ribosomal protein S8

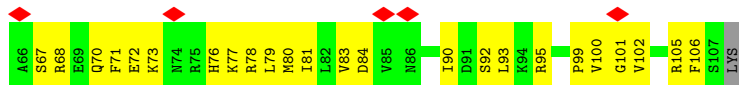
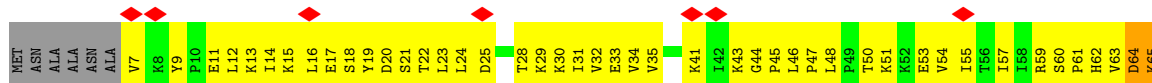


• Molecule 12: 30S ribosomal protein S9

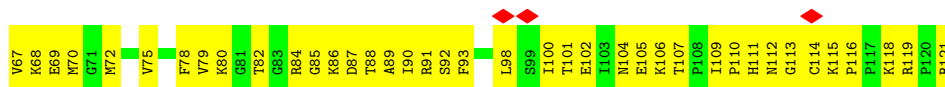
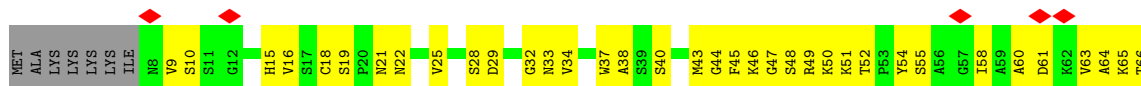




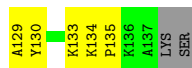
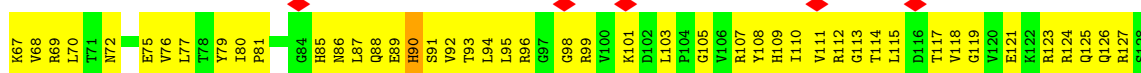
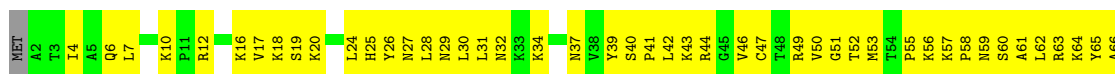
• Molecule 13: 30S ribosomal protein S10



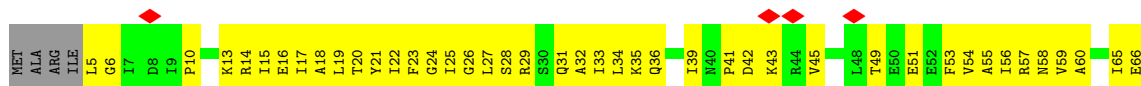
• Molecule 14: 30S ribosomal protein S11



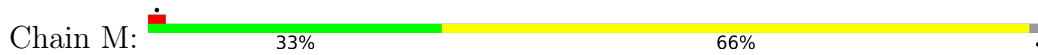
• Molecule 15: 30S ribosomal protein S12



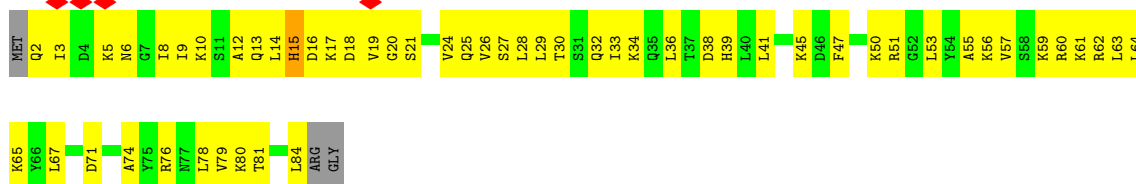
• Molecule 16: 30S ribosomal protein S13



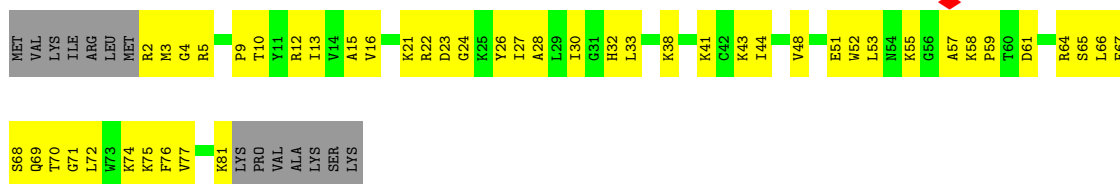
• Molecule 17: 30S ribosomal protein S14 type Z



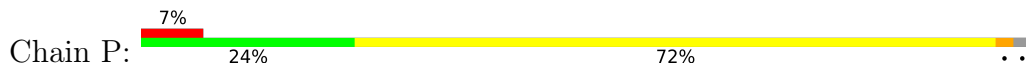
• Molecule 18: 30S ribosomal protein S15



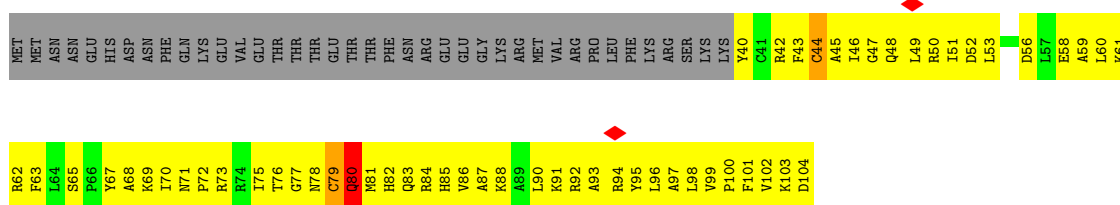
• Molecule 19: 30S ribosomal protein S16



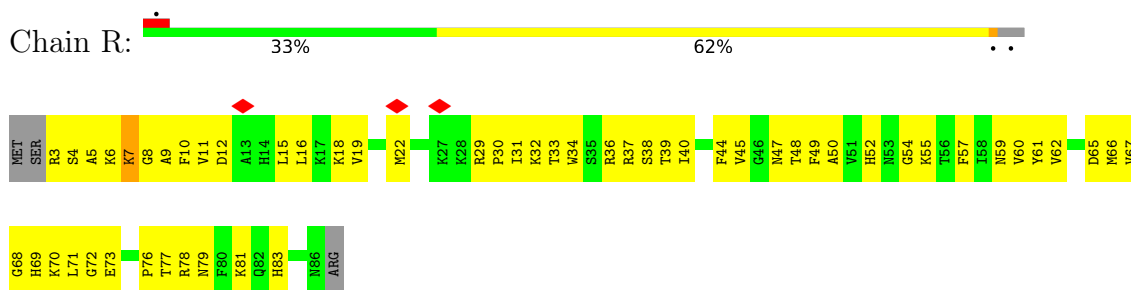
• Molecule 20: 30S ribosomal protein S17



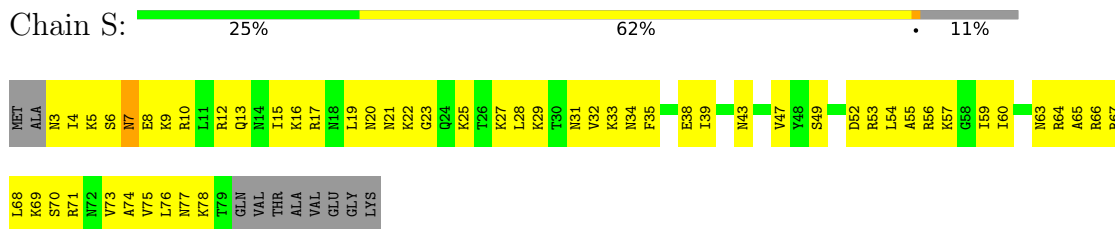
• Molecule 21: 30S ribosomal protein S18



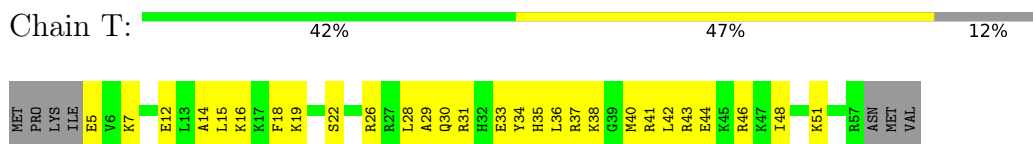
• Molecule 22: 30S ribosomal protein S19



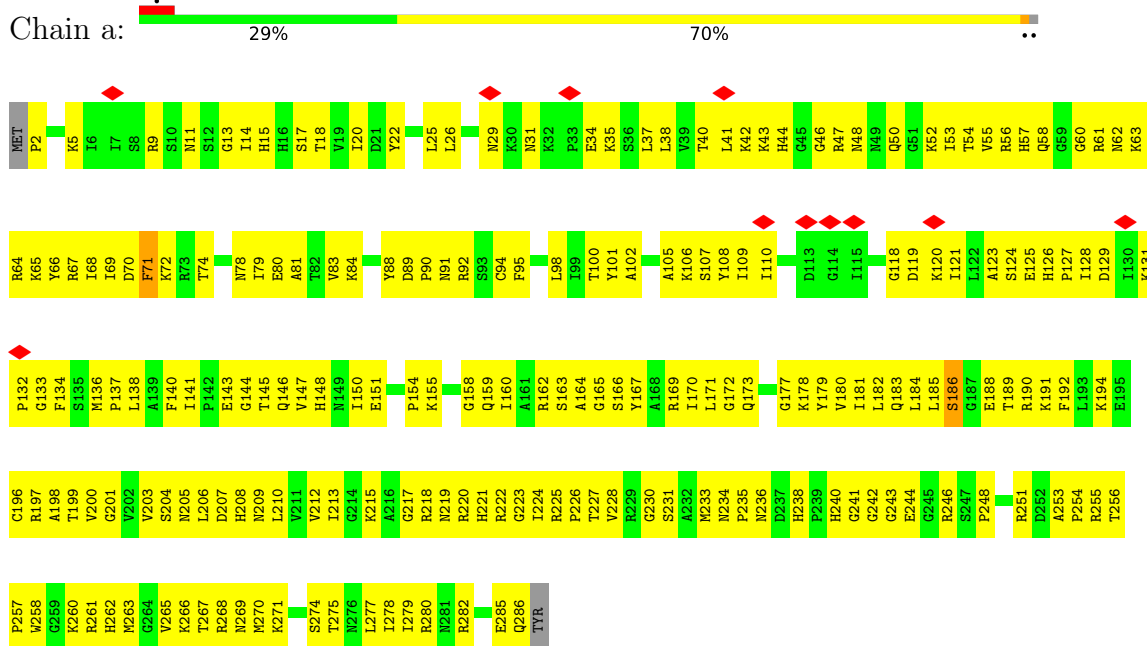
• Molecule 23: 30S ribosomal protein S20



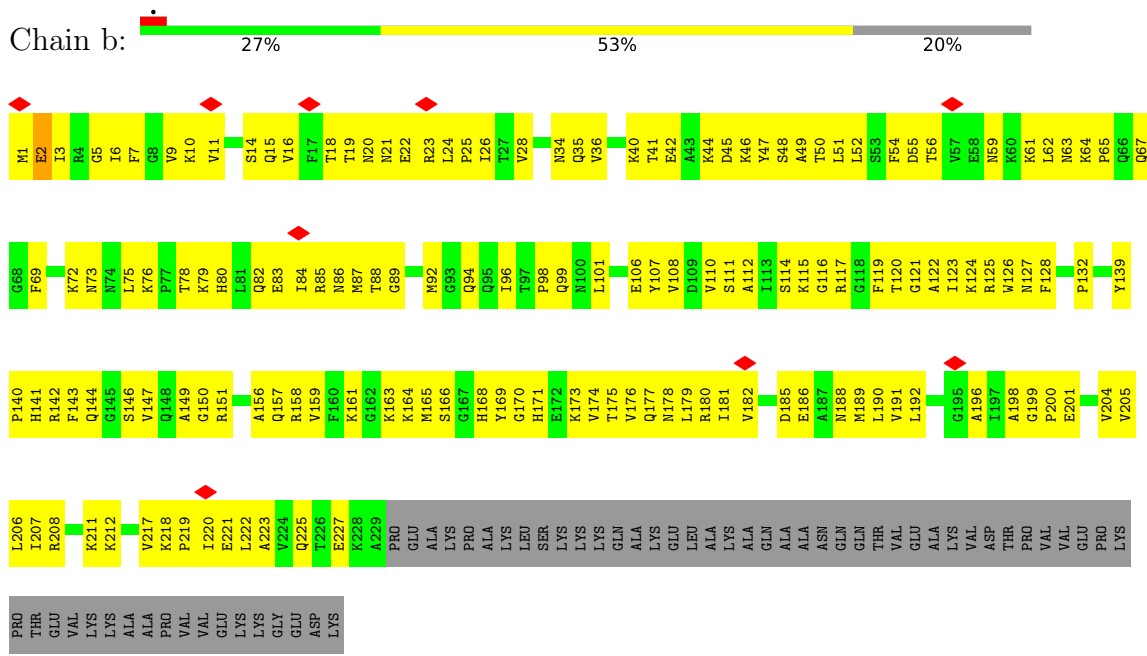
• Molecule 24: 30S ribosomal protein S21



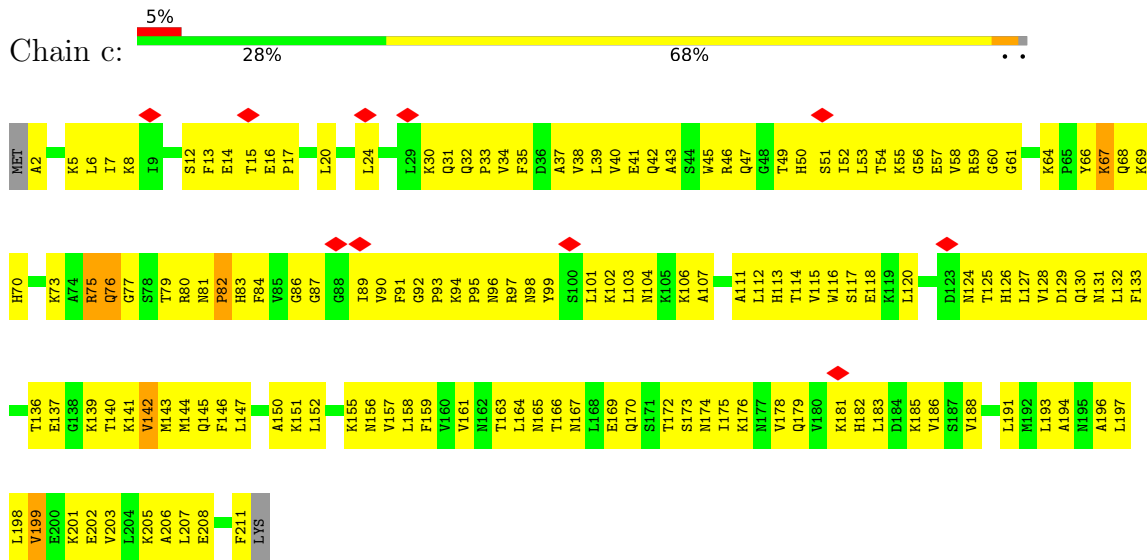
• Molecule 25: 50S ribosomal protein L2



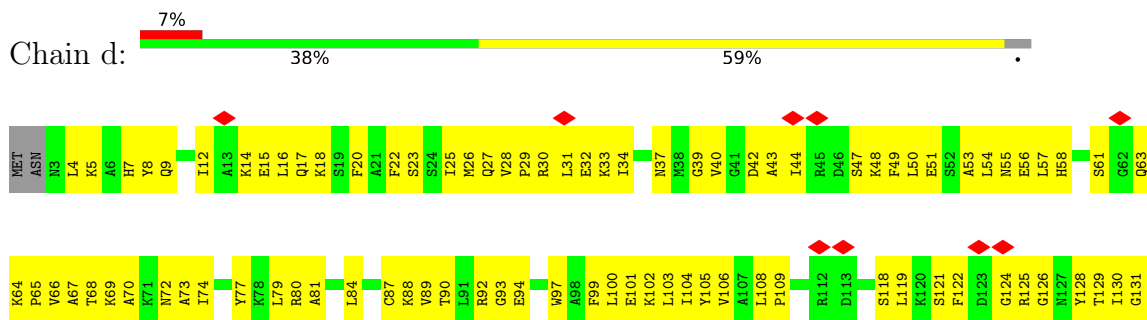
• Molecule 26: 50S ribosomal protein L3

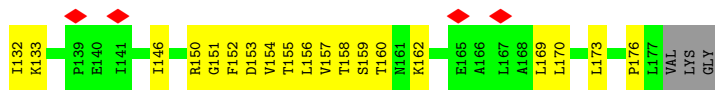


• Molecule 27: 50S ribosomal protein L4

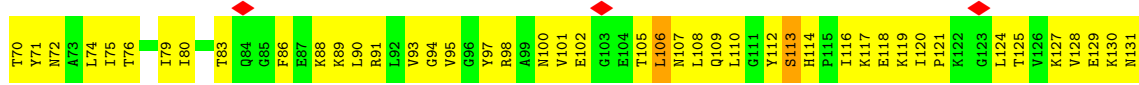
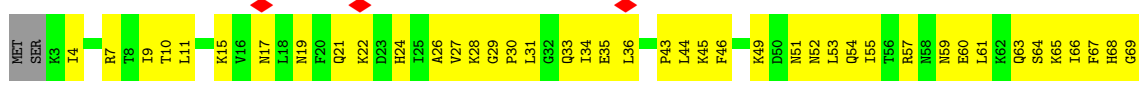


• Molecule 28: 50S ribosomal protein L5

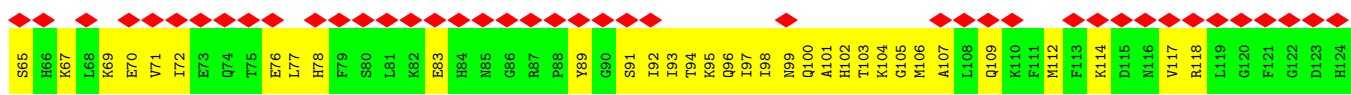
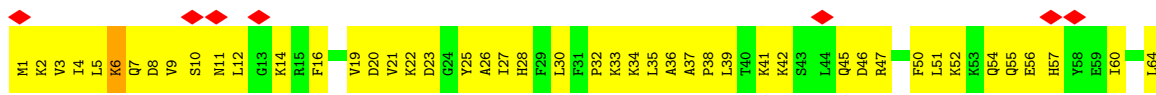




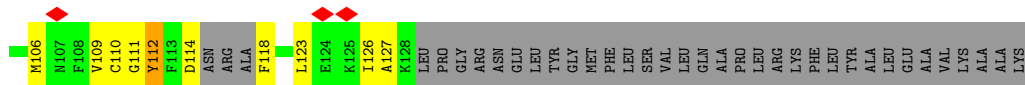
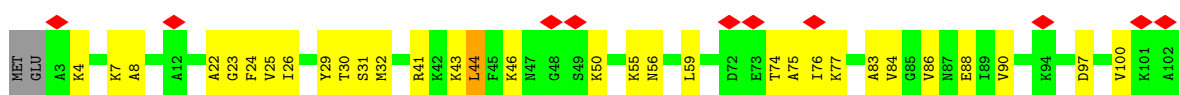
• Molecule 29: 50S ribosomal protein L6



• Molecule 30: 50S ribosomal protein L9

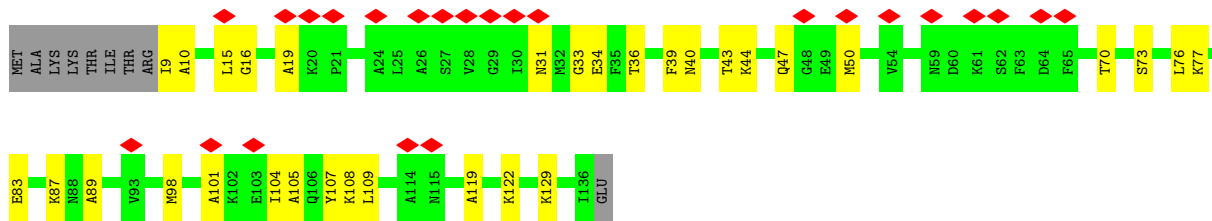


• Molecule 31: 50S ribosomal protein L10

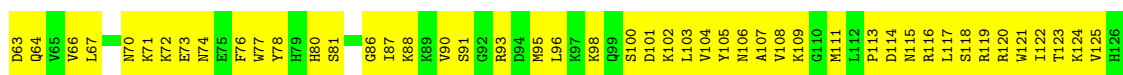
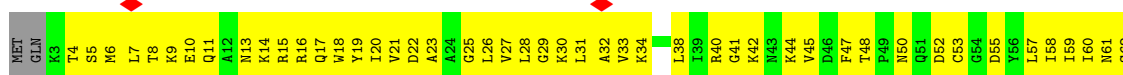


• Molecule 32: 50S ribosomal protein L11





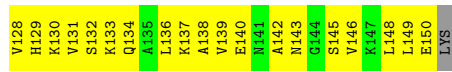
• Molecule 33: 50S ribosomal protein L13



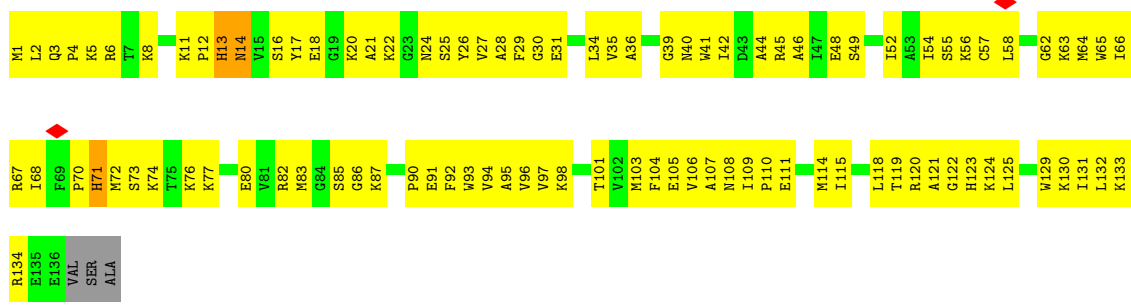
• Molecule 34: 50S ribosomal protein L14



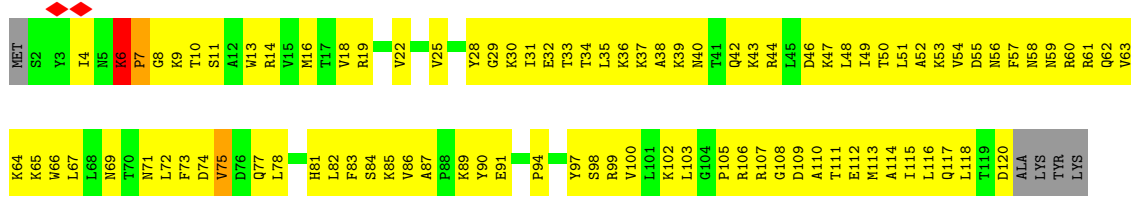
• Molecule 35: 50S ribosomal protein L15



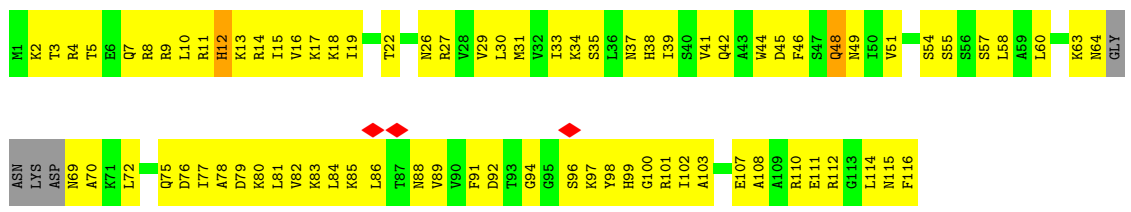
• Molecule 36: 50S ribosomal protein L16



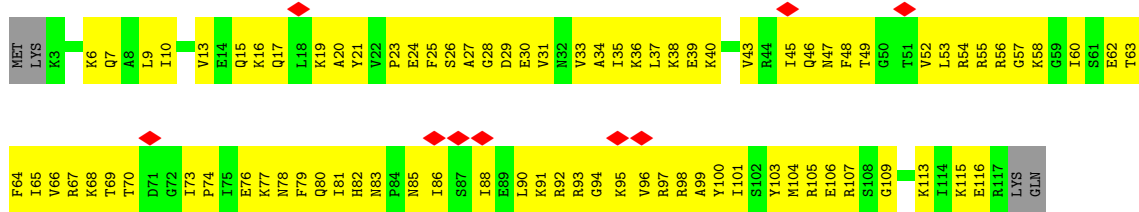
• Molecule 37: 50S ribosomal protein L17



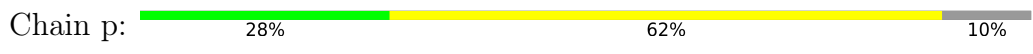
• Molecule 38: 50S ribosomal protein L18

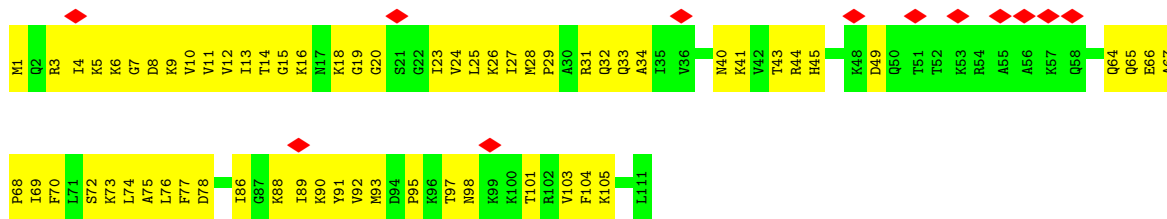


• Molecule 39: 50S ribosomal protein L19

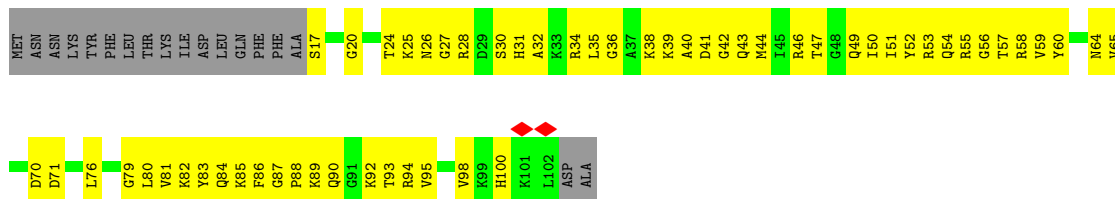


• Molecule 40: 50S ribosomal protein L20

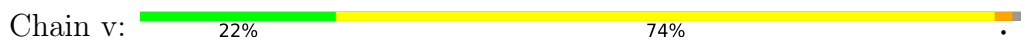




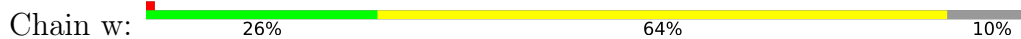
• Molecule 45: 50S ribosomal protein L27



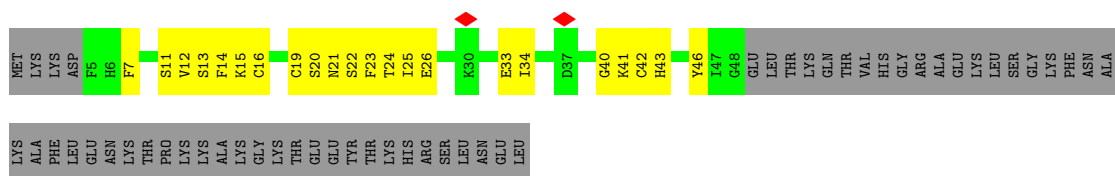
• Molecule 46: 50S ribosomal protein L28



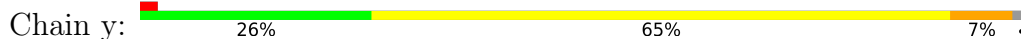
• Molecule 47: 50S ribosomal protein L29

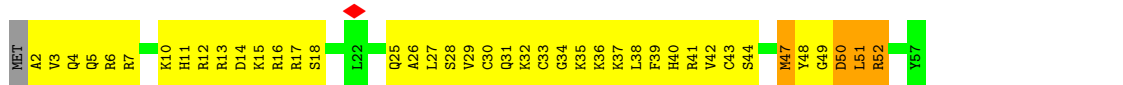


• Molecule 48: 50S ribosomal protein L31

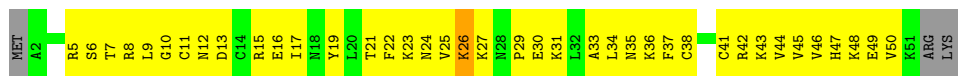
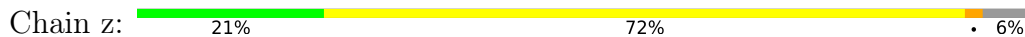


• Molecule 49: 50S ribosomal protein L32

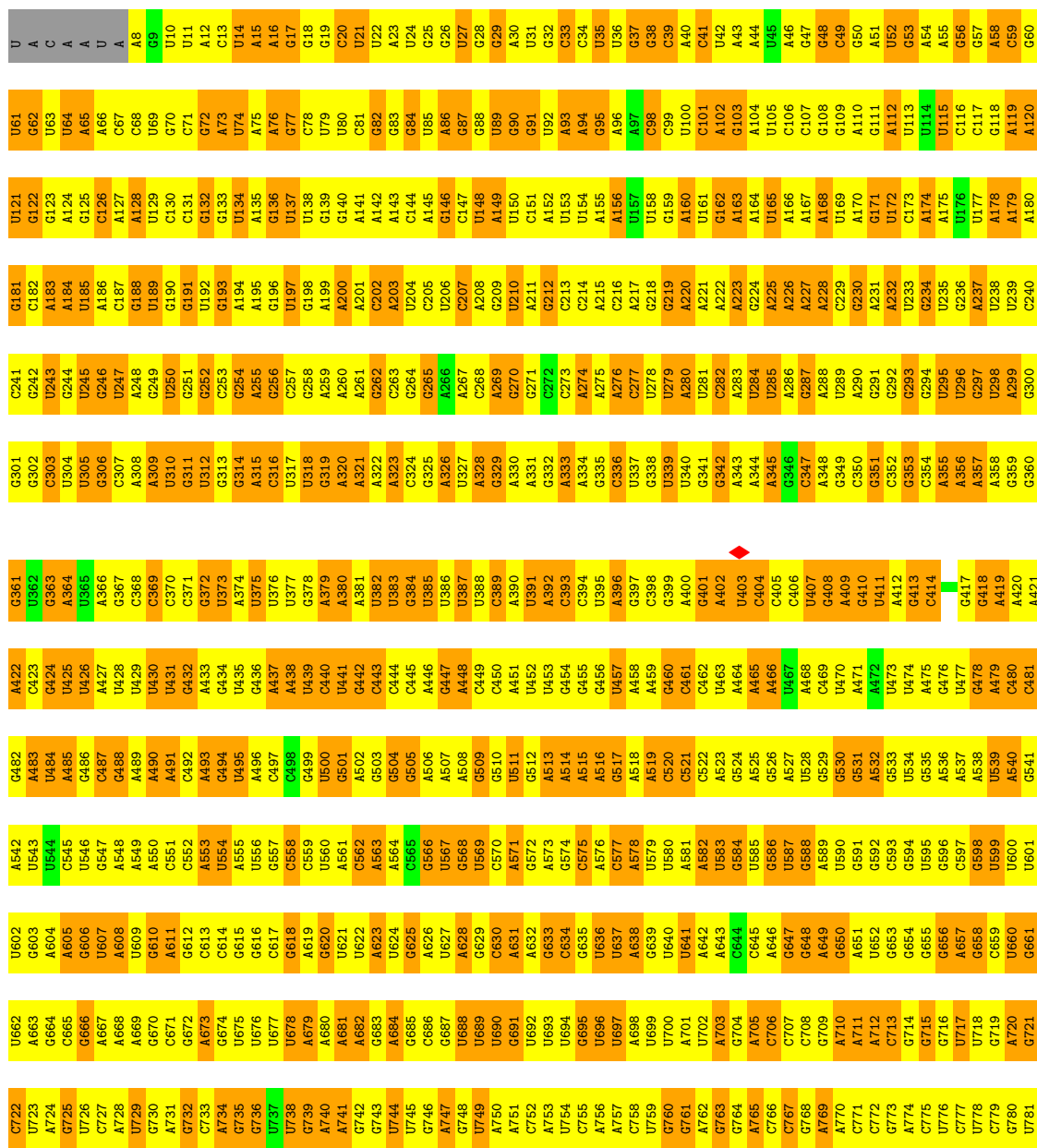
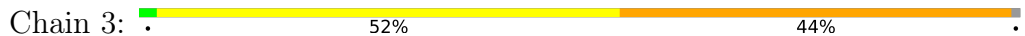




• Molecule 50: 50S ribosomal protein L33 1



• Molecule 51: 23S ribosomal RNA



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G1746	U1686	C1626	U1446	G1386	G1265	U1205	G1145	A1085	U965	C904	G844	A784
G1747	U1687	U1627	A1447	G1387	G1266	U1206	G1146	G1086	U966	U905	G845	A785
U1748	A1688	G1628	U1448	G1388	A1267	U1207	G1147	C1087	U967	G906	U846	A786
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G1753	U1693	C1633	U1453	U1393	A1272	C1212	U1152	A1092	C972	U913	U851	A791
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G1695	G1635	U1635	A1455	A1395	A1274	U1214	U1154	G1094	C974	G914	G853	C793
G1696	G1636	G1576	G1456	A1396	C1275	U1215	G1155	U1095	G975	A915	U854	G794
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G1700	G1700	G1640	U1460	U1400	U1279	U1219	C1159	U1099	C919	C919	U858	A798
C1701	A1641	U1581	A1461	A1401	G1280	A1220	G1160	U1100	G920	G920	G859	A799
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A1643	G1583	U1523	G1463	C1343	A1282	A1222	A1162	U1102	G982	C922	U861	U801
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A1619	U1559	G1439	G1499	C1379	U1318	C1258	G1198	U1138	C1078	C958	A897	A837
A1620	U	U1440	U1500	U1380	C1319	A1259	A1199	C1139	U1079	C959	A898	U838
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C1622	A	G1442	G1442	A1382	C1321	U1261	A1201	U1141	A1081	A961	G900	G840
U1623	G	A1503	A1443	G1383	A1322	G1262	A1202	G1142	A1082	U962	C901	C841

G2709	A2647	U2587	G2407	G3347	G2287	U2227	G2167	G2105	C2045	A1985	A1925	A1864	A1804
G2710	A2648	U2588	G2408	U2348	G2288	U2228	C2168	G2106	G2046	C1986	A1926	A1865	U1805
G2711	G2649	G2589	U2409	G2349	C2289	C2229	C2169	A2107	U2047	C1987	C1927	G1866	G1806
G2712	G2650	G2590	G2410	G2350	G2290	A2230	A2170	C2108	U2048	A1988	A1928	G1867	C1807
G2713	G2651	G2591	C2411	U2351	U2291	A2231	A2171	A2109	A2049	A1989	G1929	A1868	C1808
G2714	U2652	G2592	G2412	U2352	A2292	A2232	A2172	U2110	G2050	C1990	U1930	G1869	A1809
G2715	U2653	A2593	G2413	G2353	C2293	A2233	G2173	U2111	G2051	U1991	C1931	G1870	A1810
G2716	U2654	G2594	U2414	A2354	A2294	C2234	G2174	A2112	C2052	C1992	C1932	U1871	A1811
G2717	C2415	G2595	U2415	C2355	A2295	A2235	G2175	A2113	G2053	U1993	U1933	U1872	C1812
G2718	A2416	U2596	U2416	U2356	A2296	G2236	G2176	C2114	C2054	A1994	A1934	A1873	C1813
A2719	A2417	G2597	G2417	G2357	G2297	U2237	G2177	A2115	A2055	G1995	A1935	A1874	G1814
G2720	G2418	U2598	G2418	U2358	G2298	G2238	A2178	U2116	A2056	A1996	G1936	G1875	U1815
G2721	A2419	A2599	G2419	G2359	U2299	U2239	A2179	G2117	C2057	C1997	G1937	G1876	A1816
G2722	G2420	G2600	A2420	A2360	A2300	U2240	U2180	U2118	G2058	U1998	U1938	A1877	A1817
G2723	U2421	U2601	U2421	G2361	C2301	A2241	U2181	A2119	G2059	A1999	G1939	A1878	G1818
G2724	G2422	C2602	G2422	A2362	C2302	G2242	A2182	G2120	G2060	U2000	A1940	A1879	G1819
G2725	G2423	G2603	G2423	C2363	U2303	G2243	U2183	A2121	A2061	C2001	C1941	G1880	U1820
G2726	A2424	U2604	C2424	A2364	U2304	U2244	A2184	G2122	C2062	U2002	G1942	G1881	G1821
G2727	U2425	G2605	G2425	U2365	C2305	G2245	C2185	A2123	G2063	C2003	A1943	G1882	A1822
G2728	A2426	A2606	A2426	A2366	A2306	G2246	C2186	A2124	G2064	C2004	A1944	A1883	U1823
A2729	U2427	G2607	U2427	C2367	G2307	G2247	C2187	U2125	A2065	G2005	A1945	A1884	G1824
G2730	A2670	A2608	C2428	A2368	U2308	C2248	U2188	A2126	A2066	C2006	U1946	G1885	U1825
G2731	G2671	C2609	G2429	G2369	A2309	A2249	U2189	G2127	A2067	U2007	U1947	A1886	A1826
A2732	G2672	A2610	C2430	U2370	G2310	G2250	G2190	U2128	G2068	A2008	C1948	U1887	U1827
A2733	A2673	G2611	U2431	G2371	G2311	U2251	G2191	U2129	A2069	U2009	C1949	U1888	A1828
G2734	C2674	G2612	C2432	C2372	G2312	U2252	U2192	A2130	C2070	A2010	U1950	U1889	U1829
G2735	G2675	U2613	A2433	G2373	U2313	U2253	U2193	G2071	C2071	G2011	A1951	U1890	A1830
U2736	G2676	U2614	A2434	A2374	U2314	G2254	C2194	A2132	C2072	A2012	G1952	A1891	G1831
G2737	A2677	G2615	G2435	A2375	U2315	G2255	U2195	A2133	C2073	C2013	U1953	A1892	G1832
U2738	A2678	G2616	G2436	C2376	G2316	C2256	A2196	G2074	G2074	U2014	C1954	A1893	G1833
G2739	G2679	U2617	G2437	A2377	U2317	U2257	U2197	C2135	U2075	C2015	G1955	U1894	U1834
U2740	C2680	G2618	A2438	G2378	A2318	G2258	G2198	G2076	G2076	G2016	G1956	G1895	G1835
A2741	A2681	C2619	U2439	C2379	A2319	G2259	C2199	A2077	A2077	U2018	G1957	A1896	A1836
U2742	G2682	G2620	A2440	U2380	U2320	G2260	U2200	A2078	A2078	U2019	A1958	A1897	C1837
U2743	G2683	U2621	A2441	G2381	C2321	G2261	G2201	A2079	G2079	C2019	A1959	G1898	A1838
G2744	A2684	U2622	A2442	A2382	G2322	G2262	U2202	C2080	A2020	A2020	A1960	C1839	C1840
G2745	A2685	U2623	G2443	G2383	U2323	G2263	U2203	G2141	C2081	A2021	A1961	C1840	C1840
A2746	C2686	C2624	G2444	A2384	A2324	G2264	C2204	A2141	U2082	A2022	U1962	U1841	U1841
U2747	A2687	U2625	C2445	A2385	U2325	U2265	U2205	C2144	U2083	A2023	U1963	G1902	G1842
A2748	C2688	A2626	U2446	A2386	G2326	G2266	A2206	A2145	A2084	C2024	C1964	A1903	C1843
A2749	G2689	U2627	U2447	U2387	U2327	G2267	A2207	A2146	C2085	C2025	C1965	U1905	C1844
U2750	U2690	U2628	C2448	C2388	A2328	C2268	U2208	G2147	U2086	A2026	G1966	G1906	C1845
G2751	C2691	G2629	U2449	A2389	G2329	C2269	U2209	U2148	G2087	G2027	U1967	A1907	A1846
G2752	U2692	U2630	C2450	G2390	A2330	U2270	G2210	U2149	U2088	G2028	C1968	A1908	G1847
C2753	U2693	G2631	C2451	G2391	G2331	C2271	G2211	U2150	A2089	U2029	C1969	C1909	U1848
U2754	A2694	C2632	G2452	U2392	U2332	C2272	U2212	C2150	A2090	A2030	C1970	G1910	G1849
G2755	U2695	G2633	G2453	C2393	G2333	U2273	A2213	G2151	C2091	C2031	G1971	G1911	C1850
A2756	G2696	C2634	U2454	A2394	U2334	A2274	C2214	C2152	U2092	G2032	C1972	U1851	U1851
A2757	C2697	G2635	G2455	U2395	A2335	A2275	C2215	U2153	U2093	G2033	U1973	G1913	G1852
U2758	U2698	U2636	A2456	A2396	A2336	A2276	U2216	A2154	A2094	G2034	U1974	G1914	G1853
G2759	C2699	A2637	U2457	G2397	U2337	A2277	G2217	G2155	A2095	U2035	G1975	C1915	A1854
C2760	U2700	G2638	A2458	U2398	G2338	G2278	U2218	G2156	U2096	G2036	A1976	C1916	A1855
A2761	A2701	G2639	A2459	G2399	G2339	G2279	U2219	A2157	A2097	A2037	A1977	G1917	G1856
U2762	G2702	U2640	C2460	A2400	U2340	U2280	A2220	C2158	U2098	A2038	U1978	G1918	G1857
U2763	U2703	A2641	U2461	U2401	U2341	A2281	U2221	G2161	G2109	G2039	G1979	A1919	U1858
C2764	G2704	G2642	G2462	C2402	U2342	A2282	C2222	U2162	A2040	G2100	G1980	A1920	U1859
A2765	G2705	A2643	G2463	C2403	A2343	C2283	C2223	C2163	A2101	C2041	U1981	C1921	A1860
G2766	U2706	U2644	U2464	G2404	A2344	G2284	A2224	U2164	U2102	A2042	G1982	U1922	A1861
G2767	U2707	U2645	U2465	G2405	G2345	G2285	G2225	G2165	C2103	C2043	U1983	U1923	A1862
U2768	G2708	G2646	G2466	U2406	G2346	A2286	U2226	U2166	A2104	C2044	A1984	U1924	G1863

G2829	G2830	U2889	G2890	G2891	G2892	G2893	G2894	G2895	G2896	G2897	G2898	G2899	U2900	U	A	U	U	U	U	U	G	G	G	A	G2843	G2844	G2845	G2846	G2847	G2848	G2849	G2850	G2851	G2852	G2853	G2854	G2855	G2856	G2857	G2858	G2859	G2860	G2861	G2862	G2863	G2864	U2865	A2866	U2867	G2868	U2869	U2870	U2871	G2872	G2873	G2874	U2875	G2876	A2877	G2878	G2879	A2880	G2881	U2882	A2883	C2884	U2885	A2886	A2887	U2888	G2769	U2770	A2771	G2772	G2773	A2774	G2775	U2776	A2777	U2778	G2779	U2780	A2841	G2781	A2782	U2783	G2784	U2785	A2786	U2787	U2788	A2789	U2790	U2791	A2792	U2793	U2794	A2854	A2855	C2795	G2856	C2796	G2857	A2798	U2799	A2860	U2800	G2801	G2802	G2803	C2804	A2805	U2806	A2807	A2808	A2809	G2810	U2811	U2812	A2813	A2814	G2815	A2816	G2817	G2818	G2819	U2820	U2821	C2822	A2823	C2824	U2825	A2826	A2827	U2828	C2829
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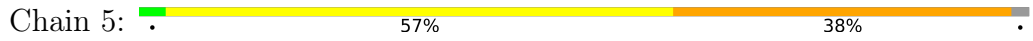
• Molecule 52: 5S ribosomal RNA



U1	U2	U3	G4	G5	U6	G7	C8	G9	C10	A11	G12	U13	U14	C15	U18	G19	U20	G21	A22	G23	A24	A25	G26	A27	G28	C29	U30	G31	A32	G33	U34	C35	C36	A37	U38	U39	U40	C41	G42	A43	A44	C45	C46	G47	A48	C49	G50	G51	U52	U53	A54	A55	A56	A57	G58	A59	C60	A61
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G62	U63	G64	G65	A66	G67	G68	C69	G70	A71	G72	U73	G74	U75	A76	G77	U78	G79	U80	U	U	U	C84	A85	G86	U87	G88	A89	G90	A91	A92	U93	A94	G95	G96	A97	A98	A99	G100	C101	A102	C103	C104	A105	A106	G107	C108
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• Molecule 53: 16S ribosomal RNA



U	U	U	U	U5	U6	U7	G8	A9	G10	A11	G12	U13	U14	U15	U16	G17	A18	C19	C20	U21	G22	G23	C24	U25	C26	A27	G28	G29	A30	U31	U32	A33	C34	C35	G36	C37	U38	G39	C40	C41	C42	C43	C44	A45	U46	C48	C49	U50	U51	A52	A53	U54	U55	C56	U57	G58	C59	U60
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A61	G62	U63	C64	U65	A66	U67	G68	A69	G70	A71	G72	U73	U74	A75	G76	U77	A78	U79	U80	A81	G82	U83	U84	U85	A86	G87	A88	G89	A90	U91	G92	A93	C94	C95	G96	G97	G98	U99	G100	A101	C102	U103	A104	A105	U106	C108	U109	G110	U111	A112	C113	U114	A115	C116	A117	U118	C119	U120
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C121	C122	U123	U124	C64	A125	U126	A127	U128	A129	U130	A131	G132	U133	U134	A135	U136	G137	A138	C139	U140	A141	G142	U143	U144	U145	A146	U147	A148	G149	U150	C151	U152	A153	C154	C155	U156	G157	U158	U159	A160	C161	U162	G163	C164	A165	U166	G168	C169	U170	U171	A172	U173	C174	A175	C176	U177	U178	C179	U180
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G	C	A	U	G185	A186	U187	U188	A189	U190	A191	G192	U193	U194	U195	G196	U197	A198	U199	G200	U201	A202	G203	U204	C205	G206	U207	A208	U209	G210	C211	U212	C213	U214	A215	C216	U217	U218	A219	U220	C221	U222	G223	A224	U225	G226	U227	A228	U229	G230	U231	G232	C233	U234	A235	C236	U237	U238	A239	U240
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C241	A242	G243	C244	U245	A246	G247	U248	U249	C250	U251	U252	G253	U254	G255	C256	U257	A258	U259	C260	G261	C262	U263	C264	U265	A266	U267	C268	A269	U270	G271	C272	C273	A274	A275	U276	G277	A278	C279	U280	U281	G282	U283	A284	G285	U286	C288	U289	G290	C291	U292	A293	C294	U295	A296	G297	U298	C299	U300
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G301	A302	U303	U304	A305	G306	C307	C308	A309	C310	U311	A312	U313	G314	G315	C316	A317	U318	U319	G320	A321	C322	U323	A324	C325	A326	U327	G328	U329	U330	C331	A332	U333	C334	C335	U336	U337	C338	U339	A340	C341	G342	U343	A344	U345	A346	C348	A349	U350	C351	A352	C353	U354	A355	C356	U357	G358	A359	U360
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U361	U362	U363	U364	U365	C366	U367	C368	A369	U370	U371	G372	A373	G374	C375	G376	A377	A378	U379	C380	U381	G382	U383	G384	A385	U386	G387	A388	U389	U390	U391	A392	A393	U394	G395	C396	C397	G398	C399	U400	U401	G402	A403	A404	C405	U406	U407	U408	G409	U410	A411	G412	U413	U414	U415	U416	U417	U418	U419	U420
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G421	A422	U423	A424	G425	U426	A427	A428	A429	G430	U431	U432	U433	U434	U435	U436	U437	A438	U439	U440	U441	G442	G443	G444	A445	A446	G447	A448	U449	U450	U451	A452	C453	U454	U455	U456	A457	G458	U459	A460	G461	G462	U463	A464	A465	U466	G467	U468	G469	U470	U471	A472	A473	G474	U475	U476	U477	U478	A479	U480
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U481	G482	U483	A484	C485	C486	A487	U488	U489	U490	U491	G492	A493	A494	G495	A496	U497	G498	U499	G500	A501	C502	G503	A504	C505	U506	A507	U508	C509	U510	A511	U512	G513	U514	A515	G516	C517	A518	G519	C520	A521	G522	U523	C524	G525	C526	U527	U528	U529	A530	A531	U532	A533	A534	A535	U536	U537	U538	G539	U540
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C541	G542	C543	A544	A545	G546	C547	G548	U549	U550	A551	U552	C553	C554	G555	G556	U557	U558	U559	U560	A561	C562	U563	G564	C565	G566	C567	U568	U569	U570	A571	U572	G573	U574	A575	U576	G577	C578	G579	C580	A581	G582	G583	C584	G585	C586	U587	U588	U589	G590	A591	U592	A593	A594	A595	U596	C597	U598	U599	G600
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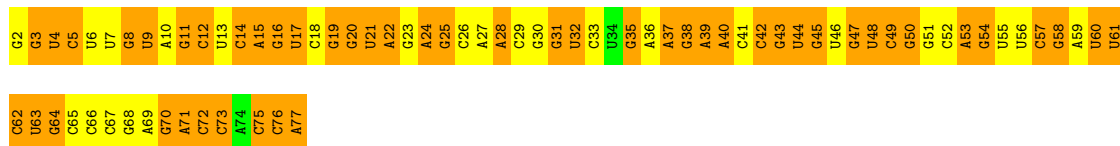
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G1504	G1444	A1384	A1324	G1264	A1204	A1144	A1084	A964	C904	U844	G782	G722	G662	G602
A1506	A1445	A1385	A1325	U1265	C1205	A1145	U1085	C965	U905	C845	G783	C723	U663	U603
U1507	A1446	C1386	C1326	U1266	G1206	U1146	A1086	G966	C906	C846	G784	G724	A664	U604
C1508	U1447	U1387	G1327	G1267	U1207	U1147	C1087	C967	A907	C847	U785	A725	G665	A605
A1509	A1448	A1388	C1328	G1268	G1208	U1148	U1088	C968	A908	U848	U786	A726	U666	A606
C	G1449	U1389	G1329	U1269	C1209	G1149	C1089	A969	A909	A849	G787	G727	U667	A607
C	C1450	A1390	A1330	U1270	U1210	G1150	U1090	A970	C910	G850	G788	G728	U668	G608
C	C1452	A1391	A1331	U1271	A1211	A1151	C1091	A971	C911	G851	G789	G729	U669	G609
C	C1453	A1392	C1332	C1272	C1212	G1152	A1092	A972	G912	G852	U790	G730	U670	C610
C	G1454	C1393	C1333	A1273	A1213	A1153	A1093	A973	G913	A853	U791	A731	G671	A611
C	G1455	C1394	A1334	U1274	A1214	A1154	A1094	C974	A914	A854	C792	A732	A672	C612
U	U1456	C1395	G1335	U1275	A1215	A1155	A1095	C975	A915	G855	C793	A733	A673	C613
U	U1457	U1396	C1336	U1276	G1216	G1156	A1096	U976	U916	U856	C794	A734	U674	U614
C	G1458	G1397	U1337	G1277	C1217	G1157	U1097	U977	G917	U857	U795	G735	U675	G615
C	A1459	A1398	A1338	G1278	A1218	A1158	C1098	A978	A918	A858	U796	U736	U676	C616
U	U1460	U1399	U1339	G1279	A1219	A1159	U1099	C979	C919	C860	G797	U737	G677	U617
U	U1462	A1400	A1400	A1280	A1220	G1160	A1100	C980	C920	C861	U798	A738	A678	U618
A	G1461	A1401	U1341	U1281	A1221	G1161	A1101	U981	G921	A862	A799	G739	U679	A619
	G1462	U1402	C1342	U1282	U1222	G1162	A1102	A982	G922	C863	C800	G740	G680	A620
	A1463	A1403	G1343	G1283	A1223	U1163	C1103	A983	G923	A864	U801	C741	U681	C621
	G1464	U1404	C1344	A1284	C1224	U1164	C1104	A984	A924	U865	C802	C742	G682	A622
	U1465	G1405	G1345	G1285	A1225	G1165	C1105	C985	C925	U866	C803	A743	G683	G623
	U1466	U1406	G1346	G1286	A1226	A1166	U1106	U986	C926	A867	C804	U744	A684	U624
	A1467	U1407	U1347	G1287	A1227	C1167	U1107	U987	C927	U868	C805	U745	G685	U625
	A1468	A1408	G1348	C1288	C1228	G1168	A1108	G988	G928	G868	C806	A746	C686	G626
	G1469	A1409	U1349	U1289	A1229	U1169	U1109	A989	C929	U869	C807	C747	G687	U627
	U1470	A1410	A1350	G1290	G1230	C1170	U1110	C990	A930	A870	U810	U748	G688	A628
	C1471	C1411	U1351	C1291	A1231	A1171	U1051	C991	C931	U871	A811	G749	U689	G629
	A1472	A1412	A1352	A1292	C1232	A1172	U1052	U992	A932	C872	A812	A750	U690	G630
	U1473	G1413	C1353	A1293	G1233	A1173	U1053	C993	A933	U873	A813	C751	C631	C631
	A1474	U1414	G1354	U1294	C1234	U1174	C1054	C994	G934	C874	C814	C752	A632	A632
	A1475	G1415	U1355	U1295	C1235	C1175	G1055	U995	U935	G875	G815	C753	U633	U633
	G1476	U1416	U1356	C1296	A1236	A1176	U1056	U996	G936	C876	U817	U754	U634	U634
	A1477	U1417	C1357	G1297	G1237	U1177	C1057	U997	G937	C877	U818	A756	G695	G695
	U1478	C1418	U1358	U1298	C1238	C1178	A1058	U998	U938	U878	A819	G757	C696	G696
	G1479	C1419	C1359	C1299	U1239	A1179	G1059	C999	G939	G879	G819	C758	A637	A637
	G1480	U1420	G1360	C1300	U1240	U1180	U1120	A1000	G940	C880	A820	G759	U638	U638
	U1481	A1421	G1361	U1301	G1241	G1181	U1121	A1001	A941	C881	U821	C760	A639	A639
	A1482	A1422	C1362	C1302	U1242	C1182	U1122	A1002	G942	U882	U822	U760	G700	C640
	C1483	C1423	U1363	A1303	A1243	C1183	G1063	G1003	C943	A883	C823	U761	A701	U641
	C1484	C1424	C1364	U1304	A1244	C1184	U1064	U1004	A944	C884	U824	G762	U702	A642
	C1485	A1425	U1365	G1305	A1245	C1185	G1065	U1005	U945	U885	A825	A763	A703	U643
	U1486	U1426	U1366	A1306	A1246	U1186	U1066	A1006	G946	C886	C826	A764	U704	U644
	U1487	U1427	G1367	A1307	G1247	U1187	C1067	U1007	U947	C887	C827	A765	A705	A645
	A1488	A1428	U1368	U1308	U1248	A1188	G1068	G1008	U948	A888	U828	G766	U706	A646
	C1489	G1429	U1369	G1309	G1249	U1189	U1069	G1009	G949	U889	G829	U767	G707	U647
	G1490	C1370	C1370	C1310	A1250	G1190	G1070	A1010	C950	U890	U830	G768	A708	C648
	A1491	A1371	A1371	G1311	G1251	U1191	A1071	A1011	U951	C891	C831	U769	A709	U649
	G1492	C1372	C1372	G1312	C1252	C1192	G1072	A1012	U952	C892	G832	G770	G710	A650
	A1493	C1373	A1373	A1313	A1253	U1193	A1073	C1013	A953	C893	G833	G771	G711	G651
	A1494	C1374	C1374	A1314	A1254	A1194	U1074	A1014	A954	A894	G834	G772	A712	A652
	G1495	G1375	U1315	U1315	U1255	G1195	G1075	A1015	U955	A895	G835	G773	A713	G653
	G1496	C1376	C1376	C1316	U1256	G1196	U1076	A1016	U956	G896	C836	A774	C714	U654
	U1497	U1377	A1377	A1317	C1257	G1197	U1077	C957	G957	A897	A837	G775	A715	G655
	A1498	U1438	C1378	C1318	U1258	C1198	G1078	U1018	G958	A898	A838	C776	C716	U656
	G1499	G1439	C1379	U1319	G1259	U1199	G1079	G1019	A959	U899	U839	A777	C717	G657
	G1500	U1440	U1380	A1320	U1260	G1200	U1080	A	G960	G900	C840	A778	A718	U658
	U1501	C1441	U1381	G1321	A1261	U1141	U1081	G	A961	A901	C841	A779	G719	U659
	G1502	A1442	C1382	U1322	A1262	A1202	U1082	G	G962	A902	C842	U780	U720	A660

• Molecule 54: tRNA-Phe





• Molecule 54: tRNA-Phe



4 Experimental information

Property	Value	Source
EM reconstruction method	SUBTOMOGRAM AVERAGING	Depositor
Imposed symmetry	POINT, C1	Depositor
Number of subtomograms used	1786	Depositor
Resolution determination method	FSC 0.143 CUT-OFF	Depositor
CTF correction method	PHASE FLIPPING AND AMPLITUDE CORRECTION	Depositor
Microscope	FEI TITAN KRIOS	Depositor
Voltage (kV)	300	Depositor
Electron dose ($e^-/\text{\AA}^2$)	3.2	Depositor
Minimum defocus (nm)	1500	Depositor
Maximum defocus (nm)	3750	Depositor
Magnification	81000	Depositor
Image detector	GATAN K2 SUMMIT (4k x 4k)	Depositor
Maximum map value	1.572	Depositor
Minimum map value	-0.560	Depositor
Average map value	0.024	Depositor
Map value standard deviation	0.126	Depositor
Recommended contour level	0.4	Depositor
Map size (Å)	435.328, 435.328, 435.328	wwPDB
Map dimensions	256, 256, 256	wwPDB
Map angles (°)	90.0, 90.0, 90.0	wwPDB
Pixel spacing (Å)	1.7005, 1.7005, 1.7005	Depositor

5 Model quality i

5.1 Standard geometry i

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	0	0.29	0/383	0.66	0/504
2	1	0.29	0/484	0.71	0/637
3	2	0.38	0/306	0.65	0/401
4	9	0.27	0/3071	0.62	0/4147
5	A	0.30	0/1954	0.66	5/2642 (0.2%)
6	B	0.30	0/1721	0.64	0/2323
7	C	0.28	0/1691	0.62	0/2267
8	D	0.28	0/1188	0.63	0/1593
9	E	0.38	0/1384	0.79	2/1867 (0.1%)
10	F	0.28	0/1266	0.67	1/1700 (0.1%)
11	G	0.34	0/1126	0.76	3/1517 (0.2%)
12	H	0.33	0/1044	0.74	1/1395 (0.1%)
13	I	0.31	0/820	0.74	1/1103 (0.1%)
14	J	0.28	0/844	0.65	1/1136 (0.1%)
15	K	0.34	0/1094	0.72	0/1468
16	L	0.25	0/962	0.57	0/1289
17	M	0.30	0/483	0.71	1/643 (0.2%)
18	N	0.30	0/679	0.58	0/907
19	O	0.24	0/659	0.60	0/885
20	P	0.33	0/684	0.66	2/913 (0.2%)
21	Q	0.41	0/545	0.90	2/730 (0.3%)
22	R	0.27	0/698	0.66	1/936 (0.1%)
23	S	0.34	0/631	0.69	1/838 (0.1%)
24	T	0.28	0/475	0.60	0/621
25	a	0.29	0/2267	0.69	1/3044 (0.0%)
26	b	0.30	0/1795	0.69	1/2412 (0.0%)
27	c	0.33	0/1671	0.75	3/2246 (0.1%)
28	d	0.30	0/1409	0.68	0/1894
29	e	0.35	0/1420	0.75	4/1912 (0.2%)
30	f	0.27	0/1205	0.66	0/1616
31	g	1.95	6/944 (0.6%)	0.84	3/1260 (0.2%)
32	h	0.25	0/968	0.55	0/1298
33	i	0.30	0/1186	0.62	0/1592
34	j	0.31	0/953	0.73	0/1275

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z >5	RMSZ	# Z >5
35	k	0.31	0/1170	0.70	1/1559 (0.1%)
36	l	0.33	0/1104	0.67	1/1481 (0.1%)
37	m	0.32	0/973	0.65	1/1309 (0.1%)
38	n	0.30	0/897	0.67	1/1198 (0.1%)
39	o	0.30	0/948	0.71	1/1262 (0.1%)
40	p	0.32	0/961	0.64	1/1278 (0.1%)
41	q	0.31	0/828	0.75	2/1111 (0.2%)
42	r	0.29	0/1077	0.66	0/1441
43	s	0.28	0/732	0.77	3/988 (0.3%)
44	t	0.27	0/879	0.68	0/1165
45	u	0.28	0/665	0.67	0/884
46	v	0.30	0/519	0.73	1/695 (0.1%)
47	w	0.26	0/826	0.52	0/1104
48	x	0.24	0/353	0.67	1/474 (0.2%)
49	y	0.38	0/457	0.74	1/601 (0.2%)
50	z	0.28	0/412	0.74	1/547 (0.2%)
51	3	0.29	0/69073	0.47	0/107710
52	4	0.29	0/2505	0.48	0/3902
53	5	0.28	0/35768	0.46	0/55764
54	6	0.26	0/1808	0.52	0/2817
54	7	0.27	0/1808	0.52	0/2817
All	All	0.33	6/161773 (0.0%)	0.54	48/241118 (0.0%)

All (6) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
31	g	112	TYR	CD2-CE2	31.31	2.32	1.38
31	g	112	TYR	CD1-CE1	30.87	2.31	1.38
31	g	112	TYR	CE1-CZ	20.99	1.88	1.38
31	g	112	TYR	CE2-CZ	20.70	1.88	1.38
31	g	112	TYR	CG-CD2	17.36	1.75	1.39
31	g	112	TYR	CG-CD1	16.97	1.75	1.39

All (48) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
5	A	36	TYR	N-CA-C	-10.23	96.45	110.68
21	Q	44	CYS	N-CA-C	-9.69	100.72	112.54
9	E	123	ASN	CA-C-N	-9.52	107.87	121.20
9	E	123	ASN	C-N-CA	-9.52	107.87	121.20
10	F	16	VAL	N-CA-C	-8.19	105.93	113.71
43	s	50	ILE	CA-C-N	-7.71	110.33	120.67

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
43	s	50	ILE	C-N-CA	-7.71	110.33	120.67
11	G	110	GLY	N-CA-C	-7.70	105.12	115.36
29	e	113	SER	CA-C-N	7.62	140.81	122.36
29	e	113	SER	C-N-CA	7.62	140.81	122.36
50	z	26	LYS	N-CA-C	-7.61	105.94	114.62
27	c	199	VAL	N-CA-C	7.40	120.44	108.97
39	o	40	LYS	N-CA-C	-7.20	105.41	114.56
21	Q	56	ASP	N-CA-C	-6.74	104.93	113.02
26	b	2	GLU	N-CA-C	-6.55	104.43	112.88
41	q	41	LEU	N-CA-C	-6.36	104.27	111.07
11	G	63	LYS	N-CA-C	-6.33	106.78	114.75
23	S	7	ASN	N-CA-C	-6.27	106.23	114.31
31	g	29	TYR	N-CA-C	-6.22	105.85	113.50
40	p	27	ARG	N-CA-C	-6.20	106.25	113.88
29	e	157	PRO	CA-C-N	-6.06	112.25	123.65
29	e	157	PRO	C-N-CA	-6.06	112.25	123.65
14	J	10	SER	N-CA-C	-6.04	107.14	114.75
48	x	41	LYS	N-CA-C	-5.93	105.35	113.30
35	k	25	GLY	N-CA-C	-5.92	107.32	114.66
27	c	75	ARG	CA-C-O	-5.84	114.65	121.07
20	P	16	THR	N-CA-C	-5.77	106.85	112.97
38	n	48	GLN	N-CA-C	-5.72	107.54	114.75
37	m	6	LYS	N-CA-C	-5.67	101.65	109.71
5	A	206	THR	CA-C-N	5.66	129.21	121.74
5	A	206	THR	C-N-CA	5.66	129.21	121.74
31	g	76	ILE	N-CA-C	-5.59	107.37	112.96
36	l	71	HIS	N-CA-C	-5.53	106.53	113.28
46	v	21	SER	N-CA-C	-5.50	105.56	114.09
41	q	42	ASP	CB-CA-C	-5.49	99.49	110.42
12	H	63	PHE	CB-CA-C	-5.34	98.54	109.38
43	s	70	ARG	N-CA-C	-5.32	108.56	114.62
5	A	167	LYS	N-CA-C	-5.30	106.58	114.64
31	g	86	VAL	CA-C-O	-5.29	118.02	122.63
13	I	65	LYS	N-CA-C	-5.29	104.19	111.81
5	A	36	TYR	CB-CA-C	5.27	119.31	111.88
20	P	35	TYR	N-CA-C	-5.27	106.85	113.28
22	R	7	LYS	N-CA-C	-5.17	104.56	111.02
17	M	17	ALA	N-CA-C	-5.16	106.49	112.89
25	a	186	SER	N-CA-C	-5.12	106.35	112.59
27	c	163	THR	N-CA-C	-5.08	107.06	114.12
11	G	92	LYS	N-CA-C	-5.04	103.79	110.40
49	y	50	ASP	N-CA-C	-5.04	108.40	114.75

There are no chirality outliers.

There are no planarity outliers.

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	0	380	0	429	55	0
2	1	477	0	530	66	0
3	2	304	0	350	43	0
4	9	3021	0	3050	332	0
5	A	1921	0	1973	189	0
6	B	1698	0	1768	166	0
7	C	1660	0	1719	195	0
8	D	1173	0	1267	153	0
9	E	1362	0	1377	166	0
10	F	1246	0	1308	132	0
11	G	1110	0	1226	128	0
12	H	1028	0	1094	143	0
13	I	809	0	894	94	0
14	J	829	0	855	93	0
15	K	1076	0	1170	145	0
16	L	951	0	1014	87	0
17	M	474	0	509	74	0
18	N	673	0	730	58	0
19	O	646	0	677	53	0
20	P	675	0	728	78	0
21	Q	535	0	562	74	0
22	R	682	0	691	91	0
23	S	629	0	681	78	0
24	T	471	0	522	38	0
25	a	2225	0	2301	271	0
26	b	1762	0	1808	230	0
27	c	1644	0	1731	192	0
28	d	1388	0	1469	116	0
29	e	1396	0	1481	132	0
30	f	1182	0	1227	162	0
31	g	936	0	989	27	0
32	h	959	0	1039	24	0
33	i	1164	0	1192	134	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
34	j	944	0	1019	129	0
35	k	1153	0	1256	162	0
36	l	1079	0	1134	132	0
37	m	958	0	1011	114	0
38	n	889	0	952	113	0
39	o	938	0	1008	124	0
40	p	947	0	1028	117	0
41	q	811	0	858	91	0
42	r	1068	0	1150	125	0
43	s	720	0	803	84	0
44	t	872	0	972	74	0
45	u	657	0	695	89	0
46	v	513	0	560	73	0
47	w	818	0	870	85	0
48	x	344	0	333	19	0
49	y	452	0	472	80	0
50	z	408	0	440	50	0
51	3	61664	0	30951	6388	0
52	4	2239	0	1137	256	0
53	5	31943	0	16058	3265	0
54	6	1618	0	821	143	0
54	7	1618	0	821	155	0
All	All	149139	0	102710	14408	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 61.

All (14408) 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)
30:f:5:LEU:HD11	30:f:34:LYS:CG	1.34	1.56
30:f:5:LEU:HD12	30:f:34:LYS:CB	1.35	1.56
30:f:5:LEU:CD1	30:f:34:LYS:HB3	1.33	1.53
53:5:778:A:N6	53:5:798:U:C2	1.79	1.50
30:f:5:LEU:CD1	30:f:34:LYS:CB	1.93	1.40
53:5:1002:A:N6	53:5:1019:G:C4	1.92	1.37
51:3:47:G:N2	51:3:184:A:H61	1.22	1.34
30:f:5:LEU:CD1	30:f:34:LYS:CG	2.01	1.32
51:3:47:G:H21	51:3:184:A:N6	1.32	1.28
51:3:741:A:N7	51:3:760:G:N2	1.80	1.26
53:5:434:U:N3	53:5:493:A:C8	2.02	1.26

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:2:14:CYS:HA	3:2:26:ILE:O	1.30	1.23
51:3:900:G:N2	51:3:903:A:H61	1.35	1.22
51:3:274:A:C8	51:3:295:U:N3	2.08	1.19
53:5:649:U:N3	53:5:750:A:C8	2.10	1.19
53:5:1133:A:C2	53:5:1153:G:N2	2.14	1.16
53:5:434:U:C2	53:5:493:A:N7	2.17	1.12
51:3:2465:U:C4	51:3:2502:G:O6	2.03	1.12
53:5:671:G:C6	53:5:713:A:N6	2.17	1.12
30:f:4:ILE:HG22	30:f:35:LEU:O	1.46	1.11
54:7:27:A:N6	54:7:45:G:H1	1.46	1.11
53:5:661:G:H1	53:5:738:A:N6	1.49	1.11
46:v:13:LEU:O	46:v:28:LYS:HA	1.51	1.10
46:v:17:ASN:O	46:v:24:ILE:HA	1.51	1.10
51:3:900:G:H21	51:3:903:A:N6	1.50	1.10
51:3:1310:U:H3	51:3:1314:A:N6	1.47	1.10
30:f:5:LEU:HG	30:f:6:LYS:H	1.12	1.09
46:v:35:PRO:HA	46:v:48:ILE:O	1.52	1.07
53:5:778:A:C6	53:5:798:U:C2	2.41	1.07
51:3:1557:G:H2'	51:3:1573:A:H61	1.17	1.07
30:f:5:LEU:CD1	30:f:34:LYS:HG2	1.75	1.06
51:3:411:U:N3	51:3:437:A:C8	2.22	1.06
51:3:341:G:N3	51:3:364:A:N6	2.03	1.06
53:5:242:A:C8	53:5:277:G:N2	2.21	1.06
53:5:1322:U:N3	53:5:1349:A:C8	2.24	1.03
51:3:1721:G:N3	51:3:1735:A:N6	2.07	1.03
30:f:2:LYS:CD	30:f:36:ALA:HB1	1.86	1.03
53:5:649:U:C2	53:5:750:A:N7	2.26	1.03
51:3:535:G:N3	51:3:540:A:N6	2.06	1.03
51:3:173:C:H2'	51:3:174:A:H8	1.21	1.02
53:5:434:U:N3	53:5:493:A:N7	2.08	1.02
51:3:2465:U:C2	51:3:2502:G:N1	2.27	1.02
51:3:1244:A:H62	51:3:1265:G:N2	1.57	1.01
51:3:499:G:N2	51:3:502:A:N7	2.09	1.01
51:3:274:A:H8	51:3:295:U:H3	1.08	1.01
51:3:748:G:H21	51:3:753:A:H62	1.02	1.01
30:f:2:LYS:HD2	30:f:36:ALA:HB1	1.06	1.01
53:5:649:U:N3	53:5:750:A:N7	2.09	1.01
51:3:2465:U:N3	51:3:2502:G:C6	2.28	1.00
51:3:2465:U:C4	51:3:2502:G:C6	2.49	1.00
53:5:1321:G:HO2'	53:5:1348:G:H1	1.01	1.00
53:5:434:U:O2	53:5:493:A:N7	1.95	1.00

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:5:724:G:N2	53:5:727:G:N7	2.08	1.00
51:3:1876:G:N2	51:3:1879:A:N7	2.09	1.00
53:5:106:C:N4	53:5:232:G:N7	2.10	0.99
51:3:1698:A:H61	51:3:2003:C:N4	1.59	0.99
28:d:125:ARG:NH1	51:3:2323:U:O2	1.95	0.99
51:3:1035:U:O4	51:3:1190:A:N7	1.93	0.99
51:3:2756:A:N7	51:3:2762:U:O2	1.94	0.99
52:4:70:G:N2	52:4:94:A:N7	2.10	0.99
53:5:242:A:H8	53:5:277:G:H21	1.08	0.99
53:5:368:C:N4	53:5:385:A:H62	1.60	0.99
39:o:31:VAL:HG12	39:o:90:LEU:HA	1.44	0.98
51:3:17:G:H1	51:3:560:U:H3	0.99	0.98
30:f:5:LEU:HD21	30:f:14:LYS:HE2	1.45	0.98
51:3:730:G:H1	51:3:802:U:H3	1.02	0.98
30:f:4:ILE:HD13	30:f:37:ALA:HB3	1.42	0.98
26:b:40:LYS:O	26:b:48:SER:HA	1.63	0.98
36:l:54:ILE:O	36:l:58:LEU:HB2	1.64	0.98
53:5:671:G:N1	53:5:713:A:N6	2.10	0.98
53:5:1002:A:C6	53:5:1019:G:N3	2.32	0.98
51:3:895:G:HO2'	51:3:953:G:H1	1.05	0.98
53:5:1138:U:H3	53:5:1149:G:H1	1.11	0.98
51:3:274:A:N7	51:3:295:U:C2	2.32	0.97
51:3:62:G:N2	51:3:90:G:N7	2.12	0.97
51:3:572:G:N2	51:3:589:A:N7	2.11	0.97
51:3:1785:U:C2	51:3:1792:A:N7	2.32	0.97
53:5:134:G:H1	53:5:160:A:H2	1.05	0.97
51:3:719:G:N2	51:3:810:G:N7	2.13	0.97
53:5:1044:G:N2	53:5:1048:G:N7	2.13	0.97
53:5:1405:U:H3	53:5:1445:G:H1	1.06	0.97
20:P:32:HIS:HB3	20:P:37:LYS:H	1.26	0.97
53:5:762:G:H1	53:5:809:G:HO2'	1.10	0.97
51:3:1932:C:H42	51:3:1936:G:H22	1.08	0.96
53:5:1416:U:H3	53:5:1435:G:H1	1.00	0.96
44:t:41:LYS:HB3	44:t:64:GLN:HB3	1.48	0.96
51:3:1777:G:H1	51:3:1989:U:H3	1.04	0.96
51:3:511:U:C2	51:3:515:A:C5	2.54	0.96
51:3:741:A:N6	51:3:760:G:N3	2.14	0.96
53:5:1049:G:H1	53:5:1174:U:H3	1.00	0.96
29:e:67:PHE:HA	29:e:70:THR:HG22	1.47	0.95
51:3:244:G:N3	51:3:261:A:N6	2.13	0.95
53:5:603:U:H3	53:5:630:G:H1	1.01	0.95

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:3:1244:A:N6	51:3:1265:G:N3	2.15	0.95
51:3:2257:U:O2	51:3:2283:C:N4	1.99	0.95
51:3:2851:U:H3	51:3:2873:G:H1	0.96	0.95
30:f:5:LEU:HB2	30:f:20:ASP:OD2	1.64	0.95
51:3:853:G:N2	51:3:1219:U:OP2	1.98	0.95
51:3:251:G:N2	51:3:255:A:N7	2.14	0.95
51:3:1141:U:H2'	51:3:1142:G:H8	1.29	0.95
36:l:35:VAL:O	36:l:129:TRP:HA	1.66	0.95
51:3:1846:A:H61	51:3:1906:G:H1	1.13	0.95
53:5:368:C:H42	53:5:385:A:H62	1.10	0.95
53:5:1322:U:C2	53:5:1349:A:N7	2.35	0.95
51:3:1054:U:O2'	51:3:1056:A:N7	2.00	0.94
51:3:341:G:C2	51:3:364:A:N6	2.35	0.94
53:5:1133:A:N1	53:5:1153:G:C2	2.34	0.94
51:3:1035:U:H3	51:3:1190:A:H62	0.96	0.94
53:5:1106:U:H3	53:5:1160:G:H1	0.95	0.94
21:Q:88:LYS:HA	21:Q:91:LYS:HE2	1.49	0.94
51:3:855:A:N7	51:3:1009:A:N6	2.15	0.94
51:3:900:G:H21	51:3:903:A:H61	0.96	0.94
51:3:2353:G:H1'	51:3:2390:G:H5'	1.48	0.94
53:5:63:U:H3	53:5:90:G:H1	1.14	0.94
53:5:600:G:H1	53:5:633:U:H3	0.95	0.94
46:v:38:VAL:HG12	46:v:45:THR:HA	1.47	0.94
51:3:647:G:N2	51:3:651:A:N7	2.16	0.94
31:g:25:VAL:O	31:g:83:ALA:HB3	1.68	0.94
51:3:2852:G:HO2'	51:3:2871:G:H1	1.14	0.93
53:5:144:U:O2	53:5:149:G:O6	1.85	0.93
34:j:35:LEU:H	34:j:69:GLN:HE22	1.09	0.93
53:5:968:G:H3'	53:5:969:A:H2'	1.49	0.93
53:5:1077:U:H3	53:5:1090:G:H22	1.13	0.93
53:5:883:A:N6	53:5:902:A:N7	2.15	0.93
38:n:30:LEU:HB2	38:n:91:PHE:HA	1.49	0.93
51:3:274:A:N7	51:3:295:U:O2	2.02	0.93
51:3:739:G:N2	51:3:762:A:N7	2.17	0.93
43:s:26:LYS:HA	43:s:83:ILE:O	1.68	0.93
12:H:66:ASN:HD21	53:5:1121:U:H2'	1.31	0.93
51:3:2664:U:O2	51:3:2673:A:N7	2.02	0.93
33:i:115:ASN:HB3	33:i:118:SER:H	1.34	0.93
51:3:274:A:N7	51:3:295:U:N3	2.12	0.93
51:3:2297:G:H1	51:3:2351:U:H3	0.95	0.93
53:5:1406:U:O2	53:5:1444:G:N2	2.02	0.93

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:3:2374:A:H3'	51:3:2375:A:H8	1.33	0.92
53:5:175:U:N3	53:5:190:A:N1	2.17	0.92
51:3:748:G:N2	51:3:753:A:H62	1.67	0.92
51:3:1200:U:O2	51:3:1215:G:O6	1.86	0.92
52:4:104:C:H2'	52:4:105:A:H8	1.35	0.92
51:3:2098:U:H3'	51:3:2099:U:H2'	1.50	0.92
51:3:2838:G:N3	51:3:2887:A:N6	2.17	0.92
53:5:973:A:N1	53:5:1290:G:N2	2.16	0.92
51:3:484:U:O4	51:3:615:G:N2	2.02	0.92
53:5:144:U:O2	53:5:149:G:C6	2.23	0.92
47:w:40:LYS:HD2	47:w:42:HIS:HE1	1.35	0.92
51:3:739:G:H22	51:3:761:G:H1'	1.34	0.92
53:5:293:G:N2	53:5:296:A:N7	2.16	0.92
53:5:365:U:H3	53:5:388:G:H1	0.94	0.92
45:u:86:PHE:O	45:u:92:LYS:HB2	1.70	0.92
51:3:219:G:N2	51:3:468:A:N1	2.17	0.92
51:3:512:G:N2	51:3:516:A:N7	2.17	0.92
51:3:569:U:H3	51:3:592:G:H1	0.94	0.92
53:5:245:U:H3	53:5:271:G:H1	1.07	0.92
30:f:4:ILE:HD12	30:f:37:ALA:O	1.67	0.92
37:m:28:TYR:HH	51:3:1307:G:HO2'	1.12	0.92
51:3:1063:A:OP2	51:3:1161:A:N6	2.02	0.92
51:3:2113:U:H3	51:3:2191:G:H1	1.17	0.92
15:K:4:ILE:HA	15:K:7:LEU:HB2	1.51	0.92
51:3:2477:A:N6	51:3:2489:G:N3	2.18	0.92
53:5:778:A:N6	53:5:798:U:N3	2.18	0.92
51:3:1071:G:N2	51:3:1154:U:O2	2.03	0.91
51:3:1807:C:N3	51:3:1824:G:N2	2.18	0.91
53:5:441:U:N3	53:5:487:A:N1	2.18	0.91
53:5:1322:U:O2	53:5:1349:A:N7	2.03	0.91
51:3:1244:A:H62	51:3:1265:G:H21	1.06	0.91
51:3:2053:G:H1	51:3:2630:U:H3	0.94	0.91
53:5:789:A:O2'	53:5:791:A:N7	2.01	0.91
53:5:1417:U:H2'	53:5:1418:G:H8	1.33	0.91
10:F:76:VAL:HA	10:F:85:GLN:HG3	1.52	0.91
51:3:856:A:N6	51:3:1008:A:N3	2.18	0.91
53:5:460:A:C2	53:5:467:G:N1	2.39	0.91
53:5:1136:G:N1	53:5:1151:A:N6	2.19	0.91
53:5:1322:U:N3	53:5:1349:A:N7	2.19	0.91
12:H:13:LYS:HD3	12:H:112:VAL:HG13	1.51	0.91
23:S:10:ARG:NH1	53:5:92:G:N7	2.19	0.91

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:f:5:LEU:HG	30:f:6:LYS:N	1.86	0.91
51:3:496:A:N6	51:3:505:G:N3	2.19	0.91
51:3:1747:G:N2	51:3:1752:A:N7	2.17	0.91
53:5:940:G:H1	53:5:1211:A:H61	1.13	0.91
51:3:2849:G:H1	51:3:2875:U:H3	1.14	0.91
51:3:2530:U:H3	51:3:2551:G:H1	0.91	0.91
53:5:446:A:H3'	53:5:447:G:H8	1.35	0.91
51:3:1387:A:N6	51:3:1400:U:O2	2.04	0.90
53:5:22:G:N2	53:5:908:A:N7	2.17	0.90
53:5:333:U:H2'	53:5:334:A:H8	1.36	0.90
48:x:14:PHE:HB3	48:x:23:PHE:HB3	1.50	0.90
53:5:599:G:N2	53:5:634:U:O2	2.03	0.90
53:5:961:G:H2'	53:5:962:G:C8	2.05	0.90
54:6:23:G:N7	54:6:47:G:N2	2.18	0.90
20:P:4:ASN:HB2	20:P:6:ARG:HH12	1.36	0.90
51:3:418:G:N2	51:3:430:U:O2	2.05	0.90
29:e:110:LEU:HD12	29:e:155:ARG:HD2	1.53	0.90
37:m:11:SER:HA	37:m:14:ARG:HD2	1.53	0.90
51:3:887:A:N1	51:3:963:U:N3	2.19	0.90
51:3:1939:A:H3'	51:3:1940:G:H8	1.34	0.90
53:5:499:U:C2	53:5:542:G:N1	2.39	0.90
11:G:68:ARG:HG2	53:5:650:A:H61	1.36	0.90
46:v:56:ARG:NH2	51:3:436:G:N7	2.19	0.90
51:3:2409:U:H3	51:3:2423:G:H1	0.94	0.90
51:3:641:U:O2	51:3:657:A:N7	2.04	0.90
53:5:1002:A:C5	53:5:1019:G:C2	2.60	0.90
51:3:247:U:O2	51:3:259:A:C6	2.25	0.90
51:3:1815:U:HO2'	51:3:1816:A:H8	0.97	0.90
34:j:87:ILE:HA	34:j:93:PRO:HA	1.52	0.90
53:5:1237:G:H1	53:5:1248:U:H3	1.15	0.90
5:A:85:VAL:HB	5:A:178:VAL:HA	1.51	0.89
51:3:305:U:O2	51:3:399:G:N1	2.04	0.89
53:5:255:G:H3'	53:5:256:G:H8	1.35	0.89
53:5:304:U:H2'	53:5:305:A:H8	1.35	0.89
9:E:104:LYS:HA	9:E:107:LEU:HD23	1.52	0.89
35:k:64:LYS:HB2	51:3:2402:C:H5''	1.54	0.89
51:3:1554:A:N7	51:3:1576:G:N2	2.19	0.89
53:5:1142:G:N2	53:5:1145:A:N7	2.19	0.89
13:I:65:LYS:HB2	53:5:967:C:H4'	1.54	0.89
30:f:4:ILE:HD11	30:f:42:LYS:HG2	1.52	0.89
53:5:778:A:C6	53:5:798:U:N3	2.39	0.89

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:o:104:MET:HA	39:o:107:ARG:HB2	1.54	0.89
51:3:1868:A:H2'	51:3:1869:G:H8	1.37	0.89
4:9:34:THR:HA	4:9:45:THR:HG23	1.55	0.89
9:E:150:GLN:O	11:G:56:ASN:ND2	2.06	0.89
15:K:96:ARG:HE	15:K:109:HIS:HB3	1.38	0.89
20:P:59:ASP:HB3	20:P:83:ARG:HH11	1.36	0.89
53:5:455:U:H3	53:5:472:G:H1	1.20	0.89
51:3:268:C:H4'	51:3:465:A:H1'	1.54	0.89
51:3:1803:U:O2	51:3:1830:G:N2	2.06	0.89
53:5:499:U:N3	53:5:542:G:N1	2.19	0.89
51:3:1746:U:H3	51:3:1753:G:H1	0.91	0.89
51:3:137:U:O2	51:3:146:G:C2	2.26	0.89
53:5:778:A:C5	53:5:798:U:N3	2.41	0.89
53:5:1304:U:H3'	53:5:1305:G:H8	1.37	0.89
8:D:185:ARG:NH2	53:5:22:G:N7	2.19	0.89
51:3:900:G:N2	51:3:903:A:N6	2.13	0.89
53:5:20:C:O2	53:5:911:G:N2	2.06	0.89
53:5:134:G:O6	53:5:160:A:N1	2.06	0.89
26:b:125:ARG:HD2	26:b:166:SER:HA	1.55	0.89
51:3:2098:U:O2	51:3:2236:G:N2	2.05	0.89
53:5:778:A:N6	53:5:798:U:O2	2.05	0.89
53:5:1133:A:N1	53:5:1152:G:N2	2.21	0.89
25:a:43:LYS:HB3	25:a:61:ARG:HH21	1.36	0.88
51:3:1447:A:N6	51:3:1612:U:O2	2.05	0.88
23:S:64:ARG:HH22	23:S:67:ARG:HH11	1.21	0.88
30:f:5:LEU:CG	30:f:6:LYS:H	1.87	0.88
51:3:512:G:H1'	51:3:516:A:H61	1.38	0.88
51:3:2689:C:O2	51:3:2733:A:N6	2.07	0.88
30:f:5:LEU:HD11	30:f:34:LYS:CB	1.82	0.88
51:3:2200:U:H3'	51:3:2201:G:H8	1.37	0.88
51:3:675:U:H3	51:3:685:G:H1	0.96	0.88
51:3:1788:A:H4'	51:3:1789:C:H5''	1.55	0.88
51:3:2299:U:H3	51:3:2349:G:H1	0.92	0.88
53:5:949:G:N1	53:5:1201:C:N3	2.21	0.88
53:5:1396:U:O2	53:5:1454:G:N1	2.05	0.88
51:3:313:G:N2	51:3:394:C:O2	2.06	0.88
51:3:2458:A:N6	51:3:2509:C:C2	2.41	0.88
7:C:97:LEU:HD21	7:C:134:ILE:HB	1.56	0.88
51:3:2663:G:HO2'	51:3:2672:G:H1	0.88	0.88
51:3:499:G:N2	51:3:502:A:OP2	2.07	0.88
51:3:1200:U:C2	51:3:1215:G:O6	2.27	0.88

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:3:2383:G:N2	51:3:2386:A:OP2	2.05	0.88
44:t:7:GLY:H	44:t:24:VAL:HG13	1.38	0.88
51:3:1385:U:H3	51:3:1402:G:H1	1.21	0.88
51:3:1871:U:H3	51:3:1885:G:H1	1.08	0.88
52:4:93:U:H2'	52:4:94:A:C8	2.09	0.88
53:5:434:U:N3	53:5:493:A:H8	1.72	0.88
54:7:27:A:N6	54:7:45:G:N1	2.20	0.88
51:3:549:A:H1'	51:3:615:G:H5'	1.56	0.87
53:5:118:C:N3	53:5:226:G:N1	2.22	0.87
51:3:2729:A:H4'	51:3:2878:G:H5'	1.55	0.87
51:3:2756:A:N7	51:3:2762:U:C2	2.42	0.87
53:5:450:U:H3'	53:5:451:G:H8	1.40	0.87
16:L:105:ASN:ND2	53:5:944:A:N7	2.22	0.87
51:3:29:G:H1	51:3:547:G:HO2'	1.12	0.87
51:3:2002:U:H3'	51:3:2003:C:H2'	1.53	0.87
53:5:460:A:H2	53:5:467:G:N1	1.70	0.87
30:f:5:LEU:HD22	30:f:20:ASP:OD1	1.73	0.87
51:3:818:A:H4'	51:3:2596:A:H4'	1.56	0.87
51:3:1677:G:H2'	51:3:1678:U:C6	2.10	0.87
51:3:2089:A:H3'	51:3:2090:G:H8	1.39	0.87
53:5:368:C:H42	53:5:385:A:N6	1.71	0.87
53:5:778:A:C6	53:5:798:U:O2	2.26	0.87
9:E:1:MET:HB3	9:E:89:ASN:HD21	1.38	0.87
28:d:37:ASN:ND2	51:3:2320:U:O2	2.07	0.87
54:6:5:C:O2	54:6:70:G:N2	2.07	0.87
51:3:1649:C:OP2	51:3:1651:C:N4	2.06	0.87
54:7:27:A:H61	54:7:45:G:H1	1.23	0.87
51:3:173:C:H2'	51:3:174:A:C8	2.10	0.87
53:5:42:G:N1	53:5:397:C:N3	2.22	0.87
53:5:606:A:H3'	53:5:607:A:H8	1.40	0.87
38:n:81:LEU:O	38:n:85:LYS:N	2.07	0.87
51:3:1252:C:N3	51:3:1257:G:N1	2.23	0.87
25:a:154:PRO:O	51:3:2212:U:O2'	1.93	0.86
51:3:47:G:N2	51:3:184:A:N6	2.01	0.86
30:f:2:LYS:HD2	30:f:36:ALA:CB	2.01	0.86
51:3:1925:A:N3	51:3:1926:A:N6	2.22	0.86
51:3:2173:G:H3'	51:3:2174:G:H8	1.38	0.86
22:R:79:ASN:HD21	53:5:953:A:H62	1.19	0.86
34:j:98:ILE:HB	34:j:119:VAL:HG23	1.57	0.86
53:5:365:U:O2	53:5:388:G:N2	2.08	0.86
51:3:720:A:H5''	51:3:722:C:H41	1.39	0.86

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:5:253:G:N2	53:5:265:U:O2	2.07	0.86
51:3:137:U:O2	51:3:146:G:N2	2.08	0.86
51:3:1858:U:H3	51:3:1898:G:H1	0.87	0.86
51:3:2234:C:H3'	51:3:2235:A:H8	1.40	0.86
54:6:16:G:N2	54:6:49:C:C2	2.44	0.86
53:5:573:G:H4'	53:5:574:C:H5''	1.56	0.86
25:a:253:ALA:HB1	25:a:261:ARG:HD2	1.58	0.86
28:d:9:GLN:O	28:d:14:LYS:NZ	2.09	0.86
51:3:2646:G:O2'	51:3:2647:A:N7	2.08	0.86
53:5:492:G:N2	53:5:495:U:O4	2.08	0.86
54:6:27:A:N6	54:6:45:G:C6	2.43	0.86
54:6:50:G:H2'	54:6:51:G:H8	1.39	0.86
51:3:1844:C:H2'	51:3:1846:A:H62	1.40	0.86
51:3:1919:A:N7	51:3:1924:U:O2	2.09	0.86
53:5:1289:U:HO2'	53:5:1334:A:HO2'	1.21	0.86
53:5:240:U:O4	53:5:887:C:N3	2.09	0.85
53:5:1136:G:N1	53:5:1151:A:C6	2.44	0.85
54:6:7:U:O2	54:6:68:G:N2	2.09	0.85
9:E:11:GLY:H	9:E:52:GLN:HB3	1.40	0.85
30:f:69:LYS:HZ2	30:f:137:VAL:H	1.25	0.85
37:m:50:THR:HA	37:m:53:LYS:HE2	1.57	0.85
51:3:742:G:N2	51:3:759:U:O2	2.08	0.85
51:3:1093:U:O2	51:3:1115:G:N2	2.09	0.85
52:4:9:C:O2	52:4:100:G:N1	2.09	0.85
51:3:511:U:C4	51:3:515:A:C8	2.65	0.85
51:3:854:A:OP2	51:3:1218:G:N2	2.08	0.85
51:3:2862:U:H2'	51:3:2863:G:C4	2.09	0.85
52:4:69:C:N3	52:4:95:G:N1	2.24	0.85
49:y:2:ALA:N	51:3:2585:A:N3	2.24	0.85
51:3:989:G:H1	51:3:1000:U:H3	1.24	0.85
51:3:2291:U:O2	51:3:2333:G:O6	1.94	0.85
29:e:93:VAL:O	29:e:163:LYS:HA	1.76	0.85
51:3:1552:C:O2	51:3:1579:G:N2	2.08	0.85
51:3:1938:U:H2'	51:3:1939:A:H8	1.38	0.85
53:5:580:C:O2	53:5:756:A:N6	2.08	0.85
4:9:244:GLU:HA	4:9:252:ARG:O	1.76	0.85
19:O:55:LYS:O	53:5:223:G:N2	2.09	0.85
51:3:2820:G:N3	51:3:2887:A:O2'	2.08	0.85
53:5:104:A:N6	53:5:283:U:O2	2.10	0.85
53:5:582:G:H1	53:5:754:U:H3	1.22	0.85
29:e:95:VAL:HB	29:e:163:LYS:HZ3	1.42	0.85

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:3:418:G:H1	51:3:430:U:H3	1.23	0.85
51:3:1496:A:H3'	51:3:1497:A:H8	1.40	0.85
53:5:983:G:N2	53:5:1192:C:O2	2.10	0.85
53:5:1136:G:C6	53:5:1151:A:N6	2.44	0.85
53:5:350:G:N2	53:5:384:G:O2'	2.07	0.85
5:A:87:THR:HA	5:A:93:LYS:HD2	1.59	0.85
24:T:43:ARG:NH2	53:5:1503:U:OP2	2.10	0.85
51:3:2206:A:N3	51:3:2233:A:N6	2.25	0.85
53:5:1406:U:H3	53:5:1444:G:H1	1.24	0.85
30:f:11:ASN:ND2	30:f:27:ILE:HD12	1.91	0.85
51:3:990:G:N2	51:3:999:U:O2	2.10	0.85
12:H:54:LEU:HB3	12:H:60:LYS:H	1.42	0.84
44:t:90:LYS:HG3	44:t:105:LYS:HG2	1.58	0.84
51:3:1070:U:O2	51:3:1155:G:N2	2.08	0.84
51:3:1200:U:O2	51:3:1215:G:C6	2.30	0.84
51:3:2099:U:O4	51:3:2235:A:N6	2.10	0.84
53:5:443:G:H3'	53:5:444:G:H8	1.41	0.84
53:5:1002:A:N6	53:5:1019:G:C5	2.44	0.84
53:5:1321:G:N2	53:5:1349:A:O5'	2.09	0.84
54:7:27:A:N1	54:7:45:G:N2	2.25	0.84
51:3:1434:U:O4	51:3:1630:A:N6	2.09	0.84
10:F:82:SER:HB3	53:5:690:G:H21	1.41	0.84
34:j:68:GLY:HA3	34:j:78:LYS:HA	1.56	0.84
51:3:198:G:H2'	51:3:199:A:C8	2.12	0.84
51:3:616:G:N1	51:3:1287:C:N3	2.24	0.84
51:3:1344:U:H2'	51:3:1345:G:H8	1.41	0.84
51:3:2359:G:N3	51:3:2374:A:N7	2.24	0.84
53:5:1425:A:O2'	53:5:1428:A:N6	2.09	0.84
51:3:61:U:H3	51:3:70:G:H1	1.18	0.84
51:3:413:G:H1	51:3:435:U:H3	1.23	0.84
51:3:2156:G:H2'	51:3:2157:A:H8	1.41	0.84
53:5:381:C:H2'	53:5:382:U:C6	2.11	0.84
54:7:54:G:N1	54:7:62:C:N3	2.24	0.84
29:e:173:VAL:O	29:e:174:ARG:NH2	2.11	0.84
51:3:2376:C:H2'	51:3:2377:A:H8	1.40	0.84
52:4:69:C:O2	52:4:95:G:N2	2.10	0.84
53:5:671:G:N1	53:5:713:A:C6	2.46	0.84
53:5:880:G:N2	53:5:905:U:O2	2.10	0.84
15:K:55:PRO:HG3	15:K:63:ARG:HE	1.42	0.84
38:n:101:ARG:NH2	52:4:47:C:OP2	2.11	0.84
51:3:774:A:N3	51:3:775:C:N4	2.24	0.84

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:3:1734:A:N6	53:5:1450:C:OP1	2.10	0.84
51:3:2752:G:N1	51:3:2768:U:N3	2.25	0.84
38:n:4:ARG:HA	38:n:7:GLN:HB3	1.59	0.84
51:3:605:A:H61	51:3:2036:G:H21	1.25	0.84
51:3:1297:U:H2'	51:3:1298:A:H8	1.43	0.84
51:3:1698:A:H61	51:3:2003:C:H42	1.20	0.84
51:3:224:G:H1	51:3:463:U:H3'	1.41	0.84
51:3:2752:G:N2	51:3:2768:U:O2	2.11	0.84
53:5:499:U:O2	53:5:542:G:N2	2.10	0.84
38:n:97:LYS:HB3	52:4:46:C:H5'	1.56	0.84
51:3:748:G:H21	51:3:753:A:N6	1.76	0.84
51:3:880:C:O2'	51:3:881:A:OP2	1.95	0.84
51:3:1242:G:N2	51:3:1267:A:C8	2.46	0.84
51:3:1245:G:H1	51:3:1264:U:H3	1.25	0.84
51:3:1725:G:O6	51:3:1731:G:N2	2.11	0.84
51:3:2748:A:OP2	51:3:2771:G:N1	2.10	0.84
53:5:460:A:H2	53:5:467:G:H1	0.88	0.84
5:A:30:VAL:HG12	5:A:56:PHE:H	1.43	0.84
8:D:96:ASN:O	8:D:98:LYS:NZ	2.09	0.84
51:3:243:U:N3	51:3:262:G:N1	2.25	0.84
51:3:712:A:H61	51:3:835:U:H3	1.23	0.84
51:3:1485:A:H4'	51:3:1486:U:C4	2.13	0.84
47:w:85:ASN:HA	47:w:88:LYS:HE2	1.57	0.83
51:3:1503:A:H3'	51:3:1504:G:H8	1.43	0.83
51:3:2458:A:N6	51:3:2509:C:O2	2.10	0.83
51:3:2645:U:H3'	51:3:2646:G:H8	1.40	0.83
53:5:919:C:N3	53:5:1367:G:N1	2.25	0.83
53:5:950:C:N3	53:5:1200:G:N1	2.26	0.83
53:5:966:A:OP2	53:5:1206:G:N2	2.10	0.83
53:5:996:U:O2	53:5:1030:G:N1	2.10	0.83
53:5:1055:G:O6	53:5:1167:C:N4	2.09	0.83
51:3:1310:U:N3	51:3:1314:A:N6	2.16	0.83
51:3:2849:G:N2	51:3:2875:U:O2	2.11	0.83
53:5:134:G:N1	53:5:160:A:C2	2.44	0.83
53:5:1136:G:O6	53:5:1157:G:O6	1.95	0.83
7:C:38:HIS:NE2	53:5:509:C:O2	2.10	0.83
14:J:32:GLY:O	53:5:704:U:O2'	1.96	0.83
39:o:98:ARG:NH1	51:3:2852:G:OP1	2.11	0.83
51:3:410:G:N2	51:3:411:U:O4	2.12	0.83
51:3:764:G:H5'	51:3:765:A:H5''	1.59	0.83
51:3:2151:G:N2	51:3:2155:G:O6	2.11	0.83

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:4:6:U:H2'	52:4:7:G:H8	1.43	0.83
53:5:446:A:H3'	53:5:447:G:C8	2.13	0.83
53:5:949:G:O6	53:5:1201:C:N4	2.09	0.83
30:f:4:ILE:HD11	30:f:42:LYS:CG	2.08	0.83
51:3:1166:G:HO2'	51:3:2032:G:HO2'	1.27	0.83
53:5:19:C:O2	53:5:912:G:N2	2.10	0.83
25:a:101:TYR:HB2	25:a:105:ALA:HB3	1.58	0.83
29:e:141:LYS:HE3	51:3:2754:U:H5''	1.60	0.83
51:3:1494:U:O2	51:3:1550:G:N2	2.11	0.83
52:4:21:G:H2'	52:4:22:G:C8	2.14	0.83
27:c:102:LYS:NZ	51:3:693:U:O2'	2.10	0.83
29:e:70:THR:OG1	51:3:2755:G:O2'	1.93	0.83
51:3:656:G:O2'	51:3:658:G:N7	2.12	0.83
51:3:1469:C:N4	51:3:1583:G:O6	2.11	0.83
51:3:1508:G:N3	51:3:1534:A:N6	2.26	0.83
53:5:97:G:H21	53:5:350:G:H5''	1.42	0.83
9:E:14:SER:H	9:E:17:GLN:HE21	1.25	0.83
51:3:1344:U:H2'	51:3:1345:G:C8	2.14	0.83
53:5:600:G:N2	53:5:633:U:O2	2.12	0.83
29:e:90:LEU:O	29:e:134:ILE:HB	1.79	0.83
30:f:11:ASN:CG	30:f:27:ILE:HD12	2.02	0.83
35:k:5:GLN:NE2	51:3:1234:U:O2'	2.12	0.83
51:3:449:C:N4	51:3:2418:G:O6	2.12	0.83
51:3:2123:A:OP1	51:3:2174:G:N2	2.11	0.83
53:5:47:G:N1	53:5:391:C:N3	2.25	0.83
8:D:138:HIS:O	8:D:202:GLN:NE2	2.12	0.83
25:a:207:ASP:HA	25:a:210:LEU:HD13	1.59	0.83
26:b:56:THR:HA	26:b:78:THR:HA	1.60	0.83
51:3:341:G:N1	51:3:344:A:OP2	2.11	0.83
51:3:1940:G:H1	51:3:1974:U:H3	1.24	0.83
51:3:2299:U:O2	51:3:2349:G:N2	2.09	0.83
51:3:2400:A:OP2	51:3:2432:C:N4	2.11	0.83
51:3:2481:U:OP1	51:3:2483:C:N4	2.12	0.83
51:3:2696:G:N1	51:3:2728:U:OP2	2.12	0.83
52:4:29:C:O2	52:4:51:A:N6	2.12	0.83
53:5:1307:A:H3'	53:5:1308:G:H8	1.43	0.83
53:5:1389:U:O2	53:5:1461:G:O6	1.96	0.83
5:A:47:PRO:O	5:A:49:ARG:NH2	2.12	0.83
7:C:111:ARG:HG3	53:5:403:A:H5''	1.61	0.83
8:D:79:THR:O	53:5:916:U:O2'	1.96	0.83
51:3:80:U:O2	51:3:109:G:N2	2.10	0.83

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:3:165:U:O2	51:3:167:A:N6	2.12	0.83
51:3:1484:G:N2	51:3:2711:C:O2	2.11	0.83
28:d:67:ALA:HA	28:d:87:CYS:HA	1.58	0.82
51:3:1343:C:O2'	51:3:1420:A:N3	2.11	0.82
51:3:2275:A:N6	51:3:2280:U:C2	2.47	0.82
53:5:412:G:N2	53:5:424:U:O2	2.12	0.82
53:5:688:G:H22	53:5:692:A:H5''	1.44	0.82
51:3:1398:C:H3'	51:3:1399:G:H8	1.44	0.82
51:3:1468:U:O4	51:3:1584:U:N3	2.12	0.82
53:5:1366:U:H2'	53:5:1367:G:C8	2.15	0.82
27:c:101:LEU:HB3	51:3:695:G:H5''	1.61	0.82
51:3:35:U:O2'	51:3:482:G:N2	2.12	0.82
51:3:770:A:H1'	51:3:1668:G:H21	1.45	0.82
51:3:1860:A:H2'	51:3:1861:A:C8	2.14	0.82
51:3:2689:C:N3	51:3:2733:A:N7	2.27	0.82
53:5:1236:A:H3'	53:5:1237:G:H8	1.45	0.82
1:0:11:LYS:NZ	1:0:15:THR:OG1	2.13	0.82
50:z:34:LEU:O	50:z:46:VAL:HA	1.80	0.82
51:3:904:C:N4	51:3:949:C:O2	2.12	0.82
51:3:1787:A:H3'	51:3:1788:A:H2'	1.61	0.82
54:6:19:G:N2	54:6:61:U:OP2	2.12	0.82
15:K:43:LYS:NZ	53:5:359:A:N7	2.26	0.82
35:k:39:GLN:NE2	51:3:200:A:N7	2.26	0.82
51:3:17:G:N2	51:3:560:U:O2	2.13	0.82
51:3:2570:U:H2'	51:3:2574:A:H62	1.41	0.82
53:5:925:C:O2	53:5:1362:G:N2	2.13	0.82
12:H:108:ARG:NH2	12:H:109:ASP:OD1	2.12	0.82
51:3:2536:U:H3	51:3:2543:G:H1	1.24	0.82
53:5:774:A:H3'	53:5:775:G:H8	1.44	0.82
53:5:988:G:N1	53:5:1036:C:N3	2.28	0.82
7:C:9:LYS:HA	7:C:12:ARG:HD2	1.62	0.82
51:3:85:U:O2	51:3:104:A:N7	2.12	0.82
51:3:742:G:H1	51:3:759:U:H3	0.83	0.82
51:3:2058:G:N2	51:3:2059:G:O6	2.13	0.82
53:5:1405:U:O2	53:5:1445:G:N2	2.12	0.82
24:T:38:LYS:HD3	24:T:41:ARG:HE	1.43	0.82
51:3:1086:G:N2	51:3:1143:U:O2	2.10	0.82
51:3:1599:C:O2'	51:3:1601:A:N7	2.12	0.82
51:3:2059:G:O6	51:3:2625:U:O4	1.98	0.82
53:5:317:A:N1	53:5:328:G:O6	2.13	0.82
51:3:411:U:H3	51:3:437:A:H8	1.20	0.82

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:3:677:U:N3	51:3:683:G:O6	2.13	0.82
51:3:847:C:O2	51:3:1256:A:O2'	1.98	0.82
51:3:852:C:H3'	51:3:853:G:H8	1.44	0.82
51:3:1076:U:O2	51:3:1150:U:N3	2.13	0.82
51:3:1541:A:HO2'	51:3:1590:U:HO2'	1.15	0.82
51:3:1785:U:O2	51:3:1792:A:C5	2.33	0.82
51:3:2035:U:O2	51:3:2040:A:N7	2.13	0.82
51:3:2100:G:H2'	51:3:2101:A:H8	1.45	0.82
51:3:2367:C:H3'	51:3:2368:A:H8	1.44	0.82
52:4:75:U:O2	52:4:89:A:N6	2.10	0.82
48:x:19:CYS:HB2	48:x:42:CYS:HB2	1.61	0.82
51:3:312:U:N3	51:3:395:U:O2	2.10	0.82
51:3:1529:U:H2'	51:3:1530:G:H8	1.42	0.82
53:5:317:A:C2	53:5:328:G:N1	2.48	0.82
21:Q:59:ALA:HA	21:Q:62:ARG:HE	1.42	0.81
26:b:18:THR:HA	26:b:222:LEU:HA	1.62	0.81
51:3:1504:G:N1	51:3:1539:U:O2	2.13	0.81
51:3:2481:U:OP1	51:3:2537:G:N2	2.13	0.81
53:5:66:A:O2'	53:5:378:A:N1	2.13	0.81
53:5:778:A:N7	53:5:798:U:C4	2.48	0.81
53:5:779:A:OP1	53:5:1496:G:N2	2.13	0.81
3:2:14:CYS:CA	3:2:26:ILE:O	2.23	0.81
4:9:308:GLU:HA	4:9:358:SER:HA	1.61	0.81
15:K:12:ARG:NH2	53:5:560:U:O2	2.13	0.81
25:a:35:LYS:NZ	51:3:1454:G:N7	2.27	0.81
25:a:84:LYS:HE3	25:a:100:THR:HB	1.60	0.81
32:h:15:LEU:HA	32:h:50:MET:HA	1.62	0.81
51:3:914:G:H22	51:3:936:G:H2'	1.45	0.81
51:3:1393:A:H3'	51:3:1394:A:H8	1.44	0.81
17:M:47:LEU:HG	17:M:53:ILE:HD11	1.61	0.81
33:i:26:LEU:HG	33:i:31:LEU:HD22	1.61	0.81
46:v:53:ARG:NH1	51:3:435:U:OP2	2.13	0.81
51:3:341:G:N2	51:3:364:A:N6	2.28	0.81
51:3:638:A:N6	51:3:660:U:O4	2.11	0.81
51:3:872:C:O2	51:3:978:G:N1	2.12	0.81
51:3:1057:G:H1	51:3:1175:C:H2'	1.45	0.81
51:3:2175:U:O2	51:3:2179:A:N7	2.13	0.81
51:3:2453:G:N2	51:3:2457:U:O4	2.13	0.81
53:5:720:U:O2'	53:5:829:G:N2	2.13	0.81
53:5:1123:G:O2'	53:5:1124:U:O5'	1.98	0.81
53:5:1462:G:H2'	53:5:1463:A:H8	1.45	0.81

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:3:1965:C:H2'	51:3:1966:G:H8	1.45	0.81
51:3:2303:U:O2	51:3:2345:G:N2	2.11	0.81
53:5:42:G:N2	53:5:397:C:O2	2.10	0.81
53:5:47:G:O6	53:5:391:C:N4	2.11	0.81
53:5:444:G:N2	53:5:483:U:OP2	2.13	0.81
54:6:36:A:H2'	54:6:37:A:C8	2.16	0.81
7:C:134:ILE:HG23	53:5:618:U:H5'	1.63	0.81
12:H:71:GLY:O	12:H:77:GLN:NE2	2.13	0.81
46:v:12:PRO:HA	46:v:29:TRP:O	1.80	0.81
51:3:2120:G:O6	51:3:2178:A:N6	2.13	0.81
53:5:317:A:N1	53:5:328:G:C6	2.48	0.81
53:5:945:U:H2'	53:5:946:G:C8	2.16	0.81
5:A:126:SER:HA	5:A:129:LYS:HE3	1.63	0.81
51:3:411:U:O2	51:3:437:A:N7	2.14	0.81
53:5:1002:A:C6	53:5:1019:G:C4	2.69	0.81
23:S:12:ARG:O	23:S:16:LYS:NZ	2.13	0.81
29:e:142:GLU:OE2	51:3:2767:G:N2	2.12	0.81
37:m:39:LYS:O	37:m:43:LYS:NZ	2.14	0.81
51:3:47:G:H5''	51:3:48:G:H5'	1.63	0.81
51:3:85:U:O4	51:3:103:G:O2'	1.99	0.81
51:3:2331:G:N2	51:3:2340:U:O2	2.13	0.81
16:L:65:ILE:O	16:L:69:LEU:N	2.13	0.81
25:a:219:ASN:O	25:a:223:GLY:N	2.14	0.81
51:3:1257:G:OP1	51:3:1280:G:N2	2.13	0.81
51:3:2177:G:H2'	51:3:2178:A:C4	2.16	0.81
53:5:245:U:O2	53:5:271:G:N2	2.13	0.81
53:5:1214:A:H2'	53:5:1272:C:H41	1.45	0.81
35:k:4:ASN:N	35:k:7:LYS:O	2.14	0.81
51:3:192:U:H3	51:3:212:G:H1	1.28	0.81
51:3:1058:U:OP2	51:3:1060:G:O2'	1.98	0.81
53:5:106:C:O2	53:5:108:C:N4	2.14	0.81
53:5:680:G:N2	53:5:704:U:O2	2.14	0.81
53:5:1101:A:OP2	53:5:1102:A:N6	2.12	0.81
51:3:203:A:N6	51:3:2442:A:OP2	2.13	0.81
51:3:515:A:H1'	51:3:517:G:H5'	1.63	0.81
51:3:853:G:H3'	51:3:1218:G:H1	1.46	0.81
53:5:144:U:O2	53:5:149:G:N1	2.12	0.81
14:J:121:ARG:NH1	53:5:792:C:OP1	2.13	0.80
16:L:98:ARG:NE	53:5:1283:G:OP2	2.13	0.80
46:v:56:ARG:NH2	51:3:436:G:OP2	2.14	0.80
51:3:192:U:O2	51:3:212:G:N2	2.14	0.80

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:5:460:A:N1	53:5:467:G:O6	2.14	0.80
51:3:207:C:H3'	51:3:208:A:H8	1.45	0.80
51:3:1327:G:O2'	51:3:1674:A:N6	2.13	0.80
51:3:1940:G:N2	51:3:1974:U:O2	2.14	0.80
53:5:55:C:H2'	53:5:348:C:H41	1.43	0.80
53:5:1049:G:N2	53:5:1174:U:O2	2.13	0.80
53:5:1413:G:N1	53:5:1438:U:N3	2.29	0.80
12:H:11:ARG:NH2	53:5:1125:C:OP1	2.14	0.80
51:3:511:U:O2	51:3:515:A:C6	2.34	0.80
51:3:549:A:N3	51:3:614:C:O2'	2.14	0.80
51:3:618:G:H3'	51:3:1281:A:H61	1.44	0.80
51:3:1016:A:H2'	51:3:1017:A:C4	2.17	0.80
53:5:7:U:O2'	53:5:8:G:N7	2.14	0.80
53:5:56:A:OP2	53:5:348:C:N4	2.15	0.80
53:5:1487:U:H3	53:5:1498:G:H1	1.30	0.80
34:j:67:LYS:NZ	51:3:1698:A:N3	2.30	0.80
51:3:1027:U:O4	51:3:1198:G:O6	1.99	0.80
51:3:1558:A:OP1	51:3:1570:A:N6	2.13	0.80
51:3:2303:U:H3	51:3:2345:G:H1	0.85	0.80
54:6:27:A:N6	54:6:45:G:N1	2.28	0.80
25:a:251:ARG:HH21	25:a:261:ARG:HH22	1.27	0.80
51:3:251:G:H22	51:3:254:G:H3'	1.45	0.80
53:5:92:G:OP1	53:5:321:A:N6	2.13	0.80
53:5:166:U:O2	53:5:197:A:N6	2.13	0.80
53:5:453:C:H2'	53:5:454:U:C6	2.16	0.80
2:1:36:LYS:NZ	51:3:2359:G:O6	2.14	0.80
25:a:50:GLN:NE2	51:3:1813:C:O2	2.13	0.80
51:3:1218:G:N2	51:3:1219:U:O4	2.13	0.80
51:3:2793:U:H2'	51:3:2794:U:H6	1.46	0.80
53:5:499:U:N3	53:5:542:G:C6	2.50	0.80
53:5:563:U:H3'	53:5:564:G:H2'	1.64	0.80
32:h:105:ALA:O	32:h:109:LEU:N	2.15	0.80
51:3:411:U:C2	51:3:437:A:N7	2.50	0.80
51:3:1456:C:N4	51:3:1604:A:OP2	2.14	0.80
51:3:1495:A:H2'	51:3:1496:A:C8	2.16	0.80
53:5:223:G:H3'	53:5:224:A:H8	1.47	0.80
53:5:411:A:N6	53:5:425:G:O6	2.11	0.80
53:5:1261:A:H2'	53:5:1262:A:H8	1.46	0.80
54:6:5:C:N3	54:6:70:G:N1	2.25	0.80
35:k:92:LYS:HA	35:k:125:HIS:H	1.47	0.80
51:3:247:U:C2	51:3:259:A:C5	2.69	0.80

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:3:2231:A:H3'	51:3:2232:G:H8	1.46	0.80
2:1:33:LYS:HE2	2:1:38:LYS:HG2	1.64	0.80
2:1:39:ARG:O	2:1:42:ARG:HG2	1.82	0.80
25:a:35:LYS:NZ	51:3:1455:A:O2'	2.15	0.80
51:3:101:C:H4'	51:3:103:G:C4	2.17	0.80
2:1:39:ARG:HA	2:1:42:ARG:HE	1.46	0.80
3:2:4:ARG:NH1	51:3:2475:C:OP1	2.11	0.80
51:3:694:U:H2'	51:3:695:G:H8	1.45	0.80
51:3:1418:U:H3	51:3:1423:A:H62	1.28	0.80
53:5:945:U:H2'	53:5:946:G:H8	1.46	0.80
27:c:32:GLN:HE21	35:k:11:LYS:HE2	1.47	0.79
30:f:5:LEU:HD11	30:f:34:LYS:HG2	0.81	0.79
51:3:1247:C:N4	51:3:1262:G:O6	2.15	0.79
51:3:2260:G:H22	54:7:76:C:H5'	1.46	0.79
51:3:2399:G:N1	51:3:2433:A:OP1	2.15	0.79
53:5:333:U:H2'	53:5:334:A:C8	2.17	0.79
53:5:702:U:H3'	53:5:703:A:H8	1.47	0.79
53:5:1321:G:N2	53:5:1322:U:O4	2.15	0.79
1:0:11:LYS:HA	1:0:14:LYS:HD2	1.63	0.79
43:s:33:PRO:HA	43:s:79:LYS:HD2	1.62	0.79
51:3:1295:A:H61	51:3:2020:A:H3'	1.44	0.79
51:3:1382:A:OP2	51:3:1405:G:N2	2.14	0.79
51:3:1470:C:N4	51:3:1582:G:O6	2.11	0.79
51:3:2100:G:H2'	51:3:2101:A:C8	2.17	0.79
10:F:149:ALA:HB1	14:J:52:THR:HG21	1.64	0.79
12:H:54:LEU:HD13	12:H:60:LYS:HA	1.65	0.79
15:K:64:LYS:HB2	15:K:80:ILE:HD12	1.63	0.79
22:R:48:THR:HG22	22:R:61:TYR:HB2	1.63	0.79
51:3:278:U:O2	51:3:291:G:N2	2.15	0.79
51:3:622:U:H2'	51:3:623:A:C8	2.16	0.79
51:3:1402:G:H3'	51:3:1403:G:H8	1.47	0.79
51:3:2756:A:H3'	51:3:2761:A:H61	1.46	0.79
53:5:459:C:O2	53:5:468:G:N2	2.15	0.79
51:3:629:G:H1	51:3:696:U:H3	0.84	0.79
51:3:1077:G:H22	51:3:1148:U:H2'	1.47	0.79
51:3:2669:G:H2'	51:3:2670:A:C8	2.18	0.79
51:3:2839:A:N6	51:3:2883:A:OP2	2.16	0.79
53:5:288:A:OP2	53:5:301:G:N1	2.15	0.79
53:5:508:A:H1'	53:5:541:C:H1'	1.62	0.79
53:5:950:C:O2	53:5:1200:G:N2	2.15	0.79
53:5:1043:U:O2	53:5:1181:G:C6	2.35	0.79

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:z:23:LYS:HE3	50:z:25:VAL:HG22	1.64	0.79
51:3:762:A:H3'	51:3:763:G:C8	2.17	0.79
51:3:2014:U:H5'	51:3:2827:A:H2	1.47	0.79
53:5:319:U:H2'	53:5:320:G:C4	2.16	0.79
53:5:1228:C:H2'	53:5:1229:A:C8	2.17	0.79
7:C:97:LEU:HD11	7:C:134:ILE:HG12	1.64	0.79
12:H:124:ARG:NH2	53:5:1320:A:OP1	2.13	0.79
25:a:180:VAL:N	25:a:192:PHE:O	2.15	0.79
51:3:488:G:N2	51:3:493:A:O2'	2.16	0.79
51:3:1170:C:N4	51:3:1173:G:OP2	2.15	0.79
51:3:2476:A:H2'	51:3:2484:A:C2	2.17	0.79
51:3:2764:U:H1'	51:3:2765:A:H5''	1.65	0.79
52:4:60:C:H2'	52:4:61:A:H8	1.48	0.79
52:4:64:G:N1	52:4:98:A:OP2	2.11	0.79
53:5:466:U:H3'	53:5:467:G:H8	1.47	0.79
53:5:833:G:N2	53:5:844:U:O2	2.14	0.79
51:3:13:C:H42	51:3:2637:A:H61	1.28	0.79
51:3:274:A:OP2	51:3:294:G:N1	2.15	0.79
51:3:627:U:H2'	51:3:628:A:C8	2.18	0.79
51:3:1455:A:N6	51:3:1605:A:OP2	2.14	0.79
51:3:1777:G:N2	51:3:1989:U:O2	2.15	0.79
4:9:63:ILE:O	4:9:91:ASN:ND2	2.16	0.79
9:E:146:THR:HB	11:G:2:ILE:HD11	1.65	0.79
9:E:148:LYS:HB3	11:G:59:VAL:H	1.47	0.79
50:z:11:CYS:HB3	50:z:16:GLU:H	1.48	0.79
51:3:627:U:H2'	51:3:628:A:H8	1.48	0.79
51:3:752:C:H3'	51:3:753:A:H8	1.46	0.79
51:3:827:G:N3	51:3:2079:G:O2'	2.16	0.79
51:3:1938:U:H2'	51:3:1939:A:C8	2.17	0.79
51:3:2041:C:H2'	51:3:2042:A:C8	2.18	0.79
51:3:2081:U:O2	51:3:2605:G:N2	2.16	0.79
54:6:50:G:H2'	54:6:51:G:C8	2.18	0.79
4:9:14:ASN:O	4:9:100:ASP:N	2.16	0.79
31:g:74:THR:HA	31:g:77:LYS:HB3	1.64	0.79
44:t:90:LYS:HB3	44:t:92:VAL:HG22	1.65	0.79
51:3:790:U:H2'	51:3:791:A:C8	2.18	0.79
51:3:961:U:H2'	51:3:962:U:H6	1.47	0.79
51:3:1460:G:H2'	51:3:1461:A:C8	2.18	0.79
51:3:2249:A:H2'	51:3:2250:G:C8	2.18	0.79
51:3:2514:U:O4	51:3:2618:C:N4	2.16	0.79
53:5:936:G:H1	53:5:1316:C:H42	1.31	0.79

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:H:108:ARG:NH1	12:H:111:ARG:O	2.16	0.79
13:I:17:GLU:O	13:I:102:VAL:HA	1.82	0.79
25:a:67:ARG:NH2	25:a:88:TYR:O	2.16	0.79
51:3:2856:G:H1	51:3:2869:U:H3	1.27	0.79
52:4:38:U:H3'	52:4:39:U:H4'	1.64	0.79
10:F:131:GLY:HA2	10:F:134:ILE:HB	1.64	0.78
23:S:34:ASN:O	23:S:38:GLU:N	2.14	0.78
40:p:32:LYS:HA	40:p:35:LYS:HD2	1.65	0.78
46:v:6:GLN:HE21	46:v:49:LEU:HB2	1.48	0.78
51:3:1107:C:N4	51:3:1133:A:OP2	2.16	0.78
51:3:2534:G:N2	51:3:2545:U:O2	2.15	0.78
52:4:11:A:H1'	52:4:13:G:H2'	1.63	0.78
53:5:644:U:H2'	53:5:645:A:H8	1.49	0.78
53:5:1002:A:N6	53:5:1019:G:N3	2.30	0.78
53:5:1325:U:O2	53:5:1346:G:O6	2.01	0.78
4:9:98:GLN:O	4:9:231:ARG:NH1	2.16	0.78
7:C:93:LEU:O	7:C:99:ASN:ND2	2.17	0.78
22:R:34:TRP:HE3	53:5:1194:A:H1'	1.48	0.78
25:a:222:ARG:NH2	51:3:1601:A:OP2	2.15	0.78
28:d:118:SER:HA	28:d:121:SER:HB3	1.64	0.78
51:3:199:A:H61	51:3:202:C:H3'	1.46	0.78
51:3:1348:C:O2'	51:3:1358:C:N4	2.16	0.78
51:3:1981:U:H2'	51:3:1982:G:C8	2.18	0.78
51:3:2400:A:N7	51:3:2432:C:N3	2.29	0.78
52:4:75:U:N3	52:4:89:A:N7	2.32	0.78
23:S:57:LYS:NZ	53:5:162:C:OP1	2.17	0.78
25:a:57:HIS:HB3	25:a:227:THR:HB	1.64	0.78
26:b:41:THR:O	26:b:45:ASP:N	2.15	0.78
34:j:23:LYS:HB3	34:j:40:VAL:HB	1.63	0.78
38:n:8:ARG:HA	38:n:11:ARG:HE	1.48	0.78
53:5:118:C:O2	53:5:226:G:N2	2.11	0.78
53:5:1002:A:C6	53:5:1019:G:C2	2.70	0.78
4:9:85:HIS:HB3	4:9:88:TYR:HB2	1.64	0.78
13:I:18:SER:OG	13:I:20:ASP:O	2.02	0.78
51:3:1244:A:N6	51:3:1265:G:H21	1.81	0.78
15:K:41:PRO:HB3	53:5:551:A:H1'	1.65	0.78
22:R:78:ARG:NH2	53:5:1197:G:OP1	2.17	0.78
24:T:38:LYS:NZ	53:5:1500:G:OP1	2.13	0.78
42:r:128:ARG:HH11	51:3:1262:G:H1'	1.47	0.78
44:t:33:GLN:HB3	44:t:68:PRO:HB2	1.65	0.78
49:y:13:ARG:NH2	49:y:14:ASP:OD1	2.15	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:3:278:U:H3	51:3:291:G:H1	1.30	0.78
51:3:2667:G:H2'	51:3:2668:A:H2'	1.66	0.78
53:5:520:C:H1'	53:5:534:C:H5''	1.66	0.78
53:5:604:U:C2	53:5:630:G:C2	2.71	0.78
27:c:98:ASN:ND2	51:3:624:U:OP1	2.17	0.78
51:3:1805:U:O2'	51:3:1809:A:N3	2.16	0.78
51:3:2551:G:H21	51:3:2654:U:H5''	1.48	0.78
53:5:621:C:H2'	53:5:622:A:C8	2.18	0.78
53:5:825:A:N1	53:5:852:G:O2'	2.16	0.78
53:5:977:U:O2	53:5:1197:G:N2	2.17	0.78
53:5:1450:C:H2'	53:5:1451:A:H8	1.49	0.78
51:3:15:A:H61	51:3:560:U:H3'	1.47	0.78
51:3:534:U:H3'	51:3:535:G:C8	2.19	0.78
51:3:1873:A:C8	51:3:1882:G:N2	2.52	0.78
51:3:2088:U:O2	51:3:2247:G:N2	2.15	0.78
25:a:173:GLN:HA	25:a:180:VAL:HA	1.65	0.78
29:e:107:ASN:HA	29:e:117:LYS:HG2	1.64	0.78
46:v:36:CYS:O	46:v:47:ARG:HA	1.84	0.78
51:3:243:U:O2	51:3:262:G:N2	2.16	0.78
51:3:316:C:O2	51:3:392:A:N6	2.17	0.78
51:3:1269:C:H2'	51:3:1270:C:H6	1.49	0.78
51:3:1300:C:H5''	51:3:1301:G:H5'	1.64	0.78
51:3:2603:G:N2	51:3:2606:A:OP2	2.13	0.78
52:4:91:A:H3'	52:4:92:A:H8	1.48	0.78
53:5:773:G:N2	53:5:800:G:OP2	2.16	0.78
53:5:1068:G:N2	53:5:1071:A:OP2	2.15	0.78
53:5:1151:A:H3'	53:5:1152:G:H8	1.49	0.78
1:0:43:THR:OG1	51:3:127:A:N6	2.17	0.78
1:0:45:SER:OG	51:3:127:A:N7	2.17	0.78
25:a:181:ILE:HA	25:a:190:ARG:O	1.83	0.78
51:3:1814:G:N2	51:3:1817:A:OP2	2.12	0.78
51:3:1867:G:H1	51:3:1890:U:H3	1.32	0.78
51:3:2849:G:N1	51:3:2875:U:N3	2.21	0.78
53:5:446:A:N6	53:5:481:U:O4	2.16	0.78
54:7:16:G:C6	54:7:49:C:O2	2.37	0.78
34:j:16:ALA:HA	34:j:46:ALA:HA	1.65	0.78
51:3:401:G:H3'	51:3:402:A:H5''	1.66	0.78
51:3:410:G:N2	51:3:437:A:OP2	2.16	0.78
51:3:2374:A:H3'	51:3:2375:A:C8	2.19	0.78
52:4:34:U:N3	52:4:47:C:O2	2.16	0.78
53:5:35:C:N4	53:5:548:G:O6	2.17	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:a:5:LYS:HG2	25:a:18:THR:HG22	1.66	0.77
36:l:72:MET:HE3	36:l:96:VAL:HG12	1.66	0.77
42:r:9:ARG:H	42:r:102:ASN:HA	1.48	0.77
51:3:170:A:H3'	51:3:171:G:H8	1.46	0.77
51:3:383:U:H2'	51:3:384:G:H8	1.50	0.77
51:3:539:U:H4'	51:3:540:A:H5''	1.67	0.77
51:3:1035:U:H3	51:3:1190:A:N6	1.79	0.77
51:3:1803:U:H3	51:3:1830:G:H1	0.82	0.77
18:N:32:GLN:HE22	18:N:36:LEU:HD13	1.49	0.77
26:b:65:PRO:HB3	51:3:2795:C:H1'	1.64	0.77
32:h:129:LYS:O	51:3:1112:A:O2'	2.02	0.77
45:u:28:ARG:NH2	51:3:2288:G:N7	2.33	0.77
51:3:984:C:O2	51:3:1020:G:O2'	2.00	0.77
39:o:38:LYS:NZ	39:o:85:ASN:OD1	2.17	0.77
42:r:57:ASN:HD21	51:3:529:G:H21	1.30	0.77
51:3:2254:G:H2'	51:3:2255:A:C8	2.20	0.77
51:3:2482:U:OP2	51:3:2483:C:N4	2.16	0.77
51:3:2645:U:H3'	51:3:2646:G:C8	2.19	0.77
8:D:66:PHE:HA	8:D:96:ASN:HA	1.64	0.77
22:R:19:VAL:HG13	22:R:22:MET:HE2	1.66	0.77
35:k:83:ASN:HB3	35:k:118:THR:HG21	1.65	0.77
38:n:96:SER:OG	52:4:46:C:OP1	2.03	0.77
51:3:137:U:N3	51:3:146:G:N1	2.31	0.77
51:3:1070:U:O4	51:3:1155:G:O6	2.02	0.77
51:3:1352:G:O2'	51:3:1355:C:N4	2.16	0.77
51:3:2754:U:N3	51:3:2764:U:O4	2.17	0.77
53:5:754:U:H1'	53:5:873:U:H1'	1.66	0.77
54:6:56:U:O2'	54:6:57:C:O5'	2.03	0.77
54:7:53:A:N6	54:7:63:U:O4	2.17	0.77
2:1:49:ALA:HA	2:1:52:PHE:HB3	1.66	0.77
51:3:1007:C:OP1	51:3:1025:G:N1	2.16	0.77
53:5:168:A:N6	53:5:219:A:N3	2.33	0.77
53:5:550:U:H2'	53:5:551:A:H8	1.49	0.77
53:5:1271:U:H4'	53:5:1272:C:H5'	1.65	0.77
54:7:71:A:O2'	54:7:72:C:OP1	2.01	0.77
4:9:345:PRO:HG3	4:9:358:SER:H	1.47	0.77
9:E:141:PRO:HA	11:G:5:THR:HA	1.67	0.77
25:a:186:SER:OG	51:3:1806:G:N7	2.18	0.77
51:3:784:A:N1	51:3:788:G:O2'	2.17	0.77
51:3:819:U:O4	51:3:828:A:N6	2.18	0.77
51:3:996:A:OP2	51:3:998:C:N4	2.17	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:3:1932:C:N4	51:3:1936:G:H22	1.83	0.77
53:5:40:G:N1	53:5:399:C:O2	2.17	0.77
53:5:57:U:H2'	53:5:58:G:C8	2.19	0.77
53:5:1328:C:H2'	53:5:1329:G:H8	1.48	0.77
4:9:223:GLY:HA3	53:5:56:A:N7	1.99	0.77
9:E:37:THR:HA	9:E:60:TRP:HZ3	1.49	0.77
42:r:77:ASN:O	42:r:102:ASN:N	2.17	0.77
51:3:598:G:H1	51:3:609:U:H3	1.33	0.77
51:3:729:U:H4'	51:3:1406:A:H2	1.50	0.77
51:3:1310:U:C2	51:3:1314:A:N6	2.52	0.77
51:3:1619:A:H2'	51:3:1620:A:C8	2.19	0.77
51:3:2572:A:H2'	51:3:2573:A:C8	2.19	0.77
51:3:2759:G:H2'	51:3:2760:C:C5	2.20	0.77
53:5:176:G:N2	53:5:189:C:O2	2.16	0.77
53:5:1262:A:N3	53:5:1326:C:O2'	2.16	0.77
51:3:1453:U:H2'	51:3:1454:G:O4'	1.85	0.77
51:3:2551:G:H2'	51:3:2552:G:C8	2.20	0.77
53:5:170:A:H2'	53:5:171:A:H8	1.48	0.77
53:5:376:G:N2	53:5:379:A:OP2	2.18	0.77
23:S:3:ASN:ND2	53:5:328:G:OP2	2.17	0.77
33:i:25:GLY:HA2	33:i:66:VAL:HG12	1.66	0.77
40:p:50:ARG:NH2	51:3:1028:C:OP1	2.18	0.77
51:3:153:U:O4	51:3:179:A:N6	2.15	0.77
51:3:1301:G:N1	51:3:1649:C:O2	2.16	0.77
51:3:1765:G:OP1	51:3:1767:A:N6	2.18	0.77
53:5:32:U:N3	53:5:302:A:O2'	2.16	0.77
6:B:105:THR:HG23	6:B:107:ASN:HD21	1.50	0.77
34:j:97:ARG:NH2	53:5:335:C:OP1	2.18	0.77
51:3:513:A:N6	51:3:536:A:OP1	2.17	0.77
51:3:1334:U:O2	51:3:1656:A:N6	2.18	0.77
51:3:2853:U:N3	51:3:2871:G:O4'	2.17	0.77
53:5:762:G:H3'	53:5:809:G:H21	1.48	0.77
6:B:8:ASN:HB2	6:B:187:TYR:HD2	1.50	0.76
10:F:110:ARG:NH2	10:F:118:LYS:O	2.19	0.76
16:L:116:VAL:H	53:5:1203:A:H4'	1.50	0.76
51:3:358:A:H61	51:3:372:G:H2'	1.49	0.76
53:5:163:G:H1'	53:5:1423:C:H5''	1.67	0.76
5:A:27:ARG:NH1	5:A:223:GLN:OE1	2.16	0.76
9:E:146:THR:HA	11:G:60:LEU:HA	1.67	0.76
31:g:8:ALA:HB2	51:3:1081:A:H61	1.50	0.76
51:3:137:U:C2	51:3:146:G:N1	2.53	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:3:1871:U:O2	51:3:1885:G:N2	2.18	0.76
53:5:98:G:N3	53:5:349:A:O2'	2.17	0.76
15:K:85:HIS:CD2	15:K:87:LEU:H	2.03	0.76
16:L:14:ARG:HD3	16:L:43:LYS:HA	1.67	0.76
36:l:35:VAL:HB	36:l:130:LYS:HB2	1.67	0.76
51:3:252:G:C5	51:3:254:G:N2	2.53	0.76
51:3:494:G:H1'	51:3:495:U:H5	1.50	0.76
51:3:641:U:H1'	51:3:657:A:H62	1.49	0.76
51:3:722:C:O2	51:3:1787:A:N6	2.18	0.76
53:5:949:G:H21	53:5:1202:A:H62	1.34	0.76
12:H:124:ARG:NH1	53:5:1319:U:OP1	2.18	0.76
38:n:101:ARG:NH1	52:4:48:A:OP2	2.18	0.76
46:v:26:ARG:NH1	51:3:209:G:O6	2.19	0.76
53:5:372:G:H2'	53:5:373:A:C8	2.20	0.76
53:5:949:G:N2	53:5:1201:C:O2	2.18	0.76
53:5:1222:U:O2	53:5:1264:G:O6	2.03	0.76
6:B:36:GLU:OE1	6:B:60:ARG:NH2	2.18	0.76
15:K:61:ALA:HA	53:5:517:C:H5''	1.66	0.76
20:P:60:LYS:H	20:P:83:ARG:HE	1.33	0.76
32:h:10:ALA:HA	51:3:1133:A:H4'	1.67	0.76
41:q:45:ILE:HG23	41:q:50:LEU:HB2	1.66	0.76
51:3:564:A:N6	51:3:2048:U:O2	2.12	0.76
51:3:1414:C:H2'	51:3:1415:A:C8	2.20	0.76
51:3:2013:C:O2'	51:3:2827:A:N3	2.19	0.76
53:5:1009:G:N2	53:5:1012:A:OP2	2.18	0.76
12:H:13:LYS:HB2	12:H:76:GLY:HA3	1.68	0.76
27:c:51:SER:HA	27:c:95:PRO:HD3	1.68	0.76
46:v:6:GLN:HG2	46:v:49:LEU:H	1.50	0.76
51:3:915:A:OP2	51:3:936:G:N2	2.19	0.76
51:3:1558:A:N6	51:3:1572:U:O2	2.15	0.76
51:3:1858:U:O2	51:3:1898:G:N2	2.17	0.76
52:4:22:G:N1	52:4:57:G:O6	2.19	0.76
53:5:1048:G:H3'	53:5:1049:G:H8	1.51	0.76
54:7:16:G:N1	54:7:49:C:C2	2.53	0.76
7:C:79:LEU:O	7:C:82:ARG:NH1	2.18	0.76
12:H:74:PHE:HE2	53:5:1263:A:H61	1.32	0.76
26:b:218:LYS:HG3	26:b:220:ILE:HD11	1.68	0.76
27:c:8:LYS:N	27:c:12:SER:O	2.19	0.76
33:i:120:ARG:NH1	51:3:562:C:O2'	2.16	0.76
40:p:57:ARG:HH22	51:3:1033:A:H3'	1.50	0.76
51:3:292:G:H3'	51:3:293:G:H8	1.51	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:3:675:U:O4	51:3:685:G:O6	2.02	0.76
51:3:1296:G:N1	51:3:2020:A:OP2	2.18	0.76
51:3:2058:G:H2'	51:3:2622:A:H61	1.50	0.76
53:5:409:G:H21	53:5:425:G:H1'	1.50	0.76
26:b:64:LYS:NZ	51:3:2795:C:O3'	2.19	0.76
26:b:185:ASP:O	26:b:189:MET:N	2.19	0.76
28:d:44:ILE:HD11	28:d:77:TYR:HB3	1.68	0.76
30:f:4:ILE:HD11	30:f:38:PRO:O	1.86	0.76
37:m:84:SER:OG	37:m:85:LYS:NZ	2.16	0.76
51:3:957:G:H21	51:3:2277:A:H8	1.31	0.76
51:3:1315:A:H2'	51:3:1316:U:C2	2.20	0.76
51:3:1484:G:N1	51:3:2711:C:N3	2.31	0.76
51:3:1503:A:N6	51:3:1540:G:O2'	2.19	0.76
51:3:1512:A:N6	51:3:1527:U:O4	2.16	0.76
51:3:1703:A:OP2	51:3:1705:U:N3	2.18	0.76
51:3:1767:A:H2'	51:3:1768:G:C4	2.21	0.76
53:5:41:C:H2'	53:5:42:G:H8	1.50	0.76
53:5:799:A:H3'	53:5:800:G:H8	1.50	0.76
54:6:9:U:O2'	54:6:22:A:N1	2.19	0.76
54:7:54:G:N2	54:7:62:C:O2	2.14	0.76
8:D:68:GLU:HA	8:D:94:VAL:HA	1.67	0.76
10:F:67:ASN:ND2	10:F:129:ASN:OD1	2.17	0.76
16:L:101:ARG:HD3	16:L:105:ASN:HB3	1.67	0.76
25:a:62:ASN:ND2	25:a:221:HIS:O	2.19	0.76
36:l:11:LYS:HE2	36:l:90:PRO:HD3	1.66	0.76
51:3:200:A:OP1	51:3:202:C:N4	2.19	0.76
51:3:847:C:N4	51:3:1226:G:O6	2.19	0.76
51:3:2321:C:H2'	51:3:2322:G:H8	1.51	0.76
51:3:2716:U:H2'	51:3:2717:G:H8	1.49	0.76
52:4:64:G:OP2	52:4:98:A:N6	2.15	0.76
53:5:674:U:H3	53:5:710:G:H22	1.33	0.76
4:9:100:ASP:OD1	4:9:231:ARG:NH1	2.19	0.76
4:9:257:THR:HB	4:9:278:LEU:HG	1.68	0.76
14:J:115:LYS:NZ	14:J:116:PRO:O	2.19	0.76
26:b:20:ASN:O	34:j:72:LYS:NZ	2.18	0.76
39:o:30:GLU:OE1	39:o:92:ARG:HG3	1.84	0.76
51:3:47:G:C2	51:3:184:A:N6	2.47	0.76
51:3:633:G:H1	51:3:692:U:H3	0.79	0.76
51:3:1348:C:N4	51:3:1359:C:OP2	2.19	0.76
51:3:2032:G:H2'	51:3:2033:G:C8	2.21	0.76
51:3:2054:C:O2'	51:3:2827:A:N6	2.18	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:3:2425:C:H2'	51:3:2426:A:C8	2.21	0.76
53:5:35:C:H2'	53:5:36:G:H8	1.51	0.76
53:5:242:A:N7	53:5:277:G:N3	2.33	0.76
4:9:34:THR:OG1	4:9:46:ARG:O	2.05	0.75
28:d:15:GLU:HA	28:d:18:LYS:HE2	1.68	0.75
38:n:112:ARG:O	38:n:112:ARG:NH2	2.20	0.75
51:3:410:G:H1	51:3:436:G:H3'	1.50	0.75
51:3:738:U:O2	51:3:763:G:O6	2.04	0.75
51:3:1343:C:H2'	51:3:1344:U:C6	2.20	0.75
51:3:1572:U:H2'	51:3:1573:A:C8	2.21	0.75
51:3:1927:C:H2'	51:3:1928:G:H8	1.48	0.75
51:3:2011:G:H3'	51:3:2012:A:H8	1.49	0.75
51:3:2306:A:H3'	51:3:2307:G:H8	1.50	0.75
53:5:44:C:N3	53:5:395:G:N1	2.30	0.75
53:5:239:A:H62	53:5:277:G:H1'	1.48	0.75
4:9:217:ASP:OD1	4:9:284:ARG:NH2	2.19	0.75
14:J:84:ARG:O	14:J:84:ARG:NH2	2.17	0.75
25:a:67:ARG:H	25:a:91:ASN:HD21	1.32	0.75
26:b:6:ILE:HG12	26:b:98:PRO:HG3	1.66	0.75
43:s:66:ARG:HB2	43:s:73:GLY:H	1.51	0.75
51:3:155:A:H2'	51:3:156:A:H8	1.49	0.75
51:3:1198:G:H2'	51:3:1199:A:H8	1.51	0.75
53:5:35:C:H2'	53:5:36:G:C8	2.21	0.75
53:5:146:A:N6	53:5:340:A:O2'	2.18	0.75
53:5:497:A:N6	53:5:545:A:O5'	2.19	0.75
53:5:1289:U:O2	53:5:1293:A:N6	2.19	0.75
6:B:59:GLU:HB3	13:I:100:VAL:HG11	1.67	0.75
16:L:100:GLN:NE2	53:5:1282:U:OP1	2.18	0.75
29:e:127:LYS:HB2	29:e:135:THR:HB	1.68	0.75
38:n:17:LYS:HE3	38:n:18:LYS:HE3	1.67	0.75
51:3:788:G:H2'	51:3:789:A:C8	2.21	0.75
51:3:788:G:H2'	51:3:789:A:H8	1.52	0.75
51:3:1027:U:H3	51:3:1198:G:H1	0.77	0.75
51:3:1340:U:O2	51:3:1367:G:N2	2.20	0.75
54:7:27:A:H3'	54:7:28:A:C8	2.21	0.75
4:9:211:PHE:HB3	4:9:295:LYS:H	1.50	0.75
5:A:41:MET:SD	5:A:206:THR:OG1	2.45	0.75
24:T:37:ARG:NH1	53:5:1502:G:N7	2.34	0.75
25:a:20:ILE:HB	25:a:25:LEU:HD12	1.69	0.75
51:3:810:G:H1'	51:3:812:G:C4	2.21	0.75
51:3:868:C:H2'	51:3:869:U:C6	2.21	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:3:1127:C:H3'	51:3:1128:G:H8	1.51	0.75
51:3:2089:A:N7	51:3:2245:G:N3	2.34	0.75
51:3:2237:U:H2'	51:3:2238:G:H8	1.50	0.75
51:3:2745:G:H3'	51:3:2746:A:H8	1.50	0.75
53:5:137:A:H3'	53:5:138:A:H8	1.52	0.75
53:5:145:G:H1'	53:5:148:A:H61	1.52	0.75
53:5:530:A:N1	53:5:1181:G:O2'	2.20	0.75
53:5:992:U:H3	53:5:1034:G:H1	1.34	0.75
54:7:6:U:O4	54:7:69:A:N6	2.19	0.75
4:9:13:VAL:HB	4:9:202:THR:HG23	1.67	0.75
4:9:220:THR:HA	4:9:226:THR:HA	1.67	0.75
14:J:33:ASN:HB2	53:5:681:U:H1'	1.68	0.75
37:m:106:ARG:HG2	37:m:108:GLY:H	1.52	0.75
51:3:1793:A:O2'	51:3:1945:A:N6	2.19	0.75
51:3:2150:C:O2	51:3:2155:G:N1	2.20	0.75
7:C:49:GLY:HA3	8:D:167:ARG:HH22	1.51	0.75
33:i:63:ASP:HB3	33:i:129:LYS:HD3	1.68	0.75
38:n:31:MET:HB3	38:n:42:GLN:O	1.86	0.75
45:u:53:ARG:HH21	51:3:2363:C:H1'	1.52	0.75
51:3:163:A:N7	51:3:169:U:O2	2.20	0.75
51:3:675:U:O2	51:3:685:G:N2	2.18	0.75
51:3:1060:G:N1	51:3:1174:G:O6	2.19	0.75
51:3:1295:A:N6	51:3:2021:A:N7	2.28	0.75
51:3:1338:G:OP2	51:3:1339:U:N3	2.18	0.75
53:5:974:C:OP1	53:5:1198:C:N4	2.19	0.75
53:5:1228:C:H2'	53:5:1229:A:H8	1.51	0.75
51:3:458:A:H3'	51:3:459:A:H8	1.50	0.75
51:3:610:G:H2'	51:3:611:A:C8	2.20	0.75
51:3:633:G:O6	51:3:692:U:O4	2.04	0.75
51:3:1108:A:OP1	51:3:1110:C:N4	2.19	0.75
51:3:2025:C:H2'	51:3:2026:A:H8	1.49	0.75
51:3:2111:U:O4	51:3:2193:U:N3	2.19	0.75
51:3:2173:G:H3'	51:3:2174:G:C8	2.21	0.75
53:5:295:G:H2'	53:5:296:A:C8	2.21	0.75
53:5:443:G:H3'	53:5:444:G:C8	2.21	0.75
53:5:598:U:H2'	53:5:599:G:H8	1.52	0.75
53:5:661:G:N1	53:5:738:A:N6	2.20	0.75
53:5:1213:A:H2	53:5:1216:G:H21	1.32	0.75
6:B:131:VAL:HG11	6:B:136:ALA:HB2	1.69	0.75
9:E:33:GLU:HG3	9:E:34:GLY:H	1.51	0.75
22:R:79:ASN:OD1	53:5:952:U:O2'	2.05	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:k:53:GLY:HA3	51:3:867:G:H1'	1.67	0.75
51:3:86:A:OP2	51:3:103:G:N2	2.19	0.75
51:3:407:U:H3'	51:3:440:C:H41	1.52	0.75
51:3:495:U:O2	51:3:506:A:N6	2.17	0.75
51:3:616:G:N2	51:3:1287:C:O2	2.17	0.75
51:3:1297:U:H2'	51:3:1298:A:C8	2.20	0.75
53:5:1045:C:H4'	53:5:1046:A:H5''	1.67	0.75
53:5:1056:U:H5''	53:5:1165:G:H1	1.51	0.75
53:5:1112:U:O2	53:5:1128:G:N2	2.20	0.75
7:C:69:LYS:HA	7:C:72:ARG:HD2	1.67	0.75
15:K:96:ARG:NE	15:K:109:HIS:HB3	2.01	0.75
22:R:37:ARG:NH2	53:5:1291:C:O2	2.20	0.75
51:3:267:A:O2'	51:3:465:A:O2'	2.05	0.75
51:3:1906:G:N2	51:3:1909:C:H41	1.85	0.75
51:3:2088:U:O4	51:3:2247:G:O6	2.05	0.75
53:5:255:G:H3'	53:5:256:G:C8	2.22	0.75
53:5:884:G:N1	53:5:901:A:OP2	2.19	0.75
53:5:933:A:N3	53:5:1351:U:O2'	2.17	0.75
53:5:991:A:N7	53:5:1037:A:O2'	2.19	0.75
16:L:57:ARG:HA	16:L:60:ALA:HB3	1.69	0.74
41:q:28:PRO:HA	41:q:62:HIS:HE1	1.52	0.74
41:q:56:VAL:HB	41:q:96:ARG:H	1.52	0.74
51:3:133:G:N2	51:3:150:U:O2	2.17	0.74
51:3:525:A:H2'	51:3:526:G:C4	2.22	0.74
51:3:984:C:H2'	51:3:985:A:H8	1.51	0.74
51:3:998:C:H2'	51:3:999:U:H6	1.51	0.74
51:3:1071:G:O6	51:3:1154:U:O4	2.05	0.74
51:3:1363:C:H2'	51:3:1364:A:H8	1.51	0.74
51:3:1724:A:H2'	51:3:1725:G:C8	2.22	0.74
51:3:2376:C:H2'	51:3:2377:A:C8	2.22	0.74
23:S:71:ARG:NH2	53:5:256:G:N7	2.31	0.74
33:i:40:ARG:NH2	51:3:1043:C:OP1	2.20	0.74
34:j:5:MET:N	34:j:21:ILE:O	2.19	0.74
38:n:76:ASP:O	38:n:79:ASP:HB2	1.87	0.74
44:t:10:VAL:HA	44:t:77:PHE:H	1.52	0.74
51:3:1860:A:N6	51:3:1895:G:O2'	2.16	0.74
51:3:2126:A:N6	51:3:2178:A:N7	2.35	0.74
51:3:2655:U:O2	51:3:2681:G:N1	2.20	0.74
53:5:926:C:O2	53:5:1361:G:N2	2.16	0.74
53:5:972:A:N6	53:5:1199:U:OP1	2.20	0.74
6:B:29:GLN:N	6:B:29:GLN:OE1	2.21	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:b:5:GLY:HA3	26:b:207:ILE:O	1.86	0.74
51:3:274:A:H8	51:3:295:U:N3	1.71	0.74
51:3:513:A:H2'	51:3:514:A:C4	2.22	0.74
51:3:1965:C:H2'	51:3:1966:G:C8	2.20	0.74
54:7:27:A:OP2	54:7:28:A:N6	2.20	0.74
20:P:62:GLN:HB3	20:P:79:LYS:HB3	1.68	0.74
49:y:28:SER:N	49:y:37:LYS:O	2.20	0.74
51:3:881:A:N7	51:3:968:U:N3	2.35	0.74
51:3:1338:G:H1'	51:3:1645:C:H5''	1.68	0.74
51:3:1471:A:N6	51:3:1581:U:O4	2.17	0.74
51:3:1866:G:N1	51:3:1891:A:N7	2.34	0.74
53:5:1086:U:OP1	53:5:1099:G:N1	2.19	0.74
10:F:107:ALA:HB1	10:F:119:ILE:HG13	1.70	0.74
28:d:63:GLN:HB3	28:d:89:VAL:HG13	1.70	0.74
33:i:111:MET:HB3	51:3:1042:C:H1'	1.67	0.74
37:m:25:VAL:O	37:m:29:GLY:N	2.17	0.74
39:o:91:LYS:O	39:o:92:ARG:HG3	1.87	0.74
40:p:9:THR:HG23	40:p:12:ARG:HH11	1.52	0.74
51:3:39:C:H5''	51:3:487:C:H5'	1.69	0.74
51:3:412:A:H3'	51:3:413:G:H8	1.51	0.74
51:3:720:A:N6	51:3:813:G:H1'	2.03	0.74
51:3:2551:G:H2'	51:3:2552:G:H8	1.52	0.74
51:3:2599:C:H2'	51:3:2600:G:C8	2.22	0.74
53:5:200:G:N1	53:5:215:C:N3	2.35	0.74
53:5:238:U:O2	53:5:281:U:N3	2.18	0.74
53:5:639:A:H2'	53:5:640:C:C6	2.22	0.74
53:5:919:C:N4	53:5:1367:G:O6	2.15	0.74
53:5:989:A:H61	53:5:1037:A:H2	1.32	0.74
5:A:193:ILE:O	5:A:195:ARG:NH2	2.21	0.74
51:3:407:U:OP2	51:3:440:C:N4	2.19	0.74
51:3:512:G:H1'	51:3:516:A:N6	2.01	0.74
51:3:917:G:N1	51:3:934:C:N3	2.29	0.74
53:5:1065:G:O2'	53:5:1092:A:N1	2.20	0.74
53:5:1241:G:O2'	53:5:1243:A:N6	2.19	0.74
8:D:207:ARG:HH12	8:D:211:LEU:HD21	1.51	0.74
51:3:207:C:H3'	51:3:208:A:C8	2.23	0.74
51:3:867:G:H2'	51:3:868:C:C6	2.22	0.74
51:3:1027:U:O2	51:3:1198:G:N2	2.19	0.74
51:3:1176:U:H1'	51:3:1177:A:C5	2.23	0.74
51:3:2234:C:H3'	51:3:2235:A:C8	2.22	0.74
51:3:2802:C:N4	51:3:2807:G:O3'	2.21	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:5:110:U:O2	53:5:232:G:N1	2.20	0.74
53:5:720:U:O2	53:5:849:A:O2'	2.04	0.74
8:D:204:SER:HB3	8:D:207:ARG:HG2	1.68	0.74
51:3:1020:G:N2	51:3:1020:G:OP2	2.21	0.74
51:3:1507:G:O2'	51:3:1508:G:OP1	2.06	0.74
51:3:2156:G:H2'	51:3:2157:A:C8	2.22	0.74
5:A:76:ALA:HB3	5:A:239:ALA:HB1	1.70	0.74
51:3:247:U:C2	51:3:259:A:C6	2.75	0.74
51:3:1920:A:N6	53:5:1470:U:OP1	2.20	0.74
51:3:1948:C:H3'	51:3:1949:C:C6	2.23	0.74
51:3:2425:C:H2'	51:3:2426:A:H8	1.53	0.74
51:3:2579:U:H5''	51:3:2580:A:H5''	1.67	0.74
53:5:100:G:H21	53:5:102:G:H1	1.32	0.74
53:5:604:U:C2	53:5:630:G:N1	2.56	0.74
53:5:710:G:H2'	53:5:711:G:C8	2.23	0.74
4:9:280:ARG:HD2	53:5:363:U:H5'	1.70	0.74
6:B:11:ARG:NH1	6:B:180:THR:O	2.21	0.74
9:E:94:TYR:HA	21:Q:50:ARG:HG3	1.69	0.74
17:M:4:LYS:NZ	53:5:990:C:O2	2.21	0.74
23:S:39:ILE:HG22	23:S:76:LEU:HD13	1.69	0.74
25:a:31:ASN:ND2	25:a:88:TYR:OH	2.21	0.74
29:e:61:LEU:O	29:e:65:LYS:N	2.20	0.74
38:n:99:HIS:H	38:n:102:ILE:HB	1.52	0.74
47:w:46:GLN:HE21	47:w:49:ARG:HH21	1.35	0.74
51:3:413:G:N2	51:3:435:U:O2	2.16	0.74
51:3:852:C:H3'	51:3:853:G:C8	2.22	0.74
51:3:853:G:H1	51:3:1218:G:H3'	1.53	0.74
51:3:1335:A:N6	51:3:1641:A:OP1	2.21	0.74
51:3:1380:U:O4	51:3:1406:A:N7	2.21	0.74
51:3:2092:U:O2	51:3:2242:G:N2	2.19	0.74
53:5:189:C:H2'	53:5:190:A:H8	1.53	0.74
53:5:213:U:HO2'	53:5:466:U:H3	1.36	0.74
53:5:616:C:N4	53:5:620:A:OP2	2.21	0.74
53:5:712:A:H2'	53:5:713:A:C8	2.23	0.74
54:7:29:C:H2'	54:7:30:G:H8	1.52	0.74
1:0:3:ARG:NH1	51:3:824:A:N1	2.34	0.73
4:9:132:VAL:HG21	4:9:196:VAL:HG22	1.69	0.73
7:C:131:THR:HG21	53:5:618:U:H3	1.53	0.73
20:P:37:LYS:NZ	20:P:38:SER:O	2.21	0.73
27:c:5:LYS:HG2	27:c:17:PRO:HA	1.69	0.73
34:j:36:GLY:HA2	34:j:106:LEU:HD13	1.70	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:3:75:A:H5''	51:3:77:G:H1'	1.71	0.73
51:3:107:C:O2	51:3:328:A:O2'	2.07	0.73
51:3:604:A:H61	51:3:2508:U:H5'	1.52	0.73
51:3:1327:G:H1'	51:3:1675:A:N6	2.03	0.73
51:3:1470:C:N3	51:3:1582:G:N1	2.30	0.73
53:5:411:A:H3'	53:5:412:G:H8	1.53	0.73
6:B:61:THR:HG22	6:B:62:GLN:H	1.51	0.73
7:C:180:ARG:NH2	7:C:181:PHE:O	2.21	0.73
9:E:99:SER:O	9:E:103:LYS:NZ	2.21	0.73
15:K:40:SER:OG	53:5:359:A:N6	2.21	0.73
17:M:32:ALA:N	53:5:971:A:OP2	2.18	0.73
27:c:77:GLY:HA3	51:3:709:G:H5''	1.71	0.73
44:t:88:LYS:HB2	44:t:105:LYS:HB2	1.68	0.73
49:y:16:ARG:HE	51:3:2053:G:H5'	1.53	0.73
51:3:137:U:H2'	51:3:146:G:H22	1.53	0.73
53:5:304:U:H2'	53:5:305:A:C8	2.20	0.73
53:5:661:G:H1	53:5:738:A:H61	0.76	0.73
54:6:22:A:N7	54:6:47:G:O2'	2.21	0.73
4:9:243:ILE:O	4:9:253:LYS:HA	1.89	0.73
27:c:50:HIS:HB2	27:c:93:PRO:HB2	1.70	0.73
27:c:147:LEU:HA	27:c:150:ALA:HB3	1.70	0.73
33:i:10:GLU:OE2	33:i:14:LYS:N	2.21	0.73
51:3:816:A:H2'	51:3:1784:U:H1'	1.70	0.73
51:3:1296:G:N2	51:3:1297:U:O4	2.21	0.73
51:3:1480:A:N6	51:3:1487:U:O2'	2.21	0.73
51:3:1557:G:H2'	51:3:1573:A:N6	1.98	0.73
53:5:683:G:H1	53:5:700:G:HO2'	1.34	0.73
53:5:930:A:H2'	53:5:931:C:C6	2.22	0.73
51:3:2359:G:H2'	51:3:2373:G:H22	1.52	0.73
51:3:2530:U:O4	51:3:2551:G:O6	2.07	0.73
52:4:38:U:H1'	52:4:43:A:H61	1.52	0.73
53:5:649:U:O2	53:5:750:A:N7	2.20	0.73
53:5:761:U:H3'	53:5:762:G:H8	1.53	0.73
53:5:1266:U:H2'	53:5:1267:G:H8	1.53	0.73
29:e:158:GLU:H	29:e:162:GLY:HA2	1.52	0.73
51:3:195:A:N7	51:3:208:A:N6	2.36	0.73
51:3:465:A:H2'	51:3:466:A:C5	2.23	0.73
51:3:566:G:OP1	51:3:594:G:N2	2.21	0.73
51:3:1010:G:H1'	51:3:1011:A:C8	2.22	0.73
51:3:1730:C:H2'	51:3:1731:G:O4'	1.89	0.73
51:3:2729:A:H3'	51:3:2730:G:H8	1.53	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:5:796:A:H3'	53:5:797:G:H8	1.52	0.73
4:9:310:TYR:HA	4:9:356:ASN:HA	1.71	0.73
26:b:10:LYS:NZ	26:b:199:GLY:O	2.21	0.73
45:u:39:LYS:HB3	45:u:43:GLN:HG3	1.67	0.73
51:3:251:G:N2	51:3:255:A:OP2	2.21	0.73
51:3:1070:U:H3	51:3:1155:G:H1	0.80	0.73
53:5:669:U:H2'	53:5:670:G:C8	2.24	0.73
54:7:16:G:N1	54:7:49:C:N3	2.36	0.73
30:f:5:LEU:HD21	30:f:14:LYS:CE	2.17	0.73
36:l:109:ILE:HG13	36:l:110:PRO:HD2	1.71	0.73
51:3:604:A:OP2	51:3:2037:A:N6	2.22	0.73
51:3:1554:A:OP2	51:3:1576:G:N2	2.22	0.73
51:3:2140:G:O2'	51:3:2165:A:N6	2.21	0.73
53:5:554:C:H2'	53:5:555:G:H8	1.53	0.73
53:5:669:U:H2'	53:5:670:G:H8	1.54	0.73
53:5:778:A:N7	53:5:798:U:O4	2.20	0.73
6:B:93:LYS:HA	6:B:96:ILE:HG22	1.71	0.73
7:C:133:SER:OG	53:5:618:U:O2	2.07	0.73
26:b:23:ARG:NH2	51:3:2690:U:O2	2.22	0.73
26:b:159:VAL:O	51:3:2626:A:O2'	2.06	0.73
28:d:77:TYR:O	54:7:57:C:O2'	2.05	0.73
51:3:17:G:H2'	51:3:18:G:C8	2.24	0.73
51:3:276:A:N6	51:3:301:G:O2'	2.21	0.73
51:3:401:G:H2'	51:3:402:A:C8	2.23	0.73
51:3:443:C:H2'	51:3:444:C:C6	2.23	0.73
51:3:1932:C:H42	51:3:1936:G:N2	1.87	0.73
51:3:2277:A:H2'	51:3:2278:G:H8	1.53	0.73
51:3:2588:U:H2'	51:3:2589:G:C4	2.24	0.73
53:5:80:U:H2'	53:5:81:A:C8	2.24	0.73
53:5:265:U:H2'	53:5:266:A:C8	2.24	0.73
53:5:1307:A:H3'	53:5:1308:G:C8	2.24	0.73
5:A:173:PRO:HG2	5:A:196:ILE:HG21	1.71	0.73
14:J:15:HIS:HB3	14:J:80:LYS:HZ1	1.54	0.73
39:o:49:THR:HG22	39:o:68:LYS:HE3	1.70	0.73
51:3:71:C:O2	51:3:75:A:O2'	2.07	0.73
51:3:328:A:N6	51:3:378:G:O2'	2.21	0.73
51:3:1000:U:O2'	51:3:2281:A:N3	2.21	0.73
51:3:1252:C:O2	51:3:1257:G:N2	2.19	0.73
53:5:985:C:H2'	53:5:986:U:C6	2.24	0.73
53:5:1400:A:H61	53:5:1450:C:H42	1.37	0.73
14:J:25:VAL:HG21	14:J:60:ALA:HA	1.71	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:a:170:ILE:HG22	25:a:172:GLY:H	1.52	0.73
27:c:141:LYS:HB2	51:3:354:C:H5	1.51	0.73
31:g:100:VAL:HA	31:g:106:MET:HB3	1.70	0.73
51:3:995:A:H2'	51:3:996:A:C8	2.24	0.73
51:3:1106:G:N7	51:3:1107:C:N4	2.37	0.73
51:3:1487:U:O2'	51:3:2710:G:N2	2.21	0.73
53:5:662:G:N7	53:5:721:G:N1	2.35	0.73
53:5:1217:G:N2	53:5:1269:U:O2	2.22	0.73
53:5:1282:U:H2'	53:5:1283:G:H8	1.53	0.73
54:6:4:U:N3	54:6:71:A:N1	2.37	0.73
4:9:334:ARG:CZ	4:9:334:ARG:HB2	2.16	0.72
26:b:161:LYS:HD2	51:3:2627:U:H5''	1.70	0.72
36:l:82:ARG:NH2	51:3:2260:G:O6	2.21	0.72
51:3:180:A:H3'	51:3:181:G:H8	1.54	0.72
51:3:2092:U:O4	51:3:2242:G:O6	2.07	0.72
51:3:2104:A:N6	51:3:2200:U:O4	2.14	0.72
53:5:1195:G:H2'	53:5:1196:G:H8	1.54	0.72
6:B:140:SER:HA	6:B:143:LYS:HE3	1.69	0.72
7:C:198:GLU:O	7:C:201:LYS:NZ	2.22	0.72
25:a:231:SER:HA	25:a:240:HIS:HB2	1.70	0.72
35:k:5:GLN:HG3	51:3:1234:U:H1'	1.69	0.72
41:q:61:LYS:HG3	41:q:91:LYS:HB3	1.69	0.72
51:3:252:G:N7	51:3:254:G:C2	2.57	0.72
51:3:1028:C:H2'	51:3:1029:A:H8	1.54	0.72
51:3:1053:C:H5''	51:3:1071:G:H4'	1.72	0.72
51:3:1336:A:H61	51:3:1640:G:H2'	1.53	0.72
51:3:1572:U:H2'	51:3:1573:A:H8	1.53	0.72
51:3:2700:C:O2	51:3:2851:U:O2'	2.05	0.72
53:5:365:U:OP2	53:5:384:G:N1	2.20	0.72
53:5:1062:C:H2'	53:5:1063:G:C8	2.23	0.72
53:5:1196:G:H3'	53:5:1197:G:C8	2.24	0.72
7:C:88:ASN:OD1	7:C:91:ARG:NH1	2.22	0.72
25:a:162:ARG:NH2	51:3:1824:G:OP2	2.22	0.72
26:b:26:ILE:HG21	26:b:192:LEU:HD13	1.70	0.72
27:c:158:LEU:HA	27:c:179:GLN:HG2	1.70	0.72
51:3:29:G:O2'	51:3:30:A:N7	2.18	0.72
51:3:67:C:O2'	51:3:492:C:N3	2.22	0.72
51:3:209:G:N2	51:3:210:U:O4	2.16	0.72
51:3:834:G:H3'	51:3:835:U:H2'	1.70	0.72
51:3:2032:G:H2'	51:3:2033:G:H8	1.54	0.72
51:3:2826:G:O2'	51:3:2828:C:OP2	2.04	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:4:78:C:H5	52:4:86:G:H1	1.36	0.72
53:5:1151:A:H3'	53:5:1152:G:C8	2.23	0.72
54:7:16:G:O6	54:7:49:C:O2	2.06	0.72
1:0:34:ARG:NH1	51:3:503:G:OP2	2.21	0.72
8:D:143:ARG:NH1	53:5:857:U:OP1	2.22	0.72
9:E:147:GLU:HB3	11:G:59:VAL:HG13	1.71	0.72
11:G:93:PRO:HB2	53:5:872:C:H5'	1.71	0.72
14:J:119:ARG:HH12	24:T:36:LEU:HD13	1.55	0.72
21:Q:65:SER:HB3	21:Q:69:LYS:HE3	1.71	0.72
36:l:16:SER:HA	36:l:41:TRP:HZ2	1.53	0.72
37:m:98:SER:OG	37:m:117:GLN:O	2.06	0.72
53:5:351:C:O2'	53:5:384:G:N3	2.20	0.72
53:5:454:U:O2	53:5:474:G:N2	2.22	0.72
53:5:1266:U:H2'	53:5:1267:G:C8	2.24	0.72
4:9:227:VAL:HG22	4:9:278:LEU:HB2	1.71	0.72
5:A:120:PHE:O	5:A:124:SER:N	2.19	0.72
15:K:81:PRO:HB3	15:K:96:ARG:HH22	1.55	0.72
25:a:70:ASP:C	25:a:72:LYS:H	1.98	0.72
27:c:137:GLU:HA	27:c:167:ASN:HB3	1.71	0.72
28:d:176:PRO:HG3	48:x:46:TYR:HA	1.71	0.72
33:i:27:VAL:HB	33:i:30:LYS:HB2	1.70	0.72
34:j:37:ASP:HA	34:j:109:ARG:HH12	1.55	0.72
37:m:106:ARG:NH1	37:m:109:ASP:OD2	2.22	0.72
40:p:15:LYS:O	40:p:19:GLN:NE2	2.22	0.72
42:r:57:ASN:ND2	51:3:529:G:H21	1.86	0.72
46:v:17:ASN:HB3	46:v:25:THR:HB	1.71	0.72
50:z:12:ASN:HD22	50:z:48:LYS:HG3	1.54	0.72
51:3:195:A:H1'	51:3:714:G:H1'	1.72	0.72
51:3:297:G:N2	51:3:441:U:OP2	2.21	0.72
51:3:1166:G:O2'	51:3:2032:G:O2'	2.03	0.72
51:3:1848:U:H2'	51:3:1849:G:H8	1.54	0.72
51:3:1858:U:O4	51:3:1898:G:O6	2.06	0.72
51:3:2063:G:H2'	51:3:2064:G:H8	1.53	0.72
53:5:22:G:H2'	53:5:23:G:C8	2.24	0.72
53:5:359:A:H2'	53:5:360:A:C8	2.24	0.72
53:5:831:C:H2'	53:5:832:G:H8	1.53	0.72
53:5:1146:A:H2'	53:5:1147:U:C6	2.24	0.72
53:5:1364:C:H2'	53:5:1365:U:C6	2.24	0.72
7:C:198:GLU:OE2	8:D:158:THR:OG1	2.07	0.72
8:D:146:ALA:O	8:D:148:ARG:NH2	2.22	0.72
21:Q:60:LEU:HB3	21:Q:90:LEU:HD21	1.71	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:f:64:LEU:HA	30:f:67:LYS:HD2	1.71	0.72
33:i:19:TYR:HD1	33:i:141:THR:HB	1.55	0.72
34:j:59:ARG:H	34:j:94:ARG:HH22	1.37	0.72
34:j:63:VAL:HG23	34:j:64:ARG:HG3	1.72	0.72
51:3:133:G:H1	51:3:150:U:H3	0.78	0.72
51:3:947:A:N3	51:3:2272:C:O2'	2.23	0.72
51:3:1746:U:O4	51:3:1753:G:O6	2.07	0.72
51:3:1939:A:H3'	51:3:1940:G:C8	2.23	0.72
51:3:2169:G:H4'	51:3:2170:A:H3'	1.72	0.72
51:3:2465:U:N3	51:3:2502:G:N1	2.35	0.72
53:5:499:U:C4	53:5:542:G:O6	2.42	0.72
14:J:33:ASN:HB3	53:5:680:G:H21	1.53	0.72
25:a:172:GLY:O	25:a:181:ILE:N	2.22	0.72
30:f:4:ILE:HG12	30:f:42:LYS:HG3	1.71	0.72
51:3:162:G:O2'	51:3:170:A:N6	2.21	0.72
51:3:283:A:OP1	51:3:286:A:N6	2.23	0.72
51:3:1604:A:H2'	51:3:1605:A:C8	2.25	0.72
51:3:1688:A:N6	51:3:2056:A:OP1	2.21	0.72
51:3:2005:G:H2'	51:3:2006:C:H6	1.54	0.72
52:4:9:C:H2'	52:4:10:C:C2	2.25	0.72
53:5:778:A:N7	53:5:798:U:N3	2.37	0.72
53:5:1002:A:N6	53:5:1019:G:N9	2.37	0.72
53:5:1196:G:H3'	53:5:1197:G:H8	1.53	0.72
14:J:63:VAL:HA	14:J:66:THR:HG22	1.72	0.72
21:Q:48:GLN:NE2	21:Q:52:ASP:OD1	2.23	0.72
28:d:63:GLN:HG3	52:4:41:C:H5'	1.71	0.72
30:f:93:ILE:HD12	30:f:117:VAL:HG12	1.72	0.72
33:i:4:THR:HA	51:3:1031:U:H2'	1.72	0.72
36:l:62:GLY:HA2	36:l:108:ASN:HB2	1.72	0.72
43:s:58:LEU:HG	43:s:80:LEU:HD11	1.72	0.72
51:3:417:G:N2	51:3:431:U:O2	2.22	0.72
51:3:1399:G:N2	51:3:1400:U:O4	2.22	0.72
51:3:2059:G:H1	51:3:2625:U:H3	0.74	0.72
53:5:673:A:H2'	53:5:674:U:C6	2.25	0.72
53:5:1261:A:H2'	53:5:1262:A:C8	2.24	0.72
7:C:1:MET:N	53:5:544:A:O5'	2.23	0.72
29:e:129:GLU:N	29:e:133:GLU:OE1	2.21	0.72
35:k:34:ARG:NE	35:k:41:ALA:O	2.22	0.72
51:3:124:A:H3'	51:3:125:G:C8	2.24	0.72
51:3:1284:A:H5''	51:3:1285:U:H5''	1.70	0.72
51:3:1310:U:O4	51:3:1314:A:N7	2.23	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:3:1374:U:H3	51:3:1634:A:H61	1.35	0.72
51:3:1495:A:OP2	51:3:1547:G:N1	2.23	0.72
51:3:2133:A:H4'	51:3:2134:G:H4'	1.72	0.72
51:3:2329:G:N2	51:3:2330:A:O4'	2.23	0.72
53:5:786:U:N3	53:5:789:A:OP2	2.23	0.72
5:A:73:LYS:HA	5:A:239:ALA:HB2	1.70	0.72
11:G:18:LEU:HD11	11:G:45:LEU:HD21	1.71	0.72
23:S:28:LEU:HD11	23:S:47:VAL:HG13	1.70	0.72
29:e:65:LYS:NZ	51:3:2757:A:O2'	2.22	0.72
38:n:8:ARG:HH22	38:n:12:HIS:HB3	1.55	0.72
51:3:577:C:N3	51:3:584:G:N1	2.32	0.72
51:3:849:C:O2	51:3:1224:G:N2	2.19	0.72
51:3:941:C:H2'	51:3:942:A:C8	2.24	0.72
51:3:1048:A:H2'	51:3:1049:U:C6	2.25	0.72
51:3:1327:G:H5''	51:3:1329:U:O4'	1.89	0.72
51:3:1846:A:N6	51:3:1906:G:H1	1.87	0.72
51:3:2213:A:H2'	51:3:2214:A:C8	2.25	0.72
53:5:37:C:O2	53:5:546:G:N1	2.18	0.72
53:5:104:A:OP2	53:5:284:A:N6	2.18	0.72
53:5:579:G:N2	53:5:756:A:OP2	2.17	0.72
53:5:1043:U:O2	53:5:1181:G:O6	2.08	0.72
26:b:123:ILE:HA	26:b:128:PHE:HB2	1.72	0.71
39:o:30:GLU:HB3	39:o:92:ARG:HB2	1.71	0.71
51:3:616:G:O6	51:3:1287:C:N4	2.20	0.71
51:3:1050:A:N6	51:3:1182:U:O4	2.20	0.71
51:3:1483:G:N1	51:3:2712:C:O2	2.20	0.71
53:5:659:U:O2	53:5:740:G:N1	2.19	0.71
53:5:1197:G:H2'	53:5:1198:C:C2	2.25	0.71
53:5:1257:C:H2'	53:5:1258:U:C6	2.24	0.71
7:C:73:ARG:NH1	53:5:619:A:O2'	2.23	0.71
17:M:15:LYS:NZ	53:5:1194:A:OP2	2.23	0.71
20:P:41:ARG:NH1	53:5:277:G:OP1	2.22	0.71
37:m:106:ARG:HB2	37:m:111:THR:HG22	1.70	0.71
38:n:45:ASP:O	38:n:49:ASN:N	2.22	0.71
44:t:28:MET:O	44:t:32:GLN:N	2.23	0.71
51:3:829:A:H2'	51:3:830:A:H8	1.55	0.71
51:3:874:U:H2'	51:3:875:G:H8	1.55	0.71
51:3:874:U:O2'	51:3:1222:A:N3	2.23	0.71
51:3:1102:A:C4	54:6:58:G:H4'	2.25	0.71
51:3:1337:G:H2'	51:3:1338:G:H8	1.55	0.71
51:3:1867:G:H2'	51:3:1868:A:C8	2.25	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:3:1871:U:N3	51:3:1885:G:N1	2.23	0.71
53:5:200:G:N2	53:5:215:C:O2	2.18	0.71
53:5:1153:G:N1	53:5:1156:G:OP2	2.12	0.71
4:9:30:ALA:HA	4:9:46:ARG:HD2	1.73	0.71
20:P:61:VAL:HG12	20:P:80:ILE:HA	1.72	0.71
26:b:28:VAL:HG12	26:b:192:LEU:HD22	1.72	0.71
51:3:802:U:H2'	51:3:803:G:H8	1.54	0.71
51:3:1263:G:H2'	51:3:1264:U:H6	1.54	0.71
52:4:8:C:H3'	52:4:9:C:C5	2.25	0.71
5:A:137:GLN:NE2	5:A:149:ASN:OD1	2.24	0.71
9:E:142:ARG:H	11:G:5:THR:HA	1.54	0.71
10:F:113:LYS:NZ	53:5:1272:C:OP2	2.23	0.71
38:n:9:ARG:HB3	38:n:13:LYS:HE2	1.73	0.71
49:y:3:VAL:HG13	51:3:2063:G:H21	1.56	0.71
51:3:293:G:H2'	51:3:294:G:C8	2.25	0.71
51:3:566:G:O6	51:3:2025:C:N4	2.16	0.71
51:3:990:G:H1	51:3:999:U:H3	0.75	0.71
51:3:1256:A:H5''	51:3:1257:G:H5''	1.71	0.71
51:3:2747:U:N3	51:3:2772:A:C8	2.59	0.71
53:5:775:G:H2'	53:5:776:C:C6	2.25	0.71
4:9:304:LYS:HE2	4:9:362:GLU:HB3	1.71	0.71
9:E:66:ASN:ND2	9:E:67:GLN:OE1	2.23	0.71
18:N:45:LYS:NZ	53:5:666:U:OP1	2.22	0.71
27:c:75:ARG:HD3	27:c:75:ARG:H	1.56	0.71
51:3:92:U:H3'	51:3:93:A:C8	2.25	0.71
51:3:511:U:C2	51:3:515:A:C6	2.78	0.71
51:3:1093:U:O4	51:3:1115:G:O6	2.09	0.71
51:3:2359:G:O2'	51:3:2374:A:N6	2.23	0.71
51:3:2752:G:N1	51:3:2768:U:C2	2.59	0.71
53:5:644:U:H2'	53:5:645:A:C8	2.26	0.71
6:B:109:ILE:HG23	6:B:112:PRO:HB3	1.73	0.71
22:R:81:LYS:HB2	53:5:1201:C:H4'	1.71	0.71
30:f:4:ILE:HD12	30:f:37:ALA:C	2.16	0.71
44:t:1:MET:HG2	51:3:85:U:H5'	1.72	0.71
51:3:38:G:H4'	51:3:487:C:C2	2.25	0.71
51:3:438:A:N3	51:3:443:C:H5''	2.06	0.71
51:3:2053:G:O6	51:3:2630:U:O4	2.07	0.71
53:5:341:C:O2	53:5:342:G:N1	2.24	0.71
53:5:568:G:H5'	53:5:817:U:H5'	1.71	0.71
53:5:798:U:H2'	53:5:799:A:C8	2.26	0.71
53:5:894:A:H2'	53:5:895:A:C4	2.25	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:5:1363:U:H2'	53:5:1364:C:H6	1.55	0.71
6:B:127:ILE:HD12	6:B:133:LEU:HD22	1.73	0.71
17:M:16:PHE:H	17:M:19:ARG:HB2	1.55	0.71
26:b:198:ALA:HA	51:3:2688:C:H5'	1.71	0.71
30:f:5:LEU:CD1	30:f:34:LYS:HG3	2.18	0.71
51:3:886:U:H2'	51:3:887:A:C8	2.25	0.71
51:3:2088:U:H3	51:3:2247:G:H1	0.73	0.71
51:3:2478:G:H2'	51:3:2479:A:H8	1.54	0.71
52:4:32:G:H21	52:4:35:C:H42	1.36	0.71
53:5:604:U:O2	53:5:630:G:C2	2.44	0.71
53:5:884:G:N2	53:5:901:A:O5'	2.20	0.71
53:5:1013:C:N4	53:5:1014:A:N7	2.39	0.71
8:D:80:THR:HA	53:5:917:G:H4'	1.72	0.71
49:y:6:ARG:NH2	51:3:2026:A:N7	2.39	0.71
51:3:720:A:H62	51:3:809:A:H5'	1.55	0.71
51:3:2175:U:C2	51:3:2179:A:N7	2.59	0.71
51:3:2851:U:O2	51:3:2873:G:N2	2.24	0.71
53:5:499:U:O2	53:5:542:G:C2	2.44	0.71
53:5:927:C:O2	53:5:1360:G:N2	2.16	0.71
53:5:1413:G:N1	53:5:1438:U:C2	2.57	0.71
54:6:15:A:N6	54:6:49:C:O2	2.24	0.71
9:E:66:ASN:HB2	53:5:735:C:H5''	1.71	0.71
16:L:26:GLY:H	53:5:1303:A:H5''	1.56	0.71
21:Q:69:LYS:HA	53:5:715:A:H62	1.56	0.71
32:h:40:ASN:O	32:h:44:LYS:N	2.24	0.71
35:k:22:ARG:NH1	51:3:1279:U:OP2	2.22	0.71
43:s:39:ARG:O	43:s:39:ARG:NH2	2.24	0.71
51:3:1091:G:H22	51:3:1137:C:H3'	1.55	0.71
51:3:1294:G:N3	51:3:2022:A:N6	2.39	0.71
51:3:1434:U:H2'	51:3:1435:A:C8	2.26	0.71
51:3:1785:U:O4	51:3:1791:A:O2'	2.08	0.71
53:5:310:C:H2'	53:5:311:A:C8	2.25	0.71
5:A:72:VAL:HA	5:A:75:VAL:HG22	1.72	0.71
8:D:152:LYS:O	8:D:179:TYR:N	2.23	0.71
10:F:73:GLU:O	10:F:87:PRO:HA	1.90	0.71
27:c:68:GLN:NE2	51:3:710:A:O3'	2.24	0.71
34:j:25:LEU:HB3	34:j:38:VAL:HG13	1.71	0.71
38:n:57:SER:HB3	38:n:64:ASN:HB2	1.72	0.71
51:3:29:G:N1	51:3:547:G:O2'	2.11	0.71
51:3:332:G:N2	51:3:375:U:O4	2.24	0.71
51:3:680:A:H4'	51:3:681:A:C6	2.26	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:3:984:C:H2'	51:3:985:A:C8	2.25	0.71
51:3:1079:U:O2'	51:3:1082:A:O2'	2.07	0.71
51:3:1086:G:H1	51:3:1143:U:H3	0.75	0.71
51:3:1469:C:N3	51:3:1583:G:N1	2.36	0.71
51:3:1922:U:H3'	51:3:1923:A:H8	1.55	0.71
51:3:1989:U:H2'	51:3:1990:C:H6	1.55	0.71
51:3:2089:A:N6	51:3:2245:G:O2'	2.23	0.71
51:3:2353:G:O6	51:3:2379:G:O6	2.09	0.71
51:3:2570:U:O2	51:3:2574:A:N7	2.24	0.71
9:E:9:VAL:HB	9:E:81:GLN:HE21	1.55	0.70
15:K:133:LYS:HA	53:5:37:C:H5''	1.71	0.70
25:a:233:MET:HB2	25:a:238:HIS:HB3	1.73	0.70
44:t:41:LYS:O	44:t:64:GLN:NE2	2.24	0.70
51:3:2876:G:H2'	51:3:2877:A:C8	2.26	0.70
53:5:59:C:H2'	53:5:60:A:H8	1.55	0.70
53:5:168:A:H3'	53:5:169:G:H8	1.54	0.70
53:5:252:U:H2'	53:5:253:G:H8	1.56	0.70
54:6:27:A:H3'	54:6:28:A:C8	2.26	0.70
4:9:213:LEU:HD21	4:9:230:GLY:HA3	1.71	0.70
4:9:224:ARG:HG3	53:5:56:A:N1	2.05	0.70
5:A:179:ASP:OD1	5:A:180:ASP:N	2.23	0.70
8:D:69:ARG:NH1	8:D:168:ALA:O	2.24	0.70
29:e:88:LYS:NZ	29:e:89:LYS:O	2.24	0.70
30:f:4:ILE:CG1	30:f:42:LYS:HG3	2.21	0.70
40:p:65:ASN:HA	40:p:68:LEU:HD12	1.72	0.70
51:3:603:G:N1	51:3:2507:C:O5'	2.22	0.70
51:3:1645:C:H2'	51:3:1646:G:H8	1.54	0.70
53:5:44:C:O2	53:5:395:G:N2	2.18	0.70
53:5:598:U:H3	53:5:635:G:H1	1.38	0.70
53:5:970:A:H1'	53:5:1332:U:H4'	1.73	0.70
53:5:1046:A:H62	53:5:1175:C:N4	1.88	0.70
6:B:8:ASN:O	6:B:16:LYS:NZ	2.24	0.70
8:D:107:LYS:NZ	53:5:1071:A:OP1	2.22	0.70
21:Q:88:LYS:HB3	21:Q:92:ARG:HH12	1.55	0.70
22:R:29:ARG:HA	22:R:47:ASN:HB2	1.71	0.70
33:i:107:ALA:O	51:3:1173:G:O2'	2.08	0.70
51:3:42:U:H4'	51:3:649:A:H2	1.56	0.70
51:3:281:U:H2'	51:3:282:C:H6	1.55	0.70
51:3:2064:G:H3'	51:3:2065:A:C8	2.26	0.70
51:3:2615:G:H2'	51:3:2616:G:C8	2.26	0.70
53:5:470:U:H2'	53:5:471:A:C8	2.26	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:5:1001:A:OP2	53:5:1019:G:N2	2.23	0.70
7:C:106:PHE:HA	7:C:158:SER:HA	1.73	0.70
10:F:113:LYS:HD3	53:5:1272:C:C2	2.25	0.70
29:e:28:LYS:NZ	29:e:29:GLY:O	2.24	0.70
33:i:119:ARG:NH2	51:3:564:A:OP2	2.24	0.70
37:m:77:GLN:HG2	37:m:81:HIS:CE1	2.27	0.70
42:r:72:PHE:H	42:r:107:LEU:HA	1.57	0.70
51:3:622:U:H2'	51:3:623:A:H8	1.54	0.70
51:3:633:G:H2'	51:3:634:C:C6	2.25	0.70
51:3:1310:U:H3	51:3:1314:A:H62	0.74	0.70
51:3:1440:U:H2'	51:3:1441:A:C8	2.26	0.70
52:4:8:C:N4	52:4:101:C:N3	2.40	0.70
12:H:123:ALA:N	53:5:1323:A:OP1	2.25	0.70
25:a:268:ARG:NH1	25:a:275:THR:OG1	2.23	0.70
29:e:100:ASN:HA	29:e:128:VAL:HG21	1.73	0.70
46:v:3:LYS:NZ	51:3:1392:G:OP1	2.25	0.70
51:3:325:G:H1	51:3:383:U:H3	1.39	0.70
51:3:1160:G:H3'	51:3:1161:A:C8	2.26	0.70
51:3:1293:U:H3'	51:3:1294:G:C8	2.26	0.70
51:3:2297:G:O6	51:3:2351:U:O4	2.09	0.70
51:3:2424:C:H2'	51:3:2425:C:C6	2.27	0.70
51:3:2856:G:N1	51:3:2869:U:N3	2.37	0.70
53:5:247:G:O6	53:5:268:C:N4	2.24	0.70
53:5:1122:U:H2'	53:5:1123:G:C4	2.27	0.70
53:5:1417:U:H2'	53:5:1418:G:C8	2.23	0.70
15:K:60:SER:O	53:5:527:G:N1	2.25	0.70
25:a:253:ALA:O	25:a:261:ARG:NH2	2.24	0.70
26:b:35:GLN:HE22	26:b:76:LYS:H	1.36	0.70
26:b:41:THR:N	26:b:45:ASP:OD2	2.24	0.70
29:e:110:LEU:HB3	29:e:155:ARG:HE	1.54	0.70
30:f:3:VAL:H	30:f:39:LEU:HD11	1.55	0.70
36:l:133:LYS:NZ	36:l:134:ARG:O	2.24	0.70
49:y:7:ARG:HD3	49:y:7:ARG:H	1.56	0.70
51:3:138:U:H2'	51:3:139:G:H8	1.56	0.70
51:3:223:A:N3	51:3:238:U:O2'	2.25	0.70
51:3:896:U:OP2	51:3:953:G:N2	2.23	0.70
51:3:1036:A:H2'	51:3:1037:A:C8	2.27	0.70
53:5:59:C:H1'	53:5:384:G:C8	2.26	0.70
53:5:69:G:H2'	53:5:70:A:O4'	1.92	0.70
53:5:918:A:H1'	53:5:1373:A:H2'	1.72	0.70
53:5:1065:G:O6	53:5:1074:U:O2	2.09	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:9:158:LEU:HD11	4:9:165:GLY:HA2	1.74	0.70
9:E:106:GLN:O	9:E:110:GLN:NE2	2.24	0.70
16:L:86:TRP:HD1	22:R:76:PRO:HA	1.55	0.70
22:R:38:SER:HB2	22:R:71:LEU:HB2	1.74	0.70
24:T:36:LEU:H	24:T:41:ARG:NH1	1.88	0.70
51:3:518:A:OP2	51:3:542:A:N6	2.23	0.70
51:3:2409:U:O2	51:3:2423:G:N2	2.24	0.70
51:3:2497:U:O2'	51:3:2499:U:O4	2.09	0.70
51:3:2522:U:H2'	51:3:2523:C:C6	2.27	0.70
51:3:2552:G:H2'	51:3:2553:G:H8	1.57	0.70
51:3:2662:A:H61	51:3:2674:C:H5	1.38	0.70
53:5:876:C:H2'	53:5:877:C:H6	1.55	0.70
53:5:1112:U:H2'	53:5:1113:U:C6	2.25	0.70
53:5:1181:G:H2'	53:5:1182:C:C6	2.27	0.70
9:E:26:GLN:HG3	9:E:35:LEU:HD21	1.74	0.70
17:M:5:SER:HA	17:M:8:VAL:HG12	1.72	0.70
20:P:5:GLN:HG2	53:5:113:C:H5'	1.72	0.70
34:j:77:LEU:HB2	39:o:77:LYS:HE2	1.72	0.70
42:r:87:PRO:HA	51:3:1648:A:N6	2.07	0.70
51:3:243:U:H3'	51:3:244:G:C8	2.27	0.70
51:3:1363:C:H2'	51:3:1364:A:C8	2.26	0.70
51:3:1670:U:H2'	51:3:1671:C:C6	2.27	0.70
51:3:2367:C:H3'	51:3:2368:A:C8	2.25	0.70
51:3:2575:G:H2'	51:3:2576:A:C8	2.27	0.70
52:4:39:U:H5'	52:4:40:U:H5	1.57	0.70
53:5:434:U:H2'	53:5:435:U:C6	2.27	0.70
53:5:603:U:O4	53:5:630:G:O6	2.10	0.70
53:5:943:C:O2	53:5:1208:G:N2	2.19	0.70
53:5:1328:C:H2'	53:5:1329:G:C8	2.25	0.70
4:9:36:LEU:HD11	4:9:70:TYR:HD1	1.54	0.70
9:E:43:LYS:HZ3	9:E:45:LEU:HA	1.56	0.70
10:F:139:ASP:O	10:F:143:MET:N	2.15	0.70
20:P:20:LYS:HE3	53:5:251:G:H5''	1.74	0.70
20:P:32:HIS:CE1	20:P:35:TYR:H	2.10	0.70
20:P:79:LYS:NZ	20:P:80:ILE:O	2.25	0.70
42:r:89:ALA:HB1	51:3:783:G:H8	1.57	0.70
51:3:611:A:H2'	51:3:2025:C:H5''	1.74	0.70
7:C:199:TRP:O	7:C:202:ARG:NE	2.25	0.70
15:K:99:ARG:CZ	15:K:107:ARG:HG3	2.22	0.70
23:S:35:PHE:HD2	23:S:43:ASN:HB3	1.56	0.70
27:c:98:ASN:H	51:3:623:A:H5''	1.55	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:3:1557:G:H3'	51:3:1571:G:H22	1.57	0.70
51:3:2306:A:OP2	51:3:2326:G:N2	2.23	0.70
51:3:2484:A:H2'	51:3:2485:U:C2	2.27	0.70
51:3:2664:U:H3	51:3:2673:A:H8	1.35	0.70
51:3:2856:G:H2'	51:3:2857:C:C6	2.27	0.70
52:4:31:G:N2	52:4:34:U:O4	2.25	0.70
53:5:358:G:N1	53:5:361:U:OP2	2.24	0.70
53:5:542:G:H2'	53:5:543:C:C6	2.27	0.70
53:5:1195:G:H2'	53:5:1196:G:C8	2.26	0.70
30:f:47:ARG:NH2	30:f:47:ARG:O	2.25	0.69
40:p:12:ARG:O	40:p:15:LYS:HG2	1.91	0.69
47:w:63:LEU:HB2	47:w:66:GLN:HE21	1.57	0.69
51:3:269:A:C6	51:3:315:A:H5''	2.27	0.69
51:3:326:A:H2'	51:3:327:U:C6	2.26	0.69
51:3:663:A:N6	51:3:673:A:O5'	2.24	0.69
51:3:714:G:H2'	51:3:715:G:C8	2.27	0.69
51:3:892:G:H2'	51:3:893:A:C8	2.27	0.69
51:3:1056:A:O2'	51:3:1158:C:OP1	2.07	0.69
51:3:1242:G:C2	51:3:1267:A:N7	2.60	0.69
53:5:41:C:H2'	53:5:42:G:C8	2.26	0.69
53:5:435:U:O2'	53:5:437:U:O4	2.10	0.69
54:7:9:U:O2	54:7:15:A:N7	2.25	0.69
6:B:33:TRP:HA	6:B:60:ARG:HH22	1.57	0.69
33:i:138:GLN:NE2	51:3:8:A:N3	2.40	0.69
36:l:83:MET:O	51:3:2258:G:H5''	1.91	0.69
42:r:16:LYS:HA	42:r:19:LEU:HD12	1.74	0.69
46:v:32:ASN:HB2	51:3:433:A:H5''	1.73	0.69
50:z:31:LYS:NZ	50:z:49:GLU:O	2.24	0.69
51:3:269:A:C5	51:3:315:A:H5''	2.27	0.69
51:3:917:G:O6	51:3:934:C:N4	2.18	0.69
51:3:1374:U:O2	51:3:1635:G:N2	2.25	0.69
51:3:1380:U:H3	51:3:1406:A:H62	1.35	0.69
51:3:1458:A:N6	51:3:1597:U:O4	2.17	0.69
51:3:1645:C:H2'	51:3:1646:G:C8	2.26	0.69
51:3:1867:G:N2	51:3:1890:U:O2	2.25	0.69
51:3:1961:A:O2'	51:3:1963:U:O4	2.08	0.69
51:3:2113:U:O4	51:3:2191:G:O6	2.09	0.69
51:3:2851:U:H3'	51:3:2852:G:H8	1.57	0.69
53:5:627:U:H2'	53:5:628:A:C4	2.28	0.69
53:5:886:A:H61	53:5:900:G:H1'	1.57	0.69
2:1:28:HIS:NE2	51:3:2429:G:OP2	2.25	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:B:32:LYS:O	6:B:36:GLU:HB2	1.92	0.69
17:M:19:ARG:NH1	53:5:974:C:O2'	2.24	0.69
26:b:55:ASP:OD2	26:b:80:HIS:ND1	2.23	0.69
36:l:118:LEU:HD13	36:l:131:ILE:HD12	1.74	0.69
51:3:1202:A:H2'	51:3:1203:G:H8	1.55	0.69
51:3:1501:U:O2	51:3:1542:G:N2	2.25	0.69
2:1:7:ALA:O	2:1:11:PHE:N	2.26	0.69
4:9:306:LYS:HB3	4:9:391:GLU:HB3	1.75	0.69
14:J:34:VAL:O	53:5:681:U:O2'	2.10	0.69
25:a:183:GLN:NE2	25:a:184:LEU:O	2.25	0.69
51:3:1055:A:N1	51:3:1176:U:O2'	2.22	0.69
51:3:1391:U:H2'	51:3:1392:G:H8	1.56	0.69
51:3:1392:G:O2'	51:3:1815:U:O4	2.10	0.69
51:3:1553:G:N1	51:3:1577:A:OP2	2.20	0.69
51:3:1806:G:N1	51:3:1826:A:OP2	2.20	0.69
51:3:1951:A:N6	51:3:2565:G:O2'	2.25	0.69
51:3:2308:U:H2'	51:3:2309:A:C8	2.27	0.69
51:3:2527:U:O5'	51:3:2550:A:N6	2.24	0.69
51:3:2540:G:O2'	51:3:2665:A:N1	2.25	0.69
51:3:2829:G:OP2	51:3:2829:G:N2	2.16	0.69
53:5:59:C:H1'	53:5:384:G:H8	1.56	0.69
17:M:41:ARG:HG2	17:M:42:LEU:HD12	1.74	0.69
44:t:105:LYS:NZ	51:3:333:A:OP1	2.26	0.69
47:w:53:THR:O	47:w:57:ILE:N	2.23	0.69
51:3:155:A:H2'	51:3:156:A:C8	2.28	0.69
51:3:659:C:H2'	51:3:660:U:C6	2.28	0.69
51:3:1204:A:N6	51:3:1212:C:H42	1.91	0.69
51:3:1296:G:H1	51:3:2019:G:H3'	1.58	0.69
51:3:1639:C:C2	51:3:1640:G:H1'	2.27	0.69
54:7:37:A:O2'	54:7:38:G:O5'	2.10	0.69
4:9:259:ILE:HD13	4:9:277:VAL:HG22	1.75	0.69
7:C:123:LEU:HD13	7:C:145:LYS:HE2	1.75	0.69
9:E:66:ASN:ND2	53:5:736:U:OP1	2.25	0.69
15:K:53:MET:O	15:K:63:ARG:N	2.26	0.69
25:a:72:LYS:HB3	25:a:74:THR:HG23	1.75	0.69
27:c:146:PHE:O	27:c:150:ALA:N	2.24	0.69
36:l:20:LYS:HG3	36:l:21:ALA:H	1.57	0.69
39:o:101:ILE:HD12	39:o:104:MET:HG3	1.75	0.69
46:v:30:ASN:HB2	51:3:2238:G:H5''	1.74	0.69
51:3:98:C:H2'	51:3:99:C:C6	2.26	0.69
51:3:1059:G:H3'	51:3:1060:G:H2'	1.75	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:3:1379:C:O2'	51:3:1605:A:N3	2.22	0.69
51:3:1798:A:N6	51:3:1835:G:O2'	2.25	0.69
51:3:2124:A:H3'	51:3:2125:U:H5''	1.74	0.69
53:5:318:C:OP2	53:5:324:C:N4	2.26	0.69
53:5:447:G:H5'	53:5:449:A:H62	1.57	0.69
53:5:1278:G:OP2	53:5:1279:G:N2	2.26	0.69
6:B:40:ILE:HG12	6:B:95:ILE:HD13	1.75	0.69
6:B:85:ILE:HD11	6:B:104:LEU:HD11	1.74	0.69
7:C:8:PHE:CD2	53:5:426:U:H3'	2.28	0.69
11:G:9:LYS:HG2	53:5:822:A:H5'	1.75	0.69
25:a:246:ARG:CZ	51:3:2598:C:H5''	2.22	0.69
27:c:106:LYS:HG2	51:3:634:C:H4'	1.75	0.69
34:j:15:GLY:HA3	34:j:50:GLY:HA3	1.75	0.69
38:n:8:ARG:HH12	38:n:12:HIS:CD2	2.11	0.69
40:p:12:ARG:HA	40:p:15:LYS:HE2	1.75	0.69
47:w:10:LYS:HD3	47:w:14:GLU:H	1.55	0.69
51:3:246:G:N2	51:3:259:A:OP2	2.24	0.69
51:3:386:U:H2'	51:3:387:U:C6	2.27	0.69
51:3:562:C:N4	51:3:2787:U:O5'	2.25	0.69
51:3:573:A:N6	51:3:588:G:H1'	2.07	0.69
51:3:810:G:O2'	51:3:829:A:OP2	2.11	0.69
51:3:840:G:C6	51:3:2075:U:H5''	2.28	0.69
51:3:1127:C:H3'	51:3:1128:G:C8	2.28	0.69
51:3:1334:U:H2'	51:3:1335:A:C8	2.27	0.69
51:3:2335:A:H2'	51:3:2336:A:O4'	1.93	0.69
51:3:2385:A:H2'	51:3:2386:A:C4	2.28	0.69
53:5:848:U:H3'	53:5:865:U:H3	1.57	0.69
53:5:1394:G:H1	53:5:1456:U:H3	1.38	0.69
53:5:1409:A:H3'	53:5:1410:A:H8	1.54	0.69
1:0:12:ARG:NH2	51:3:501:G:OP1	2.26	0.69
4:9:308:GLU:HB3	4:9:390:THR:HG21	1.74	0.69
4:9:378:ARG:NE	4:9:383:THR:OG1	2.24	0.69
9:E:97:LEU:HD23	9:E:100:ILE:HG23	1.74	0.69
25:a:150:ILE:HD13	25:a:198:ALA:HB2	1.73	0.69
33:i:95:MET:HA	33:i:98:LYS:HB2	1.75	0.69
43:s:45:GLU:O	43:s:49:GLY:N	2.26	0.69
46:v:22:LYS:NZ	51:3:424:G:N3	2.34	0.69
46:v:38:VAL:H	46:v:45:THR:HB	1.57	0.69
47:w:31:PHE:O	47:w:35:HIS:ND1	2.18	0.69
51:3:142:A:O2'	51:3:1436:C:O3'	2.09	0.69
51:3:184:A:H4'	51:3:185:U:OP2	1.91	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:3:355:A:C4	51:3:375:U:H4'	2.27	0.69
51:3:383:U:H2'	51:3:384:G:C8	2.28	0.69
51:3:647:G:O2'	51:3:650:G:N7	2.23	0.69
51:3:894:G:N3	51:3:2276:A:H2'	2.08	0.69
51:3:1219:U:H2'	51:3:1220:A:C8	2.27	0.69
51:3:1264:U:H3'	51:3:1265:G:C8	2.28	0.69
51:3:1295:A:N6	51:3:2021:A:OP2	2.25	0.69
51:3:1665:G:O2'	51:3:1667:G:O6	2.10	0.69
51:3:1932:C:N3	51:3:1936:G:N1	2.38	0.69
51:3:2277:A:H2'	51:3:2278:G:C8	2.28	0.69
51:3:2486:A:HO2'	51:3:2536:U:HO2'	1.39	0.69
51:3:2787:U:H4'	51:3:2788:U:H3'	1.74	0.69
51:3:2853:U:N3	51:3:2871:G:OP2	2.26	0.69
53:5:368:C:H41	53:5:383:U:H2'	1.58	0.69
53:5:1112:U:O4	53:5:1128:G:O6	2.09	0.69
53:5:1333:C:O2'	53:5:1336:C:N4	2.24	0.69
4:9:241:GLN:HG2	4:9:295:LYS:HE2	1.75	0.69
9:E:110:GLN:O	9:E:114:LYS:N	2.24	0.69
10:F:14:ASP:O	10:F:18:ASN:N	2.18	0.69
16:L:104:THR:OG1	53:5:1205:C:N4	2.25	0.69
26:b:108:VAL:HG23	26:b:179:LEU:HD12	1.75	0.69
27:c:144:MET:HE1	27:c:174:ASN:HD22	1.56	0.69
51:3:42:U:H2'	51:3:43:A:H8	1.57	0.69
51:3:675:U:H2'	51:3:676:U:H6	1.56	0.69
51:3:840:G:OP2	51:3:841:C:N4	2.16	0.69
51:3:882:C:H3'	51:3:883:A:C8	2.28	0.69
51:3:1080:A:H1'	51:3:1082:A:N3	2.07	0.69
51:3:2057:C:H2'	51:3:2058:G:C8	2.28	0.69
51:3:2266:C:O2'	51:3:2435:C:OP2	2.11	0.69
53:5:219:A:H2'	53:5:220:U:C6	2.28	0.69
53:5:405:C:H3'	53:5:406:G:H8	1.58	0.69
53:5:660:A:N1	53:5:739:G:O6	2.26	0.69
53:5:774:A:H3'	53:5:775:G:C8	2.28	0.69
53:5:1012:A:C5	53:5:1013:C:H1'	2.27	0.69
54:7:19:G:N2	54:7:59:A:OP2	2.25	0.69
5:A:180:ASP:HB3	5:A:183:TYR:HB3	1.75	0.69
7:C:28:GLY:O	7:C:31:ARG:NH1	2.26	0.69
7:C:141:LYS:NZ	7:C:175:GLU:OE1	2.22	0.69
7:C:184:ARG:HH12	7:C:189:ALA:HA	1.58	0.69
9:E:97:LEU:HG	9:E:99:SER:H	1.58	0.69
12:H:56:LEU:HD22	12:H:103:LYS:HD2	1.75	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:S:63:ASN:ND2	53:5:258:A:O2'	2.26	0.69
25:a:240:HIS:HE1	25:a:254:PRO:HG3	1.57	0.69
27:c:185:LYS:HD2	51:3:650:G:H1	1.57	0.69
37:m:7:PRO:O	51:3:2009:U:O2'	2.09	0.69
37:m:94:PRO:O	51:3:2843:G:N2	2.22	0.69
38:n:110:ARG:NH2	51:3:2384:A:N3	2.34	0.69
46:v:29:TRP:NE1	51:3:2240:U:OP1	2.26	0.69
51:3:299:A:H2'	51:3:300:G:C8	2.28	0.69
51:3:1011:A:N7	51:3:1025:G:N2	2.40	0.69
51:3:1104:A:N7	54:6:57:C:H5''	2.08	0.69
51:3:1275:C:H2'	51:3:1276:A:C8	2.27	0.69
51:3:1495:A:OP2	51:3:1548:A:N6	2.26	0.69
52:4:32:G:N2	52:4:35:C:H42	1.90	0.69
53:5:38:U:H2'	53:5:39:G:H8	1.58	0.69
53:5:118:C:N4	53:5:226:G:O6	2.26	0.69
54:6:23:G:OP2	54:6:47:G:N1	2.25	0.69
10:F:101:ARG:NH1	53:5:1350:A:O2'	2.26	0.68
18:N:6:ASN:OD1	18:N:10:LYS:NZ	2.25	0.68
35:k:82:LEU:HA	35:k:85:ILE:HG22	1.74	0.68
36:l:72:MET:HE2	36:l:95:ALA:HA	1.75	0.68
37:m:74:ASP:O	37:m:78:LEU:N	2.21	0.68
42:r:132:GLN:OE1	51:3:1260:U:O2'	2.09	0.68
51:3:694:U:H2'	51:3:695:G:C8	2.26	0.68
51:3:873:G:H2'	51:3:874:U:C6	2.28	0.68
51:3:986:G:N2	51:3:1003:U:O2	2.26	0.68
51:3:1714:U:H3'	51:3:1715:A:C8	2.27	0.68
51:3:1724:A:H61	51:3:1731:G:H2'	1.57	0.68
51:3:2331:G:N1	51:3:2340:U:N3	2.40	0.68
51:3:2571:U:O2'	51:3:2573:A:N7	2.22	0.68
53:5:136:U:H2'	53:5:137:A:H8	1.57	0.68
54:6:61:U:OP1	54:6:62:C:N4	2.23	0.68
4:9:256:VAL:HA	4:9:279:LEU:HD13	1.75	0.68
8:D:84:ARG:NH1	53:5:16:G:O3'	2.25	0.68
10:F:37:LEU:HD23	53:5:1215:U:H1'	1.74	0.68
17:M:26:ARG:NH2	53:5:1177:U:O2	2.25	0.68
24:T:37:ARG:NH1	24:T:40:MET:SD	2.66	0.68
25:a:220:ARG:NH1	51:3:799:A:N3	2.42	0.68
35:k:100:GLU:O	35:k:102:GLN:NE2	2.26	0.68
36:l:82:ARG:NH2	54:7:75:C:O2	2.25	0.68
45:u:35:LEU:HD13	45:u:54:GLN:HA	1.76	0.68
51:3:246:G:N2	51:3:247:U:O4	2.26	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:3:292:G:H3'	51:3:293:G:C8	2.27	0.68
51:3:894:G:O2'	51:3:2276:A:N3	2.23	0.68
51:3:1010:G:N1	51:3:1025:G:H1'	2.07	0.68
51:3:1087:C:H2'	51:3:1088:A:H8	1.59	0.68
51:3:2455:G:H8	51:3:2508:U:H3'	1.57	0.68
51:3:2699:C:H5'	51:3:2876:G:H5'	1.73	0.68
53:5:172:C:H2'	53:5:173:U:C6	2.28	0.68
53:5:825:A:H62	53:5:852:G:H21	1.41	0.68
53:5:911:G:H2'	53:5:912:G:H8	1.58	0.68
53:5:1111:G:H2'	53:5:1112:U:C6	2.27	0.68
53:5:1132:G:O3'	53:5:1133:A:H8	1.77	0.68
53:5:1321:G:N1	53:5:1349:A:OP2	2.26	0.68
53:5:1384:A:H2'	53:5:1385:A:C8	2.28	0.68
2:1:25:TYR:HA	51:3:2400:A:H5''	1.73	0.68
4:9:182:ASP:OD2	4:9:185:TRP:N	2.26	0.68
30:f:1:MET:HG3	30:f:2:LYS:H	1.57	0.68
43:s:3:VAL:O	47:w:23:LYS:NZ	2.25	0.68
51:3:194:A:OP2	51:3:209:G:N1	2.25	0.68
51:3:668:A:H2'	51:3:669:A:C8	2.28	0.68
51:3:1028:C:H2'	51:3:1029:A:C8	2.28	0.68
51:3:1036:A:H3'	51:3:1189:G:H22	1.58	0.68
51:3:1240:U:H4'	51:3:1241:U:H5''	1.74	0.68
51:3:2088:U:H2'	51:3:2089:A:H8	1.59	0.68
51:3:2316:G:O2'	51:3:2318:A:N6	2.25	0.68
51:3:2451:C:H2'	51:3:2452:G:C8	2.28	0.68
51:3:2812:U:H1'	51:3:2813:A:H2'	1.75	0.68
53:5:520:C:O2'	53:5:534:C:OP1	2.10	0.68
53:5:702:U:H3'	53:5:703:A:C8	2.29	0.68
53:5:1351:U:H2'	53:5:1352:A:C8	2.28	0.68
6:B:165:ILE:HB	53:5:1047:U:H4'	1.74	0.68
7:C:167:VAL:HA	7:C:179:VAL:HG23	1.75	0.68
22:R:19:VAL:HG21	22:R:44:PHE:HD1	1.57	0.68
25:a:279:ILE:O	25:a:286:GLN:N	2.27	0.68
29:e:49:LYS:HB3	29:e:52:ASN:HB3	1.75	0.68
29:e:150:GLU:O	29:e:153:LYS:NZ	2.19	0.68
33:i:71:LYS:NZ	51:3:1176:U:OP2	2.27	0.68
42:r:28:LYS:HG2	42:r:29:THR:H	1.57	0.68
51:3:715:G:H2'	51:3:716:G:C8	2.28	0.68
51:3:829:A:H2'	51:3:830:A:C8	2.29	0.68
51:3:1633:C:H2'	51:3:1634:A:H8	1.57	0.68
53:5:329:C:H2'	53:5:330:C:H6	1.57	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:5:369:A:O2'	53:5:448:A:N7	2.20	0.68
53:5:911:G:H2'	53:5:912:G:C8	2.29	0.68
53:5:1233:G:H2'	53:5:1234:C:C6	2.27	0.68
19:O:61:ASP:HB2	53:5:451:G:H4'	1.75	0.68
28:d:73:ALA:HB1	54:7:57:C:H5'	1.74	0.68
51:3:85:U:N3	51:3:104:A:OP2	2.26	0.68
51:3:608:A:O2'	51:3:2509:C:OP1	2.12	0.68
51:3:730:G:H2'	51:3:731:A:C8	2.28	0.68
51:3:1698:A:N6	51:3:2003:C:H42	1.91	0.68
51:3:1958:U:H1'	51:3:1961:A:H8	1.59	0.68
51:3:2004:G:H2'	51:3:2005:G:C8	2.28	0.68
53:5:1098:C:H2'	53:5:1099:G:H8	1.57	0.68
53:5:1248:U:H3'	53:5:1249:G:H8	1.58	0.68
53:5:1437:A:H2'	53:5:1438:U:C6	2.29	0.68
4:9:320:HIS:NE2	54:6:53:A:O2'	2.25	0.68
26:b:114:SER:OG	26:b:171:HIS:N	2.26	0.68
27:c:185:LYS:O	51:3:650:G:N2	2.26	0.68
34:j:43:VAL:HG11	34:j:46:ALA:HB2	1.75	0.68
39:o:100:TYR:OH	39:o:105:ARG:NE	2.26	0.68
45:u:20:GLY:N	54:7:2:G:O2'	2.26	0.68
47:w:60:GLU:OE2	47:w:61:ARG:NH1	2.26	0.68
51:3:294:G:O2'	51:3:296:U:O4	2.06	0.68
51:3:577:C:O2	51:3:584:G:N2	2.19	0.68
51:3:720:A:P	51:3:823:A:H62	2.16	0.68
51:3:1036:A:N6	51:3:1190:A:O5'	2.27	0.68
51:3:1141:U:H2'	51:3:1142:G:C8	2.20	0.68
51:3:1316:U:H5	51:3:1354:U:H3	1.40	0.68
51:3:1337:G:H2'	51:3:1338:G:C8	2.29	0.68
51:3:1722:U:H1'	51:3:1735:A:C5	2.28	0.68
51:3:2006:C:O2'	51:3:2695:U:O2'	2.09	0.68
53:5:189:C:H2'	53:5:190:A:C8	2.29	0.68
53:5:360:A:H2'	53:5:361:U:C2	2.29	0.68
53:5:931:C:H3'	53:5:932:A:H8	1.59	0.68
53:5:1411:A:H2'	53:5:1412:C:O4'	1.93	0.68
22:R:45:VAL:HG13	22:R:62:VAL:HG13	1.76	0.68
26:b:144:GLN:NE2	51:3:2520:C:O2'	2.26	0.68
30:f:45:GLN:OE1	30:f:45:GLN:N	2.24	0.68
45:u:44:MET:HA	45:u:100:HIS:CE1	2.29	0.68
51:3:278:U:H2'	51:3:279:U:H6	1.59	0.68
51:3:814:U:H2'	51:3:815:G:C8	2.28	0.68
51:3:974:C:H2'	51:3:975:G:C8	2.29	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:3:1942:G:N2	51:3:1971:G:O5'	2.27	0.68
51:3:2083:U:OP2	51:3:2246:G:N2	2.17	0.68
51:3:2497:U:H3'	51:3:2498:G:C8	2.28	0.68
51:3:2856:G:O6	51:3:2869:U:O4	2.11	0.68
52:4:9:C:O2'	52:4:13:G:O6	2.12	0.68
53:5:80:U:H2'	53:5:81:A:H8	1.57	0.68
53:5:134:G:C6	53:5:160:A:N1	2.61	0.68
53:5:219:A:O2'	53:5:220:U:OP1	2.12	0.68
53:5:242:A:N7	53:5:277:G:C2	2.62	0.68
53:5:711:G:H2'	53:5:712:A:C8	2.28	0.68
53:5:1293:A:O2'	53:5:1297:G:N7	2.25	0.68
53:5:1333:C:O2'	53:5:1335:G:OP2	2.08	0.68
9:E:47:TYR:CD2	21:Q:100:PRO:HA	2.28	0.68
13:I:61:PRO:O	17:M:41:ARG:NH1	2.27	0.68
20:P:63:ILE:HG13	20:P:77:ILE:HD13	1.76	0.68
26:b:69:PHE:CG	51:3:2794:U:H4'	2.29	0.68
46:v:13:LEU:HB3	46:v:29:TRP:HB2	1.76	0.68
51:3:947:A:N6	51:3:2285:G:O2'	2.26	0.68
51:3:1084:C:H2'	51:3:1085:A:C8	2.29	0.68
51:3:1496:A:H3'	51:3:1497:A:C8	2.26	0.68
51:3:1919:A:N7	51:3:1924:U:C2	2.62	0.68
53:5:830:U:H2'	53:5:831:C:C6	2.28	0.68
53:5:886:A:H2'	53:5:887:C:C6	2.28	0.68
53:5:1012:A:C4	53:5:1013:C:H1'	2.28	0.68
53:5:1083:A:C6	53:5:1101:A:H4'	2.27	0.68
8:D:140:VAL:HB	8:D:202:GLN:HE21	1.57	0.68
16:L:14:ARG:NH2	16:L:41:PRO:O	2.27	0.68
26:b:99:GLN:HE22	26:b:189:MET:HG2	1.59	0.68
29:e:118:GLU:OE2	29:e:154:TRP:NE1	2.27	0.68
29:e:146:GLN:CD	51:3:2752:G:H21	2.01	0.68
51:3:441:U:H3'	51:3:442:G:H8	1.58	0.68
51:3:629:G:O6	51:3:696:U:O4	2.12	0.68
51:3:680:A:H2'	51:3:682:A:C8	2.29	0.68
51:3:897:A:H3'	51:3:898:A:H8	1.58	0.68
51:3:1104:A:O2'	51:3:1108:A:N7	2.25	0.68
51:3:1822:A:H4'	51:3:1823:U:H5'	1.74	0.68
51:3:1932:C:O2	51:3:1936:G:O6	2.12	0.68
51:3:2365:U:O2'	51:3:2368:A:N6	2.26	0.68
51:3:2686:C:H2'	51:3:2687:A:C8	2.29	0.68
53:5:590:G:H1	53:5:644:U:H3	0.78	0.68
53:5:604:U:N3	53:5:630:G:C6	2.61	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:5:1056:U:O2	53:5:1057:C:N4	2.24	0.68
3:2:14:CYS:SG	3:2:32:HIS:ND1	2.66	0.68
7:C:56:GLU:OE1	7:C:59:ARG:NH2	2.27	0.68
49:y:6:ARG:NH1	51:3:2026:A:OP2	2.27	0.68
49:y:33:CYS:SG	49:y:44:SER:OG	2.51	0.68
51:3:142:A:H2	51:3:1628:G:H21	1.42	0.68
51:3:465:A:H2'	51:3:466:A:C4	2.29	0.68
51:3:562:C:N4	51:3:2785:G:O2'	2.27	0.68
53:5:27:A:N6	53:5:556:G:N3	2.42	0.68
53:5:478:G:O2'	53:5:480:C:N4	2.27	0.68
53:5:991:A:N1	53:5:1036:C:O2'	2.26	0.68
54:6:7:U:H3	54:6:68:G:H1	0.75	0.68
4:9:71:SER:HA	4:9:76:HIS:HA	1.76	0.67
8:D:143:ARG:HA	8:D:148:ARG:HG3	1.77	0.67
10:F:2:ARG:NH2	53:5:926:C:H3'	2.09	0.67
12:H:107:THR:HG22	53:5:1154:A:H4'	1.76	0.67
15:K:12:ARG:NH1	53:5:561:A:N3	2.41	0.67
26:b:151:ARG:HG3	51:3:2580:A:C8	2.29	0.67
45:u:55:ARG:NH2	45:u:70:ASP:OD2	2.27	0.67
51:3:946:A:O2'	51:3:948:A:OP2	2.12	0.67
51:3:2699:C:H2'	51:3:2700:C:C6	2.29	0.67
53:5:434:U:H3	53:5:493:A:H8	1.25	0.67
53:5:840:C:OP2	53:5:841:C:N4	2.27	0.67
53:5:862:C:H2'	53:5:863:A:O4'	1.94	0.67
53:5:1123:G:N2	53:5:1124:U:O4	2.24	0.67
1:0:12:ARG:HB2	51:3:721:G:H1	1.58	0.67
5:A:35:ARG:NH2	5:A:54:ASP:OD1	2.27	0.67
14:J:52:THR:HG23	14:J:55:SER:H	1.59	0.67
15:K:43:LYS:HA	53:5:359:A:OP1	1.94	0.67
37:m:106:ARG:NH2	51:3:1315:A:O4'	2.27	0.67
39:o:36:LYS:HE2	39:o:85:ASN:HA	1.76	0.67
46:v:61:HIS:O	46:v:63:ARG:NE	2.27	0.67
51:3:453:U:H2'	51:3:454:G:C8	2.29	0.67
51:3:573:A:H3'	51:3:574:G:H8	1.59	0.67
51:3:730:G:N2	51:3:802:U:O2	2.25	0.67
51:3:1019:A:H2'	51:3:1020:G:C4	2.29	0.67
51:3:1198:G:H2'	51:3:1199:A:C8	2.28	0.67
51:3:2340:U:O2'	51:3:2343:A:O2'	2.10	0.67
51:3:2713:A:H3'	51:3:2714:G:H8	1.59	0.67
53:5:621:C:H2'	53:5:622:A:H8	1.59	0.67
54:7:50:G:H2'	54:7:51:G:H8	1.59	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:7:PRO:HA	51:3:721:G:H21	1.58	0.67
5:A:136:LYS:O	5:A:140:ASN:N	2.26	0.67
29:e:97:TYR:HA	29:e:109:GLN:O	1.94	0.67
30:f:94:THR:O	30:f:98:ILE:HG12	1.93	0.67
36:l:87:LYS:HE3	51:3:991:G:H5''	1.74	0.67
40:p:2:ARG:CZ	51:3:485:A:H4'	2.24	0.67
51:3:109:G:OP1	51:3:327:U:O2'	2.13	0.67
51:3:411:U:N3	51:3:437:A:H8	1.81	0.67
51:3:1106:G:N2	51:3:1124:G:O2'	2.28	0.67
51:3:1785:U:N3	51:3:1792:A:C8	2.63	0.67
51:3:1801:U:H2'	51:3:1802:C:C6	2.28	0.67
51:3:2321:C:H2'	51:3:2322:G:C8	2.29	0.67
53:5:833:G:O6	53:5:844:U:O4	2.13	0.67
53:5:1055:G:O3'	53:5:1165:G:N2	2.26	0.67
53:5:1056:U:H1'	53:5:1057:C:H5	1.58	0.67
53:5:1497:U:H2'	53:5:1498:G:H8	1.59	0.67
2:1:40:HIS:HA	2:1:43:LYS:HG2	1.77	0.67
5:A:110:GLN:HG2	5:A:161:LYS:O	1.94	0.67
7:C:103:ARG:HD2	7:C:162:VAL:HG12	1.76	0.67
7:C:109:THR:O	7:C:112:SER:OG	2.10	0.67
10:F:30:MET:HE1	53:5:1349:A:H1'	1.77	0.67
18:N:29:LEU:HD22	18:N:60:ARG:HB2	1.77	0.67
19:O:65:SER:O	19:O:68:SER:OG	2.13	0.67
40:p:57:ARG:NH2	51:3:1033:A:O5'	2.27	0.67
50:z:25:VAL:HG13	50:z:29:PRO:HA	1.74	0.67
51:3:330:A:H2'	51:3:331:A:C8	2.29	0.67
51:3:675:U:H2'	51:3:676:U:C6	2.29	0.67
51:3:1032:A:H2'	51:3:1033:A:H8	1.59	0.67
51:3:1247:C:N3	51:3:1262:G:N1	2.38	0.67
51:3:1712:A:N3	51:3:1997:C:O2'	2.26	0.67
51:3:1801:U:H3	51:3:1832:G:H1	1.43	0.67
51:3:2852:G:O2'	51:3:2871:G:N1	2.12	0.67
53:5:15:U:N3	53:5:18:U:OP2	2.27	0.67
53:5:253:G:O6	53:5:265:U:O4	2.13	0.67
53:5:576:A:O2'	53:5:725:A:N3	2.25	0.67
53:5:1289:U:H3	53:5:1293:A:H62	1.40	0.67
53:5:1505:G:H2'	53:5:1506:A:C8	2.30	0.67
3:2:6:SER:OG	3:2:8:LYS:NZ	2.28	0.67
4:9:260:GLU:HA	4:9:265:GLU:HA	1.76	0.67
9:E:4:ASN:HB2	9:E:88:ILE:HD13	1.76	0.67
20:P:59:ASP:HB3	20:P:83:ARG:NH1	2.10	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:R:3:ARG:N	53:5:1287:G:O6	2.27	0.67
30:f:95:LYS:HG2	51:3:2227:U:H4'	1.76	0.67
42:r:70:TYR:OH	42:r:110:ASN:O	2.08	0.67
48:x:12:VAL:N	48:x:25:ILE:O	2.28	0.67
51:3:219:G:H1'	51:3:220:A:H4'	1.77	0.67
51:3:643:A:H62	51:3:655:G:H21	1.41	0.67
51:3:2103:C:H2'	51:3:2104:A:C8	2.30	0.67
51:3:2260:G:N1	54:7:76:C:OP1	2.26	0.67
51:3:2756:A:C5	51:3:2762:U:O2	2.47	0.67
51:3:2849:G:O6	51:3:2875:U:O4	2.12	0.67
16:L:34:LEU:HG	16:L:39:ILE:HB	1.76	0.67
49:y:33:CYS:O	49:y:35:LYS:N	2.28	0.67
51:3:420:A:H2'	51:3:421:A:O4'	1.94	0.67
51:3:566:G:N1	51:3:2025:C:N3	2.31	0.67
51:3:1078:C:H2'	51:3:1079:U:H6	1.59	0.67
51:3:1482:U:O2'	51:3:1484:G:OP2	2.13	0.67
51:3:1989:U:H2'	51:3:1990:C:C6	2.30	0.67
51:3:2312:G:H1	51:3:2320:U:H3	1.43	0.67
51:3:2375:A:H2'	51:3:2376:C:C6	2.30	0.67
51:3:2465:U:C5	51:3:2502:G:O6	2.47	0.67
53:5:152:U:H2'	53:5:153:A:C8	2.30	0.67
53:5:223:G:H3'	53:5:224:A:C8	2.30	0.67
53:5:242:A:H8	53:5:277:G:N2	1.77	0.67
53:5:362:U:O2'	53:5:390:G:N2	2.27	0.67
53:5:764:A:H3'	53:5:765:A:H8	1.59	0.67
53:5:892:G:N2	53:5:895:A:OP2	2.24	0.67
53:5:988:G:O6	53:5:1036:C:N4	2.17	0.67
4:9:309:ILE:O	4:9:357:THR:N	2.27	0.67
8:D:181:LYS:HZ1	53:5:10:G:H8	1.40	0.67
23:S:4:ILE:HG12	23:S:6:SER:H	1.59	0.67
25:a:61:ARG:HH11	25:a:64:ARG:HG2	1.59	0.67
39:o:58:LYS:HA	51:3:2849:G:H5''	1.77	0.67
45:u:87:GLY:HA3	45:u:92:LYS:HD3	1.77	0.67
51:3:534:U:H3'	51:3:535:G:H8	1.58	0.67
51:3:535:G:H1'	51:3:540:A:H61	1.60	0.67
51:3:621:U:H2'	51:3:622:U:C6	2.29	0.67
51:3:1063:A:H62	51:3:1160:G:H2'	1.59	0.67
51:3:1202:A:H2'	51:3:1203:G:C8	2.29	0.67
51:3:1261:U:H2'	51:3:1262:G:H8	1.59	0.67
51:3:1362:C:H2'	51:3:1363:C:C6	2.30	0.67
51:3:2035:U:H2'	51:3:2036:G:C8	2.30	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:5:134:G:N1	53:5:160:A:H2	1.84	0.67
53:5:170:A:H2'	53:5:171:A:C8	2.29	0.67
53:5:332:A:H2'	53:5:333:U:O4'	1.94	0.67
53:5:1160:G:H2'	53:5:1161:G:H8	1.59	0.67
53:5:1291:C:H3'	53:5:1292:A:C8	2.29	0.67
5:A:25:GLU:HG3	5:A:250:PRO:HA	1.77	0.67
6:B:59:GLU:HB2	6:B:66:ASP:HB2	1.75	0.67
25:a:222:ARG:HD2	51:3:1600:A:H4'	1.77	0.67
30:f:19:VAL:HG12	30:f:19:VAL:O	1.94	0.67
35:k:138:ALA:O	35:k:142:ALA:N	2.20	0.67
42:r:77:ASN:HB2	42:r:102:ASN:HB2	1.77	0.67
51:3:297:G:O2'	51:3:298:U:OP2	2.12	0.67
51:3:412:A:H1'	51:3:437:A:N6	2.10	0.67
51:3:740:A:OP2	51:3:761:G:N2	2.28	0.67
51:3:1204:A:H61	51:3:1212:C:H42	1.43	0.67
51:3:1550:G:H2'	51:3:1551:U:C6	2.30	0.67
51:3:1605:A:H2'	51:3:1606:A:C8	2.30	0.67
51:3:1849:G:N2	51:3:1905:U:O2	2.28	0.67
51:3:2552:G:H1'	51:3:2654:U:H5'	1.77	0.67
51:3:2785:G:OP2	51:3:2789:A:O2'	2.13	0.67
53:5:234:G:H2'	53:5:235:C:C6	2.29	0.67
53:5:242:A:N6	53:5:277:G:O4'	2.28	0.67
53:5:278:A:OP2	53:5:279:C:N4	2.26	0.67
53:5:334:A:N1	53:5:347:G:N2	2.41	0.67
53:5:640:C:H2'	53:5:641:U:C6	2.30	0.67
53:5:660:A:N1	53:5:739:G:C6	2.62	0.67
53:5:1119:C:HO2'	53:5:1124:U:H3	1.40	0.67
54:7:9:U:O2'	54:7:22:A:N1	2.23	0.67
5:A:73:LYS:HE3	5:A:238:GLU:HG2	1.77	0.67
6:B:175:ASN:HD22	6:B:177:PRO:HD3	1.60	0.67
8:D:110:GLU:HB2	8:D:113:ASN:HD21	1.60	0.67
26:b:106:GLU:HA	26:b:217:VAL:HA	1.77	0.67
51:3:2070:C:OP2	51:3:2071:C:N4	2.27	0.67
53:5:661:G:C6	53:5:738:A:N6	2.62	0.67
53:5:677:C:H2'	53:5:678:A:C8	2.30	0.67
53:5:1444:G:H2'	53:5:1445:G:H8	1.60	0.67
54:6:66:C:H2'	54:6:67:C:C6	2.29	0.67
4:9:226:THR:HB	4:9:282:VAL:HG23	1.76	0.67
9:E:73:LYS:HE3	9:E:87:ILE:HG13	1.77	0.67
13:I:32:VAL:HA	13:I:35:VAL:HG12	1.77	0.67
29:e:44:LEU:HA	29:e:57:ARG:HA	1.75	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:n:81:LEU:HD22	38:n:114:LEU:HD11	1.77	0.67
51:3:92:U:H3'	51:3:93:A:H8	1.59	0.67
51:3:360:G:H2'	51:3:361:G:C8	2.30	0.67
51:3:682:A:H3'	51:3:683:G:H8	1.60	0.67
51:3:1327:G:N1	51:3:1674:A:OP2	2.26	0.67
51:3:2802:C:OP2	51:3:2808:A:N6	2.27	0.67
52:4:103:C:H2'	52:4:104:C:C6	2.30	0.67
53:5:596:U:H2'	53:5:597:C:C6	2.30	0.67
53:5:612:G:N2	53:5:624:U:O2	2.28	0.67
54:6:19:G:OP2	54:6:20:G:N1	2.27	0.67
4:9:62:THR:HG23	4:9:83:PRO:HB3	1.76	0.66
4:9:67:HIS:HB3	4:9:262:PHE:HE1	1.59	0.66
4:9:377:ILE:N	4:9:385:GLY:O	2.26	0.66
5:A:73:LYS:HE2	5:A:77:GLN:HE21	1.60	0.66
11:G:33:VAL:HG23	11:G:74:LEU:HD21	1.77	0.66
12:H:35:ARG:HG3	12:H:40:TYR:HD1	1.60	0.66
17:M:42:LEU:HA	17:M:45:ARG:HB3	1.77	0.66
37:m:77:GLN:HG2	37:m:81:HIS:NE2	2.10	0.66
40:p:62:LEU:HD13	51:3:1045:A:H5''	1.76	0.66
51:3:184:A:O2'	51:3:186:A:N7	2.21	0.66
51:3:2176:G:O2'	51:3:2178:A:N6	2.28	0.66
51:3:2599:C:H2'	51:3:2600:G:H8	1.60	0.66
51:3:2695:U:O2	51:3:2730:G:N2	2.28	0.66
53:5:212:G:H2'	53:5:213:U:H6	1.60	0.66
53:5:724:G:P	53:5:739:G:H21	2.18	0.66
10:F:6:ALA:N	53:5:1353:C:OP1	2.28	0.66
12:H:12:ARG:HG3	12:H:108:ARG:HE	1.60	0.66
22:R:36:ARG:HH22	22:R:77:THR:HG21	1.58	0.66
25:a:206:LEU:O	25:a:209:ASN:ND2	2.28	0.66
34:j:22:ILE:H	34:j:41:VAL:HA	1.60	0.66
42:r:12:ILE:HG12	42:r:43:ALA:HB2	1.77	0.66
51:3:179:A:H2'	51:3:180:A:C4	2.30	0.66
51:3:675:U:N3	51:3:685:G:N1	2.20	0.66
51:3:1296:G:O2'	51:3:2019:G:O6	2.09	0.66
51:3:1798:A:C2	51:3:1836:A:H4'	2.30	0.66
51:3:2336:A:H2'	51:3:2337:U:H6	1.60	0.66
51:3:2598:C:H2'	51:3:2599:C:C6	2.30	0.66
51:3:2699:C:H2'	51:3:2700:C:H6	1.60	0.66
53:5:412:G:H2'	53:5:413:G:C8	2.30	0.66
53:5:720:U:H1'	53:5:849:A:H1'	1.78	0.66
53:5:949:G:H21	53:5:1202:A:N6	1.91	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:5:1041:G:H2'	53:5:1042:G:C8	2.29	0.66
53:5:1319:U:O2	53:5:1350:A:N6	2.28	0.66
54:6:34:U:O2'	54:6:37:A:N6	2.24	0.66
7:C:119:HIS:HB3	7:C:121:HIS:CE1	2.30	0.66
10:F:39:GLN:HB3	10:F:43:TYR:CE2	2.31	0.66
10:F:87:PRO:HD2	10:F:151:ALA:HB2	1.76	0.66
16:L:86:TRP:CD1	22:R:76:PRO:HA	2.31	0.66
22:R:36:ARG:NE	53:5:1294:U:O4	2.27	0.66
27:c:13:PHE:CZ	27:c:126:HIS:HD2	2.14	0.66
35:k:82:LEU:O	35:k:86:ALA:N	2.24	0.66
39:o:103:TYR:CE1	51:3:1761:C:H5'	2.30	0.66
47:w:45:ASN:HA	47:w:48:ARG:HB2	1.77	0.66
51:3:30:A:H1'	51:3:548:A:C4	2.29	0.66
51:3:1343:C:H2'	51:3:1344:U:H6	1.59	0.66
51:3:1506:U:H2'	51:3:1507:G:C8	2.31	0.66
51:3:2068:G:H4'	51:3:2069:A:H5'	1.75	0.66
51:3:2754:U:H3'	51:3:2755:G:C8	2.30	0.66
53:5:1441:C:H3'	53:5:1442:A:C8	2.30	0.66
53:5:1505:G:H2'	53:5:1506:A:H8	1.59	0.66
1:0:24:THR:HG23	1:0:27:GLY:H	1.60	0.66
6:B:80:SER:O	6:B:83:LYS:N	2.25	0.66
11:G:118:THR:OG1	11:G:119:SER:N	2.25	0.66
13:I:11:GLU:H	13:I:83:VAL:HA	1.60	0.66
21:Q:43:PHE:HA	21:Q:46:ILE:HG22	1.77	0.66
27:c:32:GLN:HE22	35:k:10:PRO:HA	1.59	0.66
28:d:58:HIS:CE1	48:x:7:PHE:HB2	2.30	0.66
30:f:32:PRO:HD2	30:f:33:LYS:HE2	1.78	0.66
31:g:50:LYS:HB2	31:g:84:VAL:HB	1.78	0.66
36:l:6:ARG:NH2	51:3:906:G:O3'	2.28	0.66
39:o:46:GLN:NE2	53:5:342:G:OP2	2.29	0.66
39:o:63:THR:HB	39:o:78:ASN:HD21	1.61	0.66
40:p:91:ARG:HD3	51:3:1032:A:H4'	1.76	0.66
44:t:9:LYS:HG2	44:t:23:ILE:HD13	1.77	0.66
51:3:341:G:H21	51:3:364:A:N6	1.92	0.66
51:3:554:U:H2'	51:3:555:A:C8	2.30	0.66
51:3:642:A:OP2	51:3:655:G:N1	2.28	0.66
51:3:1861:A:C8	51:3:1862:A:C8	2.84	0.66
52:4:60:C:H2'	52:4:61:A:C8	2.29	0.66
53:5:290:G:N2	53:5:299:U:O2	2.25	0.66
53:5:470:U:H2'	53:5:471:A:H8	1.58	0.66
53:5:1119:C:O2'	53:5:1124:U:N3	2.27	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:5:1413:G:C6	53:5:1439:G:C6	2.84	0.66
4:9:112:VAL:HG13	4:9:116:THR:HB	1.77	0.66
4:9:218:THR:HG23	4:9:228:VAL:HG12	1.77	0.66
9:E:49:ILE:HG23	9:E:50:LYS:H	1.60	0.66
29:e:71:TYR:O	29:e:75:ILE:HG12	1.96	0.66
33:i:116:ARG:NE	51:3:591:G:OP2	2.25	0.66
51:3:199:A:H2'	51:3:202:C:N4	2.11	0.66
51:3:569:U:O4	51:3:592:G:O6	2.13	0.66
51:3:795:G:H3'	51:3:796:A:H8	1.61	0.66
51:3:815:G:H2'	51:3:817:A:C5	2.30	0.66
51:3:848:U:H1'	51:3:1256:A:H1'	1.77	0.66
51:3:1180:U:H2'	51:3:1181:A:C8	2.31	0.66
51:3:1598:U:H2'	51:3:1599:C:C6	2.28	0.66
51:3:2255:A:H2'	51:3:2256:C:C6	2.30	0.66
51:3:2556:C:H2'	51:3:2557:G:C8	2.31	0.66
51:3:2567:C:H2'	51:3:2568:G:C8	2.31	0.66
4:9:330:GLN:HA	4:9:338:VAL:O	1.96	0.66
14:J:67:VAL:HA	14:J:70:MET:HB2	1.78	0.66
25:a:14:ILE:N	51:3:1780:A:N1	2.43	0.66
25:a:41:LEU:HD12	25:a:64:ARG:HG3	1.78	0.66
27:c:183:LEU:HD22	27:c:203:VAL:HB	1.77	0.66
51:3:138:U:H2'	51:3:139:G:C8	2.30	0.66
51:3:705:A:H4'	51:3:706:C:H5'	1.77	0.66
51:3:821:C:H2'	51:3:822:C:C6	2.31	0.66
51:3:2212:U:H2'	51:3:2213:A:C8	2.31	0.66
51:3:2353:G:N7	51:3:2379:G:N1	2.42	0.66
53:5:460:A:H2'	53:5:461:G:C8	2.30	0.66
53:5:606:A:H3'	53:5:607:A:C8	2.28	0.66
53:5:1152:G:H2'	53:5:1153:G:C8	2.31	0.66
53:5:1194:A:H2'	53:5:1195:G:H8	1.58	0.66
53:5:1194:A:H2'	53:5:1195:G:C8	2.30	0.66
53:5:1304:U:H3'	53:5:1305:G:C8	2.26	0.66
53:5:1384:A:H2'	53:5:1385:A:H8	1.61	0.66
9:E:50:LYS:NZ	53:5:671:G:OP1	2.20	0.66
16:L:116:VAL:O	53:5:1203:A:O2'	2.14	0.66
18:N:55:ALA:O	18:N:59:LYS:HD3	1.95	0.66
26:b:107:TYR:CE1	26:b:218:LYS:HB2	2.30	0.66
49:y:28:SER:HB2	49:y:39:PHE:HA	1.78	0.66
51:3:15:A:O2'	51:3:17:G:N7	2.24	0.66
51:3:130:C:H2'	51:3:131:C:C6	2.29	0.66
51:3:1276:A:H2'	51:3:1277:A:O4'	1.96	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:3:2031:C:H2'	51:3:2032:G:C8	2.31	0.66
51:3:2567:C:H2'	51:3:2568:G:H8	1.61	0.66
51:3:2747:U:C2	51:3:2772:A:N7	2.64	0.66
51:3:2755:G:N2	51:3:2764:U:OP1	2.26	0.66
53:5:90:G:H2'	53:5:91:C:C6	2.30	0.66
53:5:175:U:O4	53:5:190:A:N6	2.19	0.66
53:5:671:G:N2	53:5:713:A:N1	2.44	0.66
53:5:953:A:H2'	53:5:954:A:C4	2.30	0.66
53:5:1133:A:N1	53:5:1153:G:N3	2.44	0.66
53:5:1392:A:H2'	53:5:1457:G:H22	1.60	0.66
15:K:61:ALA:HB2	53:5:527:G:H1	1.61	0.66
20:P:14:LYS:HD3	20:P:25:GLN:HB3	1.77	0.66
25:a:92:ARG:NH1	51:3:1825:U:OP2	2.29	0.66
26:b:122:ALA:HA	26:b:126:TRP:HD1	1.60	0.66
26:b:227:GLU:HG3	39:o:21:TYR:H	1.59	0.66
27:c:40:VAL:HG21	27:c:103:LEU:HD11	1.78	0.66
34:j:13:ASN:ND2	34:j:97:ARG:O	2.28	0.66
51:3:37:G:H1'	51:3:490:A:C4	2.30	0.66
51:3:484:U:C4	51:3:616:G:H1'	2.31	0.66
51:3:1176:U:O2	51:3:1177:A:N6	2.29	0.66
53:5:656:U:H2'	53:5:657:G:C8	2.31	0.66
53:5:1477:A:H8	53:5:1480:G:H22	1.43	0.66
28:d:101:GLU:O	28:d:105:TYR:N	2.29	0.66
33:i:5:SER:OG	51:3:1031:U:O2	2.13	0.66
40:p:80:ASN:HD22	40:p:83:LYS:HE3	1.60	0.66
51:3:1047:A:C6	51:3:1186:A:C5	2.84	0.66
51:3:1164:A:N6	51:3:2499:U:OP1	2.29	0.66
51:3:1744:U:H4'	51:3:2863:G:H21	1.61	0.66
51:3:1848:U:H2'	51:3:1849:G:C8	2.29	0.66
51:3:2078:A:H2'	51:3:2079:G:H8	1.61	0.66
51:3:2196:G:H2'	51:3:2197:U:O4'	1.96	0.66
51:3:2792:C:H2'	51:3:2793:U:C6	2.30	0.66
53:5:124:U:H2'	53:5:125:A:C8	2.31	0.66
53:5:297:A:H2'	53:5:298:G:C8	2.31	0.66
53:5:1138:U:O2	53:5:1149:G:N2	2.24	0.66
53:5:1502:G:H2'	53:5:1503:U:C6	2.31	0.66
7:C:170:ASN:O	7:C:174:PHE:N	2.29	0.66
12:H:31:THR:HA	12:H:36:ASP:HA	1.78	0.66
12:H:72:GLY:O	53:5:1224:C:O2'	2.12	0.66
13:I:92:SER:HA	13:I:95:ARG:HE	1.61	0.66
25:a:160:ILE:HG23	51:3:1806:G:C2	2.31	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:a:262:HIS:NE2	51:3:1831:G:N3	2.44	0.66
37:m:6:LYS:C	37:m:8:GLY:H	2.02	0.66
45:u:46:ARG:NH1	51:3:2362:A:O5'	2.28	0.66
51:3:84:G:H2'	51:3:85:U:C6	2.30	0.66
51:3:189:U:H2'	51:3:190:G:C8	2.31	0.66
51:3:1071:G:H1	51:3:1154:U:H3	0.69	0.66
52:4:8:C:OP2	52:4:9:C:N4	2.29	0.66
52:4:74:G:N1	52:4:90:G:O6	2.29	0.66
53:5:1135:U:O2	53:5:1137:C:N4	2.18	0.66
53:5:1156:G:H1'	53:5:1157:G:C5	2.31	0.66
53:5:1316:C:H2'	53:5:1317:A:C8	2.31	0.66
54:6:59:A:O2'	54:6:62:C:N4	2.29	0.66
54:7:7:U:H3	54:7:68:G:H1	1.40	0.66
4:9:17:THR:HG22	4:9:25:LYS:HE2	1.77	0.65
5:A:186:ASN:ND2	53:5:1092:A:OP1	2.29	0.65
27:c:41:GLU:O	27:c:45:TRP:NE1	2.29	0.65
41:q:41:LEU:N	41:q:50:LEU:HD23	2.12	0.65
51:3:86:A:N1	51:3:100:U:O2'	2.17	0.65
51:3:340:U:H2'	51:3:341:G:O4'	1.96	0.65
51:3:530:G:H2'	51:3:531:G:C8	2.31	0.65
51:3:606:G:O2'	51:3:608:A:OP1	2.11	0.65
51:3:1541:A:H3'	51:3:1542:G:H8	1.61	0.65
51:3:2576:A:H2'	51:3:2577:G:H8	1.62	0.65
53:5:126:U:H3	53:5:220:U:H3	1.42	0.65
53:5:162:C:H3'	53:5:163:G:H21	1.59	0.65
53:5:874:C:H2'	53:5:875:G:C8	2.31	0.65
53:5:1055:G:H4'	53:5:1056:U:H4'	1.78	0.65
54:7:22:A:O4'	54:7:49:C:N4	2.29	0.65
4:9:24:GLY:HA2	4:9:27:THR:OG1	1.96	0.65
5:A:67:THR:HA	5:A:70:ASN:HD21	1.60	0.65
10:F:34:LYS:HD3	53:5:1346:G:N2	2.10	0.65
11:G:90:ILE:N	11:G:138:LEU:O	2.25	0.65
20:P:21:THR:HA	20:P:48:HIS:HA	1.79	0.65
20:P:32:HIS:O	20:P:36:HIS:HA	1.96	0.65
20:P:68:PRO:O	53:5:260:C:O2'	2.14	0.65
22:R:34:TRP:CE3	53:5:1194:A:H1'	2.29	0.65
25:a:162:ARG:N	51:3:1826:A:OP1	2.28	0.65
25:a:177:GLY:O	25:a:194:LYS:HD3	1.96	0.65
35:k:81:ASN:HB3	35:k:84:LYS:HB2	1.78	0.65
37:m:109:ASP:OD1	51:3:1315:A:N6	2.29	0.65
47:w:54:ILE:O	47:w:58:LEU:N	2.19	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:w:105:ARG:HH22	51:3:1498:U:H1'	1.61	0.65
51:3:124:A:H3'	51:3:125:G:H8	1.61	0.65
51:3:1125:U:H2'	51:3:1126:G:C8	2.31	0.65
51:3:1380:U:H3	51:3:1406:A:N6	1.93	0.65
51:3:1455:A:OP1	51:3:1605:A:N6	2.28	0.65
51:3:1809:A:N6	51:3:1821:G:O2'	2.28	0.65
51:3:2663:G:N2	51:3:2664:U:O4	2.26	0.65
53:5:261:G:H3'	53:5:263:C:H5	1.61	0.65
53:5:334:A:H3'	53:5:335:C:C6	2.31	0.65
53:5:511:A:H2'	53:5:512:U:C6	2.31	0.65
53:5:612:G:N1	53:5:624:U:N3	2.43	0.65
53:5:1314:A:O2'	54:7:33:C:OP1	2.12	0.65
4:9:248:LEU:N	4:9:366:PRO:O	2.29	0.65
5:A:27:ARG:HH22	5:A:223:GLN:HB3	1.59	0.65
15:K:46:VAL:HG22	15:K:92:VAL:HB	1.78	0.65
16:L:113:ARG:NH2	53:5:942:G:OP1	2.30	0.65
22:R:66:MET:SD	22:R:68:GLY:N	2.68	0.65
33:i:59:ILE:HB	33:i:127:VAL:HA	1.78	0.65
34:j:7:ARG:NH1	51:3:1995:G:OP1	2.25	0.65
36:l:4:PRO:HD2	36:l:93:TRP:HB3	1.77	0.65
51:3:342:G:H2'	51:3:343:A:O4'	1.96	0.65
51:3:752:C:H3'	51:3:753:A:C8	2.31	0.65
51:3:1263:G:H2'	51:3:1264:U:C6	2.31	0.65
51:3:1467:U:H3	51:3:1587:U:H3	1.40	0.65
51:3:1772:G:O6	51:3:1994:U:O2	2.13	0.65
51:3:2060:G:H2'	51:3:2061:A:C8	2.31	0.65
51:3:2078:A:H2'	51:3:2079:G:C8	2.30	0.65
51:3:2895:A:N6	51:3:2896:G:O6	2.28	0.65
52:4:68:C:H2'	52:4:69:C:C6	2.32	0.65
53:5:76:G:O2'	53:5:78:A:N6	2.26	0.65
53:5:413:G:N2	53:5:423:U:O2	2.28	0.65
53:5:917:G:O2'	53:5:1373:A:N1	2.26	0.65
53:5:1065:G:C6	53:5:1074:U:O2	2.48	0.65
7:C:13:ARG:HE	7:C:34:ILE:HB	1.60	0.65
9:E:47:TYR:CE2	21:Q:97:ALA:HA	2.30	0.65
10:F:94:ARG:HH12	53:5:933:A:H4'	1.61	0.65
12:H:29:LYS:H	12:H:64:ASP:HB2	1.60	0.65
12:H:97:LYS:HE2	12:H:101:LYS:HB2	1.78	0.65
25:a:64:ARG:HA	51:3:1602:G:H5'	1.77	0.65
33:i:31:LEU:HD21	33:i:145:TRP:HA	1.77	0.65
35:k:22:ARG:NH2	51:3:620:G:OP2	2.29	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:l:24:ASN:HB3	36:l:67:ARG:HB3	1.78	0.65
45:u:28:ARG:C	51:3:2286:A:H62	2.05	0.65
51:3:451:A:O2'	51:3:1873:A:OP1	2.15	0.65
51:3:453:U:H2'	51:3:454:G:H8	1.62	0.65
51:3:1221:G:H2'	51:3:1222:A:H8	1.61	0.65
51:3:1828:A:H2'	51:3:1829:U:C6	2.32	0.65
51:3:2015:C:H2'	51:3:2016:G:H8	1.60	0.65
51:3:2113:U:H3'	51:3:2114:C:H6	1.61	0.65
51:3:2336:A:H2'	51:3:2337:U:C6	2.30	0.65
51:3:2581:C:O5'	51:3:2582:G:H5''	1.96	0.65
51:3:2843:G:O6	51:3:2882:U:C4	2.49	0.65
53:5:161:C:H2'	53:5:162:C:C6	2.32	0.65
53:5:172:C:H2'	53:5:173:U:H6	1.59	0.65
53:5:413:G:N1	53:5:423:U:C2	2.64	0.65
53:5:788:G:H2'	53:5:789:A:C8	2.31	0.65
53:5:1322:U:H3	53:5:1349:A:H8	1.39	0.65
54:6:13:U:O2	54:6:24:A:N6	2.28	0.65
5:A:83:LEU:H	5:A:176:LEU:HA	1.60	0.65
7:C:9:LYS:HD3	53:5:425:G:H3'	1.77	0.65
9:E:143:LEU:HA	11:G:3:THR:HG22	1.78	0.65
12:H:36:ASP:N	12:H:39:GLU:OE2	2.29	0.65
22:R:52:HIS:HD2	53:5:1195:G:H1'	1.60	0.65
24:T:30:GLN:NE2	24:T:33:GLU:OE1	2.29	0.65
25:a:282:ARG:NH2	51:3:1804:A:O5'	2.30	0.65
27:c:133:PHE:O	27:c:165:ASN:ND2	2.30	0.65
29:e:139:ILE:H	29:e:143:LEU:HD11	1.62	0.65
37:m:106:ARG:N	37:m:111:THR:O	2.29	0.65
42:r:27:LYS:O	42:r:71:VAL:N	2.26	0.65
43:s:9:LYS:O	43:s:30:VAL:N	2.28	0.65
51:3:487:C:H2'	51:3:489:A:N7	2.11	0.65
51:3:525:A:C5	51:3:1312:A:N1	2.65	0.65
51:3:715:G:H2'	51:3:716:G:H8	1.62	0.65
51:3:1100:U:H3	51:3:1109:G:H1	1.42	0.65
52:4:38:U:H1'	52:4:43:A:N6	2.12	0.65
53:5:94:A:H62	53:5:320:G:H21	1.45	0.65
53:5:944:A:O2'	53:5:966:A:N6	2.29	0.65
53:5:1217:G:O2'	53:5:1277:C:OP1	2.15	0.65
4:9:8:ARG:NH1	4:9:270:MET:SD	2.69	0.65
5:A:130:LEU:O	5:A:134:VAL:HG23	1.96	0.65
6:B:159:ARG:HG3	6:B:165:ILE:HG23	1.79	0.65
18:N:78:LEU:O	18:N:81:THR:N	2.25	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:b:143:PHE:HZ	51:3:2586:G:H1'	1.60	0.65
27:c:156:ASN:O	27:c:179:GLN:NE2	2.30	0.65
30:f:114:LYS:NZ	30:f:129:HIS:O	2.21	0.65
34:j:24:VAL:HA	34:j:39:VAL:HG12	1.78	0.65
35:k:133:LYS:HA	35:k:136:LEU:HD12	1.78	0.65
39:o:77:LYS:HB3	39:o:79:PHE:CZ	2.32	0.65
40:p:107:LEU:HA	40:p:110:GLN:HE21	1.59	0.65
44:t:16:LYS:HG3	51:3:363:G:H1	1.60	0.65
50:z:13:ASP:O	50:z:15:ARG:NH2	2.29	0.65
51:3:276:A:N6	51:3:294:G:O2'	2.29	0.65
51:3:384:G:H2'	51:3:385:U:C6	2.32	0.65
51:3:1429:G:H2'	51:3:1430:U:C6	2.32	0.65
51:3:1913:G:C8	51:3:1936:G:H2'	2.32	0.65
51:3:2207:A:H62	51:3:2232:G:N2	1.94	0.65
51:3:2641:A:H2'	51:3:2642:G:C8	2.31	0.65
51:3:2683:G:H2'	51:3:2684:G:C8	2.31	0.65
51:3:2755:G:H1'	51:3:2765:A:H61	1.60	0.65
53:5:240:U:H4'	53:5:241:C:H5'	1.79	0.65
53:5:649:U:C4	53:5:750:A:C8	2.84	0.65
53:5:659:U:H4'	53:5:833:G:H4'	1.79	0.65
53:5:739:G:H2'	53:5:740:G:O4'	1.97	0.65
53:5:1392:A:H2'	53:5:1457:G:N2	2.11	0.65
7:C:78:VAL:HG21	7:C:89:LEU:HG	1.78	0.65
8:D:80:THR:O	53:5:1373:A:N6	2.24	0.65
14:J:84:ARG:NH2	14:J:88:THR:OG1	2.27	0.65
15:K:25:HIS:CG	15:K:39:TYR:HA	2.31	0.65
21:Q:68:ALA:O	53:5:715:A:N6	2.29	0.65
25:a:83:VAL:O	25:a:118:GLY:N	2.25	0.65
25:a:285:GLU:O	25:a:286:GLN:HG2	1.97	0.65
30:f:78:HIS:ND1	30:f:141:LYS:O	2.29	0.65
30:f:129:HIS:HA	30:f:135:THR:HG23	1.79	0.65
44:t:29:PRO:O	44:t:32:GLN:NE2	2.27	0.65
51:3:270:G:H2'	51:3:271:G:O4'	1.96	0.65
51:3:897:A:O2'	52:4:77:G:O3'	2.14	0.65
51:3:1124:G:N2	51:3:1125:U:O4	2.29	0.65
51:3:1309:G:H2'	51:3:1310:U:C6	2.32	0.65
51:3:1492:G:H5'	51:3:1578:A:H2	1.62	0.65
51:3:2118:U:O2'	51:3:2152:C:N3	2.25	0.65
51:3:2454:G:N2	51:3:2457:U:O2	2.28	0.65
51:3:2728:U:C2	51:3:2729:A:C8	2.85	0.65
53:5:334:A:N6	53:5:347:G:N1	2.45	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:5:863:A:O2'	53:5:866:A:N7	2.30	0.65
54:7:7:U:H2'	54:7:8:G:C8	2.32	0.65
25:a:166:SER:O	25:a:203:VAL:N	2.28	0.65
26:b:112:ALA:HA	26:b:205:VAL:HG22	1.79	0.65
29:e:152:ARG:HG2	29:e:156:LYS:HE3	1.79	0.65
38:n:27:ARG:NH2	38:n:89:VAL:O	2.29	0.65
39:o:30:GLU:OE1	39:o:92:ARG:CG	2.45	0.65
48:x:13:SER:O	48:x:34:ILE:N	2.30	0.65
51:3:201:A:H3'	51:3:202:C:H6	1.62	0.65
51:3:228:A:H2'	51:3:229:C:O4'	1.97	0.65
51:3:252:G:C6	51:3:254:G:N2	2.65	0.65
51:3:1676:G:H2'	51:3:1677:G:C8	2.32	0.65
51:3:2109:A:N6	51:3:2196:G:O6	2.29	0.65
51:3:2212:U:H2'	51:3:2213:A:H8	1.61	0.65
51:3:2845:U:H2'	51:3:2846:A:C8	2.31	0.65
51:3:2892:U:H2'	51:3:2893:C:C6	2.30	0.65
53:5:317:A:H2	53:5:328:G:H1	1.37	0.65
53:5:1363:U:H2'	53:5:1364:C:C6	2.32	0.65
6:B:76:PHE:O	6:B:84:ASN:ND2	2.27	0.65
9:E:94:TYR:CE2	9:E:96:TYR:HB3	2.31	0.65
34:j:112:ASN:HA	34:j:115:LEU:HB2	1.79	0.65
35:k:55:GLN:HB2	51:3:2436:G:H2'	1.78	0.65
51:3:601:U:H2'	51:3:603:G:N7	2.12	0.65
51:3:1101:U:H3'	51:3:1102:A:H5'	1.77	0.65
51:3:1385:U:O2	51:3:1402:G:N2	2.27	0.65
51:3:1408:G:N3	51:3:1603:A:N6	2.44	0.65
51:3:1537:A:H2'	51:3:1538:U:O4'	1.96	0.65
51:3:1809:A:P	51:3:1822:A:H61	2.19	0.65
51:3:1906:G:H21	51:3:1909:C:H41	1.44	0.65
53:5:466:U:H3'	53:5:467:G:C8	2.32	0.65
53:5:1100:C:H2'	53:5:1101:A:H8	1.62	0.65
4:9:4:GLU:OE1	4:9:264:LYS:NZ	2.30	0.65
20:P:84:ALA:HB1	53:5:644:U:H4'	1.79	0.65
23:S:17:ARG:NH2	53:5:160:A:O2'	2.29	0.65
26:b:54:PHE:CE1	26:b:80:HIS:HB2	2.32	0.65
26:b:165:MET:HB2	51:3:2628:U:H4'	1.77	0.65
26:b:200:PRO:HB2	51:3:2824:A:H1'	1.79	0.65
26:b:225:GLN:NE2	39:o:82:HIS:O	2.29	0.65
27:c:13:PHE:HZ	27:c:126:HIS:HD2	1.44	0.65
51:3:1296:G:H22	51:3:2019:G:H2'	1.62	0.65
51:3:1505:G:H1	51:3:1538:U:H3	1.45	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:3:2455:G:C8	51:3:2509:C:H5''	2.31	0.65
51:3:2755:G:O6	51:3:2763:C:H5''	1.96	0.65
53:5:135:A:N6	53:5:158:A:OP2	2.30	0.65
53:5:864:U:H4'	53:5:865:U:H3'	1.79	0.65
53:5:869:U:H2'	53:5:870:A:C8	2.32	0.65
53:5:887:C:H3'	53:5:888:A:H8	1.62	0.65
54:7:44:U:H4'	54:7:44:U:OP1	1.96	0.65
5:A:21:ALA:HB1	5:A:62:ARG:HB2	1.79	0.64
5:A:87:THR:HG22	5:A:93:LYS:HZ2	1.61	0.64
7:C:147:LYS:NZ	53:5:435:U:OP1	2.30	0.64
8:D:75:ARG:HE	8:D:88:PHE:HB2	1.61	0.64
12:H:27:LYS:HA	12:H:62:ASN:HA	1.78	0.64
27:c:69:LYS:NZ	51:3:2069:A:OP1	2.30	0.64
30:f:6:LYS:HB3	30:f:33:LYS:O	1.97	0.64
34:j:71:ARG:HH21	34:j:75:THR:C	2.05	0.64
49:y:14:ASP:O	49:y:18:SER:N	2.30	0.64
51:3:458:A:H3'	51:3:459:A:C8	2.32	0.64
51:3:1067:A:H2	51:3:1157:G:H22	1.44	0.64
51:3:1887:U:H2'	51:3:1888:U:C6	2.31	0.64
51:3:2476:A:O2'	51:3:2477:A:N7	2.26	0.64
53:5:1406:U:O4	53:5:1407:A:N6	2.30	0.64
54:6:15:A:N6	54:6:22:A:N3	2.45	0.64
54:7:5:C:N4	54:7:71:A:N1	2.45	0.64
54:7:75:C:H3'	54:7:76:C:H4'	1.78	0.64
1:0:29:LYS:O	1:0:33:LEU:HG	1.97	0.64
7:C:102:TYR:HA	7:C:107:ALA:HB3	1.80	0.64
8:D:190:ASN:ND2	53:5:20:C:OP1	2.29	0.64
11:G:126:LYS:HG3	11:G:127:VAL:H	1.63	0.64
12:H:77:GLN:N	12:H:77:GLN:OE1	2.28	0.64
15:K:69:ARG:NH2	15:K:70:LEU:O	2.30	0.64
23:S:49:SER:O	23:S:53:ARG:NH1	2.29	0.64
26:b:168:HIS:NE2	51:3:2826:G:OP1	2.29	0.64
29:e:147:PHE:HA	29:e:150:GLU:CD	2.22	0.64
30:f:12:LEU:HD13	30:f:21:VAL:HB	1.79	0.64
35:k:56:THR:OG1	51:3:2437:G:N7	2.25	0.64
35:k:69:ARG:NH2	51:3:668:A:O3'	2.27	0.64
40:p:25:GLY:O	40:p:28:HIS:ND1	2.30	0.64
40:p:69:ARG:NH2	51:3:1047:A:OP1	2.30	0.64
50:z:10:GLY:HA2	50:z:17:ILE:HA	1.79	0.64
51:3:1016:A:N3	51:3:2044:C:O2'	2.27	0.64
51:3:1702:A:H1'	51:3:1704:C:N4	2.12	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:3:1725:G:H2'	51:3:1726:U:O4'	1.97	0.64
51:3:1959:A:N1	51:3:2568:G:O2'	2.26	0.64
51:3:2092:U:H3	51:3:2242:G:H1	0.72	0.64
51:3:2359:G:N2	51:3:2373:G:H2'	2.13	0.64
51:3:2436:G:O2'	51:3:2437:G:N7	2.25	0.64
51:3:2594:C:H41	51:3:2616:G:H2'	1.61	0.64
51:3:2807:G:O2'	51:3:2809:A:N6	2.28	0.64
53:5:1325:U:C2	53:5:1346:G:O6	2.50	0.64
5:A:22:LYS:N	5:A:25:GLU:OE2	2.29	0.64
10:F:34:LYS:HZ1	53:5:1264:G:H5'	1.62	0.64
10:F:41:ILE:HD12	10:F:116:LEU:HD21	1.78	0.64
25:a:132:PRO:HA	25:a:200:VAL:HG13	1.77	0.64
33:i:28:LEU:O	33:i:32:ALA:HB2	1.98	0.64
51:3:188:G:H2'	51:3:189:U:C6	2.33	0.64
51:3:481:C:H2'	51:3:482:G:O4'	1.97	0.64
51:3:1499:C:H2'	51:3:1500:A:C8	2.33	0.64
51:3:2413:G:O2'	51:3:2419:A:N6	2.30	0.64
53:5:397:C:H2'	53:5:398:G:C8	2.32	0.64
53:5:499:U:O4	53:5:542:G:O6	2.15	0.64
53:5:534:C:H2'	53:5:535:A:C8	2.32	0.64
54:7:56:U:O2'	54:7:58:G:OP2	2.16	0.64
13:I:53:GLU:HG3	13:I:55:ILE:HD11	1.80	0.64
25:a:9:ARG:NH1	51:3:1729:G:H5'	2.12	0.64
25:a:257:PRO:HG2	25:a:258:TRP:CZ3	2.32	0.64
26:b:83:GLU:OE2	51:3:2644:U:O2'	2.14	0.64
36:l:124:LYS:HB3	51:3:2492:G:H1'	1.78	0.64
41:q:72:LYS:HG3	41:q:79:HIS:NE2	2.12	0.64
51:3:343:A:H2'	51:3:364:A:N1	2.11	0.64
51:3:347:C:H2'	51:3:348:A:C8	2.32	0.64
51:3:386:U:H2'	51:3:387:U:H6	1.62	0.64
51:3:567:U:OP1	51:3:594:G:N2	2.31	0.64
51:3:611:A:C5	51:3:2025:C:H5'	2.33	0.64
51:3:665:C:O2	51:3:675:U:O2'	2.16	0.64
51:3:864:A:N6	51:3:2255:A:O2'	2.25	0.64
51:3:1354:U:N3	51:3:1682:C:O2'	2.30	0.64
51:3:2094:A:H2'	51:3:2095:A:C8	2.33	0.64
51:3:2402:C:H2'	51:3:2403:C:O4'	1.96	0.64
52:4:12:U:C5	52:4:99:A:H1'	2.33	0.64
53:5:63:U:O2	53:5:375:C:O2'	2.16	0.64
53:5:251:G:H2'	53:5:252:U:C6	2.32	0.64
53:5:427:A:H2'	53:5:428:A:H5'	1.80	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:5:922:G:H4'	53:5:1478:A:H8	1.62	0.64
53:5:1389:U:H1'	53:5:1462:G:H22	1.63	0.64
53:5:1478:A:N6	53:5:1507:U:H1'	2.12	0.64
2:1:14:THR:OG1	2:1:18:GLN:HB2	1.98	0.64
5:A:81:GLN:HB2	5:A:173:PRO:HA	1.78	0.64
10:F:49:ILE:HD13	10:F:60:VAL:HG11	1.80	0.64
12:H:129:PHE:N	53:5:1316:C:O2'	2.24	0.64
18:N:14:LEU:N	18:N:18:ASP:OD2	2.30	0.64
26:b:14:SER:O	26:b:26:ILE:N	2.19	0.64
28:d:101:GLU:HA	28:d:104:ILE:HG12	1.79	0.64
34:j:11:ALA:HB2	34:j:83:ALA:HB1	1.79	0.64
34:j:46:ALA:HB1	34:j:52:VAL:HG23	1.78	0.64
38:n:34:LYS:HD2	38:n:102:ILE:HD11	1.79	0.64
39:o:15:GLN:HE21	39:o:16:LYS:HE3	1.62	0.64
41:q:64:LEU:HB3	41:q:86:ARG:HB3	1.80	0.64
46:v:2:ALA:HA	51:3:1392:G:H3'	1.80	0.64
51:3:258:G:H4'	51:3:422:A:H1'	1.80	0.64
51:3:519:A:OP2	51:3:520:C:N4	2.28	0.64
51:3:1454:G:H2'	51:3:1606:A:H61	1.63	0.64
51:3:1556:U:H3'	51:3:1557:G:C8	2.32	0.64
51:3:2552:G:H2'	51:3:2553:G:C8	2.31	0.64
53:5:63:U:O4	53:5:90:G:O6	2.16	0.64
53:5:69:G:H21	53:5:138:A:H1'	1.63	0.64
53:5:334:A:H3'	53:5:335:C:H6	1.61	0.64
53:5:599:G:O6	53:5:634:U:O4	2.14	0.64
53:5:799:A:H3'	53:5:800:G:C8	2.30	0.64
53:5:1046:A:N6	53:5:1175:C:H42	1.96	0.64
53:5:1119:C:H3'	53:5:1120:A:C8	2.32	0.64
53:5:1482:A:H2'	53:5:1483:C:O4'	1.97	0.64
1:0:39:ARG:NH2	51:3:504:G:O6	2.22	0.64
4:9:89:ILE:HG13	4:9:93:ILE:HG13	1.79	0.64
4:9:328:ARG:HH11	54:6:51:G:H1'	1.61	0.64
9:E:107:LEU:O	9:E:111:LYS:HG2	1.97	0.64
13:I:72:GLU:HG2	17:M:57:LYS:HB2	1.79	0.64
19:O:66:LEU:HA	19:O:69:GLN:HG2	1.80	0.64
33:i:121:TRP:HA	33:i:124:LYS:HE2	1.79	0.64
34:j:35:LEU:N	34:j:69:GLN:HE22	1.88	0.64
35:k:79:VAL:HG22	35:k:113:LYS:HB3	1.80	0.64
36:l:6:ARG:HB3	51:3:907:A:H5''	1.80	0.64
38:n:83:LYS:O	38:n:85:LYS:NZ	2.29	0.64
43:s:39:ARG:HH22	43:s:43:ALA:N	1.95	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:3:33:C:H2'	51:3:34:C:C6	2.32	0.64
51:3:309:A:H2'	51:3:310:U:C6	2.33	0.64
51:3:410:G:H22	51:3:436:G:H2'	1.59	0.64
51:3:526:G:H2'	51:3:527:A:C8	2.33	0.64
51:3:574:G:N1	51:3:587:U:O2	2.18	0.64
51:3:1005:G:N2	51:3:1021:C:OP1	2.29	0.64
51:3:1294:G:H3'	51:3:1295:A:H2'	1.79	0.64
51:3:1744:U:H2'	51:3:1745:A:C8	2.31	0.64
51:3:2280:U:O3'	51:3:2281:A:H8	1.81	0.64
51:3:2838:G:H1'	51:3:2887:A:H61	1.63	0.64
52:4:58:C:H2'	52:4:59:A:H8	1.63	0.64
53:5:320:G:N1	53:5:323:A:OP2	2.26	0.64
53:5:578:C:H3'	53:5:579:G:H8	1.60	0.64
16:L:25:ILE:HG23	16:L:29:ARG:HB2	1.80	0.64
25:a:155:LYS:NZ	51:3:2212:U:O2	2.31	0.64
25:a:246:ARG:NE	51:3:2598:C:OP1	2.30	0.64
29:e:9:ILE:O	29:e:53:LEU:N	2.29	0.64
44:t:14:THR:HG22	44:t:15:GLY:H	1.63	0.64
45:u:28:ARG:HB2	51:3:2286:A:H62	1.63	0.64
46:v:32:ASN:ND2	51:3:434:G:OP1	2.31	0.64
49:y:7:ARG:NH2	51:3:2026:A:H3'	2.12	0.64
51:3:1721:G:N1	51:3:1734:A:OP1	2.30	0.64
51:3:2525:C:O2'	51:3:2527:U:OP2	2.16	0.64
53:5:212:G:H2'	53:5:213:U:C6	2.32	0.64
53:5:317:A:H2'	53:5:318:C:C6	2.33	0.64
53:5:652:A:H3'	53:5:653:G:H8	1.63	0.64
53:5:742:C:H2'	53:5:743:A:C8	2.33	0.64
53:5:950:C:N4	53:5:1200:G:O6	2.30	0.64
5:A:71:TYR:CZ	9:E:166:PHE:HB2	2.33	0.64
5:A:175:LEU:HD12	5:A:176:LEU:H	1.63	0.64
12:H:6:TYR:O	12:H:21:LEU:N	2.26	0.64
12:H:41:PHE:HE1	12:H:44:LYS:H	1.44	0.64
17:M:60:SER:O	53:5:1161:G:N2	2.31	0.64
27:c:2:ALA:N	27:c:20:LEU:H	1.96	0.64
29:e:152:ARG:NH1	29:e:165:VAL:O	2.31	0.64
30:f:67:LYS:O	30:f:71:VAL:HG23	1.98	0.64
34:j:31:ARG:NH2	51:3:2684:G:OP2	2.31	0.64
39:o:33:VAL:HG13	39:o:48:PHE:HB3	1.80	0.64
39:o:67:ARG:NH1	39:o:104:MET:O	2.30	0.64
44:t:14:THR:HG22	51:3:344:A:OP1	1.97	0.64
44:t:91:TYR:HB2	51:3:331:A:H5''	1.80	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:y:17:ARG:NH2	51:3:1294:G:OP1	2.28	0.64
51:3:235:U:H2'	51:3:236:G:O4'	1.98	0.64
51:3:279:U:O4	51:3:280:A:N6	2.31	0.64
51:3:405:C:H2'	51:3:406:C:H6	1.63	0.64
51:3:640:U:O2	51:3:658:G:O6	2.16	0.64
51:3:982:G:H2'	51:3:983:A:C8	2.33	0.64
51:3:1042:C:H2'	51:3:1043:C:C6	2.32	0.64
51:3:1503:A:OP2	51:3:1540:G:N2	2.30	0.64
51:3:2254:G:H2'	51:3:2255:A:H8	1.63	0.64
53:5:393:A:O2'	53:5:395:G:OP2	2.16	0.64
4:9:302:HIS:ND1	4:9:393:LEU:O	2.31	0.64
8:D:79:THR:OG1	53:5:916:U:O2	2.15	0.64
8:D:147:SER:HA	8:D:184:GLY:HA3	1.79	0.64
8:D:189:ILE:O	8:D:193:HIS:ND1	2.31	0.64
37:m:103:LEU:HD11	37:m:115:ILE:HG12	1.79	0.64
44:t:6:LYS:HD2	44:t:26:LYS:HA	1.80	0.64
49:y:43:CYS:SG	49:y:44:SER:N	2.71	0.64
51:3:382:U:H2'	51:3:383:U:C6	2.33	0.64
51:3:610:G:O2'	51:3:1284:A:OP1	2.16	0.64
51:3:1057:G:H1'	51:3:1059:G:C6	2.32	0.64
51:3:1059:G:OP2	51:3:1060:G:O2'	2.15	0.64
51:3:1376:G:H3'	51:3:1377:A:H8	1.62	0.64
51:3:1387:A:OP2	51:3:1399:G:N2	2.31	0.64
51:3:2031:C:H2'	51:3:2032:G:H8	1.62	0.64
51:3:2646:G:H1'	51:3:2786:A:N6	2.13	0.64
52:4:36:C:H2'	52:4:37:A:C8	2.33	0.64
53:5:288:A:C5	53:5:289:U:H1'	2.33	0.64
53:5:1267:G:H2'	53:5:1268:G:C8	2.32	0.64
53:5:1464:G:H2'	53:5:1465:U:C6	2.32	0.64
53:5:1497:U:H2'	53:5:1498:G:C8	2.32	0.64
54:7:63:U:H2'	54:7:64:G:H8	1.63	0.64
9:E:144:SER:HA	11:G:62:ASN:HA	1.80	0.64
16:L:107:ARG:HG2	16:L:112:PRO:HA	1.80	0.64
18:N:24:VAL:O	18:N:28:LEU:HG	1.98	0.64
27:c:55:LYS:HB3	51:3:836:G:N3	2.13	0.64
28:d:132:ILE:O	28:d:151:GLY:HA3	1.97	0.64
30:f:41:LYS:HB2	30:f:46:ASP:HB2	1.78	0.64
33:i:40:ARG:NH1	51:3:1043:C:H5'	2.13	0.64
42:r:9:ARG:HG3	42:r:100:SER:HB2	1.80	0.64
51:3:573:A:H3'	51:3:574:G:C8	2.33	0.64
51:3:608:A:O2'	51:3:2510:G:N7	2.30	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:3:900:G:H2'	51:3:901:C:C6	2.33	0.64
51:3:1032:A:H2'	51:3:1033:A:C8	2.33	0.64
51:3:2231:A:H3'	51:3:2232:G:C8	2.32	0.64
51:3:2478:G:O6	51:3:2489:G:N2	2.31	0.64
51:3:2538:A:OP2	51:3:2543:G:N2	2.31	0.64
53:5:1299:C:H2'	53:5:1300:C:H6	1.63	0.64
53:5:1450:C:H2'	53:5:1451:A:C8	2.30	0.64
21:Q:73:ARG:NH2	21:Q:83:GLN:OE1	2.30	0.63
26:b:119:PHE:HE2	51:3:2827:A:H8	1.46	0.63
26:b:127:ASN:ND2	51:3:2686:C:OP1	2.30	0.63
26:b:174:VAL:HA	51:3:2781:C:H5''	1.79	0.63
33:i:109:LYS:HD3	33:i:122:ILE:HG12	1.79	0.63
37:m:102:LYS:HE2	51:3:2820:G:H4'	1.79	0.63
43:s:65:ILE:HG12	43:s:73:GLY:C	2.21	0.63
45:u:43:GLN:HE22	51:3:960:A:H4'	1.62	0.63
51:3:80:U:H3	51:3:109:G:H1	0.72	0.63
51:3:816:A:O2'	51:3:1795:C:O2	2.13	0.63
51:3:1547:G:H3'	51:3:1548:A:H2'	1.80	0.63
51:3:1633:C:H2'	51:3:1634:A:C8	2.32	0.63
51:3:1957:G:N2	51:3:1963:U:O4	2.18	0.63
51:3:2082:U:H4'	51:3:2604:U:H3	1.63	0.63
53:5:19:C:N3	53:5:912:G:N1	2.42	0.63
53:5:252:U:H2'	53:5:253:G:C8	2.32	0.63
53:5:688:G:H2'	53:5:689:U:C6	2.34	0.63
53:5:1048:G:H3'	53:5:1049:G:C8	2.32	0.63
54:6:4:U:H2'	54:6:5:C:C6	2.33	0.63
54:6:10:A:H5'	54:6:22:A:H61	1.63	0.63
26:b:126:TRP:HB3	26:b:164:LYS:HD3	1.80	0.63
27:c:161:VAL:HG22	27:c:164:LEU:H	1.62	0.63
37:m:34:THR:HB	37:m:37:LYS:HZ3	1.61	0.63
46:v:57:THR:O	46:v:61:HIS:N	2.30	0.63
51:3:1844:C:H2'	51:3:1846:A:N6	2.11	0.63
51:3:2757:A:H3'	51:3:2758:A:H2'	1.79	0.63
52:4:73:U:H2'	52:4:74:G:H8	1.62	0.63
53:5:553:C:H2'	53:5:554:C:C6	2.33	0.63
54:7:57:C:H5	54:7:58:G:C6	2.16	0.63
5:A:185:LYS:HA	5:A:188:VAL:HG12	1.79	0.63
11:G:38:SER:HB3	11:G:41:LYS:HE2	1.81	0.63
29:e:7:ARG:NH1	51:3:2759:G:O2'	2.26	0.63
29:e:119:LYS:NZ	29:e:120:ILE:O	2.30	0.63
34:j:27:SER:H	34:j:30:LYS:HE3	1.63	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:o:54:ARG:HB3	39:o:65:ILE:HG12	1.79	0.63
41:q:15:HIS:N	41:q:18:ASP:OD2	2.28	0.63
51:3:42:U:H2'	51:3:43:A:C8	2.34	0.63
51:3:243:U:O4	51:3:262:G:O6	2.15	0.63
51:3:713:C:H2'	51:3:714:G:H8	1.62	0.63
51:3:1226:G:N2	51:3:1256:A:N3	2.46	0.63
51:3:1295:A:N7	51:3:2021:A:N6	2.37	0.63
51:3:1436:C:H2'	51:3:1437:A:C8	2.34	0.63
51:3:1557:G:C2'	51:3:1573:A:H61	2.03	0.63
51:3:1587:U:O2'	51:3:1588:A:OP1	2.16	0.63
51:3:2461:A:N1	51:3:2507:C:N4	2.44	0.63
51:3:2580:A:O2'	51:3:2581:C:OP1	2.16	0.63
51:3:2855:A:N6	51:3:2870:U:O4	2.20	0.63
53:5:763:A:H2'	53:5:764:A:O4'	1.98	0.63
53:5:775:G:N2	53:5:801:U:O2	2.29	0.63
53:5:879:G:H2'	53:5:880:G:H8	1.64	0.63
53:5:971:A:H5''	53:5:1333:C:H5'	1.81	0.63
53:5:1262:A:N1	53:5:1346:G:H1'	2.13	0.63
13:l:14:ILE:HG23	13:l:80:MET:HB2	1.78	0.63
15:k:96:ARG:HH11	15:k:110:ILE:H	1.46	0.63
35:k:117:HIS:HB2	51:3:673:A:H5''	1.79	0.63
47:w:47:THR:O	47:w:50:LEU:HB3	1.98	0.63
51:3:159:G:H2'	51:3:160:A:C8	2.33	0.63
51:3:195:A:O2'	51:3:713:C:O2	2.15	0.63
51:3:615:G:H2'	51:3:616:G:C8	2.33	0.63
51:3:937:A:H3'	51:3:938:A:H8	1.63	0.63
53:5:137:A:H3'	53:5:138:A:C8	2.32	0.63
53:5:169:G:H3'	53:5:170:A:H8	1.63	0.63
53:5:294:A:H2'	53:5:295:G:C8	2.33	0.63
53:5:331:C:H2'	53:5:332:A:C8	2.33	0.63
53:5:520:C:H3'	53:5:521:A:H8	1.63	0.63
1:0:8:SER:H	51:3:721:G:H21	1.45	0.63
1:0:39:ARG:NH1	51:3:504:G:N7	2.46	0.63
3:2:14:CYS:SG	3:2:27:CYS:HB2	2.39	0.63
6:B:53:VAL:HA	6:B:71:ALA:HA	1.78	0.63
9:E:125:PRO:O	53:5:839:U:N3	2.26	0.63
11:G:92:LYS:H	11:G:95:LEU:HB3	1.64	0.63
16:L:10:PRO:HB2	16:L:13:LYS:HD2	1.80	0.63
27:c:143:MET:O	27:c:147:LEU:HG	1.99	0.63
33:i:42:LYS:HE2	40:p:62:LEU:HD21	1.81	0.63
45:u:60:TYR:OH	51:3:2340:U:OP1	2.14	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:3:206:U:H2'	51:3:207:C:O4'	1.98	0.63
51:3:618:G:H3'	51:3:1281:A:N6	2.12	0.63
51:3:646:A:H3'	51:3:647:G:C8	2.33	0.63
51:3:710:A:N3	51:3:2451:C:O2'	2.25	0.63
51:3:887:A:N6	51:3:963:U:O4	2.19	0.63
51:3:1116:U:H2'	51:3:1117:U:C6	2.34	0.63
51:3:1265:G:H3'	51:3:1266:G:C8	2.32	0.63
51:3:1327:G:H2'	51:3:1661:A:N6	2.13	0.63
51:3:2384:A:H2'	51:3:2385:A:C8	2.33	0.63
51:3:2521:A:H2'	51:3:2522:U:C6	2.33	0.63
51:3:2784:A:N3	51:3:2789:A:H5''	2.14	0.63
51:3:2888:U:H1'	51:3:2889:U:C5	2.34	0.63
53:5:351:C:H1'	53:5:384:G:H1'	1.81	0.63
53:5:873:U:H2'	53:5:874:C:H6	1.64	0.63
53:5:988:G:N2	53:5:1036:C:O2	2.30	0.63
53:5:1231:U:H2'	53:5:1253:A:C5	2.34	0.63
53:5:1246:A:H2'	53:5:1247:G:C8	2.33	0.63
2:1:2:LYS:HA	51:3:246:G:H2'	1.79	0.63
5:A:128:ASN:O	5:A:132:LYS:NZ	2.31	0.63
15:K:26:TYR:O	15:K:72:ASN:ND2	2.31	0.63
18:N:5:LYS:NZ	53:5:656:U:OP1	2.26	0.63
37:m:32:GLU:HG2	37:m:115:ILE:HD11	1.79	0.63
38:n:97:LYS:HG2	38:n:99:HIS:HB2	1.80	0.63
42:r:89:ALA:HB1	51:3:783:G:C8	2.33	0.63
45:u:85:LYS:HA	45:u:92:LYS:O	1.99	0.63
47:w:62:LYS:NZ	47:w:66:GLN:O	2.25	0.63
51:3:225:A:OP2	51:3:462:C:N4	2.31	0.63
51:3:334:A:HO2'	51:3:352:C:HO2'	1.39	0.63
51:3:483:A:H8	51:3:483:A:OP2	1.82	0.63
51:3:562:C:C4	51:3:2787:U:H2'	2.33	0.63
51:3:1021:C:H2'	51:3:1022:C:C6	2.33	0.63
51:3:1323:A:N6	51:3:1679:U:O4	2.31	0.63
51:3:1457:A:H61	51:3:1598:U:H3	1.47	0.63
51:3:1799:A:O2'	51:3:1837:C:OP1	2.16	0.63
51:3:2207:A:H62	51:3:2232:G:H21	1.46	0.63
51:3:2465:U:C2	51:3:2502:G:C2	2.86	0.63
53:5:167:A:N6	53:5:196:G:H3'	2.13	0.63
53:5:335:C:H2'	53:5:336:U:C6	2.34	0.63
53:5:486:C:H2'	53:5:487:A:C8	2.34	0.63
53:5:590:G:H2'	53:5:591:A:C8	2.34	0.63
53:5:604:U:N3	53:5:630:G:N1	2.46	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:5:663:G:H2'	53:5:664:A:C8	2.33	0.63
53:5:664:A:H2'	53:5:665:G:C8	2.34	0.63
53:5:1062:C:H2'	53:5:1063:G:H8	1.61	0.63
15:K:69:ARG:NH2	15:K:72:ASN:O	2.31	0.63
21:Q:96:LEU:HB2	21:Q:98:LEU:HG	1.81	0.63
22:R:55:LYS:HB3	53:5:953:A:N3	2.13	0.63
25:a:191:LYS:HE3	25:a:277:LEU:HA	1.80	0.63
26:b:34:ASN:HD22	26:b:54:PHE:HB3	1.64	0.63
30:f:5:LEU:O	30:f:50:PHE:HZ	1.81	0.63
35:k:18:LYS:HB2	51:3:698:A:H5''	1.79	0.63
38:n:77:ILE:O	38:n:80:LYS:HB2	1.99	0.63
51:3:380:A:H3'	51:3:381:A:C8	2.33	0.63
51:3:421:A:H5''	51:3:422:A:H5''	1.80	0.63
51:3:573:A:H61	51:3:588:G:H1'	1.62	0.63
51:3:1021:C:H2'	51:3:1022:C:H6	1.63	0.63
51:3:1434:U:H2'	51:3:1435:A:H8	1.62	0.63
51:3:2524:U:H2'	51:3:2525:C:C6	2.33	0.63
53:5:35:C:N3	53:5:548:G:N1	2.36	0.63
53:5:207:C:H3'	53:5:208:A:C8	2.34	0.63
53:5:648:C:OP2	53:5:749:G:O2'	2.15	0.63
53:5:1237:G:N2	53:5:1248:U:O2	2.29	0.63
53:5:1242:U:H2'	53:5:1243:A:C4	2.34	0.63
3:2:18:LYS:NZ	3:2:21:GLN:O	2.31	0.63
7:C:58:GLN:HB3	7:C:62:TYR:CE2	2.33	0.63
7:C:139:GLY:N	7:C:178:TYR:O	2.23	0.63
10:F:3:LYS:NZ	53:5:1353:C:OP2	2.32	0.63
14:J:15:HIS:HB3	14:J:80:LYS:NZ	2.13	0.63
16:L:105:ASN:OD1	16:L:106:ALA:N	2.32	0.63
17:M:29:ARG:HH11	53:5:1177:U:H4'	1.64	0.63
20:P:7:LYS:O	20:P:64:VAL:HA	1.98	0.63
25:a:44:HIS:NE2	51:3:1823:U:OP2	2.32	0.63
28:d:69:LYS:HA	28:d:84:LEU:HA	1.79	0.63
34:j:51:MET:HG3	34:j:52:VAL:HG13	1.81	0.63
36:l:18:GLU:OE1	36:l:18:GLU:N	2.28	0.63
46:v:14:TYR:HB3	46:v:26:ARG:HD2	1.80	0.63
49:y:37:LYS:NZ	49:y:38:LEU:O	2.30	0.63
51:3:500:U:O2'	51:3:501:G:OP1	2.13	0.63
51:3:1849:G:H2'	51:3:1850:C:C6	2.33	0.63
51:3:2037:A:N3	51:3:2507:C:H4'	2.14	0.63
51:3:2115:A:N6	51:3:2190:G:C6	2.66	0.63
51:3:2486:A:O2'	51:3:2536:U:O2'	2.17	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:3:2664:U:C2	51:3:2673:A:N7	2.66	0.63
53:5:536:U:H2'	53:5:537:A:H8	1.62	0.63
53:5:934:G:O2'	53:5:1350:A:N3	2.32	0.63
53:5:970:A:C2	53:5:1341:U:H1'	2.34	0.63
53:5:1316:C:H2'	53:5:1317:A:H8	1.64	0.63
4:9:36:LEU:HD22	4:9:43:ALA:HB1	1.79	0.63
8:D:139:GLU:N	8:D:139:GLU:OE1	2.31	0.63
11:G:127:VAL:HA	11:G:130:LEU:HD12	1.79	0.63
14:J:38:ALA:HB2	14:J:63:VAL:HG13	1.81	0.63
30:f:101:ALA:HB1	30:f:106:MET:HE3	1.81	0.63
34:j:102:VAL:O	34:j:122:VAL:N	2.30	0.63
35:k:24:HIS:HE1	51:3:846:U:H5''	1.63	0.63
35:k:93:ILE:HB	35:k:126:PHE:HA	1.80	0.63
37:m:71:ASN:N	51:3:1321:C:O2'	2.30	0.63
47:w:11:SER:HA	47:w:15:LEU:HD22	1.81	0.63
51:3:615:G:H2'	51:3:616:G:H8	1.64	0.63
51:3:896:U:H2'	51:3:897:A:H8	1.64	0.63
51:3:1079:U:H2'	51:3:1080:A:H8	1.63	0.63
51:3:1319:C:H2'	51:3:1320:C:H6	1.64	0.63
51:3:2084:A:N3	51:3:2442:A:O2'	2.31	0.63
51:3:2100:G:C8	51:3:2233:A:H2'	2.32	0.63
51:3:2670:A:H3'	51:3:2671:G:H8	1.64	0.63
53:5:434:U:C4	53:5:493:A:H8	2.16	0.63
53:5:663:G:H5'	53:5:723:C:H1'	1.79	0.63
53:5:1012:A:O2'	53:5:1192:C:O2	2.17	0.63
4:9:376:SER:HA	4:9:386:ALA:HA	1.80	0.62
15:K:12:ARG:NE	53:5:562:U:OP2	2.31	0.62
16:L:24:GLY:HA2	16:L:69:LEU:HG	1.80	0.62
19:O:16:VAL:HG23	19:O:26:TYR:HA	1.80	0.62
23:S:3:ASN:N	53:5:327:G:HO2'	1.97	0.62
25:a:11:ASN:ND2	51:3:1730:C:O3'	2.32	0.62
25:a:192:PHE:HE2	25:a:196:CYS:HB2	1.63	0.62
27:c:144:MET:SD	51:3:354:C:N4	2.71	0.62
27:c:161:VAL:N	27:c:181:LYS:O	2.32	0.62
36:l:31:GLU:N	36:l:106:VAL:O	2.32	0.62
38:n:88:ASN:HA	38:n:115:ASN:HB3	1.80	0.62
40:p:91:ARG:HH21	51:3:1033:A:H5'	1.64	0.62
43:s:10:PRO:HA	43:s:29:PHE:HA	1.81	0.62
47:w:51:LEU:HA	47:w:54:ILE:HD12	1.80	0.62
51:3:170:A:H3'	51:3:171:G:C8	2.32	0.62
51:3:322:A:H2'	51:3:323:A:C8	2.33	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:3:700:U:H2'	51:3:701:A:C8	2.34	0.62
51:3:800:C:H2'	51:3:801:U:C6	2.34	0.62
51:3:1012:G:H4'	51:3:1191:A:C6	2.33	0.62
51:3:1889:U:H2'	51:3:1890:U:C2	2.33	0.62
51:3:2005:G:H2'	51:3:2006:C:C6	2.34	0.62
51:3:2455:G:H1	51:3:2459:A:N6	1.97	0.62
53:5:27:A:H61	53:5:556:G:H2'	1.63	0.62
53:5:1012:A:H3'	53:5:1013:C:O4'	1.99	0.62
53:5:1136:G:C2	53:5:1151:A:C6	2.86	0.62
54:7:3:G:H2'	54:7:4:U:C2	2.34	0.62
54:7:20:G:N3	54:7:58:G:N2	2.47	0.62
3:2:7:VAL:O	3:2:8:LYS:HD3	1.98	0.62
4:9:182:ASP:O	4:9:186:GLU:N	2.28	0.62
7:C:70:GLN:O	7:C:74:LEU:HG	2.00	0.62
7:C:128:THR:OG1	7:C:145:LYS:NZ	2.20	0.62
8:D:132:HIS:CG	8:D:137:TYR:HB3	2.34	0.62
16:L:119:LYS:NZ	16:L:120:LYS:O	2.32	0.62
22:R:70:LYS:N	22:R:73:GLU:HG3	2.15	0.62
46:v:26:ARG:NH2	51:3:193:G:OP2	2.32	0.62
51:3:495:U:OP2	51:3:505:G:N2	2.32	0.62
51:3:506:A:H2'	51:3:507:A:C8	2.33	0.62
51:3:895:G:H22	51:3:953:G:H2'	1.65	0.62
51:3:955:A:OP2	51:3:2276:A:N6	2.26	0.62
53:5:886:A:N6	53:5:900:G:H1'	2.15	0.62
53:5:973:A:C8	53:5:974:C:H5	2.17	0.62
53:5:1038:G:N2	53:5:1186:U:O2	2.31	0.62
53:5:1133:A:N6	53:5:1153:G:H1'	2.14	0.62
53:5:1364:C:H2'	53:5:1365:U:H6	1.61	0.62
7:C:88:ASN:O	7:C:92:VAL:HG23	2.00	0.62
9:E:37:THR:HA	9:E:60:TRP:CZ3	2.33	0.62
10:F:65:VAL:HA	10:F:68:VAL:HG22	1.81	0.62
11:G:92:LYS:O	11:G:96:ARG:NH2	2.31	0.62
25:a:235:PRO:HD3	25:a:242:GLY:HA3	1.81	0.62
28:d:31:LEU:HA	28:d:158:THR:HA	1.81	0.62
28:d:40:VAL:HG11	28:d:50:LEU:HD21	1.80	0.62
32:h:104:ILE:HA	32:h:107:TYR:HB3	1.80	0.62
35:k:73:LEU:HD11	51:3:248:A:H4'	1.80	0.62
40:p:89:ILE:HG22	40:p:91:ARG:HH12	1.64	0.62
42:r:34:ASN:O	42:r:37:SER:OG	2.16	0.62
43:s:51:LYS:NZ	43:s:52:PRO:O	2.32	0.62
45:u:84:GLN:O	45:u:93:THR:HA	1.99	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:3:199:A:H3'	51:3:201:A:OP2	2.00	0.62
51:3:411:U:H2'	51:3:412:A:C8	2.34	0.62
51:3:434:G:H2'	51:3:435:U:H6	1.64	0.62
51:3:704:G:H3'	51:3:705:A:C8	2.34	0.62
51:3:849:C:N3	51:3:1224:G:N1	2.42	0.62
51:3:1253:G:H1	51:3:1256:A:P	2.21	0.62
51:3:1447:A:OP2	51:3:1611:C:N4	2.32	0.62
51:3:1589:A:H2'	51:3:1590:U:C6	2.35	0.62
51:3:1785:U:H1'	51:3:1792:A:H62	1.64	0.62
51:3:2297:G:H2'	51:3:2298:G:C8	2.34	0.62
51:3:2749:A:H62	51:3:2771:G:H21	1.47	0.62
53:5:68:C:H2'	53:5:69:G:C8	2.33	0.62
53:5:481:U:H4'	53:5:482:G:H2'	1.80	0.62
53:5:640:C:H2'	53:5:641:U:H6	1.63	0.62
53:5:778:A:N6	53:5:798:U:N1	2.45	0.62
54:6:22:A:N3	54:6:47:G:N2	2.43	0.62
4:9:154:VAL:HG13	4:9:157:LEU:HD23	1.82	0.62
4:9:343:SER:OG	4:9:360:THR:O	2.11	0.62
5:A:83:LEU:HB3	5:A:176:LEU:HB2	1.79	0.62
5:A:180:ASP:O	5:A:184:GLU:N	2.32	0.62
6:B:202:LYS:HB3	6:B:204:TRP:CH2	2.34	0.62
13:I:51:LYS:NZ	53:5:1228:C:OP2	2.27	0.62
34:j:66:LYS:N	34:j:82:ASN:OD1	2.32	0.62
39:o:34:ALA:HA	39:o:47:ASN:HA	1.81	0.62
41:q:29:VAL:O	41:q:31:LYS:NZ	2.32	0.62
41:q:45:ILE:HA	41:q:50:LEU:HD13	1.81	0.62
42:r:126:LYS:HA	42:r:129:VAL:HG22	1.82	0.62
43:s:18:PHE:HA	43:s:21:MET:HB2	1.80	0.62
46:v:37:LYS:NZ	46:v:45:THR:OG1	2.33	0.62
51:3:117:C:H2'	51:3:118:G:O4'	1.99	0.62
51:3:197:U:H2'	51:3:198:G:C8	2.34	0.62
51:3:491:A:O2'	51:3:493:A:OP1	2.18	0.62
51:3:1077:G:H2'	51:3:1078:C:C6	2.34	0.62
51:3:1079:U:O2'	51:3:1146:A:N6	2.28	0.62
51:3:1391:U:H2'	51:3:1392:G:C8	2.33	0.62
51:3:1393:A:H3'	51:3:1394:A:C8	2.30	0.62
51:3:1474:C:C2	51:3:1492:G:C2	2.87	0.62
51:3:1663:G:H3'	51:3:1664:A:H8	1.65	0.62
53:5:94:A:C8	53:5:322:G:H2'	2.35	0.62
53:5:732:A:H2'	53:5:733:A:C8	2.34	0.62
53:5:1218:C:H2'	53:5:1219:C:C6	2.34	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:A:38:ASN:ND2	5:A:206:THR:O	2.33	0.62
7:C:105:GLY:N	7:C:162:VAL:O	2.27	0.62
12:H:41:PHE:HZ	12:H:47:ILE:HB	1.64	0.62
12:H:108:ARG:HD3	12:H:110:LYS:H	1.64	0.62
21:Q:100:PRO:HB2	21:Q:103:LYS:HB2	1.81	0.62
22:R:54:GLY:O	53:5:1195:G:N2	2.33	0.62
23:S:15:ILE:O	23:S:19:LEU:HG	1.99	0.62
25:a:234:ASN:O	25:a:238:HIS:N	2.27	0.62
31:g:118:PHE:HB2	31:g:123:LEU:HB2	1.81	0.62
33:i:98:LYS:O	33:i:129:LYS:NZ	2.30	0.62
35:k:39:GLN:OE1	51:3:866:G:O2'	2.11	0.62
35:k:97:SER:HA	35:k:100:GLU:CD	2.23	0.62
36:l:26:TYR:CE2	36:l:28:ALA:HB2	2.35	0.62
51:3:317:U:H2'	51:3:318:U:C6	2.34	0.62
51:3:318:U:N3	51:3:391:U:O2	2.33	0.62
51:3:643:A:H62	51:3:655:G:N2	1.96	0.62
51:3:1302:C:OP2	51:3:1680:A:O2'	2.11	0.62
51:3:1331:G:N1	51:3:1659:C:O2	2.28	0.62
51:3:1400:U:H2'	51:3:1401:A:C8	2.34	0.62
51:3:1549:U:H5''	51:3:1550:G:C8	2.35	0.62
51:3:2013:C:H2'	51:3:2014:U:C6	2.35	0.62
52:4:85:A:H2'	52:4:86:G:C8	2.34	0.62
53:5:372:G:N2	53:5:383:U:O2	2.32	0.62
53:5:876:C:H2'	53:5:877:C:C6	2.35	0.62
53:5:1462:G:H2'	53:5:1463:A:C8	2.31	0.62
4:9:304:LYS:H	4:9:394:GLU:C	2.07	0.62
5:A:21:ALA:HB2	5:A:65:LEU:HD22	1.82	0.62
6:B:13:GLY:N	6:B:16:LYS:O	2.31	0.62
11:G:68:ARG:NH1	53:5:588:U:O4'	2.33	0.62
15:K:25:HIS:HB3	15:K:37:ASN:HB2	1.81	0.62
38:n:81:LEU:HD11	38:n:86:LEU:HB3	1.81	0.62
43:s:66:ARG:NH1	51:3:66:A:O2'	2.31	0.62
51:3:281:U:H2'	51:3:282:C:C6	2.35	0.62
51:3:730:G:H2'	51:3:731:A:H8	1.63	0.62
51:3:1064:A:H3'	51:3:1065:G:H8	1.63	0.62
51:3:1414:C:H2'	51:3:1415:A:H8	1.62	0.62
51:3:1439:U:H2'	51:3:1440:U:C6	2.34	0.62
51:3:1845:C:H5''	51:3:1846:A:N7	2.14	0.62
51:3:2007:U:H2'	51:3:2008:A:H8	1.63	0.62
53:5:70:A:H2'	53:5:71:A:C8	2.35	0.62
53:5:630:G:H2'	53:5:631:C:C6	2.35	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:5:637:A:H2'	53:5:638:A:C4	2.34	0.62
53:5:662:G:O6	53:5:721:G:O6	2.17	0.62
53:5:912:G:H2'	53:5:913:A:H8	1.65	0.62
53:5:963:U:O5'	53:5:1053:U:H5''	1.99	0.62
53:5:1472:G:H1'	53:5:1493:A:N1	2.14	0.62
4:9:155:ARG:HD3	4:9:166:LYS:HE3	1.80	0.62
7:C:61:GLN:O	7:C:65:GLY:N	2.22	0.62
10:F:106:PHE:CZ	10:F:136:LYS:HG3	2.34	0.62
18:N:65:LYS:NZ	53:5:580:C:O3'	2.33	0.62
20:P:26:VAL:HG22	20:P:43:LYS:HB3	1.82	0.62
29:e:113:SER:HB3	51:3:2675:C:N3	2.14	0.62
32:h:9:ILE:O	51:3:1133:A:O2'	2.16	0.62
51:3:392:A:H4'	51:3:392:A:OP1	1.98	0.62
51:3:558:C:O5'	51:3:575:C:O2'	2.17	0.62
51:3:726:U:H2'	51:3:727:C:C6	2.35	0.62
51:3:1398:C:H3'	51:3:1399:G:C8	2.29	0.62
51:3:1653:C:H2'	51:3:1654:G:C8	2.35	0.62
51:3:1865:A:H2'	51:3:1866:G:O4'	1.99	0.62
51:3:2587:U:H2'	51:3:2588:U:C2	2.35	0.62
51:3:2721:C:O2'	51:3:2723:C:OP2	2.16	0.62
51:3:2892:U:H2'	51:3:2893:C:H6	1.64	0.62
53:5:988:G:O2'	53:5:989:A:N7	2.33	0.62
53:5:1106:U:O2	53:5:1160:G:N2	2.22	0.62
53:5:1185:C:H1'	53:5:1189:U:H5	1.64	0.62
4:9:329:PRO:HG3	4:9:342:ILE:HD11	1.82	0.62
23:S:17:ARG:HA	23:S:20:ASN:HD22	1.64	0.62
25:a:43:LYS:HB3	25:a:61:ARG:NH2	2.13	0.62
36:l:111:GLU:HA	36:l:114:MET:HE3	1.80	0.62
51:3:83:G:H3'	51:3:84:G:H8	1.65	0.62
51:3:358:A:N6	51:3:372:G:H2'	2.14	0.62
51:3:724:A:H2'	51:3:725:G:H8	1.64	0.62
51:3:832:C:H2'	51:3:833:C:C6	2.34	0.62
51:3:895:G:N2	51:3:896:U:O4	2.33	0.62
51:3:1050:A:H2'	51:3:1051:U:O4'	1.99	0.62
51:3:1079:U:H2'	51:3:1080:A:C8	2.35	0.62
51:3:1166:G:H1	51:3:2047:U:H1'	1.64	0.62
51:3:1531:C:H3'	51:3:1532:A:H8	1.65	0.62
51:3:1792:A:H2'	51:3:1794:A:N7	2.14	0.62
51:3:1836:A:H3'	51:3:1837:C:C6	2.35	0.62
51:3:2342:U:H4'	51:3:2343:A:C8	2.35	0.62
52:4:90:G:H2'	52:4:91:A:C8	2.34	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:5:394:U:H2'	53:5:395:G:C8	2.35	0.62
53:5:768:G:H2'	53:5:769:U:C6	2.35	0.62
53:5:866:A:C5	53:5:868:G:C8	2.88	0.62
53:5:991:A:C4	53:5:1037:A:H4'	2.34	0.62
54:7:37:A:H2'	54:7:38:G:C8	2.35	0.62
4:9:319:ARG:HG3	4:9:382:ARG:HE	1.64	0.62
6:B:201:VAL:C	6:B:202:LYS:HD3	2.25	0.62
7:C:73:ARG:HA	7:C:76:ARG:HE	1.64	0.62
14:J:93:PHE:HA	14:J:98:LEU:HD13	1.80	0.62
24:T:36:LEU:O	24:T:38:LYS:NZ	2.29	0.62
36:l:22:LYS:HB2	36:l:98:LYS:HZ2	1.64	0.62
37:m:105:PRO:HA	37:m:112:GLU:HA	1.80	0.62
40:p:31:TYR:O	40:p:34:ALA:N	2.32	0.62
51:3:613:C:H2'	51:3:614:C:C6	2.35	0.62
51:3:714:G:H2'	51:3:715:G:H8	1.65	0.62
51:3:1307:G:H2'	51:3:1308:A:H8	1.64	0.62
51:3:1665:G:H1'	51:3:1669:A:N6	2.15	0.62
51:3:2249:A:H2'	51:3:2250:G:H8	1.64	0.62
51:3:2668:A:HO2'	51:3:2669:G:H8	1.48	0.62
51:3:2891:C:H2'	51:3:2892:U:C6	2.35	0.62
52:4:35:C:H2'	52:4:36:C:O4'	2.00	0.62
53:5:58:G:H2'	53:5:59:C:C6	2.35	0.62
53:5:162:C:H1'	53:5:1422:A:O2'	1.99	0.62
53:5:320:G:C2	53:5:322:G:H3'	2.35	0.62
54:6:16:G:H4'	54:6:17:U:OP1	2.00	0.62
8:D:152:LYS:HG2	8:D:179:TYR:HD2	1.65	0.62
9:E:144:SER:H	11:G:3:THR:HA	1.65	0.62
18:N:36:LEU:HA	18:N:39:HIS:HB3	1.82	0.62
27:c:47:GLN:NE2	51:3:41:C:O2	2.32	0.62
27:c:128:VAL:HG13	27:c:198:LEU:HB3	1.81	0.62
29:e:21:GLN:N	29:e:24:HIS:O	2.31	0.62
29:e:34:ILE:HG13	29:e:35:GLU:H	1.65	0.62
29:e:175:LYS:NZ	51:3:2537:G:OP2	2.24	0.62
35:k:43:LYS:NZ	51:3:709:G:O6	2.32	0.62
36:l:1:MET:HE3	36:l:45:ARG:HG3	1.82	0.62
38:n:19:ILE:HA	38:n:22:THR:HG22	1.82	0.62
38:n:72:LEU:HA	38:n:75:GLN:NE2	2.15	0.62
40:p:49:ARG:HH21	51:3:1029:A:P	2.23	0.62
42:r:122:LYS:HA	42:r:125:VAL:HG12	1.81	0.62
51:3:989:G:O2'	51:3:2274:A:OP2	2.16	0.62
51:3:1010:G:O2'	51:3:1025:G:N2	2.33	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:3:1104:A:N3	51:3:1131:A:H5'	2.15	0.62
51:3:2205:U:HO2'	51:3:2232:G:H1	1.45	0.62
51:3:2381:G:H2'	51:3:2382:A:C8	2.35	0.62
51:3:2468:U:H2'	51:3:2469:A:C8	2.34	0.62
51:3:2530:U:N3	51:3:2773:A:N7	2.47	0.62
51:3:2576:A:H2'	51:3:2577:G:C8	2.34	0.62
51:3:2641:A:H2'	51:3:2642:G:H8	1.62	0.62
53:5:930:A:H2'	53:5:931:C:H6	1.65	0.62
53:5:1102:A:H2'	53:5:1103:C:C6	2.35	0.62
53:5:1214:A:H1'	53:5:1216:G:C5	2.35	0.62
1:0:34:ARG:HA	1:0:37:LYS:HD3	1.82	0.61
6:B:153:LYS:HE2	6:B:170:MET:HG2	1.81	0.61
11:G:24:ASN:ND2	53:5:823:C:O2	2.34	0.61
25:a:179:TYR:HB3	25:a:191:LYS:HB3	1.80	0.61
28:d:33:LYS:HD2	28:d:90:THR:HG23	1.82	0.61
29:e:125:THR:O	29:e:127:LYS:NZ	2.24	0.61
33:i:40:ARG:HH12	51:3:1043:C:H5'	1.65	0.61
35:k:88:LEU:HD22	35:k:103:VAL:HG11	1.80	0.61
36:l:63:LYS:NZ	36:l:64:MET:O	2.34	0.61
41:q:35:LEU:HB2	41:q:55:VAL:HG13	1.82	0.61
42:r:9:ARG:HD2	42:r:80:PRO:HD2	1.82	0.61
42:r:78:GLN:OE1	42:r:99:ARG:NH1	2.32	0.61
50:z:31:LYS:HE3	50:z:48:LYS:HD2	1.81	0.61
51:3:597:C:H2'	51:3:598:G:H8	1.65	0.61
51:3:904:C:N3	51:3:949:C:O2'	2.29	0.61
51:3:1496:A:OP2	51:3:1547:G:N2	2.32	0.61
51:3:1508:G:N2	51:3:1532:A:O3'	2.33	0.61
51:3:1873:A:H2'	51:3:1874:G:O4'	2.01	0.61
51:3:2025:C:H2'	51:3:2026:A:C8	2.34	0.61
51:3:2300:A:C6	51:3:2349:G:C6	2.88	0.61
51:3:2306:A:H3'	51:3:2307:G:C8	2.33	0.61
51:3:2478:G:H2'	51:3:2479:A:C8	2.34	0.61
51:3:2694:A:H2'	51:3:2695:U:O4'	2.00	0.61
51:3:2750:A:H2'	51:3:2751:C:C6	2.35	0.61
53:5:66:A:H4'	53:5:67:U:H5''	1.80	0.61
53:5:97:G:N2	53:5:350:G:H5''	2.13	0.61
53:5:503:G:H5'	53:5:532:U:H2'	1.82	0.61
53:5:554:C:H2'	53:5:555:G:C8	2.35	0.61
53:5:1160:G:H2'	53:5:1161:G:C8	2.35	0.61
4:9:332:TYR:N	4:9:376:SER:O	2.31	0.61
5:A:82:ILE:HG13	5:A:175:LEU:HB3	1.82	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:B:7:SER:HG	6:B:204:TRP:CD1	2.18	0.61
17:M:46:GLU:OE2	53:5:1177:U:N3	2.33	0.61
21:Q:42:ARG:O	21:Q:46:ILE:HB	2.00	0.61
21:Q:59:ALA:HA	21:Q:62:ARG:NE	2.12	0.61
27:c:141:LYS:HA	27:c:144:MET:HB2	1.81	0.61
33:i:10:GLU:HB2	33:i:48:THR:HG21	1.82	0.61
35:k:40:LYS:N	51:3:867:G:OP1	2.20	0.61
42:r:121:GLN:NE2	51:3:23:A:O2'	2.33	0.61
47:w:4:ALA:O	47:w:8:ARG:NH1	2.33	0.61
51:3:401:G:O2'	51:3:402:A:OP1	2.19	0.61
51:3:496:A:H61	51:3:505:G:C2'	2.13	0.61
51:3:947:A:H2'	51:3:948:A:C8	2.34	0.61
51:3:1270:C:H2'	51:3:1271:A:H8	1.65	0.61
51:3:1336:A:H3'	51:3:1337:G:H8	1.65	0.61
51:3:1976:A:O2'	51:3:1979:G:N3	2.27	0.61
51:3:2007:U:H2'	51:3:2008:A:C8	2.34	0.61
51:3:2240:U:H2'	51:3:2241:A:C8	2.35	0.61
53:5:49:C:N4	53:5:359:A:N1	2.47	0.61
53:5:501:A:H2'	53:5:502:C:C6	2.35	0.61
53:5:991:A:C5	53:5:1037:A:H4'	2.35	0.61
53:5:1046:A:N6	53:5:1175:C:N4	2.48	0.61
53:5:1098:C:H2'	53:5:1099:G:C8	2.34	0.61
53:5:1204:A:H2'	53:5:1205:C:C6	2.35	0.61
53:5:1290:G:N1	53:5:1293:A:OP2	2.34	0.61
53:5:1388:A:C2	53:5:1462:G:N1	2.68	0.61
53:5:1442:A:H2'	53:5:1443:A:C8	2.34	0.61
54:7:9:U:H4'	54:7:49:C:H4'	1.82	0.61
4:9:36:LEU:HB3	4:9:43:ALA:O	2.00	0.61
6:B:41:ARG:HA	6:B:44:PHE:CD2	2.34	0.61
6:B:189:LEU:HD21	6:B:191:LYS:HE3	1.81	0.61
7:C:48:SER:O	7:C:52:GLN:N	2.26	0.61
10:F:101:ARG:NH1	53:5:934:G:O3'	2.33	0.61
15:K:6:GLN:O	15:K:10:LYS:N	2.34	0.61
15:K:57:LYS:HG3	15:K:58:PRO:HD3	1.81	0.61
16:L:79:HIS:NE2	22:R:65:ASP:O	2.26	0.61
18:N:57:VAL:HG23	18:N:60:ARG:HH11	1.64	0.61
20:P:66:THR:HG22	20:P:75:PHE:N	2.15	0.61
25:a:163:SER:N	51:3:1826:A:OP1	2.33	0.61
27:c:174:ASN:ND2	51:3:357:A:N7	2.47	0.61
33:i:115:ASN:HD21	51:3:591:G:H5''	1.63	0.61
36:l:20:LYS:HE3	52:4:76:A:H4'	1.81	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:n:97:LYS:NZ	52:4:36:C:O2'	2.25	0.61
42:r:6:LYS:HG2	42:r:104:VAL:HB	1.83	0.61
46:v:2:ALA:N	51:3:1392:G:OP2	2.33	0.61
51:3:494:G:H1'	51:3:495:U:C5	2.35	0.61
51:3:599:U:H4'	51:3:844:G:OP1	1.99	0.61
51:3:739:G:N2	51:3:761:G:N3	2.48	0.61
51:3:1426:C:H2'	51:3:1427:C:C6	2.35	0.61
51:3:1600:A:H2'	51:3:1600:A:N3	2.16	0.61
51:3:1798:A:H3'	51:3:1799:A:H8	1.65	0.61
51:3:2468:U:H2'	51:3:2469:A:H8	1.66	0.61
51:3:2689:C:N4	51:3:2733:A:OP2	2.33	0.61
52:4:32:G:H21	52:4:35:C:N4	1.98	0.61
53:5:366:C:H2'	53:5:367:A:C8	2.36	0.61
53:5:420:A:H3'	53:5:421:G:C8	2.35	0.61
53:5:482:G:O2'	53:5:483:U:O5'	2.18	0.61
53:5:940:G:H1	53:5:1211:A:N6	1.93	0.61
53:5:1321:G:O2'	53:5:1348:G:N1	2.20	0.61
53:5:1366:U:H2'	53:5:1367:G:H8	1.65	0.61
8:D:188:PRO:HA	8:D:191:MET:HB2	1.82	0.61
11:G:14:PRO:HB2	11:G:41:LYS:HD3	1.82	0.61
13:I:43:LYS:HZ2	13:I:81:ILE:HD12	1.63	0.61
16:L:97:VAL:H	53:5:1282:U:H5''	1.63	0.61
22:R:81:LYS:HE2	53:5:950:C:O2	2.00	0.61
34:j:35:LEU:HA	34:j:62:ILE:HG23	1.82	0.61
35:k:22:ARG:HE	51:3:1280:G:P	2.23	0.61
44:t:10:VAL:HG12	44:t:74:LEU:HD12	1.82	0.61
50:z:11:CYS:N	50:z:16:GLU:O	2.33	0.61
51:3:493:A:O2'	51:3:494:G:OP2	2.19	0.61
51:3:563:A:N6	51:3:2050:G:OP2	2.32	0.61
51:3:574:G:H2'	51:3:575:C:C6	2.35	0.61
51:3:725:G:H2'	51:3:726:U:C6	2.35	0.61
51:3:897:A:H3'	51:3:898:A:C8	2.36	0.61
51:3:1164:A:N1	51:3:2577:G:O2'	2.30	0.61
51:3:1366:G:H2'	51:3:1367:G:C8	2.35	0.61
51:3:2462:G:H3'	51:3:2463:G:H8	1.64	0.61
52:4:39:U:H5'	52:4:40:U:C5	2.36	0.61
53:5:290:G:H2'	53:5:291:C:C6	2.36	0.61
53:5:394:U:H2'	53:5:395:G:H8	1.65	0.61
53:5:507:A:H2'	53:5:508:A:C8	2.35	0.61
53:5:594:A:H3'	53:5:595:G:H8	1.64	0.61
53:5:612:G:N1	53:5:624:U:C2	2.68	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:5:990:C:N3	53:5:1037:A:O2'	2.34	0.61
53:5:1075:G:H21	53:5:1093:A:N6	1.98	0.61
53:5:1381:U:H1'	53:5:1493:A:H1'	1.80	0.61
6:B:27:HIS:HB3	17:M:36:HIS:HA	1.83	0.61
6:B:117:ARG:HH12	6:B:189:LEU:H	1.48	0.61
7:C:109:THR:HB	7:C:112:SER:HB3	1.82	0.61
8:D:134:GLY:O	8:D:176:SER:N	2.31	0.61
13:I:44:GLY:HA3	53:5:1114:A:H4'	1.82	0.61
17:M:9:LYS:HB2	17:M:12:ARG:HH11	1.65	0.61
18:N:76:ARG:O	18:N:80:LYS:NZ	2.33	0.61
24:T:46:ARG:HH11	53:5:719:G:H21	1.49	0.61
29:e:80:ILE:HA	29:e:83:THR:HG22	1.82	0.61
30:f:3:VAL:HG12	30:f:3:VAL:O	1.99	0.61
34:j:110:GLY:O	34:j:112:ASN:ND2	2.33	0.61
35:k:113:LYS:HG2	35:k:114:LEU:H	1.66	0.61
40:p:91:ARG:HG3	41:q:11:GLN:HB2	1.81	0.61
51:3:144:C:H2'	51:3:145:A:H8	1.65	0.61
51:3:195:A:OP2	51:3:208:A:N6	2.33	0.61
51:3:445:C:H2'	51:3:446:A:C8	2.35	0.61
51:3:641:U:H1'	51:3:657:A:N6	2.14	0.61
51:3:739:G:N2	51:3:761:G:H1'	2.11	0.61
51:3:863:U:H4'	51:3:866:G:N1	2.15	0.61
51:3:868:C:H2'	51:3:869:U:H6	1.61	0.61
51:3:1158:C:H2'	51:3:1159:C:C6	2.35	0.61
51:3:1440:U:H2'	51:3:1441:A:H8	1.63	0.61
51:3:1587:U:H2'	51:3:1588:A:C8	2.35	0.61
51:3:1634:A:C6	51:3:1635:G:C6	2.89	0.61
51:3:2667:G:N2	51:3:2670:A:OP2	2.33	0.61
53:5:348:C:N4	53:5:353:G:H1	1.98	0.61
53:5:420:A:H3'	53:5:421:G:H8	1.64	0.61
53:5:1298:U:H5'	53:5:1336:C:H4'	1.82	0.61
53:5:1416:U:O4	53:5:1435:G:O6	2.17	0.61
54:6:41:C:H2'	54:6:42:C:C6	2.36	0.61
2:1:25:TYR:CG	51:3:2400:A:H4'	2.36	0.61
4:9:29:THR:HG22	4:9:79:HIS:HE1	1.64	0.61
5:A:102:ARG:HH11	5:A:103:VAL:HG21	1.66	0.61
7:C:9:LYS:NZ	53:5:425:G:OP2	2.33	0.61
10:F:101:ARG:HH12	53:5:1351:U:H5'	1.65	0.61
15:K:63:ARG:HG3	15:K:103:LEU:HD11	1.82	0.61
27:c:106:LYS:NZ	51:3:634:C:O3'	2.33	0.61
28:d:169:LEU:O	28:d:173:LEU:N	2.34	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:l:45:ARG:HH12	36:l:93:TRP:H	1.48	0.61
36:l:54:ILE:HG22	36:l:58:LEU:HD12	1.83	0.61
42:r:94:ASN:ND2	51:3:2021:A:H5'	2.15	0.61
43:s:16:VAL:HA	43:s:19:ASN:ND2	2.16	0.61
51:3:409:A:N1	51:3:437:A:H5''	2.15	0.61
51:3:727:C:H2'	51:3:728:A:C8	2.35	0.61
51:3:804:U:H2'	51:3:805:G:C8	2.35	0.61
51:3:855:A:H1'	51:3:979:U:H1'	1.82	0.61
53:5:168:A:C5	53:5:169:G:H1'	2.35	0.61
53:5:251:G:H2'	53:5:252:U:H6	1.65	0.61
53:5:649:U:C4	53:5:750:A:H8	2.18	0.61
53:5:941:A:H2'	53:5:942:G:H8	1.65	0.61
53:5:1104:C:H2'	53:5:1105:C:H6	1.66	0.61
4:9:136:ASN:OD1	4:9:137:LYS:N	2.33	0.61
6:B:193:GLN:NE2	6:B:194:THR:O	2.33	0.61
15:K:67:LYS:HD3	15:K:77:LEU:HD22	1.81	0.61
15:K:81:PRO:O	15:K:112:ARG:NH1	2.33	0.61
18:N:20:GLY:HA3	53:5:747:C:O2	2.01	0.61
25:a:50:GLN:OE1	51:3:1813:C:O2'	2.13	0.61
25:a:173:GLN:HG2	25:a:180:VAL:HB	1.83	0.61
26:b:16:VAL:N	26:b:24:LEU:O	2.32	0.61
29:e:55:ILE:O	29:e:68:HIS:NE2	2.34	0.61
51:3:50:G:N2	51:3:180:A:N7	2.48	0.61
51:3:247:U:O2	51:3:259:A:C5	2.53	0.61
51:3:360:G:H2'	51:3:361:G:H8	1.65	0.61
51:3:518:A:O2'	51:3:532:A:N1	2.32	0.61
51:3:546:U:H3'	51:3:547:G:C8	2.35	0.61
51:3:623:A:H2'	51:3:624:U:C6	2.35	0.61
51:3:745:U:H2'	51:3:746:G:C8	2.35	0.61
51:3:900:G:C2	51:3:903:A:N6	2.65	0.61
51:3:1886:C:H2'	51:3:1887:U:C6	2.36	0.61
51:3:2180:U:H3'	51:3:2181:A:H8	1.64	0.61
51:3:2224:A:H2'	51:3:2225:G:H8	1.66	0.61
51:3:2290:G:H4'	51:3:2397:G:O2'	2.01	0.61
51:3:2465:U:O2	51:3:2502:G:C2	2.54	0.61
51:3:2494:C:H2'	51:3:2495:A:H8	1.66	0.61
51:3:2684:G:H2'	51:3:2685:A:C8	2.35	0.61
51:3:2851:U:O4	51:3:2873:G:O6	2.19	0.61
53:5:24:C:H2'	53:5:25:U:C6	2.35	0.61
53:5:813:A:OP1	53:5:1501:G:O2'	2.19	0.61
54:6:4:U:O4	54:6:71:A:N6	2.17	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:C:41:ARG:O	7:C:41:ARG:NH2	2.30	0.61
10:F:125:ASP:HB3	10:F:130:THR:HB	1.83	0.61
19:O:65:SER:OG	53:5:450:U:O3'	2.18	0.61
39:o:30:GLU:OE1	39:o:92:ARG:CD	2.49	0.61
46:v:14:TYR:HA	46:v:27:ARG:O	2.01	0.61
51:3:42:U:H4'	51:3:649:A:C2	2.35	0.61
51:3:81:C:H2'	51:3:82:G:C8	2.35	0.61
51:3:116:C:H2'	51:3:117:C:C6	2.36	0.61
51:3:163:A:N3	51:3:2216:U:O2'	2.32	0.61
51:3:345:A:H5''	51:3:366:A:C4	2.36	0.61
51:3:1520:A:H2'	51:3:1521:A:O4'	2.01	0.61
51:3:2667:G:N1	51:3:2670:A:OP2	2.30	0.61
51:3:2755:G:C6	51:3:2762:U:H2'	2.35	0.61
53:5:229:G:H2'	53:5:230:G:C8	2.36	0.61
53:5:352:A:H1'	53:5:384:G:C2	2.36	0.61
53:5:402:G:C2	53:5:434:U:C2	2.87	0.61
53:5:762:G:N2	53:5:810:U:OP2	2.33	0.61
53:5:834:G:H2'	53:5:835:G:C8	2.35	0.61
53:5:1423:C:H2'	53:5:1424:C:C6	2.36	0.61
4:9:3:ARG:HH11	4:9:260:GLU:HG3	1.66	0.61
7:C:177:THR:HG23	7:C:179:VAL:HG22	1.82	0.61
9:E:142:ARG:N	11:G:5:THR:HA	2.15	0.61
10:F:114:THR:HG22	10:F:116:LEU:H	1.66	0.61
13:I:21:SER:O	13:I:25:ASP:N	2.34	0.61
13:I:64:ASP:H	53:5:968:G:H5'	1.66	0.61
15:K:129:ALA:H	53:5:36:G:H1'	1.66	0.61
27:c:15:THR:HG23	27:c:16:GLU:HG2	1.80	0.61
51:3:268:C:O2'	51:3:464:A:N1	2.33	0.61
51:3:421:A:H2'	51:3:423:C:H41	1.65	0.61
51:3:482:G:H1'	51:3:485:A:C2	2.34	0.61
51:3:1453:U:H3'	51:3:1454:G:C8	2.35	0.61
51:3:1999:G:N2	51:3:2003:C:O2	2.33	0.61
51:3:2038:A:H1'	51:3:2463:G:O2'	2.01	0.61
51:3:2623:U:H2'	51:3:2624:C:C6	2.36	0.61
52:4:104:C:H2'	52:4:105:A:C8	2.26	0.61
53:5:149:G:H2'	53:5:150:A:O4'	2.01	0.61
53:5:275:A:H1'	53:5:277:G:C4	2.35	0.61
53:5:460:A:N1	53:5:467:G:C6	2.69	0.61
53:5:723:C:O3'	53:5:739:G:N2	2.34	0.61
54:6:17:U:N3	54:6:20:G:N7	2.49	0.61
54:7:29:C:H2'	54:7:30:G:C8	2.36	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:D:179:TYR:HH	53:5:7:U:H3	1.48	0.61
9:E:39:TYR:HB3	9:E:58:TYR:CD2	2.36	0.61
16:L:53:PHE:O	16:L:57:ARG:HG2	2.00	0.61
25:a:268:ARG:NH1	25:a:269:ASN:O	2.33	0.61
36:l:24:ASN:ND2	36:l:67:ARG:O	2.34	0.61
46:v:53:ARG:NH2	51:3:434:G:O5'	2.33	0.61
49:y:15:LYS:O	51:3:2052:C:O2'	2.19	0.61
51:3:168:A:H2'	51:3:169:U:O4'	1.99	0.61
51:3:604:A:N6	51:3:2508:U:H5'	2.16	0.61
51:3:1057:G:H1'	51:3:1059:G:C5	2.36	0.61
51:3:2305:C:H2'	51:3:2306:A:C8	2.35	0.61
51:3:2731:U:H2'	51:3:2732:A:C8	2.36	0.61
51:3:2752:G:C6	51:3:2768:U:N3	2.69	0.61
53:5:18:U:H3	53:5:913:A:H61	1.49	0.61
53:5:672:A:H2'	53:5:673:A:C8	2.36	0.61
53:5:862:C:O2'	53:5:867:A:O2'	2.13	0.61
53:5:1320:A:H62	53:5:1349:A:H3'	1.66	0.61
53:5:1325:U:O2	53:5:1346:G:C6	2.54	0.61
54:7:51:G:C2	54:7:66:C:C2	2.89	0.61
8:D:66:PHE:CD2	8:D:96:ASN:HB3	2.36	0.60
11:G:115:ILE:HB	11:G:138:LEU:HB2	1.83	0.60
39:o:34:ALA:HB1	39:o:45:ILE:HG13	1.83	0.60
51:3:39:C:H2'	51:3:40:A:H8	1.67	0.60
51:3:493:A:N6	51:3:507:A:OP2	2.34	0.60
51:3:604:A:N6	51:3:2507:C:O3'	2.34	0.60
51:3:683:G:H2'	51:3:684:A:C8	2.35	0.60
51:3:867:G:H2'	51:3:868:C:H6	1.66	0.60
51:3:1040:U:O2'	51:3:1047:A:OP2	2.17	0.60
51:3:1492:G:O2'	51:3:1579:G:H4'	2.01	0.60
51:3:1494:U:H3	51:3:1550:G:H1	1.49	0.60
53:5:292:U:H2'	53:5:293:G:C8	2.36	0.60
53:5:641:U:C2	53:5:642:A:C8	2.89	0.60
53:5:885:U:N3	53:5:901:A:C8	2.68	0.60
53:5:930:A:O2'	53:5:1358:U:O2	2.19	0.60
53:5:1432:A:H2'	53:5:1433:G:H8	1.65	0.60
1:0:9:LYS:NZ	51:3:1337:G:O5'	2.27	0.60
5:A:43:PHE:CZ	9:E:158:ASP:HB3	2.35	0.60
10:F:5:ARG:HH21	53:5:1354:G:P	2.24	0.60
15:K:18:LYS:O	15:K:20:LYS:NZ	2.33	0.60
15:K:27:ASN:HA	15:K:72:ASN:HB3	1.83	0.60
25:a:43:LYS:HD2	51:3:727:C:H5''	1.81	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:b:19:THR:N	26:b:221:GLU:O	2.31	0.60
26:b:116:GLY:HA2	26:b:168:HIS:CE1	2.36	0.60
26:b:144:GLN:HB3	26:b:147:VAL:HG12	1.83	0.60
30:f:4:ILE:CD1	30:f:38:PRO:O	2.49	0.60
37:m:37:LYS:NZ	51:3:1685:G:OP1	2.30	0.60
37:m:43:LYS:H	37:m:43:LYS:HZ3	1.49	0.60
39:o:64:PHE:CE2	39:o:79:PHE:HB2	2.36	0.60
51:3:727:C:H2'	51:3:728:A:H8	1.66	0.60
51:3:840:G:O6	51:3:2075:U:H5''	2.00	0.60
51:3:897:A:N3	52:4:77:G:O2'	2.33	0.60
51:3:1049:U:H3	51:3:1184:U:H3	1.48	0.60
51:3:1413:A:N1	51:3:1430:U:C4	2.69	0.60
51:3:1481:U:H4'	51:3:1482:U:OP1	2.00	0.60
51:3:1678:U:H2'	51:3:1679:U:C2	2.34	0.60
51:3:1793:A:OP2	51:3:1794:A:N6	2.25	0.60
51:3:1817:A:H3'	51:3:1818:G:H8	1.66	0.60
51:3:1864:A:C2	51:3:1891:A:H2	2.19	0.60
51:3:2381:G:H2'	51:3:2382:A:H8	1.65	0.60
51:3:2515:C:H5''	51:3:2581:C:N3	2.15	0.60
53:5:631:C:H2'	53:5:632:A:C8	2.36	0.60
53:5:988:G:H2'	53:5:990:C:H41	1.66	0.60
53:5:1041:G:H2'	53:5:1042:G:H8	1.65	0.60
2:1:13:LEU:HD11	2:1:17:GLY:HA2	1.83	0.60
5:A:84:PHE:HA	5:A:177:ILE:HG12	1.81	0.60
7:C:118:ASN:ND2	7:C:130:ASP:O	2.34	0.60
10:F:147:ASN:HB3	10:F:150:PHE:HB2	1.83	0.60
12:H:116:LYS:HZ1	53:5:1342:C:H3'	1.66	0.60
18:N:16:ASP:OD1	18:N:16:ASP:N	2.34	0.60
23:S:28:LEU:O	23:S:32:VAL:HG23	2.01	0.60
27:c:67:LYS:H	27:c:67:LYS:NZ	1.99	0.60
35:k:22:ARG:NE	51:3:1280:G:OP1	2.32	0.60
40:p:46:TYR:OH	40:p:50:ARG:NH2	2.29	0.60
48:x:14:PHE:O	48:x:23:PHE:N	2.33	0.60
51:3:53:G:N2	51:3:119:A:C8	2.65	0.60
51:3:230:G:H1'	51:3:232:A:H61	1.66	0.60
51:3:373:U:H2'	51:3:374:A:C8	2.36	0.60
51:3:517:G:N1	51:3:542:A:H1'	2.16	0.60
51:3:604:A:N1	51:3:2507:C:O2'	2.33	0.60
51:3:609:U:H2'	51:3:610:G:C8	2.37	0.60
51:3:1093:U:H3	51:3:1115:G:H1	0.69	0.60
51:3:1251:G:C2	51:3:1252:C:C2	2.88	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:3:1446:G:O2'	51:3:1613:A:N6	2.25	0.60
51:3:1610:U:H2'	51:3:1611:C:H6	1.67	0.60
51:3:1724:A:H62	51:3:1732:A:H62	1.49	0.60
51:3:2064:G:OP2	51:3:2065:A:N6	2.24	0.60
51:3:2102:U:H2'	51:3:2103:C:C6	2.35	0.60
51:3:2796:C:H2'	51:3:2797:C:C6	2.37	0.60
51:3:2796:C:H2'	51:3:2797:C:H6	1.66	0.60
52:4:69:C:N4	52:4:95:G:O6	2.24	0.60
53:5:574:C:H41	53:5:875:G:H4'	1.66	0.60
53:5:1322:U:N3	53:5:1349:A:H8	1.95	0.60
4:9:171:ILE:HD11	4:9:195:ALA:HB3	1.84	0.60
7:C:48:SER:H	7:C:51:ALA:HB3	1.66	0.60
7:C:96:ARG:NH1	7:C:98:ASP:OD2	2.35	0.60
10:F:8:LYS:HA	53:5:1352:A:H62	1.64	0.60
12:H:37:PRO:HB2	12:H:47:ILE:HG13	1.84	0.60
21:Q:84:ARG:NH2	53:5:661:G:OP1	2.34	0.60
30:f:4:ILE:HG21	30:f:37:ALA:HB3	1.83	0.60
35:k:5:GLN:N	35:k:5:GLN:OE1	2.34	0.60
35:k:13:ARG:NH1	35:k:14:ASN:OD1	2.34	0.60
35:k:26:SER:HB3	51:3:848:U:H5	1.65	0.60
37:m:85:LYS:O	37:m:89:LYS:NZ	2.21	0.60
38:n:80:LYS:O	38:n:83:LYS:HB2	2.01	0.60
39:o:25:PHE:O	39:o:55:ARG:HD3	2.00	0.60
41:q:77:LYS:NZ	51:3:1009:A:OP2	2.31	0.60
42:r:61:ASN:ND2	51:3:530:G:O2'	2.35	0.60
42:r:87:PRO:HA	51:3:1648:A:C6	2.35	0.60
44:t:41:LYS:HZ2	44:t:66:GLU:CD	2.08	0.60
51:3:142:A:H2'	51:3:143:A:C4	2.36	0.60
51:3:603:G:N2	51:3:2507:C:OP1	2.35	0.60
51:3:661:G:H2'	51:3:662:U:C6	2.36	0.60
51:3:1063:A:OP2	51:3:1160:G:N1	2.34	0.60
51:3:1499:C:H2'	51:3:1500:A:H8	1.64	0.60
51:3:2059:G:H3'	51:3:2060:G:H8	1.66	0.60
51:3:2081:U:H1'	51:3:2606:A:N3	2.16	0.60
51:3:2541:C:H2'	51:3:2542:A:O4'	2.01	0.60
51:3:2571:U:H2'	51:3:2573:A:OP2	2.01	0.60
51:3:2671:G:H3'	51:3:2672:G:H8	1.65	0.60
51:3:2759:G:N3	51:3:2760:C:N4	2.49	0.60
51:3:2835:G:N2	51:3:2888:U:OP2	2.35	0.60
53:5:42:G:O6	53:5:397:C:N4	2.23	0.60
53:5:52:A:N7	53:5:99:U:O2'	2.31	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:5:354:U:H2'	53:5:355:A:H8	1.65	0.60
53:5:366:C:H2'	53:5:367:A:H8	1.66	0.60
53:5:934:G:O2'	53:5:1351:U:O4'	2.19	0.60
53:5:1051:U:H2'	53:5:1052:G:H8	1.66	0.60
54:7:76:C:H2'	54:7:77:A:C8	2.36	0.60
4:9:182:ASP:HB3	4:9:185:TRP:HB2	1.81	0.60
13:I:23:LEU:HD11	13:I:99:PRO:HG2	1.82	0.60
25:a:62:ASN:ND2	51:3:1600:A:O2'	2.35	0.60
44:t:70:PHE:HB2	44:t:73:LYS:HE3	1.84	0.60
50:z:11:CYS:SG	50:z:12:ASN:N	2.75	0.60
51:3:227:A:H2'	51:3:456:G:H21	1.65	0.60
51:3:1298:A:H2'	51:3:1299:A:O4'	2.01	0.60
51:3:2155:G:H2'	51:3:2156:G:C8	2.36	0.60
51:3:2175:U:N3	51:3:2179:A:C8	2.69	0.60
51:3:2691:C:N3	51:3:2735:G:O2'	2.28	0.60
52:4:31:G:H2'	52:4:32:G:O4'	2.02	0.60
52:4:35:C:O2	52:4:46:C:O2'	2.14	0.60
53:5:65:G:H4'	53:5:66:A:H3'	1.84	0.60
53:5:598:U:H2'	53:5:599:G:C8	2.36	0.60
53:5:764:A:H2	53:5:1487:U:H1'	1.66	0.60
53:5:1012:A:H1'	53:5:1193:U:H1'	1.84	0.60
53:5:1144:A:H8	53:5:1145:A:C8	2.19	0.60
53:5:1321:G:H1	53:5:1348:G:H3'	1.64	0.60
53:5:1472:G:H2'	53:5:1473:U:O4'	2.01	0.60
2:1:29:LEU:HB3	2:1:31:PRO:HD3	1.83	0.60
4:9:270:MET:N	4:9:273:ASP:OD2	2.34	0.60
7:C:101:VAL:HG12	7:C:107:ALA:HB2	1.84	0.60
9:E:44:GLU:HG3	9:E:54:SER:HB2	1.84	0.60
10:F:64:ALA:O	10:F:68:VAL:HG13	2.02	0.60
16:L:56:ILE:O	16:L:60:ALA:N	2.34	0.60
25:a:46:GLY:O	25:a:55:VAL:N	2.32	0.60
28:d:26:MET:HE1	52:4:53:U:H1'	1.83	0.60
33:i:118:SER:HA	33:i:121:TRP:CE3	2.37	0.60
36:l:41:TRP:CD1	36:l:74:LYS:HZ1	2.20	0.60
39:o:81:ILE:HD12	39:o:88:ILE:HD13	1.83	0.60
42:r:72:PHE:HB2	42:r:108:SER:N	2.17	0.60
51:3:83:G:H3'	51:3:84:G:C8	2.36	0.60
51:3:410:G:N2	51:3:436:G:H2'	2.16	0.60
51:3:504:G:H3'	51:3:505:G:H8	1.66	0.60
51:3:567:U:H4'	51:3:568:G:C8	2.36	0.60
51:3:577:C:N4	51:3:584:G:O6	2.28	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:3:1269:C:H2'	51:3:1270:C:C6	2.34	0.60
51:3:1853:G:H2'	51:3:1854:A:C4	2.36	0.60
51:3:1859:U:O2	51:3:1897:A:N6	2.26	0.60
51:3:2275:A:N1	51:3:2280:U:C4	2.69	0.60
51:3:2637:A:O2'	51:3:2898:A:N6	2.35	0.60
51:3:2642:G:H2'	51:3:2643:A:C8	2.37	0.60
51:3:2747:U:H2'	51:3:2748:A:C8	2.37	0.60
52:4:6:U:H2'	52:4:7:G:C8	2.33	0.60
52:4:85:A:H2'	52:4:86:G:H8	1.64	0.60
53:5:171:A:H2'	53:5:172:C:H6	1.66	0.60
53:5:212:G:O2'	53:5:465:A:N6	2.35	0.60
53:5:337:C:H2'	53:5:338:C:H6	1.67	0.60
53:5:492:G:O2'	53:5:494:A:O2'	2.16	0.60
53:5:1009:G:N2	53:5:1013:C:N3	2.50	0.60
7:C:184:ARG:HA	7:C:187:LEU:HD12	1.84	0.60
9:E:92:ARG:HG2	21:Q:50:ARG:NH2	2.16	0.60
12:H:9:LEU:HD13	12:H:18:LYS:HG3	1.81	0.60
12:H:87:ARG:HA	12:H:90:LEU:HD12	1.82	0.60
29:e:167:TYR:HB2	29:e:170:GLU:HB2	1.84	0.60
33:i:105:TYR:HE1	33:i:109:LYS:HZ3	1.50	0.60
37:m:43:LYS:O	37:m:47:LYS:HG3	2.01	0.60
44:t:72:SER:OG	51:3:369:C:O2	2.20	0.60
51:3:341:G:N2	51:3:344:A:O5'	2.26	0.60
51:3:619:A:N3	51:3:707:C:H1'	2.17	0.60
51:3:1527:U:H2'	51:3:1528:G:C8	2.37	0.60
51:3:1542:G:H2'	51:3:1543:U:H6	1.66	0.60
51:3:1764:U:O2'	51:3:1765:G:OP2	2.20	0.60
51:3:1853:G:N2	51:3:1902:C:C2	2.69	0.60
52:4:91:A:H3'	52:4:92:A:C8	2.34	0.60
53:5:167:A:H61	53:5:196:G:H3'	1.67	0.60
53:5:614:U:H2'	53:5:615:G:C8	2.37	0.60
53:5:673:A:N1	53:5:711:G:O6	2.35	0.60
53:5:861:A:O2'	53:5:867:A:N1	2.34	0.60
53:5:1225:A:H2'	53:5:1226:A:C8	2.37	0.60
53:5:1338:A:O2'	53:5:1340:G:N7	2.27	0.60
53:5:1489:C:H2'	53:5:1490:G:H8	1.65	0.60
6:B:74:PRO:HA	6:B:77:LEU:HG	1.83	0.60
8:D:131:ILE:O	8:D:132:HIS:ND1	2.35	0.60
9:E:98:ALA:O	9:E:101:ASN:ND2	2.33	0.60
10:F:102:TRP:HA	10:F:105:MET:HG2	1.82	0.60
11:G:115:ILE:O	11:G:138:LEU:N	2.31	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:J:121:ARG:NH2	53:5:1498:G:OP1	2.35	0.60
19:O:51:GLU:O	19:O:55:LYS:NZ	2.33	0.60
22:R:55:LYS:HB3	53:5:953:A:C2	2.37	0.60
27:c:5:LYS:HB2	27:c:13:PHE:CD1	2.36	0.60
28:d:23:SER:O	52:4:53:U:H4'	2.02	0.60
33:i:47:PHE:O	40:p:63:ARG:NH1	2.35	0.60
37:m:67:LEU:HB2	37:m:75:VAL:HG23	1.84	0.60
40:p:10:ARG:NH1	51:3:30:A:O2'	2.34	0.60
45:u:55:ARG:HH21	51:3:2395:U:H5'	1.67	0.60
51:3:220:A:C8	51:3:468:A:C5	2.90	0.60
51:3:247:U:H1'	51:3:259:A:N6	2.16	0.60
51:3:260:A:H2'	51:3:261:A:C8	2.36	0.60
51:3:959:C:H2'	51:3:960:A:C8	2.37	0.60
51:3:977:A:H2'	51:3:978:G:C8	2.37	0.60
51:3:2140:G:O2'	51:3:2141:A:N7	2.32	0.60
51:3:2303:U:O4	51:3:2345:G:O6	2.20	0.60
51:3:2891:C:H2'	51:3:2892:U:H6	1.67	0.60
52:4:24:A:H3'	52:4:25:A:C8	2.37	0.60
52:4:24:A:H3'	52:4:25:A:H8	1.67	0.60
53:5:15:U:N3	53:5:17:A:O5'	2.34	0.60
53:5:453:C:H2'	53:5:454:U:H6	1.67	0.60
53:5:941:A:H2'	53:5:942:G:C8	2.36	0.60
53:5:967:C:N4	53:5:968:G:O6	2.34	0.60
53:5:1036:C:H2'	53:5:1037:A:O4'	2.01	0.60
53:5:1192:C:H2'	53:5:1193:U:C6	2.37	0.60
53:5:1370:C:H5'	53:5:1376:G:H21	1.67	0.60
53:5:1432:A:H2'	53:5:1433:G:C8	2.37	0.60
5:A:222:PRO:O	5:A:225:THR:OG1	2.16	0.60
9:E:75:THR:O	9:E:79:ASN:N	2.35	0.60
14:J:18:CYS:H	14:J:86:LYS:HD3	1.67	0.60
20:P:12:ILE:O	20:P:25:GLN:N	2.31	0.60
21:Q:92:ARG:O	21:Q:96:LEU:HG	2.02	0.60
23:S:64:ARG:NH2	23:S:67:ARG:HH11	1.96	0.60
30:f:9:VAL:HG13	30:f:14:LYS:H	1.67	0.60
36:l:77:LYS:N	51:3:993:A:OP2	2.35	0.60
40:p:107:LEU:O	40:p:111:LYS:CB	2.49	0.60
51:3:251:G:N2	51:3:254:G:H3'	2.15	0.60
51:3:325:G:N2	51:3:383:U:O2	2.31	0.60
51:3:490:A:OP1	51:3:491:A:N6	2.35	0.60
51:3:555:A:H2'	51:3:556:U:H6	1.67	0.60
51:3:853:G:H21	51:3:1220:A:H62	1.50	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:3:1184:U:H2'	51:3:1185:U:C2	2.36	0.60
51:3:1465:U:O2'	51:3:1466:U:O5'	2.20	0.60
51:3:1707:U:O2'	51:3:1708:G:H5'	2.02	0.60
53:5:339:U:O3'	53:5:340:A:H8	1.84	0.60
53:5:472:G:H2'	53:5:473:A:C8	2.37	0.60
53:5:555:G:H3'	53:5:556:G:C8	2.36	0.60
53:5:597:C:H2'	53:5:598:U:C6	2.36	0.60
53:5:773:G:O2'	53:5:775:G:O6	2.12	0.60
53:5:1133:A:C2	53:5:1153:G:C2	2.80	0.60
53:5:1279:G:HO2'	53:5:1280:A:H8	1.49	0.60
4:9:223:GLY:HA2	53:5:354:U:H1'	1.84	0.60
4:9:310:TYR:HD2	4:9:356:ASN:HB2	1.65	0.60
5:A:117:LEU:HD23	5:A:194:LEU:HD12	1.83	0.60
8:D:133:LYS:O	8:D:176:SER:OG	2.20	0.60
12:H:42:PRO:HG3	53:5:1264:G:H21	1.67	0.60
13:I:12:LEU:HD21	13:I:106:PHE:HB2	1.82	0.60
24:T:15:LEU:HG	24:T:19:LYS:HE2	1.84	0.60
39:o:98:ARG:HA	51:3:2852:G:H3'	1.82	0.60
42:r:7:GLN:NE2	42:r:7:GLN:O	2.35	0.60
42:r:116:GLU:HA	42:r:119:LYS:HD2	1.84	0.60
51:3:22:U:H2'	51:3:23:A:C8	2.36	0.60
51:3:353:G:H2'	51:3:354:C:C6	2.36	0.60
51:3:493:A:H61	51:3:506:A:H3'	1.66	0.60
51:3:740:A:N6	51:3:760:G:H2'	2.17	0.60
51:3:812:G:H2'	51:3:813:G:C8	2.37	0.60
51:3:1099:C:H2'	51:3:1100:U:C2	2.36	0.60
51:3:1228:G:H2'	51:3:1229:U:C6	2.37	0.60
51:3:1475:C:H2'	51:3:1476:C:C6	2.37	0.60
51:3:2103:C:H2'	51:3:2104:A:H8	1.67	0.60
53:5:257:U:H2'	53:5:259:A:N7	2.16	0.60
53:5:883:A:N1	53:5:901:A:H5''	2.16	0.60
53:5:1217:G:C2	53:5:1269:U:O2	2.55	0.60
54:7:4:U:O2'	54:7:5:C:O5'	2.18	0.60
5:A:61:GLN:HE22	5:A:215:ILE:HG23	1.67	0.59
7:C:100:ILE:HG13	7:C:136:LEU:HD13	1.84	0.59
9:E:69:THR:HB	9:E:73:LYS:HZ3	1.66	0.59
9:E:146:THR:HA	11:G:60:LEU:HG	1.84	0.59
11:G:11:HIS:CD2	11:G:12:PHE:H	2.20	0.59
13:I:62:HIS:CE1	53:5:958:G:H21	2.20	0.59
30:f:137:VAL:O	30:f:139:LYS:NZ	2.32	0.59
36:l:17:TYR:HA	36:l:96:VAL:HG23	1.83	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:3:148:U:H2'	51:3:149:A:H8	1.67	0.59
51:3:563:A:H62	51:3:2049:A:H3'	1.67	0.59
51:3:614:C:H2'	51:3:615:G:C8	2.37	0.59
51:3:638:A:N6	51:3:639:G:O6	2.34	0.59
51:3:678:U:H3	51:3:681:A:P	2.25	0.59
51:3:984:C:H1'	51:3:1020:G:C4	2.37	0.59
51:3:1082:A:H2'	51:3:1145:G:C2	2.37	0.59
51:3:1101:U:H5''	54:6:57:C:O2'	2.02	0.59
51:3:1264:U:H3'	51:3:1265:G:H8	1.66	0.59
51:3:1475:C:O2'	51:3:1577:A:N3	2.35	0.59
51:3:1706:C:H2'	51:3:1707:U:C2	2.37	0.59
51:3:1731:G:H8	51:3:1731:G:O5'	1.84	0.59
51:3:2486:A:O2'	51:3:2538:A:OP1	2.19	0.59
51:3:2547:C:H2'	51:3:2548:G:C8	2.37	0.59
53:5:42:G:C6	53:5:398:G:C6	2.89	0.59
53:5:433:C:H2'	53:5:434:U:H5'	1.83	0.59
53:5:693:A:N3	53:5:783:G:O2'	2.32	0.59
53:5:1217:G:H21	53:5:1276:U:H3	1.50	0.59
4:9:24:GLY:O	4:9:28:LEU:N	2.32	0.59
6:B:153:LYS:HD2	6:B:171:TYR:O	2.02	0.59
7:C:141:LYS:HD2	7:C:177:THR:HB	1.83	0.59
12:H:75:THR:OG1	53:5:1347:U:H5''	2.02	0.59
18:N:6:ASN:HA	18:N:9:ILE:HD12	1.84	0.59
21:Q:42:ARG:HA	21:Q:45:ALA:HB3	1.84	0.59
23:S:64:ARG:NH1	53:5:256:G:OP1	2.35	0.59
39:o:29:ASP:HA	39:o:92:ARG:O	2.02	0.59
39:o:103:TYR:CZ	51:3:1761:C:H5'	2.36	0.59
48:x:13:SER:HA	48:x:24:THR:HA	1.82	0.59
51:3:434:G:H2'	51:3:435:U:C6	2.38	0.59
51:3:1962:U:H6	51:3:2559:C:H2'	1.66	0.59
51:3:2457:U:O2'	51:3:2509:C:N4	2.35	0.59
51:3:2750:A:H2'	51:3:2751:C:H6	1.67	0.59
52:4:39:U:O2'	52:4:40:U:OP1	2.19	0.59
53:5:413:G:N1	53:5:423:U:N3	2.50	0.59
53:5:451:G:H2'	53:5:452:A:C8	2.37	0.59
53:5:582:G:O6	53:5:754:U:O4	2.20	0.59
53:5:1104:C:H2'	53:5:1105:C:C6	2.37	0.59
53:5:1383:A:C6	53:5:1469:G:C6	2.90	0.59
53:5:1409:A:H3'	53:5:1410:A:C8	2.37	0.59
54:6:39:A:C5	54:6:40:A:C8	2.90	0.59
7:C:2:LYS:HB3	7:C:3:TYR:HD1	1.66	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:D:141:ILE:HG13	8:D:149:VAL:O	2.03	0.59
12:H:97:LYS:HA	12:H:100:LEU:HB3	1.83	0.59
15:K:44:ARG:HG2	53:5:359:A:OP2	2.03	0.59
15:K:134:LYS:H	53:5:38:U:P	2.24	0.59
20:P:23:THR:HB	20:P:44:LYS:HE2	1.83	0.59
26:b:3:ILE:O	26:b:208:ARG:NH2	2.35	0.59
27:c:157:VAL:HG22	27:c:196:ALA:HB3	1.84	0.59
29:e:108:LEU:HD12	29:e:116:ILE:HG22	1.83	0.59
33:i:8:THR:HG21	40:p:100:LYS:HE3	1.84	0.59
34:j:91:LYS:NZ	34:j:109:ARG:O	2.24	0.59
39:o:80:GLN:HE22	39:o:82:HIS:HB2	1.67	0.59
39:o:107:ARG:NH1	39:o:109:GLY:O	2.35	0.59
40:p:54:ARG:NH2	51:3:1191:A:N7	2.50	0.59
41:q:39:LEU:HA	41:q:50:LEU:H	1.67	0.59
42:r:90:LYS:HA	51:3:786:A:H5'	1.84	0.59
47:w:98:LEU:HD11	47:w:102:ARG:HH21	1.67	0.59
51:3:312:U:H2'	51:3:313:G:O4'	2.03	0.59
51:3:417:G:N1	51:3:431:U:N3	2.50	0.59
51:3:496:A:H61	51:3:505:G:H2'	1.67	0.59
51:3:716:G:P	51:3:811:G:H1	2.24	0.59
51:3:1409:G:H2'	51:3:1410:A:C8	2.36	0.59
51:3:1442:G:H2'	51:3:1443:A:C8	2.37	0.59
51:3:1748:U:O2'	51:3:1750:A:N6	2.35	0.59
51:3:1896:A:N3	51:3:2093:U:O2'	2.30	0.59
51:3:2646:G:N1	51:3:2783:A:H2'	2.18	0.59
52:4:29:C:O2'	52:4:51:A:N1	2.30	0.59
53:5:100:G:O2'	53:5:102:G:O6	2.18	0.59
53:5:134:G:O2'	53:5:1422:A:N3	2.35	0.59
53:5:152:U:H2'	53:5:153:A:H8	1.65	0.59
5:A:236:VAL:O	5:A:240:LYS:N	2.36	0.59
9:E:14:SER:N	9:E:17:GLN:HE21	1.98	0.59
10:F:81:GLY:O	53:5:690:G:O2'	2.12	0.59
22:R:12:ASP:OD2	22:R:38:SER:OG	2.17	0.59
25:a:188:GLU:HG2	25:a:282:ARG:HG2	1.84	0.59
32:h:122:LYS:HB2	51:3:1116:U:H5'	1.83	0.59
33:i:18:TRP:HB3	33:i:140:PRO:HB3	1.82	0.59
41:q:4:ILE:HG12	41:q:13:LEU:HA	1.84	0.59
42:r:24:ILE:HG23	42:r:27:LYS:HE2	1.84	0.59
51:3:66:A:H2'	51:3:67:C:C6	2.36	0.59
51:3:234:G:H2'	51:3:235:U:C6	2.38	0.59
51:3:384:G:H2'	51:3:385:U:H6	1.66	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:3:1041:C:N3	51:3:1042:C:N4	2.51	0.59
51:3:1354:U:OP2	51:3:1355:C:N4	2.35	0.59
51:3:1445:U:O2	51:3:1614:G:N1	2.19	0.59
51:3:1841:U:H5''	51:3:1842:G:H5'	1.84	0.59
51:3:1962:U:C4	51:3:2560:U:C2	2.90	0.59
51:3:1986:C:H2'	51:3:1987:C:C6	2.37	0.59
51:3:2122:G:H2'	51:3:2124:A:N7	2.17	0.59
51:3:2279:G:H2'	51:3:2280:U:C2	2.37	0.59
51:3:2417:G:H2'	51:3:2418:G:O4'	2.03	0.59
51:3:2479:A:H3'	51:3:2480:G:H8	1.68	0.59
53:5:15:U:H3	53:5:17:A:H3'	1.67	0.59
53:5:168:A:H3'	53:5:169:G:C8	2.36	0.59
53:5:232:G:H2'	53:5:233:C:O4'	2.01	0.59
53:5:575:A:H2'	53:5:576:A:C8	2.37	0.59
53:5:684:A:N6	53:5:698:U:O4'	2.36	0.59
53:5:946:G:H2'	53:5:947:U:C6	2.38	0.59
53:5:968:G:OP2	53:5:969:A:O2'	2.15	0.59
53:5:1109:U:H1'	53:5:1154:A:C8	2.38	0.59
53:5:1321:G:H1'	53:5:1322:U:H5	1.66	0.59
54:6:27:A:OP2	54:6:28:A:N6	2.33	0.59
15:K:29:ASN:ND2	53:5:51:A:O5'	2.35	0.59
23:S:5:LYS:NZ	53:5:62:G:H5''	2.18	0.59
23:S:9:LYS:NZ	53:5:89:G:N7	2.49	0.59
26:b:150:GLY:HA3	26:b:157:GLN:H	1.68	0.59
28:d:37:ASN:HB3	28:d:153:ASP:HB2	1.84	0.59
34:j:28:THR:HG21	51:3:2574:A:H61	1.67	0.59
51:3:511:U:N3	51:3:515:A:C5	2.70	0.59
51:3:858:A:H61	51:3:980:C:H42	1.50	0.59
51:3:1517:G:H5''	51:3:1518:C:H5''	1.82	0.59
51:3:1539:U:H2'	51:3:1540:G:C8	2.37	0.59
51:3:1940:G:H2'	51:3:1941:C:C6	2.38	0.59
51:3:2063:G:H2'	51:3:2064:G:C8	2.35	0.59
51:3:2197:U:H3'	51:3:2198:G:C8	2.37	0.59
53:5:491:U:H3'	53:5:492:G:H8	1.66	0.59
53:5:650:A:O2'	53:5:750:A:N6	2.34	0.59
53:5:1240:U:H2'	53:5:1241:G:C8	2.37	0.59
53:5:1401:A:H2	53:5:1449:G:H22	1.50	0.59
53:5:1454:G:H2'	53:5:1455:G:C8	2.38	0.59
10:F:69:MET:HG2	10:F:95:LYS:HE2	1.85	0.59
15:K:30:LEU:O	15:K:31:LEU:HG	2.03	0.59
15:K:96:ARG:NH1	15:K:110:ILE:O	2.35	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:e:63:GLN:NE2	51:3:2765:A:O2'	2.36	0.59
46:v:39:LYS:HB2	46:v:64:LEU:HD11	1.84	0.59
48:x:15:LYS:HA	48:x:22:SER:HA	1.84	0.59
51:3:533:G:H2'	51:3:534:U:C6	2.37	0.59
51:3:1162:A:H2'	51:3:2526:A:C2	2.37	0.59
51:3:1387:A:H3'	51:3:1388:G:H8	1.67	0.59
51:3:1418:U:O4	51:3:1423:A:N7	2.36	0.59
51:3:1506:U:H2'	51:3:1507:G:H8	1.66	0.59
51:3:1658:U:H2'	51:3:1659:C:O4'	2.02	0.59
51:3:1748:U:H2'	51:3:1750:A:N7	2.17	0.59
51:3:1931:C:H2'	51:3:1932:C:C6	2.37	0.59
51:3:2121:A:H3'	51:3:2122:G:H8	1.68	0.59
51:3:2332:U:H3	51:3:2340:U:H3	1.49	0.59
51:3:2357:G:C6	51:3:2377:A:C6	2.90	0.59
51:3:2385:A:H2'	51:3:2386:A:C8	2.38	0.59
51:3:2837:U:H3'	51:3:2838:G:C8	2.38	0.59
53:5:45:A:C6	53:5:395:G:C6	2.90	0.59
53:5:305:A:H1'	53:5:606:A:C2	2.37	0.59
53:5:830:U:H2'	53:5:831:C:H6	1.66	0.59
53:5:1251:G:H2'	53:5:1252:C:O4'	2.01	0.59
53:5:1291:C:H2'	53:5:1292:A:O4'	2.03	0.59
53:5:1506:A:H2'	53:5:1507:U:C6	2.38	0.59
8:D:150:LEU:HB3	8:D:181:LYS:N	2.18	0.59
23:S:54:LEU:HB3	23:S:59:ILE:HB	1.84	0.59
28:d:69:LYS:HB3	28:d:84:LEU:HG	1.85	0.59
30:f:4:ILE:HD13	30:f:42:LYS:HE2	1.85	0.59
33:i:18:TRP:O	33:i:141:THR:N	2.28	0.59
38:n:46:PHE:C	38:n:48:GLN:H	2.10	0.59
39:o:7:GLN:HB2	51:3:2879:U:H4'	1.85	0.59
43:s:56:ASN:HD21	51:3:1426:C:H5''	1.66	0.59
51:3:224:G:N2	51:3:464:A:OP2	2.36	0.59
51:3:307:C:H2'	51:3:308:A:C8	2.38	0.59
51:3:404:C:H2'	51:3:405:C:C6	2.38	0.59
51:3:679:A:N1	51:3:2377:A:O2'	2.31	0.59
51:3:1511:C:H2'	51:3:1512:A:H8	1.67	0.59
51:3:1529:U:H2'	51:3:1530:G:C8	2.32	0.59
51:3:1553:G:H1'	51:3:1578:A:H61	1.67	0.59
51:3:1621:U:H2'	51:3:1622:C:C6	2.37	0.59
53:5:103:U:O5'	53:5:284:A:N6	2.36	0.59
53:5:755:U:H4'	53:5:874:C:H4'	1.84	0.59
53:5:853:A:N6	53:5:863:A:H2'	2.17	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:5:1217:G:N1	53:5:1269:U:C2	2.69	0.59
53:5:1252:C:O2'	53:5:1254:A:H1'	2.03	0.59
53:5:1480:G:H4'	53:5:1481:U:H3'	1.84	0.59
5:A:135:GLU:HA	5:A:138:ALA:HB3	1.85	0.59
5:A:184:GLU:HB3	5:A:187:ALA:HB3	1.84	0.59
25:a:143:GLU:OE1	25:a:172:GLY:N	2.36	0.59
34:j:104:ARG:HE	34:j:107:ARG:HD3	1.67	0.59
35:k:79:VAL:HG12	35:k:115:ILE:HB	1.84	0.59
43:s:17:TYR:O	43:s:20:GLN:NE2	2.36	0.59
45:u:32:ALA:O	45:u:34:ARG:NH2	2.35	0.59
49:y:15:LYS:HD2	51:3:2052:C:H5''	1.83	0.59
50:z:9:LEU:HD11	50:z:47:HIS:HB2	1.85	0.59
51:3:133:G:O6	51:3:150:U:O4	2.19	0.59
51:3:211:A:H3'	51:3:212:G:H8	1.67	0.59
51:3:274:A:H8	51:3:295:U:C4	2.20	0.59
51:3:359:G:H2'	51:3:360:G:H8	1.66	0.59
51:3:618:G:N2	51:3:1283:A:OP2	2.34	0.59
51:3:799:A:N6	51:3:1796:A:N3	2.49	0.59
51:3:1087:C:H2'	51:3:1088:A:C8	2.38	0.59
51:3:1251:G:H2'	51:3:1252:C:C6	2.38	0.59
51:3:1307:G:H2'	51:3:1308:A:C8	2.37	0.59
51:3:1611:C:H3'	51:3:1612:U:C6	2.38	0.59
51:3:2414:U:OP1	51:3:2419:A:N6	2.36	0.59
51:3:2488:C:OP1	51:3:2545:U:H5''	2.03	0.59
51:3:2663:G:H1'	51:3:2664:U:H5	1.67	0.59
51:3:2819:C:H2'	51:3:2820:G:C8	2.37	0.59
52:4:99:A:H2'	52:4:100:G:C8	2.37	0.59
53:5:972:A:H1'	53:5:977:U:O4	2.02	0.59
53:5:1362:G:H2'	53:5:1363:U:C6	2.37	0.59
54:7:28:A:H2'	54:7:29:C:C4	2.37	0.59
3:2:2:LYS:N	3:2:33:LYS:O	2.35	0.59
6:B:114:LEU:HD22	6:B:144:VAL:HA	1.85	0.59
8:D:207:ARG:HH21	8:D:207:ARG:HA	1.68	0.59
11:G:85:ASN:H	11:G:142:TRP:C	2.10	0.59
13:I:59:ARG:HB3	53:5:1051:U:H5''	1.85	0.59
25:a:221:HIS:HB2	51:3:1600:A:C8	2.38	0.59
29:e:76:THR:O	29:e:80:ILE:HG12	2.02	0.59
30:f:1:MET:O	30:f:2:LYS:HG3	2.03	0.59
33:i:27:VAL:HG11	51:3:1176:U:OP1	2.03	0.59
36:l:27:VAL:HG11	36:l:134:ARG:HA	1.85	0.59
37:m:56:ASN:HD21	37:m:58:ASN:HB2	1.68	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:q:45:ILE:HA	41:q:50:LEU:HD22	1.85	0.59
51:3:15:A:H1'	51:3:17:G:C5	2.38	0.59
51:3:153:U:H2'	51:3:154:U:C6	2.37	0.59
51:3:511:U:C2	51:3:515:A:N7	2.71	0.59
51:3:678:U:O2'	51:3:2357:G:O2'	2.18	0.59
51:3:1260:U:H2'	51:3:1261:U:C6	2.38	0.59
51:3:1382:A:H3'	51:3:1383:G:H8	1.68	0.59
51:3:1659:C:H2'	51:3:1660:A:O4'	2.02	0.59
51:3:2570:U:H2'	51:3:2574:A:N6	2.17	0.59
51:3:2647:A:C8	51:3:2786:A:C6	2.91	0.59
51:3:2854:A:H3'	51:3:2855:A:H8	1.67	0.59
53:5:159:U:H5''	53:5:199:A:O4'	2.03	0.59
53:5:211:G:H2'	53:5:212:G:C8	2.38	0.59
53:5:448:A:C6	53:5:477:U:H3'	2.38	0.59
53:5:617:U:OP1	53:5:619:A:N6	2.35	0.59
53:5:1282:U:H2'	53:5:1283:G:C8	2.36	0.59
4:9:35:VAL:HA	4:9:38:LYS:HD2	1.85	0.59
4:9:56:GLU:OE2	4:9:64:ASN:ND2	2.36	0.59
4:9:305:PHE:HE2	4:9:363:LEU:HG	1.68	0.59
7:C:121:HIS:CE1	7:C:147:LYS:HE2	2.38	0.59
8:D:188:PRO:O	8:D:192:ILE:HG12	2.03	0.59
25:a:42:LYS:HZ1	51:3:1382:A:H5''	1.67	0.59
26:b:196:ALA:HB1	51:3:2688:C:H1'	1.83	0.59
33:i:19:TYR:CD1	33:i:141:THR:HB	2.37	0.59
35:k:42:ARG:HE	51:3:841:C:N4	2.01	0.59
45:u:52:TYR:HE1	45:u:54:GLN:HB3	1.67	0.59
51:3:80:U:O4	51:3:109:G:O6	2.20	0.59
51:3:84:G:N2	51:3:104:A:OP2	2.35	0.59
51:3:487:C:N4	51:3:490:A:OP2	2.35	0.59
51:3:1700:G:H3'	51:3:1701:G:H8	1.67	0.59
51:3:2048:U:H2'	51:3:2049:A:C8	2.37	0.59
51:3:2305:C:H3'	51:3:2326:G:H22	1.68	0.59
51:3:2684:G:N1	51:3:2740:U:O4	2.36	0.59
51:3:2791:U:H2'	51:3:2792:C:C6	2.37	0.59
51:3:2846:A:H2'	51:3:2847:C:O4'	2.03	0.59
53:5:683:G:N1	53:5:700:G:O2'	2.31	0.59
53:5:761:U:H2'	53:5:762:G:O4'	2.03	0.59
53:5:1065:G:H2'	53:5:1066:U:H6	1.67	0.59
54:7:3:G:H2'	54:7:4:U:N3	2.18	0.59
2:1:1:MET:O	51:3:246:G:H5''	2.03	0.58
4:9:10:LYS:HG2	4:9:11:PRO:HD2	1.84	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:9:18:ILE:HG13	4:9:104:LEU:HA	1.84	0.58
5:A:211:VAL:HB	5:A:214:ILE:HG13	1.85	0.58
6:B:120:ALA:HB2	6:B:203:VAL:HG11	1.84	0.58
7:C:118:ASN:ND2	53:5:399:C:O3'	2.35	0.58
7:C:147:LYS:HG2	7:C:148:THR:HG23	1.84	0.58
8:D:77:SER:OG	8:D:84:ARG:HG2	2.01	0.58
9:E:67:GLN:HA	9:E:70:LYS:NZ	2.19	0.58
15:K:64:LYS:HG3	15:K:80:ILE:HB	1.85	0.58
22:R:32:LYS:HG3	22:R:57:PHE:CE1	2.38	0.58
33:i:63:ASP:OD1	33:i:64:GLN:HG3	2.02	0.58
39:o:91:LYS:O	39:o:92:ARG:CG	2.50	0.58
41:q:41:LEU:H	41:q:50:LEU:HD23	1.68	0.58
51:3:431:U:O2'	51:3:432:G:N7	2.26	0.58
51:3:612:G:H4'	51:3:2024:C:H2'	1.84	0.58
51:3:656:G:C8	51:3:658:G:C6	2.90	0.58
51:3:748:G:H2'	51:3:749:U:C6	2.37	0.58
51:3:770:A:H2'	51:3:771:C:O4'	2.02	0.58
51:3:1012:G:H21	51:3:1190:A:H1'	1.68	0.58
51:3:1118:U:O2	51:3:1120:A:H8	1.86	0.58
51:3:1120:A:H2'	51:3:1121:A:C8	2.38	0.58
51:3:1204:A:H61	51:3:1212:C:N4	2.01	0.58
51:3:1343:C:C2	51:3:1366:G:C2	2.91	0.58
51:3:1426:C:H2'	51:3:1427:C:H6	1.67	0.58
51:3:1516:G:C6	51:3:1525:G:N1	2.71	0.58
51:3:1541:A:H3'	51:3:1542:G:C8	2.37	0.58
51:3:1702:A:H1'	51:3:1704:C:C4	2.38	0.58
51:3:2399:G:O6	51:3:2433:A:H5''	2.03	0.58
51:3:2668:A:O2'	51:3:2669:G:O5'	2.21	0.58
51:3:2713:A:H3'	51:3:2714:G:C8	2.38	0.58
51:3:2759:G:N2	51:3:2759:G:OP2	2.36	0.58
51:3:2849:G:N1	51:3:2875:U:C2	2.66	0.58
53:5:378:A:H2'	53:5:379:A:C8	2.38	0.58
53:5:886:A:H2'	53:5:887:C:H6	1.68	0.58
53:5:1110:C:H2'	53:5:1111:G:C8	2.38	0.58
4:9:218:THR:HB	4:9:284:ARG:HE	1.69	0.58
4:9:331:PHE:HB3	4:9:375:PHE:CE2	2.38	0.58
8:D:212:ARG:NE	11:G:51:GLU:O	2.35	0.58
10:F:2:ARG:N	53:5:927:C:H5''	2.17	0.58
11:G:49:VAL:HG21	11:G:57:PHE:CD1	2.38	0.58
22:R:49:PHE:O	22:R:59:ASN:HA	2.03	0.58
34:j:7:ARG:HB3	34:j:44:LYS:HE2	1.85	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:j:59:ARG:HG2	34:j:94:ARG:HH22	1.68	0.58
34:j:64:ARG:HD2	34:j:83:ALA:HB3	1.85	0.58
37:m:90:TYR:CD2	37:m:97:TYR:HB3	2.39	0.58
42:r:7:GLN:HG3	42:r:10:VAL:HG11	1.84	0.58
45:u:54:GLN:O	45:u:55:ARG:NH1	2.36	0.58
51:3:747:A:H2'	51:3:748:G:O4'	2.02	0.58
51:3:937:A:H3'	51:3:938:A:C8	2.38	0.58
51:3:1130:A:H2'	51:3:1131:A:C8	2.37	0.58
51:3:1137:C:H2'	51:3:1138:A:H8	1.66	0.58
51:3:1227:C:H1'	51:3:1256:A:H2'	1.85	0.58
51:3:1381:A:H2'	51:3:1382:A:C8	2.38	0.58
51:3:1621:U:H2'	51:3:1622:C:H6	1.67	0.58
51:3:1991:U:H2'	51:3:1992:C:C6	2.38	0.58
51:3:2106:G:H22	51:3:2198:G:N2	2.01	0.58
51:3:2194:G:H2'	51:3:2195:U:C6	2.38	0.58
51:3:2327:U:H4'	51:3:2328:A:H5'	1.85	0.58
51:3:2354:A:OP2	51:3:2389:A:O2'	2.19	0.58
51:3:2646:G:N1	51:3:2784:A:OP2	2.31	0.58
51:3:2730:G:H2'	51:3:2731:U:C6	2.38	0.58
53:5:145:G:H1'	53:5:148:A:N6	2.18	0.58
53:5:904:C:H2'	53:5:905:U:H6	1.67	0.58
53:5:1132:G:H2'	53:5:1133:A:H2'	1.84	0.58
53:5:1498:G:H2'	53:5:1499:G:H8	1.68	0.58
11:G:91:SER:HB3	11:G:96:ARG:HH21	1.68	0.58
12:H:12:ARG:HH12	12:H:13:LYS:HZ1	1.49	0.58
29:e:17:ASN:HD21	29:e:28:LYS:HB3	1.68	0.58
30:f:42:LYS:NZ	30:f:46:ASP:OD2	2.36	0.58
30:f:137:VAL:HG13	30:f:139:LYS:HZ1	1.66	0.58
33:i:93:ARG:HA	33:i:96:LEU:HD12	1.85	0.58
34:j:5:MET:N	34:j:21:ILE:HB	2.18	0.58
34:j:30:LYS:O	34:j:31:ARG:HG2	2.02	0.58
37:m:71:ASN:HB3	51:3:1321:C:H4'	1.85	0.58
39:o:19:LYS:HG2	39:o:82:HIS:HA	1.85	0.58
42:r:128:ARG:HD2	51:3:1261:U:O2	2.02	0.58
43:s:76:LYS:NZ	51:3:60:G:O5'	2.29	0.58
45:u:89:LYS:HG2	52:4:11:A:H5''	1.83	0.58
47:w:94:ASN:HA	47:w:97:LYS:HD2	1.85	0.58
50:z:41:CYS:HB3	50:z:43:LYS:NZ	2.19	0.58
51:3:148:U:H2'	51:3:149:A:C8	2.38	0.58
51:3:567:U:P	51:3:594:G:H21	2.26	0.58
51:3:611:A:C4	51:3:2025:C:H5'	2.38	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:3:906:G:H1	51:3:945:U:H3	1.52	0.58
51:3:1253:G:N1	51:3:1256:A:OP2	2.27	0.58
51:3:1296:G:N2	51:3:2019:G:H2'	2.18	0.58
51:3:1588:A:H2'	51:3:1589:A:C4	2.38	0.58
51:3:2098:U:O2	51:3:2236:G:C2	2.55	0.58
51:3:2539:A:H2	51:3:2666:C:O2	1.85	0.58
51:3:2551:G:N2	51:3:2654:U:H5''	2.16	0.58
53:5:51:A:N6	53:5:357:G:O4'	2.37	0.58
53:5:853:A:OP2	53:5:863:A:N6	2.19	0.58
53:5:912:G:H2'	53:5:913:A:C8	2.38	0.58
54:7:50:G:H2'	54:7:51:G:C8	2.38	0.58
4:9:52:LYS:HZ2	4:9:263:LYS:HE2	1.68	0.58
4:9:309:ILE:N	4:9:357:THR:O	2.28	0.58
7:C:90:PHE:CD2	7:C:187:LEU:HD13	2.39	0.58
15:K:125:GLN:NE2	53:5:537:A:OP2	2.35	0.58
15:K:129:ALA:N	53:5:36:G:O2'	2.36	0.58
20:P:27:GLU:HG3	20:P:40:VAL:HB	1.84	0.58
26:b:46:LYS:HD3	26:b:47:TYR:CD2	2.39	0.58
41:q:93:LYS:NZ	41:q:94:VAL:O	2.37	0.58
43:s:56:ASN:ND2	51:3:1426:C:H5''	2.19	0.58
44:t:43:THR:O	51:3:516:A:O2'	2.15	0.58
51:3:186:A:C2	51:3:469:C:H1'	2.39	0.58
51:3:444:C:C2	51:3:456:G:N2	2.70	0.58
51:3:646:A:N6	51:3:653:G:O6	2.36	0.58
51:3:789:A:H2'	51:3:790:U:C6	2.38	0.58
51:3:863:U:H4'	51:3:866:G:C2	2.38	0.58
51:3:1941:C:H2'	51:3:1942:G:O4'	2.04	0.58
51:3:2420:A:H2'	51:3:2421:U:O4'	2.04	0.58
51:3:2747:U:C4	51:3:2772:A:C8	2.90	0.58
52:4:58:C:H2'	52:4:59:A:C8	2.39	0.58
53:5:70:A:H2'	53:5:71:A:H8	1.69	0.58
53:5:1413:G:O6	53:5:1438:U:O4	2.22	0.58
53:5:1465:U:H2'	53:5:1466:U:C2	2.38	0.58
4:9:327:TYR:HB3	4:9:342:ILE:HG13	1.85	0.58
7:C:103:ARG:HG3	7:C:164:SER:HB3	1.84	0.58
12:H:42:PRO:HB3	53:5:1265:U:O4'	2.03	0.58
16:L:85:ALA:O	16:L:89:LEU:N	2.37	0.58
29:e:178:LYS:H	51:3:2539:A:H8	1.51	0.58
51:3:220:A:H3'	51:3:221:A:H8	1.69	0.58
51:3:712:A:N6	51:3:835:U:H3	1.97	0.58
51:3:1851:U:H2'	51:3:1852:G:C8	2.38	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:3:1888:U:H2'	51:3:1889:U:C2	2.38	0.58
51:3:2038:A:N3	51:3:2463:G:O2'	2.32	0.58
51:3:2106:G:H22	51:3:2198:G:H1	1.50	0.58
51:3:2794:U:H2'	51:3:2795:C:C6	2.39	0.58
52:4:72:A:H2'	52:4:73:U:C2	2.38	0.58
53:5:592:A:H3'	53:5:593:A:H8	1.66	0.58
53:5:732:A:H2'	53:5:733:A:H8	1.68	0.58
53:5:962:G:H2'	53:5:963:U:C5	2.38	0.58
53:5:1197:G:O5'	53:5:1296:C:N4	2.36	0.58
53:5:1306:A:H2'	53:5:1307:A:C8	2.38	0.58
53:5:1425:A:H4'	53:5:1426:U:C5	2.39	0.58
54:6:75:C:H5'	54:6:76:C:C5	2.38	0.58
6:B:25:ASN:OD1	6:B:29:GLN:NE2	2.35	0.58
6:B:153:LYS:HB2	6:B:172:ILE:HD13	1.85	0.58
8:D:211:LEU:O	11:G:75:LYS:NZ	2.36	0.58
9:E:40:LEU:N	9:E:57:TYR:O	2.28	0.58
9:E:76:ALA:HB1	9:E:85:GLU:HG2	1.86	0.58
12:H:125:ARG:HG2	53:5:1323:A:H5''	1.84	0.58
20:P:54:LEU:HD21	20:P:56:LYS:HE3	1.84	0.58
21:Q:82:HIS:O	21:Q:86:VAL:HG23	2.02	0.58
26:b:119:PHE:CE2	51:3:2827:A:H8	2.21	0.58
26:b:166:SER:O	51:3:2628:U:O2'	2.18	0.58
29:e:61:LEU:N	29:e:64:SER:OG	2.36	0.58
29:e:100:ASN:C	29:e:106:LEU:HD13	2.29	0.58
43:s:19:ASN:OD1	43:s:20:GLN:N	2.37	0.58
51:3:283:A:C2	51:3:285:U:H5'	2.38	0.58
51:3:387:U:H2'	51:3:388:U:H6	1.69	0.58
51:3:1070:U:N3	51:3:1155:G:N1	2.13	0.58
51:3:1273:U:C2	51:3:1274:A:C8	2.91	0.58
51:3:1387:A:H3'	51:3:1388:G:C8	2.38	0.58
51:3:1508:G:H22	51:3:1532:A:H1'	1.68	0.58
51:3:1540:G:H4'	51:3:1591:C:H4'	1.84	0.58
51:3:1778:G:H2'	51:3:1779:G:C8	2.38	0.58
51:3:1831:G:H2'	51:3:1832:G:H8	1.68	0.58
51:3:2685:A:H2'	51:3:2686:C:C6	2.38	0.58
51:3:2796:C:O2'	51:3:2813:A:O2'	2.17	0.58
52:4:38:U:O2'	52:4:40:U:O2'	2.20	0.58
53:5:176:G:N1	53:5:189:C:N3	2.34	0.58
53:5:711:G:H2'	53:5:712:A:H8	1.69	0.58
53:5:762:G:H3'	53:5:809:G:N2	2.18	0.58
53:5:928:G:H1	53:5:1359:C:H42	1.51	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:5:962:G:H2'	53:5:963:U:C4	2.39	0.58
53:5:1034:G:H2'	53:5:1035:A:H8	1.68	0.58
53:5:1219:C:H2'	53:5:1220:A:C8	2.39	0.58
54:7:62:C:H2'	54:7:63:U:C6	2.39	0.58
2:1:2:LYS:HG2	51:3:246:G:N7	2.18	0.58
7:C:54:LEU:O	7:C:58:GLN:HG2	2.04	0.58
11:G:60:LEU:HB2	11:G:69:ILE:HG13	1.85	0.58
12:H:125:ARG:HH12	53:5:1317:A:H1'	1.68	0.58
13:I:51:LYS:HG2	53:5:1228:C:P	2.44	0.58
15:K:44:ARG:HH11	53:5:358:G:P	2.26	0.58
17:M:56:VAL:C	17:M:57:LYS:HD2	2.29	0.58
26:b:117:ARG:HD2	26:b:169:TYR:HD2	1.69	0.58
27:c:104:ASN:HD21	51:3:640:U:H5''	1.69	0.58
28:d:170:LEU:HA	28:d:173:LEU:HB2	1.86	0.58
40:p:36:GLN:OE1	51:3:1282:G:N1	2.34	0.58
49:y:29:VAL:HG22	49:y:36:LYS:HD2	1.85	0.58
51:3:89:U:H5''	51:3:90:G:H5''	1.85	0.58
51:3:169:U:H2'	51:3:170:A:H8	1.69	0.58
51:3:548:A:H4'	51:3:1247:C:H5'	1.84	0.58
51:3:660:U:O2'	51:3:692:U:H5''	2.04	0.58
51:3:889:G:H1	51:3:961:U:H3	1.51	0.58
51:3:912:A:H2'	51:3:913:U:C6	2.39	0.58
51:3:1193:U:H2'	51:3:1194:U:C6	2.39	0.58
51:3:2140:G:H1'	51:3:2165:A:H62	1.69	0.58
51:3:2496:G:H2'	51:3:2497:U:C6	2.39	0.58
51:3:2782:A:H2'	51:3:2783:A:O4'	2.04	0.58
53:5:46:U:H2'	53:5:47:G:C8	2.38	0.58
53:5:230:G:H2'	53:5:231:U:C6	2.37	0.58
53:5:299:U:O3'	53:5:553:C:H4'	2.04	0.58
53:5:450:U:O4	53:5:477:U:N3	2.36	0.58
53:5:638:A:H4'	53:5:639:A:H5'	1.86	0.58
53:5:714:C:O2'	53:5:731:A:O4'	2.20	0.58
53:5:717:C:H3'	53:5:718:A:H2'	1.84	0.58
53:5:831:C:H2'	53:5:832:G:C8	2.37	0.58
53:5:1206:G:H2'	53:5:1207:U:O4'	2.04	0.58
7:C:52:GLN:HE21	8:D:167:ARG:HH12	1.52	0.58
12:H:100:LEU:O	12:H:104:LYS:N	2.37	0.58
22:R:50:ALA:HB1	22:R:57:PHE:HB3	1.85	0.58
23:S:56:ARG:HH12	53:5:218:U:H4'	1.69	0.58
25:a:81:ALA:HB2	25:a:101:TYR:CD1	2.39	0.58
25:a:163:SER:HB3	51:3:1826:A:H5''	1.85	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:a:219:ASN:HD21	25:a:224:ILE:HB	1.68	0.58
25:a:269:ASN:HD21	25:a:271:LYS:HB2	1.68	0.58
25:a:271:LYS:NZ	51:3:2235:A:H5''	2.19	0.58
38:n:11:ARG:O	38:n:14:ARG:HG2	2.03	0.58
40:p:9:THR:OG1	51:3:1281:A:OP1	2.21	0.58
51:3:116:C:H2'	51:3:117:C:H6	1.69	0.58
51:3:480:C:H2'	51:3:481:C:C5	2.39	0.58
51:3:1077:G:N1	51:3:1148:U:C2	2.70	0.58
51:3:1298:A:H3'	51:3:1299:A:H8	1.69	0.58
51:3:1452:G:H2'	51:3:1453:U:C6	2.39	0.58
51:3:1577:A:H3'	51:3:1578:A:C8	2.39	0.58
51:3:2401:U:H2'	51:3:2402:C:C6	2.39	0.58
51:3:2600:G:N1	51:3:2611:G:C6	2.72	0.58
51:3:2759:G:P	51:3:2760:C:H42	2.27	0.58
51:3:2859:U:H2'	51:3:2860:A:C8	2.39	0.58
53:5:21:U:H2'	53:5:22:G:O4'	2.04	0.58
53:5:550:U:H2'	53:5:551:A:C8	2.33	0.58
53:5:603:U:O2	53:5:630:G:N2	2.32	0.58
53:5:1227:A:H2'	53:5:1228:C:O4'	2.03	0.58
53:5:1387:U:H2'	53:5:1388:A:C8	2.39	0.58
53:5:1388:A:N1	53:5:1463:A:C6	2.72	0.58
7:C:131:THR:HB	53:5:617:U:H3	1.68	0.58
8:D:131:ILE:HD12	8:D:175:TYR:HE1	1.69	0.58
9:E:75:THR:HA	9:E:78:ILE:HG12	1.86	0.58
14:J:9:VAL:HB	14:J:72:MET:HB2	1.84	0.58
21:Q:79:CYS:O	21:Q:81:MET:N	2.37	0.58
25:a:47:ARG:HA	25:a:53:ILE:HA	1.85	0.58
25:a:84:LYS:HB2	25:a:98:LEU:HG	1.85	0.58
26:b:69:PHE:HB2	51:3:2794:U:O2'	2.04	0.58
34:j:64:ARG:HB2	34:j:83:ALA:HB3	1.86	0.58
35:k:4:ASN:HB2	35:k:7:LYS:HG3	1.85	0.58
35:k:132:SER:O	35:k:136:LEU:N	2.33	0.58
42:r:58:ALA:HA	42:r:62:HIS:ND1	2.19	0.58
46:v:32:ASN:HD21	51:3:2097:A:H1'	1.67	0.58
46:v:34:GLN:OE1	51:3:2098:U:O2'	2.18	0.58
47:w:44:ILE:HG22	47:w:48:ARG:HG3	1.84	0.58
51:3:25:G:H2'	51:3:26:G:C8	2.39	0.58
51:3:834:G:OP2	51:3:835:U:O2'	2.20	0.58
51:3:1065:G:C6	51:3:1160:G:N2	2.72	0.58
51:3:1085:A:H2'	51:3:1086:G:O4'	2.04	0.58
51:3:1237:G:H2'	51:3:1238:A:C8	2.38	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:3:1305:G:H2'	51:3:1306:G:C8	2.39	0.58
51:3:1444:C:O2'	51:3:1445:U:O5'	2.21	0.58
51:3:1802:C:H2'	51:3:1803:U:C6	2.39	0.58
51:3:2670:A:H3'	51:3:2671:G:C8	2.37	0.58
51:3:2755:G:H1'	51:3:2765:A:N6	2.18	0.58
51:3:2785:G:H5'	51:3:2789:A:H1'	1.85	0.58
53:5:83:U:H2'	53:5:84:U:C6	2.38	0.58
53:5:485:C:H2'	53:5:486:C:H6	1.69	0.58
53:5:536:U:H2'	53:5:537:A:C8	2.39	0.58
53:5:832:G:C6	53:5:846:G:C6	2.92	0.58
53:5:1281:U:H2'	53:5:1282:U:C6	2.38	0.58
53:5:1338:A:O2'	53:5:1339:U:O5'	2.21	0.58
6:B:93:LYS:HZ1	6:B:98:ARG:HD3	1.68	0.58
8:D:177:ASP:N	8:D:177:ASP:OD1	2.34	0.58
10:F:110:ARG:HH22	10:F:122:GLU:HB2	1.68	0.58
11:G:117:SER:HA	11:G:121:GLY:C	2.29	0.58
11:G:119:SER:HA	53:5:639:A:C8	2.38	0.58
21:Q:70:ILE:HB	53:5:716:C:H2'	1.86	0.58
22:R:9:ALA:HA	22:R:39:THR:HG21	1.86	0.58
24:T:36:LEU:O	24:T:41:ARG:NH1	2.37	0.58
34:j:21:ILE:HA	34:j:41:VAL:HG12	1.86	0.58
37:m:18:VAL:O	37:m:22:VAL:HG13	2.04	0.58
41:q:55:VAL:HA	41:q:97:PHE:HA	1.86	0.58
44:t:66:GLU:N	44:t:66:GLU:OE1	2.36	0.58
51:3:17:G:H2'	51:3:18:G:H8	1.69	0.58
51:3:252:G:H5'	51:3:254:G:N7	2.19	0.58
51:3:411:U:OP2	51:3:436:G:N1	2.37	0.58
51:3:1498:U:H2'	51:3:1499:C:C6	2.38	0.58
51:3:1698:A:H2'	51:3:1699:A:O4'	2.04	0.58
51:3:1778:G:H2'	51:3:1779:G:H8	1.68	0.58
51:3:1991:U:H2'	51:3:1992:C:H6	1.69	0.58
51:3:2169:G:H5'	51:3:2172:A:H62	1.69	0.58
51:3:2528:C:H2'	51:3:2529:C:H6	1.68	0.58
51:3:2720:C:O2'	51:3:2723:C:OP1	2.14	0.58
52:4:42:G:H5'	52:4:43:A:N7	2.19	0.58
53:5:374:G:H2'	53:5:375:C:C6	2.38	0.58
53:5:400:G:N2	53:5:496:A:N3	2.44	0.58
53:5:719:G:O2'	53:5:721:G:O4'	2.15	0.58
53:5:762:G:O5'	53:5:809:G:N2	2.37	0.58
53:5:879:G:H2'	53:5:880:G:C8	2.38	0.58
53:5:988:G:H22	53:5:1037:A:H1'	1.69	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:5:1055:G:H1'	53:5:1165:G:H21	1.69	0.58
53:5:1498:G:H2'	53:5:1499:G:C8	2.39	0.58
2:1:15:LYS:HB2	51:3:664:G:H5''	1.86	0.57
2:1:34:THR:O	2:1:38:LYS:HG3	2.04	0.57
4:9:121:LEU:HG	4:9:122:LEU:HD23	1.85	0.57
5:A:37:TRP:HE1	53:5:827:C:H5'	1.69	0.57
8:D:185:ARG:NH2	53:5:21:U:OP2	2.35	0.57
9:E:32:VAL:HG11	9:E:64:GLY:HA3	1.85	0.57
9:E:47:TYR:HB3	21:Q:100:PRO:HB3	1.86	0.57
11:G:97:ILE:N	11:G:136:GLU:OE2	2.37	0.57
12:H:49:ASP:O	12:H:52:GLN:HG2	2.04	0.57
15:K:105:GLY:N	53:5:906:C:OP1	2.22	0.57
33:i:28:LEU:O	33:i:32:ALA:CB	2.52	0.57
33:i:28:LEU:HD13	33:i:104:VAL:HG12	1.86	0.57
37:m:44:ARG:O	37:m:48:LEU:HG	2.04	0.57
42:r:45:THR:O	42:r:49:LYS:N	2.31	0.57
42:r:110:ASN:ND2	42:r:112:ASN:HB2	2.19	0.57
45:u:28:ARG:O	51:3:2271:C:N4	2.37	0.57
51:3:21:U:H2'	51:3:22:U:C6	2.39	0.57
51:3:331:A:H2'	51:3:332:G:O4'	2.04	0.57
51:3:345:A:N6	51:3:363:G:OP1	2.37	0.57
51:3:1417:G:H2'	51:3:1418:U:C6	2.39	0.57
51:3:1656:A:H2'	51:3:1657:G:O4'	2.03	0.57
51:3:2188:U:H2'	51:3:2189:U:C6	2.39	0.57
51:3:2538:A:O2'	51:3:2542:A:N6	2.37	0.57
51:3:2541:C:OP1	51:3:2673:A:O2'	2.20	0.57
51:3:2580:A:OP1	51:3:2582:G:O2'	2.20	0.57
51:3:2590:G:H2'	51:3:2591:G:H8	1.68	0.57
51:3:2731:U:H2'	51:3:2732:A:H8	1.69	0.57
53:5:25:U:O2'	53:5:523:U:O4'	2.20	0.57
53:5:73:G:H2'	53:5:74:U:C6	2.39	0.57
53:5:146:A:N1	53:5:339:U:O2'	2.37	0.57
53:5:211:G:H2'	53:5:212:G:H8	1.69	0.57
53:5:413:G:H2'	53:5:414:U:O4'	2.03	0.57
53:5:425:G:H5'	53:5:427:A:H1'	1.86	0.57
53:5:671:G:C2	53:5:713:A:N1	2.72	0.57
53:5:708:A:H2'	53:5:709:A:H8	1.69	0.57
53:5:1091:C:O2'	53:5:1093:A:OP1	2.22	0.57
5:A:212:ASP:HB3	9:E:163:MET:HB2	1.84	0.57
6:B:38:GLU:HG2	6:B:42:ASN:HD21	1.69	0.57
15:K:26:TYR:HD1	15:K:37:ASN:HB3	1.70	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:K:47:CYS:SG	15:K:90:HIS:N	2.77	0.57
16:L:67:GLY:HA2	16:L:70:ARG:HH21	1.68	0.57
27:c:81:ASN:CG	51:3:708:C:H5''	2.28	0.57
32:h:43:THR:O	32:h:47:GLN:N	2.37	0.57
38:n:34:LYS:NZ	52:4:47:C:OP1	2.35	0.57
44:t:40:ASN:HB2	44:t:67:ALA:H	1.68	0.57
51:3:341:G:N2	51:3:364:A:H61	1.96	0.57
51:3:713:C:H2'	51:3:714:G:C8	2.38	0.57
51:3:749:U:H1'	51:3:752:C:H5	1.69	0.57
51:3:895:G:N2	51:3:953:G:H2'	2.19	0.57
51:3:1173:G:C4	51:3:1174:G:H1'	2.39	0.57
51:3:1723:A:H2'	51:3:1724:A:C8	2.38	0.57
51:3:1772:G:C5	51:3:1995:G:C6	2.92	0.57
51:3:2020:A:N6	51:3:2021:A:N1	2.52	0.57
51:3:2022:A:O2'	51:3:2064:G:O2'	2.14	0.57
51:3:2391:G:H2'	51:3:2392:U:C6	2.39	0.57
51:3:2392:U:H5''	51:3:2394:A:OP1	2.05	0.57
51:3:2605:G:H2'	51:3:2606:A:C8	2.39	0.57
51:3:2684:G:N2	51:3:2740:U:H3	2.02	0.57
51:3:2832:G:H2'	51:3:2833:A:H8	1.67	0.57
51:3:2840:U:H2'	51:3:2841:A:H8	1.69	0.57
53:5:204:C:C2	53:5:212:G:C2	2.93	0.57
53:5:298:G:H2'	53:5:299:U:O4'	2.04	0.57
53:5:1068:G:C6	53:5:1072:G:C6	2.91	0.57
53:5:1246:A:H2'	53:5:1247:G:H8	1.69	0.57
53:5:1444:G:H2'	53:5:1445:G:C8	2.39	0.57
9:E:65:ASP:CG	9:E:67:GLN:H	2.11	0.57
13:I:48:LEU:HD12	13:I:77:LYS:HB3	1.85	0.57
15:K:43:LYS:HZ1	53:5:359:A:H62	1.52	0.57
27:c:6:LEU:HD13	27:c:128:VAL:HA	1.85	0.57
27:c:136:THR:HG21	27:c:143:MET:HE1	1.86	0.57
29:e:95:VAL:HG11	51:3:2665:A:H4'	1.87	0.57
33:i:80:HIS:CD2	51:3:1166:G:H5'	2.39	0.57
43:s:56:ASN:OD1	51:3:1370:A:H5'	2.03	0.57
47:w:96:ALA:O	47:w:100:LYS:HG2	2.03	0.57
51:3:224:G:N1	51:3:463:U:H3'	2.17	0.57
51:3:347:C:H2'	51:3:348:A:H8	1.68	0.57
51:3:795:G:C2	51:3:796:A:H1'	2.39	0.57
51:3:799:A:N7	51:3:1783:G:H1'	2.19	0.57
51:3:804:U:H2'	51:3:805:G:H8	1.69	0.57
51:3:915:A:H3'	51:3:916:U:C6	2.39	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:3:1091:G:O2'	51:3:1138:A:N6	2.35	0.57
51:3:1132:C:H3'	51:3:1133:A:H8	1.70	0.57
51:3:1171:G:N2	51:3:2046:G:OP1	2.38	0.57
51:3:1414:C:O2'	51:3:1495:A:N3	2.35	0.57
51:3:1777:G:H2'	51:3:1778:G:C8	2.39	0.57
51:3:1785:U:O2	51:3:1792:A:C6	2.56	0.57
51:3:2829:G:H3'	51:3:2830:A:C8	2.39	0.57
52:4:19:G:C6	52:4:61:A:C6	2.92	0.57
53:5:432:U:H2'	53:5:433:C:O4'	2.05	0.57
53:5:497:A:O2'	53:5:498:G:N7	2.32	0.57
53:5:996:U:H1'	53:5:1031:A:C2	2.39	0.57
54:7:66:C:H2'	54:7:67:C:H6	1.68	0.57
5:A:32:MET:HE2	5:A:203:ASN:ND2	2.19	0.57
25:a:151:GLU:N	25:a:151:GLU:OE1	2.37	0.57
29:e:141:LYS:HB2	51:3:2754:U:H4'	1.85	0.57
30:f:4:ILE:CD1	30:f:42:LYS:CG	2.82	0.57
31:g:31:SER:HB2	51:3:1089:A:H4'	1.86	0.57
34:j:114:ILE:HA	34:j:117:LEU:HB3	1.86	0.57
45:u:47:THR:O	51:3:2361:G:O2'	2.22	0.57
46:v:18:ARG:CZ	46:v:24:ILE:HB	2.35	0.57
47:w:52:ALA:O	47:w:56:THR:OG1	2.20	0.57
49:y:12:ARG:HD3	49:y:15:LYS:HB2	1.86	0.57
51:3:982:G:H2'	51:3:983:A:H8	1.68	0.57
51:3:1275:C:H2'	51:3:1276:A:H8	1.67	0.57
51:3:1380:U:N3	51:3:1406:A:N6	2.48	0.57
51:3:1415:A:H2'	51:3:1416:G:C8	2.40	0.57
51:3:1497:A:H2'	51:3:1498:U:C6	2.39	0.57
51:3:1695:G:H5''	51:3:2720:C:N3	2.20	0.57
51:3:1715:A:O3'	51:3:1769:A:O2'	2.21	0.57
51:3:2305:C:H3'	51:3:2326:G:N2	2.19	0.57
51:3:2317:A:H3'	51:3:2318:A:H8	1.70	0.57
51:3:2476:A:OP1	51:3:2484:A:N6	2.37	0.57
51:3:2542:A:C2	51:3:2543:G:H1'	2.39	0.57
53:5:49:C:N3	53:5:359:A:N6	2.52	0.57
53:5:917:G:H2'	53:5:918:A:C8	2.39	0.57
53:5:931:C:H3'	53:5:932:A:C8	2.37	0.57
53:5:1147:U:H2'	53:5:1148:U:C6	2.40	0.57
53:5:1329:G:H2'	53:5:1330:A:C8	2.38	0.57
53:5:1388:A:H2'	53:5:1389:U:O4'	2.04	0.57
4:9:8:ARG:HH21	4:9:11:PRO:HA	1.69	0.57
5:A:22:LYS:O	5:A:26:MET:N	2.34	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:A:201:LEU:HG	5:A:217:ALA:HB3	1.85	0.57
6:B:41:ARG:NH1	6:B:42:ASN:OD1	2.35	0.57
7:C:67:THR:OG1	53:5:544:A:OP1	2.22	0.57
8:D:93:VAL:HG12	8:D:103:TYR:HB3	1.85	0.57
8:D:191:MET:O	8:D:195:THR:HG23	2.04	0.57
15:K:53:MET:N	15:K:63:ARG:O	2.31	0.57
25:a:260:LYS:HG3	51:3:1812:C:OP2	2.04	0.57
26:b:106:GLU:O	26:b:181:ILE:N	2.31	0.57
26:b:151:ARG:NH1	51:3:2580:A:O2'	2.37	0.57
27:c:52:ILE:HD11	27:c:89:ILE:HG21	1.86	0.57
27:c:143:MET:HG3	27:c:147:LEU:HD21	1.87	0.57
34:j:59:ARG:HG2	34:j:94:ARG:NH2	2.20	0.57
36:l:24:ASN:H	51:3:944:U:P	2.27	0.57
45:u:43:GLN:NE2	51:3:960:A:H4'	2.19	0.57
51:3:341:G:N2	51:3:364:A:C6	2.63	0.57
51:3:1701:G:N1	51:3:1999:G:OP2	2.37	0.57
51:3:2454:G:H1'	51:3:2457:U:C4	2.40	0.57
53:5:240:U:N3	53:5:887:C:O2	2.37	0.57
53:5:320:G:H2'	53:5:321:A:H3'	1.86	0.57
53:5:422:A:H2'	53:5:423:U:C6	2.38	0.57
53:5:437:U:H2'	53:5:438:A:H8	1.69	0.57
53:5:447:G:H5'	53:5:449:A:N7	2.19	0.57
53:5:972:A:O2'	53:5:976:U:N3	2.30	0.57
53:5:1185:C:H2'	53:5:1186:U:C2	2.39	0.57
53:5:1468:A:N3	54:6:37:A:H2	2.03	0.57
2:1:52:PHE:O	2:1:55:ILE:N	2.27	0.57
6:B:65:VAL:N	6:B:101:ASN:OD1	2.26	0.57
8:D:101:ILE:HD11	8:D:173:ALA:HA	1.86	0.57
15:K:10:LYS:NZ	53:5:876:C:OP2	2.18	0.57
15:K:47:CYS:SG	15:K:91:SER:N	2.74	0.57
18:N:13:GLN:HG3	18:N:18:ASP:OD1	2.05	0.57
25:a:166:SER:H	25:a:203:VAL:HB	1.69	0.57
25:a:180:VAL:HG12	25:a:192:PHE:O	2.04	0.57
25:a:263:MET:SD	51:3:1803:U:H1'	2.44	0.57
26:b:174:VAL:HA	51:3:2781:C:C5'	2.34	0.57
27:c:91:PHE:HE2	51:3:706:C:O2'	1.87	0.57
33:i:70:ASN:O	33:i:74:ASN:N	2.38	0.57
36:l:44:ALA:H	36:l:45:ARG:HH11	1.52	0.57
40:p:26:THR:HG23	40:p:29:ALA:HB3	1.85	0.57
41:q:28:PRO:HA	41:q:62:HIS:CE1	2.36	0.57
51:3:12:A:H3'	51:3:13:C:C6	2.40	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:3:212:G:H2'	51:3:213:C:C6	2.39	0.57
51:3:541:G:O3'	51:3:542:A:H8	1.86	0.57
51:3:1177:A:O2'	51:3:1179:G:OP2	2.23	0.57
51:3:1742:C:H2'	51:3:1743:U:C6	2.39	0.57
51:3:1801:U:H2'	51:3:1802:C:H6	1.68	0.57
51:3:2387:U:H2'	51:3:2388:C:C6	2.39	0.57
51:3:2586:G:OP2	51:3:2622:A:N6	2.37	0.57
52:4:77:G:H3'	52:4:78:C:O2	2.04	0.57
53:5:376:G:O2'	53:5:379:A:N6	2.34	0.57
53:5:407:A:H61	53:5:427:A:H62	1.52	0.57
53:5:445:A:H2'	53:5:446:A:C8	2.40	0.57
53:5:780:U:OP1	53:5:1490:G:O2'	2.23	0.57
53:5:1015:U:H3'	53:5:1016:A:H8	1.68	0.57
53:5:1044:G:N1	53:5:1048:G:O6	2.36	0.57
53:5:1355:U:O2	53:5:1357:C:N4	2.37	0.57
4:9:378:ARG:HG2	4:9:383:THR:HG23	1.86	0.57
6:B:138:ARG:O	6:B:142:ILE:HG12	2.05	0.57
11:G:116:ILE:HG22	11:G:118:THR:HG22	1.85	0.57
26:b:125:ARG:NH2	26:b:165:MET:O	2.38	0.57
27:c:130:GLN:HA	27:c:133:PHE:CD2	2.39	0.57
33:i:42:LYS:NZ	51:3:1043:C:OP1	2.34	0.57
34:j:88:LYS:HB3	34:j:94:ARG:HG2	1.87	0.57
36:l:2:LEU:H	36:l:2:LEU:HD12	1.70	0.57
38:n:31:MET:SD	52:4:6:U:H4'	2.45	0.57
44:t:41:LYS:NZ	44:t:66:GLU:OE2	2.33	0.57
47:w:94:ASN:OD1	47:w:97:LYS:NZ	2.37	0.57
49:y:27:LEU:HA	49:y:38:LEU:HA	1.86	0.57
49:y:30:CYS:SG	49:y:33:CYS:N	2.77	0.57
51:3:33:C:H2'	51:3:34:C:H6	1.69	0.57
51:3:198:G:H2'	51:3:199:A:H8	1.65	0.57
51:3:332:G:O2'	51:3:356:A:N1	2.36	0.57
51:3:448:A:C6	51:3:2420:A:H1'	2.40	0.57
51:3:729:U:O2'	51:3:1407:U:O2'	2.22	0.57
51:3:2259:G:H2'	51:3:2260:G:O4'	2.03	0.57
51:3:2685:A:O2'	51:3:2686:C:H5'	2.04	0.57
53:5:412:G:C2	53:5:424:U:O2	2.58	0.57
53:5:885:U:C2	53:5:901:A:N7	2.73	0.57
53:5:946:G:H2'	53:5:947:U:H6	1.70	0.57
53:5:1269:U:O2'	53:5:1276:U:O4	2.21	0.57
2:1:2:LYS:NZ	51:3:257:C:H3'	2.20	0.57
6:B:7:SER:HA	6:B:10:LEU:HB2	1.87	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:I:9:TYR:HE2	13:I:12:LEU:HB2	1.69	0.57
18:N:60:ARG:O	18:N:64:LEU:HG	2.05	0.57
27:c:47:GLN:H	51:3:479:A:P	2.27	0.57
27:c:77:GLY:CA	51:3:709:G:H5''	2.35	0.57
34:j:25:LEU:H	34:j:39:VAL:HA	1.70	0.57
39:o:93:ARG:HH22	39:o:96:VAL:HG23	1.69	0.57
41:q:39:LEU:HG	41:q:45:ILE:HG21	1.87	0.57
42:r:25:VAL:HG12	42:r:74:CYS:HB3	1.86	0.57
51:3:225:A:C1'	51:3:237:A:H1'	2.35	0.57
51:3:445:C:H2'	51:3:446:A:H8	1.68	0.57
51:3:960:A:H2'	51:3:961:U:C6	2.39	0.57
51:3:1759:C:H2'	51:3:1760:G:C8	2.40	0.57
51:3:1832:G:H2'	51:3:1833:G:C8	2.39	0.57
51:3:1877:C:H2'	51:3:1878:A:C4	2.40	0.57
51:3:2066:A:H1'	51:3:2511:A:N1	2.18	0.57
51:3:2120:G:O6	51:3:2176:G:O2'	2.22	0.57
51:3:2556:C:H2'	51:3:2557:G:H8	1.69	0.57
51:3:2661:U:H3'	51:3:2662:A:H8	1.70	0.57
51:3:2712:C:H2'	51:3:2713:A:C8	2.39	0.57
51:3:2797:C:H2'	51:3:2798:A:C8	2.40	0.57
51:3:2861:G:N2	51:3:2864:A:OP2	2.38	0.57
53:5:169:G:C4	53:5:170:A:C8	2.93	0.57
53:5:397:C:H2'	53:5:398:G:H8	1.69	0.57
53:5:514:U:H2'	53:5:515:G:C8	2.40	0.57
53:5:535:A:H2'	53:5:536:U:C6	2.40	0.57
53:5:753:C:H2'	53:5:754:U:C6	2.40	0.57
53:5:884:G:N2	53:5:885:U:O4	2.37	0.57
53:5:921:G:C2	53:5:1480:G:H2'	2.40	0.57
53:5:1033:U:H2'	53:5:1034:G:C8	2.39	0.57
53:5:1279:G:N7	53:5:1305:G:N1	2.53	0.57
53:5:1286:G:C2	53:5:1300:C:C2	2.92	0.57
6:B:116:ALA:HB1	6:B:203:VAL:HG13	1.87	0.57
7:C:11:SER:O	7:C:15:GLY:N	2.32	0.57
8:D:87:ARG:NE	8:D:107:LYS:HD2	2.19	0.57
9:E:47:TYR:CE1	9:E:49:ILE:HD12	2.40	0.57
13:I:46:LEU:HB2	13:I:79:LEU:HB3	1.87	0.57
14:J:48:SER:H	53:5:692:A:P	2.26	0.57
14:J:64:ALA:O	14:J:68:LYS:HG2	2.05	0.57
15:K:85:HIS:HD2	15:K:87:LEU:H	1.51	0.57
19:O:38:LYS:HE3	53:5:448:A:H5''	1.86	0.57
22:R:79:ASN:HD21	53:5:953:A:N6	1.96	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:S:21:ASN:HB3	23:S:25:LYS:HE2	1.86	0.57
26:b:7:PHE:CE1	26:b:206:LEU:HD13	2.39	0.57
29:e:130:LYS:HE2	29:e:133:GLU:HB2	1.87	0.57
37:m:63:VAL:HG12	37:m:67:LEU:HG	1.87	0.57
41:q:3:ALA:HA	41:q:41:LEU:HA	1.86	0.57
44:t:12:VAL:N	44:t:20:GLY:O	2.37	0.57
51:3:235:U:H3'	51:3:236:G:C8	2.40	0.57
51:3:682:A:H3'	51:3:683:G:C8	2.39	0.57
51:3:786:A:O2'	51:3:1788:A:N1	2.37	0.57
51:3:827:G:H2'	51:3:2448:C:O2	2.05	0.57
51:3:848:U:C1'	51:3:1256:A:H1'	2.35	0.57
51:3:1084:C:H2'	51:3:1085:A:H8	1.68	0.57
51:3:1273:U:H2'	51:3:1274:A:H8	1.70	0.57
51:3:1346:G:H2'	51:3:1347:A:C8	2.40	0.57
51:3:1464:G:N2	51:3:1591:C:N3	2.53	0.57
51:3:1882:G:H2'	51:3:1883:A:H8	1.70	0.57
51:3:2302:C:N3	51:3:2347:G:N1	2.53	0.57
51:3:2595:A:H61	51:3:2616:G:H1'	1.69	0.57
53:5:499:U:H2'	53:5:500:G:C8	2.40	0.57
53:5:610:C:H2'	53:5:611:A:C8	2.40	0.57
53:5:754:U:O2'	53:5:873:U:O2	2.22	0.57
53:5:883:A:N6	53:5:902:A:OP2	2.31	0.57
53:5:1219:C:N3	53:5:1268:G:N1	2.53	0.57
54:6:23:G:H8	54:6:23:G:O5'	1.87	0.57
2:1:57:ASN:OD1	2:1:58:LEU:N	2.38	0.57
3:2:11:CYS:N	3:2:14:CYS:SG	2.77	0.57
4:9:92:MET:HG2	4:9:119:HIS:NE2	2.20	0.57
4:9:245:ILE:HD12	4:9:252:ARG:HD3	1.87	0.57
8:D:142:GLY:O	8:D:148:ARG:HA	2.05	0.57
15:K:49:ARG:O	15:K:67:LYS:N	2.33	0.57
24:T:38:LYS:HD3	24:T:41:ARG:NE	2.17	0.57
24:T:46:ARG:HH11	53:5:719:G:N2	2.03	0.57
38:n:34:LYS:HA	38:n:39:ILE:HG12	1.86	0.57
40:p:82:LEU:O	40:p:87:ILE:HA	2.04	0.57
49:y:15:LYS:O	49:y:18:SER:OG	2.18	0.57
49:y:17:ARG:NE	51:3:1296:G:OP2	2.38	0.57
51:3:152:A:H2'	51:3:153:U:O4'	2.04	0.57
51:3:511:U:N3	51:3:515:A:C8	2.73	0.57
51:3:672:G:O2'	51:3:674:G:O2'	2.22	0.57
51:3:716:G:H2'	51:3:717:U:C6	2.40	0.57
51:3:1221:G:H2'	51:3:1222:A:C8	2.40	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:3:1299:A:HO2'	51:3:1353:G:H1	1.51	0.57
51:3:1475:C:H2'	51:3:1476:C:H6	1.70	0.57
51:3:1481:U:C2	51:3:1482:U:H3'	2.39	0.57
51:3:1785:U:C2	51:3:1792:A:C5	2.89	0.57
51:3:1916:C:N3	51:3:1929:G:N1	2.53	0.57
51:3:2098:U:H3	51:3:2236:G:H1	1.51	0.57
51:3:2267:G:C8	51:3:2435:C:C4	2.93	0.57
51:3:2522:U:H2'	51:3:2523:C:H6	1.67	0.57
51:3:2586:G:O2'	51:3:2587:U:O5'	2.21	0.57
51:3:2752:G:O6	51:3:2768:U:O4	2.23	0.57
53:5:94:A:N7	53:5:322:G:H2'	2.19	0.57
53:5:335:C:H2'	53:5:336:U:H6	1.70	0.57
53:5:649:U:O3'	53:5:650:A:H2'	2.05	0.57
53:5:675:U:O2	53:5:710:G:N2	2.38	0.57
53:5:1133:A:C6	53:5:1153:G:N3	2.73	0.57
53:5:1236:A:H62	53:5:1249:G:H21	1.51	0.57
4:9:224:ARG:NH2	4:9:257:THR:O	2.37	0.56
4:9:378:ARG:HG2	4:9:383:THR:HA	1.86	0.56
7:C:13:ARG:HE	7:C:35:PRO:HD2	1.70	0.56
15:K:59:ASN:ND2	53:5:526:C:H41	2.03	0.56
29:e:91:ARG:NH1	29:e:132:THR:OG1	2.37	0.56
35:k:92:LYS:HZ3	35:k:123:PRO:HB2	1.69	0.56
37:m:10:THR:H	37:m:13:TRP:HB3	1.70	0.56
47:w:44:ILE:H	47:w:44:ILE:HD12	1.68	0.56
51:3:164:A:OP2	51:3:165:U:O2'	2.13	0.56
51:3:252:G:C5	51:3:254:G:C2	2.93	0.56
51:3:373:U:H2'	51:3:374:A:H8	1.69	0.56
51:3:513:A:O2'	51:3:514:A:OP1	2.16	0.56
51:3:1077:G:C5	51:3:1149:G:C6	2.93	0.56
51:3:1492:G:H2'	51:3:1580:G:C8	2.39	0.56
51:3:1512:A:C6	51:3:1528:G:C6	2.93	0.56
51:3:1682:C:H2'	51:3:1683:G:O4'	2.05	0.56
51:3:1751:A:H2'	51:3:1752:A:C8	2.39	0.56
51:3:2113:U:H3'	51:3:2114:C:C6	2.40	0.56
51:3:2420:A:H3'	51:3:2421:U:C6	2.40	0.56
53:5:833:G:H1	53:5:844:U:H3	0.70	0.56
53:5:895:A:C8	53:5:896:G:H1'	2.40	0.56
53:5:1165:G:H4'	53:5:1166:A:H5''	1.87	0.56
53:5:1222:U:O2	53:5:1264:G:C6	2.58	0.56
53:5:1346:G:H2'	53:5:1347:U:C6	2.40	0.56
53:5:1477:A:H5'	53:5:1479:G:N7	2.20	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:A:97:ASN:C	5:A:101:LYS:HZ2	2.12	0.56
12:H:122:GLY:N	12:H:125:ARG:HB2	2.20	0.56
21:Q:48:GLN:NE2	21:Q:50:ARG:O	2.25	0.56
25:a:58:GLN:HA	25:a:224:ILE:HG12	1.88	0.56
33:i:105:TYR:CZ	33:i:122:ILE:HG13	2.41	0.56
34:j:19:VAL:HA	34:j:44:LYS:H	1.70	0.56
39:o:28:GLY:O	39:o:115:LYS:NZ	2.33	0.56
42:r:61:ASN:CG	51:3:531:G:H1'	2.30	0.56
43:s:36:SER:O	43:s:40:VAL:N	2.35	0.56
51:3:81:C:C2	51:3:109:G:C2	2.94	0.56
51:3:164:A:H1'	51:3:2216:U:H1'	1.87	0.56
51:3:202:C:O2'	51:3:203:A:H5'	2.05	0.56
51:3:479:A:H1'	51:3:1232:U:O4'	2.06	0.56
51:3:726:U:H2'	51:3:727:C:H6	1.70	0.56
51:3:1156:C:H2'	51:3:1157:G:H8	1.68	0.56
51:3:1446:G:O2'	51:3:1613:A:N7	2.32	0.56
51:3:1589:A:O2'	51:3:1590:U:O4'	2.09	0.56
51:3:1714:U:H3'	51:3:1715:A:H8	1.69	0.56
51:3:1854:A:H2'	51:3:1855:A:H5''	1.87	0.56
51:3:2116:U:H2'	51:3:2117:G:C4	2.40	0.56
51:3:2213:A:H2'	51:3:2214:A:H8	1.70	0.56
51:3:2831:U:H2'	51:3:2832:G:H8	1.70	0.56
52:4:69:C:C2	52:4:96:G:C2	2.93	0.56
52:4:72:A:N6	52:4:93:U:O2	2.39	0.56
53:5:504:A:H2'	53:5:505:C:O4'	2.05	0.56
53:5:563:U:OP2	53:5:564:G:O2'	2.21	0.56
53:5:901:A:H2'	53:5:902:A:C8	2.40	0.56
53:5:1043:U:H2'	53:5:1175:C:N4	2.20	0.56
53:5:1212:C:O3'	53:5:1274:G:N2	2.38	0.56
53:5:1483:C:H2'	53:5:1484:C:C6	2.39	0.56
4:9:280:ARG:HH11	53:5:363:U:H4'	1.70	0.56
5:A:40:LYS:HE3	5:A:208:PRO:HD2	1.86	0.56
5:A:63:GLN:O	5:A:67:THR:HG23	2.05	0.56
5:A:202:CYS:N	5:A:215:ILE:O	2.37	0.56
6:B:93:LYS:O	6:B:97:GLY:N	2.24	0.56
7:C:10:ARG:NH1	53:5:541:C:OP1	2.38	0.56
7:C:90:PHE:HD2	7:C:187:LEU:HD13	1.69	0.56
11:G:134:GLY:C	53:5:597:C:H4'	2.30	0.56
12:H:71:GLY:HA2	53:5:1225:A:H5'	1.88	0.56
17:M:12:ARG:NH2	53:5:989:A:O2'	2.32	0.56
18:N:84:LEU:HD23	51:3:749:U:H5	1.68	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:O:59:PRO:O	19:O:64:ARG:NH1	2.38	0.56
20:P:5:GLN:NE2	53:5:112:U:O3'	2.32	0.56
22:R:55:LYS:HE2	53:5:953:A:N3	2.19	0.56
25:a:31:ASN:ND2	51:3:1601:A:N3	2.52	0.56
25:a:61:ARG:NH1	25:a:62:ASN:O	2.38	0.56
30:f:4:ILE:HD13	30:f:37:ALA:CB	2.28	0.56
30:f:6:LYS:HB2	30:f:35:LEU:H	1.70	0.56
33:i:106:ASN:HA	33:i:109:LYS:HE2	1.86	0.56
34:j:64:ARG:HH22	39:o:73:ILE:HG13	1.69	0.56
35:k:112:ILE:HB	35:k:128:VAL:HA	1.87	0.56
35:k:125:HIS:NE2	35:k:145:SER:OG	2.38	0.56
36:l:26:TYR:HH	51:3:943:A:P	2.27	0.56
36:l:40:ASN:H	36:l:97:VAL:HB	1.70	0.56
43:s:27:TYR:OH	43:s:91:ILE:O	2.21	0.56
45:u:26:ASN:HD21	51:3:2287:G:H8	1.53	0.56
46:v:17:ASN:O	46:v:24:ILE:CA	2.41	0.56
51:3:20:C:H2'	51:3:21:U:O4'	2.05	0.56
51:3:59:C:H2'	51:3:60:G:C8	2.39	0.56
51:3:535:G:H22	51:3:538:A:P	2.28	0.56
51:3:775:C:H5''	51:3:1791:A:OP1	2.06	0.56
51:3:1166:G:N2	51:3:2046:G:H21	2.04	0.56
51:3:1309:G:H2'	51:3:1310:U:H6	1.70	0.56
51:3:1374:U:H3	51:3:1634:A:N6	2.03	0.56
51:3:1508:G:H1	51:3:1532:A:H1'	1.70	0.56
51:3:1832:G:H2'	51:3:1833:G:H8	1.70	0.56
51:3:2080:C:H2'	51:3:2081:U:H6	1.70	0.56
51:3:2151:G:H1'	51:3:2154:A:N6	2.19	0.56
51:3:2189:U:H2'	51:3:2190:G:C8	2.40	0.56
51:3:2218:U:N3	51:3:2220:A:O2'	2.38	0.56
51:3:2278:G:C5	51:3:2279:G:C5	2.93	0.56
51:3:2447:A:H2	51:3:2594:C:H5''	1.70	0.56
51:3:2465:U:H2'	51:3:2466:G:O4'	2.05	0.56
51:3:2598:C:H2'	51:3:2599:C:H6	1.68	0.56
51:3:2604:U:O2'	51:3:2605:G:OP1	2.21	0.56
51:3:2633:C:H2'	51:3:2634:C:O4'	2.05	0.56
51:3:2682:A:H3'	51:3:2683:G:H8	1.71	0.56
51:3:2752:G:O6	51:3:2768:U:C4	2.58	0.56
51:3:2786:A:O3'	51:3:2788:U:O2'	2.23	0.56
51:3:2829:G:H3'	51:3:2830:A:H8	1.70	0.56
51:3:2835:G:H5'	51:3:2836:U:H5'	1.87	0.56
51:3:2849:G:H2'	51:3:2850:G:O4'	2.05	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:3:2851:U:H3'	51:3:2852:G:C8	2.40	0.56
53:5:23:G:H2'	53:5:24:C:H6	1.69	0.56
53:5:84:U:H2'	53:5:85:U:C6	2.40	0.56
53:5:130:G:C6	53:5:165:A:C6	2.93	0.56
53:5:435:U:C2'	53:5:492:G:H1	2.19	0.56
53:5:485:C:H2'	53:5:486:C:C6	2.39	0.56
53:5:512:U:H2'	53:5:513:G:C8	2.40	0.56
53:5:673:A:H2'	53:5:674:U:H6	1.70	0.56
53:5:908:A:H2'	53:5:909:A:C8	2.40	0.56
53:5:1076:U:H3'	53:5:1077:U:C6	2.40	0.56
53:5:1118:A:OP1	53:5:1120:A:N6	2.38	0.56
53:5:1502:G:H2'	53:5:1503:U:H6	1.69	0.56
54:6:34:U:HO2'	54:6:37:A:H62	1.47	0.56
4:9:36:LEU:HD11	4:9:70:TYR:CD1	2.38	0.56
4:9:306:LYS:O	4:9:390:THR:OG1	2.24	0.56
4:9:329:PRO:O	4:9:339:THR:HA	2.06	0.56
5:A:95:LEU:HB3	5:A:229:MET:SD	2.44	0.56
14:J:19:SER:HA	14:J:82:THR:O	2.05	0.56
23:S:55:ALA:HA	23:S:60:ILE:O	2.05	0.56
26:b:180:ARG:HD3	26:b:218:LYS:HG2	1.86	0.56
26:b:212:LYS:NZ	51:3:2778:U:O2	2.37	0.56
28:d:29:PRO:HB2	28:d:169:LEU:HD22	1.87	0.56
30:f:38:PRO:HB2	30:f:41:LYS:HG2	1.88	0.56
40:p:80:ASN:OD1	51:3:1186:A:O2'	2.15	0.56
41:q:76:GLN:N	51:3:598:G:OP1	2.39	0.56
42:r:27:LYS:HD2	42:r:32:ALA:HB2	1.88	0.56
42:r:92:SER:O	51:3:1648:A:N6	2.38	0.56
49:y:40:HIS:HA	51:3:2888:U:C5	2.41	0.56
51:3:691:G:H2'	51:3:692:U:C6	2.40	0.56
51:3:1091:G:O3'	51:3:1092:A:H8	1.89	0.56
51:3:1270:C:H2'	51:3:1271:A:C8	2.40	0.56
51:3:1394:A:H3'	51:3:1395:A:C8	2.40	0.56
51:3:1530:G:H2'	51:3:1531:C:C6	2.40	0.56
51:3:1575:C:H3'	51:3:1576:G:H8	1.70	0.56
51:3:1614:G:C6	51:3:1615:G:C6	2.94	0.56
51:3:2383:G:H2'	51:3:2385:A:OP2	2.05	0.56
51:3:2785:G:H4'	51:3:2787:U:H5'	1.86	0.56
53:5:293:G:N2	53:5:295:G:H3'	2.20	0.56
53:5:1084:A:C2	53:5:1086:U:H5'	2.40	0.56
53:5:1241:G:O6	53:5:1245:A:N6	2.39	0.56
53:5:1299:C:H2'	53:5:1300:C:C6	2.40	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:5:1445:G:H2'	53:5:1446:A:C8	2.41	0.56
3:2:27:CYS:SG	3:2:28:LYS:N	2.79	0.56
6:B:86:GLN:HG3	6:B:87:LYS:H	1.71	0.56
10:F:24:ARG:HH12	10:F:97:ALA:HA	1.70	0.56
11:G:41:LYS:O	11:G:44:ILE:HG22	2.06	0.56
13:I:19:TYR:CE2	17:M:54:PRO:HB2	2.40	0.56
22:R:34:TRP:O	53:5:1194:A:O2'	2.21	0.56
23:S:27:LYS:O	23:S:31:ASN:ND2	2.39	0.56
24:T:31:ARG:NH2	53:5:715:A:O2'	2.39	0.56
29:e:9:ILE:HD12	29:e:54:GLN:HA	1.88	0.56
29:e:121:PRO:HD2	29:e:124:LEU:HD22	1.87	0.56
30:f:102:HIS:HB3	51:3:166:A:C5	2.40	0.56
35:k:8:SER:N	51:3:1273:U:O2'	2.39	0.56
42:r:49:LYS:CE	51:3:527:A:H61	2.18	0.56
50:z:41:CYS:HB3	50:z:43:LYS:HZ3	1.69	0.56
51:3:986:G:H2'	51:3:987:U:C6	2.41	0.56
51:3:1151:U:H2'	51:3:1152:U:C6	2.41	0.56
51:3:2035:U:C2	51:3:2040:A:N7	2.73	0.56
51:3:2274:A:N6	51:3:2281:A:OP2	2.35	0.56
51:3:2324:A:H2'	51:3:2325:U:O4'	2.05	0.56
51:3:2333:G:C5	51:3:2334:U:C4	2.93	0.56
51:3:2375:A:O2'	51:3:2376:C:H5'	2.06	0.56
51:3:2477:A:H2'	51:3:2478:G:O4'	2.05	0.56
53:5:626:G:H2'	53:5:627:U:C6	2.41	0.56
53:5:884:G:C2	53:5:900:G:H2'	2.41	0.56
53:5:936:G:H1	53:5:1316:C:N4	2.02	0.56
53:5:1423:C:H2'	53:5:1424:C:C5	2.40	0.56
54:7:16:G:C6	54:7:49:C:C2	2.93	0.56
4:9:324:LEU:HG	4:9:325:ASN:H	1.70	0.56
5:A:116:THR:N	5:A:190:GLU:OE2	2.39	0.56
6:B:59:GLU:O	6:B:66:ASP:N	2.38	0.56
9:E:7:LEU:HB2	9:E:58:TYR:HB2	1.87	0.56
9:E:151:LYS:N	9:E:152:PRO:HD3	2.21	0.56
11:G:19:LEU:HA	11:G:22:ILE:HD12	1.88	0.56
13:I:62:HIS:CG	13:I:63:VAL:H	2.24	0.56
15:K:101:LYS:NZ	53:5:524:C:OP1	2.23	0.56
16:L:107:ARG:HG2	16:L:107:ARG:O	2.06	0.56
25:a:70:ASP:C	25:a:72:LYS:N	2.62	0.56
26:b:122:ALA:HA	26:b:126:TRP:CD1	2.39	0.56
27:c:104:ASN:ND2	51:3:640:U:H5''	2.20	0.56
30:f:109:GLN:HB2	30:f:112:MET:HE1	1.88	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:f:126:ILE:HG22	30:f:127:THR:H	1.70	0.56
35:k:54:GLY:HA3	51:3:861:U:H1'	1.88	0.56
45:u:53:ARG:NH2	51:3:2363:C:O2	2.37	0.56
47:w:26:LEU:HA	47:w:29:TYR:CD2	2.40	0.56
49:y:42:VAL:HA	49:y:48:TYR:HA	1.86	0.56
51:3:218:G:O2'	51:3:221:A:H5'	2.05	0.56
51:3:417:G:N2	51:3:432:G:C5	2.73	0.56
51:3:593:C:H2'	51:3:594:G:C8	2.41	0.56
51:3:618:G:H1'	51:3:1284:A:H61	1.70	0.56
51:3:740:A:H2'	51:3:741:A:C8	2.41	0.56
51:3:986:G:C2	51:3:1003:U:O2	2.58	0.56
51:3:1444:C:C2	51:3:1445:U:C2	2.93	0.56
51:3:1507:G:H2'	51:3:1507:G:OP2	2.05	0.56
51:3:1836:A:H3'	51:3:1837:C:H6	1.69	0.56
51:3:2668:A:O2'	51:3:2669:G:H8	1.87	0.56
51:3:2819:C:H2'	51:3:2820:G:H8	1.71	0.56
51:3:2838:G:H21	51:3:2887:A:H62	1.54	0.56
51:3:2873:G:H2'	51:3:2874:C:C6	2.40	0.56
52:4:51:A:H2'	52:4:52:G:C8	2.41	0.56
53:5:11:A:O2'	53:5:505:C:O3'	2.23	0.56
53:5:28:G:H2'	53:5:29:G:C8	2.41	0.56
53:5:483:U:H2'	53:5:484:A:H8	1.70	0.56
53:5:684:A:N3	53:5:685:G:H1'	2.20	0.56
53:5:727:G:H21	53:5:762:G:H4'	1.70	0.56
53:5:743:A:H2'	53:5:744:U:C6	2.40	0.56
53:5:883:A:H2	53:5:884:G:H21	1.53	0.56
53:5:1064:U:H3	53:5:1093:A:H61	1.53	0.56
53:5:1205:C:H2'	53:5:1206:G:C8	2.40	0.56
53:5:1427:U:O2	53:5:1428:A:N6	2.39	0.56
4:9:317:GLY:O	4:9:383:THR:N	2.39	0.56
4:9:323:PHE:HB2	4:9:327:TYR:CG	2.41	0.56
5:A:29:HIS:CE1	5:A:61:GLN:HG2	2.40	0.56
5:A:146:LYS:O	5:A:150:LEU:HG	2.05	0.56
11:G:29:LYS:HA	11:G:76:TYR:OH	2.05	0.56
11:G:51:GLU:HG3	11:G:53:TYR:CD2	2.41	0.56
13:I:7:VAL:C	13:I:9:TYR:H	2.14	0.56
18:N:26:VAL:HA	18:N:29:LEU:HD12	1.86	0.56
23:S:8:GLU:N	23:S:8:GLU:OE1	2.39	0.56
30:f:6:LYS:HD3	30:f:57:HIS:CG	2.40	0.56
33:i:135:MET:HE1	51:3:8:A:H4'	1.88	0.56
40:p:40:GLN:HA	40:p:43:LYS:HZ1	1.70	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:z:37:PHE:HA	50:z:44:VAL:HA	1.88	0.56
51:3:34:C:H2'	51:3:35:U:C6	2.41	0.56
51:3:264:G:O2'	51:3:642:A:N6	2.38	0.56
51:3:335:G:H5'	51:3:368:C:H2'	1.87	0.56
51:3:519:A:H3'	51:3:520:C:H5	1.71	0.56
51:3:652:U:H2'	51:3:653:G:H8	1.70	0.56
51:3:842:U:C2	51:3:843:G:C8	2.94	0.56
51:3:984:C:H1'	51:3:1020:G:C5	2.40	0.56
51:3:1039:G:HO2'	51:3:1046:A:N6	2.04	0.56
51:3:1457:A:H2'	51:3:1458:A:C8	2.41	0.56
51:3:1747:G:N2	51:3:1753:G:N7	2.54	0.56
51:3:2329:G:H21	51:3:2330:A:H8	1.54	0.56
51:3:2733:A:C4	51:3:2735:G:N7	2.74	0.56
53:5:44:C:N4	53:5:395:G:O6	2.29	0.56
53:5:767:U:H2'	53:5:768:G:C8	2.41	0.56
53:5:943:C:N3	53:5:1208:G:N1	2.43	0.56
53:5:1245:A:O3'	53:5:1288:C:H4'	2.05	0.56
53:5:1346:G:H2'	53:5:1347:U:H6	1.70	0.56
2:1:5:SER:OG	51:3:251:G:O6	2.24	0.56
3:2:35:ARG:O	3:2:35:ARG:HG3	2.05	0.56
6:B:22:TRP:NE1	6:B:60:ARG:HD3	2.21	0.56
10:F:105:MET:O	10:F:109:LYS:HG3	2.06	0.56
13:I:59:ARG:HD2	13:I:67:SER:HB2	1.88	0.56
17:M:2:ALA:HA	53:5:1039:G:H5''	1.87	0.56
21:Q:63:PHE:HB3	21:Q:76:THR:HG22	1.86	0.56
25:a:110:ILE:H	25:a:110:ILE:HD12	1.71	0.56
25:a:251:ARG:HE	25:a:255:ARG:HH22	1.53	0.56
27:c:37:ALA:O	27:c:40:VAL:HG12	2.06	0.56
30:f:11:ASN:CG	30:f:27:ILE:CD1	2.78	0.56
30:f:94:THR:O	30:f:97:ILE:HG12	2.06	0.56
33:i:41:GLY:HA2	33:i:44:LYS:HZ3	1.71	0.56
33:i:135:MET:SD	51:3:8:A:O2'	2.60	0.56
38:n:77:ILE:HA	38:n:80:LYS:HB2	1.87	0.56
42:r:7:GLN:OE1	51:3:528:U:O2'	2.19	0.56
44:t:93:MET:SD	44:t:93:MET:N	2.79	0.56
45:u:30:SER:OG	51:3:2270:U:OP2	2.15	0.56
49:y:10:LYS:HB3	49:y:13:ARG:NH1	2.20	0.56
49:y:16:ARG:NE	51:3:2053:G:H5'	2.21	0.56
51:3:279:U:C4	51:3:291:G:C6	2.94	0.56
51:3:297:G:H22	51:3:441:U:P	2.29	0.56
51:3:297:G:H4'	51:3:298:U:C5	2.40	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:3:901:C:O2	51:3:904:C:N4	2.20	0.56
51:3:1085:A:H1'	51:3:2759:G:N2	2.21	0.56
51:3:1162:A:O2'	51:3:2526:A:OP1	2.20	0.56
51:3:1343:C:H4'	51:3:1420:A:O2'	2.05	0.56
51:3:1392:G:N2	51:3:1395:A:OP2	2.28	0.56
51:3:1446:G:H1'	51:3:1614:G:C6	2.41	0.56
51:3:1608:C:H2'	51:3:1609:U:C6	2.40	0.56
51:3:2305:C:H2'	51:3:2306:A:H8	1.70	0.56
51:3:2367:C:H2'	51:3:2368:A:O4'	2.06	0.56
52:4:11:A:O2'	52:4:13:G:O5'	2.24	0.56
53:5:102:G:H2'	53:5:103:U:C2	2.40	0.56
53:5:317:A:C6	53:5:328:G:O6	2.59	0.56
53:5:348:C:O2'	53:5:350:G:OP1	2.18	0.56
53:5:479:A:H2'	53:5:480:C:O4'	2.05	0.56
53:5:662:G:H8	53:5:721:G:H22	1.47	0.56
53:5:825:A:H62	53:5:852:G:N2	2.03	0.56
53:5:1111:G:H2'	53:5:1112:U:H6	1.67	0.56
53:5:1154:A:H2'	53:5:1155:A:C8	2.41	0.56
53:5:1405:U:H2'	53:5:1406:U:C6	2.40	0.56
53:5:1439:G:O2'	53:5:1440:U:O5'	2.22	0.56
53:5:1445:G:H2'	53:5:1446:A:H8	1.70	0.56
54:6:43:G:H3'	54:6:44:U:H4'	1.87	0.56
54:7:18:C:H5'	54:7:61:U:O2'	2.05	0.56
14:J:45:PHE:HB3	14:J:49:ARG:O	2.06	0.56
17:M:19:ARG:HG2	53:5:974:C:O2	2.05	0.56
21:Q:71:ASN:HD22	21:Q:75:ILE:HG21	1.71	0.56
23:S:66:ARG:HG2	23:S:69:LYS:HE2	1.87	0.56
25:a:56:ARG:HG3	51:3:1831:G:OP1	2.06	0.56
33:i:22:ASP:OD1	33:i:61:ASN:HB2	2.06	0.56
34:j:86:LEU:HB3	34:j:94:ARG:HH11	1.70	0.56
37:m:19:ARG:HA	37:m:22:VAL:HG22	1.88	0.56
38:n:10:LEU:HG	38:n:14:ARG:HH11	1.71	0.56
40:p:69:ARG:HD3	40:p:73:MET:O	2.05	0.56
42:r:72:PHE:HB2	42:r:108:SER:H	1.71	0.56
43:s:18:PHE:HA	43:s:21:MET:HE3	1.88	0.56
45:u:49:GLN:HE21	51:3:2362:A:H4'	1.71	0.56
47:w:19:VAL:HA	47:w:22:LEU:HD12	1.88	0.56
51:3:117:C:H1'	51:3:128:A:N3	2.20	0.56
51:3:533:G:H22	51:3:541:G:H1	1.54	0.56
51:3:535:G:N2	51:3:537:A:H3'	2.19	0.56
51:3:854:A:H2'	51:3:855:A:C8	2.40	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:3:983:A:H2'	51:3:984:C:C6	2.41	0.56
51:3:1035:U:H2'	51:3:1036:A:H5'	1.87	0.56
51:3:2044:C:H2'	51:3:2045:C:C6	2.40	0.56
51:3:2082:U:OP2	51:3:2246:G:O2'	2.18	0.56
51:3:2085:C:H1'	51:3:2442:A:H1'	1.87	0.56
51:3:2446:U:O2'	51:3:2448:C:OP1	2.24	0.56
51:3:2671:G:H3'	51:3:2672:G:C8	2.40	0.56
53:5:74:U:H2'	53:5:75:A:C8	2.39	0.56
53:5:385:A:H3'	53:5:386:U:C6	2.41	0.56
53:5:589:U:H2'	53:5:590:G:C8	2.41	0.56
53:5:661:G:N2	53:5:723:C:O2'	2.37	0.56
53:5:689:U:H1'	53:5:692:A:N7	2.21	0.56
53:5:951:U:H2'	53:5:952:U:C6	2.41	0.56
2:1:11:PHE:C	2:1:12:LYS:HD2	2.30	0.56
7:C:132:PRO:HD2	53:5:399:C:H5''	1.87	0.56
13:I:24:LEU:HD13	13:I:78:ARG:HD3	1.87	0.56
14:J:104:ASN:HB3	14:J:106:LYS:HZ2	1.70	0.56
17:M:10:GLN:HG3	17:M:23:ARG:HE	1.70	0.56
18:N:5:LYS:O	18:N:9:ILE:HG13	2.06	0.56
25:a:171:LEU:HB2	25:a:181:ILE:C	2.31	0.56
27:c:92:GLY:HA2	51:3:1278:G:O4'	2.06	0.56
36:l:24:ASN:HA	36:l:67:ARG:NH1	2.21	0.56
37:m:44:ARG:HD3	37:m:47:LYS:HD2	1.87	0.56
39:o:56:ARG:HD2	39:o:57:GLY:N	2.20	0.56
51:3:57:G:H2'	51:3:58:A:C8	2.41	0.56
51:3:190:G:H2'	51:3:191:G:H8	1.71	0.56
51:3:387:U:H2'	51:3:388:U:C6	2.41	0.56
51:3:685:G:H2'	51:3:686:C:O4'	2.06	0.56
51:3:753:A:H2'	51:3:754:U:O4'	2.05	0.56
51:3:886:U:H2'	51:3:887:A:H8	1.71	0.56
51:3:1064:A:H3'	51:3:1065:G:C8	2.40	0.56
51:3:1368:U:H4'	51:3:1422:U:H1'	1.87	0.56
51:3:1454:G:OP2	51:3:1455:A:O2'	2.21	0.56
51:3:2484:A:H2	51:3:2489:G:H22	1.54	0.56
51:3:2656:G:H22	51:3:2681:G:H1'	1.71	0.56
53:5:515:G:H2'	53:5:529:U:C2	2.41	0.56
53:5:688:G:H4'	53:5:794:C:H4'	1.87	0.56
53:5:849:A:H2'	53:5:850:G:C8	2.42	0.56
53:5:1323:A:H2'	53:5:1324:A:O4'	2.06	0.56
4:9:92:MET:HG2	4:9:119:HIS:CE1	2.40	0.55
7:C:166:PHE:CG	7:C:182:PRO:HB3	2.41	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:H:90:LEU:HD21	12:H:97:LYS:HD3	1.87	0.55
14:J:16:VAL:HG22	14:J:25:VAL:HG12	1.87	0.55
14:J:115:LYS:HG2	14:J:116:PRO:O	2.06	0.55
16:L:111:GLY:O	16:L:114:LYS:NZ	2.24	0.55
18:N:17:LYS:O	18:N:17:LYS:HD2	2.06	0.55
19:O:15:ALA:N	19:O:28:ALA:O	2.32	0.55
19:O:67:PHE:O	19:O:71:GLY:N	2.38	0.55
26:b:151:ARG:NE	51:3:2583:U:OP1	2.35	0.55
28:d:17:GLN:HA	28:d:20:PHE:O	2.05	0.55
30:f:6:LYS:CB	30:f:34:LYS:HA	2.36	0.55
30:f:42:LYS:HD3	30:f:46:ASP:HB3	1.88	0.55
34:j:91:LYS:NZ	34:j:110:GLY:HA3	2.21	0.55
37:m:6:LYS:HG3	51:3:1302:C:H4'	1.87	0.55
37:m:30:LYS:HA	37:m:116:LEU:O	2.07	0.55
39:o:19:LYS:CG	39:o:82:HIS:HA	2.36	0.55
40:p:4:LYS:NZ	51:3:616:G:O2'	2.35	0.55
47:w:92:GLU:O	47:w:95:LYS:N	2.38	0.55
51:3:88:G:H2'	51:3:89:U:C6	2.40	0.55
51:3:112:A:H2'	51:3:113:U:C6	2.41	0.55
51:3:358:A:H62	51:3:372:G:H21	1.54	0.55
51:3:616:G:H2'	51:3:617:C:O4'	2.06	0.55
51:3:648:G:N7	51:3:650:G:H1'	2.21	0.55
51:3:698:A:H2'	51:3:699:U:C6	2.41	0.55
51:3:1095:U:O4'	51:3:1097:G:H5'	2.06	0.55
51:3:1242:G:N2	51:3:1266:G:H1'	2.20	0.55
51:3:1254:U:H2'	51:3:1255:G:C8	2.41	0.55
51:3:1278:G:H2'	51:3:1278:G:OP1	2.06	0.55
51:3:1746:U:O2	51:3:1753:G:N2	2.27	0.55
51:3:1810:A:H3'	51:3:1811:A:H8	1.71	0.55
51:3:2646:G:H1	51:3:2784:A:P	2.28	0.55
51:3:2759:G:P	51:3:2759:G:H21	2.30	0.55
51:3:2778:U:H2'	51:3:2779:C:H5'	1.87	0.55
53:5:97:G:N2	53:5:350:G:OP2	2.39	0.55
53:5:133:G:H21	53:5:1422:A:H1'	1.71	0.55
53:5:176:G:C2	53:5:190:A:C5	2.93	0.55
53:5:406:G:C2'	53:5:429:A:H61	2.19	0.55
53:5:447:G:H5''	53:5:448:A:H3'	1.88	0.55
53:5:556:G:H2'	53:5:557:A:H2	1.71	0.55
53:5:791:A:H4'	53:5:1497:U:H5'	1.88	0.55
53:5:1087:C:H2'	53:5:1088:C:C6	2.41	0.55
53:5:1367:G:H2'	53:5:1368:U:C6	2.41	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:5:1393:A:OP2	53:5:1457:G:N1	2.39	0.55
53:5:1477:A:H2'	53:5:1479:G:C5	2.41	0.55
2:1:22:LYS:H	35:k:65:PHE:HZ	1.54	0.55
4:9:216:GLU:O	4:9:289:ARG:NH1	2.39	0.55
4:9:310:TYR:OH	4:9:313:LYS:NZ	2.36	0.55
4:9:332:TYR:HB2	4:9:376:SER:H	1.71	0.55
15:K:61:ALA:HB1	53:5:518:A:OP2	2.06	0.55
16:L:31:GLN:O	16:L:35:LYS:HG2	2.06	0.55
16:L:53:PHE:O	16:L:56:ILE:HB	2.05	0.55
23:S:23:GLY:HA2	53:5:1433:G:H5'	1.89	0.55
24:T:7:LYS:HD2	24:T:14:ALA:HB1	1.88	0.55
26:b:121:GLY:O	26:b:125:ARG:N	2.28	0.55
29:e:26:ALA:HB1	29:e:33:GLN:HE21	1.72	0.55
35:k:131:VAL:HG21	35:k:136:LEU:HD21	1.88	0.55
38:n:22:THR:HG1	51:3:2387:U:HO2'	1.54	0.55
38:n:54:SER:H	38:n:80:LYS:HE2	1.70	0.55
39:o:23:PRO:HD2	39:o:81:ILE:HD11	1.87	0.55
39:o:66:VAL:HB	39:o:79:PHE:CE1	2.41	0.55
39:o:98:ARG:NH1	51:3:2725:G:N3	2.44	0.55
41:q:10:LYS:HE3	51:3:1032:A:C8	2.41	0.55
41:q:76:GLN:NE2	51:3:598:G:OP2	2.39	0.55
51:3:274:A:P	51:3:294:G:H1	2.28	0.55
51:3:341:G:H22	51:3:344:A:P	2.29	0.55
51:3:358:A:H61	51:3:372:G:C2'	2.19	0.55
51:3:709:G:H3'	51:3:839:A:H61	1.70	0.55
51:3:740:A:H61	51:3:760:G:H2'	1.72	0.55
51:3:929:G:H2'	51:3:930:C:C6	2.40	0.55
51:3:1073:A:H2'	51:3:1074:A:C8	2.41	0.55
51:3:1080:A:OP1	51:3:1081:A:O2'	2.21	0.55
51:3:1240:U:H5''	51:3:1241:U:H3'	1.87	0.55
51:3:1356:G:H22	51:3:1681:G:H1	1.54	0.55
51:3:1446:G:H1'	51:3:1614:G:N1	2.22	0.55
51:3:1466:U:H5'	51:3:1542:G:O3'	2.06	0.55
51:3:1719:C:H2'	51:3:1720:C:O4'	2.05	0.55
51:3:1855:A:H3'	51:3:1856:G:H8	1.71	0.55
51:3:1871:U:O4	51:3:1885:G:O6	2.23	0.55
51:3:2348:U:H5'	52:4:39:U:O4	2.07	0.55
51:3:2427:U:H2'	51:3:2428:C:C6	2.40	0.55
51:3:2788:U:H4'	51:3:2789:A:OP2	2.04	0.55
51:3:2838:G:H1	51:3:2883:A:HO2'	1.53	0.55
53:5:23:G:H2'	53:5:24:C:C6	2.42	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:5:92:G:C6	53:5:93:A:H1'	2.41	0.55
53:5:100:G:C6	53:5:309:A:C6	2.94	0.55
53:5:334:A:N1	53:5:347:G:C2	2.75	0.55
53:5:957:C:H2'	53:5:958:G:C8	2.41	0.55
53:5:1200:G:HO2'	53:5:1201:C:P	2.28	0.55
3:2:11:CYS:SG	3:2:12:LYS:N	2.80	0.55
4:9:120:ILE:HD12	4:9:157:LEU:HG	1.89	0.55
10:F:42:LEU:HG	10:F:46:PHE:CZ	2.40	0.55
10:F:91:PRO:O	10:F:95:LYS:HG3	2.06	0.55
11:G:97:ILE:H	11:G:136:GLU:CD	2.14	0.55
12:H:9:LEU:HA	12:H:17:ALA:O	2.06	0.55
27:c:93:PRO:HD3	51:3:1278:G:C8	2.42	0.55
31:g:4:LYS:HA	31:g:7:LYS:HB2	1.89	0.55
42:r:18:ARG:HA	42:r:21:CYS:HB3	1.87	0.55
42:r:45:THR:HA	42:r:48:ALA:HB3	1.89	0.55
47:w:65:TRP:HB3	51:3:147:C:H4'	1.88	0.55
51:3:330:A:H2'	51:3:331:A:H8	1.70	0.55
51:3:871:G:H2'	51:3:872:C:O4'	2.06	0.55
51:3:1010:G:H1'	51:3:1011:A:H8	1.68	0.55
51:3:1319:C:H2'	51:3:1320:C:C6	2.41	0.55
51:3:1577:A:H3'	51:3:1578:A:H8	1.71	0.55
51:3:1714:U:OP2	51:3:1715:A:N6	2.26	0.55
51:3:1877:C:H2'	51:3:1878:A:N3	2.22	0.55
51:3:1937:G:N2	51:3:1938:U:O4	2.27	0.55
51:3:2301:C:H2'	51:3:2302:C:C6	2.41	0.55
51:3:2476:A:H5''	51:3:2484:A:H61	1.71	0.55
51:3:2587:U:H2'	51:3:2588:U:N1	2.22	0.55
51:3:2611:G:H2'	51:3:2612:G:C8	2.42	0.55
51:3:2705:G:H2'	51:3:2706:U:C6	2.41	0.55
51:3:2881:A:H2'	51:3:2882:U:C6	2.41	0.55
52:4:105:A:H3'	52:4:106:A:H8	1.71	0.55
53:5:502:C:H1'	53:5:508:A:H2'	1.89	0.55
53:5:767:U:H2'	53:5:768:G:H8	1.71	0.55
53:5:904:C:H2'	53:5:905:U:C6	2.41	0.55
53:5:1102:A:H2'	53:5:1103:C:N1	2.20	0.55
53:5:1236:A:C2	53:5:1237:G:H1'	2.41	0.55
53:5:1289:U:O4	53:5:1293:A:N7	2.40	0.55
53:5:1389:U:O2	53:5:1461:G:C6	2.59	0.55
53:5:1483:C:H2'	53:5:1484:C:H6	1.71	0.55
2:1:21:ARG:HH12	2:1:23:HIS:CE1	2.24	0.55
4:9:25:LYS:O	4:9:29:THR:HG23	2.06	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:9:304:LYS:HD3	4:9:305:PHE:H	1.71	0.55
10:F:35:LYS:O	10:F:39:GLN:HG3	2.05	0.55
11:G:9:LYS:HG3	53:5:822:A:H4'	1.89	0.55
12:H:56:LEU:HD13	12:H:103:LYS:NZ	2.22	0.55
18:N:59:LYS:NZ	53:5:578:C:O3'	2.39	0.55
20:P:65:GLU:HA	20:P:75:PHE:HA	1.87	0.55
25:a:255:ARG:HD2	25:a:261:ARG:CZ	2.37	0.55
26:b:34:ASN:O	26:b:96:ILE:N	2.39	0.55
28:d:63:GLN:NE2	52:4:40:U:H1'	2.22	0.55
30:f:5:LEU:CG	30:f:34:LYS:CG	2.80	0.55
34:j:3:SER:HA	34:j:24:VAL:HG21	1.87	0.55
34:j:91:LYS:HZ2	34:j:110:GLY:HA3	1.70	0.55
40:p:60:TRP:CD1	40:p:96:GLU:HG3	2.41	0.55
42:r:4:PHE:HA	42:r:105:VAL:O	2.07	0.55
44:t:78:ASP:OD2	44:t:86:ILE:HA	2.05	0.55
45:u:26:ASN:ND2	51:3:2287:G:OP2	2.20	0.55
48:x:19:CYS:CB	48:x:42:CYS:HB2	2.36	0.55
51:3:734:A:H2'	51:3:735:G:O4'	2.06	0.55
51:3:850:G:C6	51:3:1224:G:C5	2.93	0.55
51:3:1057:G:N1	51:3:1175:C:H2'	2.20	0.55
51:3:1059:G:C6	51:3:1060:G:C6	2.95	0.55
51:3:1091:G:H4'	51:3:1121:A:C8	2.42	0.55
51:3:1160:G:H3'	51:3:1161:A:H8	1.69	0.55
51:3:1199:A:H3'	51:3:1200:U:C6	2.40	0.55
51:3:1828:A:H2'	51:3:1829:U:H6	1.70	0.55
51:3:2482:U:H3'	51:3:2483:C:C6	2.42	0.55
51:3:2557:G:H2'	51:3:2558:G:H8	1.70	0.55
51:3:2777:A:H2'	51:3:2778:U:H5'	1.87	0.55
52:4:56:A:H2'	52:4:57:G:H8	1.71	0.55
53:5:26:C:H4'	53:5:522:G:N3	2.21	0.55
53:5:115:A:H4'	53:5:116:A:H5''	1.88	0.55
53:5:213:U:O2'	53:5:466:U:N3	2.33	0.55
53:5:339:U:H2'	53:5:341:C:N3	2.21	0.55
53:5:508:A:O2'	53:5:540:U:O2	2.21	0.55
53:5:561:A:O2'	53:5:565:G:OP2	2.22	0.55
53:5:563:U:H2'	53:5:564:G:C8	2.42	0.55
53:5:970:A:H1'	53:5:1332:U:C4'	2.36	0.55
53:5:1125:C:H2'	53:5:1126:U:N1	2.21	0.55
53:5:1297:G:H2'	53:5:1298:U:O4'	2.07	0.55
5:A:71:TYR:O	5:A:75:VAL:HG13	2.07	0.55
10:F:2:ARG:NH2	53:5:926:C:O5'	2.39	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:F:30:MET:HE3	10:F:33:GLY:HA2	1.88	0.55
10:F:60:VAL:HA	10:F:63:ARG:HH11	1.71	0.55
12:H:10:GLY:HA3	12:H:83:LEU:HB3	1.89	0.55
12:H:56:LEU:HD13	12:H:103:LYS:HZ3	1.71	0.55
16:L:101:ARG:NH1	53:5:946:G:OP2	2.22	0.55
18:N:57:VAL:O	18:N:61:LYS:HG2	2.06	0.55
23:S:35:PHE:O	23:S:39:ILE:HG13	2.07	0.55
26:b:185:ASP:HB3	26:b:190:LEU:H	1.72	0.55
33:i:72:LYS:O	33:i:91:SER:OG	2.23	0.55
37:m:43:LYS:HG2	51:3:2843:G:H5'	1.86	0.55
38:n:77:ILE:HA	38:n:80:LYS:HD3	1.89	0.55
40:p:35:LYS:NZ	51:3:1282:G:O5'	2.40	0.55
45:u:28:ARG:NE	51:3:2287:G:N7	2.53	0.55
47:w:51:LEU:O	47:w:55:LEU:HG	2.06	0.55
47:w:91:LEU:HA	47:w:94:ASN:ND2	2.21	0.55
51:3:130:C:H2'	51:3:131:C:H6	1.70	0.55
51:3:379:A:H1'	51:3:381:A:N6	2.22	0.55
51:3:956:U:H2'	51:3:957:G:C8	2.41	0.55
51:3:2065:A:H2'	51:3:2066:A:H2	1.72	0.55
51:3:2207:A:C2	51:3:2233:A:H1'	2.42	0.55
51:3:2299:U:O5'	51:3:2388:C:O2'	2.22	0.55
51:3:2419:A:H2'	51:3:2420:A:C8	2.42	0.55
51:3:2662:A:H62	51:3:2674:C:H41	1.54	0.55
52:4:9:C:O2	52:4:99:A:N6	2.40	0.55
53:5:818:A:H2'	53:5:819:G:H8	1.71	0.55
53:5:1109:U:H2'	53:5:1110:C:C6	2.42	0.55
53:5:1489:C:H2'	53:5:1490:G:C8	2.42	0.55
54:6:8:G:O2'	54:6:50:G:O4'	2.24	0.55
54:6:16:G:H8	54:6:16:G:OP2	1.90	0.55
54:6:66:C:H2'	54:6:67:C:H6	1.68	0.55
4:9:289:ARG:HB2	54:6:2:G:H5'	1.89	0.55
4:9:302:HIS:N	4:9:367:ILE:O	2.39	0.55
6:B:64:THR:OG1	6:B:101:ASN:ND2	2.40	0.55
7:C:76:ARG:O	7:C:79:LEU:HB2	2.07	0.55
13:I:51:LYS:HB3	53:5:1228:C:H5''	1.87	0.55
20:P:61:VAL:HA	20:P:81:ILE:H	1.71	0.55
22:R:31:ILE:O	22:R:50:ALA:N	2.39	0.55
23:S:56:ARG:NH1	53:5:198:A:O5'	2.40	0.55
25:a:2:PRO:HG2	25:a:25:LEU:HD21	1.88	0.55
25:a:230:GLY:HA2	25:a:233:MET:HG3	1.87	0.55
25:a:246:ARG:O	51:3:1978:U:N3	2.38	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:a:248:PRO:HD3	51:3:1978:U:C4	2.42	0.55
26:b:7:PHE:CE1	26:b:206:LEU:HB2	2.42	0.55
28:d:39:GLY:HA3	51:3:2315:G:H22	1.71	0.55
29:e:159:PRO:O	29:e:174:ARG:NH2	2.38	0.55
30:f:2:LYS:HG2	30:f:39:LEU:HD21	1.89	0.55
33:i:15:ARG:HE	33:i:17:GLN:NE2	2.04	0.55
34:j:45:ASP:HA	34:j:54:LYS:HG3	1.89	0.55
34:j:114:ILE:O	34:j:118:ALA:N	2.39	0.55
35:k:24:HIS:NE2	51:3:846:U:OP1	2.37	0.55
36:l:1:MET:HG2	36:l:45:ARG:HG3	1.88	0.55
37:m:61:ARG:NH2	51:3:2713:A:N3	2.55	0.55
38:n:97:LYS:N	52:4:46:C:OP1	2.39	0.55
41:q:34:GLN:OE1	41:q:54:ARG:HB3	2.07	0.55
47:w:98:LEU:O	47:w:102:ARG:HG2	2.06	0.55
49:y:37:LYS:HZ3	49:y:41:ARG:H	1.53	0.55
51:3:119:A:N3	51:3:181:G:H1'	2.21	0.55
51:3:337:U:H2'	51:3:338:G:C8	2.41	0.55
51:3:381:A:C6	51:3:382:U:C4	2.95	0.55
51:3:880:C:N3	51:3:968:U:O2'	2.39	0.55
51:3:1167:U:H2'	51:3:1168:A:C8	2.41	0.55
51:3:1242:G:N1	51:3:1266:G:O2'	2.31	0.55
51:3:1311:G:N2	51:3:1313:G:H3'	2.22	0.55
51:3:1581:U:H2'	51:3:1582:G:C8	2.40	0.55
51:3:2149:U:H3	51:3:2156:G:H1	1.52	0.55
51:3:2418:G:H3'	51:3:2419:A:H8	1.72	0.55
51:3:2812:U:O2'	51:3:2894:G:N2	2.40	0.55
52:4:32:G:H2'	52:4:42:G:N7	2.21	0.55
53:5:63:U:O2	53:5:90:G:N2	2.36	0.55
53:5:307:C:H2'	53:5:308:C:C6	2.42	0.55
53:5:459:C:N3	53:5:468:G:N1	2.41	0.55
53:5:605:A:H2'	53:5:606:A:O4'	2.06	0.55
53:5:822:A:H5''	53:5:823:C:OP2	2.07	0.55
53:5:933:A:H2'	53:5:934:G:O4'	2.06	0.55
53:5:1000:A:HO2'	53:5:1029:C:HO2'	1.54	0.55
53:5:1167:C:H3'	53:5:1168:G:H8	1.72	0.55
1:0:9:LYS:H	51:3:1337:G:H5''	1.71	0.55
1:0:19:LEU:HD22	51:3:126:C:H5''	1.88	0.55
4:9:70:TYR:HE2	4:9:79:HIS:CD2	2.25	0.55
6:B:117:ARG:NH2	6:B:189:LEU:O	2.30	0.55
7:C:68:ASP:HB3	7:C:72:ARG:CZ	2.37	0.55
10:F:34:LYS:HD3	53:5:1346:G:H21	1.71	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:I:41:LYS:HB2	13:I:84:ASP:HB2	1.88	0.55
15:K:113:GLY:CA	15:K:119:GLY:H	2.19	0.55
24:T:37:ARG:NE	53:5:1501:G:N7	2.55	0.55
25:a:31:ASN:HB2	51:3:1601:A:H2	1.71	0.55
31:g:26:ILE:O	31:g:109:VAL:HB	2.06	0.55
38:n:31:MET:HA	38:n:92:ASP:HB3	1.88	0.55
38:n:55:SER:OG	38:n:77:ILE:HB	2.07	0.55
46:v:32:ASN:CG	51:3:2238:G:H1'	2.32	0.55
51:3:279:U:H3'	51:3:280:A:H8	1.72	0.55
51:3:358:A:H62	51:3:372:G:N2	2.05	0.55
51:3:496:A:H2'	51:3:497:C:O4'	2.06	0.55
51:3:548:A:H2'	51:3:549:A:H8	1.70	0.55
51:3:603:G:H2'	51:3:2037:A:N7	2.22	0.55
51:3:893:A:H2'	51:3:894:G:C8	2.42	0.55
51:3:915:A:H3'	51:3:916:U:H6	1.72	0.55
51:3:1026:A:H62	51:3:1217:G:H1'	1.72	0.55
51:3:1376:G:H3'	51:3:1377:A:C8	2.42	0.55
51:3:1640:G:H4'	51:3:1642:G:C2	2.42	0.55
51:3:1820:U:O2'	51:3:1821:G:OP1	2.22	0.55
51:3:2476:A:H1'	51:3:2490:A:N6	2.22	0.55
51:3:2505:A:H5'	51:3:2506:C:C5	2.42	0.55
51:3:2747:U:H2'	51:3:2748:A:H8	1.70	0.55
52:4:4:G:OP1	52:4:58:C:O2'	2.24	0.55
52:4:96:G:H2'	52:4:97:A:O4'	2.07	0.55
53:5:196:G:O2'	53:5:197:A:OP1	2.22	0.55
53:5:313:U:H2'	53:5:314:G:C8	2.41	0.55
53:5:369:A:H1'	53:5:478:G:N3	2.21	0.55
53:5:486:C:H2'	53:5:487:A:H8	1.72	0.55
53:5:500:G:C6	53:5:542:G:C6	2.95	0.55
53:5:874:C:H2'	53:5:875:G:H8	1.70	0.55
53:5:1118:A:H1'	53:5:1255:A:C6	2.41	0.55
53:5:1294:U:H3'	53:5:1295:U:H6	1.71	0.55
4:9:29:THR:HG22	4:9:79:HIS:CE1	2.42	0.55
6:B:18:TRP:HE1	17:M:56:VAL:HB	1.72	0.55
8:D:110:GLU:HB2	8:D:113:ASN:ND2	2.22	0.55
9:E:86:LEU:HD11	53:5:733:A:H4'	1.89	0.55
11:G:38:SER:H	11:G:42:ILE:HD11	1.71	0.55
11:G:113:ILE:O	11:G:140:TYR:HA	2.07	0.55
13:I:46:LEU:HD12	13:I:79:LEU:HD23	1.88	0.55
14:J:87:ASP:OD2	24:T:19:LYS:NZ	2.31	0.55
18:N:76:ARG:HH12	18:N:79:VAL:HG11	1.72	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:a:78:ASN:N	25:a:123:ALA:O	2.39	0.55
25:a:192:PHE:CE2	25:a:196:CYS:HB2	2.42	0.55
26:b:190:LEU:HD23	26:b:191:VAL:N	2.22	0.55
27:c:52:ILE:HD13	27:c:93:PRO:HD2	1.87	0.55
29:e:159:PRO:HA	29:e:174:ARG:HH22	1.72	0.55
34:j:71:ARG:HH22	39:o:77:LYS:HZ3	1.54	0.55
35:k:134:GLN:NE2	51:3:673:A:OP1	2.40	0.55
42:r:11:ARG:NH1	51:3:1349:C:O2'	2.37	0.55
42:r:11:ARG:NH2	51:3:1349:C:O3'	2.40	0.55
42:r:128:ARG:NH1	51:3:1262:G:H1'	2.20	0.55
51:3:95:G:O2'	51:3:96:A:O4'	2.10	0.55
51:3:193:G:H2'	51:3:209:G:N2	2.22	0.55
51:3:412:A:C2	51:3:413:G:H1'	2.42	0.55
51:3:421:A:N6	51:3:424:G:OP2	2.40	0.55
51:3:517:G:C6	51:3:542:A:H1'	2.42	0.55
51:3:756:A:H2'	51:3:757:A:C8	2.41	0.55
51:3:1116:U:H2'	51:3:1117:U:H6	1.72	0.55
51:3:1235:U:H3'	51:3:1236:G:H5''	1.89	0.55
51:3:1357:U:O2'	51:3:1358:C:H5'	2.07	0.55
51:3:1390:C:H2'	51:3:1391:U:C6	2.42	0.55
51:3:1401:A:C8	51:3:1402:G:C8	2.95	0.55
51:3:1413:A:N1	51:3:1430:U:N3	2.55	0.55
51:3:1555:G:H8	51:3:1555:G:OP2	1.90	0.55
51:3:1860:A:N1	51:3:2094:A:H1'	2.21	0.55
51:3:2588:U:O2'	51:3:2589:G:O4'	2.15	0.55
51:3:2718:C:H2'	51:3:2719:A:C8	2.41	0.55
51:3:2814:A:H62	51:3:2894:G:H21	1.54	0.55
51:3:2849:G:H2'	51:3:2850:G:C8	2.42	0.55
53:5:205:U:H2'	53:5:206:G:C8	2.42	0.55
53:5:229:G:H2'	53:5:230:G:H8	1.72	0.55
53:5:406:G:H2'	53:5:429:A:H61	1.71	0.55
53:5:1290:G:N2	53:5:1292:A:H3'	2.22	0.55
53:5:1410:A:H2'	53:5:1411:A:C8	2.42	0.55
54:6:16:G:N2	54:6:49:C:O2	2.39	0.55
54:7:27:A:N3	54:7:27:A:H2'	2.20	0.55
2:1:4:LYS:HD2	2:1:58:LEU:HD22	1.89	0.55
4:9:139:ASP:HB3	4:9:176:LEU:HB3	1.89	0.55
4:9:327:TYR:CE2	4:9:329:PRO:HB3	2.42	0.55
13:I:19:TYR:CZ	17:M:54:PRO:HB2	2.42	0.55
22:R:10:PHE:HB3	22:R:37:ARG:HE	1.71	0.55
23:S:56:ARG:CZ	53:5:197:A:H4'	2.37	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:b:9:VAL:HG12	26:b:204:VAL:HG22	1.88	0.55
26:b:36:VAL:CG2	26:b:94:GLN:H	2.19	0.55
27:c:185:LYS:NZ	51:3:650:G:O6	2.38	0.55
33:i:93:ARG:HA	33:i:96:LEU:HB2	1.88	0.55
36:l:66:ILE:HG12	36:l:68:ILE:H	1.71	0.55
38:n:99:HIS:HB3	52:4:46:C:H4'	1.88	0.55
38:n:101:ARG:CZ	52:4:47:C:H5''	2.37	0.55
39:o:99:ALA:HB2	51:3:2852:G:C8	2.42	0.55
42:r:47:ILE:O	42:r:51:LEU:HG	2.06	0.55
46:v:30:ASN:HD22	51:3:2238:G:H5''	1.72	0.55
51:3:252:G:C8	51:3:254:G:C2	2.94	0.55
51:3:377:U:H2'	51:3:378:G:H8	1.72	0.55
51:3:625:G:C6	51:3:701:A:C6	2.95	0.55
51:3:684:A:H2'	51:3:685:G:C8	2.41	0.55
51:3:1336:A:N6	51:3:1640:G:H2'	2.19	0.55
51:3:1406:A:O2'	51:3:1408:G:OP2	2.25	0.55
51:3:1419:U:H2'	51:3:1421:A:OP2	2.07	0.55
51:3:1942:G:H22	51:3:1971:G:P	2.29	0.55
51:3:2320:U:H2'	51:3:2321:C:C6	2.41	0.55
51:3:2418:G:H3'	51:3:2419:A:C8	2.42	0.55
51:3:2653:G:H2'	51:3:2653:G:N3	2.21	0.55
51:3:2870:U:O2	51:3:2872:A:H1'	2.06	0.55
51:3:2874:C:H2'	51:3:2875:U:C6	2.42	0.55
53:5:145:G:N1	53:5:149:G:O6	2.40	0.55
53:5:761:U:H3'	53:5:762:G:C8	2.39	0.55
53:5:972:A:O2'	53:5:974:C:OP2	2.16	0.55
53:5:1317:A:H2'	53:5:1318:C:C6	2.42	0.55
53:5:1358:U:H2'	53:5:1359:C:C6	2.42	0.55
4:9:100:ASP:OD1	4:9:205:ARG:NH2	2.40	0.55
4:9:324:LEU:N	54:6:53:A:OP1	2.39	0.55
6:B:152:ILE:HA	6:B:204:TRP:O	2.07	0.55
10:F:137:LYS:O	10:F:140:THR:OG1	2.24	0.55
14:J:21:ASN:O	14:J:50:LYS:HE3	2.07	0.55
15:K:60:SER:N	53:5:527:G:O6	2.40	0.55
19:O:71:GLY:O	19:O:74:LYS:N	2.40	0.55
21:Q:101:PHE:CE2	53:5:671:G:H4'	2.42	0.55
25:a:256:THR:OG1	25:a:260:LYS:HG2	2.06	0.55
28:d:133:LYS:HA	28:d:151:GLY:H	1.71	0.55
30:f:4:ILE:CD1	30:f:42:LYS:HE2	2.36	0.55
35:k:24:HIS:CE1	51:3:846:U:H5''	2.42	0.55
36:l:3:GLN:HG3	36:l:93:TRP:CZ2	2.42	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:p:46:TYR:HA	40:p:49:ARG:HH12	1.72	0.55
40:p:68:LEU:HD13	40:p:75:TYR:HA	1.88	0.55
42:r:46:LEU:O	42:r:49:LYS:HB3	2.07	0.55
51:3:53:G:C2	51:3:119:A:N7	2.75	0.55
51:3:589:A:H3'	51:3:590:U:C6	2.42	0.55
51:3:817:A:H5''	51:3:1792:A:H61	1.71	0.55
51:3:854:A:H2'	51:3:855:A:H8	1.73	0.55
51:3:934:C:H2'	51:3:935:U:O4'	2.07	0.55
51:3:1379:C:N3	51:3:1409:G:C6	2.75	0.55
51:3:1380:U:C2	51:3:1406:A:N6	2.75	0.55
51:3:1523:C:H2'	51:3:1524:C:C6	2.41	0.55
51:3:1779:G:N2	51:3:1781:C:OP1	2.40	0.55
51:3:2494:C:H2'	51:3:2495:A:C8	2.42	0.55
51:3:2759:G:O5'	51:3:2760:C:N4	2.40	0.55
51:3:2823:A:O2'	51:3:2825:A:N7	2.36	0.55
53:5:136:U:H2'	53:5:137:A:C8	2.40	0.55
53:5:916:U:H2'	53:5:917:G:O4'	2.06	0.55
53:5:935:U:H2'	53:5:936:G:C8	2.42	0.55
53:5:1407:A:O2'	53:5:1442:A:N1	2.38	0.55
54:6:27:A:H2'	54:6:27:A:N3	2.22	0.55
54:7:59:A:O2'	54:7:61:U:OP1	2.24	0.55
4:9:46:ARG:NH1	4:9:68:VAL:HG11	2.22	0.54
6:B:152:ILE:HG23	6:B:173:GLU:OE1	2.07	0.54
8:D:154:ALA:HB3	8:D:177:ASP:HB2	1.88	0.54
10:F:116:LEU:O	10:F:119:ILE:HG22	2.07	0.54
11:G:33:VAL:HB	11:G:72:PHE:CZ	2.42	0.54
11:G:114:ALA:HA	11:G:139:ALA:O	2.07	0.54
12:H:37:PRO:HA	12:H:40:TYR:HB3	1.89	0.54
15:K:56:LYS:HG3	15:K:58:PRO:HD2	1.88	0.54
23:S:49:SER:O	23:S:52:ASP:HB2	2.07	0.54
25:a:61:ARG:NH1	25:a:64:ARG:HG2	2.21	0.54
25:a:61:ARG:HH12	25:a:63:LYS:HA	1.72	0.54
36:l:28:ALA:O	36:l:134:ARG:NH2	2.40	0.54
37:m:109:ASP:OD2	51:3:1683:G:O2'	2.19	0.54
50:z:5:ARG:NH2	50:z:25:VAL:H	2.05	0.54
50:z:5:ARG:CZ	50:z:24:ASN:HA	2.37	0.54
51:3:1354:U:H2'	51:3:1355:C:O4'	2.07	0.54
51:3:1442:G:H2'	51:3:1443:A:H8	1.72	0.54
51:3:1976:A:H2'	51:3:1979:G:H21	1.72	0.54
51:3:2122:G:O2'	51:3:2175:U:H1'	2.08	0.54
51:3:2124:A:N6	51:3:2174:G:H22	2.05	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:3:2382:A:H2'	51:3:2383:G:O4'	2.08	0.54
51:3:2466:G:O2'	51:3:2468:U:O4	2.15	0.54
51:3:2499:U:P	51:3:2578:A:H5''	2.47	0.54
51:3:2668:A:O2'	51:3:2669:G:C8	2.60	0.54
53:5:62:G:H2'	53:5:63:U:C6	2.42	0.54
53:5:372:G:O2'	53:5:373:A:H5'	2.06	0.54
53:5:402:G:C2	53:5:403:A:N7	2.75	0.54
53:5:430:G:H2'	53:5:431:U:H6	1.72	0.54
53:5:1248:U:H3'	53:5:1249:G:C8	2.42	0.54
53:5:1374:C:O2'	53:5:1477:A:N6	2.33	0.54
53:5:1383:A:C6	53:5:1384:A:N7	2.75	0.54
12:H:35:ARG:NH2	12:H:40:TYR:HA	2.23	0.54
14:J:28:SER:HB2	14:J:34:VAL:HG12	1.90	0.54
15:K:12:ARG:HH11	53:5:561:A:H3'	1.72	0.54
19:O:59:PRO:HG3	19:O:67:PHE:HE2	1.71	0.54
20:P:20:LYS:HG2	53:5:251:G:H5''	1.90	0.54
21:Q:78:ASN:O	21:Q:79:CYS:C	2.49	0.54
23:S:9:LYS:HA	23:S:12:ARG:HE	1.71	0.54
24:T:37:ARG:O	24:T:41:ARG:HG3	2.07	0.54
26:b:69:PHE:CD1	51:3:2794:U:H4'	2.42	0.54
26:b:185:ASP:O	26:b:189:MET:CA	2.55	0.54
29:e:140:SER:O	29:e:144:VAL:HG12	2.06	0.54
30:f:92:ILE:HG23	30:f:96:GLN:HE21	1.73	0.54
37:m:102:LYS:HD2	49:y:40:HIS:O	2.07	0.54
39:o:26:SER:H	39:o:93:ARG:NH1	2.04	0.54
51:3:72:G:H21	51:3:73:A:H61	1.55	0.54
51:3:200:A:N7	51:3:840:G:C4	2.75	0.54
51:3:299:A:H2'	51:3:300:G:H8	1.70	0.54
51:3:511:U:H1'	51:3:515:A:N6	2.22	0.54
51:3:556:U:H2'	51:3:557:G:C8	2.42	0.54
51:3:754:U:H2'	51:3:755:C:C6	2.41	0.54
51:3:856:A:O2'	51:3:980:C:H4'	2.07	0.54
51:3:1325:C:H2'	51:3:1326:C:C2	2.43	0.54
51:3:1336:A:H3'	51:3:1337:G:C8	2.42	0.54
51:3:1345:G:H3'	51:3:1346:G:H8	1.71	0.54
51:3:1884:A:H2'	51:3:1885:G:O4'	2.06	0.54
51:3:2096:U:H2'	51:3:2238:G:H1	1.71	0.54
51:3:2831:U:H2'	51:3:2832:G:C8	2.43	0.54
51:3:2860:A:H2'	51:3:2861:G:C8	2.42	0.54
51:3:2861:G:O2'	51:3:2863:G:N7	2.40	0.54
52:4:11:A:N6	52:4:67:G:O2'	2.40	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:4:67:G:H3'	52:4:68:C:H6	1.73	0.54
53:5:104:A:H5'	53:5:105:A:C2	2.42	0.54
53:5:167:A:H3'	53:5:196:G:H1	1.72	0.54
53:5:358:G:O3'	53:5:359:A:H8	1.90	0.54
53:5:459:C:H2'	53:5:460:A:C8	2.42	0.54
53:5:880:G:O6	53:5:905:U:O4	2.25	0.54
53:5:958:G:H2'	53:5:959:A:H8	1.73	0.54
53:5:974:C:H41	53:5:1334:A:N6	2.05	0.54
54:7:29:C:O2	54:7:44:U:N3	2.40	0.54
54:7:55:U:H3'	54:7:56:U:O2	2.08	0.54
7:C:70:GLN:HG3	7:C:73:ARG:HH21	1.73	0.54
8:D:69:ARG:NH2	8:D:171:GLU:OE1	2.38	0.54
8:D:212:ARG:HH21	11:G:51:GLU:HA	1.73	0.54
10:F:5:ARG:NH2	53:5:1354:G:OP2	2.41	0.54
10:F:30:MET:HG3	10:F:34:LYS:C	2.32	0.54
21:Q:50:ARG:NH1	21:Q:51:ILE:O	2.40	0.54
34:j:89:GLU:CD	34:j:89:GLU:N	2.66	0.54
35:k:34:ARG:NH2	51:3:620:G:H1	2.05	0.54
41:q:96:ARG:HH22	41:q:98:VAL:HG12	1.72	0.54
45:u:64:ASN:O	45:u:76:LEU:N	2.36	0.54
45:u:86:PHE:CZ	45:u:94:ARG:HB2	2.41	0.54
51:3:60:G:C2	51:3:72:G:C2	2.95	0.54
51:3:118:G:H3'	51:3:120:A:C8	2.42	0.54
51:3:227:A:O2'	51:3:456:G:N3	2.40	0.54
51:3:379:A:O2'	51:3:381:A:N6	2.39	0.54
51:3:380:A:H3'	51:3:381:A:H8	1.70	0.54
51:3:485:A:H2'	51:3:486:G:O4'	2.07	0.54
51:3:573:A:OP2	51:3:588:G:N2	2.37	0.54
51:3:722:C:O2'	51:3:1787:A:N1	2.23	0.54
51:3:1380:U:H2'	51:3:1381:A:H5'	1.89	0.54
51:3:1488:U:H2'	51:3:1489:G:O4'	2.07	0.54
51:3:1507:G:H1'	51:3:1508:G:OP2	2.08	0.54
51:3:1511:C:H2'	51:3:1512:A:C8	2.41	0.54
51:3:1542:G:H2'	51:3:1543:U:C6	2.42	0.54
51:3:1606:A:H2'	51:3:1607:G:H8	1.71	0.54
51:3:2297:G:H2'	51:3:2298:G:H8	1.73	0.54
51:3:2306:A:N6	51:3:2326:G:O2'	2.40	0.54
51:3:2747:U:O2	51:3:2772:A:C6	2.60	0.54
52:4:68:C:H2'	52:4:69:C:H6	1.70	0.54
53:5:159:U:O4	53:5:200:G:N2	2.35	0.54
53:5:407:A:N6	53:5:427:A:H62	2.04	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:5:580:C:N3	53:5:756:A:N7	2.56	0.54
8:D:112:PRO:HA	8:D:115:ILE:HB	1.89	0.54
8:D:148:ARG:HB2	8:D:183:LEU:HB2	1.88	0.54
11:G:84:ILE:HG22	11:G:86:GLY:H	1.73	0.54
13:I:43:LYS:HD2	13:I:46:LEU:HD11	1.90	0.54
14:J:104:ASN:ND2	24:T:5:GLU:O	2.41	0.54
16:L:53:PHE:HA	16:L:56:ILE:HD12	1.89	0.54
19:O:55:LYS:HA	53:5:123:U:O2'	2.07	0.54
27:c:81:ASN:HB2	27:c:84:PHE:CD2	2.42	0.54
28:d:5:LYS:HB2	28:d:97:TRP:CD1	2.42	0.54
28:d:26:MET:SD	28:d:26:MET:N	2.81	0.54
28:d:64:LYS:HD2	28:d:65:PRO:HD2	1.89	0.54
30:f:114:LYS:HD2	30:f:129:HIS:HB2	1.89	0.54
34:j:6:THR:HG23	51:3:1700:G:O3'	2.08	0.54
35:k:64:LYS:HD2	51:3:2403:C:OP1	2.08	0.54
44:t:75:ALA:HB1	44:t:86:ILE:HG21	1.89	0.54
45:u:46:ARG:HD2	51:3:2361:G:H4'	1.89	0.54
50:z:38:CYS:O	50:z:42:ARG:N	2.40	0.54
51:3:28:G:H3'	51:3:29:G:C8	2.42	0.54
51:3:127:A:H2'	51:3:128:A:C8	2.43	0.54
51:3:153:U:H2'	51:3:154:U:H6	1.72	0.54
51:3:190:G:H2'	51:3:191:G:C8	2.41	0.54
51:3:260:A:H2'	51:3:261:A:H8	1.73	0.54
51:3:360:G:C2	51:3:371:C:C2	2.96	0.54
51:3:469:C:H2'	51:3:470:U:C6	2.43	0.54
51:3:704:G:N2	51:3:705:A:O4'	2.41	0.54
51:3:741:A:H3'	51:3:742:G:H8	1.72	0.54
51:3:770:A:H1'	51:3:1668:G:N2	2.19	0.54
51:3:1323:A:H2'	51:3:1324:A:C8	2.43	0.54
51:3:1327:G:N2	51:3:1676:G:O6	2.41	0.54
51:3:1798:A:H2	51:3:1836:A:H4'	1.72	0.54
51:3:1870:G:H2'	51:3:1871:U:C6	2.42	0.54
51:3:2070:C:H42	51:3:2458:A:H61	1.54	0.54
51:3:2153:U:H4'	51:3:2154:A:C8	2.42	0.54
51:3:2851:U:N3	51:3:2873:G:N1	2.26	0.54
53:5:108:C:H5''	53:5:285:G:N2	2.23	0.54
53:5:402:G:N7	53:5:493:A:O2'	2.23	0.54
53:5:753:C:H2'	53:5:754:U:H6	1.72	0.54
53:5:821:U:H2'	53:5:822:A:C8	2.43	0.54
53:5:972:A:C4	53:5:1198:C:H2'	2.42	0.54
53:5:1051:U:H2'	53:5:1052:G:C8	2.43	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:5:1120:A:H1'	53:5:1122:U:O2	2.08	0.54
53:5:1301:U:H2'	53:5:1302:C:C6	2.41	0.54
54:7:9:U:H3	54:7:15:A:H8	1.46	0.54
1:0:8:SER:H	51:3:721:G:N2	2.04	0.54
3:2:2:LYS:HB2	3:2:34:GLN:HA	1.89	0.54
4:9:344:LEU:HB3	4:9:345:PRO:HD2	1.88	0.54
4:9:371:LYS:HA	4:9:389:VAL:HB	1.89	0.54
9:E:88:ILE:H	9:E:88:ILE:HD12	1.71	0.54
12:H:15:SER:OG	12:H:72:GLY:HA3	2.06	0.54
15:K:46:VAL:HA	15:K:92:VAL:HA	1.88	0.54
17:M:45:ARG:HH12	53:5:1051:U:P	2.30	0.54
20:P:18:ASN:HB2	20:P:21:THR:HB	1.88	0.54
25:a:225:ARG:NH1	51:3:726:U:OP1	2.40	0.54
25:a:251:ARG:NH2	25:a:261:ARG:HH22	2.02	0.54
26:b:159:VAL:HG23	51:3:2059:G:C4	2.43	0.54
29:e:86:PHE:HE2	29:e:141:LYS:HG2	1.72	0.54
29:e:94:GLY:HA2	29:e:163:LYS:HE2	1.88	0.54
30:f:9:VAL:HG13	30:f:14:LYS:HG2	1.89	0.54
35:k:91:ASP:HA	35:k:124:LEU:HD22	1.89	0.54
37:m:53:LYS:HD2	37:m:91:GLU:HA	1.89	0.54
38:n:8:ARG:HH12	38:n:12:HIS:HD2	1.52	0.54
38:n:11:ARG:O	38:n:15:ILE:HG12	2.08	0.54
39:o:33:VAL:O	39:o:48:PHE:N	2.40	0.54
42:r:7:GLN:HE22	51:3:528:U:H4'	1.72	0.54
51:3:144:C:H2'	51:3:145:A:C8	2.43	0.54
51:3:278:U:H2'	51:3:279:U:C6	2.42	0.54
51:3:280:A:H2'	51:3:281:U:C6	2.42	0.54
51:3:282:C:N4	51:3:286:A:O2'	2.26	0.54
51:3:674:G:C6	51:3:687:G:C6	2.96	0.54
51:3:773:G:H2'	51:3:774:A:C8	2.42	0.54
51:3:776:U:H2'	51:3:777:C:C6	2.42	0.54
51:3:1126:G:H2'	51:3:1127:C:C6	2.43	0.54
51:3:1152:U:H2'	51:3:1153:U:H6	1.72	0.54
51:3:1296:G:H1'	51:3:1297:U:H5	1.72	0.54
51:3:1464:G:N2	51:3:1591:C:C2	2.75	0.54
51:3:1500:A:H2'	51:3:1501:U:O4'	2.07	0.54
51:3:1550:G:H2'	51:3:1551:U:H6	1.69	0.54
51:3:1848:U:C2	51:3:1849:G:C8	2.96	0.54
51:3:2299:U:H2'	51:3:2300:A:C8	2.42	0.54
51:3:2664:U:C2	51:3:2665:A:C8	2.96	0.54
51:3:2703:U:O2	51:3:2722:G:O6	2.25	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:3:2747:U:C2	51:3:2748:A:C8	2.96	0.54
51:3:2754:U:H3'	51:3:2755:G:H8	1.72	0.54
51:3:2764:U:H4'	51:3:2765:A:OP1	2.08	0.54
51:3:2770:U:H3'	51:3:2771:G:C8	2.42	0.54
51:3:2837:U:O2'	51:3:2838:G:O5'	2.23	0.54
53:5:205:U:H1'	53:5:211:G:N2	2.22	0.54
53:5:400:G:O2'	53:5:496:A:N1	2.35	0.54
53:5:577:G:H2'	53:5:578:C:H6	1.73	0.54
53:5:680:G:C6	53:5:705:A:N1	2.75	0.54
53:5:708:A:H2'	53:5:709:A:C8	2.42	0.54
53:5:791:A:O5'	53:5:1496:G:O2'	2.25	0.54
53:5:1118:A:H2'	53:5:1119:C:H5'	1.89	0.54
53:5:1370:C:H2'	53:5:1371:A:C8	2.42	0.54
53:5:1394:G:O6	53:5:1456:U:O4	2.25	0.54
4:9:148:GLU:OE2	4:9:148:GLU:N	2.40	0.54
7:C:147:LYS:HE2	53:5:435:U:H5''	1.89	0.54
10:F:35:LYS:NZ	53:5:1349:A:OP1	2.25	0.54
13:I:63:VAL:HG11	53:5:958:G:N2	2.23	0.54
15:K:81:PRO:HG2	15:K:112:ARG:HB2	1.89	0.54
18:N:60:ARG:HH21	18:N:64:LEU:HD11	1.73	0.54
32:h:89:ALA:H	51:3:1112:A:H4'	1.72	0.54
34:j:77:LEU:HD13	39:o:77:LYS:HB2	1.90	0.54
42:r:84:ARG:HD2	42:r:98:LYS:HZ2	1.72	0.54
45:u:56:GLY:HA2	51:3:2338:G:H21	1.72	0.54
51:3:170:A:H2	51:3:2217:G:H4'	1.72	0.54
51:3:249:G:N2	51:3:258:G:H1'	2.22	0.54
51:3:501:G:H2'	51:3:502:A:C8	2.43	0.54
51:3:519:A:N7	51:3:532:A:H2	2.06	0.54
51:3:559:C:H2'	51:3:560:U:C6	2.43	0.54
51:3:988:G:C6	51:3:1002:A:N6	2.76	0.54
51:3:1005:G:H21	51:3:1021:C:P	2.29	0.54
51:3:1010:G:H4'	51:3:1011:A:H5'	1.88	0.54
51:3:1010:G:H1	51:3:1025:G:H1'	1.71	0.54
51:3:1467:U:C2	51:3:1588:A:N1	2.76	0.54
51:3:1488:U:H5'	51:3:2710:G:H21	1.73	0.54
51:3:1493:A:N7	51:3:1579:G:H2'	2.22	0.54
51:3:1766:A:N1	51:3:2705:G:H1'	2.22	0.54
51:3:2053:G:H2'	51:3:2054:C:C6	2.42	0.54
51:3:2260:G:C5	51:3:2261:G:C8	2.95	0.54
51:3:2472:G:H2'	51:3:2473:C:H6	1.73	0.54
51:3:2490:A:H2'	51:3:2491:C:O4'	2.07	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:5:39:G:N2	53:5:393:A:O5'	2.18	0.54
53:5:249:U:N3	53:5:250:G:N7	2.54	0.54
53:5:549:U:H2'	53:5:550:U:C6	2.42	0.54
53:5:592:A:H3'	53:5:593:A:C8	2.42	0.54
53:5:680:G:H1	53:5:704:U:H3	1.54	0.54
53:5:831:C:N3	53:5:847:G:N1	2.56	0.54
53:5:927:C:N3	53:5:1360:G:N1	2.38	0.54
53:5:931:C:H2'	53:5:932:A:O4'	2.07	0.54
53:5:1199:U:H1'	53:5:1200:G:OP1	2.08	0.54
53:5:1233:G:H2'	53:5:1234:C:H6	1.73	0.54
4:9:10:LYS:HD2	4:9:75:ARG:HA	1.89	0.54
5:A:107:PHE:C	5:A:166:VAL:HG13	2.32	0.54
7:C:96:ARG:HB2	7:C:99:ASN:ND2	2.23	0.54
12:H:53:PRO:HG3	12:H:82:ARG:HG3	1.90	0.54
13:I:28:THR:HA	13:I:31:ILE:HD12	1.90	0.54
17:M:8:VAL:O	17:M:12:ARG:HG3	2.08	0.54
18:N:25:GLN:HA	18:N:28:LEU:HD12	1.89	0.54
23:S:67:ARG:NE	53:5:257:U:H5	2.05	0.54
26:b:212:LYS:HD2	51:3:2741:A:N6	2.23	0.54
30:f:45:GLN:HG2	30:f:46:ASP:H	1.73	0.54
35:k:23:GLY:H	51:3:846:U:H3'	1.73	0.54
37:m:35:LEU:HD13	37:m:100:VAL:HG11	1.89	0.54
41:q:23:GLU:OE2	51:3:1197:G:O2'	2.18	0.54
44:t:10:VAL:HG22	44:t:76:LEU:HD23	1.90	0.54
51:3:46:A:H2'	51:3:47:G:C8	2.43	0.54
51:3:446:A:H2'	51:3:2415:A:C8	2.43	0.54
51:3:666:G:H2'	51:3:668:A:N7	2.22	0.54
51:3:880:C:H4'	51:3:881:A:O4'	2.07	0.54
51:3:1258:C:H2'	51:3:1259:A:O4'	2.07	0.54
51:3:1384:C:H2'	51:3:1385:U:H6	1.73	0.54
51:3:1465:U:O2'	51:3:1466:U:O4'	2.21	0.54
51:3:1492:G:H5'	51:3:1578:A:C2	2.43	0.54
51:3:1585:A:C6	51:3:1749:A:H1'	2.43	0.54
51:3:1764:U:C2	51:3:1769:A:N6	2.76	0.54
51:3:1869:G:N2	51:3:1887:U:O2	2.41	0.54
51:3:2291:U:C2	51:3:2333:G:O6	2.60	0.54
51:3:2317:A:H3'	51:3:2318:A:C8	2.43	0.54
51:3:2321:C:O2'	51:3:2322:G:H5'	2.07	0.54
51:3:2712:C:H2'	51:3:2713:A:H8	1.72	0.54
53:5:454:U:H2'	53:5:455:U:O4'	2.08	0.54
53:5:636:G:H3'	53:5:637:A:H8	1.73	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:5:779:A:P	53:5:1497:U:H1'	2.48	0.54
53:5:962:G:H3'	53:5:963:U:H2'	1.89	0.54
5:A:153:SER:O	5:A:157:GLU:HG2	2.08	0.54
7:C:85:LEU:HA	7:C:88:ASN:ND2	2.23	0.54
14:J:58:ILE:HA	14:J:61:ASP:OD2	2.08	0.54
26:b:48:SER:OG	26:b:86:ASN:OD1	2.17	0.54
29:e:118:GLU:OE2	29:e:153:LYS:NZ	2.41	0.54
30:f:4:ILE:CD1	30:f:42:LYS:HG3	2.38	0.54
30:f:27:ILE:H	30:f:28:HIS:CD2	2.26	0.54
32:h:119:ALA:HB1	51:3:1116:U:H4'	1.89	0.54
36:l:20:LYS:HG3	36:l:21:ALA:N	2.21	0.54
40:p:32:LYS:HE3	51:3:1282:G:N3	2.23	0.54
43:s:62:PRO:HG3	43:s:77:LEU:HB2	1.88	0.54
47:w:105:ARG:NH2	51:3:1498:U:O2'	2.40	0.54
48:x:11:SER:HA	48:x:26:GLU:HA	1.90	0.54
51:3:191:G:H2'	51:3:192:U:C6	2.42	0.54
51:3:273:C:C4	51:3:295:U:C2	2.95	0.54
51:3:275:A:H61	51:3:294:G:H2'	1.72	0.54
51:3:411:U:C4	51:3:437:A:H8	2.26	0.54
51:3:602:U:H5'	51:3:856:A:H2	1.73	0.54
51:3:869:U:H2'	51:3:870:A:O4'	2.07	0.54
51:3:1441:A:H2'	51:3:1442:G:C8	2.43	0.54
51:3:1691:U:H2'	51:3:1692:A:C8	2.43	0.54
51:3:1720:C:C4	51:3:1737:G:C6	2.96	0.54
51:3:2716:U:H2'	51:3:2717:G:C8	2.38	0.54
53:5:26:C:H5''	53:5:522:G:H1'	1.89	0.54
53:5:352:A:H2'	53:5:364:U:O2'	2.08	0.54
53:5:1035:A:N1	53:5:1036:C:O2'	2.40	0.54
53:5:1413:G:C5	53:5:1414:U:C4	2.96	0.54
53:5:1436:C:H2'	53:5:1437:A:C8	2.43	0.54
54:7:13:U:H2'	54:7:14:C:C6	2.43	0.54
54:7:40:A:H2'	54:7:41:C:C6	2.43	0.54
4:9:82:CYS:HB3	4:9:92:MET:HA	1.89	0.54
4:9:106:VAL:O	4:9:136:ASN:N	2.25	0.54
5:A:19:SER:OG	5:A:20:LEU:N	2.40	0.54
5:A:120:PHE:HA	5:A:123:LEU:HD12	1.90	0.54
7:C:13:ARG:HH22	53:5:541:C:H5'	1.71	0.54
8:D:144:SER:OG	8:D:194:ALA:HB2	2.08	0.54
9:E:42:LEU:HB2	9:E:56:HIS:CE1	2.43	0.54
9:E:125:PRO:C	53:5:839:U:H3	2.14	0.54
10:F:113:LYS:HD3	53:5:1272:C:O2	2.08	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:G:18:LEU:HD22	11:G:41:LYS:HB3	1.89	0.54
12:H:49:ASP:OD1	12:H:82:ARG:NH2	2.40	0.54
15:K:49:ARG:HH12	15:K:77:LEU:HD11	1.72	0.54
17:M:7:LYS:O	17:M:11:THR:N	2.37	0.54
22:R:48:THR:HA	22:R:60:VAL:O	2.08	0.54
25:a:88:TYR:OH	51:3:1601:A:O2'	2.09	0.54
25:a:144:GLY:H	25:a:170:ILE:HB	1.72	0.54
27:c:46:ARG:NH1	51:3:479:A:H3'	2.23	0.54
27:c:130:GLN:O	27:c:130:GLN:NE2	2.40	0.54
28:d:33:LYS:HB3	28:d:92:ARG:NH2	2.23	0.54
28:d:131:GLY:HA3	51:3:2312:G:O3'	2.08	0.54
29:e:54:GLN:NE2	29:e:55:ILE:O	2.38	0.54
30:f:6:LYS:HA	30:f:54:GLN:NE2	2.23	0.54
33:i:28:LEU:HD23	51:3:1174:G:H5'	1.88	0.54
34:j:25:LEU:O	34:j:30:LYS:NZ	2.38	0.54
35:k:112:ILE:H	35:k:129:HIS:CD2	2.26	0.54
36:l:39:GLY:CA	36:l:97:VAL:O	2.56	0.54
38:n:7:GLN:O	38:n:11:ARG:HG3	2.08	0.54
45:u:36:GLY:N	45:u:53:ARG:O	2.41	0.54
45:u:55:ARG:NH1	45:u:71:ASP:HB2	2.23	0.54
51:3:608:A:H2'	51:3:609:U:C6	2.43	0.54
51:3:732:G:H2'	51:3:733:C:C6	2.42	0.54
51:3:771:C:H2'	51:3:772:C:H6	1.71	0.54
51:3:831:U:H2'	51:3:832:C:C6	2.43	0.54
51:3:1086:G:O6	51:3:1143:U:O4	2.25	0.54
51:3:1691:U:H2'	51:3:1692:A:H8	1.71	0.54
51:3:1961:A:O2'	51:3:1962:U:OP2	2.25	0.54
52:4:56:A:H2'	52:4:57:G:C8	2.42	0.54
52:4:90:G:H2'	52:4:91:A:H8	1.72	0.54
53:5:5:U:H2'	53:5:6:C:C6	2.43	0.54
53:5:108:C:OP1	53:5:307:C:O2'	2.24	0.54
53:5:123:U:H2'	53:5:124:U:H6	1.73	0.54
53:5:128:A:H2'	53:5:129:U:O4'	2.08	0.54
53:5:201:G:N1	53:5:214:U:O2	2.19	0.54
53:5:250:G:C6	53:5:269:A:C6	2.95	0.54
53:5:262:G:H1	53:5:267:C:N4	2.05	0.54
53:5:623:G:H2'	53:5:624:U:C6	2.43	0.54
53:5:657:G:C6	53:5:658:G:C5	2.95	0.54
53:5:928:G:N2	53:5:1359:C:N3	2.53	0.54
53:5:946:G:H4'	53:5:966:A:H5'	1.90	0.54
53:5:1070:G:H8	53:5:1070:G:O5'	1.91	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:6:GLN:N	51:3:721:G:O2'	2.30	0.54
9:E:11:GLY:N	9:E:52:GLN:HB3	2.18	0.54
9:E:47:TYR:HD2	21:Q:100:PRO:HA	1.73	0.54
10:F:37:LEU:O	10:F:40:ARG:HG2	2.08	0.54
10:F:98:LEU:HA	10:F:101:ARG:HB2	1.90	0.54
16:L:53:PHE:HD1	16:L:56:ILE:HD12	1.73	0.54
20:P:7:LYS:O	20:P:9:LEU:HG	2.08	0.54
20:P:62:GLN:N	20:P:81:ILE:HG12	2.23	0.54
25:a:102:ALA:O	51:3:1526:U:O2'	2.16	0.54
26:b:40:LYS:HD3	26:b:45:ASP:HB3	1.90	0.54
34:j:70:GLN:OE1	34:j:71:ARG:N	2.41	0.54
42:r:122:LYS:O	42:r:126:LYS:HG2	2.08	0.54
46:v:56:ARG:NH1	51:3:436:G:O6	2.41	0.54
46:v:58:LEU:O	46:v:62:ASN:N	2.41	0.54
47:w:49:ARG:O	47:w:52:ALA:HB3	2.08	0.54
51:3:154:U:H2'	51:3:155:A:C8	2.43	0.54
51:3:247:U:H2'	51:3:248:A:C8	2.43	0.54
51:3:507:A:H2'	51:3:508:A:O4'	2.08	0.54
51:3:563:A:H2'	51:3:2049:A:N1	2.22	0.54
51:3:604:A:H1'	51:3:606:G:C8	2.42	0.54
51:3:631:A:H2'	51:3:632:A:H8	1.72	0.54
51:3:848:U:H2'	51:3:849:C:C6	2.43	0.54
51:3:1366:G:H2'	51:3:1367:G:H8	1.73	0.54
51:3:1445:U:H2'	51:3:1446:G:C8	2.43	0.54
51:3:1449:G:N3	51:3:1519:A:N6	2.56	0.54
51:3:1557:G:H8	51:3:1557:G:OP2	1.91	0.54
51:3:1809:A:H8	51:3:1822:A:H62	1.54	0.54
51:3:2364:A:H3'	51:3:2365:U:C6	2.43	0.54
51:3:2662:A:H4'	51:3:2663:G:H4'	1.90	0.54
52:4:22:G:N7	52:4:54:U:O2'	2.24	0.54
53:5:377:A:OP1	53:5:378:A:N6	2.40	0.54
53:5:425:G:H4'	53:5:426:U:OP1	2.07	0.54
53:5:651:G:C4	53:5:652:A:C8	2.95	0.54
53:5:1065:G:H2'	53:5:1066:U:C6	2.42	0.54
53:5:1275:U:P	53:5:1277:C:H41	2.30	0.54
53:5:1425:A:HO2'	53:5:1428:A:N6	2.03	0.54
54:6:42:C:H2'	54:6:43:G:H4'	1.89	0.54
4:9:242:GLU:OE1	4:9:253:LYS:HE3	2.08	0.53
5:A:119:ASN:ND2	53:5:1065:G:O4'	2.41	0.53
5:A:175:LEU:HD13	5:A:197:PRO:HG2	1.90	0.53
5:A:202:CYS:HB2	5:A:216:PRO:HA	1.90	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:C:144:LEU:HD21	7:C:154:VAL:HG11	1.90	0.53
11:G:29:LYS:HA	11:G:76:TYR:CZ	2.43	0.53
12:H:129:PHE:HB3	53:5:1316:C:O3'	2.08	0.53
13:I:57:ILE:HD12	17:M:41:ARG:HB2	1.89	0.53
23:S:29:LYS:O	23:S:33:LYS:HG3	2.08	0.53
25:a:22:TYR:O	25:a:29:ASN:HB2	2.08	0.53
25:a:208:HIS:CD2	51:3:1827:U:H1'	2.44	0.53
30:f:4:ILE:HD11	30:f:42:LYS:HG3	1.90	0.53
37:m:71:ASN:HB3	51:3:1321:C:C4'	2.38	0.53
41:q:67:LYS:HA	41:q:86:ARG:HG2	1.89	0.53
41:q:73:HIS:NE2	41:q:74:ILE:O	2.41	0.53
42:r:56:ALA:O	42:r:59:THR:OG1	2.25	0.53
51:3:60:G:H2'	51:3:61:U:C6	2.44	0.53
51:3:195:A:H2'	51:3:196:G:O4'	2.07	0.53
51:3:341:G:O2'	51:3:343:A:N6	2.40	0.53
51:3:502:A:C5	51:3:503:G:H1'	2.44	0.53
51:3:739:G:N1	51:3:761:G:O2'	2.39	0.53
51:3:857:U:H2'	51:3:858:A:C8	2.42	0.53
51:3:891:G:H2'	51:3:892:G:H8	1.72	0.53
51:3:954:A:H2'	51:3:955:A:O4'	2.08	0.53
51:3:1013:G:N1	51:3:1023:C:N3	2.56	0.53
51:3:1111:C:H2'	51:3:1112:A:C8	2.43	0.53
51:3:1126:G:H2'	51:3:1127:C:H6	1.72	0.53
51:3:1255:G:H2'	51:3:1256:A:C8	2.43	0.53
51:3:1410:A:H2'	51:3:1411:C:N1	2.23	0.53
51:3:1505:G:N2	51:3:1539:U:H1'	2.23	0.53
51:3:2281:A:H2'	51:3:2282:A:C8	2.43	0.53
51:3:2331:G:H2'	51:3:2332:U:O4'	2.07	0.53
51:3:2469:A:H2'	51:3:2470:C:C6	2.44	0.53
51:3:2531:C:O2'	51:3:2772:A:O3'	2.27	0.53
53:5:578:C:H3'	53:5:579:G:C8	2.41	0.53
53:5:651:G:H2'	53:5:652:A:O4'	2.08	0.53
53:5:862:C:HO2'	53:5:867:A:HO2'	1.51	0.53
53:5:1142:G:H1'	53:5:1145:A:H61	1.72	0.53
53:5:1212:C:O2'	53:5:1274:G:N2	2.41	0.53
54:7:5:C:N4	54:7:70:G:H1	2.05	0.53
3:2:13:ASP:HA	3:2:15:LYS:NZ	2.23	0.53
6:B:78:ILE:HG23	6:B:82:ASN:HA	1.90	0.53
10:F:49:ILE:HD11	10:F:123:ILE:HG23	1.90	0.53
25:a:48:ASN:HB2	25:a:54:THR:HG23	1.88	0.53
26:b:2:GLU:CD	26:b:89:GLY:H	2.17	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:b:63:ASN:HD21	51:3:2815:G:H5'	1.73	0.53
30:f:27:ILE:HG23	51:3:2206:A:C4	2.43	0.53
33:i:17:GLN:H	33:i:55:ASP:CB	2.22	0.53
38:n:79:ASP:O	38:n:82:VAL:HG22	2.08	0.53
40:p:10:ARG:C	40:p:14:LYS:HE3	2.34	0.53
43:s:20:GLN:O	43:s:25:LYS:NZ	2.34	0.53
51:3:1070:U:N3	51:3:1155:G:C6	2.70	0.53
51:3:1179:G:H2'	51:3:1180:U:C6	2.43	0.53
51:3:1302:C:H2'	51:3:1680:A:C8	2.43	0.53
51:3:1382:A:H3'	51:3:1383:G:C8	2.44	0.53
51:3:1384:C:H2'	51:3:1385:U:C6	2.43	0.53
51:3:1426:C:C2	51:3:1427:C:C5	2.96	0.53
51:3:1468:U:H2'	51:3:1469:C:O4'	2.07	0.53
51:3:1538:U:H2'	51:3:1539:U:O4'	2.08	0.53
51:3:1721:G:C2	51:3:1722:U:C2	2.96	0.53
51:3:1862:A:H2'	51:3:1863:G:C8	2.43	0.53
51:3:2084:A:H2'	51:3:2085:C:C6	2.44	0.53
51:3:2088:U:H2'	51:3:2245:G:H22	1.73	0.53
51:3:2229:C:H2'	51:3:2230:A:C8	2.43	0.53
51:3:2523:C:H2'	51:3:2524:U:C6	2.43	0.53
51:3:2745:G:H3'	51:3:2746:A:C8	2.38	0.53
53:5:556:G:OP2	53:5:557:A:O2'	2.15	0.53
53:5:576:A:H2'	53:5:577:G:C8	2.43	0.53
53:5:709:A:H2'	53:5:710:G:C8	2.42	0.53
53:5:841:C:H2'	53:5:842:C:H5'	1.89	0.53
53:5:1224:C:N4	53:5:1262:A:C8	2.76	0.53
53:5:1237:G:H2'	53:5:1238:C:C6	2.43	0.53
5:A:48:GLU:OE1	5:A:51:HIS:HE1	1.91	0.53
5:A:158:ARG:NH1	53:5:1089:C:OP2	2.41	0.53
6:B:6:ASN:OD1	6:B:9:GLY:N	2.41	0.53
7:C:97:LEU:HD12	7:C:132:PRO:HA	1.89	0.53
8:D:87:ARG:NH1	53:5:1072:G:OP2	2.38	0.53
9:E:35:LEU:N	9:E:62:PHE:HB3	2.24	0.53
11:G:90:ILE:HG12	11:G:139:ALA:CA	2.38	0.53
14:J:110:PRO:HA	53:5:672:A:N3	2.23	0.53
14:J:114:CYS:SG	53:5:775:G:H4'	2.49	0.53
15:K:60:SER:OG	53:5:516:C:O3'	2.26	0.53
16:L:55:ALA:O	16:L:58:ASN:HB2	2.08	0.53
25:a:84:LYS:N	25:a:98:LEU:O	2.41	0.53
27:c:94:LYS:HB3	27:c:96:ASN:OD1	2.07	0.53
27:c:203:VAL:HA	27:c:206:ALA:HB3	1.91	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:d:125:ARG:HH22	51:3:2309:A:H2	1.56	0.53
36:l:1:MET:HG3	36:l:48:GLU:HB2	1.90	0.53
39:o:26:SER:H	39:o:93:ARG:HH11	1.56	0.53
42:r:7:GLN:HG3	42:r:10:VAL:CG1	2.38	0.53
43:s:62:PRO:HD3	43:s:77:LEU:HD13	1.91	0.53
44:t:10:VAL:HG22	44:t:76:LEU:HA	1.88	0.53
45:u:41:ASP:HA	45:u:81:VAL:HG13	1.89	0.53
45:u:42:GLY:HA2	45:u:80:LEU:HB3	1.89	0.53
51:3:85:U:H2'	51:3:86:A:C8	2.43	0.53
51:3:108:G:C2	51:3:109:G:C8	2.96	0.53
51:3:455:G:H3'	51:3:456:G:C8	2.43	0.53
51:3:645:C:H2'	51:3:646:A:C8	2.44	0.53
51:3:703:A:H2'	51:3:705:A:N6	2.24	0.53
51:3:719:G:O3'	51:3:823:A:N6	2.41	0.53
51:3:734:A:H62	51:3:768:G:H21	1.55	0.53
51:3:806:A:O2'	51:3:1383:G:O2'	2.18	0.53
51:3:955:A:H3'	51:3:956:U:H6	1.72	0.53
51:3:1014:G:O6	51:3:1022:C:N4	2.42	0.53
51:3:1199:A:C6	51:3:1200:U:C2	2.97	0.53
51:3:1391:U:O2'	51:3:1816:A:N3	2.37	0.53
51:3:1814:G:N2	51:3:1816:A:H3'	2.23	0.53
51:3:2135:C:H4'	51:3:2182:C:H1'	1.90	0.53
51:3:2251:U:O2'	51:3:2442:A:N1	2.37	0.53
51:3:2308:U:H2'	51:3:2309:A:H8	1.70	0.53
51:3:2308:U:C2	51:3:2309:A:N7	2.77	0.53
51:3:2327:U:H1'	51:3:2328:A:C8	2.43	0.53
51:3:2388:C:H2'	51:3:2389:A:C8	2.43	0.53
51:3:2458:A:O2'	54:7:77:A:OP1	2.25	0.53
51:3:2536:U:O2	51:3:2543:G:N2	2.32	0.53
53:5:401:U:H4'	53:5:496:A:N7	2.23	0.53
53:5:661:G:N3	53:5:723:C:H4'	2.23	0.53
53:5:834:G:H2'	53:5:835:G:H8	1.73	0.53
53:5:1067:C:H2'	53:5:1068:G:O4'	2.08	0.53
53:5:1487:U:H2'	53:5:1488:A:C8	2.44	0.53
4:9:147:GLN:HB3	4:9:172:TYR:CZ	2.44	0.53
4:9:348:THR:HG21	4:9:351:VAL:HG22	1.91	0.53
7:C:123:LEU:N	7:C:143:ARG:O	2.42	0.53
9:E:84:ARG:NH1	53:5:670:G:H4'	2.23	0.53
10:F:51:GLN:O	10:F:52:ARG:NE	2.40	0.53
13:I:72:GLU:H	17:M:57:LYS:H	1.54	0.53
15:K:55:PRO:HD3	15:K:61:ALA:O	2.07	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:R:69:HIS:HA	22:R:73:GLU:HG3	1.90	0.53
26:b:63:ASN:C	26:b:67:GLN:HE21	2.16	0.53
28:d:57:LEU:O	28:d:61:SER:OG	2.18	0.53
34:j:60:ALA:HB2	34:j:86:LEU:HD13	1.91	0.53
36:l:124:LYS:HD2	51:3:2492:G:C4	2.43	0.53
38:n:51:VAL:HB	52:4:103:C:O2'	2.09	0.53
40:p:35:LYS:O	40:p:39:ILE:HG12	2.08	0.53
41:q:67:LYS:HZ3	41:q:86:ARG:HG3	1.74	0.53
42:r:41:LYS:NZ	51:3:2016:G:H5''	2.24	0.53
45:u:28:ARG:N	51:3:2286:A:N7	2.57	0.53
51:3:54:A:OP2	51:3:118:G:N1	2.41	0.53
51:3:658:G:H2'	51:3:659:C:C6	2.44	0.53
51:3:682:A:H2'	51:3:683:G:O4'	2.08	0.53
51:3:729:U:H4'	51:3:1406:A:C2	2.38	0.53
51:3:955:A:H62	51:3:2276:A:H8	1.54	0.53
51:3:1152:U:H2'	51:3:1153:U:C6	2.43	0.53
51:3:1261:U:H2'	51:3:1262:G:C8	2.42	0.53
51:3:1312:A:H8	51:3:1312:A:OP1	1.90	0.53
51:3:1340:U:H1'	51:3:1342:C:C5	2.43	0.53
51:3:1449:G:O2'	51:3:1518:C:N4	2.39	0.53
51:3:1623:U:H2'	51:3:1624:A:C8	2.43	0.53
51:3:2149:U:H2'	51:3:2150:C:O4'	2.08	0.53
51:3:2207:A:H61	51:3:2232:G:H2'	1.73	0.53
51:3:2320:U:H2'	51:3:2321:C:H6	1.73	0.53
51:3:2364:A:C2	51:3:2370:G:C2	2.96	0.53
51:3:2557:G:H2'	51:3:2558:G:C8	2.43	0.53
51:3:2853:U:H4'	51:3:2872:A:C2	2.44	0.53
53:5:204:C:H2'	53:5:205:U:O4'	2.09	0.53
53:5:637:A:H3'	53:5:638:A:C8	2.43	0.53
53:5:1185:C:H2'	53:5:1186:U:N1	2.23	0.53
53:5:1395:C:H2'	53:5:1396:U:O4'	2.08	0.53
53:5:1413:G:H2'	53:5:1414:U:O4'	2.09	0.53
54:7:76:C:H2'	54:7:77:A:N7	2.23	0.53
1:0:9:LYS:NZ	51:3:1339:U:O4	2.42	0.53
2:1:31:PRO:HG2	2:1:32:HIS:CE1	2.44	0.53
7:C:51:ALA:HA	7:C:54:LEU:HD12	1.91	0.53
10:F:37:LEU:HG	10:F:40:ARG:NH1	2.23	0.53
10:F:147:ASN:O	10:F:150:PHE:N	2.42	0.53
11:G:126:LYS:HG3	11:G:127:VAL:N	2.23	0.53
19:O:2:ARG:NH1	19:O:4:GLY:O	2.42	0.53
26:b:15:GLN:HB3	51:3:2690:U:H1'	1.90	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:b:19:THR:HG22	26:b:20:ASN:H	1.74	0.53
26:b:98:PRO:HD2	26:b:189:MET:SD	2.48	0.53
35:k:48:ARG:HH22	51:3:199:A:H5''	1.73	0.53
35:k:63:PRO:HA	51:3:2401:U:O3'	2.09	0.53
36:l:36:ALA:HB2	36:l:103:MET:HE2	1.90	0.53
36:l:74:LYS:HB2	36:l:92:PHE:CZ	2.44	0.53
37:m:33:THR:OG1	37:m:34:THR:N	2.40	0.53
38:n:14:ARG:HA	38:n:17:LYS:HE2	1.91	0.53
40:p:22:GLY:HA2	51:3:21:U:OP1	2.09	0.53
51:3:196:G:N2	51:3:835:U:OP1	2.41	0.53
51:3:270:G:O2'	51:3:315:A:N6	2.27	0.53
51:3:276:A:H61	51:3:301:G:HO2'	1.56	0.53
51:3:335:G:C6	51:3:351:G:C5	2.97	0.53
51:3:501:G:H2'	51:3:502:A:O4'	2.09	0.53
51:3:724:A:H2'	51:3:725:G:C8	2.42	0.53
51:3:1201:A:C6	51:3:1215:G:C5	2.96	0.53
51:3:1242:G:N3	51:3:1267:A:N7	2.57	0.53
51:3:1288:C:N4	51:3:1289:G:O6	2.42	0.53
51:3:1343:C:O2'	51:3:1420:A:H1'	2.08	0.53
51:3:1698:A:N6	51:3:2003:C:N4	2.43	0.53
51:3:2030:A:H2'	51:3:2031:C:H6	1.73	0.53
51:3:2534:G:H1	51:3:2545:U:H3	1.56	0.53
51:3:2551:G:H5'	51:3:2775:C:OP1	2.09	0.53
52:4:23:A:H2'	52:4:24:A:O4'	2.07	0.53
53:5:20:C:N3	53:5:911:G:N1	2.46	0.53
53:5:410:A:OP2	53:5:425:G:N1	2.39	0.53
53:5:779:A:H2'	53:5:780:U:O4'	2.08	0.53
53:5:906:C:O2'	53:5:907:A:H5'	2.08	0.53
53:5:1075:G:C8	53:5:1076:U:H2'	2.43	0.53
53:5:1080:G:N1	53:5:1088:C:N3	2.56	0.53
2:1:21:ARG:CZ	2:1:45:GLY:HA3	2.39	0.53
4:9:33:CYS:O	4:9:45:THR:HA	2.08	0.53
6:B:20:SER:HB2	17:M:52:ALA:O	2.08	0.53
9:E:92:ARG:HE	9:E:93:GLU:CD	2.16	0.53
9:E:100:ILE:HA	9:E:103:LYS:HG2	1.90	0.53
10:F:87:PRO:HB3	10:F:144:ALA:HB1	1.91	0.53
20:P:60:LYS:HZ3	20:P:81:ILE:HG13	1.73	0.53
25:a:95:PHE:N	25:a:205:ASN:OD1	2.42	0.53
30:f:27:ILE:HA	30:f:30:LEU:HD23	1.90	0.53
33:i:22:ASP:HA	33:i:60:ILE:HB	1.91	0.53
36:l:3:GLN:HG3	36:l:93:TRP:CE2	2.44	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:n:112:ARG:HB3	38:n:114:LEU:HD23	1.89	0.53
40:p:32:LYS:NZ	51:3:1283:A:O4'	2.39	0.53
42:r:90:LYS:HE3	51:3:783:G:C4	2.43	0.53
45:u:86:PHE:C	45:u:90:GLN:HA	2.34	0.53
47:w:26:LEU:HD11	47:w:44:ILE:HA	1.90	0.53
47:w:26:LEU:HD12	47:w:29:TYR:HD2	1.73	0.53
49:y:47:MET:HG3	49:y:52:ARG:HA	1.89	0.53
51:3:134:U:H2'	51:3:135:A:C8	2.44	0.53
51:3:300:G:H2'	51:3:301:G:C8	2.44	0.53
51:3:312:U:C2	51:3:396:A:N1	2.77	0.53
51:3:313:G:N1	51:3:394:C:N3	2.45	0.53
51:3:319:G:C6	51:3:390:A:N1	2.76	0.53
51:3:512:G:C2	51:3:514:A:H8	2.27	0.53
51:3:664:G:C6	51:3:672:G:C2	2.96	0.53
51:3:1394:A:H3'	51:3:1395:A:H8	1.74	0.53
51:3:1570:A:H2'	51:3:1571:G:H4'	1.90	0.53
51:3:1897:A:H3'	51:3:1898:G:C8	2.44	0.53
51:3:2113:U:C4	51:3:2191:G:O6	2.62	0.53
51:3:2224:A:H2'	51:3:2225:G:C8	2.42	0.53
51:3:2375:A:H2'	51:3:2376:C:H6	1.70	0.53
51:3:2469:A:N1	51:3:2498:G:N2	2.56	0.53
51:3:2812:U:H5'	51:3:2895:A:C5	2.44	0.53
51:3:2812:U:C2	51:3:2895:A:H1'	2.43	0.53
51:3:2840:U:H2'	51:3:2841:A:C8	2.44	0.53
53:5:36:G:C6	53:5:548:G:N1	2.76	0.53
53:5:36:G:C6	53:5:548:G:C6	2.97	0.53
53:5:37:C:H2'	53:5:38:U:C6	2.43	0.53
53:5:240:U:C4	53:5:887:C:N3	2.77	0.53
53:5:358:G:H2'	53:5:360:A:N7	2.24	0.53
53:5:686:C:C2	53:5:687:G:C8	2.97	0.53
53:5:884:G:H22	53:5:901:A:P	2.32	0.53
53:5:1279:G:H1'	53:5:1306:A:N6	2.23	0.53
54:6:44:U:H5'	54:6:45:G:OP2	2.07	0.53
4:9:217:ASP:OD1	4:9:218:THR:N	2.41	0.53
8:D:185:ARG:NE	53:5:21:U:OP2	2.38	0.53
9:E:4:ASN:HD21	9:E:61:LYS:HD2	1.74	0.53
10:F:148:LYS:HA	10:F:151:ALA:HB3	1.91	0.53
14:J:47:GLY:O	14:J:50:LYS:HG2	2.08	0.53
21:Q:71:ASN:HB3	21:Q:75:ILE:HD12	1.89	0.53
21:Q:91:LYS:HE3	53:5:732:A:H5''	1.91	0.53
22:R:40:ILE:HG13	22:R:67:VAL:HA	1.90	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:a:131:LYS:N	25:a:131:LYS:HD2	2.24	0.53
25:a:170:ILE:O	25:a:171:LEU:HD23	2.08	0.53
26:b:35:GLN:HE22	26:b:76:LYS:N	2.06	0.53
26:b:111:SER:C	26:b:173:LYS:HD2	2.34	0.53
27:c:185:LYS:NZ	51:3:647:G:O3'	2.42	0.53
28:d:102:LYS:O	28:d:106:VAL:N	2.38	0.53
34:j:62:ILE:HG13	34:j:83:ALA:O	2.09	0.53
35:k:20:LEU:HD12	51:3:620:G:C4	2.43	0.53
36:l:42:ILE:HD11	36:l:46:ALA:HB3	1.89	0.53
41:q:86:ARG:NH1	51:3:583:U:O4	2.41	0.53
51:3:186:A:H2'	51:3:187:C:H6	1.74	0.53
51:3:341:G:H2'	51:3:364:A:H62	1.73	0.53
51:3:578:A:O4'	51:3:1250:A:N6	2.41	0.53
51:3:1242:G:H1'	51:3:1243:A:N7	2.24	0.53
51:3:1336:A:H2'	51:3:1337:G:O4'	2.09	0.53
51:3:1356:G:N2	51:3:1681:G:H1	2.07	0.53
51:3:1461:A:H2'	51:3:1462:A:C8	2.44	0.53
51:3:2042:A:H5''	51:3:2043:C:C5	2.44	0.53
51:3:2106:G:N2	51:3:2198:G:H22	2.07	0.53
51:3:2328:A:H4'	51:3:2329:G:C2	2.44	0.53
51:3:2385:A:O2'	51:3:2386:A:O4'	2.26	0.53
51:3:2597:A:H2'	51:3:2598:C:H6	1.74	0.53
51:3:2656:G:N2	51:3:2681:G:H1'	2.24	0.53
51:3:2748:A:H2'	51:3:2749:A:C8	2.44	0.53
51:3:2757:A:H2'	51:3:2758:A:C8	2.42	0.53
51:3:2848:A:H2'	51:3:2849:G:C8	2.43	0.53
51:3:2885:U:H2'	51:3:2886:A:C8	2.44	0.53
53:5:259:A:H2'	53:5:260:C:C6	2.43	0.53
53:5:851:U:H3'	53:5:852:G:H8	1.73	0.53
53:5:1085:G:O2'	53:5:1086:U:OP1	2.27	0.53
53:5:1298:U:H2'	53:5:1299:C:C6	2.44	0.53
53:5:1394:G:N2	53:5:1456:U:O2	2.41	0.53
53:5:1443:A:H2'	53:5:1444:G:O4'	2.09	0.53
8:D:67:GLU:CD	8:D:97:ARG:HG2	2.34	0.53
9:E:33:GLU:CG	9:E:34:GLY:H	2.21	0.53
9:E:148:LYS:HB2	11:G:59:VAL:HG12	1.90	0.53
15:K:89:GLU:O	15:K:90:HIS:HB3	2.09	0.53
15:K:126:GLN:HB3	15:K:130:TYR:HE2	1.72	0.53
19:O:61:ASP:HA	19:O:64:ARG:HG2	1.91	0.53
20:P:4:ASN:HB2	20:P:6:ARG:NH1	2.15	0.53
20:P:63:ILE:HG23	20:P:77:ILE:HA	1.91	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:Q:58:GLU:O	21:Q:62:ARG:HG3	2.09	0.53
22:R:31:ILE:HG12	22:R:49:PHE:CD1	2.44	0.53
23:S:27:LYS:HG3	53:5:1431:A:O2'	2.09	0.53
24:T:35:HIS:NE2	53:5:1500:G:OP1	2.37	0.53
25:a:56:ARG:HE	25:a:57:HIS:CE1	2.26	0.53
25:a:95:PHE:H	25:a:204:SER:HG	1.55	0.53
26:b:107:TYR:CZ	26:b:218:LYS:HB2	2.44	0.53
29:e:88:LYS:HD2	29:e:89:LYS:H	1.74	0.53
29:e:127:LYS:NZ	29:e:137:SER:OG	2.42	0.53
30:f:26:ALA:HB3	30:f:28:HIS:HD2	1.72	0.53
42:r:66:GLY:HA2	42:r:69:LEU:HB2	1.90	0.53
50:z:7:THR:OG1	50:z:21:THR:HG23	2.09	0.53
51:3:300:G:H2'	51:3:301:G:H8	1.73	0.53
51:3:1145:G:O2'	51:3:1146:A:N7	2.37	0.53
51:3:1366:G:C2	51:3:1367:G:C4	2.97	0.53
51:3:1806:G:O5'	51:3:1826:A:N6	2.42	0.53
51:3:1849:G:C2	51:3:1905:U:O2	2.61	0.53
51:3:1958:U:H1'	51:3:1961:A:C8	2.40	0.53
51:3:2303:U:C2	51:3:2346:G:C2	2.96	0.53
51:3:2649:G:C6	51:3:2782:A:C2	2.97	0.53
51:3:2696:G:H1	51:3:2728:U:P	2.30	0.53
51:3:2712:C:C2	51:3:2713:A:C8	2.96	0.53
53:5:449:A:H5''	53:5:450:U:O5'	2.08	0.53
53:5:577:G:H2'	53:5:578:C:C6	2.44	0.53
53:5:660:A:C2	53:5:739:G:N1	2.77	0.53
53:5:1162:G:H2'	53:5:1163:A:C8	2.44	0.53
53:5:1200:G:O2'	53:5:1201:C:O5'	2.23	0.53
53:5:1331:A:O5'	53:5:1333:C:N4	2.42	0.53
54:7:6:U:H2'	54:7:7:U:C6	2.44	0.53
54:7:63:U:H2'	54:7:64:G:C8	2.44	0.53
4:9:100:ASP:HB3	4:9:203:PRO:HG2	1.90	0.53
4:9:150:VAL:HA	4:9:153:GLU:HG3	1.90	0.53
4:9:205:ARG:HH22	4:9:231:ARG:HH12	1.57	0.53
9:E:2:GLN:O	9:E:89:ASN:ND2	2.39	0.53
12:H:6:TYR:HD1	12:H:91:GLN:HG2	1.73	0.53
12:H:83:LEU:HA	12:H:86:VAL:HG22	1.90	0.53
16:L:101:ARG:HH22	53:5:945:U:H3'	1.74	0.53
23:S:66:ARG:HA	23:S:69:LYS:HG2	1.91	0.53
27:c:8:LYS:HG2	27:c:14:GLU:CD	2.34	0.53
27:c:49:THR:HG21	51:3:478:G:N3	2.23	0.53
30:f:5:LEU:HG	30:f:34:LYS:HG3	1.91	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:s:36:SER:O	43:s:40:VAL:HG23	2.09	0.53
47:w:54:ILE:O	47:w:57:ILE:HB	2.09	0.53
51:3:17:G:O6	51:3:560:U:O4	2.27	0.53
51:3:132:G:C2	51:3:133:G:C8	2.97	0.53
51:3:524:G:N2	51:3:527:A:OP2	2.32	0.53
51:3:572:G:N2	51:3:588:G:O2'	2.39	0.53
51:3:597:C:H2'	51:3:598:G:C8	2.42	0.53
51:3:760:G:H3'	51:3:761:G:C8	2.43	0.53
51:3:1082:A:C8	51:3:1145:G:C6	2.97	0.53
51:3:1137:C:H2'	51:3:1138:A:C8	2.44	0.53
51:3:1181:A:H2'	51:3:1182:U:C6	2.44	0.53
51:3:1444:C:H4'	51:3:1620:A:H61	1.74	0.53
51:3:1477:A:H2'	51:3:1478:U:O4'	2.09	0.53
51:3:2264:G:H2'	51:3:2265:U:C6	2.44	0.53
51:3:2476:A:H2'	51:3:2484:A:N1	2.24	0.53
51:3:2647:A:H8	51:3:2647:A:O5'	1.92	0.53
51:3:2802:C:OP2	51:3:2807:G:N2	2.42	0.53
51:3:2842:G:C4	51:3:2843:G:C8	2.97	0.53
53:5:69:G:O4'	53:5:157:A:H1'	2.09	0.53
53:5:859:A:N3	53:5:913:A:O2'	2.35	0.53
53:5:891:C:H2'	53:5:892:G:C8	2.43	0.53
53:5:1231:U:H2'	53:5:1253:A:N7	2.23	0.53
54:6:28:A:OP2	54:6:28:A:H8	1.91	0.53
5:A:51:HIS:C	5:A:53:ASN:H	2.17	0.53
5:A:198:VAL:HG23	5:A:212:ASP:H	1.73	0.53
6:B:8:ASN:HB2	6:B:187:TYR:CD2	2.38	0.53
10:F:76:VAL:O	10:F:77:ARG:NH2	2.38	0.53
26:b:36:VAL:HG13	26:b:96:ILE:HD11	1.90	0.53
26:b:49:ALA:HB2	26:b:85:ARG:HD2	1.91	0.53
33:i:16:ARG:HA	33:i:55:ASP:HA	1.91	0.53
34:j:18:GLN:H	34:j:45:ASP:HB3	1.74	0.53
37:m:107:ARG:HE	51:3:1314:A:H5'	1.73	0.53
38:n:81:LEU:O	38:n:84:LEU:N	2.42	0.53
40:p:80:ASN:HD21	51:3:1187:C:P	2.32	0.53
40:p:107:LEU:HA	40:p:110:GLN:NE2	2.23	0.53
51:3:875:G:C6	51:3:975:G:N1	2.77	0.53
51:3:915:A:H61	51:3:936:G:H1'	1.74	0.53
51:3:957:G:N2	51:3:2277:A:O5'	2.42	0.53
51:3:965:U:H2'	51:3:966:U:C6	2.44	0.53
51:3:1072:A:H2'	51:3:1073:A:C8	2.44	0.53
51:3:1077:G:N1	51:3:1148:U:N3	2.56	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:3:1351:G:C6	51:3:1361:U:H1'	2.43	0.53
51:3:1474:C:H2'	51:3:1475:C:C6	2.44	0.53
51:3:1491:G:HO2'	51:3:1577:A:H61	1.54	0.53
51:3:1520:A:C2	51:3:1612:U:H1'	2.44	0.53
51:3:1853:G:H2'	51:3:1854:A:C5	2.43	0.53
51:3:2013:C:H2'	51:3:2014:U:H6	1.74	0.53
51:3:2039:G:OP2	51:3:2463:G:H5'	2.08	0.53
51:3:2138:U:OP1	51:3:2139:C:H5''	2.08	0.53
51:3:2538:A:H1'	51:3:2543:G:C6	2.44	0.53
51:3:2669:G:C5	51:3:2670:A:C6	2.97	0.53
53:5:566:G:C2	53:5:877:C:C2	2.97	0.53
53:5:1322:U:C2	53:5:1323:A:C8	2.96	0.53
53:5:1387:U:O4	53:5:1388:A:N6	2.42	0.53
54:7:66:C:C2	54:7:67:C:C5	2.97	0.53
2:1:2:LYS:HG2	51:3:246:G:C8	2.44	0.52
4:9:321:THR:OG1	54:6:53:A:O3'	2.19	0.52
5:A:203:ASN:ND2	5:A:219:ASN:OD1	2.42	0.52
5:A:224:SER:HA	5:A:227:LEU:HD12	1.90	0.52
7:C:60:MET:HB2	7:C:191:ILE:HG21	1.90	0.52
10:F:26:ILE:HA	10:F:29:ILE:HG12	1.91	0.52
13:I:63:VAL:HG11	53:5:958:G:H22	1.74	0.52
15:K:44:ARG:NH1	53:5:358:G:O5'	2.42	0.52
17:M:26:ARG:NH1	17:M:46:GLU:OE2	2.42	0.52
17:M:40:CYS:HB3	17:M:43:CYS:HB2	1.90	0.52
20:P:13:VAL:HA	20:P:24:VAL:HG22	1.90	0.52
25:a:54:THR:HG21	51:3:1819:G:H21	1.74	0.52
25:a:251:ARG:HE	25:a:255:ARG:NH2	2.07	0.52
35:k:15:HIS:HB2	51:3:697:U:O4'	2.09	0.52
39:o:31:VAL:C	39:o:91:LYS:HE2	2.34	0.52
40:p:62:LEU:HD22	51:3:1045:A:H5'	1.91	0.52
42:r:60:ASN:HD22	51:3:522:C:C1'	2.22	0.52
44:t:16:LYS:CG	51:3:363:G:H1	2.21	0.52
44:t:16:LYS:HZ1	51:3:536:A:P	2.32	0.52
45:u:36:GLY:O	45:u:53:ARG:N	2.39	0.52
45:u:79:GLY:HA2	45:u:100:HIS:H	1.74	0.52
46:v:16:ASN:O	46:v:27:ARG:NH2	2.41	0.52
47:w:40:LYS:HD2	47:w:42:HIS:CE1	2.27	0.52
47:w:85:ASN:ND2	47:w:89:GLN:OE1	2.42	0.52
49:y:7:ARG:HH21	51:3:2026:A:H3'	1.72	0.52
49:y:12:ARG:NH1	51:3:2052:C:OP1	2.40	0.52
51:3:334:A:O2'	51:3:352:C:O2'	2.15	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:3:338:G:C6	51:3:348:A:N1	2.77	0.52
51:3:427:A:H1'	51:3:447:G:H1'	1.90	0.52
51:3:652:U:H2'	51:3:653:G:C8	2.44	0.52
51:3:858:A:C6	51:3:870:A:C2	2.96	0.52
51:3:1403:G:H2'	51:3:1404:C:H6	1.73	0.52
51:3:1420:A:H2'	51:3:1421:A:C8	2.44	0.52
51:3:1447:A:N6	51:3:1519:A:N1	2.47	0.52
51:3:1503:A:P	51:3:1540:G:H22	2.32	0.52
51:3:2296:A:C5	51:3:2333:G:H1'	2.44	0.52
51:3:2363:C:H2'	51:3:2364:A:C8	2.44	0.52
51:3:2372:C:H2'	51:3:2373:G:O4'	2.08	0.52
51:3:2385:A:H2'	51:3:2386:A:N9	2.24	0.52
51:3:2566:C:H2'	51:3:2567:C:C6	2.44	0.52
53:5:21:U:H2'	53:5:22:G:C8	2.43	0.52
53:5:40:G:H2'	53:5:41:C:O4'	2.09	0.52
53:5:407:A:H61	53:5:427:A:N6	2.07	0.52
53:5:430:G:H2'	53:5:431:U:C6	2.44	0.52
53:5:442:G:C6	53:5:487:A:C6	2.97	0.52
53:5:896:G:C2	53:5:897:A:C8	2.98	0.52
53:5:995:U:H2'	53:5:996:U:O4'	2.10	0.52
53:5:1044:G:O2'	53:5:1174:U:OP2	2.17	0.52
53:5:1052:G:C6	53:5:1172:A:C6	2.97	0.52
54:6:6:U:H3	54:6:69:A:H61	1.57	0.52
1:0:24:THR:C	1:0:28:ARG:HE	2.17	0.52
2:1:54:ARG:NH1	51:3:869:U:H5'	2.24	0.52
10:F:5:ARG:HG2	10:F:7:PRO:HD3	1.90	0.52
16:L:33:ILE:HA	16:L:36:GLN:HB3	1.91	0.52
19:O:15:ALA:O	19:O:27:ILE:N	2.41	0.52
26:b:116:GLY:HA2	26:b:168:HIS:HE1	1.74	0.52
28:d:132:ILE:O	28:d:151:GLY:CA	2.58	0.52
33:i:10:GLU:HG2	33:i:11:GLN:H	1.74	0.52
34:j:79:PHE:HD1	34:j:81:ASP:H	1.56	0.52
38:n:27:ARG:HH22	38:n:116:PHE:HB3	1.74	0.52
38:n:63:LYS:O	38:n:69:ASN:N	2.42	0.52
41:q:64:LEU:HB3	41:q:86:ARG:HE	1.73	0.52
42:r:2:ILE:O	42:r:107:LEU:N	2.23	0.52
42:r:86:ILE:HD12	42:r:87:PRO:HD2	1.91	0.52
45:u:57:THR:N	51:3:2339:G:H4'	2.24	0.52
46:v:3:LYS:O	46:v:4:LYS:HG3	2.10	0.52
49:y:12:ARG:HA	49:y:15:LYS:HE3	1.91	0.52
51:3:10:U:H2'	51:3:11:U:C6	2.44	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:3:274:A:H2'	51:3:275:A:C8	2.44	0.52
51:3:614:C:H42	51:3:1289:G:H1	1.57	0.52
51:3:741:A:H2'	51:3:742:G:O4'	2.09	0.52
51:3:833:C:H2'	51:3:834:G:C8	2.44	0.52
51:3:881:A:C8	51:3:883:A:C6	2.98	0.52
51:3:931:G:H2'	51:3:932:U:H4'	1.91	0.52
51:3:993:A:C5	51:3:995:A:C8	2.97	0.52
51:3:1271:A:H2'	51:3:1272:A:H8	1.73	0.52
51:3:1297:U:OP2	51:3:2019:G:N1	2.35	0.52
51:3:1375:G:C6	51:3:1634:A:C6	2.97	0.52
51:3:1456:C:O2'	51:3:1603:A:OP2	2.18	0.52
51:3:1471:A:C6	51:3:1582:G:C6	2.97	0.52
51:3:1616:G:H2'	51:3:1617:U:C6	2.45	0.52
51:3:1641:A:N7	51:3:1655:U:H2'	2.24	0.52
51:3:1751:A:N7	51:3:1752:A:N6	2.56	0.52
51:3:1772:G:H3'	51:3:1773:A:H8	1.74	0.52
51:3:1856:G:C4	51:3:1857:G:C8	2.97	0.52
51:3:1895:G:O3'	51:3:1896:A:H8	1.91	0.52
51:3:2018:U:H3'	51:3:2019:G:H8	1.74	0.52
51:3:2033:G:C4	51:3:2034:G:C8	2.96	0.52
51:3:2039:G:C5	51:3:2462:G:H4'	2.45	0.52
51:3:2156:G:C2	51:3:2157:A:C5	2.96	0.52
51:3:2423:G:H2'	51:3:2424:C:C6	2.44	0.52
51:3:2623:U:H2'	51:3:2624:C:O4'	2.08	0.52
51:3:2755:G:N1	51:3:2762:U:H2'	2.24	0.52
52:4:51:A:H2'	52:4:52:G:H8	1.75	0.52
52:4:61:A:H2'	52:4:62:G:H8	1.73	0.52
53:5:337:C:H5''	54:6:77:A:N1	2.23	0.52
53:5:566:G:H2'	53:5:567:C:C6	2.44	0.52
53:5:639:A:H2'	53:5:640:C:H6	1.72	0.52
53:5:857:U:H2'	53:5:859:A:N7	2.24	0.52
53:5:934:G:N3	53:5:1350:A:H2	2.08	0.52
53:5:1347:U:H2'	53:5:1348:G:O4'	2.09	0.52
53:5:1415:G:C6	53:5:1437:A:N1	2.77	0.52
53:5:1420:U:C2	53:5:1433:G:C2	2.97	0.52
54:7:61:U:O5'	54:7:62:C:H5	1.91	0.52
5:A:34:LYS:HA	5:A:52:ASN:O	2.09	0.52
5:A:202:CYS:SG	5:A:214:ILE:HG23	2.49	0.52
6:B:202:LYS:NZ	53:5:1049:G:OP1	2.35	0.52
7:C:81:GLN:HG3	7:C:85:LEU:HD13	1.92	0.52
9:E:47:TYR:CE1	9:E:49:ILE:HA	2.44	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:I:20:ASP:OD1	13:I:21:SER:N	2.42	0.52
28:d:43:ALA:HB3	28:d:49:PHE:CD2	2.44	0.52
29:e:147:PHE:O	29:e:151:VAL:HG23	2.09	0.52
33:i:14:LYS:HG3	33:i:16:ARG:HH11	1.74	0.52
42:r:18:ARG:O	42:r:22:GLN:HG2	2.09	0.52
42:r:125:VAL:O	42:r:129:VAL:HG13	2.09	0.52
51:3:39:C:H2'	51:3:40:A:C8	2.45	0.52
51:3:72:G:H21	51:3:73:A:N6	2.07	0.52
51:3:275:A:H1'	51:3:407:U:H5''	1.91	0.52
51:3:342:G:N2	51:3:513:A:C5	2.78	0.52
51:3:417:G:C2	51:3:432:G:C6	2.97	0.52
51:3:529:G:H2'	51:3:530:G:C8	2.44	0.52
51:3:529:G:H2'	51:3:530:G:H8	1.73	0.52
51:3:841:C:O2'	51:3:2453:G:H4'	2.09	0.52
51:3:1154:U:H2'	51:3:1155:G:C8	2.44	0.52
51:3:1166:G:H22	51:3:2046:G:H21	1.57	0.52
51:3:1348:C:O2	51:3:1359:C:N4	2.38	0.52
51:3:1417:G:H2'	51:3:1418:U:H6	1.74	0.52
51:3:1423:A:H2'	51:3:1426:C:H41	1.73	0.52
51:3:1475:C:O2	51:3:1577:A:H2	1.93	0.52
51:3:1635:G:H8	51:3:1635:G:OP2	1.92	0.52
51:3:2408:G:N2	51:3:2425:C:C2	2.77	0.52
53:5:28:G:C6	53:5:555:G:C6	2.98	0.52
53:5:42:G:H2'	53:5:43:G:C8	2.45	0.52
53:5:250:G:H2'	53:5:251:G:H8	1.73	0.52
53:5:278:A:H3'	53:5:279:C:C6	2.45	0.52
53:5:295:G:H2'	53:5:296:A:N9	2.23	0.52
53:5:662:G:N7	53:5:721:G:C2	2.77	0.52
54:6:28:A:H2'	54:6:29:C:C2	2.44	0.52
54:7:9:U:C2	54:7:15:A:N7	2.77	0.52
1:0:44:VAL:O	1:0:47:GLU:HG3	2.09	0.52
4:9:118:GLU:OE2	4:9:378:ARG:NE	2.43	0.52
5:A:38:ASN:HB2	5:A:205:ASN:HA	1.92	0.52
5:A:125:ILE:HA	5:A:128:ASN:HD22	1.75	0.52
9:E:17:GLN:O	9:E:21:VAL:HG23	2.09	0.52
9:E:71:ASP:HA	9:E:74:ARG:CZ	2.39	0.52
19:O:5:ARG:CZ	53:5:621:C:H1'	2.38	0.52
19:O:13:ILE:HG12	19:O:32:HIS:HA	1.91	0.52
21:Q:40:TYR:OH	53:5:839:U:O2	2.27	0.52
22:R:77:THR:HB	53:5:1196:G:O3'	2.09	0.52
25:a:89:ASP:OD2	25:a:92:ARG:HG2	2.10	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:a:267:THR:HB	51:3:1805:U:H5'	1.89	0.52
26:b:5:GLY:HA3	26:b:208:ARG:HA	1.92	0.52
26:b:41:THR:HB	26:b:44:LYS:HB3	1.92	0.52
27:c:61:GLY:O	27:c:79:THR:HB	2.08	0.52
27:c:84:PHE:HE1	51:3:1287:C:H5'	1.74	0.52
28:d:105:TYR:HA	48:x:40:GLY:HA3	1.90	0.52
29:e:90:LEU:O	29:e:91:ARG:HD2	2.09	0.52
33:i:9:LYS:HD2	51:3:572:G:H4'	1.90	0.52
35:k:22:ARG:HD2	51:3:846:U:H2'	1.92	0.52
38:n:49:ASN:ND2	52:4:7:G:O2'	2.42	0.52
40:p:77:VAL:O	40:p:81:LEU:N	2.40	0.52
43:s:4:THR:HA	43:s:7:LEU:HD23	1.92	0.52
51:3:534:U:H2'	51:3:535:G:O4'	2.10	0.52
51:3:578:A:H1'	51:3:579:U:C5	2.45	0.52
51:3:754:U:H2'	51:3:755:C:H6	1.74	0.52
51:3:902:U:O2'	51:3:904:C:OP2	2.27	0.52
51:3:1001:C:H2'	51:3:1002:A:H8	1.75	0.52
51:3:1091:G:C2	51:3:1139:C:N4	2.78	0.52
51:3:1243:A:H2'	51:3:1244:A:C8	2.44	0.52
51:3:1353:G:OP1	51:3:1681:G:H8	1.93	0.52
51:3:1484:G:C4	51:3:1485:A:C8	2.97	0.52
51:3:1620:A:H2'	51:3:1621:U:O4'	2.10	0.52
51:3:1720:C:H3'	51:3:1721:G:H8	1.74	0.52
51:3:1810:A:N6	51:3:1821:G:H1'	2.25	0.52
51:3:2051:G:H2'	51:3:2052:C:C6	2.44	0.52
51:3:2273:U:OP2	51:3:2274:A:O2'	2.22	0.52
51:3:2503:G:H2'	51:3:2504:C:O4'	2.08	0.52
51:3:2797:C:H1'	51:3:2895:A:O2'	2.09	0.52
51:3:2800:U:H2'	51:3:2801:U:O4'	2.10	0.52
51:3:2828:C:H3'	51:3:2829:G:N3	2.24	0.52
53:5:369:A:O4'	53:5:478:G:H5'	2.10	0.52
53:5:590:G:O6	53:5:644:U:O4	2.27	0.52
53:5:665:G:N2	53:5:736:U:H1'	2.25	0.52
53:5:689:U:N3	53:5:692:A:OP2	2.41	0.52
53:5:1096:A:H2'	53:5:1097:G:C8	2.44	0.52
53:5:1134:C:H3'	53:5:1134:C:O2	2.09	0.52
54:7:31:G:H2'	54:7:31:G:N3	2.24	0.52
54:7:66:C:H2'	54:7:67:C:C6	2.43	0.52
6:B:122:ASP:HA	6:B:125:ASN:HD22	1.74	0.52
6:B:134:ARG:O	6:B:138:ARG:HG2	2.10	0.52
6:B:181:LEU:HB2	53:5:1103:C:H2'	1.89	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:D:170:ILE:O	8:D:175:TYR:HB2	2.10	0.52
10:F:63:ARG:O	10:F:67:ASN:ND2	2.42	0.52
11:G:42:ILE:HD12	11:G:70:VAL:HG11	1.90	0.52
22:R:83:HIS:NE2	53:5:1202:A:OP1	2.41	0.52
27:c:54:THR:HA	27:c:89:ILE:O	2.09	0.52
27:c:130:GLN:NE2	27:c:133:PHE:HB2	2.24	0.52
29:e:125:THR:HB	29:e:137:SER:OG	2.10	0.52
31:g:31:SER:HA	51:3:1089:A:O2'	2.10	0.52
34:j:16:ALA:O	34:j:17:LYS:HD2	2.09	0.52
36:l:85:SER:HA	51:3:2283:C:H1'	1.92	0.52
41:q:19:THR:HG22	41:q:93:LYS:HB3	1.91	0.52
44:t:6:LYS:HG3	44:t:27:ILE:HG13	1.91	0.52
49:y:12:ARG:HA	49:y:15:LYS:HB2	1.92	0.52
51:3:93:A:H1'	51:3:94:A:C8	2.44	0.52
51:3:342:G:N2	51:3:363:G:O2'	2.43	0.52
51:3:900:G:N2	51:3:950:U:C2	2.77	0.52
51:3:1094:G:C6	51:3:1115:G:C6	2.98	0.52
51:3:1166:G:H1'	51:3:1168:A:H62	1.74	0.52
51:3:1170:C:N4	51:3:1172:G:H3'	2.24	0.52
51:3:1373:C:H2'	51:3:1374:U:C6	2.44	0.52
51:3:1555:G:H2'	51:3:1556:U:O4'	2.10	0.52
51:3:1675:A:N6	51:3:1676:G:C2	2.76	0.52
51:3:1898:G:H3'	51:3:1899:C:H6	1.74	0.52
51:3:2020:A:C6	51:3:2021:A:N1	2.78	0.52
51:3:2056:A:H2'	51:3:2057:C:C6	2.44	0.52
51:3:2167:G:H2'	51:3:2168:C:O4'	2.09	0.52
51:3:2412:A:H3'	51:3:2413:G:H8	1.75	0.52
51:3:2553:G:N3	51:3:2573:A:H2	2.07	0.52
51:3:2893:C:H3'	51:3:2894:G:H8	1.75	0.52
52:4:18:U:C2	52:4:62:G:C2	2.97	0.52
52:4:28:C:H1'	52:4:55:A:H61	1.75	0.52
53:5:18:U:H2'	53:5:19:C:H6	1.74	0.52
53:5:132:G:H2'	53:5:133:G:O4'	2.09	0.52
53:5:411:A:H2'	53:5:412:G:O4'	2.10	0.52
53:5:463:U:O2'	53:5:464:A:N3	2.42	0.52
53:5:511:A:C6	53:5:537:A:C6	2.97	0.52
53:5:648:C:H41	53:5:750:A:P	2.32	0.52
53:5:775:G:H1	53:5:801:U:H3	1.57	0.52
53:5:1040:U:H4'	53:5:1041:G:H5'	1.92	0.52
53:5:1066:U:H2'	53:5:1067:C:C6	2.43	0.52
53:5:1385:A:H2'	53:5:1386:C:C6	2.45	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:7:22:A:C8	54:7:49:C:C4	2.98	0.52
2:1:25:TYR:N	51:3:2401:U:OP1	2.43	0.52
3:2:27:CYS:SG	3:2:28:LYS:HG2	2.50	0.52
4:9:313:LYS:HG2	4:9:354:GLY:N	2.25	0.52
5:A:201:LEU:HD11	5:A:225:THR:HG22	1.91	0.52
6:B:41:ARG:HH11	6:B:42:ASN:CG	2.16	0.52
7:C:70:GLN:NE2	53:5:398:G:O5'	2.43	0.52
9:E:9:VAL:HG22	9:E:56:HIS:H	1.75	0.52
10:F:110:ARG:HH12	10:F:122:GLU:HA	1.75	0.52
17:M:41:ARG:NH2	17:M:42:LEU:HB2	2.25	0.52
19:O:4:GLY:HA2	53:5:622:A:H4'	1.91	0.52
25:a:68:ILE:O	25:a:108:TYR:HB2	2.09	0.52
29:e:45:LYS:HG3	29:e:46:PHE:H	1.74	0.52
33:i:6:MET:HE2	51:3:572:G:H5'	1.92	0.52
42:r:43:ALA:HA	42:r:46:LEU:HD13	1.91	0.52
42:r:81:SER:O	42:r:83:LYS:NZ	2.41	0.52
42:r:115:GLN:O	42:r:119:LYS:HG3	2.09	0.52
44:t:34:ALA:N	44:t:69:ILE:O	2.42	0.52
51:3:14:U:H3	51:3:2634:C:H4'	1.74	0.52
51:3:53:G:N3	51:3:119:A:N7	2.57	0.52
51:3:122:G:H5''	51:3:152:A:H5'	1.92	0.52
51:3:141:A:C5	51:3:142:A:C6	2.98	0.52
51:3:254:G:H2'	51:3:255:A:C8	2.45	0.52
51:3:577:C:H2'	51:3:578:A:C8	2.44	0.52
51:3:739:G:C2	51:3:761:G:N3	2.78	0.52
51:3:760:G:H2'	51:3:761:G:C4	2.44	0.52
51:3:890:U:H2'	51:3:891:G:C8	2.45	0.52
51:3:920:G:H1'	51:3:931:G:N2	2.24	0.52
51:3:1058:U:H5	51:3:1059:G:C4	2.27	0.52
51:3:1070:U:H2'	51:3:1071:G:C8	2.45	0.52
51:3:1445:U:H2'	51:3:1446:G:O4'	2.10	0.52
51:3:1451:A:H2'	51:3:1452:G:C8	2.45	0.52
51:3:1724:A:C6	51:3:1725:G:C6	2.98	0.52
51:3:1780:A:H5''	51:3:1781:C:H5	1.75	0.52
51:3:1873:A:H3'	51:3:1874:G:H8	1.73	0.52
51:3:2006:C:H2'	51:3:2007:U:H6	1.74	0.52
51:3:2110:U:H2'	51:3:2111:U:O2	2.10	0.52
51:3:2467:A:H3'	51:3:2468:U:H6	1.74	0.52
51:3:2597:A:H2'	51:3:2598:C:C6	2.44	0.52
52:4:61:A:H2'	52:4:62:G:C8	2.43	0.52
53:5:680:G:C6	53:5:681:U:C4	2.97	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:5:948:U:H2'	53:5:949:G:C8	2.44	0.52
53:5:956:U:H2'	53:5:957:C:O4'	2.10	0.52
53:5:1415:G:C2	53:5:1437:A:C2	2.97	0.52
4:9:47:TYR:HD1	4:9:179:LEU:HD11	1.75	0.52
4:9:327:TYR:HA	54:6:52:C:H4'	1.92	0.52
7:C:81:GLN:O	7:C:82:ARG:NE	2.42	0.52
7:C:97:LEU:O	7:C:101:VAL:HG23	2.10	0.52
9:E:35:LEU:HB2	9:E:60:TRP:HB3	1.91	0.52
16:L:98:ARG:HG2	53:5:1282:U:P	2.49	0.52
24:T:15:LEU:HA	24:T:18:PHE:HB3	1.92	0.52
25:a:48:ASN:HD22	51:3:1813:C:H1'	1.73	0.52
27:c:185:LYS:HB3	51:3:648:G:H1	1.75	0.52
28:d:22:PHE:HB3	28:d:27:GLN:HB2	1.92	0.52
30:f:76:GLU:CD	30:f:141:LYS:HB2	2.34	0.52
33:i:120:ARG:HH11	51:3:563:A:P	2.32	0.52
35:k:126:PHE:HB3	35:k:128:VAL:HG13	1.91	0.52
36:l:124:LYS:HD2	51:3:2492:G:N3	2.25	0.52
38:n:39:ILE:HB	38:n:64:ASN:HB3	1.91	0.52
40:p:79:ILE:HG22	40:p:83:LYS:HE2	1.91	0.52
42:r:134:LYS:HA	42:r:137:MET:HE1	1.91	0.52
45:u:27:GLY:HA2	51:3:2285:G:N7	2.24	0.52
46:v:17:ASN:OD1	46:v:18:ARG:N	2.42	0.52
50:z:38:CYS:HB3	50:z:41:CYS:HB2	1.92	0.52
51:3:359:G:H2'	51:3:360:G:C8	2.44	0.52
51:3:359:G:O6	51:3:372:G:N2	2.43	0.52
51:3:680:A:H5''	51:3:681:A:OP1	2.10	0.52
51:3:777:C:H2'	51:3:778:U:C6	2.44	0.52
51:3:906:G:N2	51:3:945:U:O2	2.41	0.52
51:3:916:U:H3'	51:3:917:G:H8	1.74	0.52
51:3:1061:A:OP2	51:3:1169:A:O2'	2.16	0.52
51:3:1464:G:C4	51:3:1465:U:N3	2.78	0.52
51:3:1547:G:OP2	51:3:1548:A:O2'	2.24	0.52
51:3:1769:A:H4'	51:3:1769:A:OP1	2.10	0.52
51:3:1829:U:H2'	51:3:1830:G:H8	1.74	0.52
51:3:1930:U:H2'	51:3:1931:C:C6	2.45	0.52
51:3:1947:U:H1'	51:3:1949:C:H41	1.75	0.52
51:3:2071:C:H2'	51:3:2072:C:H6	1.74	0.52
51:3:2111:U:C4	51:3:2194:G:H1'	2.44	0.52
51:3:2217:G:C2	51:3:2224:A:C2	2.98	0.52
51:3:2325:U:H2'	51:3:2326:G:O4'	2.10	0.52
51:3:2463:G:H2'	51:3:2464:C:C6	2.45	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:3:2577:G:H2'	51:3:2578:A:C8	2.45	0.52
51:3:2749:A:H62	51:3:2771:G:N2	2.06	0.52
51:3:2841:A:C4	51:3:2842:G:C8	2.97	0.52
52:4:93:U:H2'	52:4:94:A:H8	1.72	0.52
53:5:275:A:H4'	53:5:276:U:H3'	1.91	0.52
53:5:405:C:H3'	53:5:406:G:C8	2.42	0.52
53:5:568:G:H2'	53:5:569:U:C6	2.45	0.52
53:5:622:A:H2'	53:5:623:G:C8	2.44	0.52
53:5:684:A:H62	53:5:700:G:N2	2.06	0.52
53:5:782:G:H2'	53:5:783:G:H8	1.74	0.52
53:5:840:C:H3'	53:5:841:C:C6	2.44	0.52
53:5:1065:G:O6	53:5:1075:G:N2	2.42	0.52
53:5:1413:G:O6	53:5:1438:U:C4	2.63	0.52
2:1:25:TYR:H	51:3:2401:U:P	2.33	0.52
4:9:6:PHE:N	4:9:265:GLU:O	2.40	0.52
4:9:261:MET:HB2	4:9:266:LEU:HD21	1.92	0.52
4:9:330:GLN:CD	54:6:66:C:H4'	2.35	0.52
7:C:151:ILE:O	7:C:155:LYS:HG2	2.10	0.52
9:E:69:THR:HB	9:E:73:LYS:NZ	2.24	0.52
12:H:24:THR:HG21	12:H:64:ASP:HB3	1.91	0.52
15:K:51:GLY:O	15:K:65:TYR:N	2.39	0.52
15:K:81:PRO:HB3	15:K:96:ARG:NH2	2.23	0.52
19:O:57:ALA:O	19:O:58:LYS:NZ	2.34	0.52
25:a:207:ASP:O	25:a:210:LEU:HB2	2.10	0.52
26:b:34:ASN:ND2	26:b:54:PHE:HB3	2.24	0.52
27:c:107:ALA:HB2	51:3:633:G:O2'	2.10	0.52
29:e:152:ARG:HG3	29:e:165:VAL:HB	1.92	0.52
30:f:69:LYS:HD2	30:f:72:ILE:HD11	1.92	0.52
34:j:5:MET:H	34:j:21:ILE:HB	1.73	0.52
38:n:26:ASN:O	38:n:88:ASN:ND2	2.43	0.52
39:o:49:THR:H	39:o:68:LYS:HD2	1.74	0.52
39:o:60:ILE:HG13	39:o:82:HIS:CE1	2.44	0.52
41:q:74:ILE:HG23	41:q:77:LYS:HB2	1.91	0.52
44:t:41:LYS:HD3	44:t:66:GLU:HG3	1.92	0.52
51:3:186:A:H2'	51:3:187:C:C6	2.45	0.52
51:3:248:A:C4	51:3:249:G:H1'	2.45	0.52
51:3:251:G:N1	51:3:254:G:H5''	2.25	0.52
51:3:707:C:C2	51:3:844:G:C2	2.98	0.52
51:3:730:G:N1	51:3:802:U:N3	2.38	0.52
51:3:1023:C:O2'	51:3:1036:A:N3	2.37	0.52
51:3:1231:G:H2'	51:3:1232:U:C6	2.45	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:3:2021:A:H2'	51:3:2022:A:C5	2.45	0.52
51:3:2165:A:H4'	51:3:2166:U:H5'	1.92	0.52
51:3:2557:G:C2	51:3:2558:G:C5	2.97	0.52
51:3:2853:U:O5'	51:3:2871:G:N2	2.42	0.52
51:3:2856:G:H2'	51:3:2857:C:H6	1.71	0.52
52:4:11:A:O2'	52:4:13:G:N3	2.37	0.52
53:5:124:U:O2'	53:5:125:A:H5'	2.10	0.52
53:5:625:U:H2'	53:5:626:G:C8	2.45	0.52
53:5:1390:G:C4	53:5:1391:A:C8	2.98	0.52
53:5:1429:G:C4	53:5:1430:G:C8	2.97	0.52
54:6:30:G:H2'	54:6:31:G:O4'	2.10	0.52
54:7:53:A:C5	54:7:64:G:C6	2.98	0.52
1:0:3:ARG:NH2	51:3:1647:A:O2'	2.32	0.52
4:9:258:GLY:O	4:9:277:VAL:HA	2.10	0.52
5:A:38:ASN:CB	5:A:205:ASN:HA	2.40	0.52
8:D:87:ARG:CZ	8:D:107:LYS:HD2	2.40	0.52
8:D:160:ILE:HD11	8:D:167:ARG:HA	1.92	0.52
12:H:48:GLN:NE2	12:H:55:ASP:OD2	2.43	0.52
17:M:60:SER:HB3	53:5:1162:G:H21	1.75	0.52
25:a:127:PRO:HD3	25:a:140:PHE:CD1	2.45	0.52
26:b:111:SER:OG	26:b:206:LEU:HB3	2.09	0.52
26:b:149:ALA:HB3	26:b:158:ARG:O	2.10	0.52
27:c:50:HIS:ND1	27:c:50:HIS:O	2.43	0.52
28:d:63:GLN:OE1	28:d:90:THR:N	2.43	0.52
29:e:21:GLN:HG2	29:e:26:ALA:H	1.75	0.52
35:k:44:SER:HB3	51:3:705:A:H3'	1.92	0.52
36:l:6:ARG:NH1	51:3:906:G:O2'	2.39	0.52
38:n:37:ASN:HD22	52:4:25:A:H5'	1.73	0.52
41:q:81:LYS:NZ	51:3:849:C:H3'	2.25	0.52
42:r:49:LYS:NZ	51:3:524:G:O2'	2.43	0.52
51:3:211:A:H2'	51:3:212:G:O4'	2.09	0.52
51:3:408:G:OP2	51:3:459:A:N6	2.43	0.52
51:3:485:A:H2'	51:3:486:G:C8	2.44	0.52
51:3:725:G:H2'	51:3:726:U:H6	1.75	0.52
51:3:784:A:H4'	51:3:1301:G:N3	2.25	0.52
51:3:818:A:N3	51:3:818:A:H2'	2.23	0.52
51:3:985:A:C6	51:3:1005:G:C6	2.98	0.52
51:3:1008:A:OP2	51:3:1009:A:O2'	2.22	0.52
51:3:1191:A:H5''	51:3:1193:U:O4	2.09	0.52
51:3:1400:U:H2'	51:3:1401:A:H8	1.74	0.52
51:3:1469:C:H2'	51:3:1470:C:C6	2.45	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:3:1488:U:O3'	51:3:2710:G:O2'	2.27	0.52
51:3:1720:C:H3'	51:3:1721:G:C8	2.45	0.52
51:3:1762:A:H2'	51:3:1765:G:H8	1.75	0.52
51:3:1842:G:H2'	51:3:1843:C:C6	2.44	0.52
51:3:2612:G:H2'	51:3:2613:U:O4'	2.09	0.52
51:3:2713:A:H2'	51:3:2714:G:O4'	2.10	0.52
53:5:28:G:H2'	53:5:29:G:O4'	2.10	0.52
53:5:39:G:C4	53:5:393:A:C6	2.98	0.52
53:5:398:G:C6	53:5:399:C:C4	2.98	0.52
53:5:657:G:C6	53:5:743:A:N1	2.78	0.52
53:5:696:C:H2'	53:5:697:G:H8	1.74	0.52
53:5:839:U:OP2	53:5:840:C:N4	2.26	0.52
53:5:880:G:H1	53:5:905:U:H3	0.68	0.52
53:5:971:A:O5'	53:5:1332:U:O2'	2.22	0.52
53:5:1068:G:H1	53:5:1071:A:P	2.33	0.52
53:5:1128:G:H2'	53:5:1129:C:C6	2.44	0.52
53:5:1236:A:C8	53:5:1250:A:C6	2.98	0.52
53:5:1406:U:O2	53:5:1444:G:C2	2.63	0.52
54:6:55:U:N3	54:6:59:A:OP1	2.43	0.52
4:9:339:THR:OG1	54:6:66:C:O2'	2.20	0.52
4:9:372:GLY:HA2	4:9:388:SER:HB3	1.92	0.52
5:A:160:GLU:OE1	5:A:164:GLY:HA2	2.09	0.52
5:A:237:ALA:O	5:A:241:ALA:N	2.43	0.52
9:E:65:ASP:OD1	9:E:66:ASN:N	2.42	0.52
11:G:44:ILE:HA	11:G:47:ILE:HG22	1.90	0.52
11:G:107:VAL:HB	11:G:112:GLY:C	2.35	0.52
17:M:5:SER:HB2	53:5:1191:U:H5''	1.91	0.52
20:P:50:GLU:N	20:P:50:GLU:OE1	2.43	0.52
27:c:172:THR:HB	27:c:178:VAL:HG21	1.92	0.52
29:e:160:TYR:OH	51:3:2539:A:OP2	2.25	0.52
34:j:107:ARG:HG3	34:j:112:ASN:ND2	2.25	0.52
35:k:125:HIS:CE1	35:k:145:SER:HG	2.28	0.52
36:l:86:GLY:HA2	51:3:2284:G:H5'	1.92	0.52
37:m:46:ASP:OD2	51:3:2843:G:O2'	2.27	0.52
39:o:26:SER:OG	39:o:93:ARG:NH1	2.42	0.52
39:o:69:THR:HA	39:o:74:PRO:HA	1.92	0.52
40:p:9:THR:HG23	40:p:12:ARG:NH1	2.22	0.52
40:p:78:PHE:HA	40:p:81:LEU:HG	1.92	0.52
43:s:60:ARG:NH1	51:3:1368:U:OP2	2.43	0.52
46:v:51:SER:OG	46:v:54:THR:OG1	2.25	0.52
51:3:50:G:H22	51:3:179:A:H5''	1.74	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:3:55:A:H3'	51:3:56:G:H8	1.75	0.52
51:3:141:A:N6	51:3:1628:G:O2'	2.42	0.52
51:3:1071:G:N1	51:3:1154:U:N3	2.14	0.52
51:3:1078:C:H2'	51:3:1079:U:C6	2.42	0.52
51:3:1220:A:H3'	51:3:1221:G:H8	1.75	0.52
51:3:1348:C:N3	51:3:1359:C:H5	2.08	0.52
51:3:1378:C:N3	51:3:1410:A:N1	2.58	0.52
51:3:1764:U:C4	51:3:1769:A:N7	2.78	0.52
51:3:1873:A:C8	51:3:1883:A:C6	2.98	0.52
51:3:2252:U:H2'	51:3:2253:U:O4'	2.09	0.52
51:3:2270:U:OP1	51:3:2395:U:O2'	2.26	0.52
51:3:2795:C:H2'	51:3:2796:C:C5	2.44	0.52
52:4:21:G:H2'	52:4:22:G:H8	1.69	0.52
52:4:64:G:C2	52:4:97:A:H2'	2.45	0.52
52:4:94:A:H3'	52:4:95:G:H8	1.75	0.52
53:5:97:G:H1	53:5:311:A:H61	1.58	0.52
53:5:842:C:H2'	53:5:843:C:C6	2.45	0.52
53:5:891:C:H2'	53:5:892:G:H8	1.75	0.52
53:5:1087:C:H2'	53:5:1088:C:H6	1.75	0.52
53:5:1102:A:H8	53:5:1102:A:OP2	1.93	0.52
53:5:1197:G:H3'	53:5:1296:C:H42	1.73	0.52
54:7:22:A:H2'	54:7:47:G:N2	2.25	0.52
1:0:26:SER:HA	1:0:29:LYS:HE3	1.91	0.51
5:A:108:ILE:HG12	5:A:166:VAL:HG11	1.91	0.51
9:E:149:ALA:HA	11:G:58:GLN:CD	2.35	0.51
10:F:21:LEU:HD23	10:F:24:ARG:HD3	1.91	0.51
11:G:47:ILE:O	11:G:51:GLU:N	2.42	0.51
12:H:124:ARG:NE	53:5:1319:U:H5''	2.25	0.51
13:I:48:LEU:O	13:I:50:THR:HG23	2.10	0.51
20:P:48:HIS:HE1	20:P:66:THR:HG21	1.74	0.51
23:S:56:ARG:NH2	53:5:197:A:H4'	2.24	0.51
25:a:262:HIS:CE1	51:3:1831:G:N3	2.78	0.51
26:b:157:GLN:HG2	51:3:2060:G:H5''	1.91	0.51
27:c:81:ASN:N	27:c:84:PHE:HB2	2.24	0.51
29:e:101:VAL:HA	29:e:106:LEU:HD22	1.92	0.51
33:i:23:ALA:N	33:i:60:ILE:O	2.41	0.51
38:n:3:THR:C	38:n:5:THR:H	2.17	0.51
51:3:98:C:H2'	51:3:99:C:H6	1.74	0.51
51:3:173:C:O2'	51:3:174:A:H5'	2.10	0.51
51:3:504:G:H3'	51:3:505:G:C8	2.45	0.51
51:3:664:G:H2'	51:3:665:C:C6	2.44	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:3:978:G:H2'	51:3:979:U:O4'	2.10	0.51
51:3:1077:G:N2	51:3:1148:U:O2	2.44	0.51
51:3:1271:A:H2'	51:3:1272:A:C8	2.45	0.51
51:3:1638:C:H2'	51:3:1639:C:C6	2.45	0.51
53:5:82:C:H2'	53:5:83:U:H6	1.76	0.51
53:5:148:A:H3'	53:5:149:G:O4'	2.10	0.51
53:5:236:C:H2'	53:5:237:A:C8	2.46	0.51
53:5:370:A:H4'	53:5:448:A:OP2	2.09	0.51
53:5:413:G:C6	53:5:423:U:N3	2.78	0.51
53:5:887:C:H3'	53:5:888:A:C8	2.43	0.51
53:5:932:A:H2'	53:5:1353:C:N4	2.25	0.51
53:5:987:U:H4'	53:5:988:G:C4	2.44	0.51
53:5:1229:A:H3'	53:5:1230:G:H8	1.74	0.51
53:5:1463:A:H2'	53:5:1464:G:C8	2.45	0.51
1:0:24:THR:HG23	1:0:27:GLY:N	2.25	0.51
4:9:37:ALA:HB2	4:9:44:ALA:HA	1.91	0.51
5:A:59:GLU:C	5:A:63:GLN:HE21	2.18	0.51
10:F:31:GLU:HB2	53:5:1215:U:C4	2.45	0.51
15:K:113:GLY:N	15:K:117:THR:OG1	2.43	0.51
19:O:66:LEU:O	19:O:70:THR:N	2.43	0.51
20:P:32:HIS:N	20:P:37:LYS:O	2.34	0.51
21:Q:102:VAL:HG23	21:Q:103:LYS:HD3	1.93	0.51
22:R:81:LYS:HG3	22:R:83:HIS:HA	1.92	0.51
25:a:107:SER:OG	25:a:108:TYR:N	2.44	0.51
29:e:138:GLY:HA3	29:e:144:VAL:HB	1.91	0.51
34:j:19:VAL:HG13	34:j:41:VAL:HB	1.93	0.51
38:n:4:ARG:HE	52:4:44:A:H5''	1.75	0.51
38:n:76:ASP:N	38:n:76:ASP:OD1	2.41	0.51
40:p:10:ARG:NH1	51:3:615:G:O3'	2.43	0.51
44:t:44:ARG:HB2	44:t:65:GLN:NE2	2.25	0.51
51:3:163:A:H2'	51:3:164:A:C8	2.45	0.51
51:3:210:U:H2'	51:3:211:A:C8	2.45	0.51
51:3:338:G:C6	51:3:348:A:C6	2.98	0.51
51:3:511:U:H1'	51:3:515:A:H62	1.76	0.51
51:3:638:A:C5	51:3:661:G:N1	2.79	0.51
51:3:719:G:C2	51:3:809:A:C5	2.98	0.51
51:3:728:A:H3'	51:3:729:U:H6	1.74	0.51
51:3:849:C:O2'	51:3:1255:G:N2	2.42	0.51
51:3:853:G:H2'	51:3:1220:A:H61	1.75	0.51
51:3:891:G:H2'	51:3:892:G:C8	2.44	0.51
51:3:919:C:H2'	51:3:920:G:O4'	2.10	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:3:1353:G:OP1	51:3:1650:A:O2'	2.23	0.51
51:3:1521:A:H4'	51:3:1522:U:C5	2.45	0.51
51:3:1615:G:C6	51:3:1616:G:C6	2.98	0.51
51:3:1883:A:H2'	51:3:1884:A:H8	1.75	0.51
51:3:1937:G:O2'	51:3:1975:G:O6	2.17	0.51
51:3:2032:G:C6	51:3:2046:G:N1	2.78	0.51
51:3:2240:U:H2'	51:3:2241:A:H8	1.72	0.51
51:3:2407:G:H2'	51:3:2408:G:C8	2.46	0.51
51:3:2697:C:OP2	51:3:2876:G:N1	2.37	0.51
52:4:69:C:H3'	52:4:70:G:H8	1.75	0.51
53:5:257:U:N3	53:5:260:C:OP2	2.33	0.51
53:5:683:G:N2	53:5:701:A:OP2	2.41	0.51
53:5:752:G:H2'	53:5:753:C:C5	2.45	0.51
53:5:849:A:OP2	53:5:865:U:N3	2.43	0.51
53:5:931:C:H1'	53:5:1358:U:C4	2.44	0.51
53:5:958:G:H2'	53:5:959:A:C8	2.45	0.51
53:5:1301:U:H2'	53:5:1302:C:H6	1.75	0.51
53:5:1321:G:H22	53:5:1349:A:P	2.31	0.51
10:F:89:GLU:HG3	10:F:90:VAL:H	1.75	0.51
12:H:69:VAL:O	12:H:70:LYS:NZ	2.26	0.51
13:I:15:LYS:HE2	13:I:77:LYS:NZ	2.24	0.51
14:J:121:ARG:HH11	53:5:1497:U:H5''	1.76	0.51
17:M:40:CYS:HB3	17:M:43:CYS:CB	2.40	0.51
22:R:52:HIS:CD2	53:5:1195:G:H1'	2.43	0.51
25:a:148:HIS:N	25:a:199:THR:O	2.40	0.51
26:b:227:GLU:HB3	39:o:20:ALA:H	1.75	0.51
30:f:6:LYS:HB3	30:f:34:LYS:HA	1.91	0.51
31:g:25:VAL:O	31:g:83:ALA:CB	2.50	0.51
33:i:117:LEU:HB2	33:i:121:TRP:CZ2	2.44	0.51
35:k:84:LYS:HE3	51:3:637:U:C5	2.46	0.51
37:m:6:LYS:O	37:m:8:GLY:N	2.43	0.51
42:r:108:SER:OG	42:r:109:ASP:N	2.43	0.51
42:r:116:GLU:N	42:r:116:GLU:OE1	2.43	0.51
49:y:11:HIS:NE2	51:3:19:G:H5'	2.25	0.51
51:3:85:U:H2'	51:3:86:A:H8	1.74	0.51
51:3:169:U:H2'	51:3:170:A:C8	2.46	0.51
51:3:268:C:H5'	51:3:465:A:O2'	2.11	0.51
51:3:363:G:C2	51:3:513:A:N1	2.77	0.51
51:3:437:A:H3'	51:3:438:A:H8	1.75	0.51
51:3:591:G:H2'	51:3:592:G:H8	1.74	0.51
51:3:614:C:N4	51:3:615:G:O6	2.44	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:3:720:A:H62	51:3:813:G:H1'	1.75	0.51
51:3:885:A:H4'	51:3:970:U:C4	2.45	0.51
51:3:899:A:H2'	51:3:900:G:C8	2.45	0.51
51:3:1369:U:N3	51:3:1423:A:H2	2.08	0.51
51:3:1580:G:H2'	51:3:1581:U:C6	2.45	0.51
51:3:1766:A:N6	51:3:2704:U:O2'	2.43	0.51
51:3:1837:C:H3'	51:3:1838:A:H8	1.75	0.51
51:3:1962:U:H2'	51:3:2559:C:H2'	1.92	0.51
51:3:2112:A:H2'	51:3:2113:U:C6	2.45	0.51
51:3:2200:U:H3'	51:3:2201:G:C8	2.30	0.51
51:3:2366:A:H2'	51:3:2367:C:O4'	2.09	0.51
51:3:2470:C:H2'	51:3:2471:U:H6	1.75	0.51
51:3:2475:C:N4	51:3:2492:G:O6	2.44	0.51
51:3:2838:G:OP2	51:3:2883:A:N6	2.43	0.51
51:3:2849:G:C6	51:3:2875:U:N3	2.72	0.51
53:5:8:G:C6	53:5:294:A:C2	2.98	0.51
53:5:19:C:H2'	53:5:20:C:C6	2.45	0.51
53:5:497:A:H4'	53:5:498:G:OP1	2.11	0.51
53:5:943:C:H5'	53:5:1280:A:H4'	1.92	0.51
53:5:1209:C:H2'	53:5:1210:U:H6	1.75	0.51
53:5:1218:C:H2'	53:5:1219:C:H6	1.75	0.51
53:5:1458:A:H3'	53:5:1459:U:C6	2.46	0.51
53:5:1468:A:C2	54:6:38:G:H1'	2.45	0.51
53:5:1474:A:H3'	53:5:1474:A:OP2	2.10	0.51
54:6:9:U:H4'	54:6:49:C:H4'	1.93	0.51
54:7:13:U:H2'	54:7:14:C:H6	1.75	0.51
6:B:123:LEU:HD11	6:B:140:SER:HB3	1.93	0.51
8:D:140:VAL:O	8:D:151:LEU:HB2	2.10	0.51
8:D:192:ILE:O	8:D:195:THR:OG1	2.20	0.51
11:G:104:LEU:O	11:G:129:ARG:NE	2.30	0.51
12:H:7:TYR:HA	12:H:20:TYR:HA	1.93	0.51
14:J:22:ASN:HD22	53:5:687:G:P	2.34	0.51
14:J:78:PHE:HA	14:J:106:LYS:NZ	2.24	0.51
17:M:22:THR:OG1	17:M:23:ARG:N	2.39	0.51
36:l:35:VAL:O	36:l:129:TRP:CA	2.51	0.51
39:o:7:GLN:NE2	51:3:2879:U:O3'	2.43	0.51
40:p:46:TYR:HA	40:p:49:ARG:NH1	2.25	0.51
41:q:34:GLN:OE1	41:q:55:VAL:N	2.44	0.51
43:s:33:PRO:HB2	43:s:34:LYS:NZ	2.26	0.51
45:u:79:GLY:HA2	45:u:100:HIS:CG	2.46	0.51
45:u:86:PHE:CE1	45:u:94:ARG:HB2	2.46	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:3:50:G:O3'	51:3:53:G:H5'	2.11	0.51
51:3:205:C:H2'	51:3:206:U:C6	2.45	0.51
51:3:246:G:N2	51:3:258:G:H2'	2.26	0.51
51:3:353:G:C2	51:3:367:G:C2	2.99	0.51
51:3:519:A:H3'	51:3:520:C:C5	2.45	0.51
51:3:530:G:H2'	51:3:531:G:H8	1.73	0.51
51:3:569:U:H2'	51:3:570:C:C6	2.45	0.51
51:3:639:G:H2'	51:3:640:U:O4'	2.10	0.51
51:3:745:U:H2'	51:3:746:G:H8	1.73	0.51
51:3:864:A:H62	51:3:2255:A:HO2'	1.55	0.51
51:3:994:U:O2'	51:3:995:A:H5'	2.11	0.51
51:3:1413:A:O2'	51:3:1414:C:H5''	2.11	0.51
51:3:1860:A:O2'	51:3:1861:A:O4'	2.26	0.51
51:3:2033:G:H2'	51:3:2034:G:C8	2.45	0.51
51:3:2571:U:N3	51:3:2574:A:OP2	2.43	0.51
51:3:2586:G:H2'	51:3:2587:U:C6	2.45	0.51
51:3:2736:U:H1'	51:3:2737:G:C8	2.46	0.51
52:4:77:G:C5	52:4:78:C:C2	2.99	0.51
52:4:88:G:H8	52:4:88:G:OP2	1.93	0.51
53:5:58:G:N2	53:5:384:G:C6	2.78	0.51
53:5:171:A:H2'	53:5:172:C:C6	2.45	0.51
53:5:372:G:C2	53:5:385:A:C6	2.99	0.51
53:5:481:U:OP1	53:5:483:U:H1'	2.10	0.51
53:5:824:U:H2'	53:5:864:U:O4	2.10	0.51
53:5:852:G:N2	53:5:864:U:OP2	2.36	0.51
53:5:859:A:H2'	53:5:860:C:O4'	2.11	0.51
53:5:919:C:O2	53:5:1367:G:N2	2.37	0.51
53:5:989:A:C8	53:5:1191:U:H4'	2.45	0.51
53:5:1153:G:H2'	53:5:1155:A:N7	2.25	0.51
54:7:10:A:H5'	54:7:22:A:H61	1.75	0.51
54:7:22:A:H62	54:7:47:G:H4'	1.74	0.51
54:7:72:C:H2'	54:7:73:C:C6	2.46	0.51
4:9:107:SER:HB3	4:9:110:ASP:H	1.75	0.51
4:9:147:GLN:HA	4:9:150:VAL:HG22	1.92	0.51
6:B:11:ARG:H	6:B:16:LYS:HZ2	1.57	0.51
6:B:88:ILE:O	6:B:92:ILE:HG12	2.10	0.51
10:F:33:GLY:HA3	53:5:1324:A:N3	2.26	0.51
10:F:34:LYS:HZ1	53:5:1263:A:H2'	1.74	0.51
10:F:55:GLU:OE1	10:F:56:LYS:N	2.44	0.51
17:M:60:SER:CB	53:5:1162:G:H21	2.23	0.51
19:O:3:MET:HG2	19:O:10:THR:HB	1.92	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:Q:76:THR:OG1	21:Q:77:GLY:N	2.43	0.51
21:Q:78:ASN:O	21:Q:83:GLN:N	2.44	0.51
29:e:156:LYS:C	29:e:164:GLY:HA3	2.36	0.51
30:f:4:ILE:CD1	30:f:37:ALA:C	2.84	0.51
33:i:22:ASP:OD1	33:i:23:ALA:N	2.44	0.51
37:m:32:GLU:HB2	51:3:1307:G:OP1	2.10	0.51
44:t:13:ILE:O	44:t:19:GLY:N	2.42	0.51
45:u:52:TYR:CE1	45:u:54:GLN:HB3	2.46	0.51
46:v:29:TRP:HB3	51:3:432:G:H1'	1.93	0.51
51:3:536:A:H2'	51:3:537:A:C8	2.46	0.51
51:3:716:G:N1	51:3:832:C:N3	2.58	0.51
51:3:854:A:H5''	51:3:1009:A:C2	2.46	0.51
51:3:947:A:C2	51:3:2272:C:H1'	2.46	0.51
51:3:961:U:H2'	51:3:962:U:C6	2.36	0.51
51:3:1354:U:H4'	51:3:2018:U:O4'	2.11	0.51
51:3:1489:G:OP2	51:3:2711:C:H5'	2.10	0.51
51:3:1722:U:O2'	51:3:1734:A:N7	2.43	0.51
51:3:2011:G:H3'	51:3:2012:A:C8	2.38	0.51
51:3:2071:C:H2'	51:3:2072:C:C6	2.45	0.51
51:3:2208:U:H2'	51:3:2209:U:C6	2.45	0.51
51:3:2634:C:H2'	51:3:2635:G:H8	1.76	0.51
51:3:2736:U:O2'	51:3:2737:G:OP2	2.28	0.51
53:5:443:G:C2	53:5:444:G:H1'	2.45	0.51
53:5:943:C:H2'	53:5:944:A:H8	1.76	0.51
53:5:959:A:H5''	53:5:1173:A:H4'	1.91	0.51
53:5:1002:A:N7	53:5:1019:G:C2	2.78	0.51
53:5:1047:U:H2'	53:5:1048:G:C8	2.46	0.51
53:5:1106:U:H2'	53:5:1107:U:C6	2.46	0.51
53:5:1384:A:O2'	53:5:1385:A:H5'	2.11	0.51
54:7:7:U:O2	54:7:68:G:N2	2.35	0.51
1:0:12:ARG:HG3	1:0:16:HIS:HD2	1.76	0.51
2:1:4:LYS:HG3	2:1:58:LEU:HD13	1.91	0.51
4:9:98:GLN:OE1	4:9:231:ARG:NH2	2.44	0.51
6:B:87:LYS:O	6:B:90:LYS:HG3	2.11	0.51
8:D:179:TYR:OH	53:5:7:U:N3	2.41	0.51
9:E:3:TYR:O	9:E:4:ASN:ND2	2.44	0.51
16:L:103:ARG:HH21	53:5:1201:C:H41	1.59	0.51
23:S:68:LEU:HD12	23:S:69:LYS:N	2.26	0.51
25:a:40:THR:HA	25:a:65:LYS:HG2	1.93	0.51
33:i:14:LYS:HD2	33:i:53:CYS:HA	1.92	0.51
33:i:105:TYR:OH	51:3:2788:U:O4	2.29	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:n:38:HIS:HB2	38:n:64:ASN:H	1.74	0.51
39:o:37:LEU:C	39:o:38:LYS:HD3	2.36	0.51
39:o:94:GLY:HA2	39:o:116:GLU:H	1.75	0.51
40:p:2:ARG:H	51:3:481:C:H5''	1.75	0.51
40:p:107:LEU:O	40:p:111:LYS:HB3	2.11	0.51
43:s:51:LYS:O	47:w:87:TRP:NE1	2.37	0.51
45:u:55:ARG:NH1	45:u:70:ASP:O	2.44	0.51
51:3:26:G:N1	51:3:552:C:N3	2.58	0.51
51:3:123:G:H2'	51:3:124:A:C8	2.45	0.51
51:3:230:G:H1	51:3:454:G:H21	1.58	0.51
51:3:308:A:C2	51:3:397:G:C2	2.99	0.51
51:3:338:G:C6	51:3:339:U:C4	2.98	0.51
51:3:629:G:N2	51:3:696:U:O2	2.35	0.51
51:3:1192:U:H3'	51:3:1193:U:H6	1.75	0.51
51:3:1251:G:C2	51:3:1259:A:C4	2.99	0.51
51:3:1389:G:H2'	51:3:1390:C:H6	1.76	0.51
51:3:1718:C:N4	51:3:1739:G:O6	2.43	0.51
51:3:1723:A:H2'	51:3:1724:A:O4'	2.11	0.51
51:3:1741:G:C5	51:3:1763:G:C6	2.99	0.51
51:3:1985:A:H2'	51:3:1986:C:C6	2.45	0.51
51:3:2121:A:H2	51:3:2176:G:H1'	1.75	0.51
51:3:2296:A:C2	51:3:2333:G:C8	2.99	0.51
51:3:2418:G:H2'	51:3:2419:A:O4'	2.11	0.51
51:3:2436:G:H4'	51:3:2437:G:C8	2.46	0.51
51:3:2501:U:H3'	51:3:2502:G:H5''	1.92	0.51
51:3:2570:U:H2'	51:3:2570:U:O2	2.10	0.51
51:3:2854:A:N7	51:3:2870:U:N3	2.58	0.51
53:5:359:A:H2'	53:5:360:A:N9	2.25	0.51
53:5:377:A:P	53:5:378:A:H62	2.34	0.51
53:5:433:C:C2'	53:5:434:U:H5'	2.40	0.51
53:5:655:G:H2'	53:5:656:U:C6	2.46	0.51
53:5:782:G:H2'	53:5:783:G:C8	2.46	0.51
53:5:881:G:H2'	53:5:882:U:C6	2.46	0.51
53:5:909:A:H2'	53:5:911:G:H5''	1.92	0.51
53:5:1043:U:C2	53:5:1181:G:O6	2.63	0.51
53:5:1052:G:C5	53:5:1053:U:C4	2.99	0.51
53:5:1156:G:C4	53:5:1157:G:C6	2.99	0.51
1:0:39:ARG:NH2	51:3:495:U:OP2	2.43	0.51
4:9:246:VAL:HG23	4:9:292:VAL:HB	1.92	0.51
6:B:33:TRP:HA	6:B:60:ARG:NH2	2.25	0.51
14:J:111:HIS:HE1	53:5:671:G:O2'	1.94	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:L:16:GLU:HB2	16:L:41:PRO:HG3	1.92	0.51
17:M:16:PHE:HE2	53:5:974:C:H1'	1.75	0.51
22:R:36:ARG:C	22:R:71:LEU:HB3	2.35	0.51
25:a:71:PHE:CD1	25:a:71:PHE:N	2.77	0.51
26:b:63:ASN:ND2	26:b:65:PRO:HD2	2.25	0.51
26:b:185:ASP:OD2	26:b:188:ASN:HB2	2.11	0.51
28:d:50:LEU:O	28:d:54:LEU:HD23	2.11	0.51
30:f:8:ASP:CG	30:f:16:PHE:HB2	2.35	0.51
33:i:27:VAL:HA	33:i:67:LEU:HG	1.92	0.51
33:i:117:LEU:HD11	51:3:590:U:H4'	1.92	0.51
34:j:31:ARG:HH12	51:3:2683:G:P	2.33	0.51
34:j:80:ASP:OD1	39:o:76:GLU:HG2	2.10	0.51
35:k:110:LEU:HD12	35:k:111:PRO:HD2	1.92	0.51
36:l:133:LYS:HG2	36:l:134:ARG:N	2.26	0.51
38:n:100:GLY:HA3	52:4:47:C:P	2.50	0.51
42:r:82:MET:HB2	42:r:98:LYS:HB2	1.93	0.51
43:s:2:ASP:OD1	43:s:39:ARG:NH1	2.44	0.51
46:v:3:LYS:NZ	51:3:1392:G:H5''	2.25	0.51
51:3:226:A:H8	51:3:456:G:H4'	1.76	0.51
51:3:249:G:H21	51:3:422:A:H2	1.55	0.51
51:3:308:A:C2	51:3:309:A:C5	2.99	0.51
51:3:572:G:H2'	51:3:573:A:C8	2.46	0.51
51:3:614:C:H2'	51:3:615:G:H8	1.76	0.51
51:3:676:U:H2'	51:3:677:U:C6	2.45	0.51
51:3:865:A:H5''	51:3:2456:A:C2	2.46	0.51
51:3:948:A:N1	51:3:2285:G:O2'	2.35	0.51
51:3:1253:G:C6	51:3:1257:G:C5	2.99	0.51
51:3:1287:C:H2'	51:3:1288:C:C6	2.45	0.51
51:3:1385:U:C2	51:3:1403:G:C2	2.99	0.51
51:3:1724:A:N6	51:3:1731:G:C2	2.78	0.51
51:3:1775:G:H2'	51:3:1776:G:C8	2.46	0.51
51:3:1775:G:H1	51:3:1991:U:H3	1.58	0.51
51:3:1871:U:O3'	51:3:2417:G:N2	2.41	0.51
51:3:1883:A:H2'	51:3:1884:A:C8	2.46	0.51
51:3:1939:A:C2	51:3:1940:G:H1'	2.46	0.51
51:3:2260:G:O6	54:7:75:C:H2'	2.10	0.51
51:3:2306:A:O2'	51:3:2330:A:H4'	2.10	0.51
51:3:2545:U:H2'	51:3:2546:U:C6	2.45	0.51
51:3:2728:U:O2	51:3:2877:A:C8	2.64	0.51
51:3:2764:U:C4	51:3:2767:G:C6	2.98	0.51
52:4:14:U:H2'	52:4:15:C:C6	2.45	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:5:28:G:H2'	53:5:29:G:H8	1.76	0.51
53:5:239:A:N6	53:5:277:G:H1'	2.24	0.51
53:5:253:G:C6	53:5:266:A:N1	2.78	0.51
53:5:266:A:C6	53:5:267:C:C4	2.98	0.51
53:5:296:A:H2	53:5:564:G:O6	1.94	0.51
53:5:319:U:O2	53:5:323:A:N7	2.43	0.51
53:5:340:A:H3'	53:5:341:C:C2	2.45	0.51
53:5:369:A:C4	53:5:479:A:N6	2.78	0.51
53:5:580:C:C4	53:5:757:G:C6	2.99	0.51
53:5:1039:G:N1	53:5:1185:C:N3	2.58	0.51
53:5:1186:U:O2'	53:5:1187:U:H5''	2.10	0.51
53:5:1359:C:H2'	53:5:1360:G:C8	2.46	0.51
53:5:1496:G:H2'	53:5:1497:U:C6	2.46	0.51
54:6:34:U:HO2'	54:6:37:A:N6	2.04	0.51
54:7:57:C:C5	54:7:58:G:C6	2.99	0.51
4:9:16:GLY:HA3	4:9:99:MET:SD	2.51	0.51
5:A:182:VAL:O	5:A:185:LYS:HE3	2.11	0.51
7:C:73:ARG:N	7:C:76:ARG:HH11	2.08	0.51
10:F:9:ARG:NH1	53:5:1320:A:N7	2.58	0.51
11:G:124:THR:OG1	11:G:127:VAL:HG12	2.11	0.51
16:L:32:ALA:HA	16:L:35:LYS:HE3	1.92	0.51
17:M:45:ARG:NH2	53:5:1050:U:O2'	2.44	0.51
27:c:51:SER:OG	27:c:95:PRO:HG3	2.11	0.51
33:i:105:TYR:HE2	33:i:125:VAL:HB	1.76	0.51
33:i:115:ASN:ND2	51:3:591:G:H5''	2.25	0.51
37:m:73:PHE:HB2	37:m:78:LEU:HG	1.93	0.51
39:o:25:PHE:HB3	39:o:90:LEU:HD12	1.92	0.51
40:p:74:THR:O	40:p:78:PHE:HB2	2.11	0.51
40:p:80:ASN:ND2	51:3:1186:A:O3'	2.35	0.51
41:q:78:HIS:ND1	51:3:1219:U:H4'	2.26	0.51
44:t:44:ARG:NH2	51:3:516:A:OP2	2.44	0.51
44:t:45:HIS:N	51:3:517:G:OP2	2.43	0.51
45:u:28:ARG:C	51:3:2286:A:N6	2.69	0.51
45:u:94:ARG:HG2	45:u:95:VAL:H	1.76	0.51
50:z:11:CYS:HB3	50:z:16:GLU:N	2.22	0.51
51:3:193:G:H21	51:3:211:A:H62	1.57	0.51
51:3:234:G:C2	51:3:235:U:C4	2.99	0.51
51:3:572:G:N1	51:3:588:G:N3	2.58	0.51
51:3:755:C:H2'	51:3:756:A:C8	2.45	0.51
51:3:770:A:H3'	51:3:771:C:C6	2.46	0.51
51:3:810:G:H4'	51:3:810:G:OP1	2.11	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:3:1721:G:C2	51:3:1736:G:C6	2.99	0.51
51:3:2567:C:C2	51:3:2568:G:C8	2.98	0.51
51:3:2647:A:H2'	51:3:2648:A:O4'	2.10	0.51
51:3:2720:C:OP1	51:3:2722:G:O2'	2.25	0.51
53:5:104:A:H5'	53:5:105:A:N3	2.25	0.51
53:5:297:A:H2'	53:5:298:G:H8	1.73	0.51
53:5:413:G:C2	53:5:423:U:O2	2.64	0.51
53:5:463:U:H2'	53:5:465:A:OP2	2.09	0.51
53:5:1006:A:H2'	53:5:1007:U:C6	2.45	0.51
53:5:1386:C:H2'	53:5:1387:U:C6	2.46	0.51
54:7:53:A:H1'	54:7:64:G:N2	2.26	0.51
4:9:66:ALA:O	4:9:80:VAL:HA	2.11	0.51
5:A:69:TYR:CE1	5:A:235:ALA:HB2	2.45	0.51
5:A:199:VAL:HG12	5:A:213:PHE:HB2	1.92	0.51
6:B:187:TYR:CG	6:B:188:ALA:N	2.79	0.51
7:C:78:VAL:HG13	7:C:81:GLN:HE21	1.76	0.51
10:F:47:ASP:O	10:F:51:GLN:HB2	2.11	0.51
12:H:96:LEU:O	12:H:100:LEU:N	2.37	0.51
13:I:51:LYS:HZ2	53:5:1228:C:P	2.33	0.51
18:N:38:ASP:HA	18:N:41:LEU:HG	1.92	0.51
25:a:137:PRO:HA	25:a:197:ARG:HA	1.93	0.51
25:a:158:GLY:O	25:a:162:ARG:NH1	2.36	0.51
25:a:240:HIS:CE1	25:a:254:PRO:HG3	2.43	0.51
26:b:42:GLU:HG3	26:b:47:TYR:HA	1.92	0.51
27:c:137:GLU:O	27:c:170:GLN:HB2	2.11	0.51
28:d:94:GLU:HA	28:d:97:TRP:HB2	1.92	0.51
35:k:36:GLN:HE21	35:k:37:LYS:HG2	1.74	0.51
35:k:83:ASN:OD1	35:k:84:LYS:N	2.42	0.51
39:o:6:LYS:O	51:3:2879:U:O2'	2.18	0.51
40:p:107:LEU:O	40:p:111:LYS:HB2	2.11	0.51
41:q:60:GLU:OE2	41:q:91:LYS:HG2	2.11	0.51
50:z:42:ARG:HH11	51:3:679:A:H8	1.57	0.51
51:3:177:U:H3'	51:3:178:A:C8	2.46	0.51
51:3:177:U:O4	51:3:178:A:N6	2.43	0.51
51:3:225:A:C4	51:3:237:A:H1'	2.45	0.51
51:3:244:G:P	51:3:245:U:H2'	2.51	0.51
51:3:296:U:O4	51:3:301:G:O2'	2.25	0.51
51:3:355:A:C5	51:3:375:U:H4'	2.46	0.51
51:3:411:U:H2'	51:3:412:A:H8	1.75	0.51
51:3:635:G:N2	51:3:636:U:H3	2.09	0.51
51:3:646:A:C6	51:3:647:G:C6	2.99	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:3:679:A:H2'	51:3:680:A:O4'	2.11	0.51
51:3:804:U:C2	51:3:805:G:C8	2.99	0.51
51:3:852:C:O2	51:3:874:U:H4'	2.11	0.51
51:3:1294:G:H3'	51:3:1295:A:H8	1.76	0.51
51:3:1317:C:H4'	51:3:1358:C:H4'	1.93	0.51
51:3:1335:A:H2'	51:3:1336:A:C8	2.46	0.51
51:3:1342:C:H5'	51:3:1644:A:N1	2.26	0.51
51:3:1496:A:N6	51:3:1547:G:O2'	2.43	0.51
51:3:1920:A:C4	53:5:1469:G:H4'	2.46	0.51
51:3:2099:U:OP1	51:3:2207:A:O2'	2.26	0.51
51:3:2170:A:H5'	51:3:2174:G:H22	1.75	0.51
51:3:2515:C:H5''	51:3:2581:C:C2	2.46	0.51
51:3:2725:G:C6	51:3:2726:G:C5	2.99	0.51
51:3:2799:U:H2'	51:3:2810:A:C2	2.46	0.51
51:3:2839:A:N6	51:3:2882:U:H3'	2.26	0.51
52:4:59:A:O2'	52:4:60:C:OP1	2.23	0.51
52:4:73:U:H2'	52:4:74:G:C8	2.44	0.51
53:5:28:G:N2	53:5:292:U:H4'	2.26	0.51
53:5:59:C:O2'	53:5:384:G:H2'	2.10	0.51
53:5:161:C:H2'	53:5:162:C:H6	1.76	0.51
53:5:167:A:H1'	53:5:197:A:N6	2.25	0.51
53:5:207:C:H3'	53:5:208:A:H8	1.76	0.51
53:5:623:G:C2	53:5:624:U:C2	2.99	0.51
53:5:631:C:H2'	53:5:632:A:H8	1.76	0.51
53:5:1005:U:H2'	53:5:1006:A:C8	2.46	0.51
53:5:1479:G:OP1	53:5:1482:A:O2'	2.24	0.51
54:6:5:C:C4	54:6:6:U:C4	2.99	0.51
2:1:28:HIS:CD2	51:3:2428:C:H3'	2.46	0.51
4:9:4:GLU:HB2	4:9:264:LYS:HD2	1.91	0.51
4:9:247:GLY:HA2	4:9:367:ILE:HA	1.92	0.51
4:9:345:PRO:CG	4:9:358:SER:H	2.18	0.51
5:A:44:PHE:O	5:A:57:VAL:HG11	2.10	0.51
6:B:27:HIS:N	6:B:30:THR:OG1	2.43	0.51
12:H:19:VAL:HG12	12:H:67:VAL:HG23	1.92	0.51
12:H:37:PRO:HB3	12:H:41:PHE:HE2	1.76	0.51
12:H:109:ASP:O	12:H:110:LYS:HG3	2.11	0.51
12:H:125:ARG:NH1	53:5:1317:A:H1'	2.26	0.51
15:K:94:LEU:O	15:K:110:ILE:HG13	2.11	0.51
19:O:5:ARG:NH2	53:5:621:C:O2	2.44	0.51
19:O:21:LYS:NZ	53:5:97:G:OP1	2.42	0.51
23:S:28:LEU:HA	23:S:31:ASN:ND2	2.25	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:a:119:ASP:C	25:a:120:LYS:HD3	2.36	0.51
25:a:236:ASN:ND2	51:3:2080:C:H5'	2.26	0.51
26:b:36:VAL:HG21	26:b:92:MET:HA	1.92	0.51
26:b:225:GLN:HE21	39:o:19:LYS:HD3	1.75	0.51
30:f:127:THR:HG22	30:f:135:THR:HG22	1.92	0.51
30:f:129:HIS:ND1	30:f:132:GLU:OE1	2.44	0.51
34:j:41:VAL:O	34:j:57:VAL:HA	2.11	0.51
35:k:116:GLY:HA2	51:3:663:A:H62	1.76	0.51
38:n:38:HIS:CD2	38:n:58:LEU:HD23	2.46	0.51
51:3:201:A:H3'	51:3:202:C:C6	2.46	0.51
51:3:332:G:N1	51:3:373:U:OP2	2.41	0.51
51:3:343:A:N3	51:3:363:G:O2'	2.39	0.51
51:3:586:G:C5	51:3:587:U:C4	2.98	0.51
51:3:597:C:O2'	51:3:1283:A:N1	2.44	0.51
51:3:618:G:C2	51:3:1286:G:C6	2.98	0.51
51:3:678:U:N3	51:3:681:A:OP2	2.42	0.51
51:3:728:A:O2'	51:3:1381:A:O2'	2.24	0.51
51:3:1027:U:N3	51:3:1198:G:N1	2.21	0.51
51:3:1147:G:H2'	51:3:1148:U:O4'	2.11	0.51
51:3:1186:A:H2'	51:3:1187:C:O4'	2.10	0.51
51:3:1228:G:C6	51:3:1280:G:C6	2.99	0.51
51:3:1327:G:H1'	51:3:1675:A:H61	1.76	0.51
51:3:1335:A:OP2	51:3:1640:G:N1	2.29	0.51
51:3:1375:G:C6	51:3:1376:G:C8	2.99	0.51
51:3:1483:G:O2'	51:3:2857:C:OP1	2.25	0.51
51:3:1686:U:H3'	51:3:1687:G:C8	2.46	0.51
51:3:2130:A:C5	51:3:2184:A:C6	2.99	0.51
51:3:2472:G:C2	51:3:2495:A:C2	2.99	0.51
51:3:2646:G:H1'	51:3:2786:A:H61	1.75	0.51
51:3:2744:A:H2'	51:3:2745:G:C8	2.46	0.51
53:5:8:G:H5'	53:5:294:A:OP1	2.10	0.51
53:5:206:G:O2'	53:5:208:A:N6	2.26	0.51
53:5:246:A:H4'	53:5:247:G:OP1	2.11	0.51
53:5:434:U:C4	53:5:493:A:C8	2.88	0.51
53:5:547:C:H2'	53:5:548:G:C8	2.46	0.51
53:5:727:G:O2'	53:5:811:A:N6	2.44	0.51
53:5:1097:G:C2'	53:5:1098:C:H5'	2.41	0.51
53:5:1402:U:O2	53:5:1449:G:N2	2.44	0.51
53:5:1429:G:H2'	53:5:1430:G:O4'	2.11	0.51
2:1:4:LYS:H	2:1:58:LEU:HD11	1.76	0.50
4:9:312:LEU:N	4:9:384:VAL:O	2.41	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:B:12:PHE:CZ	17:M:51:GLY:HA3	2.46	0.50
13:I:28:THR:O	13:I:32:VAL:HG13	2.12	0.50
16:L:65:ILE:C	16:L:69:LEU:HD23	2.36	0.50
25:a:64:ARG:HH21	51:3:1601:A:P	2.33	0.50
30:f:26:ALA:HB3	30:f:28:HIS:CD2	2.46	0.50
36:l:6:ARG:HH22	51:3:906:G:H4'	1.76	0.50
38:n:42:GLN:NE2	52:4:5:G:O2'	2.44	0.50
41:q:38:VAL:HG11	41:q:41:LEU:HB2	1.93	0.50
47:w:38:LEU:HG	47:w:40:LYS:H	1.76	0.50
51:3:162:G:O2'	51:3:163:A:H5''	2.11	0.50
51:3:408:G:OP1	51:3:440:C:N4	2.44	0.50
51:3:526:G:O2'	51:3:527:A:O4'	2.22	0.50
51:3:666:G:N2	51:3:668:A:H3'	2.26	0.50
51:3:954:A:H3'	51:3:955:A:H8	1.76	0.50
51:3:978:G:H4'	51:3:1220:A:O2'	2.10	0.50
51:3:995:A:C2	51:3:2465:U:H1'	2.47	0.50
51:3:1036:A:H3'	51:3:1189:G:N2	2.25	0.50
51:3:1168:A:N6	51:3:2032:G:O2'	2.44	0.50
51:3:1199:A:H2'	51:3:1200:U:O4'	2.11	0.50
51:3:1266:G:H8	51:3:1266:G:OP2	1.94	0.50
51:3:1464:G:H8	51:3:1464:G:OP2	1.94	0.50
51:3:1592:A:C4	51:3:1594:G:C8	2.98	0.50
51:3:2070:C:C2	51:3:2071:C:C5	3.00	0.50
51:3:2355:C:H5	51:3:2390:G:C8	2.28	0.50
51:3:2429:G:H2'	51:3:2430:C:C2	2.46	0.50
51:3:2609:C:H2'	51:3:2611:G:C8	2.45	0.50
51:3:2648:A:H2'	51:3:2649:G:O4'	2.12	0.50
51:3:2734:C:O2'	51:3:2735:G:H8	1.95	0.50
51:3:2752:G:H2'	51:3:2753:C:C6	2.46	0.50
51:3:2822:C:O3'	51:3:2841:A:H4'	2.11	0.50
53:5:19:C:H2'	53:5:20:C:H6	1.75	0.50
53:5:77:U:H2'	53:5:78:A:O4'	2.11	0.50
53:5:435:U:O2	53:5:494:A:N7	2.44	0.50
53:5:497:A:N6	53:5:545:A:O4'	2.44	0.50
53:5:597:C:H2'	53:5:598:U:H6	1.75	0.50
53:5:650:A:O3'	53:5:651:G:H8	1.94	0.50
53:5:720:U:C5	53:5:829:G:H1'	2.46	0.50
53:5:777:A:N6	53:5:798:U:OP2	2.44	0.50
53:5:786:U:H3	53:5:788:G:H3'	1.76	0.50
53:5:932:A:H1'	53:5:1354:G:N1	2.26	0.50
53:5:986:U:O2'	53:5:987:U:OP2	2.29	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:5:1002:A:N6	53:5:1003:G:C2	2.78	0.50
4:9:150:VAL:O	4:9:154:VAL:HG23	2.11	0.50
5:A:128:ASN:O	5:A:132:LYS:HG2	2.11	0.50
6:B:90:LYS:O	6:B:94:GLN:HG2	2.11	0.50
7:C:151:ILE:O	7:C:155:LYS:N	2.38	0.50
8:D:141:ILE:HG12	8:D:148:ARG:HB3	1.91	0.50
8:D:154:ALA:HA	8:D:179:TYR:CE2	2.45	0.50
8:D:207:ARG:O	8:D:211:LEU:HG	2.11	0.50
11:G:90:ILE:HD11	11:G:140:TYR:CG	2.46	0.50
12:H:36:ASP:HB3	12:H:39:GLU:OE1	2.11	0.50
12:H:97:LYS:HE2	12:H:101:LYS:HE2	1.94	0.50
20:P:8:VAL:HG13	20:P:62:GLN:NE2	2.26	0.50
26:b:146:SER:HG	51:3:2519:U:H3	1.57	0.50
26:b:177:GLN:N	26:b:177:GLN:OE1	2.44	0.50
29:e:19:ASN:O	29:e:21:GLN:NE2	2.40	0.50
33:i:17:GLN:H	33:i:55:ASP:HB3	1.76	0.50
36:l:1:MET:HG2	36:l:45:ARG:HA	1.93	0.50
36:l:24:ASN:HA	36:l:67:ARG:HH11	1.77	0.50
36:l:45:ARG:NH1	36:l:93:TRP:O	2.45	0.50
37:m:6:LYS:C	37:m:8:GLY:N	2.69	0.50
42:r:14:PRO:O	42:r:18:ARG:HG2	2.11	0.50
43:s:70:ARG:HD3	43:s:71:PHE:CE2	2.45	0.50
51:3:25:G:C6	51:3:553:A:C6	2.99	0.50
51:3:323:A:H2'	51:3:324:C:O4'	2.11	0.50
51:3:755:C:C2	51:3:756:A:C8	2.99	0.50
51:3:893:A:C6	51:3:894:G:C6	3.00	0.50
51:3:922:C:O2	51:3:929:G:N1	2.44	0.50
51:3:954:A:C2	51:3:955:A:H1'	2.46	0.50
51:3:1083:A:H1'	51:3:1147:G:N2	2.26	0.50
51:3:1088:A:H3'	51:3:1089:A:H8	1.74	0.50
51:3:1095:U:N3	51:3:1123:A:C8	2.79	0.50
51:3:2030:A:H2'	51:3:2031:C:C6	2.46	0.50
51:3:2036:G:N1	51:3:2040:A:OP2	2.45	0.50
51:3:2106:G:H22	51:3:2198:G:H22	1.57	0.50
51:3:2353:G:H4'	51:3:2354:A:H3'	1.94	0.50
51:3:2420:A:H3'	51:3:2421:U:H6	1.76	0.50
51:3:2645:U:H2'	51:3:2646:G:O4'	2.10	0.50
51:3:2702:G:H3'	51:3:2703:U:H6	1.77	0.50
51:3:2861:G:H22	51:3:2864:A:P	2.34	0.50
52:4:11:A:O3'	52:4:13:G:N2	2.44	0.50
53:5:24:C:H2'	53:5:25:U:H6	1.76	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:5:95:C:H3'	53:5:96:G:C8	2.46	0.50
53:5:113:C:N3	53:5:230:G:N1	2.59	0.50
53:5:117:U:H2'	53:5:118:C:C6	2.47	0.50
53:5:321:A:H2'	53:5:322:G:C8	2.47	0.50
53:5:489:U:OP2	53:5:489:U:H6	1.93	0.50
53:5:807:C:H2'	53:5:808:C:O4'	2.10	0.50
53:5:852:G:H1	53:5:863:A:H3'	1.76	0.50
53:5:948:U:H2'	53:5:949:G:H8	1.76	0.50
2:1:48:SER:O	2:1:52:PHE:N	2.42	0.50
4:9:174:SER:OG	4:9:177:LYS:HB2	2.11	0.50
6:B:27:HIS:HD2	17:M:36:HIS:HB3	1.76	0.50
8:D:73:LEU:H	8:D:73:LEU:HD23	1.77	0.50
9:E:7:LEU:C	9:E:8:LEU:HD22	2.36	0.50
9:E:12:SER:HA	9:E:42:LEU:HD11	1.92	0.50
14:J:18:CYS:SG	14:J:85:GLY:N	2.85	0.50
15:K:134:LYS:HD3	53:5:38:U:H4'	1.93	0.50
18:N:59:LYS:O	18:N:63:LEU:HG	2.12	0.50
25:a:138:LEU:HA	25:a:141:ILE:HD12	1.93	0.50
29:e:24:HIS:HB2	29:e:35:GLU:OE2	2.12	0.50
29:e:100:ASN:N	29:e:107:ASN:OD1	2.45	0.50
34:j:98:ILE:HD11	34:j:117:LEU:HG	1.94	0.50
38:n:27:ARG:NH2	38:n:115:ASN:O	2.36	0.50
39:o:99:ALA:HB3	51:3:2852:G:OP2	2.12	0.50
40:p:41:ALA:HA	40:p:44:TYR:CD2	2.47	0.50
43:s:58:LEU:HD23	51:3:1369:U:H6	1.76	0.50
44:t:5:LYS:HE3	44:t:8:ASP:HB3	1.93	0.50
49:y:14:ASP:HA	49:y:17:ARG:HB2	1.93	0.50
51:3:410:G:N1	51:3:436:G:H3'	2.21	0.50
51:3:419:A:H3'	51:3:425:U:O4	2.12	0.50
51:3:450:C:H1'	51:3:1871:U:H1'	1.93	0.50
51:3:589:A:H3'	51:3:590:U:H6	1.76	0.50
51:3:683:G:C6	51:3:684:A:C6	2.99	0.50
51:3:858:A:H2'	51:3:859:G:O4'	2.11	0.50
51:3:1047:A:N1	51:3:1185:U:C4	2.79	0.50
51:3:1070:U:C4	51:3:1155:G:O6	2.63	0.50
51:3:1096:U:O2'	51:3:1098:G:OP2	2.29	0.50
51:3:1129:U:O2	51:3:1132:C:H6	1.94	0.50
51:3:1268:U:H2'	51:3:1269:C:O4'	2.11	0.50
51:3:1446:G:H2'	51:3:1612:U:C4	2.46	0.50
51:3:1583:G:O2'	51:3:1584:U:OP1	2.27	0.50
51:3:1627:U:H2'	51:3:1628:G:H8	1.76	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:3:2286:A:C6	51:3:2287:G:C5	3.00	0.50
51:3:2288:G:O2'	51:3:2396:A:N1	2.40	0.50
51:3:2331:G:N1	51:3:2340:U:C2	2.77	0.50
51:3:2498:G:O3'	51:3:2499:U:H2'	2.12	0.50
51:3:2713:A:O2'	51:3:2856:G:OP1	2.19	0.50
51:3:2849:G:O6	51:3:2875:U:C4	2.64	0.50
52:4:11:A:H4'	52:4:13:G:C2	2.47	0.50
53:5:299:U:H4'	53:5:553:C:O3'	2.10	0.50
53:5:961:G:C6	53:5:962:G:C6	2.99	0.50
53:5:1075:G:H5'	53:5:1093:A:OP2	2.11	0.50
53:5:1223:A:C6	53:5:1264:G:C4	2.99	0.50
53:5:1289:U:H3	53:5:1293:A:N6	2.08	0.50
53:5:1347:U:H3'	53:5:1348:G:C8	2.47	0.50
54:6:7:U:O4	54:6:68:G:O6	2.28	0.50
54:7:30:G:C4	54:7:31:G:C8	2.99	0.50
54:7:54:G:N3	54:7:54:G:H2'	2.27	0.50
4:9:34:THR:HG21	4:9:179:LEU:HD12	1.93	0.50
6:B:33:TRP:O	6:B:60:ARG:NH1	2.28	0.50
6:B:152:ILE:O	6:B:172:ILE:HD12	2.10	0.50
7:C:198:GLU:HG3	8:D:160:ILE:O	2.12	0.50
8:D:94:VAL:HG22	8:D:122:ALA:HB1	1.92	0.50
9:E:30:THR:OG1	9:E:31:ASN:N	2.44	0.50
15:K:88:GLN:HB2	15:K:91:SER:OG	2.12	0.50
16:L:54:VAL:HG13	16:L:55:ALA:H	1.75	0.50
18:N:5:LYS:O	18:N:8:ILE:HG22	2.11	0.50
19:O:74:LYS:HD3	53:5:470:U:H5'	1.92	0.50
22:R:15:LEU:HA	22:R:18:LYS:HE2	1.92	0.50
25:a:41:LEU:HG	25:a:65:LYS:HA	1.93	0.50
26:b:42:GLU:HB2	26:b:48:SER:N	2.26	0.50
26:b:123:ILE:O	26:b:128:PHE:N	2.44	0.50
26:b:227:GLU:HG2	39:o:19:LYS:HB3	1.92	0.50
27:c:194:ALA:C	27:c:196:ALA:H	2.19	0.50
36:l:103:MET:HG3	36:l:104:PHE:N	2.26	0.50
42:r:61:ASN:OD1	51:3:530:G:N2	2.35	0.50
47:w:84:VAL:O	47:w:88:LYS:HG3	2.11	0.50
51:3:18:G:H2'	51:3:19:G:C8	2.46	0.50
51:3:122:G:C6	51:3:132:G:C4	3.00	0.50
51:3:201:A:H2	51:3:2442:A:H62	1.58	0.50
51:3:251:G:OP2	51:3:253:C:N4	2.44	0.50
51:3:301:G:H2'	51:3:302:G:H8	1.76	0.50
51:3:719:G:C2	51:3:829:A:C2	2.99	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:3:818:A:O2'	51:3:820:U:OP1	2.27	0.50
51:3:920:G:H2'	51:3:921:C:O4'	2.11	0.50
51:3:972:C:H2'	51:3:973:U:C6	2.46	0.50
51:3:1036:A:P	51:3:1189:G:H1	2.35	0.50
51:3:1380:U:H1'	51:3:1604:A:H2	1.76	0.50
51:3:1450:G:H4'	51:3:1518:C:OP1	2.11	0.50
51:3:1913:G:C5	51:3:1936:G:C2	2.99	0.50
51:3:1945:A:C5	51:3:2598:C:H1'	2.46	0.50
51:3:2021:A:H2'	51:3:2022:A:C4	2.45	0.50
51:3:2080:C:H2'	51:3:2081:U:C6	2.45	0.50
51:3:2088:U:H3'	51:3:2245:G:H1	1.77	0.50
51:3:2403:C:H2'	51:3:2404:G:C8	2.46	0.50
51:3:2462:G:C4	51:3:2463:G:C8	2.99	0.50
51:3:2528:C:H2'	51:3:2529:C:C6	2.45	0.50
51:3:2534:G:C2	51:3:2546:U:C2	3.00	0.50
51:3:2579:U:C5'	51:3:2580:A:H5''	2.39	0.50
51:3:2596:A:C6	51:3:2615:G:N1	2.80	0.50
51:3:2641:A:C2	51:3:2794:U:C2	2.99	0.50
51:3:2696:G:O2'	51:3:2728:U:O4	2.17	0.50
51:3:2736:U:OP2	51:3:2736:U:H2'	2.11	0.50
51:3:2745:G:C3'	51:3:2746:A:H8	2.23	0.50
52:4:31:G:C6	52:4:48:A:N6	2.79	0.50
52:4:46:C:H2'	52:4:47:C:C6	2.46	0.50
53:5:254:G:H2'	53:5:255:G:H8	1.77	0.50
53:5:255:G:H2'	53:5:256:G:O4'	2.12	0.50
53:5:424:U:H3'	53:5:425:G:H8	1.75	0.50
53:5:574:C:N4	53:5:875:G:H4'	2.26	0.50
53:5:600:G:C2	53:5:634:U:C2	2.99	0.50
53:5:619:A:H2'	53:5:620:A:C4	2.46	0.50
53:5:677:C:H2'	53:5:678:A:H8	1.74	0.50
53:5:894:A:H2'	53:5:895:A:N9	2.27	0.50
53:5:1280:A:N6	53:5:1305:G:H1'	2.27	0.50
4:9:134:PHE:HB2	4:9:192:LEU:HD13	1.93	0.50
6:B:46:VAL:HA	6:B:49:ARG:HH22	1.77	0.50
6:B:153:LYS:HB3	6:B:204:TRP:HB2	1.93	0.50
7:C:114:ARG:HG3	7:C:132:PRO:HG3	1.93	0.50
8:D:138:HIS:HA	11:G:109:ASN:HB2	1.93	0.50
9:E:4:ASN:ND2	9:E:61:LYS:HA	2.25	0.50
9:E:35:LEU:HD13	9:E:60:TRP:CE3	2.46	0.50
11:G:119:SER:HA	53:5:639:A:N9	2.26	0.50
15:K:61:ALA:HB3	15:K:63:ARG:CZ	2.41	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:O:66:LEU:O	19:O:70:THR:HG23	2.11	0.50
24:T:15:LEU:O	24:T:19:LYS:HG2	2.12	0.50
25:a:15:HIS:NE2	51:3:764:G:O6	2.44	0.50
30:f:83:GLU:HB3	30:f:89:TYR:HB2	1.93	0.50
30:f:102:HIS:CD2	30:f:107:ALA:HA	2.47	0.50
34:j:10:VAL:HG13	34:j:86:LEU:HD23	1.92	0.50
35:k:74:LYS:NZ	51:3:670:G:O6	2.41	0.50
36:l:24:ASN:N	51:3:944:U:OP1	2.40	0.50
36:l:111:GLU:O	36:l:115:ILE:HG12	2.12	0.50
37:m:13:TRP:HA	37:m:16:MET:HG2	1.91	0.50
38:n:9:ARG:HA	38:n:12:HIS:HD2	1.76	0.50
40:p:106:ASN:O	40:p:109:VAL:N	2.45	0.50
41:q:10:LYS:HD2	51:3:1032:A:P	2.51	0.50
41:q:35:LEU:HD13	41:q:57:CYS:SG	2.52	0.50
43:s:6:VAL:HG12	43:s:32:ASN:HD22	1.75	0.50
47:w:4:ALA:O	47:w:8:ARG:HG2	2.11	0.50
49:y:31:GLN:HG2	49:y:32:LYS:N	2.27	0.50
51:3:51:A:C6	51:3:119:A:C5	3.00	0.50
51:3:193:G:N1	51:3:209:G:O2'	2.33	0.50
51:3:238:U:H2'	51:3:239:U:H5'	1.93	0.50
51:3:270:G:C6	51:3:271:G:C5	3.00	0.50
51:3:275:A:H8	51:3:275:A:O5'	1.95	0.50
51:3:410:G:H4'	51:3:411:U:O5'	2.10	0.50
51:3:650:G:C2	51:3:651:A:C5	2.99	0.50
51:3:728:A:HO2'	51:3:1381:A:HO2'	1.53	0.50
51:3:730:G:O6	51:3:802:U:O4	2.28	0.50
51:3:774:A:H1'	51:3:775:C:H5	1.77	0.50
51:3:841:C:H2'	51:3:842:U:H5''	1.93	0.50
51:3:1303:U:OP2	51:3:1680:A:H8	1.95	0.50
51:3:1380:U:O4'	51:3:1605:A:H1'	2.12	0.50
51:3:1553:G:H3'	51:3:1576:G:H22	1.76	0.50
51:3:1722:U:H1'	51:3:1735:A:C6	2.46	0.50
51:3:1932:C:H2'	51:3:1933:U:C6	2.47	0.50
51:3:2385:A:H2'	51:3:2386:A:C5	2.46	0.50
51:3:2571:U:O2	51:3:2573:A:H8	1.95	0.50
51:3:2852:G:O2'	51:3:2853:U:OP2	2.28	0.50
53:5:253:G:C6	53:5:266:A:C6	3.00	0.50
53:5:302:A:H3'	53:5:303:A:H8	1.77	0.50
53:5:515:G:H2'	53:5:529:U:N1	2.26	0.50
53:5:902:A:H3'	53:5:903:A:H8	1.75	0.50
53:5:969:A:H8	53:5:969:A:OP1	1.93	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:5:1064:U:H2'	53:5:1065:G:H8	1.76	0.50
53:5:1161:G:H2'	53:5:1162:G:H8	1.77	0.50
53:5:1199:U:H2'	53:5:1296:C:H5'	1.93	0.50
53:5:1314:A:H4'	54:7:33:C:H5'	1.94	0.50
54:7:64:G:H2'	54:7:65:C:C6	2.46	0.50
4:9:120:ILE:HG23	4:9:163:PHE:CE1	2.46	0.50
15:K:52:THR:HB	15:K:62:LEU:HG	1.94	0.50
17:M:47:LEU:HD11	17:M:52:ALA:HB3	1.93	0.50
18:N:15:HIS:N	18:N:15:HIS:CD2	2.79	0.50
25:a:98:LEU:HD12	25:a:107:SER:O	2.12	0.50
25:a:146:GLN:OE1	25:a:167:TYR:HB2	2.10	0.50
25:a:228:VAL:HG13	51:3:1795:C:O3'	2.12	0.50
35:k:112:ILE:O	35:k:129:HIS:N	2.22	0.50
38:n:8:ARG:NH1	38:n:9:ARG:HA	2.26	0.50
38:n:97:LYS:HE3	38:n:99:HIS:CG	2.47	0.50
45:u:28:ARG:NH1	51:3:2288:G:O6	2.45	0.50
46:v:37:LYS:HA	46:v:45:THR:O	2.11	0.50
51:3:58:A:H1'	51:3:128:A:C4	2.47	0.50
51:3:204:U:O2'	51:3:424:G:N2	2.45	0.50
51:3:247:U:N3	51:3:259:A:N7	2.60	0.50
51:3:567:U:H1'	51:3:2028:G:C6	2.46	0.50
51:3:585:U:H2'	51:3:586:G:C8	2.46	0.50
51:3:625:G:H1	51:3:700:U:H3	1.58	0.50
51:3:853:G:N2	51:3:1220:A:H62	2.08	0.50
51:3:885:A:H4'	51:3:970:U:N3	2.26	0.50
51:3:1005:G:C6	51:3:1006:U:C4	3.00	0.50
51:3:1127:C:H2'	51:3:1128:G:O4'	2.12	0.50
51:3:1212:C:H2'	51:3:1213:U:C6	2.47	0.50
51:3:1217:G:H2'	51:3:1218:G:C8	2.47	0.50
51:3:2011:G:C5	51:3:2012:A:C5	3.00	0.50
51:3:2029:U:O2'	51:3:2625:U:H5'	2.11	0.50
51:3:2081:U:H2'	51:3:2605:G:H21	1.76	0.50
51:3:2106:G:H2'	51:3:2106:G:N3	2.26	0.50
51:3:2399:G:H1'	51:3:2437:G:N2	2.27	0.50
51:3:2482:U:H2'	51:3:2483:C:O4'	2.12	0.50
53:5:201:G:C6	53:5:215:C:C4	2.99	0.50
53:5:305:A:H1'	53:5:606:A:H2	1.73	0.50
53:5:537:A:H2'	53:5:538:G:C8	2.47	0.50
53:5:613:C:H2'	53:5:614:U:C6	2.46	0.50
53:5:715:A:H5'	53:5:716:C:OP2	2.12	0.50
53:5:925:C:N3	53:5:1362:G:N1	2.54	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:5:995:U:C2	53:5:1032:G:N2	2.80	0.50
53:5:1116:U:O2'	53:5:1117:U:H3'	2.11	0.50
53:5:1497:U:C2	53:5:1498:G:C8	3.00	0.50
4:9:120:ILE:HG23	4:9:163:PHE:HE1	1.77	0.50
5:A:237:ALA:O	5:A:242:MET:N	2.42	0.50
8:D:166:ILE:H	8:D:166:ILE:HD12	1.76	0.50
12:H:30:ILE:HG13	12:H:37:PRO:HD2	1.94	0.50
14:J:104:ASN:HB3	14:J:106:LYS:NZ	2.26	0.50
14:J:119:ARG:HB2	24:T:34:TYR:CD1	2.47	0.50
15:K:93:THR:HA	15:K:115:LEU:HB2	1.94	0.50
18:N:67:LEU:HG	18:N:74:ALA:HB1	1.93	0.50
24:T:12:GLU:O	24:T:16:LYS:NZ	2.32	0.50
26:b:99:GLN:HE21	26:b:186:GLU:HA	1.76	0.50
27:c:67:LYS:H	27:c:67:LYS:HZ3	1.60	0.50
30:f:4:ILE:HG21	30:f:37:ALA:CB	2.41	0.50
34:j:79:PHE:CZ	34:j:101:PRO:HG2	2.47	0.50
36:l:71:HIS:HB2	36:l:72:MET:SD	2.51	0.50
37:m:56:ASN:ND2	37:m:58:ASN:HB2	2.25	0.50
39:o:98:ARG:HG2	39:o:99:ALA:H	1.75	0.50
41:q:22:VAL:HG22	41:q:92:LEU:HD22	1.93	0.50
42:r:89:ALA:HB2	51:3:785:A:OP2	2.12	0.50
43:s:2:ASP:HA	43:s:39:ARG:NH1	2.27	0.50
44:t:90:LYS:HB2	44:t:103:VAL:HG12	1.93	0.50
51:3:62:G:H1'	51:3:64:U:C5	2.47	0.50
51:3:230:G:H1'	51:3:232:A:N6	2.27	0.50
51:3:537:A:O2'	51:3:540:A:OP1	2.25	0.50
51:3:631:A:C6	51:3:695:G:C6	3.00	0.50
51:3:704:G:H2'	51:3:704:G:N3	2.25	0.50
51:3:1321:C:H2'	51:3:1321:C:O2	2.12	0.50
51:3:1427:C:H2'	51:3:1428:U:C6	2.47	0.50
51:3:2242:G:H2'	51:3:2243:G:C8	2.47	0.50
51:3:2328:A:H5''	51:3:2329:G:C5	2.47	0.50
51:3:2377:A:H2'	51:3:2378:G:C8	2.47	0.50
51:3:2644:U:H2'	51:3:2645:U:O4'	2.12	0.50
51:3:2676:G:H2'	51:3:2677:A:C8	2.47	0.50
51:3:2828:C:H5''	51:3:2829:G:OP2	2.12	0.50
51:3:2841:A:C6	51:3:2842:G:C5	3.00	0.50
53:5:40:G:C5	53:5:400:G:C6	3.00	0.50
53:5:63:U:N3	53:5:90:G:N1	2.36	0.50
53:5:389:A:C4	53:5:390:G:C8	3.00	0.50
53:5:595:G:H3'	53:5:596:U:H6	1.76	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:5:680:G:C6	53:5:705:A:C6	3.00	0.50
53:5:954:A:O2'	53:5:979:C:O2'	2.24	0.50
53:5:997:G:H2'	53:5:998:G:H8	1.77	0.50
53:5:1297:G:O2'	53:5:1336:C:O4'	2.29	0.50
1:0:34:ARG:HG2	1:0:37:LYS:NZ	2.27	0.50
6:B:30:THR:O	6:B:33:TRP:HB2	2.12	0.50
10:F:101:ARG:NH1	53:5:1351:U:H5'	2.26	0.50
11:G:67:LYS:HD3	53:5:650:A:H5'	1.94	0.50
13:I:54:VAL:HG13	13:I:72:GLU:HB3	1.94	0.50
14:J:37:TRP:HE1	53:5:683:G:H5'	1.77	0.50
19:O:2:ARG:HE	19:O:9:PRO:HA	1.77	0.50
23:S:28:LEU:HD12	23:S:31:ASN:HB2	1.93	0.50
27:c:46:ARG:HD3	51:3:479:A:H5'	1.94	0.50
36:l:17:TYR:OH	51:3:994:U:O4	2.22	0.50
37:m:99:ARG:NH1	51:3:2886:A:OP1	2.44	0.50
42:r:43:ALA:HA	42:r:46:LEU:HD22	1.93	0.50
42:r:79:GLY:H	42:r:101:SER:HA	1.77	0.50
45:u:46:ARG:HB2	45:u:49:GLN:CD	2.37	0.50
45:u:55:ARG:HD3	45:u:71:ASP:OD2	2.12	0.50
47:w:41:PRO:HG2	51:3:63:U:C4	2.46	0.50
51:3:37:G:C6	51:3:38:G:C5	3.00	0.50
51:3:47:G:H21	51:3:184:A:H61	0.77	0.50
51:3:65:A:H2'	51:3:66:A:C8	2.47	0.50
51:3:196:G:H4'	51:3:712:A:H2	1.77	0.50
51:3:338:G:C2	51:3:339:U:C2	3.00	0.50
51:3:728:A:H3'	51:3:729:U:C6	2.47	0.50
51:3:735:G:H2'	51:3:736:G:C8	2.47	0.50
51:3:895:G:N1	51:3:954:A:O5'	2.44	0.50
51:3:972:C:C2	51:3:973:U:C5	3.00	0.50
51:3:1125:U:H3	51:3:1136:U:H3	1.60	0.50
51:3:1184:U:H2'	51:3:1185:U:N1	2.26	0.50
51:3:1394:A:H2'	51:3:1395:A:O4'	2.11	0.50
51:3:1595:C:H2'	51:3:1596:U:H6	1.77	0.50
51:3:1596:U:H2'	51:3:1597:U:C6	2.47	0.50
51:3:1706:C:H2'	51:3:1707:U:N1	2.27	0.50
51:3:1723:A:N7	51:3:1732:A:C6	2.80	0.50
51:3:1747:G:N3	51:3:1753:G:C6	2.79	0.50
51:3:1809:A:H8	51:3:1822:A:N6	2.09	0.50
51:3:1896:A:N1	51:3:2242:G:H1'	2.27	0.50
51:3:1972:C:H2'	51:3:1973:U:C5	2.46	0.50
51:3:2137:A:OP1	51:3:2139:C:H2'	2.12	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:3:2316:G:H22	51:3:2319:A:H8	1.60	0.50
51:3:2409:U:O4	51:3:2423:G:O6	2.29	0.50
51:3:2552:G:H1'	51:3:2654:U:C5'	2.40	0.50
52:4:22:G:H5''	52:4:23:A:OP1	2.12	0.50
53:5:90:G:H2'	53:5:91:C:H6	1.73	0.50
53:5:147:A:H2'	53:5:148:A:C8	2.47	0.50
53:5:566:G:N2	53:5:877:C:C2	2.80	0.50
53:5:657:G:C4	53:5:658:G:C8	3.00	0.50
53:5:720:U:H5	53:5:829:G:H1'	1.77	0.50
53:5:842:C:H2'	53:5:843:C:H6	1.77	0.50
53:5:843:C:H2'	53:5:844:U:H6	1.76	0.50
53:5:1082:U:N3	53:5:1084:A:O5'	2.45	0.50
53:5:1413:G:H2'	53:5:1414:U:C6	2.46	0.50
53:5:1463:A:N1	53:5:1464:G:C6	2.80	0.50
1:0:24:THR:O	1:0:28:ARG:NE	2.43	0.50
1:0:38:GLN:HB3	51:3:494:G:H5''	1.94	0.50
3:2:30:GLN:HA	3:2:33:LYS:HG3	1.94	0.50
4:9:124:ARG:HG2	4:9:161:TYR:O	2.11	0.50
6:B:78:ILE:HD12	6:B:82:ASN:HD22	1.77	0.50
8:D:114:ALA:HA	8:D:117:LYS:HD3	1.94	0.50
10:F:14:ASP:H	10:F:19:ASN:H	1.60	0.50
10:F:50:GLU:OE1	10:F:57:PRO:HD3	2.12	0.50
16:L:96:PRO:N	16:L:109:ARG:HD3	2.27	0.50
21:Q:84:ARG:HH11	21:Q:85:HIS:CE1	2.29	0.50
30:f:101:ALA:HA	30:f:104:LYS:HZ3	1.77	0.50
33:i:62:SER:OG	33:i:101:ASP:HB3	2.11	0.50
35:k:18:LYS:HD3	51:3:698:A:H4'	1.94	0.50
36:l:1:MET:HB3	36:l:44:ALA:HB3	1.92	0.50
36:l:11:LYS:HB2	51:3:2285:G:O3'	2.12	0.50
36:l:17:TYR:HB3	36:l:41:TRP:CD1	2.46	0.50
36:l:63:LYS:HG2	36:l:64:MET:H	1.75	0.50
38:n:33:ILE:O	38:n:39:ILE:HA	2.12	0.50
40:p:103:SER:HA	40:p:106:ASN:HB3	1.94	0.50
45:u:55:ARG:HH11	45:u:71:ASP:HB2	1.76	0.50
47:w:32:LYS:HB3	47:w:37:GLU:O	2.12	0.50
50:z:5:ARG:HH22	50:z:26:LYS:HZ2	1.60	0.50
51:3:50:G:C2	51:3:181:G:C6	3.00	0.50
51:3:117:C:H3'	51:3:118:G:C8	2.47	0.50
51:3:408:G:OP2	51:3:408:G:H2'	2.12	0.50
51:3:598:G:H2'	51:3:599:U:C6	2.47	0.50
51:3:759:U:H2'	51:3:760:G:O4'	2.12	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:3:1040:U:H1'	51:3:1046:A:H3'	1.93	0.50
51:3:1248:A:C6	51:3:1262:G:C6	3.00	0.50
51:3:1810:A:H2'	51:3:1811:A:O4'	2.12	0.50
51:3:1819:G:H2'	51:3:1820:U:C6	2.46	0.50
51:3:1885:G:C5	51:3:1886:C:C4	3.00	0.50
51:3:1945:A:C6	51:3:2598:C:H1'	2.47	0.50
51:3:1954:C:H2'	51:3:1955:G:C8	2.46	0.50
51:3:2174:G:H2'	51:3:2175:U:C6	2.47	0.50
51:3:2499:U:O5'	51:3:2578:A:H5''	2.11	0.50
53:5:255:G:C2	53:5:264:C:C2	3.00	0.50
53:5:372:G:H2'	53:5:373:A:H8	1.73	0.50
53:5:594:A:C4	53:5:595:G:C8	3.00	0.50
53:5:751:C:H5'	53:5:752:G:H8	1.77	0.50
53:5:1063:G:C6	53:5:1095:G:N1	2.80	0.50
53:5:1083:A:H8	53:5:1084:A:C5	2.30	0.50
53:5:1123:G:HO2'	53:5:1124:U:P	2.33	0.50
53:5:1135:U:O4'	53:5:1157:G:N2	2.45	0.50
53:5:1277:C:H2'	53:5:1278:G:O4'	2.12	0.50
53:5:1398:G:C2	53:5:1453:C:C2	3.00	0.50
54:7:3:G:H2'	54:7:4:U:C4	2.47	0.50
4:9:155:ARG:NE	4:9:166:LYS:HA	2.26	0.49
9:E:156:LEU:HB2	11:G:78:GLN:CD	2.37	0.49
15:K:79:TYR:CE2	15:K:81:PRO:HA	2.47	0.49
20:P:64:VAL:HG22	20:P:78:ALA:HB2	1.94	0.49
21:Q:81:MET:HG2	21:Q:85:HIS:NE2	2.27	0.49
27:c:30:LYS:HB3	27:c:33:PRO:HG2	1.94	0.49
27:c:64:LYS:HE2	27:c:68:GLN:HE21	1.77	0.49
29:e:11:LEU:HB3	29:e:51:ASN:C	2.37	0.49
32:h:87:LYS:HB3	51:3:1097:G:N2	2.27	0.49
40:p:13:ARG:HA	40:p:16:TRP:HD1	1.76	0.49
42:r:60:ASN:ND2	51:3:522:C:O4'	2.45	0.49
47:w:55:LEU:O	47:w:59:THR:N	2.42	0.49
47:w:85:ASN:CG	47:w:89:GLN:HE22	2.17	0.49
51:3:203:A:N1	51:3:2441:A:H2'	2.26	0.49
51:3:538:A:H4'	51:3:539:U:O5'	2.12	0.49
51:3:795:G:H3'	51:3:796:A:C8	2.45	0.49
51:3:974:C:H2'	51:3:975:G:H8	1.73	0.49
51:3:1078:C:O2'	51:3:1083:A:H4'	2.12	0.49
51:3:1104:A:O2'	51:3:1105:A:OP2	2.30	0.49
51:3:1107:C:OP1	51:3:1123:A:O2'	2.29	0.49
51:3:1218:G:O2'	51:3:1219:U:O5'	2.29	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:3:1381:A:H3'	51:3:1405:G:N2	2.27	0.49
51:3:1467:U:C4	51:3:1468:U:C4	2.99	0.49
51:3:1841:U:H5''	51:3:1842:G:C5'	2.42	0.49
51:3:2106:G:H1	51:3:2198:G:H1	1.59	0.49
51:3:2172:A:H2'	51:3:2173:G:H8	1.77	0.49
51:3:2190:G:N2	51:3:2191:G:C6	2.79	0.49
51:3:2349:G:C6	51:3:2350:C:C4	2.99	0.49
51:3:2548:G:H3'	51:3:2549:A:H8	1.77	0.49
52:4:3:U:H2'	52:4:4:G:H8	1.77	0.49
53:5:47:G:C6	53:5:362:U:C2	3.00	0.49
53:5:151:C:H2'	53:5:152:U:C6	2.47	0.49
53:5:293:G:C4	53:5:295:G:OP2	2.65	0.49
53:5:365:U:O4	53:5:388:G:O6	2.29	0.49
53:5:377:A:H3'	53:5:378:A:C8	2.47	0.49
53:5:475:U:H5	53:5:476:U:C4	2.30	0.49
53:5:738:A:H2'	53:5:739:G:O4'	2.12	0.49
53:5:963:U:H6	53:5:1053:U:H4'	1.77	0.49
53:5:1054:C:H3'	53:5:1055:G:H2'	1.94	0.49
53:5:1059:G:O6	53:5:1099:G:C6	2.65	0.49
53:5:1166:A:H2'	53:5:1167:C:C6	2.46	0.49
53:5:1508:C:H2'	53:5:1509:A:C4	2.47	0.49
54:7:3:G:N2	54:7:73:C:N3	2.60	0.49
4:9:322:GLY:HA3	4:9:350:MET:SD	2.53	0.49
5:A:156:ILE:O	5:A:160:GLU:HG2	2.11	0.49
6:B:4:LYS:HB2	53:5:1165:G:OP1	2.12	0.49
7:C:52:GLN:NE2	7:C:195:TYR:OH	2.45	0.49
7:C:95:SER:HA	7:C:100:ILE:HD11	1.94	0.49
7:C:109:THR:HG22	7:C:111:ARG:H	1.76	0.49
7:C:148:THR:HA	7:C:151:ILE:HG12	1.94	0.49
8:D:187:THR:HG21	53:5:20:C:OP2	2.12	0.49
10:F:147:ASN:OD1	14:J:49:ARG:NH2	2.45	0.49
11:G:32:THR:HB	11:G:73:ASN:ND2	2.27	0.49
13:I:11:GLU:OE2	13:I:13:LYS:HB2	2.12	0.49
14:J:29:ASP:N	14:J:33:ASN:O	2.45	0.49
15:K:6:GLN:O	15:K:10:LYS:HG2	2.12	0.49
20:P:32:HIS:HB3	20:P:37:LYS:N	2.10	0.49
22:R:15:LEU:HG	22:R:18:LYS:HE2	1.93	0.49
22:R:81:LYS:HG2	22:R:83:HIS:ND1	2.26	0.49
26:b:23:ARG:HH22	51:3:2690:U:H3	1.59	0.49
29:e:30:PRO:HD2	29:e:83:THR:HA	1.94	0.49
29:e:98:ARG:HH21	29:e:131:ASN:ND2	2.09	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:h:104:ILE:O	32:h:108:LYS:N	2.44	0.49
33:i:28:LEU:H	33:i:67:LEU:HD21	1.76	0.49
37:m:52:ALA:O	37:m:87:ALA:HB1	2.12	0.49
41:q:73:HIS:CE1	41:q:75:SER:HA	2.47	0.49
42:r:20:VAL:HA	42:r:23:LEU:HG	1.94	0.49
42:r:28:LYS:N	42:r:31:ASP:OD2	2.45	0.49
51:3:179:A:H2'	51:3:180:A:C5	2.47	0.49
51:3:311:G:O2'	51:3:312:U:OP1	2.27	0.49
51:3:356:A:H5''	51:3:374:A:H1'	1.94	0.49
51:3:432:G:C4	51:3:433:A:C8	3.00	0.49
51:3:684:A:H5''	51:3:2359:G:O3'	2.11	0.49
51:3:891:G:C2	51:3:960:A:C2	3.00	0.49
51:3:1029:A:C6	51:3:1030:U:C4	3.00	0.49
51:3:1061:A:C8	51:3:1169:A:C4	3.01	0.49
51:3:1197:G:H2'	51:3:1198:G:H8	1.77	0.49
51:3:1265:G:C6	51:3:1266:G:C2	3.00	0.49
51:3:1278:G:H8	51:3:1278:G:OP2	1.95	0.49
51:3:1462:A:C4	51:3:1463:G:C8	3.00	0.49
51:3:1606:A:C4	51:3:1607:G:C8	3.00	0.49
51:3:1627:U:H2'	51:3:1628:G:C8	2.47	0.49
51:3:1673:U:O2'	51:3:2707:A:H4'	2.12	0.49
51:3:1720:C:C4	51:3:1721:G:C5	3.00	0.49
51:3:1760:G:H2'	51:3:1762:A:OP2	2.12	0.49
51:3:1772:G:C6	51:3:1995:G:C6	3.00	0.49
51:3:2270:U:H2'	51:3:2271:C:H6	1.77	0.49
51:3:2752:G:C2	51:3:2768:U:O2	2.65	0.49
51:3:2833:A:H2'	51:3:2834:C:C6	2.47	0.49
53:5:91:C:O2	53:5:375:C:H4'	2.12	0.49
53:5:131:G:H2'	53:5:132:G:O4'	2.12	0.49
53:5:377:A:H2'	53:5:377:A:N3	2.27	0.49
53:5:807:C:H1'	53:5:893:C:H41	1.76	0.49
53:5:993:C:C2	53:5:1034:G:C2	3.00	0.49
53:5:1034:G:C2	53:5:1035:A:C5	3.00	0.49
53:5:1144:A:H3'	53:5:1145:A:C8	2.48	0.49
53:5:1425:A:H4'	53:5:1426:U:C4	2.47	0.49
53:5:1498:G:C2	53:5:1499:G:C5	3.00	0.49
54:6:30:G:H8	54:6:30:G:O5'	1.95	0.49
54:7:5:C:N3	54:7:71:A:C2	2.80	0.49
4:9:112:VAL:HG13	4:9:116:THR:CB	2.43	0.49
5:A:87:THR:HA	5:A:93:LYS:CD	2.39	0.49
7:C:13:ARG:NH2	53:5:541:C:H5'	2.27	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:D:138:HIS:HB3	11:G:111:LEU:HD22	1.95	0.49
12:H:95:GLU:O	12:H:98:LYS:HB3	2.12	0.49
14:J:50:LYS:NZ	53:5:687:G:N7	2.60	0.49
20:P:33:PRO:O	20:P:36:HIS:NE2	2.45	0.49
21:Q:100:PRO:CB	21:Q:103:LYS:HB2	2.41	0.49
22:R:19:VAL:HA	22:R:22:MET:HG2	1.95	0.49
26:b:21:ASN:O	34:j:73:ASP:HA	2.12	0.49
26:b:146:SER:HB2	51:3:2520:C:O2	2.12	0.49
26:b:174:VAL:HG22	51:3:2781:C:H4'	1.94	0.49
27:c:60:GLY:HA3	27:c:80:ARG:CZ	2.41	0.49
27:c:181:LYS:HD3	51:3:648:G:C2	2.47	0.49
28:d:100:LEU:O	28:d:103:LEU:HB2	2.12	0.49
33:i:33:VAL:HG23	33:i:34:LYS:HD2	1.94	0.49
34:j:2:VAL:O	34:j:33:ALA:N	2.32	0.49
35:k:30:LYS:HD3	51:3:845:U:OP2	2.12	0.49
35:k:63:PRO:N	51:3:2401:U:H5''	2.28	0.49
36:l:31:GLU:O	36:l:134:ARG:N	2.44	0.49
41:q:19:THR:HB	41:q:91:LYS:NZ	2.27	0.49
41:q:40:MET:SD	41:q:40:MET:C	2.95	0.49
47:w:105:ARG:HH22	51:3:1498:U:C1'	2.25	0.49
51:3:99:C:H2'	51:3:100:U:O4'	2.12	0.49
51:3:201:A:O2'	51:3:2253:U:OP2	2.26	0.49
51:3:224:G:H1'	51:3:238:U:O2'	2.11	0.49
51:3:367:G:H2'	51:3:367:G:N3	2.27	0.49
51:3:512:G:H8	51:3:512:G:O5'	1.96	0.49
51:3:623:A:H2'	51:3:624:U:H6	1.76	0.49
51:3:629:G:H2'	51:3:630:C:C6	2.48	0.49
51:3:891:G:C6	51:3:960:A:N1	2.81	0.49
51:3:946:A:H2'	51:3:949:C:H5	1.76	0.49
51:3:1069:G:H2'	51:3:1070:U:C6	2.47	0.49
51:3:1324:A:H2'	51:3:1325:C:C6	2.48	0.49
51:3:1385:U:H2'	51:3:1386:G:O4'	2.11	0.49
51:3:1640:G:O2'	51:3:1642:G:N1	2.45	0.49
51:3:1662:G:H2'	51:3:1663:G:H8	1.77	0.49
51:3:1791:A:H3'	51:3:1988:A:H62	1.78	0.49
51:3:2235:A:H3'	51:3:2236:G:C8	2.47	0.49
51:3:2242:G:H2'	51:3:2243:G:H8	1.77	0.49
51:3:2471:U:H2'	51:3:2472:G:C8	2.47	0.49
51:3:2589:G:H1'	51:3:2590:G:N7	2.27	0.49
51:3:2729:A:H3'	51:3:2730:G:C8	2.40	0.49
51:3:2802:C:C4	51:3:2803:G:N7	2.80	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:3:2826:G:O2'	51:3:2829:G:N1	2.45	0.49
51:3:2861:G:H3'	51:3:2862:U:H5''	1.94	0.49
52:4:48:A:C4	52:4:49:G:C8	2.99	0.49
53:5:58:G:N2	53:5:384:G:O6	2.36	0.49
53:5:206:G:H1'	53:5:209:A:H61	1.77	0.49
53:5:253:G:H1	53:5:265:U:H3	0.63	0.49
53:5:274:A:H2	53:5:275:A:H62	1.59	0.49
53:5:590:G:N2	53:5:644:U:O2	2.25	0.49
53:5:605:A:H2'	53:5:606:A:C8	2.47	0.49
53:5:706:U:H2'	53:5:707:G:C8	2.47	0.49
53:5:901:A:H2'	53:5:902:A:H8	1.77	0.49
53:5:936:G:H2'	53:5:937:G:O4'	2.12	0.49
53:5:1203:A:H2'	53:5:1203:A:N3	2.25	0.49
53:5:1238:C:C2	53:5:1239:U:C5	3.01	0.49
53:5:1390:G:H3'	53:5:1391:A:H8	1.76	0.49
4:9:5:LYS:HD2	4:9:267:ASP:N	2.27	0.49
4:9:314:LYS:NZ	4:9:318:GLY:O	2.41	0.49
6:B:156:VAL:O	6:B:168:ASP:HA	2.13	0.49
7:C:58:GLN:HB3	7:C:62:TYR:CZ	2.47	0.49
10:F:24:ARG:HA	10:F:27:ASN:ND2	2.28	0.49
10:F:24:ARG:NH1	10:F:97:ALA:HA	2.26	0.49
14:J:37:TRP:HE1	53:5:683:G:H4'	1.76	0.49
15:K:75:GLU:N	15:K:75:GLU:OE1	2.45	0.49
16:L:101:ARG:NH2	53:5:945:U:O5'	2.46	0.49
26:b:99:GLN:NE2	26:b:189:MET:HG2	2.26	0.49
26:b:126:TRP:CE3	26:b:164:LYS:HG2	2.47	0.49
32:h:122:LYS:O	51:3:1115:G:O2'	2.30	0.49
34:j:64:ARG:NH2	34:j:101:PRO:HD2	2.28	0.49
35:k:71:GLY:H	51:3:249:G:P	2.34	0.49
36:l:45:ARG:N	36:l:45:ARG:HD2	2.27	0.49
42:r:39:THR:HG23	42:r:44:ALA:HB1	1.94	0.49
51:3:190:G:C6	51:3:215:A:N1	2.80	0.49
51:3:243:U:H2'	51:3:244:G:O4'	2.12	0.49
51:3:250:U:O2	51:3:256:G:N2	2.41	0.49
51:3:360:G:C2	51:3:361:G:C5	3.01	0.49
51:3:393:C:H2'	51:3:394:C:O4'	2.12	0.49
51:3:440:C:H4'	51:3:442:G:C8	2.48	0.49
51:3:703:A:H2'	51:3:705:A:H62	1.77	0.49
51:3:734:A:H62	51:3:768:G:N2	2.09	0.49
51:3:849:C:H4'	51:3:1255:G:H21	1.77	0.49
51:3:854:A:C4	51:3:1220:A:H2	2.31	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:3:873:G:C2	51:3:977:A:C5	2.99	0.49
51:3:877:G:C4	51:3:878:A:C8	3.00	0.49
51:3:922:C:O2	51:3:928:G:N2	2.45	0.49
51:3:952:U:HO2'	51:3:953:G:P	2.35	0.49
51:3:1245:G:N2	51:3:1265:G:H1'	2.26	0.49
51:3:1359:C:O3'	51:3:1360:U:H2'	2.12	0.49
51:3:1397:G:H2'	51:3:1398:C:O4'	2.12	0.49
51:3:1492:G:C2	51:3:1580:G:C5	3.00	0.49
51:3:1623:U:H2'	51:3:1624:A:H8	1.77	0.49
51:3:1762:A:H2'	51:3:1765:G:C8	2.48	0.49
51:3:1785:U:H1'	51:3:1792:A:N6	2.26	0.49
51:3:2059:G:O6	51:3:2625:U:C4	2.66	0.49
51:3:2216:U:H2'	51:3:2217:G:C8	2.47	0.49
51:3:2319:A:HO2'	51:3:2320:U:H6	1.60	0.49
51:3:2465:U:H3	51:3:2467:A:N6	2.10	0.49
51:3:2526:A:H2'	51:3:2526:A:N3	2.27	0.49
51:3:2529:C:C2	51:3:2553:G:C2	3.00	0.49
51:3:2586:G:C2	51:3:2587:U:C4	3.00	0.49
51:3:2624:C:H2'	51:3:2625:U:C5	2.47	0.49
52:4:52:G:H2'	52:4:53:U:C6	2.47	0.49
53:5:43:G:C2	53:5:397:C:C2	3.01	0.49
53:5:261:G:O2'	53:5:263:C:OP1	2.28	0.49
53:5:423:U:H2'	53:5:424:U:O4'	2.12	0.49
53:5:1002:A:N7	53:5:1019:G:N1	2.59	0.49
53:5:1100:C:C2'	53:5:1101:A:H8	2.23	0.49
53:5:1289:U:C2	53:5:1290:G:C8	3.01	0.49
53:5:1291:C:H3'	53:5:1292:A:H8	1.76	0.49
53:5:1390:G:H2'	53:5:1391:A:O4'	2.12	0.49
53:5:1403:A:H2'	53:5:1404:U:C6	2.48	0.49
53:5:1469:G:C6	53:5:1470:U:C4	3.00	0.49
4:9:218:THR:HG21	4:9:284:ARG:HA	1.95	0.49
5:A:84:PHE:HA	5:A:177:ILE:CG1	2.43	0.49
5:A:111:ARG:NH1	53:5:1091:C:OP1	2.42	0.49
7:C:142:VAL:C	7:C:143:ARG:HD3	2.38	0.49
9:E:147:GLU:HB3	11:G:59:VAL:CG1	2.42	0.49
12:H:12:ARG:NH2	12:H:13:LYS:HG3	2.28	0.49
12:H:31:THR:HB	12:H:35:ARG:N	2.27	0.49
12:H:32:VAL:HA	12:H:67:VAL:HG13	1.93	0.49
12:H:111:ARG:HA	53:5:1321:G:O5'	2.12	0.49
14:J:15:HIS:CD2	53:5:704:U:H4'	2.47	0.49
15:K:69:ARG:HB2	15:K:75:GLU:HG3	1.94	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:P:41:ARG:HG2	20:P:42:HIS:H	1.76	0.49
23:S:13:GLN:HE21	53:5:89:G:P	2.35	0.49
26:b:116:GLY:N	51:3:2825:A:OP1	2.30	0.49
27:c:126:HIS:O	27:c:198:LEU:HA	2.12	0.49
30:f:25:TYR:HA	30:f:30:LEU:H	1.77	0.49
36:l:22:LYS:NZ	51:3:900:G:N7	2.54	0.49
37:m:36:LYS:HA	37:m:39:LYS:HE3	1.94	0.49
39:o:30:GLU:OE1	39:o:92:ARG:HD2	2.13	0.49
42:r:105:VAL:HB	42:r:107:LEU:HD11	1.93	0.49
46:v:27:ARG:HB3	46:v:29:TRP:CH2	2.47	0.49
47:w:51:LEU:HD23	47:w:54:ILE:HD12	1.94	0.49
49:y:26:ALA:O	49:y:38:LEU:HG	2.11	0.49
51:3:74:U:C5	51:3:113:U:H1'	2.48	0.49
51:3:141:A:C6	51:3:142:A:N1	2.81	0.49
51:3:159:G:C2	51:3:160:A:C4	3.01	0.49
51:3:160:A:H2'	51:3:161:U:C6	2.47	0.49
51:3:598:G:N2	51:3:609:U:O2	2.46	0.49
51:3:601:U:N3	51:3:604:A:OP2	2.41	0.49
51:3:992:G:N2	51:3:995:A:H3'	2.28	0.49
51:3:1201:A:C6	51:3:1202:A:C6	3.01	0.49
51:3:1616:G:H2'	51:3:1617:U:N1	2.27	0.49
51:3:1635:G:O2'	51:3:1636:U:O4'	2.19	0.49
51:3:1810:A:H61	51:3:1821:G:H1'	1.76	0.49
51:3:2038:A:O2'	51:3:2462:G:N2	2.37	0.49
51:3:2053:G:H2'	51:3:2054:C:H6	1.77	0.49
51:3:2255:A:H2'	51:3:2256:C:H6	1.78	0.49
51:3:2265:U:H2'	51:3:2266:C:C6	2.47	0.49
51:3:2292:A:N3	51:3:2296:A:H2	2.10	0.49
51:3:2294:A:H5''	51:3:2294:A:N3	2.28	0.49
51:3:2347:G:H2'	51:3:2348:U:C6	2.48	0.49
51:3:2470:C:H2'	51:3:2471:U:C6	2.47	0.49
51:3:2577:G:H2'	51:3:2578:A:H8	1.75	0.49
52:4:64:G:H1'	52:4:97:A:C6	2.48	0.49
52:4:103:C:H2'	52:4:104:C:H6	1.76	0.49
53:5:65:G:N2	53:5:69:G:OP2	2.45	0.49
53:5:376:G:C2	53:5:380:G:C6	3.01	0.49
53:5:626:G:C2	53:5:627:U:C2	3.01	0.49
53:5:850:G:N2	53:5:851:U:H1'	2.28	0.49
53:5:1209:C:H2'	53:5:1210:U:C6	2.47	0.49
53:5:1341:U:H2'	53:5:1342:C:C6	2.48	0.49
53:5:1508:C:H3'	53:5:1509:A:C2	2.47	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:7:18:C:H5''	54:7:19:G:O4'	2.12	0.49
54:7:22:A:C8	54:7:47:G:H1'	2.47	0.49
54:7:59:A:H1'	54:7:61:U:OP2	2.12	0.49
4:9:135:LEU:HB3	4:9:172:TYR:HA	1.94	0.49
7:C:49:GLY:HA2	7:C:52:GLN:HG2	1.94	0.49
8:D:143:ARG:HG2	8:D:146:ALA:HA	1.93	0.49
9:E:135:GLY:H	53:5:836:C:H4'	1.77	0.49
9:E:144:SER:N	11:G:3:THR:HA	2.28	0.49
13:I:77:LYS:C	13:I:78:ARG:HD2	2.38	0.49
14:J:107:THR:O	14:J:109:ILE:HG12	2.12	0.49
16:L:71:ARG:O	16:L:75:LEU:HG	2.12	0.49
19:O:12:ARG:HA	19:O:32:HIS:HD2	1.78	0.49
22:R:10:PHE:CE2	53:5:1292:A:H5''	2.48	0.49
25:a:136:MET:HE3	25:a:141:ILE:HA	1.95	0.49
26:b:62:LEU:O	26:b:67:GLN:NE2	2.46	0.49
26:b:119:PHE:HB2	51:3:1688:A:O2'	2.13	0.49
28:d:74:ILE:O	54:7:57:C:O2'	2.23	0.49
29:e:57:ARG:NH2	29:e:60:GLU:OE1	2.43	0.49
29:e:113:SER:N	51:3:2674:C:H42	2.11	0.49
33:i:30:LYS:NZ	51:3:1175:C:O3'	2.44	0.49
33:i:113:PRO:HB3	51:3:1043:C:H4'	1.94	0.49
39:o:93:ARG:HD3	39:o:94:GLY:N	2.28	0.49
41:q:1:MET:N	41:q:16:GLU:OE1	2.35	0.49
43:s:66:ARG:HB2	43:s:72:PRO:HA	1.95	0.49
51:3:118:G:OP2	51:3:120:A:O2'	2.16	0.49
51:3:140:G:N2	51:3:143:A:OP2	2.44	0.49
51:3:247:U:N3	51:3:259:A:C5	2.80	0.49
51:3:261:A:C6	51:3:262:G:C5	3.00	0.49
51:3:480:C:H2'	51:3:481:C:C6	2.48	0.49
51:3:518:A:C6	51:3:541:G:H1'	2.48	0.49
51:3:642:A:C4	51:3:643:A:C8	3.01	0.49
51:3:719:G:H1	51:3:810:G:H8	1.59	0.49
51:3:723:U:C2	51:3:724:A:C8	3.00	0.49
51:3:730:G:C2	51:3:731:A:C4	3.00	0.49
51:3:742:G:N1	51:3:759:U:N3	2.27	0.49
51:3:751:A:H2'	51:3:752:C:O4'	2.13	0.49
51:3:958:C:H2'	51:3:959:C:C6	2.47	0.49
51:3:1364:A:H3'	51:3:1365:G:H8	1.77	0.49
51:3:1385:U:H2'	51:3:1386:G:C8	2.48	0.49
51:3:1464:G:N2	51:3:1591:C:C4	2.81	0.49
51:3:1661:A:H2'	51:3:1662:G:O4'	2.13	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:3:2059:G:N2	51:3:2625:U:O2	2.29	0.49
51:3:2071:C:O2'	51:3:2259:G:N2	2.46	0.49
51:3:2094:A:H2'	51:3:2095:A:H8	1.75	0.49
51:3:2268:C:H2'	51:3:2269:C:H6	1.78	0.49
51:3:2315:G:N2	51:3:2319:A:O2'	2.46	0.49
51:3:2338:G:C6	51:3:2394:A:N6	2.81	0.49
51:3:2702:G:C6	51:3:2703:U:C2	3.00	0.49
51:3:2752:G:H5'	51:3:2763:C:C6	2.48	0.49
51:3:2757:A:H2'	51:3:2758:A:C4	2.47	0.49
51:3:2795:C:H2'	51:3:2796:C:C6	2.47	0.49
52:4:59:A:HO2'	52:4:60:C:P	2.36	0.49
53:5:176:G:C6	53:5:190:A:N6	2.80	0.49
53:5:500:G:H2'	53:5:501:A:C8	2.48	0.49
53:5:921:G:N2	53:5:1480:G:H2'	2.28	0.49
53:5:947:U:H2'	53:5:948:U:H6	1.77	0.49
53:5:1182:C:H2'	53:5:1183:C:C6	2.47	0.49
53:5:1229:A:C6	53:5:1259:G:N1	2.81	0.49
54:6:20:G:H5'	54:6:61:U:O4	2.12	0.49
5:A:85:VAL:HG11	5:A:184:GLU:HG3	1.95	0.49
6:B:78:ILE:HG22	6:B:79:GLY:O	2.11	0.49
6:B:184:ASP:HB3	6:B:208:GLY:O	2.13	0.49
7:C:139:GLY:N	7:C:179:VAL:O	2.45	0.49
15:K:30:LEU:C	15:K:32:ASN:H	2.20	0.49
23:S:70:SER:HA	23:S:73:VAL:HG12	1.95	0.49
25:a:90:PRO:O	25:a:222:ARG:NH1	2.43	0.49
25:a:98:LEU:HB2	25:a:108:TYR:CE1	2.48	0.49
25:a:159:GLN:OE1	51:3:1807:C:O2'	2.22	0.49
28:d:73:ALA:HB2	28:d:81:ALA:HB2	1.94	0.49
29:e:24:HIS:HB3	29:e:36:LEU:O	2.13	0.49
29:e:90:LEU:HD22	29:e:167:TYR:HA	1.93	0.49
29:e:102:GLU:HG3	29:e:105:THR:HB	1.95	0.49
37:m:64:LYS:NZ	51:3:2715:C:O2	2.46	0.49
42:r:81:SER:HA	42:r:98:LYS:O	2.13	0.49
43:s:16:VAL:HA	43:s:19:ASN:HD21	1.76	0.49
46:v:32:ASN:ND2	51:3:2097:A:H1'	2.27	0.49
51:3:35:U:O2	51:3:483:A:N7	2.46	0.49
51:3:80:U:H2'	51:3:81:C:C6	2.47	0.49
51:3:80:U:H2'	51:3:81:C:H6	1.77	0.49
51:3:194:A:H5''	51:3:208:A:N1	2.28	0.49
51:3:251:G:C5	51:3:256:G:C6	3.00	0.49
51:3:320:A:H2'	51:3:321:A:C8	2.47	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:3:343:A:O4'	51:3:363:G:N2	2.46	0.49
51:3:513:A:H8	51:3:513:A:O5'	1.95	0.49
51:3:621:U:O4	51:3:705:A:H1'	2.12	0.49
51:3:746:G:C6	51:3:747:A:C5	3.00	0.49
51:3:768:G:H3'	51:3:796:A:H61	1.78	0.49
51:3:958:C:H1'	51:3:2277:A:C8	2.47	0.49
51:3:1201:A:H2'	51:3:1202:A:O4'	2.13	0.49
51:3:1205:U:H3'	51:3:1206:U:C6	2.48	0.49
51:3:1474:C:H2'	51:3:1475:C:H6	1.76	0.49
51:3:1747:G:C2	51:3:1751:A:C8	3.01	0.49
51:3:1862:A:H2'	51:3:1863:G:H8	1.77	0.49
51:3:1868:A:H2	51:3:1889:U:O2	1.95	0.49
51:3:1954:C:C2	51:3:1955:G:C8	3.00	0.49
51:3:2201:G:H2'	51:3:2202:U:H5''	1.95	0.49
51:3:2353:G:C5	51:3:2355:C:C5	3.01	0.49
51:3:2660:C:H42	51:3:2677:A:N6	2.10	0.49
51:3:2832:G:H2'	51:3:2833:A:C8	2.47	0.49
51:3:2835:G:H21	51:3:2888:U:P	2.35	0.49
52:4:31:G:C6	52:4:48:A:C6	3.00	0.49
53:5:52:A:N1	53:5:310:C:H1'	2.28	0.49
53:5:85:U:O2	53:5:86:A:N6	2.45	0.49
53:5:325:A:C5	53:5:328:G:C5	3.01	0.49
53:5:388:G:C4	53:5:389:A:C8	3.01	0.49
53:5:411:A:H3'	53:5:412:G:C8	2.39	0.49
53:5:434:U:O2'	53:5:435:U:O4'	2.20	0.49
53:5:662:G:C8	53:5:721:G:N2	2.58	0.49
53:5:1069:U:H3'	53:5:1070:G:C8	2.48	0.49
53:5:1082:U:N3	53:5:1085:G:OP2	2.38	0.49
53:5:1095:G:C2'	53:5:1096:A:H5'	2.43	0.49
53:5:1143:C:OP1	53:5:1143:C:H2'	2.12	0.49
53:5:1199:U:O2'	53:5:1296:C:OP2	2.27	0.49
54:7:59:A:O2'	54:7:62:C:N4	2.46	0.49
4:9:209:LYS:HB3	4:9:234:ARG:HD2	1.95	0.49
4:9:300:LYS:O	4:9:368:ALA:HA	2.13	0.49
5:A:237:ALA:HB1	5:A:242:MET:HB3	1.94	0.49
6:B:40:ILE:HG22	6:B:44:PHE:CZ	2.48	0.49
10:F:136:LYS:O	10:F:140:THR:HG23	2.12	0.49
11:G:101:PHE:HB2	11:G:129:ARG:HA	1.94	0.49
12:H:116:LYS:NZ	53:5:1342:C:O5'	2.45	0.49
13:I:59:ARG:O	17:M:45:ARG:NH2	2.45	0.49
15:K:126:GLN:HB3	15:K:130:TYR:CE2	2.48	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:N:51:ARG:NH2	53:5:725:A:OP1	2.45	0.49
25:a:60:GLY:HA3	25:a:223:GLY:O	2.12	0.49
25:a:61:ARG:HE	25:a:64:ARG:NH1	2.11	0.49
25:a:146:GLN:HG2	25:a:169:ARG:HH21	1.76	0.49
26:b:16:VAL:O	26:b:24:LEU:N	2.43	0.49
27:c:56:GLY:HA2	51:3:836:G:O5'	2.12	0.49
27:c:82:PRO:HG2	51:3:707:C:H4'	1.95	0.49
33:i:5:SER:N	51:3:1031:U:O2'	2.37	0.49
34:j:17:LYS:HZ3	34:j:99:PHE:HE2	1.60	0.49
35:k:34:ARG:NH1	35:k:45:GLY:H	2.10	0.49
35:k:75:GLN:NE2	35:k:76:GLU:O	2.46	0.49
40:p:65:ASN:O	40:p:69:ARG:HG2	2.13	0.49
42:r:81:SER:OG	42:r:98:LYS:N	2.45	0.49
45:u:28:ARG:CB	51:3:2286:A:H62	2.26	0.49
51:3:71:C:O2'	51:3:75:A:H4'	2.13	0.49
51:3:163:A:N7	51:3:169:U:C2	2.80	0.49
51:3:283:A:N1	51:3:285:U:H6	2.10	0.49
51:3:316:C:O2'	51:3:392:A:N1	2.46	0.49
51:3:490:A:OP1	51:3:490:A:H8	1.96	0.49
51:3:612:G:H5''	51:3:2025:C:OP2	2.13	0.49
51:3:741:A:H61	51:3:760:G:H1'	1.78	0.49
51:3:821:C:H2'	51:3:822:C:H6	1.74	0.49
51:3:1168:A:C2	51:3:2033:G:H1'	2.47	0.49
51:3:1217:G:H2'	51:3:1218:G:O4'	2.13	0.49
51:3:1273:U:H2'	51:3:1274:A:C8	2.48	0.49
51:3:1302:C:H3'	51:3:1680:A:H2'	1.95	0.49
51:3:1348:C:H5	51:3:1358:C:OP2	1.96	0.49
51:3:1380:U:H1'	51:3:1604:A:C2	2.47	0.49
51:3:1389:G:H2'	51:3:1390:C:C6	2.47	0.49
51:3:1489:G:C2	51:3:1490:G:C4	3.01	0.49
51:3:1558:A:OP1	51:3:1571:G:N2	2.46	0.49
51:3:1672:C:H5''	51:3:2718:C:O2'	2.13	0.49
51:3:1861:A:H2'	51:3:1862:A:O4'	2.12	0.49
51:3:1862:A:N6	51:3:1895:G:C6	2.80	0.49
51:3:1884:A:C5	51:3:1885:G:C5	3.01	0.49
51:3:2207:A:H61	51:3:2232:G:C2'	2.25	0.49
51:3:2312:G:N1	51:3:2321:C:N3	2.61	0.49
51:3:2340:U:HO2'	51:3:2343:A:HO2'	1.54	0.49
51:3:2359:G:N1	51:3:2374:A:OP2	2.45	0.49
51:3:2379:G:H2'	51:3:2380:U:O4'	2.13	0.49
51:3:2755:G:H2'	51:3:2756:A:C8	2.48	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:3:2802:C:C4	51:3:2808:A:C8	3.00	0.49
51:3:2863:G:H2'	51:3:2864:A:C4	2.48	0.49
53:5:113:C:C2	53:5:230:G:C2	3.01	0.49
53:5:421:G:H2'	53:5:422:A:C8	2.47	0.49
53:5:498:G:C6	53:5:499:U:C4	3.01	0.49
53:5:580:C:H2'	53:5:581:A:O4'	2.13	0.49
53:5:649:U:O2	53:5:750:A:C5	2.66	0.49
53:5:727:G:H8	53:5:727:G:O5'	1.95	0.49
53:5:896:G:H2'	53:5:897:A:H8	1.78	0.49
53:5:978:A:O2'	53:5:1176:A:N6	2.46	0.49
53:5:1072:G:C6	53:5:1073:A:C5	3.00	0.49
53:5:1078:G:C6	53:5:1090:G:C2	3.01	0.49
53:5:1108:A:C6	53:5:1154:A:H2	2.31	0.49
53:5:1150:G:C2	53:5:1151:A:C8	3.01	0.49
53:5:1426:U:O2'	53:5:1427:U:O4'	2.18	0.49
54:7:35:G:C6	54:7:36:A:C5	3.00	0.49
6:B:123:LEU:O	6:B:127:ILE:HG12	2.12	0.49
7:C:197:VAL:HG23	7:C:198:GLU:OE2	2.12	0.49
8:D:96:ASN:ND2	8:D:98:LYS:HB2	2.28	0.49
10:F:48:LEU:HD22	10:F:120:ALA:HB1	1.93	0.49
13:I:72:GLU:CG	17:M:57:LYS:HB2	2.43	0.49
14:J:54:TYR:O	14:J:58:ILE:HG12	2.12	0.49
17:M:16:PHE:CG	17:M:19:ARG:HG3	2.48	0.49
19:O:30:ILE:HG22	19:O:44:ILE:HB	1.95	0.49
23:S:22:LYS:HG2	53:5:1433:G:H5''	1.95	0.49
27:c:47:GLN:HG3	51:3:649:A:H61	1.77	0.49
27:c:116:TRP:O	27:c:117:SER:C	2.55	0.49
27:c:130:GLN:HA	27:c:133:PHE:CG	2.47	0.49
29:e:86:PHE:CE2	29:e:141:LYS:HG2	2.48	0.49
34:j:106:LEU:HD23	34:j:106:LEU:H	1.76	0.49
35:k:18:LYS:N	51:3:698:A:OP1	2.45	0.49
35:k:130:LYS:NZ	51:3:671:C:OP2	2.27	0.49
36:l:120:ARG:HA	36:l:123:HIS:CD2	2.48	0.49
47:w:6:GLU:HA	47:w:9:GLN:CD	2.38	0.49
51:3:177:U:H3'	51:3:178:A:H8	1.78	0.49
51:3:201:A:H2	51:3:2442:A:N6	2.10	0.49
51:3:326:A:H2'	51:3:327:U:H6	1.75	0.49
51:3:520:C:H2'	51:3:521:C:C6	2.48	0.49
51:3:795:G:H2'	51:3:796:A:O4'	2.13	0.49
51:3:1072:A:H2'	51:3:1073:A:H8	1.76	0.49
51:3:1556:U:H3'	51:3:1557:G:H8	1.77	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:3:1709:C:H2'	51:3:1710:A:O4'	2.13	0.49
51:3:1738:G:H2'	51:3:1739:G:C8	2.47	0.49
51:3:1772:G:O6	51:3:1994:U:C2	2.66	0.49
51:3:1788:A:H4'	51:3:1789:C:C5'	2.37	0.49
51:3:1820:U:H3'	51:3:1822:A:O2'	2.13	0.49
51:3:1821:G:OP2	51:3:1822:A:H3'	2.13	0.49
51:3:1881:C:C2	51:3:1882:G:C8	3.01	0.49
51:3:2015:C:H2'	51:3:2016:G:C8	2.43	0.49
51:3:2027:G:C2	51:3:2042:A:C2	3.01	0.49
51:3:2412:A:H3'	51:3:2413:G:C8	2.47	0.49
51:3:2701:A:C6	51:3:2725:G:C6	3.01	0.49
51:3:2789:A:OP2	51:3:2789:A:H8	1.96	0.49
51:3:2838:G:OP2	51:3:2838:G:H8	1.95	0.49
53:5:21:U:H6	53:5:21:U:O5'	1.96	0.49
53:5:69:G:C6	53:5:87:G:C2	3.01	0.49
53:5:169:G:H2'	53:5:170:A:O4'	2.13	0.49
53:5:216:G:H2'	53:5:217:U:C6	2.48	0.49
53:5:337:C:H2'	53:5:338:C:C6	2.46	0.49
53:5:516:C:H5'	53:5:528:G:O4'	2.12	0.49
53:5:517:C:N4	53:5:527:G:O2'	2.44	0.49
53:5:747:C:H2'	53:5:748:U:C6	2.46	0.49
53:5:920:G:C2	53:5:922:G:N7	2.81	0.49
53:5:1233:G:H8	53:5:1233:G:O5'	1.96	0.49
54:7:6:U:H2'	54:7:7:U:H6	1.77	0.49
54:7:20:G:H5''	54:7:21:U:OP2	2.12	0.49
4:9:130:ARG:HA	4:9:164:ASP:CG	2.37	0.49
7:C:28:GLY:HA3	53:5:408:U:O4'	2.13	0.49
8:D:67:GLU:HB2	8:D:172:LEU:HD21	1.95	0.49
8:D:207:ARG:NH1	8:D:211:LEU:HD21	2.24	0.49
11:G:81:ILE:HD12	11:G:82:PRO:HD2	1.94	0.49
15:K:76:VAL:HG21	15:K:108:TYR:HD2	1.78	0.49
19:O:2:ARG:HH11	19:O:9:PRO:HA	1.76	0.49
22:R:69:HIS:CA	22:R:73:GLU:HG3	2.43	0.49
22:R:81:LYS:HB3	22:R:83:HIS:CD2	2.48	0.49
25:a:243:GLY:HA2	51:3:2607:G:C8	2.48	0.49
28:d:64:LYS:HB3	52:4:40:U:H4'	1.94	0.49
34:j:34:PHE:HB3	34:j:69:GLN:NE2	2.27	0.49
34:j:112:ASN:HA	34:j:115:LEU:HD23	1.95	0.49
38:n:79:ASP:HA	38:n:82:VAL:HG22	1.95	0.49
40:p:85:HIS:CG	40:p:86:ASN:N	2.81	0.49
44:t:88:LYS:NZ	51:3:335:G:OP2	2.41	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:v:18:ARG:HH11	46:v:22:LYS:C	2.21	0.49
46:v:53:ARG:HH11	46:v:56:ARG:NH1	2.10	0.49
49:y:3:VAL:HG11	51:3:2064:G:H1'	1.94	0.49
51:3:548:A:H2'	51:3:549:A:C8	2.47	0.49
51:3:738:U:H3'	51:3:739:G:C8	2.48	0.49
51:3:855:A:N3	51:3:979:U:O2'	2.41	0.49
51:3:878:A:C6	51:3:879:U:O4	2.66	0.49
51:3:907:A:H2'	51:3:908:A:O4'	2.13	0.49
51:3:912:A:C6	51:3:940:A:N1	2.81	0.49
51:3:954:A:H3'	51:3:955:A:C8	2.48	0.49
51:3:995:A:H2'	51:3:996:A:H8	1.77	0.49
51:3:1048:A:H2	51:3:1185:U:O2	1.96	0.49
51:3:1048:A:O2'	51:3:1049:U:O5'	2.29	0.49
51:3:1057:G:H4'	51:3:1058:U:C6	2.48	0.49
51:3:1100:U:H2'	54:6:57:C:N4	2.28	0.49
51:3:1130:A:H1'	54:6:57:C:OP2	2.13	0.49
51:3:1160:G:C6	51:3:1161:A:N6	2.80	0.49
51:3:1216:U:H3'	51:3:1216:U:OP2	2.13	0.49
51:3:1278:G:H8	51:3:1278:G:P	2.35	0.49
51:3:1501:U:H3	51:3:1542:G:H1	1.60	0.49
51:3:1637:A:H2'	51:3:1638:C:O4'	2.13	0.49
51:3:1649:C:P	51:3:1651:C:H41	2.32	0.49
51:3:1710:A:H3'	51:3:1711:A:H8	1.78	0.49
51:3:1843:C:H2'	51:3:1844:C:H6	1.78	0.49
51:3:1866:G:O6	51:3:1891:A:N6	2.27	0.49
51:3:1982:G:C5	51:3:1983:U:C4	3.01	0.49
51:3:2286:A:N6	51:3:2287:G:C6	2.81	0.49
51:3:2291:U:O4	51:3:2292:A:N6	2.46	0.49
51:3:2322:G:H2'	51:3:2323:U:C6	2.48	0.49
51:3:2370:G:C2	51:3:2371:U:C6	3.01	0.49
51:3:2405:G:H2'	51:3:2406:U:C6	2.48	0.49
51:3:2454:G:N3	51:3:2457:U:N3	2.61	0.49
51:3:2533:A:C2	51:3:2547:C:C2	3.01	0.49
51:3:2536:U:OP2	51:3:2538:A:N6	2.45	0.49
51:3:2857:C:H2'	51:3:2858:A:C8	2.47	0.49
53:5:231:U:H2'	53:5:232:G:C8	2.48	0.49
53:5:253:G:C6	53:5:254:G:C5	3.01	0.49
53:5:473:A:C6	53:5:474:G:C6	3.00	0.49
53:5:556:G:H2'	53:5:557:A:C2	2.46	0.49
53:5:573:G:C6	53:5:875:G:N1	2.81	0.49
53:5:830:U:H3	53:5:847:G:H1	1.60	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:5:944:A:H4'	53:5:1339:U:O4	2.13	0.49
53:5:999:C:H1'	53:5:1000:A:O4'	2.13	0.49
53:5:1001:A:P	53:5:1019:G:H22	2.35	0.49
53:5:1137:C:H2'	53:5:1138:U:C6	2.48	0.49
53:5:1152:G:N2	53:5:1156:G:C6	2.80	0.49
53:5:1287:G:H2'	53:5:1288:C:C6	2.48	0.49
53:5:1477:A:H2'	53:5:1479:G:C4	2.47	0.49
54:6:71:A:C6	54:6:72:C:C4	3.01	0.49
2:1:39:ARG:HH12	51:3:2358:U:H5	1.57	0.48
4:9:88:TYR:O	4:9:91:ASN:HB2	2.12	0.48
4:9:120:ILE:HG22	4:9:161:TYR:HD2	1.78	0.48
4:9:205:ARG:HH12	4:9:231:ARG:CZ	2.26	0.48
4:9:328:ARG:HD3	54:6:51:G:N3	2.28	0.48
5:A:62:ARG:O	5:A:65:LEU:HB3	2.13	0.48
7:C:49:GLY:O	7:C:52:GLN:HG2	2.12	0.48
14:J:79:VAL:HG22	14:J:105:GLU:HA	1.95	0.48
19:O:12:ARG:HA	19:O:32:HIS:CD2	2.48	0.48
30:f:5:LEU:CG	30:f:34:LYS:HG3	2.41	0.48
35:k:6:LEU:HD13	51:3:1235:U:H1'	1.95	0.48
38:n:14:ARG:NH2	51:3:2342:U:O2	2.46	0.48
40:p:40:GLN:HB3	40:p:44:TYR:CZ	2.47	0.48
40:p:51:ASN:OD1	40:p:54:ARG:NH2	2.46	0.48
42:r:93:SER:OG	51:3:1648:A:N6	2.42	0.48
44:t:13:ILE:C	44:t:19:GLY:H	2.20	0.48
49:y:13:ARG:HD2	49:y:17:ARG:NH1	2.28	0.48
51:3:16:A:OP2	51:3:17:G:H8	1.96	0.48
51:3:51:A:C5	51:3:119:A:C5	3.01	0.48
51:3:62:G:N2	51:3:76:A:O2'	2.44	0.48
51:3:72:G:C2	51:3:115:U:C4	3.01	0.48
51:3:133:G:H2'	51:3:134:U:O4'	2.12	0.48
51:3:292:G:C2'	51:3:293:G:H5'	2.43	0.48
51:3:763:G:H8	51:3:763:G:OP2	1.95	0.48
51:3:874:U:H2'	51:3:875:G:C8	2.42	0.48
51:3:1012:G:O2'	51:3:1191:A:N7	2.45	0.48
51:3:1077:G:H2'	51:3:1078:C:H6	1.75	0.48
51:3:1080:A:N1	51:3:1146:A:H2'	2.28	0.48
51:3:1096:U:H4'	51:3:1106:G:OP2	2.13	0.48
51:3:1369:U:O2	51:3:1425:U:O2'	2.30	0.48
51:3:1526:U:H2'	51:3:1527:U:C6	2.47	0.48
51:3:1541:A:C2	51:3:1542:G:H1'	2.48	0.48
51:3:1706:C:C4	51:3:2590:G:H8	2.31	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:3:1772:G:C6	51:3:1995:G:C5	3.00	0.48
51:3:1795:C:C2	51:3:1796:A:C8	3.01	0.48
51:3:1797:C:H2'	51:3:1798:A:C8	2.47	0.48
51:3:1810:A:C8	51:3:1811:A:C8	3.01	0.48
51:3:1876:G:N2	51:3:1879:A:OP2	2.26	0.48
51:3:2033:G:H2'	51:3:2034:G:H8	1.78	0.48
51:3:2273:U:O5'	51:3:2274:A:H2'	2.13	0.48
51:3:2400:A:N7	51:3:2432:C:C4	2.81	0.48
51:3:2488:C:H2'	51:3:2489:G:O4'	2.13	0.48
51:3:2647:A:H2'	51:3:2648:A:C8	2.48	0.48
51:3:2838:G:H1'	51:3:2887:A:N6	2.28	0.48
53:5:151:C:H2'	53:5:152:U:H6	1.78	0.48
53:5:243:G:C6	53:5:274:A:C6	3.01	0.48
53:5:558:U:H5'	53:5:564:G:N2	2.28	0.48
53:5:571:A:H2'	53:5:572:A:O4'	2.12	0.48
53:5:641:U:H2'	53:5:642:A:H8	1.77	0.48
53:5:690:G:H2'	53:5:691:A:C8	2.48	0.48
53:5:727:G:O2'	53:5:763:A:O4'	2.31	0.48
53:5:727:G:O2'	53:5:811:A:N1	2.45	0.48
53:5:733:A:H2'	53:5:734:A:C8	2.48	0.48
53:5:764:A:C2	53:5:765:A:H1'	2.48	0.48
53:5:773:G:H4'	53:5:774:A:C8	2.48	0.48
53:5:920:G:C2	53:5:922:G:C8	3.01	0.48
53:5:959:A:N6	53:5:960:C:H41	2.11	0.48
53:5:1008:G:H2'	53:5:1009:G:C8	2.48	0.48
53:5:1294:U:H3'	53:5:1295:U:C6	2.47	0.48
5:A:87:THR:HG22	5:A:93:LYS:NZ	2.27	0.48
7:C:8:PHE:O	7:C:11:SER:OG	2.28	0.48
8:D:71:VAL:HG23	8:D:72:LYS:N	2.28	0.48
9:E:13:LEU:HD22	9:E:17:GLN:HE22	1.78	0.48
9:E:22:ASN:O	9:E:26:GLN:NE2	2.46	0.48
13:I:43:LYS:HD2	13:I:81:ILE:HD12	1.94	0.48
13:I:72:GLU:HG2	17:M:57:LYS:O	2.13	0.48
17:M:16:PHE:HB2	17:M:19:ARG:H	1.78	0.48
20:P:2:LYS:HE3	20:P:4:ASN:HB3	1.95	0.48
22:R:5:ALA:HB3	53:5:1288:C:C5	2.48	0.48
23:S:52:ASP:OD2	53:5:195:U:O2'	2.29	0.48
25:a:240:HIS:NE2	25:a:251:ARG:HB2	2.27	0.48
26:b:126:TRP:HB2	26:b:128:PHE:CZ	2.48	0.48
29:e:10:THR:HA	29:e:52:ASN:HA	1.95	0.48
29:e:112:TYR:CD2	29:e:116:ILE:HD11	2.48	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:k:149:LEU:HG	35:k:150:GLU:N	2.28	0.48
39:o:27:ALA:H	39:o:93:ARG:HH12	1.61	0.48
41:q:67:LYS:NZ	41:q:86:ARG:HG3	2.28	0.48
47:w:96:ALA:C	47:w:100:LYS:HZ3	2.21	0.48
51:3:244:G:C2'	51:3:261:A:H61	2.26	0.48
51:3:257:C:H2'	51:3:258:G:C8	2.48	0.48
51:3:325:G:C6	51:3:384:G:C6	3.01	0.48
51:3:435:U:H2'	51:3:436:G:C8	2.48	0.48
51:3:546:U:H3'	51:3:547:G:H8	1.78	0.48
51:3:755:C:H2'	51:3:756:A:H8	1.78	0.48
51:3:771:C:H2'	51:3:772:C:C6	2.47	0.48
51:3:791:A:C2	51:3:792:G:H1'	2.48	0.48
51:3:808:U:O2'	51:3:813:G:O3'	2.29	0.48
51:3:954:A:H5'	51:3:2276:A:N6	2.28	0.48
51:3:1077:G:N2	51:3:1148:U:H2'	2.21	0.48
51:3:1244:A:O4'	51:3:1269:C:H4'	2.13	0.48
51:3:1355:C:H2'	51:3:1356:G:C2	2.48	0.48
51:3:1441:A:C6	51:3:1624:A:C6	3.01	0.48
51:3:1494:U:O2	51:3:1550:G:C2	2.67	0.48
51:3:1591:C:C6	51:3:1592:A:H2'	2.48	0.48
51:3:1607:G:C5	51:3:1608:C:C5	3.02	0.48
51:3:1702:A:N6	51:3:1710:A:N1	2.51	0.48
51:3:1799:A:N6	51:3:1835:G:C2	2.81	0.48
51:3:1822:A:H8	51:3:1822:A:O5'	1.96	0.48
51:3:1842:G:H2'	51:3:1843:C:H6	1.78	0.48
51:3:1961:A:H61	51:3:1993:U:C5'	2.27	0.48
51:3:2058:G:H3'	51:3:2586:G:OP1	2.11	0.48
51:3:2307:G:N2	51:3:2325:U:O2	2.46	0.48
51:3:2379:G:H3'	51:3:2380:U:H5''	1.95	0.48
51:3:2478:G:N2	51:3:2489:G:H1'	2.27	0.48
51:3:2748:A:C5	51:3:2749:A:C5	3.00	0.48
52:4:22:G:H8	52:4:22:G:OP2	1.95	0.48
52:4:50:C:O2	52:4:51:A:N6	2.46	0.48
53:5:462:G:H2'	53:5:463:U:O4'	2.14	0.48
53:5:490:U:H2'	53:5:491:U:C6	2.48	0.48
53:5:762:G:P	53:5:809:G:H22	2.37	0.48
53:5:1064:U:O2'	53:5:1065:G:H5'	2.12	0.48
53:5:1220:A:N1	53:5:1267:G:C6	2.81	0.48
54:6:16:G:C2	54:6:49:C:O2	2.66	0.48
4:9:108:ALA:N	4:9:136:ASN:O	2.25	0.48
4:9:166:LYS:HD2	4:9:166:LYS:N	2.28	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:9:305:PHE:HA	4:9:393:LEU:HB2	1.94	0.48
6:B:54:SER:N	6:B:70:TYR:O	2.45	0.48
6:B:181:LEU:HG	53:5:1103:C:C2	2.48	0.48
8:D:84:ARG:HH11	53:5:17:A:H5'	1.78	0.48
12:H:74:PHE:HE2	53:5:1263:A:N6	2.07	0.48
13:I:92:SER:O	13:I:95:ARG:NE	2.46	0.48
20:P:20:LYS:O	20:P:49:ASN:N	2.45	0.48
25:a:143:GLU:OE2	25:a:144:GLY:N	2.46	0.48
25:a:184:LEU:C	25:a:186:SER:H	2.20	0.48
27:c:127:LEU:HD11	27:c:201:LYS:HA	1.94	0.48
27:c:175:ILE:HG12	51:3:357:A:C2	2.48	0.48
33:i:120:ARG:NH1	51:3:563:A:OP1	2.46	0.48
36:l:22:LYS:HB2	36:l:98:LYS:NZ	2.28	0.48
37:m:39:LYS:HD2	37:m:40:ASN:N	2.28	0.48
39:o:95:LYS:NZ	39:o:116:GLU:HB2	2.27	0.48
41:q:30:GLY:H	41:q:59:VAL:HB	1.78	0.48
42:r:134:LYS:HE2	42:r:134:LYS:HB3	1.59	0.48
44:t:90:LYS:HD2	44:t:105:LYS:HA	1.95	0.48
47:w:31:PHE:C	47:w:35:HIS:HD1	2.15	0.48
50:z:36:LYS:HG2	50:z:37:PHE:H	1.78	0.48
51:3:166:A:OP1	51:3:166:A:H8	1.96	0.48
51:3:276:A:O2'	51:3:406:C:O4'	2.30	0.48
51:3:464:A:N6	51:3:465:A:N1	2.60	0.48
51:3:558:C:H4'	51:3:575:C:O2	2.12	0.48
51:3:615:G:C2	51:3:616:G:C5	3.02	0.48
51:3:1063:A:P	51:3:1160:G:H1	2.37	0.48
51:3:1077:G:H2'	51:3:1078:C:O4'	2.13	0.48
51:3:1714:U:H3	51:3:1770:A:H5''	1.78	0.48
51:3:2330:A:H2'	51:3:2331:G:C8	2.48	0.48
51:3:2467:A:C2	51:3:2502:G:H1'	2.48	0.48
51:3:2480:G:H2'	51:3:2537:G:H22	1.78	0.48
51:3:2551:G:O2'	51:3:2653:G:C4	2.66	0.48
51:3:2754:U:O4	51:3:2764:U:H5	1.97	0.48
52:4:76:A:C2	52:4:77:G:H1'	2.48	0.48
53:5:296:A:O5'	53:5:296:A:H8	1.96	0.48
53:5:576:A:N3	53:5:725:A:H2	2.11	0.48
53:5:695:G:H2'	53:5:696:C:C6	2.48	0.48
53:5:918:A:H2'	53:5:919:C:C6	2.49	0.48
54:6:19:G:O2'	54:6:58:G:N1	2.33	0.48
54:6:54:G:H2'	54:6:55:U:O4'	2.13	0.48
4:9:207:VAL:HG12	4:9:236:GLU:HB3	1.95	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:A:130:LEU:HD11	5:A:160:GLU:OE2	2.14	0.48
5:A:224:SER:O	5:A:227:LEU:HB2	2.14	0.48
6:B:26:SER:O	6:B:27:HIS:ND1	2.46	0.48
7:C:184:ARG:NH1	7:C:189:ALA:HA	2.26	0.48
11:G:109:ASN:ND2	11:G:109:ASN:O	2.46	0.48
11:G:126:LYS:O	11:G:130:LEU:HG	2.13	0.48
12:H:7:TYR:O	12:H:91:GLN:NE2	2.47	0.48
14:J:105:GLU:C	14:J:106:LYS:HD3	2.38	0.48
15:K:61:ALA:HB2	53:5:527:G:N1	2.26	0.48
20:P:60:LYS:HD3	20:P:60:LYS:C	2.39	0.48
25:a:262:HIS:CE1	51:3:1831:G:H21	2.31	0.48
26:b:64:LYS:O	26:b:67:GLN:HG2	2.13	0.48
26:b:196:ALA:CB	51:3:2688:C:H1'	2.43	0.48
27:c:49:THR:HB	51:3:40:A:H1'	1.95	0.48
27:c:70:HIS:N	51:3:2067:A:OP1	2.47	0.48
27:c:140:THR:CG2	27:c:173:SER:H	2.25	0.48
28:d:30:ARG:O	28:d:159:SER:N	2.46	0.48
29:e:28:LYS:HB2	29:e:33:GLN:HB2	1.95	0.48
29:e:141:LYS:CB	51:3:2754:U:H4'	2.44	0.48
36:l:29:PHE:H	36:l:105:GLU:CD	2.21	0.48
37:m:75:VAL:HA	37:m:78:LEU:HD12	1.94	0.48
43:s:57:THR:O	51:3:1369:U:H4'	2.13	0.48
49:y:37:LYS:HZ1	49:y:39:PHE:HA	1.79	0.48
50:z:10:GLY:O	50:z:47:HIS:HB3	2.14	0.48
51:3:139:G:H2'	51:3:140:G:O4'	2.12	0.48
51:3:286:A:H4'	51:3:287:G:H2'	1.96	0.48
51:3:450:C:O2	51:3:1871:U:O2'	2.27	0.48
51:3:536:A:OP1	51:3:536:A:H8	1.96	0.48
51:3:760:G:C2	51:3:761:G:N2	2.82	0.48
51:3:820:U:H2'	51:3:821:C:O4'	2.14	0.48
51:3:955:A:H3'	51:3:956:U:C6	2.48	0.48
51:3:983:A:H2	51:3:1020:G:H8	1.60	0.48
51:3:1034:A:H2'	51:3:1035:U:H5''	1.95	0.48
51:3:1048:A:HO2'	51:3:1049:U:C5'	2.26	0.48
51:3:1379:C:H2'	51:3:1380:U:C6	2.48	0.48
51:3:1663:G:H3'	51:3:1664:A:C8	2.47	0.48
51:3:1902:C:H2'	51:3:1903:A:C8	2.47	0.48
51:3:1946:U:H5'	51:3:2599:C:H1'	1.95	0.48
51:3:2014:U:H5'	51:3:2827:A:C2	2.36	0.48
51:3:2104:A:H2'	51:3:2105:G:C8	2.48	0.48
51:3:2184:A:H2'	51:3:2185:C:O4'	2.13	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:5:39:G:N1	53:5:393:A:OP1	2.43	0.48
53:5:554:C:O2'	53:5:555:G:H5'	2.13	0.48
53:5:619:A:N7	53:5:620:A:N6	2.62	0.48
53:5:742:C:O3'	53:5:845:C:O2'	2.24	0.48
53:5:855:G:H2'	53:5:856:U:H6	1.78	0.48
53:5:881:G:N2	53:5:905:U:C2	2.82	0.48
53:5:942:G:C2	53:5:1210:U:C2	3.01	0.48
53:5:1008:G:H2'	53:5:1009:G:O4'	2.13	0.48
53:5:1010:A:H2	53:5:1194:A:O4'	1.96	0.48
53:5:1083:A:C6	53:5:1158:A:H1'	2.48	0.48
53:5:1095:G:H2'	53:5:1096:A:H5'	1.96	0.48
53:5:1117:U:O2	53:5:1255:A:H2'	2.13	0.48
54:6:56:U:HO2'	54:6:57:C:P	2.35	0.48
54:6:67:C:H2'	54:6:68:G:C8	2.48	0.48
54:7:11:G:H2'	54:7:12:C:O4'	2.13	0.48
4:9:209:LYS:O	4:9:235:GLY:HA3	2.12	0.48
5:A:38:ASN:HD22	5:A:206:THR:C	2.21	0.48
6:B:151:GLY:O	6:B:206:ASN:N	2.31	0.48
9:E:69:THR:O	9:E:73:LYS:HG2	2.12	0.48
9:E:142:ARG:O	11:G:3:THR:HB	2.14	0.48
9:E:148:LYS:O	11:G:58:GLN:HB3	2.13	0.48
10:F:26:ILE:O	10:F:30:MET:N	2.46	0.48
12:H:88:ALA:O	12:H:91:GLN:HB3	2.13	0.48
14:J:21:ASN:HA	14:J:51:LYS:HE2	1.95	0.48
18:N:25:GLN:HG2	53:5:654:U:H4'	1.95	0.48
18:N:62:ARG:HH22	53:5:751:C:H4'	1.79	0.48
19:O:43:LYS:HZ1	53:5:624:U:H5''	1.77	0.48
23:S:9:LYS:HE3	53:5:88:A:P	2.54	0.48
26:b:2:GLU:HG2	26:b:88:THR:H	1.79	0.48
27:c:141:LYS:O	27:c:145:GLN:HG2	2.14	0.48
28:d:61:SER:HA	28:d:99:PHE:CZ	2.49	0.48
34:j:70:GLN:NE2	34:j:74:GLY:O	2.46	0.48
35:k:44:SER:HB3	51:3:705:A:H5''	1.95	0.48
37:m:67:LEU:CB	37:m:75:VAL:HG23	2.42	0.48
38:n:64:ASN:HA	38:n:70:ALA:H	1.79	0.48
38:n:97:LYS:HE3	38:n:99:HIS:ND1	2.29	0.48
40:p:12:ARG:O	40:p:16:TRP:CD1	2.67	0.48
43:s:34:LYS:HD3	43:s:34:LYS:HA	1.67	0.48
46:v:30:ASN:CB	51:3:2238:G:H5''	2.42	0.48
50:z:43:LYS:O	50:z:45:VAL:HG23	2.13	0.48
51:3:28:G:N1	51:3:548:A:OP2	2.46	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:3:167:A:H3'	51:3:168:A:H8	1.77	0.48
51:3:200:A:C8	51:3:840:G:C5	3.01	0.48
51:3:292:G:H2'	51:3:293:G:O4'	2.14	0.48
51:3:299:A:N6	51:3:440:C:O2'	2.47	0.48
51:3:375:U:H2'	51:3:376:U:C6	2.47	0.48
51:3:521:C:N3	51:3:531:G:N1	2.62	0.48
51:3:665:C:H1'	51:3:675:U:H1'	1.96	0.48
51:3:667:A:H2'	51:3:668:A:C4	2.48	0.48
51:3:744:U:H2'	51:3:745:U:C6	2.48	0.48
51:3:839:A:H5''	51:3:840:G:OP1	2.13	0.48
51:3:862:U:H4'	51:3:863:U:C4	2.49	0.48
51:3:922:C:H1'	51:3:929:G:H22	1.78	0.48
51:3:992:G:H22	51:3:995:A:H3'	1.78	0.48
51:3:1071:G:C6	51:3:1155:G:C6	3.01	0.48
51:3:1082:A:H1'	51:3:1146:A:N6	2.27	0.48
51:3:1298:A:H62	51:3:2019:G:H21	1.59	0.48
51:3:1401:A:H3'	51:3:1402:G:H8	1.77	0.48
51:3:1414:C:H5'	51:3:1424:U:O4	2.13	0.48
51:3:1492:G:H2'	51:3:1580:G:H8	1.78	0.48
51:3:1521:A:H2'	51:3:1523:C:C5	2.48	0.48
51:3:1688:A:H2'	51:3:1689:A:H8	1.77	0.48
51:3:1700:G:H3'	51:3:1701:G:C8	2.48	0.48
51:3:1710:A:H2'	51:3:1711:A:O4'	2.13	0.48
51:3:1890:U:C2	51:3:1891:A:C8	3.02	0.48
51:3:1953:U:H2'	51:3:1954:C:C6	2.47	0.48
51:3:2119:A:N7	51:3:2177:G:N1	2.53	0.48
51:3:2205:U:O3'	51:3:2206:A:H8	1.97	0.48
51:3:2468:U:C2	51:3:2469:A:C8	3.01	0.48
51:3:2477:A:H3'	51:3:2478:G:H8	1.78	0.48
51:3:2663:G:C4	51:3:2672:G:C6	3.02	0.48
51:3:2748:A:H2'	51:3:2749:A:H8	1.78	0.48
51:3:2757:A:H2'	51:3:2758:A:C5	2.47	0.48
51:3:2793:U:H2'	51:3:2794:U:C6	2.38	0.48
52:4:2:U:N3	52:4:107:G:N1	2.61	0.48
53:5:65:G:H21	53:5:68:C:H3'	1.79	0.48
53:5:76:G:H2'	53:5:78:A:N7	2.28	0.48
53:5:107:A:H8	53:5:107:A:P	2.36	0.48
53:5:153:A:H2'	53:5:154:G:C8	2.48	0.48
53:5:167:A:C3'	53:5:196:G:H1	2.26	0.48
53:5:334:A:N6	53:5:347:G:H1	2.11	0.48
53:5:501:A:H2'	53:5:502:C:H6	1.77	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:5:520:C:H3'	53:5:521:A:C8	2.46	0.48
53:5:1099:G:H2'	53:5:1100:C:C6	2.48	0.48
4:9:92:MET:HE1	4:9:99:MET:HE1	1.95	0.48
5:A:30:VAL:HA	5:A:56:PHE:HD1	1.78	0.48
7:C:57:LYS:O	7:C:61:GLN:HG2	2.14	0.48
9:E:145:ARG:O	11:G:61:GLU:N	2.35	0.48
11:G:29:LYS:HG3	11:G:76:TYR:CE1	2.49	0.48
12:H:72:GLY:C	12:H:77:GLN:HE22	2.22	0.48
17:M:42:LEU:O	17:M:46:GLU:HG2	2.13	0.48
18:N:29:LEU:O	18:N:33:ILE:HG12	2.13	0.48
21:Q:84:ARG:NH1	21:Q:85:HIS:CE1	2.81	0.48
21:Q:87:ALA:O	21:Q:91:LYS:HG3	2.14	0.48
25:a:13:GLY:HA2	51:3:1780:A:C2	2.49	0.48
25:a:189:THR:O	25:a:279:ILE:N	2.44	0.48
26:b:72:LYS:HD3	51:3:2794:U:H5''	1.94	0.48
26:b:106:GLU:HA	26:b:218:LYS:H	1.78	0.48
27:c:79:THR:O	27:c:84:PHE:HB3	2.12	0.48
28:d:4:LEU:HD12	28:d:7:HIS:HB3	1.95	0.48
28:d:68:THR:HB	28:d:88:LYS:HG2	1.95	0.48
34:j:70:GLN:HA	34:j:76:HIS:HA	1.95	0.48
37:m:82:LEU:HA	37:m:86:VAL:HB	1.95	0.48
40:p:35:LYS:HG2	40:p:36:GLN:N	2.28	0.48
43:s:54:LYS:HG2	43:s:55:VAL:N	2.28	0.48
47:w:10:LYS:HD3	47:w:14:GLU:N	2.28	0.48
51:3:143:A:H2'	51:3:144:C:O4'	2.13	0.48
51:3:278:U:O2	51:3:291:G:C2	2.66	0.48
51:3:310:U:H6	51:3:311:G:C6	2.31	0.48
51:3:448:A:C5	51:3:449:C:C4	3.01	0.48
51:3:664:G:H8	51:3:664:G:P	2.36	0.48
51:3:1029:A:C6	51:3:1197:G:C6	3.02	0.48
51:3:1118:U:O2'	51:3:1120:A:N7	2.46	0.48
51:3:1174:G:HO2'	51:3:1178:A:N6	2.11	0.48
51:3:1311:G:N1	51:3:1314:A:OP2	2.47	0.48
51:3:1372:U:O2	51:3:1412:A:H2'	2.14	0.48
51:3:1507:G:H1'	51:3:1508:G:P	2.53	0.48
51:3:1553:G:H22	51:3:1577:A:H5'	1.77	0.48
51:3:1868:A:H2	51:3:1889:U:C2	2.31	0.48
51:3:1933:U:N3	51:3:1936:G:C2	2.81	0.48
51:3:2022:A:H8	51:3:2023:U:C5	2.32	0.48
51:3:2058:G:H2'	51:3:2622:A:N6	2.24	0.48
51:3:2084:A:H2'	51:3:2085:C:H6	1.77	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:3:2299:U:H2'	51:3:2300:A:H8	1.78	0.48
51:3:2607:G:C2	51:3:2608:A:C5	3.02	0.48
51:3:2687:A:H2'	51:3:2688:C:O4'	2.13	0.48
51:3:2700:C:H1'	51:3:2851:U:H1'	1.95	0.48
51:3:2707:A:C2	51:3:2717:G:C5	3.01	0.48
51:3:2715:C:H2'	51:3:2716:U:C6	2.49	0.48
51:3:2766:A:H2'	51:3:2767:G:O4'	2.14	0.48
51:3:2880:A:H2'	51:3:2881:A:C8	2.48	0.48
52:4:8:C:C4	52:4:9:C:N3	2.81	0.48
53:5:28:G:H21	53:5:292:U:H4'	1.79	0.48
53:5:59:C:C2	53:5:350:G:N2	2.77	0.48
53:5:491:U:H2'	53:5:492:G:O4'	2.13	0.48
53:5:612:G:C2	53:5:624:U:O2	2.67	0.48
53:5:683:G:O2'	53:5:700:G:N2	2.46	0.48
53:5:727:G:C5	53:5:728:G:H1'	2.49	0.48
53:5:859:A:H2'	53:5:860:C:C6	2.48	0.48
54:6:15:A:H2'	54:6:16:G:O4'	2.14	0.48
54:7:3:G:C4	54:7:4:U:N3	2.80	0.48
54:7:16:G:C2	54:7:49:C:N3	2.81	0.48
54:7:36:A:N1	54:7:37:A:N6	2.61	0.48
2:1:5:SER:HB2	2:1:9:LYS:HE2	1.96	0.48
2:1:24:ALA:HA	35:k:63:PRO:HD3	1.95	0.48
3:2:17:ILE:HG13	3:2:24:ARG:HB2	1.96	0.48
4:9:12:HIS:NE2	4:9:78:ALA:HB2	2.29	0.48
4:9:99:MET:HE3	4:9:102:ALA:HB2	1.95	0.48
4:9:193:MET:HE3	4:9:193:MET:HB3	1.81	0.48
5:A:66:GLN:O	5:A:70:ASN:ND2	2.47	0.48
5:A:109:THR:HG23	5:A:165:GLY:H	1.78	0.48
5:A:110:GLN:HB2	5:A:162:PHE:HA	1.96	0.48
7:C:102:TYR:CG	7:C:110:ARG:HG2	2.48	0.48
8:D:66:PHE:CG	8:D:96:ASN:HB3	2.49	0.48
9:E:5:ILE:HD13	9:E:72:PHE:CE1	2.49	0.48
9:E:66:ASN:HD22	53:5:736:U:P	2.37	0.48
9:E:124:ASN:C	9:E:126:GLU:H	2.21	0.48
10:F:70:PRO:HB3	10:F:102:TRP:HH2	1.79	0.48
15:K:59:ASN:HA	53:5:516:C:O2	2.14	0.48
16:L:89:LEU:N	16:L:92:ARG:HH11	2.10	0.48
25:a:170:ILE:H	25:a:170:ILE:HD12	1.79	0.48
26:b:73:ASN:HD21	26:b:92:MET:HE1	1.79	0.48
30:f:1:MET:SD	30:f:23:ASP:N	2.78	0.48
30:f:8:ASP:HA	30:f:16:PHE:HB2	1.94	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:j:101:PRO:HB3	34:j:120:GLU:OE1	2.13	0.48
36:l:92:PHE:CE1	36:l:94:VAL:HB	2.48	0.48
36:l:122:GLY:HA2	36:l:125:LEU:HB2	1.95	0.48
40:p:12:ARG:HG2	40:p:16:TRP:HE1	1.79	0.48
43:s:56:ASN:HB3	51:3:1369:U:H1'	1.96	0.48
44:t:3:ARG:NH1	51:3:370:C:H4'	2.28	0.48
44:t:44:ARG:NH2	51:3:517:G:O5'	2.47	0.48
47:w:60:GLU:HG3	47:w:61:ARG:HG3	1.95	0.48
51:3:269:A:C4	51:3:464:A:C6	3.01	0.48
51:3:286:A:H4'	51:3:287:G:O5'	2.14	0.48
51:3:377:U:C2	51:3:378:G:C8	3.02	0.48
51:3:553:A:H2'	51:3:553:A:N3	2.29	0.48
51:3:701:A:H2'	51:3:702:U:C6	2.49	0.48
51:3:770:A:H3'	51:3:771:C:H6	1.79	0.48
51:3:902:U:N3	51:3:940:A:OP2	2.34	0.48
51:3:1088:A:C6	51:3:1142:G:C6	3.02	0.48
51:3:1101:U:H3'	51:3:1102:A:C5'	2.44	0.48
51:3:1174:G:H21	51:3:1178:A:H2	1.62	0.48
51:3:1376:G:C6	51:3:1633:C:C4	3.02	0.48
51:3:1422:U:H4'	51:3:1637:A:H5''	1.95	0.48
51:3:1743:U:C2	51:3:1757:G:N2	2.82	0.48
51:3:2093:U:H2'	51:3:2094:A:C8	2.49	0.48
51:3:2208:U:O4	51:3:2232:G:N2	2.47	0.48
51:3:2331:G:C5	51:3:2332:U:C4	3.01	0.48
51:3:2465:U:O2	51:3:2502:G:N2	2.47	0.48
51:3:2838:G:N2	51:3:2887:A:H62	2.10	0.48
51:3:2898:A:C6	51:3:2899:C:C4	3.01	0.48
52:4:32:G:O2'	52:4:42:G:O6	2.28	0.48
53:5:10:G:C6	53:5:27:A:C6	3.01	0.48
53:5:58:G:H2'	53:5:59:C:N1	2.29	0.48
53:5:262:G:H1'	53:5:264:C:OP2	2.12	0.48
53:5:273:C:H2'	53:5:274:A:C8	2.49	0.48
53:5:317:A:H2'	53:5:318:C:H6	1.79	0.48
53:5:460:A:N1	53:5:462:G:N2	2.61	0.48
53:5:590:G:C6	53:5:645:A:C6	3.02	0.48
53:5:657:G:O6	53:5:743:A:N6	2.47	0.48
53:5:766:G:N2	53:5:808:C:H1'	2.29	0.48
53:5:946:G:C4	53:5:1206:G:N2	2.82	0.48
53:5:1002:A:C5	53:5:1019:G:N2	2.82	0.48
53:5:1136:G:H2'	53:5:1137:C:C6	2.48	0.48
53:5:1330:A:H2'	53:5:1331:A:C8	2.49	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:5:1341:U:H2'	53:5:1342:C:H6	1.77	0.48
53:5:1391:A:H2'	53:5:1392:A:O4'	2.14	0.48
2:1:10:ARG:HH12	35:k:62:LEU:C	2.22	0.48
2:1:31:PRO:HG2	2:1:32:HIS:ND1	2.28	0.48
4:9:13:VAL:HG11	4:9:75:ARG:HD3	1.94	0.48
4:9:46:ARG:HH21	4:9:50:ILE:HD13	1.78	0.48
4:9:261:MET:HG2	4:9:262:PHE:CE2	2.49	0.48
5:A:71:TYR:OH	9:E:165:ASN:O	2.32	0.48
5:A:184:GLU:O	5:A:188:VAL:N	2.47	0.48
7:C:88:ASN:HA	7:C:91:ARG:HE	1.78	0.48
11:G:11:HIS:CG	11:G:12:PHE:H	2.32	0.48
11:G:15:VAL:O	11:G:19:LEU:HG	2.14	0.48
13:I:13:LYS:HG2	13:I:79:LEU:HD11	1.96	0.48
13:I:23:LEU:HD21	13:I:99:PRO:HB2	1.96	0.48
25:a:138:LEU:HG	25:a:196:CYS:O	2.13	0.48
26:b:200:PRO:CB	51:3:2824:A:H1'	2.43	0.48
29:e:28:LYS:NZ	29:e:31:LEU:O	2.43	0.48
33:i:40:ARG:HH21	33:i:42:LYS:HE3	1.78	0.48
34:j:8:LEU:HD23	34:j:19:VAL:O	2.13	0.48
37:m:10:THR:OG1	37:m:13:TRP:N	2.37	0.48
37:m:98:SER:HG	37:m:99:ARG:H	1.62	0.48
40:p:53:LYS:HE2	51:3:1031:U:OP2	2.14	0.48
40:p:65:ASN:HD21	40:p:69:ARG:HH21	1.60	0.48
41:q:9:SER:HB3	41:q:10:LYS:HZ2	1.78	0.48
47:w:37:GLU:O	47:w:37:GLU:HG2	2.14	0.48
49:y:33:CYS:HB3	49:y:43:CYS:SG	2.54	0.48
51:3:51:A:OP1	51:3:52:U:O2'	2.22	0.48
51:3:55:A:H62	51:3:118:G:N2	2.12	0.48
51:3:143:A:N7	51:3:144:C:C2	2.82	0.48
51:3:194:A:H2'	51:3:195:A:O4'	2.13	0.48
51:3:241:C:O2	51:3:643:A:O2'	2.23	0.48
51:3:259:A:H2'	51:3:260:A:C8	2.49	0.48
51:3:274:A:H2	51:3:408:G:H5'	1.79	0.48
51:3:385:U:H2'	51:3:386:U:C6	2.49	0.48
51:3:1028:C:O2'	51:3:1029:A:H5'	2.13	0.48
51:3:1054:U:H2'	51:3:1055:A:N7	2.29	0.48
51:3:1341:U:H5''	51:3:1342:C:H5	1.79	0.48
51:3:1361:U:H2'	51:3:1362:C:C6	2.49	0.48
51:3:1483:G:C4	51:3:1484:G:C8	3.02	0.48
51:3:1639:C:H1'	51:3:1644:A:C4	2.48	0.48
51:3:1866:G:N2	51:3:1867:G:N3	2.61	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:3:1873:A:H3'	51:3:1874:G:C8	2.49	0.48
51:3:1943:A:C8	51:3:1952:G:C8	3.02	0.48
51:3:2012:A:H3'	51:3:2013:C:C6	2.48	0.48
51:3:2099:U:N3	51:3:2234:C:OP2	2.45	0.48
51:3:2140:G:H1'	51:3:2165:A:N6	2.28	0.48
51:3:2404:G:C2	51:3:2405:G:C8	3.02	0.48
51:3:2560:U:H3'	51:3:2562:U:OP2	2.14	0.48
51:3:2645:U:N3	51:3:2784:A:C8	2.69	0.48
51:3:2670:A:H8	51:3:2671:G:C8	2.31	0.48
52:4:7:G:C6	52:4:102:A:C5	3.01	0.48
53:5:16:G:H2'	53:5:17:A:C8	2.48	0.48
53:5:316:G:H3'	53:5:317:A:H8	1.78	0.48
53:5:431:U:H2'	53:5:432:U:H6	1.79	0.48
53:5:462:G:H2'	53:5:463:U:C1'	2.44	0.48
53:5:612:G:H2'	53:5:613:C:C6	2.48	0.48
53:5:739:G:C2	53:5:740:G:H1'	2.49	0.48
53:5:827:C:H2'	53:5:828:U:H6	1.79	0.48
53:5:1076:U:H3'	53:5:1077:U:H6	1.79	0.48
53:5:1129:C:H2'	53:5:1130:G:C8	2.49	0.48
53:5:1225:A:N7	53:5:1261:A:C8	2.82	0.48
53:5:1225:A:C8	53:5:1261:A:N7	2.82	0.48
53:5:1433:G:C2	53:5:1434:C:C5	3.02	0.48
1:0:38:GLN:NE2	51:3:494:G:H8	2.11	0.48
2:1:22:LYS:NZ	2:1:43:LYS:O	2.40	0.48
6:B:51:ALA:HA	6:B:73:GLN:HB2	1.96	0.48
6:B:201:VAL:O	6:B:202:LYS:HD3	2.13	0.48
8:D:153:PRO:HA	8:D:178:ILE:HD12	1.95	0.48
10:F:29:ILE:HG13	10:F:38:ALA:HB1	1.95	0.48
11:G:107:VAL:C	11:G:109:ASN:H	2.22	0.48
15:K:47:CYS:O	15:K:90:HIS:HA	2.14	0.48
15:K:125:GLN:HE21	53:5:536:U:H3'	1.79	0.48
26:b:7:PHE:CD1	26:b:206:LEU:HB2	2.48	0.48
26:b:158:ARG:NH1	51:3:2031:C:O3'	2.46	0.48
26:b:218:LYS:CG	26:b:220:ILE:HD11	2.42	0.48
27:c:80:ARG:HG3	27:c:86:GLY:C	2.39	0.48
35:k:34:ARG:HH21	51:3:620:G:H1	1.62	0.48
35:k:112:ILE:HG22	35:k:128:VAL:HG12	1.96	0.48
36:l:103:MET:HG3	36:l:104:PHE:H	1.77	0.48
39:o:35:ILE:HD11	39:o:48:PHE:HB2	1.95	0.48
48:x:14:PHE:N	48:x:23:PHE:O	2.47	0.48
49:y:4:GLN:HB3	51:3:2623:U:C6	2.49	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:y:31:GLN:NE2	49:y:49:GLY:O	2.47	0.48
51:3:56:G:H2'	51:3:57:G:H8	1.78	0.48
51:3:101:C:H4'	51:3:103:G:C5	2.49	0.48
51:3:179:A:O2'	51:3:180:A:O4'	2.15	0.48
51:3:252:G:OP2	51:3:253:C:H5''	2.13	0.48
51:3:515:A:OP1	51:3:515:A:H4'	2.14	0.48
51:3:602:U:H5'	51:3:856:A:C2	2.48	0.48
51:3:852:C:H2'	51:3:853:G:O4'	2.14	0.48
51:3:955:A:C2	51:3:956:U:H1'	2.48	0.48
51:3:1106:G:H21	51:3:1124:G:C2'	2.26	0.48
51:3:1254:U:H2'	51:3:1255:G:C5	2.49	0.48
51:3:1299:A:O2'	51:3:1353:G:N1	2.43	0.48
51:3:1318:U:H2'	51:3:1319:C:C6	2.48	0.48
51:3:1403:G:H2'	51:3:1404:C:C6	2.48	0.48
51:3:1470:C:H2'	51:3:1471:A:C8	2.48	0.48
51:3:1491:G:O2'	51:3:1577:A:N6	2.36	0.48
51:3:1729:G:H3'	51:3:1729:G:N3	2.29	0.48
51:3:1803:U:H2'	51:3:1804:A:C8	2.49	0.48
51:3:1829:U:H2'	51:3:1830:G:C8	2.48	0.48
51:3:1834:U:H2'	51:3:1835:G:O4'	2.14	0.48
51:3:2040:A:H1'	51:3:2042:A:OP1	2.14	0.48
51:3:2148:U:H2'	51:3:2149:U:C6	2.48	0.48
51:3:2244:U:H2'	51:3:2245:G:O4'	2.13	0.48
51:3:2257:U:H1'	51:3:2283:C:N4	2.29	0.48
51:3:2481:U:O4'	54:6:18:C:H2'	2.13	0.48
51:3:2547:C:O2	51:3:2749:A:O2'	2.32	0.48
51:3:2681:G:H3'	51:3:2682:A:H8	1.78	0.48
52:4:31:G:C6	52:4:32:G:C5	3.01	0.48
53:5:36:G:C6	53:5:37:C:N3	2.82	0.48
53:5:169:G:C6	53:5:170:A:C5	3.02	0.48
53:5:286:C:H2'	53:5:287:U:C6	2.49	0.48
53:5:740:G:H3'	53:5:741:C:H6	1.79	0.48
53:5:751:C:H3'	53:5:751:C:O2	2.14	0.48
53:5:854:A:H3'	53:5:855:G:H8	1.79	0.48
53:5:1078:G:C2	53:5:1079:G:C5	3.02	0.48
53:5:1192:C:H2'	53:5:1193:U:H6	1.76	0.48
53:5:1195:G:C4	53:5:1196:G:C8	3.02	0.48
54:7:3:G:N2	54:7:73:C:C2	2.81	0.48
4:9:71:SER:HB3	4:9:76:HIS:HD2	1.77	0.48
4:9:138:CYS:C	4:9:174:SER:HB3	2.38	0.48
4:9:215:ILE:HD12	4:9:291:GLN:HB2	1.96	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:9:319:ARG:HG2	4:9:321:THR:H	1.79	0.48
8:D:104:GLY:O	8:D:118:ALA:HB1	2.13	0.48
11:G:107:VAL:O	11:G:112:GLY:N	2.46	0.48
12:H:21:LEU:HG	12:H:88:ALA:HB1	1.95	0.48
13:I:71:PHE:HD1	17:M:58:LYS:HA	1.78	0.48
22:R:29:ARG:HG3	22:R:47:ASN:HB2	1.95	0.48
23:S:53:ARG:HG2	53:5:163:G:OP1	2.13	0.48
27:c:34:VAL:O	27:c:38:VAL:HG22	2.14	0.48
27:c:97:ARG:HB2	27:c:99:TYR:CZ	2.48	0.48
29:e:28:LYS:HD3	29:e:33:GLN:HB2	1.96	0.48
30:f:47:ARG:NH2	30:f:51:LEU:HB2	2.29	0.48
30:f:77:LEU:HB3	30:f:100:GLN:HG2	1.96	0.48
33:i:41:GLY:HA2	33:i:44:LYS:NZ	2.28	0.48
35:k:74:LYS:NZ	51:3:666:G:H1	2.12	0.48
36:l:49:SER:HB3	51:3:2492:G:O5'	2.14	0.48
44:t:34:ALA:O	44:t:68:PRO:HA	2.13	0.48
45:u:38:LYS:N	45:u:51:ILE:O	2.47	0.48
51:3:91:G:H2'	51:3:92:U:C6	2.49	0.48
51:3:225:A:H2'	51:3:270:G:O6	2.13	0.48
51:3:257:C:H2'	51:3:258:G:H8	1.77	0.48
51:3:371:C:H2'	51:3:372:G:O4'	2.13	0.48
51:3:746:G:C6	51:3:756:A:C6	3.02	0.48
51:3:764:G:C4	51:3:1782:U:H1'	2.49	0.48
51:3:774:A:H1'	51:3:775:C:H41	1.79	0.48
51:3:966:U:H2'	51:3:967:U:C6	2.49	0.48
51:3:1090:G:H2'	51:3:1090:G:N3	2.28	0.48
51:3:1201:A:C6	51:3:1215:G:C6	3.02	0.48
51:3:1338:G:H21	51:3:1644:A:H1'	1.79	0.48
51:3:1356:G:O2'	51:3:1357:U:O5'	2.27	0.48
51:3:1855:A:H3'	51:3:1856:G:C8	2.49	0.48
51:3:1866:G:C6	51:3:1891:A:N7	2.81	0.48
51:3:1898:G:H2'	51:3:1899:C:O4'	2.14	0.48
51:3:2267:G:O4'	51:3:2435:C:H2'	2.14	0.48
51:3:2505:A:H5'	51:3:2506:C:H5	1.79	0.48
51:3:2532:G:C6	51:3:2548:G:C6	3.02	0.48
51:3:2623:U:H2'	51:3:2624:C:H6	1.77	0.48
51:3:2678:A:H2'	51:3:2679:G:C8	2.49	0.48
51:3:2682:A:H3'	51:3:2683:G:C8	2.49	0.48
51:3:2745:G:C2	51:3:2776:U:C2	3.01	0.48
51:3:2852:G:H1'	51:3:2872:A:N6	2.28	0.48
51:3:2856:G:N2	51:3:2869:U:O2	2.45	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:3:2868:G:H2'	51:3:2869:U:O4'	2.14	0.48
51:3:2872:A:H2'	51:3:2873:G:C8	2.49	0.48
51:3:2873:G:H2'	51:3:2874:C:O4'	2.14	0.48
52:4:31:G:H3'	52:4:32:G:H8	1.79	0.48
53:5:11:A:H2'	53:5:12:G:O4'	2.14	0.48
53:5:29:G:C4	53:5:30:A:C8	3.02	0.48
53:5:443:G:C2	53:5:486:C:C2	3.02	0.48
53:5:517:C:H2'	53:5:518:A:O4'	2.13	0.48
53:5:782:G:C4	53:5:783:G:C8	3.02	0.48
53:5:823:C:H2'	53:5:824:U:C6	2.49	0.48
53:5:850:G:H2'	53:5:851:U:O4'	2.14	0.48
53:5:873:U:H2'	53:5:874:C:C6	2.46	0.48
53:5:902:A:H3'	53:5:903:A:C8	2.49	0.48
53:5:928:G:O2'	53:5:930:A:OP1	2.19	0.48
53:5:995:U:C2	53:5:1032:G:C2	3.02	0.48
53:5:1154:A:H2'	53:5:1155:A:O4'	2.13	0.48
53:5:1293:A:N6	53:5:1334:A:H2	2.12	0.48
54:7:4:U:HO2'	54:7:5:C:P	2.37	0.48
54:7:31:G:C4	54:7:32:U:C5	3.02	0.48
4:9:258:GLY:HA3	4:9:278:LEU:HB3	1.96	0.47
5:A:45:ILE:HG12	5:A:57:VAL:HG12	1.96	0.47
7:C:194:SER:O	7:C:198:GLU:HG2	2.14	0.47
8:D:131:ILE:C	8:D:132:HIS:HD1	2.22	0.47
10:F:106:PHE:CD2	10:F:109:LYS:HD2	2.49	0.47
11:G:98:TYR:CZ	53:5:596:U:H4'	2.49	0.47
12:H:12:ARG:HD2	12:H:79:GLY:HA3	1.95	0.47
12:H:52:GLN:N	12:H:53:PRO:HD2	2.29	0.47
14:J:22:ASN:ND2	53:5:687:G:OP2	2.46	0.47
16:L:6:GLY:HA2	16:L:57:ARG:HH12	1.79	0.47
16:L:16:GLU:O	16:L:20:THR:HG23	2.14	0.47
21:Q:94:ARG:HG2	21:Q:99:VAL:HG13	1.96	0.47
25:a:145:THR:H	25:a:170:ILE:CD1	2.26	0.47
28:d:118:SER:HB2	28:d:122:PHE:CE1	2.49	0.47
33:i:116:ARG:NH2	51:3:590:U:OP2	2.46	0.47
35:k:4:ASN:HB3	35:k:6:LEU:H	1.79	0.47
35:k:79:VAL:CG1	35:k:115:ILE:HB	2.44	0.47
37:m:55:ASP:HA	37:m:83:PHE:CE1	2.49	0.47
43:s:3:VAL:HG12	43:s:5:ASN:HB2	1.96	0.47
46:v:53:ARG:HH11	46:v:56:ARG:HH11	1.62	0.47
51:3:226:A:H1'	51:3:228:A:O4'	2.13	0.47
51:3:602:U:O2'	51:3:1019:A:N6	2.40	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:3:774:A:H1'	51:3:775:C:C5	2.49	0.47
51:3:901:C:O2'	51:3:902:U:O5'	2.28	0.47
51:3:1120:A:N7	51:3:1121:A:N6	2.62	0.47
51:3:1196:U:H2'	51:3:1197:G:C8	2.49	0.47
51:3:1298:A:C4	51:3:2020:A:C6	3.02	0.47
51:3:1695:G:C2	51:3:2007:U:C2	3.02	0.47
51:3:1738:G:C4	51:3:1739:G:C8	3.02	0.47
51:3:1791:A:H3'	51:3:1988:A:N7	2.29	0.47
51:3:1794:A:H5'	51:3:2597:A:O2'	2.14	0.47
51:3:1945:A:N3	51:3:2613:U:O2'	2.35	0.47
51:3:2106:G:N2	51:3:2198:G:H1	2.10	0.47
51:3:2256:C:H2'	51:3:2257:U:C2	2.49	0.47
51:3:2647:A:H61	51:3:2783:A:C2'	2.27	0.47
53:5:242:A:O4'	53:5:278:A:N6	2.47	0.47
53:5:302:A:C5	53:5:303:A:C8	3.02	0.47
53:5:688:G:N2	53:5:692:A:C8	2.80	0.47
53:5:893:C:C4	53:5:894:A:C6	3.01	0.47
53:5:1294:U:H2'	53:5:1295:U:O4'	2.14	0.47
53:5:1463:A:C2	53:5:1464:G:C5	3.02	0.47
54:6:58:G:O2'	54:6:59:A:OP2	2.28	0.47
54:7:28:A:H2'	54:7:29:C:C2	2.48	0.47
1:0:22:MET:O	1:0:28:ARG:HD2	2.14	0.47
5:A:228:LEU:O	5:A:231:LEU:HB3	2.14	0.47
6:B:173:GLU:OE1	6:B:173:GLU:N	2.47	0.47
7:C:9:LYS:NZ	53:5:424:U:H5''	2.29	0.47
7:C:13:ARG:NE	7:C:34:ILE:HB	2.26	0.47
7:C:70:GLN:HA	7:C:73:ARG:HG2	1.96	0.47
14:J:79:VAL:HA	14:J:86:LYS:NZ	2.29	0.47
15:K:80:ILE:HG23	15:K:87:LEU:HD11	1.95	0.47
15:K:95:LEU:HA	15:K:110:ILE:HG13	1.95	0.47
17:M:48:ALA:HA	17:M:53:ILE:HD13	1.96	0.47
21:Q:72:PRO:O	21:Q:76:THR:HG23	2.14	0.47
25:a:57:HIS:CE1	51:3:1831:G:P	3.08	0.47
26:b:61:LYS:HZ1	51:3:2835:G:P	2.37	0.47
26:b:132:PRO:HA	51:3:2001:C:OP1	2.14	0.47
26:b:161:LYS:HZ2	51:3:2627:U:H5''	1.79	0.47
27:c:81:ASN:H	27:c:84:PHE:HB2	1.79	0.47
27:c:104:ASN:ND2	51:3:641:U:OP1	2.47	0.47
28:d:33:LYS:HD2	28:d:90:THR:CG2	2.44	0.47
28:d:126:GLY:HA3	28:d:160:THR:O	2.14	0.47
29:e:102:GLU:OE1	29:e:107:ASN:HB3	2.14	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:f:47:ARG:HH12	30:f:51:LEU:HD13	1.79	0.47
34:j:26:GLY:HA3	34:j:30:LYS:NZ	2.28	0.47
35:k:92:LYS:HA	35:k:125:HIS:N	2.23	0.47
35:k:92:LYS:NZ	35:k:123:PRO:HB2	2.29	0.47
40:p:57:ARG:NH2	51:3:1033:A:H3'	2.24	0.47
44:t:9:LYS:HB3	44:t:77:PHE:HD2	1.79	0.47
51:3:28:G:H8	51:3:28:G:P	2.37	0.47
51:3:40:A:C6	51:3:478:G:C6	3.02	0.47
51:3:72:G:N2	51:3:73:A:H61	2.12	0.47
51:3:276:A:H1'	51:3:406:C:H1'	1.96	0.47
51:3:454:G:H2'	51:3:455:G:C8	2.49	0.47
51:3:481:C:H2'	51:3:482:G:C8	2.48	0.47
51:3:512:G:N2	51:3:514:A:H3'	2.29	0.47
51:3:539:U:H4'	51:3:540:A:C5'	2.41	0.47
51:3:612:G:H5'	51:3:2024:C:C6	2.49	0.47
51:3:631:A:H2'	51:3:632:A:C8	2.49	0.47
51:3:996:A:H5''	51:3:997:G:OP1	2.15	0.47
51:3:1062:A:H61	51:3:1161:A:H5'	1.79	0.47
51:3:1203:G:H2'	51:3:1204:A:O4'	2.14	0.47
51:3:1463:G:C6	51:3:1464:G:C6	3.03	0.47
51:3:1502:A:H2	51:3:1541:A:C8	2.32	0.47
51:3:1512:A:N6	51:3:1528:G:O6	2.47	0.47
51:3:1863:G:C5	51:3:1864:A:C5	3.01	0.47
51:3:2009:U:H2'	51:3:2010:A:H8	1.79	0.47
51:3:2157:A:C5	51:3:2158:C:C5	3.02	0.47
51:3:2250:G:C6	51:3:2251:U:C4	3.02	0.47
51:3:2476:A:C2	51:3:2490:A:N7	2.82	0.47
51:3:2529:C:C2	51:3:2553:G:N2	2.82	0.47
53:5:97:G:C2	53:5:98:G:C4	3.02	0.47
53:5:100:G:H4'	53:5:101:A:C8	2.48	0.47
53:5:103:U:H2'	53:5:105:A:C2	2.49	0.47
53:5:237:A:H2'	53:5:238:U:O4'	2.14	0.47
53:5:489:U:H6	53:5:489:U:P	2.37	0.47
53:5:655:G:H2'	53:5:656:U:O4'	2.14	0.47
53:5:686:C:H3'	53:5:687:G:H8	1.78	0.47
53:5:768:G:O6	53:5:806:A:N6	2.47	0.47
53:5:839:U:H3'	53:5:840:C:C6	2.49	0.47
53:5:859:A:H8	53:5:859:A:O5'	1.97	0.47
53:5:1064:U:C2'	53:5:1065:G:H5'	2.44	0.47
53:5:1413:G:C6	53:5:1438:U:N3	2.82	0.47
53:5:1464:G:C5	53:5:1465:U:C4	3.02	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:1:10:ARG:NH1	35:k:63:PRO:O	2.47	0.47
4:9:6:PHE:HB2	4:9:264:LYS:HB3	1.96	0.47
4:9:14:ASN:HA	4:9:78:ALA:HB3	1.96	0.47
4:9:253:LYS:NZ	4:9:255:VAL:HG23	2.29	0.47
6:B:159:ARG:HG2	6:B:165:ILE:HG12	1.96	0.47
10:F:112:GLU:HB2	10:F:117:GLU:OE1	2.15	0.47
12:H:101:LYS:O	12:H:104:LYS:HD3	2.13	0.47
13:I:61:PRO:HA	17:M:42:LEU:HD13	1.95	0.47
14:J:16:VAL:O	14:J:86:LYS:NZ	2.43	0.47
21:Q:47:GLY:O	21:Q:49:LEU:HG	2.15	0.47
21:Q:51:ILE:HG21	21:Q:85:HIS:CB	2.44	0.47
25:a:89:ASP:HB3	25:a:92:ARG:O	2.14	0.47
25:a:270:MET:HA	25:a:275:THR:OG1	2.14	0.47
27:c:6:LEU:HD11	27:c:132:LEU:HD11	1.96	0.47
28:d:130:ILE:HB	28:d:154:VAL:HG23	1.97	0.47
30:f:1:MET:HG2	30:f:22:LYS:HA	1.96	0.47
33:i:38:LEU:HD23	33:i:57:LEU:HD22	1.96	0.47
35:k:77:TRP:CZ3	35:k:129:HIS:HB2	2.49	0.47
35:k:80:LEU:C	35:k:115:ILE:HG22	2.39	0.47
38:n:97:LYS:HZ1	52:4:36:C:HO2'	1.54	0.47
40:p:91:ARG:HH21	51:3:1033:A:C5'	2.27	0.47
44:t:93:MET:HB2	44:t:101:THR:HB	1.95	0.47
47:w:63:LEU:HB2	47:w:66:GLN:HG2	1.96	0.47
49:y:40:HIS:O	49:y:41:ARG:NH1	2.47	0.47
51:3:217:A:H2'	51:3:218:G:C8	2.48	0.47
51:3:318:U:O2	51:3:391:U:H1'	2.14	0.47
51:3:501:G:H8	51:3:501:G:O5'	1.96	0.47
51:3:870:A:C2	51:3:871:G:C8	3.02	0.47
51:3:934:C:C4	51:3:935:U:C4	3.02	0.47
51:3:990:G:O6	51:3:999:U:O4	2.32	0.47
51:3:1039:G:C2	51:3:1188:C:C2	3.03	0.47
51:3:1303:U:N3	51:3:1679:U:H1'	2.29	0.47
51:3:1350:A:N1	51:3:1361:U:O2'	2.32	0.47
51:3:1409:G:C6	51:3:1410:A:N6	2.83	0.47
51:3:1538:U:H2'	51:3:1539:U:C6	2.49	0.47
51:3:1696:C:O2'	51:3:2695:U:OP1	2.31	0.47
51:3:1843:C:H2'	51:3:1844:C:C6	2.49	0.47
51:3:1860:A:C5	51:3:1896:A:C5	3.01	0.47
51:3:2078:A:C2	51:3:2079:G:C5	3.02	0.47
51:3:2131:G:C5	51:3:2132:G:H1'	2.49	0.47
51:3:2169:G:H21	51:3:2172:A:H2'	1.79	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:3:2343:A:H8	51:3:2343:A:OP2	1.98	0.47
51:3:2422:G:C2	51:3:2423:G:C8	3.02	0.47
51:3:2664:U:N3	51:3:2673:A:C8	2.71	0.47
51:3:2743:U:C2	51:3:2744:A:C8	3.02	0.47
52:4:47:C:H2'	52:4:48:A:H5'	1.95	0.47
52:4:49:G:H2'	52:4:50:C:C6	2.48	0.47
53:5:582:G:H2'	53:5:583:G:C8	2.50	0.47
53:5:694:U:H2'	53:5:695:G:O4'	2.13	0.47
53:5:783:G:C6	53:5:784:A:C5	3.03	0.47
53:5:819:G:H2'	53:5:820:A:H8	1.79	0.47
53:5:848:U:H3'	53:5:865:U:N3	2.28	0.47
53:5:1086:U:H2'	53:5:1087:C:O4'	2.15	0.47
53:5:1220:A:C6	53:5:1267:G:C6	3.03	0.47
53:5:1223:A:N6	53:5:1264:G:C8	2.82	0.47
54:6:35:G:N3	54:6:35:G:H2'	2.30	0.47
54:7:2:G:C6	54:7:3:G:C6	3.01	0.47
3:2:19:ARG:O	3:2:22:ILE:HB	2.15	0.47
4:9:135:LEU:HD23	4:9:147:GLN:HE21	1.79	0.47
5:A:30:VAL:HB	5:A:55:HIS:CD2	2.49	0.47
7:C:9:LYS:HD3	53:5:425:G:H5''	1.95	0.47
7:C:199:TRP:CD1	7:C:202:ARG:HH21	2.33	0.47
8:D:131:ILE:HD12	8:D:175:TYR:CE1	2.48	0.47
15:K:18:LYS:HD2	15:K:19:SER:N	2.30	0.47
16:L:107:ARG:HD3	16:L:107:ARG:H	1.78	0.47
20:P:31:LYS:HG3	20:P:32:HIS:O	2.15	0.47
20:P:66:THR:HG23	20:P:67:ARG:O	2.15	0.47
22:R:34:TRP:HB2	53:5:1010:A:H1'	1.97	0.47
25:a:66:TYR:HA	25:a:91:ASN:OD1	2.15	0.47
25:a:79:ILE:HG13	25:a:80:GLU:H	1.79	0.47
25:a:185:LEU:O	51:3:1826:A:O2'	2.31	0.47
27:c:55:LYS:HB3	51:3:836:G:C2	2.50	0.47
29:e:70:THR:O	29:e:74:LEU:HG	2.14	0.47
29:e:112:TYR:CG	51:3:2675:C:H1'	2.49	0.47
36:l:34:LEU:HD11	36:l:129:TRP:HB2	1.95	0.47
37:m:42:GLN:OE1	37:m:43:LYS:HG3	2.15	0.47
38:n:9:ARG:O	38:n:13:LYS:HG3	2.15	0.47
38:n:44:TRP:CZ2	52:4:6:U:H1'	2.49	0.47
40:p:13:ARG:NH2	51:3:1281:A:O2'	2.47	0.47
41:q:65:GLN:CD	41:q:87:GLN:HB3	2.39	0.47
42:r:1:MET:SD	42:r:109:ASP:N	2.83	0.47
43:s:32:ASN:C	43:s:34:LYS:H	2.22	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:t:41:LYS:HA	44:t:65:GLN:O	2.14	0.47
45:u:31:HIS:HB2	51:3:2269:C:OP1	2.15	0.47
49:y:5:GLN:HE22	51:3:2061:A:H3'	1.78	0.47
49:y:40:HIS:C	49:y:41:ARG:HH11	2.21	0.47
50:z:12:ASN:HB2	50:z:48:LYS:HZ3	1.79	0.47
51:3:40:A:C6	51:3:41:C:C4	3.02	0.47
51:3:74:U:O2'	51:3:77:G:N2	2.46	0.47
51:3:400:A:H2'	51:3:401:G:C8	2.49	0.47
51:3:412:A:N3	51:3:413:G:H1'	2.30	0.47
51:3:496:A:H62	51:3:505:G:N2	2.11	0.47
51:3:661:G:O2'	51:3:662:U:O4'	2.15	0.47
51:3:764:G:H4'	51:3:798:G:O5'	2.14	0.47
51:3:907:A:H3'	51:3:908:A:H8	1.80	0.47
51:3:1108:A:C4	51:3:1109:G:C8	3.02	0.47
51:3:1174:G:HO2'	51:3:1178:A:H61	1.61	0.47
51:3:1337:G:C2	51:3:1338:G:C5	3.02	0.47
51:3:1345:G:C6	51:3:1364:A:C6	3.02	0.47
51:3:1507:G:HO2'	51:3:1508:G:P	2.34	0.47
51:3:1606:A:H2'	51:3:1607:G:C8	2.49	0.47
51:3:1688:A:C4	51:3:1689:A:C8	3.02	0.47
51:3:1708:G:N3	51:3:1710:A:N6	2.62	0.47
51:3:1985:A:C5	51:3:1986:C:C4	3.02	0.47
51:3:1995:G:H2'	51:3:1996:A:C8	2.49	0.47
51:3:1996:A:H2'	51:3:1997:C:O4'	2.14	0.47
51:3:2101:A:H1'	51:3:2206:A:N1	2.29	0.47
51:3:2163:U:H2'	51:3:2164:G:C4	2.49	0.47
51:3:2263:G:H2'	51:3:2264:G:O4'	2.14	0.47
51:3:2292:A:H2'	51:3:2293:C:C6	2.49	0.47
51:3:2359:G:N2	51:3:2374:A:OP2	2.48	0.47
51:3:2423:G:H2'	51:3:2424:C:H6	1.79	0.47
51:3:2844:U:H2'	51:3:2845:U:C6	2.49	0.47
52:4:80:G:N3	52:4:80:G:H2'	2.30	0.47
53:5:123:U:H2'	53:5:124:U:C6	2.50	0.47
53:5:169:G:N2	53:5:220:U:OP1	2.36	0.47
53:5:503:G:H2'	53:5:504:A:C8	2.50	0.47
53:5:591:A:H2'	53:5:592:A:C8	2.50	0.47
53:5:612:G:H22	53:5:624:U:H2'	1.77	0.47
53:5:613:C:H2'	53:5:614:U:C5	2.50	0.47
53:5:689:U:H2'	53:5:691:A:OP2	2.13	0.47
53:5:949:G:N1	53:5:1203:A:C6	2.82	0.47
53:5:988:G:N2	53:5:1037:A:H1'	2.30	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:5:998:G:N2	53:5:999:C:H42	2.12	0.47
53:5:1079:G:H2'	53:5:1080:G:C8	2.49	0.47
53:5:1085:G:O2'	53:5:1099:G:N1	2.44	0.47
53:5:1089:C:C2	53:5:1090:G:C8	3.02	0.47
53:5:1136:G:H1	53:5:1151:A:N6	2.05	0.47
53:5:1303:A:H2'	53:5:1303:A:N3	2.29	0.47
53:5:1397:G:H2'	53:5:1397:G:N3	2.29	0.47
53:5:1401:A:H2'	53:5:1402:U:H6	1.79	0.47
53:5:1490:G:C6	53:5:1496:G:C6	3.02	0.47
54:7:60:U:H2'	54:7:61:U:C2	2.48	0.47
2:1:30:ALA:N	2:1:31:PRO:HD3	2.30	0.47
4:9:138:CYS:H	4:9:174:SER:HA	1.79	0.47
5:A:83:LEU:O	5:A:177:ILE:N	2.33	0.47
8:D:67:GLU:HB2	8:D:172:LEU:CD2	2.44	0.47
8:D:81:LYS:HB2	53:5:918:A:OP1	2.14	0.47
10:F:12:LEU:HD12	10:F:13:PRO:HD2	1.97	0.47
10:F:90:VAL:HG23	10:F:95:LYS:HD2	1.97	0.47
18:N:2:GLN:HE22	18:N:3:ILE:HD12	1.80	0.47
25:a:137:PRO:HD3	25:a:197:ARG:HD2	1.97	0.47
25:a:226:PRO:HG2	51:3:799:A:H2	1.80	0.47
27:c:30:LYS:HZ1	51:3:633:G:P	2.37	0.47
27:c:59:ARG:NH2	51:3:494:G:O6	2.42	0.47
29:e:27:VAL:O	29:e:33:GLN:HG3	2.15	0.47
29:e:45:LYS:HD2	29:e:45:LYS:HA	1.70	0.47
30:f:5:LEU:HD12	30:f:34:LYS:HB3	0.54	0.47
32:h:98:MET:HA	32:h:101:ALA:HB3	1.97	0.47
35:k:43:LYS:HZ1	51:3:839:A:H3'	1.79	0.47
36:l:30:GLY:O	36:l:134:ARG:HD2	2.14	0.47
36:l:34:LEU:HD12	36:l:35:VAL:H	1.79	0.47
40:p:47:ARG:HH12	51:3:594:G:H4'	1.80	0.47
51:3:166:A:H2'	51:3:167:A:O4'	2.14	0.47
51:3:184:A:C6	51:3:471:A:C5	3.03	0.47
51:3:231:A:H62	51:3:446:A:H1'	1.80	0.47
51:3:353:G:N2	51:3:357:A:N7	2.61	0.47
51:3:358:A:C6	51:3:359:G:C4	3.02	0.47
51:3:393:C:C4	51:3:394:C:C4	3.03	0.47
51:3:858:A:H3'	51:3:859:G:H8	1.80	0.47
51:3:1290:G:H2'	51:3:1291:C:O4'	2.14	0.47
51:3:1369:U:H2'	51:3:1425:U:H1'	1.96	0.47
51:3:1502:A:H1'	51:3:1542:G:H1	1.79	0.47
51:3:1516:G:H2'	51:3:1517:G:C8	2.50	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:3:1584:U:H4'	51:3:1585:A:C2	2.49	0.47
51:3:1697:C:O2'	51:3:2694:A:H4'	2.15	0.47
51:3:1735:A:C6	51:3:1736:G:C4	3.02	0.47
51:3:1764:U:H2'	51:3:1768:G:O6	2.15	0.47
51:3:1802:C:H2'	51:3:1803:U:H6	1.79	0.47
51:3:2124:A:N6	51:3:2174:G:N2	2.62	0.47
51:3:2233:A:H4'	51:3:2234:C:C6	2.48	0.47
51:3:2291:U:O5'	51:3:2397:G:O2'	2.31	0.47
51:3:2417:G:C6	51:3:2418:G:C5	3.02	0.47
51:3:2502:G:C6	51:3:2503:G:C6	3.03	0.47
51:3:2646:G:H22	51:3:2784:A:C5'	2.26	0.47
51:3:2808:A:N7	51:3:2809:A:C5	2.82	0.47
51:3:2820:G:C2	51:3:2835:G:C2	3.03	0.47
51:3:2825:A:H2'	51:3:2826:G:H8	1.79	0.47
51:3:2849:G:H2'	51:3:2850:G:H8	1.78	0.47
52:4:42:G:N2	52:4:46:C:C2	2.83	0.47
53:5:105:A:O2'	53:5:107:A:N7	2.45	0.47
53:5:288:A:H3'	53:5:289:U:H6	1.79	0.47
53:5:450:U:H3'	53:5:451:G:C8	2.32	0.47
53:5:479:A:P	53:5:479:A:H8	2.36	0.47
53:5:726:A:H8	53:5:726:A:O5'	1.97	0.47
53:5:828:U:C2	53:5:850:G:N2	2.83	0.47
53:5:920:G:C2	53:5:1367:G:N3	2.83	0.47
53:5:952:U:O2'	53:5:953:A:N7	2.47	0.47
53:5:999:C:O2	53:5:1000:A:H1'	2.14	0.47
53:5:1304:U:C4	53:5:1305:G:C5	3.02	0.47
53:5:1390:G:C4	53:5:1461:G:C2	3.02	0.47
54:6:55:U:C6	54:6:59:A:C8	3.02	0.47
2:1:32:HIS:HE1	51:3:2399:G:OP2	1.98	0.47
4:9:75:ARG:HH12	4:9:200:ILE:HG22	1.79	0.47
5:A:27:ARG:NH2	5:A:223:GLN:HB3	2.27	0.47
5:A:126:SER:OG	5:A:127:ILE:N	2.47	0.47
6:B:40:ILE:O	6:B:43:LEU:HB3	2.14	0.47
7:C:98:ASP:N	7:C:98:ASP:OD1	2.45	0.47
8:D:91:LEU:HD13	8:D:105:ILE:HB	1.97	0.47
8:D:152:LYS:HB3	8:D:179:TYR:HB2	1.96	0.47
8:D:169:ILE:HD11	8:D:192:ILE:HD12	1.97	0.47
10:F:59:THR:HA	10:F:62:GLU:OE1	2.13	0.47
15:K:44:ARG:HA	15:K:94:LEU:HD23	1.95	0.47
19:O:2:ARG:HH12	19:O:5:ARG:C	2.22	0.47
21:Q:90:LEU:HD23	21:Q:90:LEU:HA	1.72	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:a:143:GLU:OE1	25:a:170:ILE:HG22	2.15	0.47
25:a:219:ASN:O	25:a:222:ARG:N	2.43	0.47
26:b:163:LYS:HG3	26:b:164:LYS:H	1.79	0.47
27:c:181:LYS:HD3	51:3:648:G:N2	2.30	0.47
35:k:95:ARG:HH12	35:k:104:ILE:HD13	1.78	0.47
46:v:14:TYR:CZ	51:3:192:U:H5''	2.50	0.47
46:v:30:ASN:N	51:3:2239:U:OP1	2.40	0.47
51:3:31:U:H2'	51:3:32:G:C8	2.50	0.47
51:3:226:A:N6	51:3:236:G:H1'	2.29	0.47
51:3:345:A:H5''	51:3:366:A:N3	2.28	0.47
51:3:374:A:H3'	51:3:375:U:H6	1.80	0.47
51:3:399:G:C6	51:3:400:A:C5	3.03	0.47
51:3:426:U:H1'	51:3:447:G:H22	1.79	0.47
51:3:769:A:H3'	51:3:770:A:C8	2.49	0.47
51:3:856:A:H5''	51:3:857:U:O4'	2.15	0.47
51:3:861:U:H5''	51:3:2437:G:P	2.53	0.47
51:3:1136:U:H2'	51:3:1137:C:O4'	2.15	0.47
51:3:1199:A:H3'	51:3:1200:U:H6	1.78	0.47
51:3:1210:A:H8	51:3:1210:A:P	2.37	0.47
51:3:1242:G:H1'	51:3:1243:A:C8	2.49	0.47
51:3:1311:G:N1	51:3:1314:A:N7	2.62	0.47
51:3:1383:G:C6	51:3:1405:G:C2	3.02	0.47
51:3:1404:C:H2'	51:3:1405:G:C8	2.49	0.47
51:3:1447:A:N6	51:3:1519:A:H61	2.12	0.47
51:3:1468:U:C4	51:3:1469:C:C4	3.03	0.47
51:3:1630:A:H2'	51:3:1631:A:C8	2.50	0.47
51:3:1677:G:H2'	51:3:1678:U:C5	2.48	0.47
51:3:1801:U:O2	51:3:1832:G:N2	2.32	0.47
51:3:1958:U:H3'	51:3:1960:A:OP2	2.14	0.47
51:3:2289:C:O2'	51:3:2290:G:H5'	2.14	0.47
51:3:2355:C:C2	51:3:2379:G:C2	3.02	0.47
51:3:2477:A:H61	51:3:2489:G:C2'	2.28	0.47
51:3:2479:A:C2	51:3:2480:G:H1'	2.50	0.47
51:3:2565:G:H2'	51:3:2566:C:C6	2.49	0.47
51:3:2584:G:H3'	51:3:2584:G:N3	2.30	0.47
51:3:2659:U:H2'	51:3:2660:C:C6	2.49	0.47
52:4:87:U:H3'	52:4:88:G:C8	2.49	0.47
53:5:146:A:H2'	53:5:147:A:C8	2.50	0.47
53:5:513:G:H2'	53:5:514:U:O4'	2.14	0.47
53:5:595:G:C8	53:5:596:U:C5	3.03	0.47
53:5:611:A:N6	53:5:612:G:O6	2.48	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:5:680:G:O6	53:5:705:A:N6	2.47	0.47
53:5:772:G:H3'	53:5:773:G:C8	2.49	0.47
53:5:890:U:H2'	53:5:891:C:C6	2.50	0.47
53:5:897:A:H2'	53:5:898:A:O4'	2.14	0.47
53:5:1056:U:H5''	53:5:1165:G:N1	2.26	0.47
53:5:1075:G:H21	53:5:1093:A:H62	1.61	0.47
53:5:1213:A:H2	53:5:1216:G:N2	2.06	0.47
53:5:1405:U:H2'	53:5:1406:U:H6	1.78	0.47
2:1:23:HIS:CG	2:1:41:LEU:HA	2.49	0.47
2:1:36:LYS:O	2:1:39:ARG:HG2	2.15	0.47
4:9:124:ARG:HH11	4:9:163:PHE:HA	1.80	0.47
4:9:211:PHE:HB2	4:9:295:LYS:HG3	1.96	0.47
4:9:223:GLY:HA3	53:5:56:A:C8	2.50	0.47
4:9:245:ILE:HG23	4:9:293:LEU:HD23	1.97	0.47
5:A:27:ARG:NH2	5:A:28:THR:HG22	2.29	0.47
5:A:73:LYS:HE2	5:A:239:ALA:HA	1.96	0.47
5:A:112:TRP:NE1	5:A:190:GLU:OE2	2.42	0.47
6:B:93:LYS:NZ	6:B:98:ARG:HD3	2.29	0.47
6:B:151:GLY:N	6:B:206:ASN:HB3	2.28	0.47
7:C:10:ARG:HD3	7:C:62:TYR:CE2	2.50	0.47
7:C:50:TYR:CZ	7:C:54:LEU:HD11	2.49	0.47
7:C:75:PHE:HA	7:C:89:LEU:HD11	1.97	0.47
7:C:147:LYS:HA	53:5:488:U:O2	2.15	0.47
9:E:14:SER:H	9:E:17:GLN:NE2	2.04	0.47
10:F:125:ASP:O	10:F:129:ASN:N	2.47	0.47
10:F:135:LYS:HE3	10:F:136:LYS:HD3	1.97	0.47
12:H:115:ARG:HA	53:5:1344:C:P	2.55	0.47
21:Q:63:PHE:HE2	21:Q:78:ASN:HD21	1.63	0.47
22:R:7:LYS:O	22:R:9:ALA:N	2.48	0.47
22:R:32:LYS:HA	22:R:50:ALA:O	2.14	0.47
22:R:48:THR:O	22:R:49:PHE:HD1	1.97	0.47
25:a:64:ARG:HE	51:3:1601:A:P	2.37	0.47
26:b:61:LYS:NZ	51:3:2834:C:O5'	2.47	0.47
26:b:62:LEU:HD12	26:b:63:ASN:H	1.78	0.47
26:b:117:ARG:NH2	26:b:170:GLY:HA3	2.30	0.47
26:b:124:LYS:HA	26:b:127:ASN:HA	1.97	0.47
26:b:151:ARG:HD3	51:3:2583:U:H5'	1.97	0.47
26:b:182:VAL:HB	26:b:192:LEU:O	2.14	0.47
27:c:32:GLN:NE2	35:k:10:PRO:HA	2.28	0.47
28:d:5:LYS:HB2	28:d:97:TRP:CG	2.50	0.47
28:d:50:LEU:HA	28:d:53:ALA:HB3	1.97	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:d:108:LEU:N	28:d:109:PRO:HD2	2.30	0.47
30:f:126:ILE:O	30:f:138:LEU:N	2.45	0.47
33:i:81:SER:OG	33:i:86:GLY:HA3	2.15	0.47
34:j:10:VAL:O	34:j:17:LYS:NZ	2.47	0.47
34:j:88:LYS:HB3	34:j:88:LYS:HE3	1.61	0.47
34:j:104:ARG:NH2	39:o:39:GLU:HB2	2.30	0.47
35:k:34:ARG:HG2	35:k:41:ALA:HB1	1.96	0.47
36:l:65:TRP:HH2	36:l:107:ALA:HB3	1.80	0.47
36:l:76:LYS:HB3	36:l:91:GLU:HG3	1.97	0.47
37:m:28:TYR:HB3	37:m:30:LYS:HG2	1.96	0.47
39:o:95:LYS:H	39:o:113:LYS:HZ1	1.63	0.47
42:r:29:THR:OG1	42:r:30:ALA:N	2.47	0.47
43:s:17:TYR:HB3	43:s:21:MET:HE2	1.96	0.47
43:s:45:GLU:HA	43:s:50:ILE:O	2.14	0.47
45:u:57:THR:HG22	51:3:2339:G:O2'	2.14	0.47
49:y:52:ARG:NE	49:y:52:ARG:O	2.47	0.47
50:z:23:LYS:NZ	50:z:30:GLU:O	2.48	0.47
51:3:84:G:N1	51:3:104:A:OP1	2.48	0.47
51:3:105:U:H3'	51:3:106:C:H6	1.80	0.47
51:3:190:G:O6	51:3:215:A:N6	2.48	0.47
51:3:191:G:C2	51:3:214:C:C2	3.03	0.47
51:3:222:A:C4	51:3:223:A:C8	3.03	0.47
51:3:251:G:N7	51:3:253:C:H1'	2.30	0.47
51:3:333:A:H2'	51:3:334:A:C8	2.49	0.47
51:3:430:U:H2'	51:3:431:U:C6	2.49	0.47
51:3:522:C:N3	51:3:530:G:N1	2.62	0.47
51:3:571:A:C6	51:3:572:G:C4	3.03	0.47
51:3:612:G:H2'	51:3:613:C:O4'	2.14	0.47
51:3:674:G:C6	51:3:687:G:C5	3.02	0.47
51:3:674:G:N1	51:3:687:G:C5	2.82	0.47
51:3:683:G:H2'	51:3:684:A:H8	1.77	0.47
51:3:742:G:H2'	51:3:743:G:C8	2.50	0.47
51:3:746:G:C4	51:3:747:A:C8	3.03	0.47
51:3:778:U:O2'	51:3:1693:U:OP1	2.33	0.47
51:3:786:A:C5	51:3:824:A:C6	3.03	0.47
51:3:849:C:C2'	51:3:850:G:H5'	2.44	0.47
51:3:853:G:H2'	51:3:1218:G:N2	2.29	0.47
51:3:894:G:H8	51:3:894:G:OP2	1.97	0.47
51:3:952:U:O2'	51:3:953:G:OP1	2.29	0.47
51:3:975:G:C6	51:3:976:C:C4	3.02	0.47
51:3:977:A:H2'	51:3:978:G:H8	1.79	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:3:1016:A:C6	51:3:1171:G:H4'	2.50	0.47
51:3:1090:G:C2	51:3:1140:U:C2	3.02	0.47
51:3:1351:G:O2'	51:3:1352:G:H5'	2.14	0.47
51:3:1362:C:H2'	51:3:1363:C:H6	1.77	0.47
51:3:1381:A:H3'	51:3:1405:G:H22	1.79	0.47
51:3:1383:G:C6	51:3:1384:C:C4	3.02	0.47
51:3:1462:A:O2'	51:3:1463:G:O5'	2.32	0.47
51:3:1571:G:N2	51:3:1572:U:O4	2.34	0.47
51:3:1662:G:C2	51:3:1663:G:N7	2.83	0.47
51:3:1676:G:H2'	51:3:1677:G:N9	2.30	0.47
51:3:1723:A:C6	51:3:1724:A:C6	3.03	0.47
51:3:1734:A:C5	51:3:1735:A:O4'	2.68	0.47
51:3:1737:G:H2'	51:3:1738:G:H8	1.79	0.47
51:3:1779:G:N2	51:3:1987:C:C2	2.83	0.47
51:3:1839:C:H2'	51:3:1840:C:C6	2.49	0.47
51:3:1896:A:H8	51:3:1896:A:P	2.38	0.47
51:3:2141:A:C2	51:3:2166:U:H1'	2.49	0.47
51:3:2259:G:H5'	51:3:2505:A:C8	2.49	0.47
51:3:2307:G:H2'	51:3:2308:U:C6	2.50	0.47
51:3:2316:G:H2'	51:3:2316:G:N3	2.30	0.47
51:3:2339:G:C2	51:3:2340:U:C2	3.02	0.47
51:3:2380:U:H2'	51:3:2381:G:C8	2.49	0.47
51:3:2407:G:C6	51:3:2426:A:N1	2.82	0.47
51:3:2518:C:H2'	51:3:2519:U:C6	2.50	0.47
51:3:2704:U:H3'	51:3:2705:G:H8	1.78	0.47
51:3:2769:G:C6	51:3:2770:U:C4	3.03	0.47
51:3:2853:U:C3'	51:3:2854:A:H5'	2.44	0.47
53:5:18:U:H1'	53:5:1071:A:N3	2.30	0.47
53:5:36:G:C5	53:5:37:C:N3	2.83	0.47
53:5:38:U:H2'	53:5:39:G:C8	2.45	0.47
53:5:97:G:H1	53:5:311:A:N6	2.13	0.47
53:5:109:G:H2'	53:5:110:U:C6	2.50	0.47
53:5:141:A:C6	53:5:153:A:C6	3.03	0.47
53:5:167:A:H2'	53:5:196:G:H22	1.80	0.47
53:5:201:G:C6	53:5:202:A:C5	3.03	0.47
53:5:242:A:C2	53:5:278:A:C4	3.02	0.47
53:5:270:A:O3'	53:5:271:G:H8	1.98	0.47
53:5:385:A:H3'	53:5:386:U:C5	2.50	0.47
53:5:385:A:C6	53:5:386:U:H1'	2.49	0.47
53:5:401:U:O2	53:5:496:A:H2'	2.14	0.47
53:5:417:U:H5'	53:5:418:U:C6	2.50	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:5:537:A:C6	53:5:538:G:C6	3.03	0.47
53:5:573:G:C6	53:5:818:A:N7	2.83	0.47
53:5:657:G:N1	53:5:743:A:C6	2.83	0.47
53:5:668:U:H2'	53:5:669:U:C6	2.49	0.47
53:5:721:G:H2'	53:5:722:G:C8	2.49	0.47
53:5:806:A:H2'	53:5:807:C:C6	2.50	0.47
53:5:829:G:C5	53:5:849:A:C6	3.03	0.47
53:5:883:A:N7	53:5:902:A:N6	2.61	0.47
53:5:982:A:C5	53:5:1194:A:C6	3.03	0.47
53:5:1048:G:H2'	53:5:1049:G:O4'	2.14	0.47
53:5:1123:G:O2'	53:5:1124:U:P	2.72	0.47
53:5:1131:A:H2'	53:5:1132:G:C8	2.50	0.47
53:5:1161:G:C4	53:5:1162:G:C8	3.03	0.47
53:5:1320:A:N7	53:5:1349:A:H5''	2.30	0.47
53:5:1407:A:O2'	53:5:1408:A:OP2	2.33	0.47
53:5:1429:G:H2'	53:5:1430:G:H8	1.80	0.47
53:5:1431:A:H3'	53:5:1432:A:H8	1.79	0.47
54:6:3:G:H2'	54:6:4:U:O4'	2.14	0.47
54:7:18:C:H4'	54:7:59:A:H2	1.79	0.47
4:9:280:ARG:HD3	53:5:364:U:OP2	2.14	0.47
5:A:38:ASN:ND2	5:A:40:LYS:HB3	2.30	0.47
7:C:136:LEU:HD23	7:C:140:ASP:HB2	1.97	0.47
8:D:73:LEU:HB2	8:D:75:ARG:HH12	1.79	0.47
8:D:136:ILE:HB	8:D:153:PRO:HG3	1.96	0.47
9:E:50:LYS:CE	53:5:670:G:H5''	2.44	0.47
9:E:61:LYS:HD2	9:E:61:LYS:HA	1.61	0.47
14:J:118:LYS:HE2	53:5:777:A:H5''	1.95	0.47
19:O:77:VAL:O	19:O:81:LYS:N	2.48	0.47
22:R:10:PHE:HB2	22:R:70:LYS:NZ	2.30	0.47
26:b:16:VAL:CG2	26:b:26:ILE:HG13	2.44	0.47
26:b:82:GLN:HG2	26:b:83:GLU:O	2.15	0.47
26:b:132:PRO:HG3	51:3:2001:C:H5'	1.97	0.47
28:d:118:SER:O	28:d:119:LEU:C	2.58	0.47
28:d:128:TYR:HE2	28:d:130:ILE:HG12	1.79	0.47
31:g:22:ALA:O	31:g:112:TYR:HB3	2.15	0.47
35:k:4:ASN:HB2	35:k:7:LYS:CG	2.44	0.47
36:l:45:ARG:NH1	36:l:93:TRP:H	2.13	0.47
38:n:98:TYR:CE1	38:n:103:ALA:HA	2.48	0.47
38:n:99:HIS:CE1	52:4:36:C:H4'	2.50	0.47
40:p:34:ALA:O	40:p:38:VAL:HG23	2.15	0.47
44:t:31:ARG:CZ	44:t:33:GLN:HG3	2.45	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:w:18:LEU:O	47:w:22:LEU:HG	2.15	0.47
47:w:103:ALA:HA	47:w:106:GLU:HG2	1.96	0.47
51:3:24:U:H2'	51:3:25:G:H8	1.80	0.47
51:3:47:G:H1'	51:3:471:A:N1	2.30	0.47
51:3:159:G:C6	51:3:174:A:C6	3.03	0.47
51:3:211:A:C4	51:3:212:G:C8	3.02	0.47
51:3:438:A:H2'	51:3:439:U:C2	2.50	0.47
51:3:587:U:H2'	51:3:588:G:O4'	2.15	0.47
51:3:591:G:H2'	51:3:592:G:C8	2.50	0.47
51:3:686:C:H2'	51:3:687:G:H8	1.79	0.47
51:3:887:A:C4	51:3:888:A:C8	3.03	0.47
51:3:895:G:C4	51:3:953:G:C6	3.03	0.47
51:3:944:U:H2'	51:3:945:U:C6	2.49	0.47
51:3:1008:A:C6	51:3:1009:A:C6	3.02	0.47
51:3:1094:G:H2'	51:3:1095:U:C5	2.50	0.47
51:3:1217:G:C2	51:3:1218:G:C4	3.02	0.47
51:3:1244:A:C5	51:3:1245:G:C5	3.02	0.47
51:3:1289:G:H2'	51:3:1290:G:C8	2.49	0.47
51:3:1438:G:H2'	51:3:1439:U:C6	2.49	0.47
51:3:1457:A:H2'	51:3:1458:A:H8	1.80	0.47
51:3:1512:A:C6	51:3:1528:G:N1	2.82	0.47
51:3:1600:A:H5''	51:3:1601:A:C8	2.49	0.47
51:3:1635:G:H2'	51:3:1636:U:C6	2.49	0.47
51:3:1761:C:O2'	51:3:1762:A:O5'	2.26	0.47
51:3:1814:G:N1	51:3:1818:G:O6	2.47	0.47
51:3:2241:A:C6	51:3:2242:G:N7	2.83	0.47
51:3:2357:G:N1	51:3:2377:A:C6	2.82	0.47
51:3:2548:G:C2	51:3:2549:A:H1'	2.48	0.47
51:3:2595:A:N6	51:3:2616:G:H1'	2.30	0.47
51:3:2738:U:H2'	51:3:2739:C:C6	2.49	0.47
53:5:153:A:C2	53:5:154:G:N7	2.83	0.47
53:5:211:G:C4	53:5:212:G:C8	3.03	0.47
53:5:251:G:C2	53:5:268:C:C2	3.02	0.47
53:5:257:U:H3'	53:5:259:A:OP2	2.15	0.47
53:5:302:A:C4	53:5:303:A:C8	3.02	0.47
53:5:415:C:H2'	53:5:416:U:N1	2.30	0.47
53:5:443:G:H2'	53:5:444:G:O4'	2.15	0.47
53:5:467:G:C2	53:5:468:G:C8	3.03	0.47
53:5:756:A:C8	53:5:757:G:C8	3.03	0.47
53:5:827:C:H2'	53:5:828:U:C6	2.50	0.47
53:5:831:C:C2	53:5:832:G:C8	3.03	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:5:1044:G:N7	53:5:1175:C:H5'	2.29	0.47
53:5:1321:G:N1	53:5:1348:G:H3'	2.30	0.47
53:5:1394:G:C4	53:5:1395:C:C5	3.03	0.47
53:5:1435:G:C6	53:5:1436:C:C4	3.02	0.47
54:6:30:G:H2'	54:6:31:G:C8	2.49	0.47
5:A:223:GLN:O	5:A:227:LEU:HG	2.14	0.47
6:B:159:ARG:CG	6:B:165:ILE:HG12	2.45	0.47
6:B:193:GLN:OE1	53:5:1180:U:H4'	2.15	0.47
7:C:47:MET:SD	7:C:48:SER:N	2.88	0.47
9:E:33:GLU:OE2	9:E:35:LEU:HG	2.14	0.47
9:E:43:LYS:HD2	9:E:57:TYR:CE1	2.50	0.47
12:H:86:VAL:HG21	12:H:106:THR:HA	1.96	0.47
16:L:105:ASN:HB2	53:5:945:U:O4	2.15	0.47
17:M:41:ARG:HH21	17:M:42:LEU:H	1.63	0.47
25:a:181:ILE:HG12	25:a:191:LYS:HG2	1.97	0.47
25:a:271:LYS:HZ2	51:3:2235:A:H5''	1.80	0.47
26:b:123:ILE:C	26:b:128:PHE:H	2.23	0.47
26:b:141:HIS:NE2	51:3:1691:U:OP2	2.48	0.47
26:b:222:LEU:HB2	39:o:17:GLN:NE2	2.30	0.47
27:c:129:ASP:OD1	27:c:129:ASP:N	2.46	0.47
28:d:25:ILE:HD11	52:4:29:C:H4'	1.97	0.47
28:d:32:GLU:N	28:d:157:VAL:O	2.45	0.47
33:i:20:ILE:HB	33:i:142:THR:HA	1.97	0.47
33:i:101:ASP:OD1	33:i:102:LYS:N	2.44	0.47
38:n:108:ALA:O	38:n:111:GLU:HG2	2.14	0.47
40:p:92:LYS:O	40:p:95:SER:OG	2.23	0.47
51:3:61:U:H1'	51:3:75:A:H2'	1.97	0.47
51:3:191:G:H2'	51:3:192:U:H6	1.80	0.47
51:3:232:A:O2'	51:3:234:G:O5'	2.32	0.47
51:3:406:C:H2'	51:3:407:U:C6	2.49	0.47
51:3:638:A:C6	51:3:639:G:C6	3.03	0.47
51:3:695:G:C6	51:3:696:U:C4	3.03	0.47
51:3:809:A:C2	51:3:822:C:H2'	2.50	0.47
51:3:988:G:C6	51:3:989:G:C5	3.02	0.47
51:3:1037:A:H3'	51:3:1038:G:H8	1.79	0.47
51:3:1173:G:H2'	51:3:1174:G:O4'	2.14	0.47
51:3:1228:G:H2'	51:3:1229:U:H6	1.79	0.47
51:3:1230:U:H2'	51:3:1231:G:C8	2.50	0.47
51:3:1283:A:H5'	51:3:1284:A:H8	1.80	0.47
51:3:1482:U:O2'	51:3:1483:G:OP2	2.32	0.47
51:3:1495:A:P	51:3:1548:A:H61	2.37	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:3:1746:U:N3	51:3:1753:G:N1	2.29	0.47
51:3:1858:U:C4	51:3:1859:U:C4	3.03	0.47
51:3:1871:U:H2'	51:3:1872:U:O4'	2.15	0.47
51:3:1955:G:C6	51:3:1956:G:N7	2.82	0.47
51:3:2180:U:H3'	51:3:2181:A:C8	2.49	0.47
51:3:2228:U:H2'	51:3:2229:C:C6	2.49	0.47
51:3:2431:U:H1'	51:3:2433:A:H2'	1.97	0.47
51:3:2477:A:H1'	51:3:2490:A:C2	2.50	0.47
51:3:2507:C:H5'	51:3:2508:U:OP2	2.14	0.47
51:3:2655:U:O2	51:3:2681:G:N2	2.47	0.47
51:3:2816:A:H2'	51:3:2817:G:O4'	2.14	0.47
53:5:14:U:H1'	53:5:908:A:H5''	1.97	0.47
53:5:18:U:H2'	53:5:19:C:C6	2.49	0.47
53:5:135:A:O2'	53:5:1421:A:N1	2.45	0.47
53:5:255:G:C2	53:5:256:G:H1'	2.49	0.47
53:5:328:G:H2'	53:5:329:C:C6	2.50	0.47
53:5:392:A:O2'	53:5:394:U:OP1	2.26	0.47
53:5:509:C:C2	53:5:510:U:C5	3.03	0.47
53:5:537:A:C6	53:5:538:G:C5	3.03	0.47
53:5:605:A:C4	53:5:606:A:C8	3.03	0.47
53:5:707:G:H2'	53:5:708:A:C8	2.50	0.47
53:5:734:A:H2'	53:5:735:C:C6	2.50	0.47
53:5:743:A:C5	53:5:744:U:C4	3.03	0.47
53:5:917:G:C2	53:5:918:A:C4	3.02	0.47
53:5:1329:G:H2'	53:5:1330:A:H8	1.77	0.47
54:6:55:U:O2'	54:6:56:U:O2	2.22	0.47
4:9:33:CYS:O	4:9:36:LEU:HB2	2.15	0.47
7:C:8:PHE:CE2	53:5:426:U:H3'	2.50	0.47
12:H:108:ARG:NH2	12:H:111:ARG:H	2.13	0.47
14:J:43:MET:HE2	14:J:58:ILE:HG22	1.97	0.47
25:a:22:TYR:O	25:a:26:LEU:HB3	2.15	0.47
25:a:125:GLU:HA	25:a:137:PRO:HD2	1.96	0.47
26:b:83:GLU:CD	51:3:2644:U:H4'	2.39	0.47
27:c:32:GLN:HE21	35:k:11:LYS:HG2	1.79	0.47
29:e:4:ILE:HA	29:e:7:ARG:HB2	1.97	0.47
33:i:21:VAL:HG23	33:i:145:TRP:H	1.80	0.47
33:i:88:LYS:NZ	51:3:2776:U:OP1	2.43	0.47
34:j:66:LYS:H	34:j:82:ASN:CG	2.22	0.47
35:k:22:ARG:CZ	51:3:846:U:C4	2.98	0.47
35:k:126:PHE:HB2	35:k:146:VAL:HG21	1.96	0.47
35:k:139:VAL:O	35:k:143:ASN:N	2.48	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:o:23:PRO:HG3	39:o:88:ILE:O	2.15	0.47
42:r:6:LYS:HE2	42:r:6:LYS:HB3	1.75	0.47
51:3:17:G:C6	51:3:18:G:C6	3.03	0.47
51:3:159:G:H2'	51:3:160:A:H8	1.77	0.47
51:3:339:U:H2'	51:3:340:U:C6	2.50	0.47
51:3:388:U:H2'	51:3:389:C:C6	2.50	0.47
51:3:525:A:H2'	51:3:526:G:N9	2.30	0.47
51:3:535:G:H2'	51:3:537:A:N7	2.30	0.47
51:3:573:A:H1'	51:3:589:A:C2	2.50	0.47
51:3:866:G:C6	51:3:867:G:C5	3.03	0.47
51:3:906:G:H2'	51:3:906:G:N3	2.30	0.47
51:3:962:U:H2'	51:3:963:U:C6	2.49	0.47
51:3:1027:U:C4	51:3:1198:G:O6	2.66	0.47
51:3:1029:A:C6	51:3:1197:G:N1	2.83	0.47
51:3:1201:A:N6	51:3:1215:G:C5	2.83	0.47
51:3:1414:C:H1'	51:3:1496:A:N3	2.29	0.47
51:3:1531:C:C4	51:3:1532:A:C4	3.03	0.47
51:3:1809:A:H3'	51:3:1810:A:H8	1.80	0.47
51:3:1884:A:H3'	51:3:1885:G:H8	1.80	0.47
51:3:1894:U:C2	51:3:1895:G:C8	3.03	0.47
51:3:2269:C:C2	51:3:2288:G:C2	3.03	0.47
51:3:2488:C:H2'	51:3:2489:G:C8	2.50	0.47
51:3:2518:C:H2'	51:3:2519:U:H6	1.80	0.47
51:3:2647:A:N7	51:3:2786:A:N6	2.63	0.47
51:3:2683:G:C6	51:3:2684:G:C6	3.03	0.47
51:3:2767:G:C6	51:3:2768:U:C4	3.03	0.47
51:3:2848:A:H1'	51:3:2878:G:N2	2.30	0.47
52:4:94:A:C8	52:4:95:G:C8	3.03	0.47
53:5:149:G:C6	53:5:150:A:C5	3.03	0.47
53:5:323:A:O3'	53:5:325:A:H5''	2.15	0.47
53:5:435:U:C2	53:5:492:G:N2	2.83	0.47
53:5:548:G:C6	53:5:549:U:C4	3.03	0.47
53:5:583:G:H2'	53:5:584:C:O4'	2.15	0.47
53:5:655:G:C6	53:5:746:A:C6	3.03	0.47
53:5:721:G:H2'	53:5:722:G:H8	1.79	0.47
53:5:776:C:H2'	53:5:777:A:C8	2.50	0.47
53:5:1215:U:H3'	53:5:1216:G:H8	1.80	0.47
53:5:1267:G:H2'	53:5:1268:G:H8	1.75	0.47
53:5:1333:C:H4'	53:5:1336:C:H42	1.79	0.47
54:6:14:C:O2	54:6:14:C:H2'	2.15	0.47
3:2:19:ARG:NH2	51:3:2763:C:H3'	2.30	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:A:61:GLN:NE2	5:A:215:ILE:HG23	2.30	0.46
7:C:60:MET:HG2	7:C:64:TYR:CE2	2.50	0.46
7:C:166:PHE:CD1	7:C:182:PRO:HB3	2.50	0.46
16:L:10:PRO:HG2	16:L:21:TYR:CE1	2.50	0.46
22:R:29:ARG:O	22:R:47:ASN:ND2	2.48	0.46
25:a:79:ILE:HG13	25:a:80:GLU:N	2.30	0.46
25:a:92:ARG:NH2	51:3:1824:G:OP1	2.45	0.46
25:a:255:ARG:HG3	25:a:261:ARG:HA	1.97	0.46
28:d:30:ARG:N	28:d:159:SER:OG	2.48	0.46
34:j:46:ALA:H	34:j:54:LYS:HB2	1.80	0.46
35:k:20:LEU:HB2	51:3:620:G:C8	2.50	0.46
35:k:42:ARG:HG2	35:k:43:LYS:H	1.80	0.46
36:l:46:ALA:HA	51:3:2492:G:H4'	1.96	0.46
39:o:25:PHE:CD2	39:o:52:VAL:HG21	2.50	0.46
39:o:63:THR:HB	39:o:78:ASN:ND2	2.28	0.46
40:p:65:ASN:HD21	40:p:69:ARG:NH2	2.14	0.46
40:p:91:ARG:HE	51:3:1033:A:H5'	1.79	0.46
42:r:59:THR:O	42:r:63:GLY:N	2.48	0.46
47:w:39:ASP:O	47:w:40:LYS:HD3	2.15	0.46
49:y:28:SER:HA	51:3:2890:G:O2'	2.15	0.46
51:3:42:U:C2	51:3:476:G:N2	2.83	0.46
51:3:55:A:H62	51:3:118:G:H21	1.63	0.46
51:3:194:A:H5''	51:3:208:A:C2	2.50	0.46
51:3:670:G:H2'	51:3:671:C:C6	2.50	0.46
51:3:740:A:H61	51:3:760:G:C2'	2.27	0.46
51:3:742:G:O6	51:3:759:U:O4	2.33	0.46
51:3:998:C:H2'	51:3:999:U:C6	2.41	0.46
51:3:1047:A:H5'	51:3:1186:A:H2	1.79	0.46
51:3:1709:C:H3'	51:3:1710:A:H8	1.79	0.46
51:3:1723:A:C8	51:3:1734:A:C5	3.03	0.46
51:3:2179:A:H1'	51:3:2180:U:C2	2.50	0.46
51:3:2477:A:N1	51:3:2489:G:O2'	2.42	0.46
51:3:2738:U:H2'	51:3:2739:C:O4'	2.15	0.46
51:3:2787:U:OP1	51:3:2787:U:H3'	2.15	0.46
52:4:72:A:H8	52:4:72:A:O5'	1.98	0.46
53:5:106:C:O3'	53:5:107:A:H8	1.96	0.46
53:5:616:C:N4	53:5:620:A:N7	2.62	0.46
53:5:707:G:H2'	53:5:708:A:H8	1.80	0.46
53:5:890:U:C2	53:5:891:C:C5	3.04	0.46
53:5:897:A:C4	53:5:898:A:C8	3.03	0.46
53:5:1290:G:H1'	53:5:1334:A:C2	2.50	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:1:13:LEU:HA	2:1:19:ILE:HA	1.97	0.46
4:9:20:HIS:HB2	4:9:115:GLN:HB2	1.97	0.46
5:A:219:ASN:O	5:A:222:PRO:HG3	2.16	0.46
6:B:114:LEU:HD11	6:B:147:ALA:HB3	1.97	0.46
6:B:158:GLY:HA3	6:B:199:ILE:HG23	1.97	0.46
9:E:21:VAL:HA	9:E:24:LYS:HD3	1.96	0.46
9:E:40:LEU:HB2	9:E:57:TYR:HB2	1.97	0.46
13:I:57:ILE:HG21	17:M:41:ARG:O	2.16	0.46
13:I:90:ILE:HA	13:I:93:LEU:HG	1.96	0.46
14:J:40:SER:OG	14:J:45:PHE:HB2	2.16	0.46
15:K:55:PRO:HG3	15:K:63:ARG:NE	2.21	0.46
15:K:134:LYS:HB3	53:5:38:U:H5'	1.96	0.46
16:L:98:ARG:HG2	53:5:1282:U:O5'	2.15	0.46
22:R:32:LYS:HG3	22:R:57:PHE:CZ	2.50	0.46
26:b:122:ALA:N	26:b:166:SER:OG	2.48	0.46
27:c:68:GLN:OE1	51:3:710:A:O2'	2.32	0.46
33:i:47:PHE:CE1	33:i:52:ASP:HA	2.50	0.46
36:l:8:LYS:HZ1	51:3:906:G:HO2'	1.60	0.46
39:o:101:ILE:HB	39:o:103:TYR:CE1	2.50	0.46
41:q:40:MET:HA	41:q:45:ILE:HG12	1.95	0.46
51:3:78:C:C2	51:3:112:A:N1	2.83	0.46
51:3:246:G:H22	51:3:258:G:H2'	1.80	0.46
51:3:270:G:C5	51:3:271:G:C8	3.02	0.46
51:3:315:A:OP2	51:3:316:C:H5	1.97	0.46
51:3:557:G:C2'	51:3:558:C:H5'	2.45	0.46
51:3:632:A:H2'	51:3:633:G:C8	2.50	0.46
51:3:707:C:N3	51:3:844:G:N1	2.63	0.46
51:3:711:A:H2	51:3:2076:G:N3	2.13	0.46
51:3:719:G:H2'	51:3:809:A:H62	1.79	0.46
51:3:738:U:O2	51:3:763:G:C6	2.67	0.46
51:3:894:G:H21	51:3:2276:A:H3'	1.80	0.46
51:3:1036:A:OP2	51:3:1189:G:N1	2.46	0.46
51:3:1191:A:O5'	51:3:1192:U:H5	1.98	0.46
51:3:1232:U:H2'	51:3:1233:A:C8	2.50	0.46
51:3:1338:G:P	51:3:1339:U:H3	2.36	0.46
51:3:1401:A:H4'	51:3:2220:A:O4'	2.15	0.46
51:3:1491:G:HO2'	51:3:1577:A:N6	2.11	0.46
51:3:1583:G:HO2'	51:3:1584:U:P	2.38	0.46
51:3:1670:U:H2'	51:3:1671:C:H6	1.76	0.46
51:3:1798:A:H3'	51:3:1799:A:C8	2.48	0.46
51:3:1924:U:H2'	51:3:1925:A:C8	2.51	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:3:2033:G:H2'	51:3:2034:G:O4'	2.15	0.46
51:3:2207:A:H2'	51:3:2208:U:O4'	2.15	0.46
51:3:2266:C:O2'	51:3:2434:A:H4'	2.16	0.46
51:3:2313:U:H2'	51:3:2314:U:C6	2.49	0.46
51:3:2382:A:H2'	51:3:2383:G:C8	2.49	0.46
51:3:2472:G:H2'	51:3:2473:C:C6	2.50	0.46
51:3:2647:A:H61	51:3:2783:A:H2'	1.80	0.46
51:3:2663:G:N2	51:3:2672:G:H2'	2.30	0.46
51:3:2850:G:H2'	51:3:2851:U:H6	1.80	0.46
52:4:25:A:H8	52:4:25:A:OP2	1.99	0.46
53:5:100:G:H4'	53:5:101:A:H8	1.79	0.46
53:5:170:A:O2'	53:5:171:A:H5'	2.15	0.46
53:5:487:A:C6	53:5:489:U:N3	2.82	0.46
53:5:648:C:H2'	53:5:649:U:O4'	2.15	0.46
53:5:678:A:H2'	53:5:679:U:C6	2.51	0.46
53:5:718:A:C6	53:5:730:G:C4	3.03	0.46
53:5:727:G:N2	53:5:762:G:H4'	2.29	0.46
53:5:772:G:H3'	53:5:773:G:H8	1.80	0.46
53:5:834:G:C2	53:5:844:U:C2	3.03	0.46
53:5:949:G:C6	53:5:950:C:C4	3.02	0.46
53:5:1102:A:H2'	53:5:1103:C:C2	2.50	0.46
53:5:1268:G:C5	53:5:1269:U:C4	3.03	0.46
1:0:18:PHE:HB2	1:0:43:THR:HG21	1.96	0.46
2:1:10:ARG:HA	35:k:65:PHE:HB2	1.97	0.46
3:2:4:ARG:CZ	3:2:6:SER:HB3	2.46	0.46
5:A:95:LEU:HA	5:A:98:ASN:ND2	2.31	0.46
6:B:80:SER:C	6:B:81:GLU:HG3	2.41	0.46
6:B:153:LYS:HG3	6:B:204:TRP:CE3	2.51	0.46
6:B:159:ARG:C	6:B:160:LEU:HD12	2.40	0.46
9:E:14:SER:OG	9:E:17:GLN:HG2	2.16	0.46
9:E:39:TYR:HB2	9:E:57:TYR:O	2.16	0.46
12:H:18:LYS:HD2	53:5:1124:U:H1'	1.96	0.46
25:a:11:ASN:HD21	51:3:1730:C:H4'	1.80	0.46
25:a:67:ARG:H	25:a:91:ASN:ND2	2.08	0.46
25:a:94:CYS:HA	25:a:205:ASN:CG	2.40	0.46
26:b:36:VAL:HG12	26:b:50:THR:HG21	1.97	0.46
27:c:2:ALA:N	27:c:20:LEU:HG	2.31	0.46
27:c:32:GLN:O	27:c:35:PHE:HB3	2.15	0.46
27:c:35:PHE:O	27:c:39:LEU:HG	2.14	0.46
34:j:1:MET:SD	51:3:2734:C:H4'	2.56	0.46
39:o:70:THR:O	39:o:73:ILE:HB	2.15	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:p:39:ILE:O	40:p:43:LYS:HG3	2.15	0.46
43:s:39:ARG:HH21	43:s:42:LEU:HB3	1.81	0.46
49:y:4:GLN:HB3	51:3:2623:U:N1	2.29	0.46
50:z:38:CYS:HB2	50:z:47:HIS:CE1	2.51	0.46
51:3:56:G:C6	51:3:118:G:N2	2.83	0.46
51:3:90:G:H2'	51:3:91:G:C8	2.49	0.46
51:3:147:C:H2'	51:3:148:U:C6	2.50	0.46
51:3:276:A:N3	51:3:406:C:H1'	2.30	0.46
51:3:364:A:H8	51:3:1240:U:O2'	1.99	0.46
51:3:406:C:O2'	51:3:407:U:H5'	2.15	0.46
51:3:448:A:N7	51:3:2419:A:H2	2.12	0.46
51:3:905:U:C4	51:3:949:C:H1'	2.51	0.46
51:3:1447:A:O4'	51:3:1613:A:N6	2.49	0.46
51:3:1858:U:N3	51:3:1898:G:N1	2.22	0.46
51:3:2034:G:C5	51:3:2035:U:C4	3.04	0.46
51:3:2359:G:C2	51:3:2375:A:C6	3.03	0.46
51:3:2370:G:C2'	51:3:2371:U:H5'	2.46	0.46
51:3:2384:A:H8	51:3:2384:A:OP1	1.99	0.46
51:3:2455:G:H1	51:3:2459:A:H61	1.63	0.46
51:3:2745:G:C2	51:3:2746:A:C4	3.03	0.46
51:3:2754:U:O4	51:3:2763:C:H4'	2.16	0.46
52:4:4:G:C6	52:4:5:G:C5	3.03	0.46
52:4:69:C:H2'	52:4:70:G:O4'	2.15	0.46
53:5:179:U:H2'	53:5:180:C:C6	2.51	0.46
53:5:303:A:H2'	53:5:304:U:C6	2.50	0.46
53:5:329:C:H2'	53:5:330:C:C6	2.43	0.46
53:5:373:A:H2'	53:5:374:G:O4'	2.15	0.46
53:5:413:G:C5	53:5:414:U:C4	3.03	0.46
53:5:500:G:C5	53:5:542:G:C6	3.02	0.46
53:5:861:A:H2'	53:5:862:C:C6	2.50	0.46
53:5:866:A:O2'	53:5:867:A:H3'	2.15	0.46
53:5:1084:A:H2	53:5:1101:A:C8	2.33	0.46
53:5:1278:G:C2	53:5:1306:A:C6	3.03	0.46
53:5:1329:G:C6	53:5:1343:G:C6	3.03	0.46
54:6:21:U:H2'	54:6:22:A:H4'	1.97	0.46
2:1:7:ALA:HA	2:1:11:PHE:CD2	2.50	0.46
4:9:155:ARG:O	4:9:159:THR:HG23	2.15	0.46
4:9:332:TYR:O	4:9:375:PHE:HB2	2.15	0.46
5:A:131:ASN:HB2	5:A:132:LYS:HZ2	1.80	0.46
8:D:93:VAL:HG12	8:D:103:TYR:CB	2.45	0.46
9:E:145:ARG:N	11:G:61:GLU:O	2.48	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:G:90:ILE:O	11:G:92:LYS:NZ	2.37	0.46
14:J:87:ASP:HA	14:J:90:ILE:HG12	1.97	0.46
15:K:49:ARG:HG2	15:K:50:VAL:N	2.29	0.46
25:a:215:LYS:HG3	25:a:217:GLY:H	1.81	0.46
25:a:265:VAL:O	51:3:1804:A:H4'	2.15	0.46
26:b:24:LEU:O	26:b:26:ILE:HG12	2.15	0.46
29:e:70:THR:HG23	29:e:71:TYR:CD1	2.50	0.46
30:f:69:LYS:NZ	30:f:137:VAL:HG12	2.30	0.46
30:f:137:VAL:HG13	30:f:139:LYS:NZ	2.31	0.46
34:j:114:ILE:H	34:j:114:ILE:HD12	1.80	0.46
36:l:13:HIS:N	51:3:947:A:H62	2.13	0.46
37:m:30:LYS:O	37:m:31:ILE:HG12	2.16	0.46
37:m:33:THR:HG21	37:m:38:ALA:HB2	1.98	0.46
37:m:103:LEU:O	49:y:41:ARG:HD2	2.15	0.46
39:o:10:ILE:O	39:o:13:VAL:HG22	2.15	0.46
42:r:49:LYS:NZ	51:3:527:A:H61	2.14	0.46
44:t:41:LYS:HE3	44:t:64:GLN:CB	2.46	0.46
47:w:10:LYS:HB3	47:w:14:GLU:HB3	1.97	0.46
51:3:86:A:N6	51:3:101:C:O4'	2.49	0.46
51:3:366:A:C4	51:3:369:C:C5	3.04	0.46
51:3:401:G:H2'	51:3:402:A:N9	2.30	0.46
51:3:499:G:H3'	51:3:500:U:H5''	1.97	0.46
51:3:562:C:H42	51:3:2787:U:P	2.38	0.46
51:3:599:U:H2'	51:3:600:U:N1	2.31	0.46
51:3:695:G:H2'	51:3:696:U:H6	1.81	0.46
51:3:734:A:H61	51:3:768:G:C2'	2.29	0.46
51:3:1047:A:H5'	51:3:1186:A:C2	2.51	0.46
51:3:1203:G:N1	51:3:1213:U:N3	2.64	0.46
51:3:1413:A:C6	51:3:1431:A:C5	3.03	0.46
51:3:1435:A:H2'	51:3:1436:C:O4'	2.15	0.46
51:3:1482:U:N3	51:3:1483:G:N7	2.62	0.46
51:3:1485:A:H2'	51:3:1485:A:N3	2.30	0.46
51:3:1709:C:H3'	51:3:1710:A:C8	2.50	0.46
51:3:1710:A:H3'	51:3:1711:A:C8	2.51	0.46
51:3:1943:A:C5	51:3:1952:G:C5	3.03	0.46
51:3:2008:A:H2'	51:3:2009:U:C6	2.50	0.46
51:3:2359:G:H2'	51:3:2373:G:N2	2.26	0.46
51:3:2579:U:H2'	51:3:2582:G:H1'	1.98	0.46
51:3:2793:U:O2'	51:3:2794:U:H5'	2.15	0.46
51:3:2850:G:C2	51:3:2875:U:C2	3.03	0.46
52:4:19:G:O6	52:4:61:A:N6	2.48	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:5:278:A:H3'	53:5:279:C:C5	2.50	0.46
53:5:769:U:N3	53:5:770:G:N7	2.64	0.46
53:5:778:A:N7	53:5:779:A:N7	2.64	0.46
53:5:791:A:H2'	53:5:792:C:C6	2.51	0.46
53:5:822:A:N3	53:5:822:A:H2'	2.30	0.46
53:5:857:U:N3	53:5:861:A:N1	2.64	0.46
53:5:1142:G:H1'	53:5:1145:A:N6	2.30	0.46
53:5:1225:A:N3	53:5:1345:G:O2'	2.44	0.46
53:5:1302:C:H2'	53:5:1303:A:O4'	2.16	0.46
53:5:1329:G:C6	53:5:1343:G:N1	2.83	0.46
53:5:1499:G:H2'	53:5:1500:G:C8	2.51	0.46
54:6:11:G:H2'	54:6:12:C:C6	2.51	0.46
3:2:2:LYS:O	3:2:35:ARG:N	2.37	0.46
4:9:89:ILE:HD13	4:9:115:GLN:NE2	2.30	0.46
4:9:223:GLY:O	53:5:56:A:N6	2.48	0.46
4:9:341:SER:OG	4:9:362:GLU:OE1	2.26	0.46
5:A:25:GLU:CG	5:A:250:PRO:HA	2.44	0.46
5:A:198:VAL:HG21	5:A:210:LEU:O	2.16	0.46
6:B:46:VAL:HG13	6:B:49:ARG:HH12	1.80	0.46
7:C:2:LYS:O	7:C:114:ARG:NH2	2.41	0.46
7:C:109:THR:HB	7:C:112:SER:CB	2.45	0.46
14:J:43:MET:HE2	14:J:58:ILE:CG2	2.46	0.46
14:J:112:ASN:ND2	53:5:715:A:H4'	2.29	0.46
16:L:23:PHE:O	16:L:66:GLU:HB3	2.15	0.46
18:N:24:VAL:O	18:N:27:SER:OG	2.27	0.46
25:a:41:LEU:HD21	25:a:66:TYR:HB3	1.98	0.46
25:a:184:LEU:O	25:a:186:SER:N	2.43	0.46
25:a:221:HIS:NE2	51:3:799:A:OP2	2.46	0.46
25:a:238:HIS:CE1	25:a:240:HIS:HB2	2.51	0.46
28:d:42:ASP:OD1	28:d:42:ASP:N	2.47	0.46
30:f:33:LYS:C	30:f:34:LYS:HD3	2.40	0.46
34:j:13:ASN:HD22	34:j:97:ARG:C	2.23	0.46
34:j:64:ARG:HD3	34:j:81:ASP:OD1	2.15	0.46
35:k:76:GLU:N	35:k:76:GLU:OE1	2.49	0.46
39:o:67:ARG:HE	39:o:74:PRO:HB2	1.81	0.46
41:q:71:ILE:HG13	41:q:81:LYS:O	2.16	0.46
43:s:6:VAL:CG1	43:s:32:ASN:HD22	2.28	0.46
45:u:38:LYS:HG2	45:u:51:ILE:C	2.41	0.46
47:w:45:ASN:ND2	47:w:49:ARG:HE	2.14	0.46
51:3:252:G:H5'	51:3:254:G:C5	2.51	0.46
51:3:308:A:N1	51:3:397:G:C6	2.83	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:3:322:A:H2'	51:3:323:A:H8	1.76	0.46
51:3:609:U:C2	51:3:610:G:N7	2.84	0.46
51:3:639:G:H1'	51:3:692:U:O2'	2.15	0.46
51:3:766:C:H2'	51:3:767:C:C6	2.51	0.46
51:3:858:A:C6	51:3:859:G:C5	3.03	0.46
51:3:872:C:N3	51:3:977:A:N6	2.63	0.46
51:3:882:C:H3'	51:3:883:A:N7	2.31	0.46
51:3:893:A:N1	51:3:957:G:N2	2.61	0.46
51:3:1063:A:H2'	51:3:1064:A:C8	2.50	0.46
51:3:1090:G:O2'	51:3:1120:A:N1	2.40	0.46
51:3:1102:A:H5'	54:6:57:C:O2'	2.14	0.46
51:3:1521:A:H2'	51:3:1523:C:C4	2.51	0.46
51:3:1558:A:C6	51:3:1573:A:H1'	2.50	0.46
51:3:1714:U:O2	51:3:1770:A:H8	1.98	0.46
51:3:1842:G:O6	51:3:1937:G:N2	2.47	0.46
51:3:1863:G:C6	51:3:1864:A:C6	3.04	0.46
51:3:1897:A:H3'	51:3:1898:G:H8	1.78	0.46
51:3:2039:G:C6	51:3:2462:G:H4'	2.51	0.46
51:3:2169:G:H1'	51:3:2173:G:C2	2.51	0.46
51:3:2473:C:H2'	51:3:2474:C:H6	1.80	0.46
51:3:2521:A:C6	51:3:2582:G:C6	3.04	0.46
51:3:2646:G:C2	51:3:2647:A:N6	2.83	0.46
51:3:2689:C:C4	51:3:2733:A:N7	2.82	0.46
51:3:2838:G:C8	51:3:2883:A:C6	3.03	0.46
52:4:28:C:O2'	52:4:55:A:N1	2.46	0.46
53:5:123:U:O5'	53:5:123:U:H6	1.98	0.46
53:5:137:A:N7	53:5:156:U:O4	2.49	0.46
53:5:158:A:C4	53:5:160:A:C8	3.03	0.46
53:5:220:U:H3'	53:5:221:U:C6	2.51	0.46
53:5:224:A:H2'	53:5:225:U:O4'	2.15	0.46
53:5:575:A:H2'	53:5:576:A:H8	1.81	0.46
53:5:640:C:C2	53:5:641:U:C5	3.03	0.46
53:5:828:U:H3'	53:5:829:G:H5''	1.98	0.46
53:5:889:U:H2'	53:5:890:U:C6	2.50	0.46
53:5:948:U:C2	53:5:949:G:C8	3.03	0.46
53:5:999:C:H1'	53:5:1000:A:C1'	2.45	0.46
53:5:1044:G:C8	53:5:1174:U:H3'	2.51	0.46
53:5:1421:A:H2'	53:5:1422:A:H5'	1.98	0.46
53:5:1439:G:C2	53:5:1440:U:C4	3.04	0.46
54:6:34:U:O2'	54:6:37:A:N7	2.36	0.46
5:A:97:ASN:O	5:A:101:LYS:HG2	2.16	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:B:130:ARG:HH11	6:B:195:THR:HG21	1.81	0.46
6:B:159:ARG:N	6:B:199:ILE:HD12	2.30	0.46
7:C:96:ARG:HB2	7:C:99:ASN:CG	2.40	0.46
13:I:61:PRO:HD3	53:5:1050:U:O2'	2.16	0.46
15:K:118:VAL:HG12	15:K:118:VAL:O	2.15	0.46
18:N:15:HIS:N	18:N:18:ASP:OD2	2.46	0.46
20:P:5:GLN:HE21	53:5:113:C:P	2.39	0.46
21:Q:51:ILE:HG21	21:Q:85:HIS:HB3	1.98	0.46
25:a:64:ARG:NH2	51:3:1601:A:OP1	2.41	0.46
25:a:125:GLU:OE2	30:f:89:TYR:OH	2.28	0.46
25:a:191:LYS:HD3	25:a:279:ILE:HD11	1.97	0.46
26:b:40:LYS:HZ3	26:b:47:TYR:HE1	1.64	0.46
27:c:81:ASN:N	27:c:87:GLY:O	2.48	0.46
27:c:98:ASN:OD1	27:c:98:ASN:N	2.49	0.46
27:c:142:VAL:HG13	27:c:143:MET:H	1.80	0.46
29:e:76:THR:HA	29:e:79:ILE:HD12	1.96	0.46
30:f:38:PRO:O	30:f:42:LYS:HG2	2.15	0.46
30:f:51:LEU:O	30:f:55:GLN:HG2	2.15	0.46
35:k:67:ASN:ND2	51:3:667:A:H4'	2.30	0.46
35:k:70:LYS:CE	51:3:249:G:H5'	2.46	0.46
40:p:75:TYR:HA	40:p:78:PHE:HB3	1.96	0.46
44:t:93:MET:O	44:t:95:PRO:HD3	2.15	0.46
51:3:28:G:C5	51:3:29:G:C6	3.04	0.46
51:3:38:G:H4'	51:3:487:C:N3	2.31	0.46
51:3:51:A:H2'	51:3:180:A:H61	1.80	0.46
51:3:89:U:C5'	51:3:90:G:H5''	2.46	0.46
51:3:178:A:H3'	51:3:179:A:H8	1.81	0.46
51:3:229:C:N4	51:3:230:G:C2	2.84	0.46
51:3:327:U:H3'	51:3:379:A:H61	1.79	0.46
51:3:395:U:H2'	51:3:396:A:N7	2.30	0.46
51:3:617:C:H2'	51:3:618:G:C8	2.51	0.46
51:3:634:C:H2'	51:3:635:G:H8	1.80	0.46
51:3:728:A:H2'	51:3:729:U:O4'	2.15	0.46
51:3:767:C:H2'	51:3:768:G:O4'	2.16	0.46
51:3:866:G:C6	51:3:867:G:N7	2.83	0.46
51:3:899:A:H2	51:3:951:C:N4	2.14	0.46
51:3:1358:C:H2'	51:3:1359:C:H6	1.80	0.46
51:3:1361:U:H2'	51:3:1362:C:H6	1.80	0.46
51:3:1907:A:C6	51:3:1977:A:C6	3.03	0.46
51:3:1954:C:H2'	51:3:1955:G:H8	1.80	0.46
51:3:2012:A:H3'	51:3:2013:C:H6	1.80	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:3:2040:A:C5	51:3:2043:C:C4	3.04	0.46
51:3:2095:A:H2'	51:3:2096:U:O4'	2.16	0.46
51:3:2144:C:H2'	51:3:2145:A:C8	2.51	0.46
51:3:2235:A:H3'	51:3:2236:G:H8	1.80	0.46
51:3:2360:A:H2'	51:3:2361:G:O4'	2.15	0.46
51:3:2424:C:H2'	51:3:2425:C:H6	1.79	0.46
51:3:2469:A:H2'	51:3:2470:C:H6	1.80	0.46
51:3:2548:G:H2'	51:3:2549:A:O4'	2.16	0.46
51:3:2561:G:H2'	51:3:2562:U:O4'	2.16	0.46
51:3:2571:U:O2	51:3:2573:A:C8	2.69	0.46
51:3:2827:A:H2'	51:3:2828:C:C6	2.50	0.46
51:3:2857:C:H2'	51:3:2858:A:O4'	2.15	0.46
51:3:2862:U:O2'	51:3:2863:G:OP1	2.32	0.46
52:4:107:G:N1	52:4:108:C:H1'	2.31	0.46
53:5:42:G:C6	53:5:398:G:N1	2.84	0.46
53:5:63:U:O2'	53:5:375:C:O2	2.31	0.46
53:5:116:A:O4'	53:5:260:C:H5'	2.16	0.46
53:5:201:G:C2	53:5:215:C:C2	3.03	0.46
53:5:214:U:H2'	53:5:215:C:C6	2.51	0.46
53:5:419:A:H2'	53:5:419:A:N3	2.30	0.46
53:5:585:G:H22	53:5:751:C:P	2.38	0.46
53:5:999:C:C2	53:5:1000:A:H1'	2.50	0.46
53:5:1118:A:H8	53:5:1125:C:H1'	1.81	0.46
54:6:11:G:N1	54:6:27:A:N7	2.64	0.46
2:1:32:HIS:CE1	51:3:2398:U:H3'	2.51	0.46
4:9:261:MET:HG3	4:9:274:ASN:O	2.16	0.46
4:9:314:LYS:HD3	4:9:319:ARG:O	2.16	0.46
4:9:345:PRO:HB3	4:9:358:SER:HB3	1.98	0.46
5:A:51:HIS:ND1	5:A:53:ASN:O	2.48	0.46
6:B:121:ARG:O	6:B:125:ASN:ND2	2.49	0.46
7:C:52:GLN:O	7:C:56:GLU:HG2	2.16	0.46
7:C:57:LYS:O	7:C:60:MET:HE3	2.16	0.46
8:D:187:THR:OG1	53:5:20:C:OP1	2.27	0.46
14:J:115:LYS:O	53:5:775:G:O2'	2.27	0.46
15:K:114:THR:HG22	15:K:115:LEU:HG	1.98	0.46
16:L:13:LYS:HG2	16:L:18:ALA:HB2	1.98	0.46
22:R:6:LYS:HB2	22:R:10:PHE:HZ	1.79	0.46
25:a:159:GLN:HB3	51:3:1825:U:N3	2.31	0.46
27:c:111:ALA:O	27:c:115:VAL:HG13	2.16	0.46
28:d:40:VAL:HG23	28:d:150:ARG:HH22	1.81	0.46
28:d:124:GLY:C	28:d:125:ARG:HD2	2.41	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:f:92:ILE:HA	30:f:96:GLN:NE2	2.30	0.46
31:g:23:GLY:HA3	31:g:114:ASP:HA	1.98	0.46
35:k:82:LEU:HB2	35:k:118:THR:HB	1.96	0.46
37:m:19:ARG:HG2	37:m:66:TRP:CE3	2.50	0.46
37:m:49:ILE:O	37:m:53:LYS:HG3	2.16	0.46
39:o:53:LEU:HG	39:o:100:TYR:CE1	2.51	0.46
40:p:75:TYR:CZ	40:p:79:ILE:HD11	2.50	0.46
44:t:3:ARG:HB3	44:t:4:ILE:HD12	1.98	0.46
44:t:24:VAL:C	44:t:25:LEU:HD22	2.40	0.46
45:u:80:LEU:HG	45:u:100:HIS:CD2	2.51	0.46
47:w:91:LEU:O	47:w:95:LYS:HG2	2.16	0.46
51:3:51:A:N6	51:3:119:A:C4	2.84	0.46
51:3:53:G:O4'	51:3:119:A:N6	2.48	0.46
51:3:57:G:C2	51:3:117:C:C2	3.04	0.46
51:3:220:A:H2'	51:3:221:A:O4'	2.15	0.46
51:3:428:U:H2'	51:3:429:U:C6	2.51	0.46
51:3:641:U:H3'	51:3:655:G:H1	1.81	0.46
51:3:676:U:H2'	51:3:677:U:H6	1.80	0.46
51:3:718:U:C2	51:3:830:A:C2	3.04	0.46
51:3:799:A:C6	51:3:816:A:C2	3.04	0.46
51:3:844:G:C2	51:3:845:U:C2	3.04	0.46
51:3:861:U:H2'	51:3:863:U:O2	2.16	0.46
51:3:877:G:C2	51:3:878:A:C8	3.04	0.46
51:3:988:G:H2'	51:3:989:G:O4'	2.15	0.46
51:3:1239:G:N3	51:3:1267:A:H2	2.14	0.46
51:3:1336:A:H62	51:3:1640:G:N2	2.14	0.46
51:3:1412:A:N3	51:3:1433:U:H1'	2.31	0.46
51:3:1551:U:H3'	51:3:1552:C:C6	2.50	0.46
51:3:1575:C:H2'	51:3:1576:G:O4'	2.15	0.46
51:3:1667:G:C6	51:3:1669:A:C5	3.03	0.46
51:3:1688:A:H62	51:3:2012:A:H2'	1.81	0.46
51:3:1868:A:H2'	51:3:1869:G:C8	2.30	0.46
51:3:1944:A:C5	51:3:1947:U:H5	2.34	0.46
51:3:2020:A:N1	51:3:2021:A:C2	2.84	0.46
51:3:2101:A:H2'	51:3:2102:U:H6	1.81	0.46
51:3:2124:A:H1'	51:3:2170:A:C2	2.51	0.46
51:3:2146:A:H2'	51:3:2147:G:H8	1.80	0.46
51:3:2155:G:C2	51:3:2156:G:C4	3.04	0.46
51:3:2448:C:H2'	51:3:2449:U:H4'	1.96	0.46
51:3:2547:C:C2	51:3:2548:G:C8	3.04	0.46
51:3:2634:C:H2'	51:3:2635:G:C8	2.50	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:3:2702:G:H3'	51:3:2703:U:C6	2.51	0.46
51:3:2725:G:N2	51:3:2851:U:O3'	2.47	0.46
51:3:2807:G:HO2'	51:3:2809:A:H62	1.59	0.46
51:3:2866:A:C6	51:3:2867:U:C4	3.03	0.46
51:3:2889:U:H5''	51:3:2890:G:OP2	2.16	0.46
52:4:4:G:C5	52:4:105:A:C6	3.04	0.46
53:5:19:C:H4'	53:5:1069:U:H3	1.79	0.46
53:5:172:C:C2	53:5:173:U:C5	3.03	0.46
53:5:293:G:H22	53:5:295:G:H3'	1.79	0.46
53:5:294:A:N1	53:5:295:G:N2	2.64	0.46
53:5:628:A:H2'	53:5:629:U:O2	2.16	0.46
53:5:698:U:H1'	53:5:700:G:C2	2.51	0.46
53:5:778:A:C5	53:5:779:A:C8	3.03	0.46
53:5:818:A:H2'	53:5:819:G:C8	2.51	0.46
53:5:915:U:H2'	53:5:916:U:C6	2.51	0.46
53:5:980:C:H2'	53:5:981:U:C6	2.51	0.46
53:5:1039:G:C2	53:5:1185:C:C2	3.03	0.46
53:5:1042:G:N1	53:5:1183:C:N3	2.63	0.46
53:5:1090:G:C6	53:5:1091:C:C4	3.04	0.46
53:5:1279:G:O2'	53:5:1280:A:H8	1.99	0.46
53:5:1321:G:N2	53:5:1348:G:H2'	2.30	0.46
1:0:21:ARG:HA	1:0:24:THR:HG22	1.97	0.46
6:B:11:ARG:O	6:B:16:LYS:HG2	2.15	0.46
6:B:29:GLN:O	6:B:32:LYS:HB3	2.16	0.46
6:B:86:GLN:HG3	6:B:87:LYS:N	2.31	0.46
7:C:103:ARG:CG	7:C:164:SER:HB3	2.45	0.46
7:C:127:ARG:HG2	53:5:617:U:O4'	2.16	0.46
7:C:203:LEU:HA	53:5:29:G:H4'	1.96	0.46
8:D:81:LYS:HD3	53:5:918:A:H5''	1.98	0.46
8:D:101:ILE:C	8:D:126:LEU:HA	2.41	0.46
8:D:128:THR:O	8:D:129:ILE:HD13	2.15	0.46
9:E:40:LEU:HD12	9:E:57:TYR:HB3	1.96	0.46
11:G:90:ILE:HG12	11:G:139:ALA:N	2.31	0.46
12:H:37:PRO:HB3	12:H:41:PHE:CE2	2.50	0.46
12:H:97:LYS:HD3	12:H:100:LEU:HD23	1.98	0.46
13:I:63:VAL:HG12	53:5:968:G:C8	2.50	0.46
14:J:75:VAL:N	14:J:101:THR:HG23	2.31	0.46
18:N:5:LYS:HG2	18:N:9:ILE:HD11	1.97	0.46
25:a:165:GLY:HA3	51:3:1827:U:C4	2.51	0.46
26:b:87:MET:HB2	26:b:208:ARG:NH2	2.31	0.46
29:e:90:LEU:C	29:e:134:ILE:HB	2.41	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:k:77:TRP:CE2	35:k:111:PRO:HB2	2.51	0.46
41:q:29:VAL:HA	41:q:59:VAL:HB	1.98	0.46
43:s:24:THR:HG22	43:s:85:LEU:H	1.81	0.46
43:s:36:SER:C	43:s:40:VAL:HG23	2.41	0.46
51:3:195:A:C2	51:3:834:G:N3	2.84	0.46
51:3:301:G:C4	51:3:302:G:C8	3.03	0.46
51:3:311:G:C5	51:3:396:A:C6	3.04	0.46
51:3:348:A:N1	51:3:349:G:C6	2.84	0.46
51:3:507:A:H2'	51:3:508:A:C8	2.50	0.46
51:3:572:G:C2	51:3:588:G:N3	2.83	0.46
51:3:614:C:N4	51:3:1289:G:H1	2.14	0.46
51:3:678:U:O2'	51:3:680:A:N7	2.49	0.46
51:3:952:U:H2'	51:3:953:G:C8	2.50	0.46
51:3:1050:A:C5	51:3:1183:A:N1	2.84	0.46
51:3:1126:G:N2	51:3:1136:U:H1'	2.31	0.46
51:3:1260:U:H2'	51:3:1261:U:O4'	2.16	0.46
51:3:1284:A:C5	51:3:1286:G:H1'	2.50	0.46
51:3:1294:G:H8	51:3:1295:A:HO2'	1.63	0.46
51:3:1531:C:H3'	51:3:1532:A:C8	2.47	0.46
51:3:1849:G:H2'	51:3:1850:C:H6	1.78	0.46
51:3:1932:C:H2'	51:3:1933:U:H6	1.79	0.46
51:3:2126:A:C4	51:3:2179:A:C2	3.04	0.46
51:3:2278:G:H3'	51:3:2279:G:C8	2.51	0.46
51:3:2300:A:N6	51:3:2349:G:O6	2.48	0.46
51:3:2360:A:H3'	51:3:2361:G:H8	1.81	0.46
51:3:2439:U:H2'	51:3:2441:A:N7	2.30	0.46
51:3:2534:G:C2	51:3:2545:U:O2	2.69	0.46
52:4:31:G:C5	52:4:48:A:C6	3.04	0.46
53:5:14:U:O2	53:5:908:A:H3'	2.15	0.46
53:5:45:A:C6	53:5:46:U:C4	3.04	0.46
53:5:85:U:H1'	53:5:86:A:N7	2.30	0.46
53:5:145:G:C2	53:5:149:G:C6	3.03	0.46
53:5:210:G:C2	53:5:211:G:C4	3.04	0.46
53:5:471:A:H2'	53:5:472:G:C8	2.50	0.46
53:5:484:A:H3'	53:5:485:C:C6	2.51	0.46
53:5:561:A:H5''	53:5:563:U:O4	2.15	0.46
53:5:599:G:C6	53:5:635:G:C6	3.04	0.46
53:5:829:G:H2'	53:5:830:U:C6	2.51	0.46
53:5:977:U:O2'	53:5:979:C:N4	2.48	0.46
53:5:1142:G:C2	53:5:1146:A:N6	2.84	0.46
53:5:1197:G:H3'	53:5:1296:C:N4	2.31	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:5:1400:A:H61	53:5:1450:C:N4	2.08	0.46
53:5:1424:C:H2'	53:5:1425:A:H5'	1.98	0.46
1:0:2:LYS:NZ	51:3:723:U:P	2.89	0.46
4:9:107:SER:HB3	4:9:110:ASP:O	2.16	0.46
7:C:52:GLN:HE21	8:D:167:ARG:NH1	2.14	0.46
7:C:76:ARG:HA	7:C:79:LEU:HD12	1.96	0.46
7:C:81:GLN:HG3	7:C:85:LEU:CD1	2.46	0.46
9:E:44:GLU:N	9:E:44:GLU:OE1	2.48	0.46
9:E:86:LEU:HD12	9:E:86:LEU:HA	1.72	0.46
10:F:69:MET:HE2	10:F:96:ILE:HG22	1.98	0.46
10:F:133:ALA:HA	10:F:136:LYS:HG2	1.96	0.46
12:H:18:LYS:HZ1	53:5:1123:G:P	2.39	0.46
13:I:25:ASP:O	13:I:28:THR:HG22	2.16	0.46
15:K:26:TYR:C	15:K:72:ASN:HD22	2.24	0.46
18:N:47:PHE:HA	18:N:50:LYS:HE3	1.98	0.46
20:P:60:LYS:H	20:P:83:ARG:NE	2.09	0.46
27:c:43:ALA:C	27:c:45:TRP:H	2.24	0.46
27:c:127:LEU:HD21	27:c:201:LYS:HB2	1.97	0.46
28:d:64:LYS:O	52:4:40:U:H4'	2.15	0.46
29:e:22:LYS:N	29:e:22:LYS:HD2	2.31	0.46
36:l:123:HIS:HB3	51:3:2475:C:C4'	2.46	0.46
39:o:106:GLU:N	39:o:106:GLU:OE1	2.49	0.46
40:p:77:VAL:HA	40:p:80:ASN:OD1	2.16	0.46
41:q:28:PRO:HB2	41:q:31:LYS:HE2	1.98	0.46
41:q:49:TYR:O	41:q:51:GLU:HG3	2.15	0.46
41:q:67:LYS:HG2	41:q:69:ASN:CG	2.41	0.46
51:3:60:G:O2'	51:3:75:A:N1	2.41	0.46
51:3:124:A:C5	51:3:125:G:C5	3.03	0.46
51:3:144:C:C2	51:3:145:A:C8	3.04	0.46
51:3:184:A:N3	51:3:186:A:N7	2.63	0.46
51:3:441:U:H3'	51:3:442:G:C8	2.43	0.46
51:3:513:A:H2'	51:3:514:A:N9	2.30	0.46
51:3:562:C:H1'	51:3:563:A:C6	2.51	0.46
51:3:632:A:H2'	51:3:633:G:H8	1.80	0.46
51:3:1188:C:H2'	51:3:1189:G:O4'	2.16	0.46
51:3:1219:U:H2'	51:3:1220:A:N9	2.31	0.46
51:3:1364:A:H3'	51:3:1365:G:C8	2.51	0.46
51:3:1380:U:O5'	51:3:1605:A:O2'	2.33	0.46
51:3:1419:U:N3	51:3:1422:U:OP2	2.44	0.46
51:3:1507:G:C6	51:3:1537:A:N1	2.83	0.46
51:3:1513:A:H8	51:3:1513:A:OP2	1.97	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:3:1766:A:H2'	51:3:1767:A:C5	2.50	0.46
51:3:1844:C:O2'	51:3:1934:A:H1'	2.15	0.46
51:3:2081:U:O2'	51:3:2605:G:N3	2.44	0.46
51:3:2270:U:O2'	51:3:2337:U:O4'	2.34	0.46
51:3:2407:G:C2	51:3:2408:G:C4	3.04	0.46
51:3:2468:U:H2'	51:3:2469:A:O4'	2.16	0.46
51:3:2609:C:H2'	51:3:2611:G:N7	2.31	0.46
51:3:2804:C:H5'	51:3:2805:A:O5'	2.16	0.46
51:3:2896:G:C5'	51:3:2897:G:H21	2.28	0.46
52:4:30:U:C2	52:4:49:G:N2	2.84	0.46
52:4:33:U:H5	52:4:34:U:C4	2.33	0.46
53:5:241:C:O2	53:5:279:C:N3	2.48	0.46
53:5:356:G:H2'	53:5:357:G:O4'	2.15	0.46
53:5:587:A:H2'	53:5:588:U:C6	2.50	0.46
53:5:689:U:H5'	53:5:794:C:H5'	1.97	0.46
53:5:717:C:H5''	53:5:718:A:OP2	2.16	0.46
53:5:880:G:C6	53:5:881:G:C6	3.04	0.46
53:5:976:U:O4	53:5:1197:G:N1	2.49	0.46
53:5:977:U:C2	53:5:1197:G:N2	2.83	0.46
53:5:1034:G:H2'	53:5:1035:A:C8	2.50	0.46
53:5:1077:U:C2	53:5:1078:G:C8	3.03	0.46
53:5:1119:C:H1'	53:5:1124:U:O4	2.16	0.46
53:5:1295:U:H3'	53:5:1296:C:H2'	1.97	0.46
53:5:1361:G:H2'	53:5:1362:G:C8	2.51	0.46
53:5:1399:U:H2'	53:5:1400:A:C8	2.51	0.46
53:5:1458:A:H3'	53:5:1459:U:H6	1.80	0.46
54:6:4:U:H2'	54:6:5:C:H6	1.78	0.46
54:6:9:U:O4	54:6:14:C:H3'	2.16	0.46
54:6:12:C:H2'	54:6:13:U:C6	2.50	0.46
54:6:22:A:O2'	54:6:23:G:O5'	2.33	0.46
54:6:73:C:H2'	54:6:74:A:N3	2.31	0.46
4:9:10:LYS:HE2	4:9:11:PRO:HG2	1.98	0.46
4:9:234:ARG:HH22	4:9:298:SER:HB3	1.81	0.46
5:A:119:ASN:HA	5:A:121:LYS:NZ	2.31	0.46
5:A:162:PHE:HB2	5:A:163:PHE:CD2	2.51	0.46
7:C:88:ASN:HA	7:C:91:ARG:HH11	1.81	0.46
10:F:9:ARG:HH22	12:H:111:ARG:NH1	2.14	0.46
10:F:140:THR:HA	10:F:143:MET:HB3	1.98	0.46
11:G:100:PRO:O	11:G:104:LEU:HG	2.16	0.46
23:S:17:ARG:NH1	53:5:160:A:O3'	2.49	0.46
26:b:122:ALA:HB1	26:b:128:PHE:CE2	2.51	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:b:139:TYR:CG	26:b:140:PRO:HD3	2.51	0.46
29:e:55:ILE:HD11	29:e:72:ASN:HB2	1.97	0.46
30:f:69:LYS:HZ2	30:f:137:VAL:HG12	1.81	0.46
33:i:30:LYS:HZ3	51:3:1176:U:P	2.39	0.46
33:i:114:ASP:OD1	33:i:115:ASN:N	2.49	0.46
35:k:42:ARG:HD3	51:3:841:C:C5	2.51	0.46
35:k:105:SER:HB3	35:k:108:SER:HB3	1.98	0.46
35:k:130:LYS:HA	35:k:148:LEU:HD21	1.97	0.46
37:m:82:LEU:HG	37:m:87:ALA:HB2	1.98	0.46
40:p:30:SER:OG	51:3:614:C:OP1	2.27	0.46
43:s:19:ASN:HB2	43:s:26:LYS:HE2	1.98	0.46
43:s:54:LYS:HG2	43:s:55:VAL:H	1.80	0.46
45:u:39:LYS:HE2	45:u:50:ILE:O	2.16	0.46
51:3:277:C:H2'	51:3:278:U:O4'	2.15	0.46
51:3:282:C:H5''	51:3:284:U:OP2	2.16	0.46
51:3:496:A:H62	51:3:505:G:H21	1.64	0.46
51:3:511:U:N3	51:3:515:A:N7	2.63	0.46
51:3:526:G:H2'	51:3:527:A:N9	2.31	0.46
51:3:550:A:H1'	51:3:614:C:H1'	1.98	0.46
51:3:809:A:H1'	51:3:810:G:C8	2.51	0.46
51:3:1240:U:H5'	51:3:1242:G:C8	2.51	0.46
51:3:1479:A:H4'	51:3:1480:A:C5	2.50	0.46
51:3:1626:C:H2'	51:3:1627:U:C6	2.51	0.46
51:3:1646:G:H2'	51:3:1647:A:C8	2.51	0.46
51:3:1794:A:H2'	51:3:1795:C:O4'	2.16	0.46
51:3:1858:U:C4	51:3:1898:G:O6	2.68	0.46
51:3:2063:G:C4	51:3:2064:G:N7	2.84	0.46
51:3:2172:A:H8	51:3:2172:A:OP2	1.98	0.46
51:3:2181:A:H3'	51:3:2182:C:H5	1.81	0.46
51:3:2328:A:C6	51:3:2341:G:H1'	2.51	0.46
51:3:2348:U:H2'	51:3:2349:G:H8	1.80	0.46
51:3:2842:G:N3	51:3:2842:G:H2'	2.31	0.46
51:3:2886:A:H8	51:3:2886:A:OP2	1.99	0.46
52:4:72:A:N6	52:4:93:U:C2	2.84	0.46
53:5:213:U:C4	53:5:214:U:C4	3.04	0.46
53:5:215:C:H2'	53:5:216:G:O4'	2.16	0.46
53:5:293:G:N2	53:5:296:A:OP2	2.25	0.46
53:5:612:G:H2'	53:5:613:C:O4'	2.15	0.46
53:5:658:G:N1	53:5:742:C:C4	2.84	0.46
53:5:765:A:H2'	53:5:766:G:C8	2.51	0.46
53:5:766:G:H2'	53:5:767:U:O4'	2.16	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:5:917:G:C6	53:5:918:A:C6	3.03	0.46
53:5:921:G:H2'	53:5:1480:G:N3	2.31	0.46
53:5:1068:G:H2'	53:5:1070:G:N7	2.31	0.46
53:5:1332:U:C2	53:5:1338:A:N6	2.84	0.46
53:5:1484:C:C2	53:5:1485:C:C5	3.04	0.46
54:7:56:U:O2'	54:7:58:G:C8	2.68	0.46
4:9:33:CYS:HA	4:9:36:LEU:HD12	1.98	0.45
5:A:185:LYS:HA	5:A:188:VAL:CG1	2.45	0.45
6:B:7:SER:HG	6:B:204:TRP:NE1	2.14	0.45
7:C:94:GLU:O	7:C:99:ASN:HB2	2.16	0.45
7:C:95:SER:O	7:C:136:LEU:HD12	2.16	0.45
9:E:97:LEU:HB3	9:E:100:ILE:HG23	1.97	0.45
12:H:86:VAL:HB	12:H:100:LEU:HD21	1.98	0.45
12:H:115:ARG:HE	12:H:117:LYS:NZ	2.14	0.45
14:J:67:VAL:HA	14:J:70:MET:HE2	1.98	0.45
15:K:67:LYS:HE3	15:K:75:GLU:HB3	1.98	0.45
17:M:9:LYS:HA	17:M:12:ARG:HB2	1.97	0.45
21:Q:67:TYR:HA	21:Q:104:ASP:HA	1.98	0.45
22:R:3:ARG:O	53:5:1288:C:N4	2.49	0.45
22:R:19:VAL:HG21	22:R:44:PHE:CD1	2.44	0.45
23:S:9:LYS:HA	23:S:12:ARG:NE	2.31	0.45
23:S:28:LEU:HD12	23:S:31:ASN:HD22	1.81	0.45
25:a:9:ARG:CZ	51:3:1729:G:H5'	2.45	0.45
25:a:72:LYS:NZ	25:a:155:LYS:O	2.43	0.45
27:c:140:THR:HG22	27:c:172:THR:N	2.31	0.45
29:e:98:ARG:HA	29:e:132:THR:HG22	1.98	0.45
29:e:101:VAL:HG23	29:e:128:VAL:HB	1.98	0.45
36:l:39:GLY:HA3	36:l:97:VAL:O	2.16	0.45
36:l:115:ILE:O	36:l:119:THR:HG23	2.16	0.45
40:p:53:LYS:HA	40:p:56:PHE:CD2	2.50	0.45
42:r:39:THR:HA	49:y:25:GLN:HE22	1.81	0.45
45:u:80:LEU:HG	45:u:100:HIS:HD2	1.80	0.45
51:3:374:A:H3'	51:3:375:U:C6	2.51	0.45
51:3:411:U:C2	51:3:412:A:C8	3.03	0.45
51:3:412:A:C8	51:3:413:G:C8	3.04	0.45
51:3:478:G:C2	51:3:480:C:C6	3.04	0.45
51:3:545:C:H2'	51:3:546:U:O4'	2.16	0.45
51:3:634:C:H2'	51:3:635:G:O4'	2.16	0.45
51:3:717:U:H2'	51:3:718:U:C6	2.51	0.45
51:3:750:A:C5	51:3:751:A:C5	3.04	0.45
51:3:943:A:H2'	51:3:943:A:N3	2.30	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:3:1150:U:O2'	51:3:1151:U:H6	2.00	0.45
51:3:1200:U:C2'	51:3:1215:G:H1	2.29	0.45
51:3:1229:U:H2'	51:3:1230:U:C6	2.50	0.45
51:3:1261:U:O2'	51:3:1262:G:H5'	2.16	0.45
51:3:1265:G:O6	51:3:1266:G:N1	2.49	0.45
51:3:1336:A:H62	51:3:1640:G:H21	1.64	0.45
51:3:1379:C:C2	51:3:1409:G:C2	3.04	0.45
51:3:1492:G:C2	51:3:1580:G:C4	3.05	0.45
51:3:1521:A:O3'	51:3:1522:U:H6	1.99	0.45
51:3:1674:A:H3'	51:3:1675:A:H8	1.81	0.45
51:3:1720:C:N4	51:3:1721:G:C6	2.84	0.45
51:3:1822:A:OP1	51:3:1824:G:H1'	2.15	0.45
51:3:2034:G:C2	51:3:2044:C:N3	2.84	0.45
51:3:2360:A:N6	51:3:2373:G:O2'	2.49	0.45
51:3:2523:C:C2	51:3:2524:U:C5	3.03	0.45
51:3:2668:A:C6	51:3:2669:G:C2	3.03	0.45
51:3:2746:A:H2	51:3:2774:A:N1	2.14	0.45
51:3:2818:C:C4	51:3:2819:C:C5	3.03	0.45
51:3:2897:G:H4'	51:3:2898:A:C5'	2.47	0.45
53:5:42:G:C6	53:5:43:G:C5	3.05	0.45
53:5:342:G:N2	53:5:343:G:C8	2.84	0.45
53:5:369:A:H5'	53:5:477:U:O2'	2.17	0.45
53:5:595:G:H3'	53:5:596:U:C6	2.51	0.45
53:5:634:U:H2'	53:5:635:G:C8	2.51	0.45
53:5:836:C:C5	53:5:837:G:C6	3.04	0.45
53:5:922:G:H4'	53:5:1478:A:C8	2.47	0.45
53:5:933:A:H1'	53:5:1352:A:H5'	1.96	0.45
53:5:1048:G:C8	53:5:1049:G:C8	3.04	0.45
53:5:1250:A:H2'	53:5:1251:G:C8	2.50	0.45
54:7:16:G:O2'	54:7:17:U:OP1	2.30	0.45
54:7:36:A:O2'	54:7:37:A:H5'	2.16	0.45
54:7:39:A:H3'	54:7:40:A:H8	1.81	0.45
2:1:23:HIS:CD2	2:1:41:LEU:HA	2.51	0.45
4:9:235:GLY:N	4:9:271:ALA:HB2	2.32	0.45
4:9:301:PRO:HA	4:9:367:ILE:C	2.41	0.45
5:A:236:VAL:HA	5:A:239:ALA:HB3	1.98	0.45
6:B:38:GLU:O	6:B:42:ASN:ND2	2.49	0.45
6:B:125:ASN:HA	6:B:128:GLU:HG3	1.99	0.45
6:B:141:LEU:HD13	6:B:173:GLU:OE2	2.16	0.45
7:C:26:SER:HA	7:C:30:LYS:HB2	1.98	0.45
8:D:203:LEU:HG	8:D:204:SER:H	1.80	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:E:47:TYR:HE1	9:E:49:ILE:HD12	1.79	0.45
11:G:10:ALA:HB1	11:G:17:ASP:OD2	2.16	0.45
12:H:68:VAL:HG21	53:5:1121:U:H5''	1.99	0.45
14:J:87:ASP:OD1	14:J:90:ILE:HB	2.16	0.45
16:L:10:PRO:O	16:L:13:LYS:HB3	2.17	0.45
18:N:59:LYS:HZ1	53:5:579:G:P	2.39	0.45
22:R:40:ILE:HD13	22:R:69:HIS:HB2	1.97	0.45
23:S:9:LYS:HB2	23:S:12:ARG:NH1	2.31	0.45
24:T:37:ARG:HB2	24:T:40:MET:HG2	1.97	0.45
26:b:112:ALA:C	26:b:173:LYS:HD3	2.42	0.45
26:b:175:THR:HB	51:3:2780:U:H5''	1.97	0.45
27:c:55:LYS:HD3	51:3:836:G:N3	2.31	0.45
27:c:128:VAL:CG1	27:c:198:LEU:HB3	2.45	0.45
28:d:61:SER:HA	28:d:99:PHE:HZ	1.82	0.45
28:d:80:ARG:HB2	54:7:57:C:C2	2.51	0.45
29:e:72:ASN:O	29:e:76:THR:HG23	2.16	0.45
30:f:52:LYS:O	30:f:56:GLU:HG2	2.17	0.45
30:f:69:LYS:HZ2	30:f:137:VAL:N	2.05	0.45
35:k:101:LYS:N	35:k:101:LYS:HD2	2.30	0.45
36:l:63:LYS:HG2	36:l:64:MET:N	2.31	0.45
36:l:120:ARG:HD2	51:3:2476:A:H4'	1.97	0.45
39:o:25:PHE:HB2	39:o:29:ASP:OD2	2.16	0.45
46:v:58:LEU:HG	46:v:63:ARG:HB2	1.97	0.45
51:3:31:U:H2'	51:3:32:G:O4'	2.16	0.45
51:3:53:G:P	51:3:53:G:H8	2.39	0.45
51:3:164:A:H3'	51:3:165:U:H2'	1.98	0.45
51:3:241:C:H2'	51:3:242:G:C8	2.51	0.45
51:3:288:A:C2	51:3:289:U:C2	3.04	0.45
51:3:301:G:C2	51:3:406:C:C2	3.04	0.45
51:3:572:G:H2'	51:3:573:A:H8	1.81	0.45
51:3:718:U:C2	51:3:719:G:C8	3.05	0.45
51:3:766:C:H2'	51:3:767:C:O4'	2.16	0.45
51:3:773:G:C6	51:3:794:G:C6	3.04	0.45
51:3:803:G:H2'	51:3:804:U:C6	2.51	0.45
51:3:858:A:H8	51:3:858:A:O5'	1.98	0.45
51:3:914:G:H2'	51:3:915:A:C8	2.51	0.45
51:3:954:A:C2	52:4:77:G:H2'	2.52	0.45
51:3:1018:G:H8	51:3:1018:G:OP2	2.00	0.45
51:3:1243:A:O2'	51:3:1269:C:O4'	2.34	0.45
51:3:1454:G:H8	51:3:1454:G:O5'	1.99	0.45
51:3:1545:A:H2'	51:3:1546:U:C6	2.51	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:3:1624:A:H2'	51:3:1625:G:C8	2.51	0.45
51:3:1725:G:H22	51:3:1731:G:H1'	1.79	0.45
51:3:1876:G:H5'	51:3:1877:C:OP2	2.16	0.45
51:3:1962:U:H3'	51:3:1963:U:H5	1.81	0.45
51:3:2031:C:O2'	51:3:2032:G:H5'	2.15	0.45
51:3:2042:A:H5''	51:3:2043:C:C6	2.51	0.45
51:3:2073:C:H2'	51:3:2074:G:C8	2.51	0.45
51:3:2075:U:H5'	51:3:2076:G:OP1	2.16	0.45
51:3:2204:C:O2'	51:3:2205:U:H5'	2.16	0.45
51:3:2284:G:C2	51:3:2285:G:C8	3.04	0.45
51:3:2353:G:C8	51:3:2355:C:C6	3.04	0.45
51:3:2528:C:C5	51:3:2575:G:C4	3.04	0.45
51:3:2553:G:C2	51:3:2554:U:C2	3.04	0.45
51:3:2568:G:H2'	51:3:2569:A:C8	2.51	0.45
52:4:54:U:H1'	52:4:55:A:OP2	2.15	0.45
52:4:56:A:C5	52:4:57:G:N7	2.85	0.45
52:4:67:G:H3'	52:4:68:C:C6	2.52	0.45
53:5:73:G:H2'	53:5:74:U:H6	1.81	0.45
53:5:125:A:C6	53:5:221:U:C2	3.04	0.45
53:5:134:G:H1'	53:5:1422:A:O4'	2.16	0.45
53:5:353:G:H2'	53:5:354:U:C6	2.50	0.45
53:5:447:G:C2	53:5:481:U:O4	2.69	0.45
53:5:777:A:H2	53:5:799:A:N7	2.14	0.45
53:5:931:C:C3'	53:5:932:A:H8	2.28	0.45
53:5:1280:A:H61	53:5:1305:G:H1'	1.81	0.45
53:5:1417:U:H3	53:5:1435:G:N2	2.14	0.45
53:5:1431:A:C5	53:5:1432:A:C5	3.04	0.45
54:7:15:A:H2'	54:7:16:G:O4'	2.16	0.45
4:9:139:ASP:OD1	4:9:139:ASP:N	2.46	0.45
4:9:183:PRO:HA	4:9:186:GLU:HB2	1.97	0.45
4:9:331:PHE:HE2	4:9:340:GLY:HA3	1.80	0.45
5:A:88:LYS:HB2	5:A:92:VAL:HG21	1.97	0.45
5:A:194:LEU:HD23	5:A:194:LEU:HA	1.69	0.45
6:B:18:TRP:CG	17:M:54:PRO:HA	2.51	0.45
6:B:22:TRP:O	17:M:54:PRO:HG3	2.16	0.45
6:B:31:ALA:O	6:B:34:LEU:HG	2.16	0.45
7:C:47:MET:SD	7:C:52:GLN:HB3	2.57	0.45
8:D:97:ARG:NH2	8:D:171:GLU:O	2.50	0.45
9:E:47:TYR:HE2	21:Q:94:ARG:O	1.98	0.45
12:H:120:LEU:HB3	12:H:122:GLY:O	2.16	0.45
15:K:85:HIS:HB2	15:K:87:LEU:HG	1.98	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:K:113:GLY:HA3	15:K:119:GLY:H	1.80	0.45
15:K:124:ARG:NE	53:5:537:A:OP1	2.49	0.45
16:L:66:GLU:O	16:L:70:ARG:HG3	2.15	0.45
17:M:58:LYS:NZ	53:5:1163:A:H4'	2.31	0.45
18:N:18:ASP:OD1	18:N:18:ASP:N	2.48	0.45
20:P:12:ILE:N	20:P:25:GLN:O	2.26	0.45
20:P:56:LYS:NZ	20:P:59:ASP:OD1	2.49	0.45
26:b:64:LYS:HB3	26:b:65:PRO:HD3	1.99	0.45
26:b:175:THR:O	51:3:2780:U:H4'	2.16	0.45
27:c:52:ILE:HD13	27:c:92:GLY:HA3	1.97	0.45
30:f:99:ASN:O	30:f:103:THR:HG23	2.16	0.45
35:k:55:GLN:CD	51:3:860:C:HO2'	2.24	0.45
36:l:17:TYR:CE2	51:3:994:U:H5	2.34	0.45
37:m:13:TRP:O	37:m:16:MET:HG2	2.17	0.45
37:m:107:ARG:HD3	51:3:1314:A:H5'	1.99	0.45
41:q:40:MET:H	41:q:50:LEU:HB2	1.81	0.45
41:q:63:GLY:HA3	41:q:89:TYR:CZ	2.51	0.45
42:r:70:TYR:CE2	42:r:72:PHE:HA	2.51	0.45
43:s:59:ILE:HG13	43:s:61:LYS:HD2	1.98	0.45
45:u:84:GLN:NE2	45:u:94:ARG:HB3	2.31	0.45
51:3:17:G:H2'	51:3:18:G:O4'	2.17	0.45
51:3:37:G:O6	51:3:482:G:N1	2.49	0.45
51:3:47:G:N2	51:3:470:U:C2	2.85	0.45
51:3:82:G:C2	51:3:108:G:C2	3.04	0.45
51:3:428:U:H2'	51:3:429:U:C5	2.51	0.45
51:3:446:A:C2	51:3:2415:A:C5	3.04	0.45
51:3:589:A:C6	51:3:590:U:C2	3.04	0.45
51:3:695:G:H2'	51:3:696:U:C6	2.51	0.45
51:3:851:U:H2'	51:3:852:C:H6	1.81	0.45
51:3:920:G:H4'	51:3:933:A:H61	1.81	0.45
51:3:1114:C:H5	51:3:1123:A:OP1	2.00	0.45
51:3:1146:A:H2	51:3:1147:G:N3	2.14	0.45
51:3:1217:G:H2'	51:3:1218:G:H8	1.80	0.45
51:3:1372:U:H1'	51:3:1412:A:H2'	1.98	0.45
51:3:1447:A:C4	51:3:1449:G:C5	3.05	0.45
51:3:1557:G:N2	51:3:1573:A:H62	2.14	0.45
51:3:1604:A:H2'	51:3:1605:A:H8	1.76	0.45
51:3:1608:C:C2	51:3:1609:U:C5	3.05	0.45
51:3:1649:C:H2'	51:3:1651:C:C5	2.52	0.45
51:3:1804:A:C6	51:3:1805:U:C4	3.05	0.45
51:3:1852:G:C6	51:3:1853:G:C6	3.04	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:3:1861:A:OP2	51:3:1895:G:N2	2.43	0.45
51:3:1910:G:N2	51:3:1934:A:H2	2.15	0.45
51:3:1924:U:H2'	51:3:1925:A:O4'	2.16	0.45
51:3:1925:A:H1'	51:3:1926:A:H62	1.82	0.45
51:3:2173:G:C5	51:3:2174:G:C5	3.04	0.45
51:3:2319:A:O2'	51:3:2320:U:H5'	2.16	0.45
51:3:2355:C:C5	51:3:2390:G:C4	3.05	0.45
51:3:2484:A:H3'	51:3:2485:U:C5	2.51	0.45
51:3:2736:U:O2'	51:3:2737:G:N7	2.49	0.45
51:3:2825:A:H2'	51:3:2826:G:C8	2.52	0.45
51:3:2857:C:H2'	51:3:2858:A:H8	1.81	0.45
52:4:7:G:C2	52:4:8:C:C4	3.04	0.45
52:4:7:G:H2'	52:4:8:C:C6	2.51	0.45
53:5:81:A:C6	53:5:82:C:C4	3.04	0.45
53:5:233:C:H2'	53:5:234:G:C8	2.51	0.45
53:5:356:G:C6	53:5:357:G:C6	3.04	0.45
53:5:390:G:C2	53:5:391:C:C5	3.05	0.45
53:5:674:U:H2'	53:5:675:U:O4'	2.16	0.45
53:5:973:A:C6	53:5:1292:A:C6	3.04	0.45
53:5:1216:G:H2'	53:5:1217:G:H8	1.81	0.45
54:6:17:U:H5''	54:6:20:G:OP2	2.16	0.45
54:6:55:U:H6	54:6:59:A:C8	2.35	0.45
54:7:22:A:N6	54:7:48:U:OP1	2.48	0.45
3:2:13:ASP:O	3:2:27:CYS:HA	2.16	0.45
4:9:14:ASN:CG	4:9:231:ARG:HD2	2.41	0.45
4:9:218:THR:O	4:9:284:ARG:NE	2.50	0.45
4:9:219:MET:O	4:9:227:VAL:N	2.43	0.45
5:A:137:GLN:HA	5:A:140:ASN:HB3	1.97	0.45
7:C:112:SER:O	7:C:116:LEU:HG	2.17	0.45
7:C:202:ARG:O	53:5:28:G:O2'	2.34	0.45
9:E:47:TYR:CZ	21:Q:97:ALA:HA	2.50	0.45
11:G:29:LYS:N	11:G:29:LYS:HD2	2.30	0.45
12:H:111:ARG:NH2	53:5:1320:A:H8	2.15	0.45
14:J:89:ALA:O	14:J:92:SER:OG	2.22	0.45
22:R:30:PRO:HA	22:R:48:THR:O	2.17	0.45
23:S:64:ARG:NH2	23:S:67:ARG:HD3	2.32	0.45
25:a:220:ARG:NH1	51:3:799:A:H1'	2.32	0.45
25:a:280:ARG:HG2	25:a:285:GLU:HA	1.97	0.45
29:e:71:TYR:HA	29:e:74:LEU:HG	1.98	0.45
29:e:100:ASN:O	29:e:106:LEU:HD13	2.16	0.45
33:i:105:TYR:CE2	33:i:125:VAL:HB	2.51	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:k:114:LEU:HD22	35:k:131:VAL:HG12	1.98	0.45
36:l:16:SER:HA	36:l:41:TRP:CZ2	2.42	0.45
36:l:17:TYR:CG	36:l:40:ASN:HA	2.51	0.45
37:m:19:ARG:O	37:m:22:VAL:HG22	2.16	0.45
38:n:116:PHE:CD2	51:3:2385:A:H1'	2.51	0.45
39:o:38:LYS:HG3	39:o:43:VAL:HA	1.96	0.45
39:o:91:LYS:C	39:o:92:ARG:HG3	2.40	0.45
41:q:76:GLN:HG3	51:3:598:G:P	2.57	0.45
42:r:22:GLN:O	42:r:25:VAL:HG22	2.16	0.45
43:s:66:ARG:HD3	51:3:66:A:H1'	1.99	0.45
47:w:17:LYS:O	47:w:21:LYS:HG3	2.16	0.45
51:3:27:U:H2'	51:3:28:G:C8	2.52	0.45
51:3:28:G:H8	51:3:28:G:O5'	1.99	0.45
51:3:29:G:H22	51:3:548:A:P	2.39	0.45
51:3:83:G:C6	51:3:84:G:C2	3.05	0.45
51:3:115:U:H2'	51:3:116:C:C6	2.51	0.45
51:3:269:A:C2	51:3:315:A:H8	2.35	0.45
51:3:407:U:H3'	51:3:440:C:N4	2.25	0.45
51:3:511:U:H2'	51:3:512:G:O4'	2.16	0.45
51:3:567:U:H2'	51:3:567:U:O2	2.16	0.45
51:3:646:A:C6	51:3:653:G:C6	3.05	0.45
51:3:684:A:H2'	51:3:685:G:H8	1.78	0.45
51:3:741:A:H3'	51:3:742:G:C8	2.51	0.45
51:3:887:A:C6	51:3:888:A:C5	3.04	0.45
51:3:972:C:H2'	51:3:973:U:H6	1.82	0.45
51:3:1069:G:N2	51:3:1157:G:C4	2.84	0.45
51:3:1100:U:H2'	54:6:57:C:C4	2.52	0.45
51:3:1108:A:C5	51:3:1109:G:C5	3.04	0.45
51:3:1108:A:H3'	51:3:1109:G:C8	2.52	0.45
51:3:1159:C:H2'	51:3:1160:G:O4'	2.17	0.45
51:3:1245:G:C5	51:3:1246:U:C4	3.04	0.45
51:3:1246:U:H2'	51:3:1247:C:C2	2.51	0.45
51:3:1252:C:N4	51:3:1257:G:O6	2.36	0.45
51:3:1409:G:N1	51:3:1410:A:C6	2.84	0.45
51:3:1454:G:C2'	51:3:1606:A:H61	2.27	0.45
51:3:1505:G:C2	51:3:1539:U:H1'	2.51	0.45
51:3:1545:A:H8	51:3:1545:A:OP2	2.00	0.45
51:3:1747:G:H2'	51:3:1752:A:H61	1.81	0.45
51:3:1773:A:H2'	51:3:1774:G:H8	1.82	0.45
51:3:1784:U:H2'	51:3:1785:U:H6	1.80	0.45
51:3:1873:A:C5	51:3:1874:G:C4	3.04	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:3:1932:C:O2	51:3:1936:G:C6	2.69	0.45
51:3:1962:U:H2'	51:3:2559:C:C2'	2.47	0.45
51:3:2036:G:H3'	51:3:2038:A:H5'	1.97	0.45
51:3:2638:G:C6	51:3:2639:G:C5	3.05	0.45
51:3:2727:G:O2'	51:3:2728:U:H5'	2.17	0.45
51:3:2802:C:H41	51:3:2807:G:H1'	1.80	0.45
51:3:2828:C:OP2	51:3:2829:G:N2	2.50	0.45
51:3:2848:A:C5	51:3:2849:G:C5	3.05	0.45
53:5:36:G:C5	53:5:37:C:C4	3.04	0.45
53:5:124:U:H2'	53:5:125:A:H8	1.77	0.45
53:5:250:G:H2'	53:5:251:G:C8	2.51	0.45
53:5:313:U:H2'	53:5:314:G:H8	1.81	0.45
53:5:543:C:O2	53:5:547:C:H4'	2.17	0.45
53:5:662:G:C5	53:5:730:G:C5	3.05	0.45
53:5:663:G:O4'	53:5:723:C:O2'	2.33	0.45
53:5:709:A:C6	53:5:710:G:C6	3.05	0.45
53:5:757:G:C6	53:5:758:G:C5	3.05	0.45
53:5:799:A:C8	53:5:800:G:C8	3.05	0.45
53:5:885:U:O2	53:5:901:A:N7	2.49	0.45
53:5:905:U:H2'	53:5:906:C:C6	2.52	0.45
53:5:936:G:H4'	53:5:1324:A:H4'	1.98	0.45
53:5:1079:G:H2'	53:5:1080:G:H8	1.81	0.45
53:5:1393:A:H3'	53:5:1394:G:O4'	2.16	0.45
4:9:8:ARG:NH2	4:9:11:PRO:HA	2.32	0.45
4:9:24:GLY:O	4:9:28:LEU:HB2	2.17	0.45
4:9:120:ILE:HG22	4:9:161:TYR:CD2	2.50	0.45
8:D:67:GLU:CD	8:D:97:ARG:HE	2.24	0.45
8:D:78:LYS:O	8:D:85:ASN:N	2.49	0.45
8:D:197:ASP:O	8:D:200:LEU:HG	2.17	0.45
11:G:34:THR:HG23	11:G:71:THR:HB	1.99	0.45
12:H:34:ARG:HG3	53:5:1121:U:C4	2.52	0.45
12:H:72:GLY:N	53:5:1225:A:H4'	2.31	0.45
13:I:63:VAL:HA	53:5:968:G:O4'	2.16	0.45
19:O:22:ARG:HH21	53:5:386:U:H4'	1.81	0.45
19:O:70:THR:O	19:O:75:LYS:NZ	2.42	0.45
20:P:83:ARG:HD2	20:P:83:ARG:N	2.32	0.45
22:R:69:HIS:ND1	22:R:73:GLU:HB3	2.32	0.45
24:T:37:ARG:HD2	53:5:1500:G:H3'	1.98	0.45
24:T:48:ILE:HD12	24:T:51:LYS:HD2	1.98	0.45
25:a:56:ARG:HH21	25:a:57:HIS:CE1	2.35	0.45
25:a:219:ASN:ND2	25:a:224:ILE:HB	2.31	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:a:251:ARG:HH21	25:a:261:ARG:NH2	2.06	0.45
30:f:12:LEU:HD11	30:f:23:ASP:HB2	1.99	0.45
32:h:16:GLY:C	32:h:47:GLN:HA	2.41	0.45
32:h:89:ALA:HB2	51:3:1112:A:O2'	2.16	0.45
34:j:36:GLY:HA3	34:j:106:LEU:HB3	1.98	0.45
35:k:55:GLN:OE1	51:3:861:U:H5'	2.16	0.45
36:l:65:TRP:CH2	36:l:107:ALA:HB3	2.51	0.45
37:m:98:SER:HB2	37:m:118:LEU:HG	1.99	0.45
37:m:106:ARG:HD3	37:m:109:ASP:N	2.30	0.45
38:n:10:LEU:HA	38:n:13:LYS:HD2	1.97	0.45
38:n:35:SER:N	38:n:38:HIS:O	2.50	0.45
40:p:24:PHE:HE2	51:3:2027:G:H4'	1.81	0.45
41:q:4:ILE:HD12	41:q:40:MET:HB3	1.98	0.45
45:u:65:VAL:HG21	45:u:95:VAL:HG13	1.99	0.45
51:3:51:A:H2'	51:3:180:A:N6	2.31	0.45
51:3:60:G:C2	51:3:61:U:C2	3.05	0.45
51:3:241:C:H2'	51:3:242:G:H8	1.81	0.45
51:3:262:G:C6	51:3:263:C:C4	3.04	0.45
51:3:358:A:C5	51:3:359:G:C5	3.05	0.45
51:3:605:A:H61	51:3:2036:G:N2	2.03	0.45
51:3:613:C:H2'	51:3:614:C:H6	1.81	0.45
51:3:625:G:N2	51:3:700:U:O2	2.49	0.45
51:3:722:C:H2'	51:3:723:U:H6	1.80	0.45
51:3:853:G:C5	51:3:1218:G:C5	3.05	0.45
51:3:985:A:N6	51:3:1005:G:O6	2.50	0.45
51:3:995:A:C6	51:3:996:A:C6	3.04	0.45
51:3:1129:U:N3	51:3:1132:C:OP2	2.38	0.45
51:3:1275:C:C2	51:3:1276:A:N7	2.85	0.45
51:3:1298:A:C4	51:3:1299:A:C8	3.04	0.45
51:3:1354:U:H3'	51:3:1355:C:C6	2.52	0.45
51:3:1369:U:O2	51:3:1426:C:H5'	2.17	0.45
51:3:1461:A:O2'	51:3:1462:A:H5'	2.16	0.45
51:3:1500:A:C6	51:3:1544:G:C6	3.04	0.45
51:3:1534:A:H1'	51:3:1535:A:C8	2.52	0.45
51:3:1743:U:C2	51:3:1744:U:C5	3.04	0.45
51:3:1747:G:H8	51:3:1747:G:OP2	1.98	0.45
51:3:1772:G:C2	51:3:1995:G:C4	3.04	0.45
51:3:1789:C:O2	51:3:2616:G:O2'	2.23	0.45
51:3:1883:A:C4	51:3:1884:A:C8	3.04	0.45
51:3:1979:G:H2'	51:3:1980:G:H8	1.82	0.45
51:3:2120:G:C2	51:3:2121:A:H1'	2.51	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:3:2171:A:H2'	51:3:2172:A:O4'	2.16	0.45
51:3:2235:A:C6	51:3:2236:G:C4	3.05	0.45
51:3:2463:G:H2'	51:3:2463:G:N3	2.31	0.45
51:3:2536:U:C4	51:3:2538:A:C4	3.04	0.45
51:3:2643:A:H2'	51:3:2644:U:O4'	2.16	0.45
53:5:28:G:C5	53:5:555:G:C6	3.04	0.45
53:5:50:U:N3	53:5:358:G:N3	2.62	0.45
53:5:87:G:O2'	53:5:137:A:N3	2.44	0.45
53:5:140:U:H2'	53:5:141:A:C8	2.51	0.45
53:5:190:A:H2'	53:5:191:A:H8	1.81	0.45
53:5:454:U:H3	53:5:474:G:H1	1.63	0.45
53:5:622:A:C6	53:5:623:G:C6	3.05	0.45
53:5:896:G:N3	53:5:897:A:C8	2.84	0.45
53:5:1006:A:C6	53:5:1016:A:N1	2.85	0.45
53:5:1049:G:O6	53:5:1174:U:O4	2.34	0.45
53:5:1236:A:H62	53:5:1249:G:N2	2.13	0.45
53:5:1362:G:H2'	53:5:1363:U:H6	1.79	0.45
53:5:1477:A:H8	53:5:1480:G:N2	2.11	0.45
54:6:4:U:H2'	54:6:5:C:C5	2.51	0.45
54:6:28:A:H1'	54:6:44:U:C4	2.52	0.45
54:6:37:A:H8	54:6:37:A:O5'	1.98	0.45
4:9:5:LYS:HA	4:9:265:GLU:HB2	1.97	0.45
4:9:107:SER:CB	4:9:110:ASP:H	2.29	0.45
5:A:50:LYS:HD2	5:A:51:HIS:N	2.32	0.45
5:A:68:ALA:O	5:A:72:VAL:HG13	2.17	0.45
5:A:71:TYR:CE1	9:E:166:PHE:HB2	2.51	0.45
6:B:92:ILE:O	6:B:95:ILE:HG22	2.16	0.45
10:F:99:ALA:O	10:F:103:ILE:HG12	2.16	0.45
10:F:106:PHE:HA	10:F:109:LYS:HB2	1.97	0.45
11:G:44:ILE:O	11:G:48:LEU:HD23	2.16	0.45
11:G:98:TYR:CE2	53:5:596:U:H4'	2.51	0.45
12:H:111:ARG:HG2	53:5:1321:G:P	2.57	0.45
14:J:75:VAL:O	14:J:100:ILE:HG13	2.16	0.45
15:K:49:ARG:NH1	15:K:67:LYS:HB2	2.32	0.45
17:M:5:SER:HA	17:M:8:VAL:CG1	2.44	0.45
17:M:45:ARG:NE	17:M:49:TYR:OH	2.40	0.45
22:R:54:GLY:HA2	53:5:1195:G:H21	1.81	0.45
25:a:124:SER:O	25:a:197:ARG:NH1	2.50	0.45
25:a:212:VAL:HG13	51:3:1799:A:OP1	2.17	0.45
26:b:34:ASN:HB2	26:b:96:ILE:HB	1.99	0.45
26:b:114:SER:O	26:b:171:HIS:HA	2.17	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:d:99:PHE:O	28:d:103:LEU:HG	2.16	0.45
30:f:3:VAL:O	30:f:3:VAL:CG1	2.63	0.45
31:g:55:LYS:HA	51:3:1141:U:O3'	2.17	0.45
31:g:56:ASN:HB3	51:3:1142:G:H5''	1.97	0.45
33:i:14:LYS:HD2	33:i:52:ASP:O	2.16	0.45
33:i:102:LYS:O	33:i:105:TYR:HB3	2.16	0.45
37:m:106:ARG:HB3	37:m:110:ALA:N	2.32	0.45
40:p:53:LYS:NZ	51:3:1030:U:O5'	2.38	0.45
42:r:126:LYS:HE3	51:3:579:U:OP2	2.17	0.45
51:3:42:U:C2	51:3:43:A:C8	3.05	0.45
51:3:124:A:C6	51:3:125:G:C4	3.05	0.45
51:3:335:G:O2'	51:3:336:C:OP2	2.29	0.45
51:3:341:G:H2'	51:3:343:A:N7	2.32	0.45
51:3:442:G:O2'	51:3:443:C:H5'	2.17	0.45
51:3:491:A:H2'	51:3:491:A:OP2	2.17	0.45
51:3:557:G:N2	51:3:587:U:H5''	2.31	0.45
51:3:775:C:O4'	51:3:1988:A:C5	2.70	0.45
51:3:1126:G:N1	51:3:1136:U:C2	2.85	0.45
51:3:1204:A:C6	51:3:1205:U:C4	3.03	0.45
51:3:1438:G:C2'	51:3:1439:U:H5'	2.46	0.45
51:3:1449:G:C2	51:3:1450:G:C8	3.04	0.45
51:3:1577:A:H2'	51:3:1578:A:O4'	2.17	0.45
51:3:1609:U:H2'	51:3:1610:U:C6	2.52	0.45
51:3:1666:A:N7	51:3:1667:G:C6	2.84	0.45
51:3:1711:A:H2'	51:3:1712:A:O4'	2.16	0.45
51:3:1873:A:C8	51:3:1874:G:C8	3.05	0.45
51:3:2170:A:H5''	51:3:2173:G:O6	2.16	0.45
51:3:2322:G:H2'	51:3:2323:U:O4'	2.17	0.45
51:3:2663:G:N2	51:3:2673:A:O5'	2.48	0.45
51:3:2725:G:H2'	51:3:2726:G:O4'	2.16	0.45
51:3:2885:U:O2'	51:3:2886:A:H5'	2.15	0.45
52:4:7:G:O6	52:4:102:A:C6	2.70	0.45
53:5:190:A:C4	53:5:191:A:C8	3.05	0.45
53:5:202:A:C6	53:5:203:C:C4	3.05	0.45
53:5:331:C:H2'	53:5:332:A:H8	1.78	0.45
53:5:369:A:N3	53:5:479:A:N6	2.64	0.45
53:5:395:G:C6	53:5:396:C:C4	3.04	0.45
53:5:942:G:C6	53:5:943:C:C4	3.04	0.45
53:5:1122:U:H2'	53:5:1123:G:N3	2.30	0.45
53:5:1338:A:H1'	53:5:1340:G:C5	2.51	0.45
53:5:1367:G:C2	53:5:1368:U:C2	3.05	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:5:1431:A:H2'	53:5:1432:A:O4'	2.16	0.45
53:5:1467:A:H5''	53:5:1468:A:C2	2.52	0.45
53:5:1478:A:C6	53:5:1507:U:H1'	2.52	0.45
1:0:28:ARG:HA	1:0:31:LEU:HD12	1.98	0.45
4:9:139:ASP:HB2	4:9:177:LYS:HE2	1.99	0.45
5:A:57:VAL:O	5:A:57:VAL:HG13	2.16	0.45
5:A:112:TRP:HE1	5:A:190:GLU:CD	2.24	0.45
6:B:33:TRP:CZ3	6:B:60:ARG:HB2	2.52	0.45
7:C:101:VAL:HB	7:C:113:ALA:HB1	1.98	0.45
8:D:120:LYS:HA	8:D:120:LYS:HD2	1.67	0.45
9:E:50:LYS:HZ1	53:5:670:G:H5''	1.82	0.45
11:G:26:ARG:HD2	11:G:84:ILE:O	2.17	0.45
13:I:70:GLN:HE21	17:M:59:ALA:HB2	1.82	0.45
15:K:76:VAL:HG21	15:K:108:TYR:CD2	2.52	0.45
17:M:16:PHE:HB2	17:M:19:ARG:N	2.32	0.45
18:N:47:PHE:CD1	53:5:761:U:H4'	2.52	0.45
21:Q:93:ALA:HB1	21:Q:98:LEU:HD12	1.99	0.45
23:S:64:ARG:HH12	53:5:256:G:P	2.39	0.45
25:a:151:GLU:OE2	25:a:196:CYS:HB3	2.17	0.45
26:b:51:LEU:HD23	26:b:52:LEU:N	2.32	0.45
26:b:122:ALA:CA	26:b:126:TRP:HD1	2.28	0.45
47:w:46:GLN:HG3	47:w:49:ARG:HH22	1.82	0.45
50:z:38:CYS:SG	50:z:41:CYS:N	2.90	0.45
51:3:159:G:N1	51:3:174:A:C6	2.85	0.45
51:3:171:G:H2'	51:3:172:U:O4'	2.17	0.45
51:3:488:G:H2'	51:3:489:A:C8	2.52	0.45
51:3:667:A:H8	51:3:667:A:OP1	1.99	0.45
51:3:747:A:C5	51:3:748:G:C5	3.05	0.45
51:3:799:A:N6	51:3:1783:G:N3	2.65	0.45
51:3:955:A:H2'	51:3:956:U:O4'	2.17	0.45
51:3:1019:A:OP1	51:3:1019:A:H3'	2.16	0.45
51:3:1037:A:H3'	51:3:1038:G:C8	2.51	0.45
51:3:1162:A:N3	51:3:2526:A:H5''	2.31	0.45
51:3:1294:G:C8	51:3:1295:A:C8	3.04	0.45
51:3:1327:G:H4'	51:3:1329:U:C6	2.52	0.45
51:3:1340:U:C4	51:3:1637:A:C5	3.05	0.45
51:3:1382:A:C8	51:3:1383:G:C8	3.04	0.45
51:3:1502:A:C6	51:3:1540:G:C5	3.05	0.45
51:3:1594:G:C5	51:3:1595:C:C5	3.05	0.45
51:3:1661:A:C5	51:3:1674:A:C6	3.03	0.45
51:3:1690:C:H2'	51:3:1691:U:C6	2.52	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:3:1723:A:N7	51:3:1734:A:C5	2.85	0.45
51:3:1845:C:C2	51:3:1905:U:C4	3.05	0.45
51:3:1952:G:C6	51:3:1953:U:C5	3.05	0.45
51:3:1987:C:O2'	51:3:1989:U:OP2	2.24	0.45
51:3:2012:A:C8	51:3:2013:C:C5	3.05	0.45
51:3:2154:A:H2'	51:3:2155:G:O4'	2.17	0.45
51:3:2171:A:O2'	51:3:2172:A:H5'	2.16	0.45
51:3:2204:C:H2'	51:3:2205:U:O4'	2.16	0.45
51:3:2244:U:H2'	51:3:2245:G:C8	2.52	0.45
51:3:2246:G:O4'	51:3:2248:C:N4	2.38	0.45
51:3:2354:A:C5	51:3:2391:G:C2	3.05	0.45
51:3:2444:G:N3	51:3:2606:A:H2	2.14	0.45
51:3:2515:C:H2'	51:3:2516:G:O4'	2.16	0.45
51:3:2601:U:H2'	51:3:2602:C:H6	1.81	0.45
51:3:2839:A:OP2	51:3:2883:A:N6	2.48	0.45
53:5:60:A:O5'	53:5:383:U:H5''	2.16	0.45
53:5:109:G:C2	53:5:110:U:C2	3.05	0.45
53:5:141:A:C6	53:5:142:G:C5	3.04	0.45
53:5:239:A:N7	53:5:277:G:C4	2.85	0.45
53:5:254:G:H2'	53:5:255:G:C8	2.52	0.45
53:5:318:C:C2'	53:5:319:U:H5'	2.47	0.45
53:5:429:A:C4	53:5:430:G:C8	3.05	0.45
53:5:440:U:H1'	53:5:490:U:C2	2.51	0.45
53:5:660:A:C6	53:5:739:G:O6	2.70	0.45
53:5:832:G:C2	53:5:833:G:C8	3.05	0.45
53:5:881:G:C2	53:5:905:U:C2	3.05	0.45
53:5:934:G:O2'	53:5:1350:A:H2'	2.17	0.45
53:5:1078:G:OP1	53:5:1364:C:H5''	2.17	0.45
3:2:19:ARG:NH2	51:3:2764:U:OP2	2.49	0.45
3:2:31:LYS:O	3:2:32:HIS:HD2	1.98	0.45
4:9:171:ILE:H	4:9:171:ILE:HD12	1.81	0.45
4:9:207:VAL:C	4:9:235:GLY:HA2	2.42	0.45
5:A:185:LYS:O	5:A:188:VAL:HG12	2.17	0.45
8:D:102:GLY:O	8:D:122:ALA:HB1	2.17	0.45
9:E:97:LEU:O	9:E:100:ILE:HG12	2.16	0.45
10:F:114:THR:O	10:F:117:GLU:HG2	2.17	0.45
13:I:25:ASP:O	13:I:29:LYS:HG2	2.16	0.45
16:L:20:THR:HG21	16:L:27:LEU:HD12	1.98	0.45
17:M:8:VAL:HG13	17:M:12:ARG:NH1	2.32	0.45
18:N:15:HIS:CG	18:N:18:ASP:HB3	2.52	0.45
20:P:26:VAL:CG2	20:P:43:LYS:HB3	2.44	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:T:28:LEU:HG	24:T:31:ARG:NH2	2.32	0.45
25:a:64:ARG:HD3	25:a:90:PRO:HB2	1.99	0.45
26:b:6:ILE:HD12	26:b:6:ILE:HA	1.88	0.45
26:b:178:ASN:HD22	51:3:2739:C:P	2.40	0.45
26:b:185:ASP:O	26:b:189:MET:HA	2.16	0.45
27:c:141:LYS:HB2	51:3:354:C:C5	2.42	0.45
28:d:51:GLU:O	28:d:55:ASN:ND2	2.50	0.45
29:e:69:GLY:O	29:e:72:ASN:HB3	2.17	0.45
30:f:9:VAL:HA	30:f:14:LYS:HE3	1.99	0.45
30:f:25:TYR:HA	30:f:30:LEU:N	2.32	0.45
30:f:91:SER:OG	30:f:118:ARG:O	2.25	0.45
35:k:62:LEU:C	51:3:2401:U:H5''	2.42	0.45
35:k:128:VAL:HG23	35:k:148:LEU:HD12	1.98	0.45
40:p:15:LYS:C	40:p:19:GLN:HE22	2.25	0.45
42:r:116:GLU:HA	42:r:119:LYS:CD	2.47	0.45
48:x:13:SER:HB3	48:x:33:GLU:H	1.81	0.45
51:3:54:A:H2'	51:3:55:A:O4'	2.17	0.45
51:3:55:A:H2'	51:3:56:G:O4'	2.17	0.45
51:3:77:G:H22	51:3:112:A:H2	1.65	0.45
51:3:256:G:H2'	51:3:257:C:O4'	2.16	0.45
51:3:299:A:C6	51:3:440:C:O2'	2.70	0.45
51:3:310:U:H6	51:3:311:G:C5	2.35	0.45
51:3:426:U:O2'	51:3:447:G:N2	2.50	0.45
51:3:462:C:H2'	51:3:463:U:C6	2.52	0.45
51:3:488:G:H2'	51:3:489:A:H8	1.81	0.45
51:3:557:G:C6	51:3:558:C:C4	3.05	0.45
51:3:578:A:C4	51:3:584:G:C2	3.05	0.45
51:3:582:A:H3'	51:3:582:A:N3	2.32	0.45
51:3:1054:U:H2'	51:3:1055:A:C8	2.51	0.45
51:3:1244:A:H3'	51:3:1245:G:C8	2.52	0.45
51:3:1298:A:H62	51:3:2019:G:N2	2.15	0.45
51:3:1391:U:C2	51:3:1397:G:N2	2.85	0.45
51:3:1621:U:C2	51:3:1622:C:C5	3.05	0.45
51:3:1804:A:C6	51:3:1830:G:C6	3.05	0.45
51:3:1937:G:N2	51:3:1975:G:H2'	2.31	0.45
51:3:1956:G:H2'	51:3:1957:G:C8	2.52	0.45
51:3:2017:G:H2'	51:3:2018:U:H6	1.82	0.45
51:3:2414:U:OP2	51:3:2414:U:H2'	2.16	0.45
51:3:2560:U:N3	51:3:2562:U:H5''	2.31	0.45
51:3:2607:G:H8	51:3:2607:G:OP2	2.00	0.45
51:3:2671:G:C6	51:3:2672:G:C4	3.05	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:4:9:C:H5''	52:4:10:C:OP2	2.16	0.45
53:5:8:G:H8	53:5:8:G:P	2.40	0.45
53:5:66:A:H2	53:5:202:A:HO2'	1.61	0.45
53:5:341:C:H4'	53:5:342:G:O4'	2.16	0.45
53:5:346:G:H2'	53:5:347:G:C4	2.52	0.45
53:5:552:U:H2'	53:5:553:C:C5	2.52	0.45
53:5:678:A:H2'	53:5:679:U:H6	1.81	0.45
53:5:696:C:H2'	53:5:697:G:C8	2.52	0.45
53:5:822:A:N6	53:5:870:A:C6	2.85	0.45
53:5:847:G:H2'	53:5:848:U:O4'	2.16	0.45
53:5:855:G:H2'	53:5:856:U:C6	2.52	0.45
53:5:949:G:C6	53:5:1203:A:C6	3.05	0.45
53:5:1046:A:C5	53:5:1175:C:N4	2.85	0.45
53:5:1268:G:H2'	53:5:1269:U:C6	2.52	0.45
53:5:1316:C:C2	53:5:1317:A:C8	3.05	0.45
53:5:1507:U:C5	53:5:1508:C:C4	3.05	0.45
1:0:21:ARG:O	1:0:27:GLY:HA3	2.16	0.45
4:9:46:ARG:NH1	4:9:68:VAL:HG21	2.32	0.45
4:9:135:LEU:CD2	4:9:147:GLN:HG2	2.46	0.45
4:9:332:TYR:OH	4:9:378:ARG:HB2	2.17	0.45
5:A:114:GLY:N	53:5:1093:A:O2'	2.50	0.45
5:A:116:THR:H	5:A:190:GLU:CD	2.24	0.45
7:C:7:ILE:HG22	53:5:427:A:OP2	2.16	0.45
9:E:42:LEU:HD13	9:E:56:HIS:CE1	2.52	0.45
10:F:24:ARG:HA	10:F:27:ASN:HD22	1.81	0.45
10:F:68:VAL:O	10:F:102:TRP:HZ3	2.00	0.45
14:J:63:VAL:HA	14:J:66:THR:CG2	2.45	0.45
15:K:127:ARG:NH1	53:5:500:G:OP2	2.49	0.45
16:L:55:ALA:HA	16:L:58:ASN:ND2	2.32	0.45
17:M:18:VAL:HG23	53:5:974:C:C2	2.52	0.45
23:S:15:ILE:HG13	23:S:16:LYS:N	2.32	0.45
25:a:128:ILE:HD12	25:a:134:PHE:HB3	1.98	0.45
25:a:274:SER:O	25:a:278:ILE:HG12	2.17	0.45
26:b:151:ARG:HG2	51:3:2580:A:OP2	2.16	0.45
26:b:163:LYS:HG3	26:b:164:LYS:N	2.31	0.45
27:c:64:LYS:NZ	51:3:710:A:OP1	2.39	0.45
29:e:43:PRO:HB2	29:e:59:ASN:CG	2.42	0.45
30:f:4:ILE:HB	30:f:37:ALA:H	1.81	0.45
30:f:6:LYS:H	30:f:34:LYS:HG3	1.81	0.45
33:i:45:VAL:HG12	40:p:67:ALA:HA	1.98	0.45
33:i:77:TRP:HZ3	33:i:91:SER:C	2.24	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:k:74:LYS:HZ3	51:3:666:G:H1	1.65	0.45
37:m:69:ASN:OD1	37:m:69:ASN:N	2.49	0.45
38:n:108:ALA:HA	38:n:111:GLU:OE2	2.17	0.45
40:p:36:GLN:CD	51:3:1282:G:H1	2.22	0.45
40:p:46:TYR:HD1	40:p:49:ARG:HH22	1.63	0.45
40:p:89:ILE:HB	41:q:39:LEU:HD13	1.97	0.45
43:s:53:LEU:HB3	43:s:84:THR:C	2.42	0.45
45:u:80:LEU:HB2	45:u:98:VAL:HG23	1.99	0.45
46:v:53:ARG:HA	46:v:56:ARG:HD3	1.99	0.45
48:x:16:CYS:O	48:x:20:SER:HA	2.17	0.45
50:z:16:GLU:O	50:z:17:ILE:HD13	2.17	0.45
51:3:46:A:H2	51:3:471:A:N6	2.14	0.45
51:3:47:G:H2'	51:3:219:G:N7	2.32	0.45
51:3:117:C:O2'	51:3:127:A:H1'	2.17	0.45
51:3:148:U:C2	51:3:149:A:C8	3.05	0.45
51:3:162:G:N2	51:3:170:A:OP2	2.50	0.45
51:3:193:G:N2	51:3:210:U:OP2	2.44	0.45
51:3:269:A:C6	51:3:464:A:C5	3.05	0.45
51:3:418:G:N3	51:3:418:G:H2'	2.31	0.45
51:3:582:A:H2'	51:3:583:U:H5''	1.99	0.45
51:3:601:U:H3	51:3:2037:A:N6	2.15	0.45
51:3:678:U:H1'	51:3:682:A:N6	2.32	0.45
51:3:784:A:O2'	51:3:1301:G:N2	2.42	0.45
51:3:855:A:H2'	51:3:856:A:O4'	2.17	0.45
51:3:876:A:H2'	51:3:877:G:C8	2.51	0.45
51:3:1006:U:H2'	51:3:1007:C:O4'	2.17	0.45
51:3:1038:G:H2'	51:3:1039:G:H8	1.82	0.45
51:3:1232:U:C2	51:3:1233:A:N7	2.85	0.45
51:3:1251:G:C4	51:3:1259:A:C6	3.05	0.45
51:3:1327:G:H1	51:3:1673:U:H3'	1.82	0.45
51:3:1387:A:N6	51:3:1400:U:C2	2.62	0.45
51:3:1505:G:N1	51:3:1539:U:O2	2.50	0.45
51:3:1826:A:H4'	51:3:1828:A:C8	2.52	0.45
51:3:2068:G:C2	51:3:2511:A:C5	3.05	0.45
51:3:2268:C:H2'	51:3:2269:C:C6	2.52	0.45
51:3:2277:A:C4	51:3:2278:G:C8	3.05	0.45
51:3:2451:C:H2'	51:3:2452:G:H8	1.75	0.45
51:3:2599:C:N4	51:3:2600:G:O6	2.50	0.45
51:3:2667:G:C2	51:3:2671:G:C6	3.05	0.45
51:3:2693:U:O2'	51:3:2734:C:N4	2.47	0.45
51:3:2780:U:H2'	51:3:2781:C:C6	2.52	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:3:2840:U:C2	51:3:2841:A:N7	2.85	0.45
52:4:19:G:C6	52:4:20:U:C4	3.05	0.45
53:5:31:U:H3'	53:5:32:U:H5''	1.99	0.45
53:5:308:C:H2'	53:5:309:A:H8	1.82	0.45
53:5:316:G:H2'	53:5:317:A:C8	2.51	0.45
53:5:316:G:C6	53:5:317:A:C6	3.04	0.45
53:5:319:U:H2'	53:5:320:G:N9	2.32	0.45
53:5:378:A:H2'	53:5:379:A:N9	2.31	0.45
53:5:406:G:H2'	53:5:426:U:C4	2.52	0.45
53:5:407:A:C2	53:5:428:A:C6	3.04	0.45
53:5:614:U:H2'	53:5:615:G:H8	1.82	0.45
53:5:622:A:H2'	53:5:623:G:O4'	2.17	0.45
53:5:668:U:H2'	53:5:669:U:H6	1.82	0.45
53:5:711:G:H2'	53:5:712:A:O4'	2.17	0.45
53:5:922:G:P	53:5:1480:G:H21	2.40	0.45
53:5:1212:C:H1'	53:5:1308:G:O2'	2.17	0.45
53:5:1365:U:H2'	53:5:1366:U:C6	2.52	0.45
53:5:1417:U:C2	53:5:1418:G:N7	2.85	0.45
53:5:1467:A:C5	54:6:36:A:N3	2.85	0.45
53:5:1501:G:O2'	53:5:1502:G:H5'	2.17	0.45
54:7:10:A:C6	54:7:47:G:N2	2.84	0.45
1:0:18:PHE:CD2	1:0:19:LEU:HD12	2.52	0.45
1:0:38:GLN:NE2	51:3:494:G:O5'	2.49	0.45
2:1:25:TYR:CD1	51:3:2400:A:H4'	2.52	0.45
6:B:77:LEU:O	6:B:84:ASN:HB2	2.17	0.45
6:B:130:ARG:NH1	6:B:195:THR:HG21	2.31	0.45
6:B:184:ASP:C	6:B:207:ARG:HH11	2.26	0.45
7:C:184:ARG:HD2	7:C:187:LEU:HB2	1.99	0.45
9:E:10:ASP:O	9:E:13:LEU:HG	2.17	0.45
9:E:23:GLU:O	9:E:27:GLN:HG2	2.17	0.45
13:I:20:ASP:CG	13:I:22:THR:HG1	2.24	0.45
13:I:30:LYS:O	13:I:34:VAL:HG12	2.16	0.45
14:J:16:VAL:HG12	14:J:86:LYS:HZ2	1.81	0.45
15:K:70:LEU:HB3	15:K:72:ASN:OD1	2.17	0.45
16:L:33:ILE:HG23	16:L:59:VAL:HG11	1.98	0.45
21:Q:101:PHE:CZ	53:5:671:G:H4'	2.52	0.45
22:R:4:SER:HB2	53:5:1293:A:H2'	1.98	0.45
22:R:10:PHE:CZ	53:5:1292:A:H5''	2.52	0.45
22:R:55:LYS:HD3	53:5:981:U:H4'	1.99	0.45
25:a:92:ARG:HH12	25:a:162:ARG:NH2	2.14	0.45
25:a:127:PRO:HG3	25:a:140:PHE:HB3	1.99	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:a:147:VAL:HA	25:a:200:VAL:HA	1.99	0.45
25:a:160:ILE:HD12	51:3:1806:G:N3	2.32	0.45
26:b:40:LYS:HB2	26:b:49:ALA:HB3	1.98	0.45
27:c:32:GLN:NE2	35:k:11:LYS:HE2	2.25	0.45
27:c:188:VAL:HA	27:c:191:LEU:HG	1.99	0.45
28:d:30:ARG:H	28:d:159:SER:H	1.64	0.45
29:e:86:PHE:O	29:e:137:SER:HA	2.17	0.45
30:f:69:LYS:O	30:f:72:ILE:HG12	2.17	0.45
33:i:119:ARG:O	33:i:123:THR:HG23	2.17	0.45
35:k:51:PHE:HZ	51:3:200:A:C5	2.35	0.45
37:m:106:ARG:HD2	37:m:111:THR:HG22	1.99	0.45
38:n:38:HIS:ND1	38:n:57:SER:OG	2.50	0.45
38:n:99:HIS:CD2	52:4:46:C:H4'	2.52	0.45
39:o:35:ILE:O	39:o:45:ILE:HA	2.17	0.45
41:q:9:SER:HB3	41:q:10:LYS:NZ	2.32	0.45
41:q:61:LYS:NZ	51:3:583:U:OP1	2.35	0.45
47:w:10:LYS:HZ2	47:w:13:GLU:H	1.65	0.45
51:3:32:G:C6	51:3:33:C:C4	3.05	0.45
51:3:133:G:H2'	51:3:134:U:C6	2.52	0.45
51:3:188:G:O2'	51:3:189:U:H5'	2.17	0.45
51:3:190:G:C6	51:3:215:A:C6	3.05	0.45
51:3:202:C:H4'	51:3:2251:U:O3'	2.17	0.45
51:3:451:A:C6	51:3:2417:G:C5	3.05	0.45
51:3:537:A:C6	51:3:540:A:C6	3.04	0.45
51:3:853:G:C5	51:3:1218:G:C6	3.05	0.45
51:3:975:G:H2'	51:3:976:C:O4'	2.17	0.45
51:3:1033:A:H2'	51:3:1034:A:C8	2.52	0.45
51:3:1041:C:C2	51:3:1178:A:C5	3.05	0.45
51:3:1097:G:O6	51:3:1112:A:N6	2.50	0.45
51:3:1124:G:H4'	51:3:1125:U:OP1	2.17	0.45
51:3:1128:G:H2'	51:3:1133:A:H61	1.82	0.45
51:3:1187:C:H2'	51:3:1188:C:H6	1.81	0.45
51:3:1244:A:C4'	51:3:1269:C:H4'	2.47	0.45
51:3:1329:U:O2	51:3:1329:U:H2'	2.17	0.45
51:3:1457:A:N6	51:3:1598:U:H3	2.11	0.45
51:3:1595:C:H2'	51:3:1596:U:C6	2.51	0.45
51:3:1607:G:C6	51:3:1608:C:C4	3.05	0.45
51:3:1622:C:H2'	51:3:1623:U:H6	1.82	0.45
51:3:1678:U:H2'	51:3:1679:U:N1	2.32	0.45
51:3:1723:A:H2'	51:3:1724:A:H8	1.80	0.45
51:3:1786:U:O4	51:3:1791:A:N7	2.50	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:3:1809:A:OP1	51:3:1822:A:N6	2.47	0.45
51:3:1864:A:C2	51:3:1893:C:N4	2.85	0.45
51:3:1877:C:H6	51:3:1877:C:OP1	2.00	0.45
51:3:2131:G:N7	51:3:2132:G:H1'	2.31	0.45
51:3:2190:G:N2	51:3:2191:G:C5	2.85	0.45
51:3:2191:G:H2'	51:3:2192:U:O4'	2.17	0.45
51:3:2260:G:H22	54:7:76:C:C5'	2.23	0.45
51:3:2305:C:H5	51:3:2326:G:H2'	1.82	0.45
51:3:2533:A:H2'	51:3:2534:G:H8	1.81	0.45
51:3:2635:G:H2'	51:3:2636:U:O4'	2.17	0.45
51:3:2748:A:C8	51:3:2771:G:N2	2.85	0.45
51:3:2808:A:H3'	51:3:2809:A:C8	2.52	0.45
51:3:2849:G:C4	51:3:2850:G:C8	3.05	0.45
53:5:16:G:H1	53:5:915:U:H3	1.63	0.45
53:5:18:U:H3	53:5:913:A:N6	2.14	0.45
53:5:62:G:H2'	53:5:63:U:H6	1.82	0.45
53:5:64:C:H4'	53:5:376:G:O2'	2.16	0.45
53:5:69:G:N2	53:5:138:A:O2'	2.50	0.45
53:5:227:A:C4	53:5:228:G:C8	3.05	0.45
53:5:305:A:H2'	53:5:306:G:C8	2.52	0.45
53:5:317:A:H2	53:5:328:G:N1	2.03	0.45
53:5:352:A:C6	53:5:353:G:C5	3.05	0.45
53:5:420:A:C6	53:5:421:G:C4	3.05	0.45
53:5:579:G:H1'	53:5:758:G:N1	2.30	0.45
53:5:680:G:C6	53:5:681:U:O4	2.70	0.45
53:5:879:G:C2	53:5:907:A:C6	3.05	0.45
53:5:899:U:H3'	53:5:900:G:C8	2.52	0.45
53:5:914:A:O2'	53:5:1071:A:N1	2.42	0.45
53:5:1059:G:N7	53:5:1085:G:C8	2.85	0.45
53:5:1095:G:C2	53:5:1096:A:C8	3.05	0.45
53:5:1187:U:H4'	53:5:1188:A:N7	2.32	0.45
53:5:1219:C:H2'	53:5:1220:A:H8	1.80	0.45
53:5:1241:G:N1	53:5:1245:A:C6	2.85	0.45
53:5:1300:C:H2'	53:5:1301:U:C6	2.52	0.45
53:5:1334:A:C5	53:5:1335:G:C5	3.05	0.45
53:5:1347:U:H3'	53:5:1348:G:H8	1.81	0.45
53:5:1416:U:H2'	53:5:1417:U:N1	2.31	0.45
53:5:1492:G:H2'	53:5:1493:A:C8	2.51	0.45
3:2:30:GLN:HB3	51:3:2535:C:H5''	1.98	0.44
4:9:104:LEU:HD22	4:9:120:ILE:HD11	1.99	0.44
4:9:149:LEU:O	4:9:152:GLU:HG3	2.17	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:B:114:LEU:HD21	6:B:147:ALA:HB3	1.98	0.44
7:C:75:PHE:CE2	7:C:200:TYR:HB3	2.52	0.44
8:D:97:ARG:HA	8:D:174:GLY:N	2.32	0.44
8:D:136:ILE:HG21	8:D:139:GLU:HA	1.99	0.44
8:D:197:ASP:C	8:D:201:LYS:HZ2	2.25	0.44
10:F:34:LYS:NZ	53:5:1263:A:H2'	2.32	0.44
10:F:93:ASP:OD1	10:F:93:ASP:N	2.50	0.44
10:F:112:GLU:OE2	10:F:118:LYS:HA	2.17	0.44
11:G:24:ASN:OD1	53:5:868:G:N2	2.51	0.44
13:I:65:LYS:O	13:I:65:LYS:HG3	2.17	0.44
13:I:71:PHE:HE1	17:M:58:LYS:HD3	1.82	0.44
15:K:24:LEU:HB2	15:K:25:HIS:CE1	2.52	0.44
16:L:54:VAL:HG13	16:L:55:ALA:N	2.32	0.44
17:M:14:PRO:HB3	17:M:19:ARG:O	2.17	0.44
18:N:53:LEU:O	18:N:57:VAL:HG12	2.16	0.44
21:Q:43:PHE:C	21:Q:45:ALA:N	2.70	0.44
25:a:100:THR:HG22	25:a:101:TYR:O	2.17	0.44
27:c:37:ALA:O	27:c:41:GLU:HG2	2.17	0.44
30:f:57:HIS:HA	30:f:60:ILE:HG12	1.98	0.44
35:k:84:LYS:HB3	51:3:637:U:C5	2.52	0.44
37:m:9:LYS:HB3	37:m:13:TRP:CE3	2.52	0.44
38:n:72:LEU:HD23	38:n:75:GLN:HE22	1.81	0.44
41:q:33:ILE:HD12	41:q:35:LEU:HD11	1.99	0.44
42:r:22:GLN:HA	42:r:25:VAL:HG13	1.99	0.44
42:r:66:GLY:HA2	42:r:69:LEU:HD12	1.98	0.44
43:s:33:PRO:HB2	43:s:34:LYS:HZ3	1.82	0.44
43:s:59:ILE:HG22	43:s:79:LYS:HA	1.99	0.44
47:w:25:GLU:HA	47:w:28:GLU:CD	2.43	0.44
49:y:10:LYS:HA	49:y:13:ARG:NE	2.33	0.44
51:3:13:C:H42	51:3:2637:A:N6	2.06	0.44
51:3:57:G:H2'	51:3:58:A:H8	1.80	0.44
51:3:118:G:C2	51:3:120:A:N6	2.85	0.44
51:3:137:U:N3	51:3:146:G:C6	2.75	0.44
51:3:238:U:H2'	51:3:238:U:O2	2.17	0.44
51:3:404:C:H3'	51:3:404:C:P	2.57	0.44
51:3:526:G:H2'	51:3:527:A:C4	2.51	0.44
51:3:556:U:C2	51:3:557:G:C8	3.05	0.44
51:3:580:U:O2'	51:3:1251:G:O5'	2.32	0.44
51:3:592:G:C6	51:3:593:C:C4	3.05	0.44
51:3:592:G:H2'	51:3:593:C:C6	2.52	0.44
51:3:810:G:N3	51:3:812:G:C6	2.86	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:3:896:U:H2'	51:3:897:A:C8	2.47	0.44
51:3:1217:G:C4	51:3:1218:G:C8	3.05	0.44
51:3:1220:A:H2'	51:3:1221:G:O4'	2.18	0.44
51:3:1391:U:H4'	51:3:1817:A:H4'	1.99	0.44
51:3:1448:U:O2'	51:3:1449:G:O5'	2.25	0.44
51:3:1466:U:H5''	51:3:1467:U:OP2	2.16	0.44
51:3:1684:A:C6	51:3:1685:G:C5	3.05	0.44
51:3:1747:G:H2'	51:3:1752:A:N6	2.32	0.44
51:3:2141:A:H61	51:3:2164:G:C2'	2.30	0.44
51:3:2238:G:H2'	51:3:2239:U:C6	2.53	0.44
51:3:2476:A:O2'	51:3:2489:G:N2	2.50	0.44
51:3:2484:A:H3'	51:3:2485:U:C6	2.52	0.44
51:3:2493:G:H2'	51:3:2494:C:C6	2.52	0.44
51:3:2624:C:H2'	51:3:2625:U:C6	2.52	0.44
51:3:2770:U:H2'	51:3:2771:G:O4'	2.17	0.44
51:3:2784:A:C4	51:3:2790:A:C8	3.05	0.44
51:3:2812:U:H1'	51:3:2813:A:C8	2.52	0.44
52:4:7:G:C6	52:4:8:C:N4	2.86	0.44
52:4:14:U:C4	52:4:67:G:C2	3.05	0.44
52:4:90:G:C6	52:4:91:A:C5	3.05	0.44
53:5:42:G:H2'	53:5:43:G:H8	1.81	0.44
53:5:42:G:C4	53:5:43:G:C8	3.05	0.44
53:5:127:A:C4	53:5:219:A:C2	3.05	0.44
53:5:230:G:C5	53:5:231:U:C4	3.05	0.44
53:5:285:G:C6	53:5:286:C:C4	3.06	0.44
53:5:309:A:C6	53:5:310:C:C4	3.05	0.44
53:5:338:C:N4	53:5:344:G:C6	2.85	0.44
53:5:435:U:C2	53:5:494:A:N7	2.85	0.44
53:5:546:G:H2'	53:5:547:C:C6	2.52	0.44
53:5:692:A:H2'	53:5:693:A:C8	2.52	0.44
53:5:720:U:H3	53:5:850:G:H1'	1.82	0.44
53:5:831:C:N4	53:5:847:G:O6	2.50	0.44
53:5:999:C:H1'	53:5:1000:A:H1'	1.99	0.44
53:5:1455:G:C6	53:5:1456:U:C4	3.04	0.44
53:5:1486:C:H2'	53:5:1487:U:C6	2.52	0.44
53:5:1499:G:H2'	53:5:1500:G:H8	1.81	0.44
54:6:45:G:H2'	54:6:46:U:C6	2.52	0.44
4:9:362:GLU:OE1	4:9:362:GLU:N	2.50	0.44
6:B:38:GLU:HG2	6:B:41:ARG:NH1	2.32	0.44
6:B:116:ALA:HB2	6:B:205:ILE:HG22	1.98	0.44
7:C:73:ARG:HD3	53:5:398:G:OP1	2.17	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:C:112:SER:OG	7:C:113:ALA:N	2.50	0.44
12:H:121:TYR:CE2	12:H:127:PRO:HG3	2.52	0.44
14:J:44:GLY:O	14:J:46:LYS:NZ	2.45	0.44
14:J:79:VAL:O	14:J:106:LYS:HB2	2.17	0.44
15:K:28:LEU:HB3	15:K:34:LYS:H	1.82	0.44
20:P:20:LYS:NZ	53:5:252:U:OP1	2.50	0.44
20:P:56:LYS:O	20:P:56:LYS:HG3	2.15	0.44
21:Q:63:PHE:CD1	21:Q:76:THR:HA	2.52	0.44
22:R:10:PHE:HB3	22:R:37:ARG:NE	2.30	0.44
26:b:87:MET:HB2	26:b:208:ARG:HH22	1.82	0.44
28:d:93:GLY:C	28:d:97:TRP:HD1	2.26	0.44
30:f:35:LEU:HD23	30:f:50:PHE:HE1	1.82	0.44
30:f:114:LYS:H	30:f:128:LEU:HD23	1.83	0.44
37:m:52:ALA:HA	37:m:83:PHE:CE1	2.52	0.44
38:n:4:ARG:O	38:n:4:ARG:HD2	2.16	0.44
39:o:48:PHE:HA	39:o:68:LYS:HD2	1.97	0.44
40:p:2:ARG:HB3	51:3:481:C:H4'	1.99	0.44
40:p:11:VAL:HA	40:p:14:LYS:HG2	1.99	0.44
40:p:80:ASN:HA	40:p:83:LYS:HB3	1.99	0.44
41:q:81:LYS:HA	41:q:81:LYS:HD3	1.64	0.44
48:x:16:CYS:HB3	48:x:21:ASN:H	1.82	0.44
51:3:69:U:C2	51:3:90:G:C6	3.04	0.44
51:3:88:G:O2'	51:3:89:U:H5'	2.18	0.44
51:3:109:G:H4'	51:3:381:A:C2	2.52	0.44
51:3:109:G:H4'	51:3:381:A:H2	1.82	0.44
51:3:476:G:C2	51:3:477:U:C2	3.05	0.44
51:3:587:U:H2'	51:3:588:G:C8	2.52	0.44
51:3:782:U:O4	51:3:2021:A:H1'	2.17	0.44
51:3:974:C:O2'	51:3:975:G:H5'	2.17	0.44
51:3:1010:G:O3'	51:3:1011:A:H8	2.00	0.44
51:3:1166:G:H1	51:3:2046:G:N2	2.15	0.44
51:3:1230:U:H2'	51:3:1231:G:H8	1.82	0.44
51:3:1345:G:C6	51:3:1346:G:C5	3.05	0.44
51:3:1588:A:O2'	51:3:1589:A:OP1	2.23	0.44
51:3:1597:U:H2'	51:3:1598:U:C6	2.53	0.44
51:3:1702:A:H8	51:3:1702:A:O5'	1.99	0.44
51:3:1917:G:H2'	51:3:1918:U:O4'	2.18	0.44
51:3:2050:G:N1	51:3:2634:C:C2	2.86	0.44
51:3:2054:C:N4	51:3:2055:A:N6	2.65	0.44
51:3:2339:G:H2'	51:3:2340:U:C6	2.53	0.44
51:3:2486:A:C8	51:3:2537:G:C6	3.05	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:3:2751:C:H3'	51:3:2752:G:H5''	1.98	0.44
51:3:2752:G:OP2	51:3:2763:C:N4	2.50	0.44
51:3:2814:A:H62	51:3:2894:G:N2	2.15	0.44
51:3:2854:A:C3'	51:3:2855:A:H8	2.30	0.44
51:3:2881:A:H8	51:3:2881:A:O5'	2.00	0.44
52:4:64:G:H1'	52:4:97:A:N1	2.33	0.44
53:5:103:U:H3'	53:5:284:A:N6	2.32	0.44
53:5:137:A:C8	53:5:138:A:C8	3.05	0.44
53:5:176:G:C4	53:5:177:G:C8	3.05	0.44
53:5:178:U:H1'	53:5:188:U:C2	2.52	0.44
53:5:248:U:C2	53:5:249:U:C5	3.04	0.44
53:5:275:A:H1'	53:5:277:G:N3	2.32	0.44
53:5:568:G:H1'	53:5:817:U:C4	2.53	0.44
53:5:595:G:H2'	53:5:596:U:H5'	1.98	0.44
53:5:641:U:H2'	53:5:642:A:C8	2.53	0.44
53:5:692:A:H2'	53:5:693:A:H8	1.82	0.44
53:5:897:A:C6	53:5:898:A:C5	3.06	0.44
53:5:973:A:C6	53:5:1292:A:C5	3.06	0.44
53:5:1132:G:O3'	53:5:1133:A:C8	2.65	0.44
53:5:1290:G:H22	53:5:1292:A:H3'	1.80	0.44
53:5:1422:A:O2'	53:5:1423:C:H5'	2.17	0.44
3:2:22:ILE:HG21	3:2:35:ARG:HE	1.82	0.44
5:A:84:PHE:N	5:A:106:ALA:O	2.43	0.44
6:B:15:ASN:HD21	6:B:182:ARG:HD3	1.82	0.44
6:B:177:PRO:HD2	6:B:185:ILE:HD11	1.99	0.44
9:E:143:LEU:HA	11:G:3:THR:CG2	2.46	0.44
10:F:35:LYS:HE3	53:5:1348:G:O3'	2.17	0.44
11:G:90:ILE:HD11	11:G:140:TYR:CD1	2.52	0.44
11:G:114:ALA:HB2	11:G:140:TYR:HE1	1.82	0.44
13:I:14:ILE:HA	13:I:105:ARG:O	2.18	0.44
13:I:47:PRO:HA	13:I:77:LYS:O	2.18	0.44
15:K:46:VAL:C	15:K:68:VAL:HG23	2.42	0.44
15:K:65:TYR:HB2	15:K:77:LEU:HD12	1.98	0.44
18:N:3:ILE:HD13	18:N:32:GLN:HG2	1.99	0.44
19:O:75:LYS:HE3	19:O:75:LYS:HB3	1.88	0.44
23:S:13:GLN:HG3	53:5:89:G:P	2.58	0.44
23:S:71:ARG:O	23:S:75:VAL:HG23	2.17	0.44
26:b:62:LEU:HD12	26:b:63:ASN:N	2.31	0.44
27:c:7:ILE:HA	27:c:13:PHE:HA	1.98	0.44
27:c:24:LEU:HD21	27:c:208:GLU:HA	1.99	0.44
30:f:102:HIS:NE2	30:f:107:ALA:HA	2.32	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:i:66:VAL:C	33:i:67:LEU:HD12	2.42	0.44
34:j:25:LEU:HB2	34:j:40:VAL:HG23	1.99	0.44
34:j:36:GLY:O	34:j:109:ARG:NH1	2.50	0.44
34:j:86:LEU:HD12	34:j:94:ARG:NH1	2.32	0.44
35:k:69:ARG:NE	51:3:668:A:H4'	2.32	0.44
35:k:84:LYS:HE3	51:3:637:U:C6	2.52	0.44
35:k:95:ARG:NH2	35:k:109:GLN:HA	2.32	0.44
35:k:137:LYS:O	35:k:140:GLU:HG2	2.17	0.44
38:n:12:HIS:O	38:n:16:VAL:HG23	2.17	0.44
38:n:58:LEU:C	38:n:60:LEU:H	2.26	0.44
39:o:21:TYR:HE2	39:o:23:PRO:HB3	1.82	0.44
40:p:76:SER:OG	51:3:1047:A:H5''	2.17	0.44
41:q:34:GLN:OE1	41:q:35:LEU:N	2.50	0.44
46:v:17:ASN:HB3	46:v:25:THR:CB	2.44	0.44
51:3:20:C:C4	51:3:21:U:C4	3.05	0.44
51:3:58:A:C2	51:3:116:C:C2	3.05	0.44
51:3:210:U:H2'	51:3:211:A:O4'	2.17	0.44
51:3:242:G:H1'	51:3:642:A:C2	2.52	0.44
51:3:257:C:H2'	51:3:258:G:O4'	2.18	0.44
51:3:279:U:H3'	51:3:280:A:C8	2.53	0.44
51:3:282:C:N3	51:3:288:A:C2	2.85	0.44
51:3:308:A:N1	51:3:309:A:C5	2.85	0.44
51:3:601:U:H4'	51:3:981:A:C6	2.51	0.44
51:3:710:A:H2'	51:3:711:A:C8	2.52	0.44
51:3:785:A:C2	51:3:788:G:C8	3.05	0.44
51:3:810:G:C5	51:3:829:A:C8	3.06	0.44
51:3:1066:G:N1	51:3:1159:C:N3	2.65	0.44
51:3:1079:U:H4'	51:3:1083:A:H5'	1.99	0.44
51:3:1085:A:C4	51:3:1086:G:C8	3.06	0.44
51:3:1163:G:O2'	51:3:1164:A:H5''	2.17	0.44
51:3:1201:A:H3'	51:3:1202:A:H8	1.82	0.44
51:3:1508:G:N2	51:3:1533:U:P	2.91	0.44
51:3:1681:G:O2'	51:3:1682:C:O5'	2.34	0.44
51:3:1689:A:H2'	51:3:1690:C:O4'	2.16	0.44
51:3:1892:A:H2'	51:3:1893:C:O4'	2.17	0.44
51:3:2391:G:H2'	51:3:2392:U:H6	1.81	0.44
51:3:2408:G:C6	51:3:2409:U:C4	3.06	0.44
51:3:2438:A:H2'	51:3:2438:A:N3	2.33	0.44
51:3:2543:G:C2	51:3:2544:G:C5	3.05	0.44
51:3:2578:A:H2'	51:3:2579:U:C6	2.52	0.44
51:3:2691:C:C4	51:3:2692:U:C4	3.06	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:3:2721:C:H3'	51:3:2722:G:H5''	1.99	0.44
51:3:2851:U:C5	51:3:2852:G:C5	3.06	0.44
52:4:100:G:H2'	52:4:101:C:C6	2.52	0.44
53:5:103:U:H5	53:5:284:A:C4	2.34	0.44
53:5:107:A:O2'	53:5:108:C:H5'	2.17	0.44
53:5:149:G:C4	53:5:150:A:C8	3.05	0.44
53:5:239:A:N6	53:5:277:G:N3	2.65	0.44
53:5:358:G:H21	53:5:361:U:H3	1.63	0.44
53:5:426:U:C4'	53:5:427:A:H5''	2.47	0.44
53:5:618:U:OP2	53:5:618:U:H6	2.00	0.44
53:5:820:A:H2'	53:5:821:U:C6	2.52	0.44
53:5:855:G:H21	53:5:868:G:H5'	1.83	0.44
53:5:947:U:H2'	53:5:948:U:C6	2.52	0.44
53:5:1039:G:C2	53:5:1041:G:C5	3.05	0.44
53:5:1101:A:H3'	53:5:1102:A:N7	2.31	0.44
53:5:1104:C:C2	53:5:1105:C:C5	3.05	0.44
53:5:1196:G:C6	53:5:1197:G:C4	3.05	0.44
53:5:1241:G:C4	53:5:1243:A:OP2	2.70	0.44
53:5:1377:C:H2'	53:5:1378:C:O4'	2.16	0.44
1:0:25:ALA:N	1:0:28:ARG:HH21	2.14	0.44
4:9:376:SER:OG	4:9:377:ILE:N	2.50	0.44
5:A:116:THR:HA	5:A:123:LEU:HD11	1.99	0.44
7:C:55:GLN:O	7:C:59:ARG:HG3	2.17	0.44
9:E:99:SER:O	9:E:102:PRO:HD2	2.18	0.44
10:F:34:LYS:CD	53:5:1347:U:H1'	2.47	0.44
14:J:87:ASP:HB3	14:J:91:ARG:NH1	2.33	0.44
16:L:103:ARG:NH2	53:5:1201:C:H5	2.15	0.44
19:O:2:ARG:HE	19:O:9:PRO:HB3	1.83	0.44
19:O:38:LYS:HE2	53:5:447:G:H5''	1.98	0.44
19:O:72:LEU:O	19:O:75:LYS:HG2	2.18	0.44
21:Q:69:LYS:NZ	21:Q:71:ASN:HA	2.32	0.44
25:a:118:GLY:O	25:a:120:LYS:NZ	2.40	0.44
25:a:209:ASN:C	25:a:210:LEU:HD12	2.42	0.44
25:a:230:GLY:HA2	25:a:233:MET:HE3	1.98	0.44
25:a:253:ALA:CB	25:a:261:ARG:HD2	2.39	0.44
26:b:52:LEU:HG	26:b:84:ILE:HD13	1.98	0.44
28:d:39:GLY:O	51:3:2315:G:N1	2.50	0.44
29:e:94:GLY:HA3	29:e:97:TYR:CG	2.53	0.44
29:e:108:LEU:HB2	29:e:116:ILE:HB	1.99	0.44
30:f:33:LYS:HB2	30:f:34:LYS:NZ	2.33	0.44
30:f:41:LYS:HA	30:f:45:GLN:NE2	2.33	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:f:64:LEU:HD12	30:f:67:LYS:HB2	1.98	0.44
32:h:50:MET:O	32:h:70:THR:HB	2.18	0.44
33:i:15:ARG:C	33:i:16:ARG:HD3	2.43	0.44
33:i:104:VAL:O	33:i:108:VAL:HG12	2.17	0.44
33:i:119:ARG:HG3	33:i:120:ARG:H	1.83	0.44
35:k:64:LYS:HE3	51:3:2402:C:H4'	2.00	0.44
37:m:11:SER:N	37:m:14:ARG:HH11	2.16	0.44
39:o:103:TYR:CE2	39:o:104:MET:HG2	2.52	0.44
40:p:7:LYS:O	40:p:11:VAL:HG23	2.17	0.44
41:q:55:VAL:HG23	41:q:94:VAL:HG23	2.00	0.44
41:q:71:ILE:HA	41:q:82:LYS:HA	1.98	0.44
42:r:9:ARG:HB2	42:r:102:ASN:ND2	2.33	0.44
49:y:2:ALA:HA	51:3:2622:A:C8	2.53	0.44
51:3:29:G:N2	51:3:547:G:H1'	2.32	0.44
51:3:43:A:C6	51:3:475:A:C6	3.06	0.44
51:3:135:A:N6	51:3:136:G:O6	2.50	0.44
51:3:269:A:C5	51:3:464:A:C5	3.05	0.44
51:3:440:C:H5'	51:3:441:U:H2'	1.99	0.44
51:3:571:A:H2'	51:3:572:G:O4'	2.18	0.44
51:3:634:C:C2	51:3:635:G:C8	3.05	0.44
51:3:714:G:C2	51:3:834:G:C2	3.05	0.44
51:3:781:U:O2'	51:3:783:G:N2	2.50	0.44
51:3:937:A:C4	51:3:938:A:C8	3.05	0.44
51:3:1038:G:H2'	51:3:1039:G:C8	2.53	0.44
51:3:1071:G:N1	51:3:1155:G:C6	2.85	0.44
51:3:1079:U:HO2'	51:3:1146:A:H61	1.60	0.44
51:3:1149:G:C5	51:3:1150:U:C4	3.05	0.44
51:3:1264:U:H2'	51:3:1265:G:O4'	2.17	0.44
51:3:1520:A:N3	51:3:1612:U:O2'	2.50	0.44
51:3:1571:G:H1'	51:3:1572:U:H5	1.82	0.44
51:3:1611:C:C4	51:3:1612:U:C4	3.05	0.44
51:3:1695:G:H5''	51:3:2720:C:C4	2.52	0.44
51:3:1731:G:H3'	51:3:1732:A:H8	1.82	0.44
51:3:1778:G:C4	51:3:1779:G:C8	3.06	0.44
51:3:1885:G:H2'	51:3:1886:C:C6	2.53	0.44
51:3:2022:A:C8	51:3:2023:U:C5	3.06	0.44
51:3:2305:C:H41	51:3:2326:G:C2'	2.31	0.44
51:3:2403:C:H2'	51:3:2404:G:H8	1.82	0.44
51:3:2683:G:H2'	51:3:2684:G:O4'	2.18	0.44
51:3:2747:U:C2	51:3:2772:A:C5	3.05	0.44
51:3:2773:A:C2	51:3:2774:A:H5'	2.53	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:4:77:G:N3	52:4:78:C:H1'	2.32	0.44
53:5:37:C:H2'	53:5:38:U:N1	2.31	0.44
53:5:336:U:C4	53:5:346:G:N1	2.85	0.44
53:5:434:U:O2	53:5:493:A:C5	2.66	0.44
53:5:486:C:C2	53:5:487:A:C8	3.05	0.44
53:5:695:G:H2'	53:5:696:C:H6	1.82	0.44
53:5:836:C:H3'	53:5:837:G:C8	2.53	0.44
53:5:842:C:H2'	53:5:843:C:O4'	2.17	0.44
53:5:1068:G:N1	53:5:1070:G:H3'	2.32	0.44
53:5:1334:A:H3'	53:5:1335:G:C8	2.53	0.44
53:5:1416:U:H2'	53:5:1417:U:C2	2.52	0.44
54:6:58:G:H22	54:6:61:U:H5	1.64	0.44
54:7:38:G:H8	54:7:38:G:OP2	2.00	0.44
1:0:38:GLN:HB2	51:3:494:G:H2'	1.98	0.44
2:1:4:LYS:O	2:1:8:LYS:HG2	2.18	0.44
2:1:53:LYS:NZ	51:3:976:C:OP2	2.42	0.44
4:9:155:ARG:O	4:9:158:LEU:HG	2.18	0.44
4:9:303:LYS:HE3	4:9:366:PRO:HG3	1.99	0.44
4:9:355:ASP:O	4:9:357:THR:HG23	2.18	0.44
8:D:182:ASN:OD1	8:D:183:LEU:N	2.51	0.44
9:E:45:LEU:HD12	9:E:48:PRO:HA	2.00	0.44
12:H:95:GLU:O	12:H:98:LYS:HE2	2.18	0.44
13:I:23:LEU:HD23	13:I:101:GLY:HA3	1.98	0.44
14:J:79:VAL:HB	14:J:86:LYS:HE3	1.98	0.44
15:K:98:GLY:O	15:K:109:HIS:HD2	2.00	0.44
19:O:59:PRO:C	19:O:64:ARG:HH11	2.25	0.44
22:R:31:ILE:HG13	22:R:33:THR:HG23	2.00	0.44
23:S:28:LEU:HA	23:S:31:ASN:HD22	1.83	0.44
25:a:244:GLU:OE1	51:3:2607:G:C8	2.70	0.44
26:b:36:VAL:HG22	26:b:94:GLN:H	1.82	0.44
26:b:126:TRP:HE1	26:b:165:MET:C	2.25	0.44
27:c:166:THR:HA	27:c:169:GLU:OE2	2.17	0.44
33:i:131:ASP:C	33:i:132:LYS:HZ2	2.24	0.44
34:j:101:PRO:HA	34:j:120:GLU:HG3	1.99	0.44
36:l:30:GLY:HA3	36:l:105:GLU:HB2	2.00	0.44
38:n:29:VAL:HG23	38:n:92:ASP:HB2	1.98	0.44
40:p:17:LEU:O	40:p:20:ALA:N	2.51	0.44
43:s:60:ARG:O	43:s:77:LEU:HD12	2.17	0.44
45:u:24:THR:O	45:u:25:LYS:HG2	2.18	0.44
49:y:37:LYS:NZ	49:y:41:ARG:H	2.15	0.44
51:3:67:C:H2'	51:3:68:C:C6	2.53	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:3:262:G:H2'	51:3:263:C:O4'	2.17	0.44
51:3:264:G:C6	51:3:265:G:C8	3.05	0.44
51:3:483:A:C6	51:3:490:A:C4	3.05	0.44
51:3:664:G:C5	51:3:672:G:C2	3.05	0.44
51:3:778:U:H2'	51:3:779:C:C6	2.52	0.44
51:3:850:G:C6	51:3:1224:G:C6	3.05	0.44
51:3:954:A:H2	52:4:78:C:H1'	1.81	0.44
51:3:963:U:O4	51:3:964:A:N6	2.51	0.44
51:3:1036:A:N6	51:3:1189:G:O2'	2.50	0.44
51:3:1070:U:C2	51:3:1155:G:N1	2.70	0.44
51:3:1220:A:H8	51:3:1220:A:O5'	2.00	0.44
51:3:1439:U:O2	51:3:1625:G:N2	2.47	0.44
51:3:1444:C:C4	51:3:1445:U:C4	3.05	0.44
51:3:1662:G:H2'	51:3:1663:G:C8	2.52	0.44
51:3:1856:G:H2'	51:3:1857:G:H8	1.82	0.44
51:3:2036:G:N1	51:3:2040:A:C8	2.85	0.44
51:3:2086:U:H2'	51:3:2087:G:O4'	2.17	0.44
51:3:2108:C:N4	51:3:2109:A:H62	2.16	0.44
51:3:2108:C:N4	51:3:2109:A:N6	2.66	0.44
51:3:2381:G:O2'	51:3:2382:A:H5'	2.17	0.44
51:3:2473:C:H2'	51:3:2474:C:C6	2.53	0.44
51:3:2482:U:H3'	51:3:2483:C:C5	2.53	0.44
51:3:2638:G:C6	51:3:2639:G:C6	3.06	0.44
51:3:2692:U:N3	51:3:2735:G:H1'	2.32	0.44
52:4:43:A:C4	52:4:44:A:C8	3.05	0.44
52:4:89:A:H3'	52:4:90:G:H8	1.82	0.44
53:5:92:G:O2'	53:5:374:G:H4'	2.18	0.44
53:5:127:A:H4'	53:5:168:A:H1'	1.99	0.44
53:5:204:C:C4	53:5:205:U:C4	3.06	0.44
53:5:503:G:H2'	53:5:504:A:H8	1.82	0.44
53:5:716:C:H6	53:5:716:C:O5'	1.99	0.44
53:5:717:C:OP2	53:5:718:A:O2'	2.25	0.44
53:5:883:A:H2	53:5:884:G:N2	2.14	0.44
53:5:906:C:H2'	53:5:907:A:C8	2.52	0.44
53:5:924:A:H2'	53:5:925:C:H6	1.83	0.44
53:5:966:A:O2'	53:5:1340:G:H4'	2.16	0.44
53:5:1016:A:H2'	53:5:1016:A:N3	2.33	0.44
53:5:1396:U:O2	53:5:1455:G:C6	2.71	0.44
53:5:1406:U:C2	53:5:1445:G:N1	2.85	0.44
53:5:1465:U:H2'	53:5:1466:U:N1	2.32	0.44
4:9:47:TYR:CD1	4:9:179:LEU:HD11	2.53	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:9:132:VAL:HG22	4:9:200:ILE:HD11	1.99	0.44
4:9:338:VAL:HG21	4:9:363:LEU:HD13	2.00	0.44
7:C:40:ASN:C	7:C:43:ARG:HH22	2.26	0.44
9:E:33:GLU:HG3	9:E:34:GLY:N	2.27	0.44
12:H:50:MET:HG2	12:H:82:ARG:HH11	1.82	0.44
15:K:123:ARG:NH1	53:5:535:A:H5''	2.33	0.44
16:L:6:GLY:HA2	16:L:57:ARG:NH1	2.33	0.44
19:O:23:ASP:CG	53:5:305:A:H4'	2.43	0.44
21:Q:65:SER:C	21:Q:67:TYR:H	2.26	0.44
25:a:256:THR:HG23	25:a:260:LYS:HB2	2.00	0.44
26:b:15:GLN:HA	26:b:25:PRO:HA	2.00	0.44
26:b:206:LEU:HD12	26:b:207:ILE:H	1.82	0.44
26:b:225:GLN:HG2	39:o:17:GLN:C	2.42	0.44
27:c:31:GLN:NE2	27:c:118:GLU:OE1	2.51	0.44
30:f:5:LEU:CD2	30:f:14:LYS:HE2	2.32	0.44
30:f:105:GLY:HA2	51:3:166:A:N3	2.32	0.44
33:i:138:GLN:C	33:i:139:LYS:HG2	2.42	0.44
43:s:70:ARG:NH2	51:3:492:C:OP1	2.51	0.44
44:t:31:ARG:NH1	44:t:33:GLN:HE21	2.15	0.44
46:v:53:ARG:NH2	51:3:434:G:C8	2.86	0.44
51:3:162:G:H22	51:3:169:U:H3'	1.82	0.44
51:3:367:G:C2	51:3:368:C:C4	3.05	0.44
51:3:718:U:H2'	51:3:719:G:C8	2.53	0.44
51:3:898:A:H2'	51:3:899:A:C8	2.53	0.44
51:3:975:G:C2	51:3:976:C:C2	3.05	0.44
51:3:1039:G:O2'	51:3:1046:A:N6	2.50	0.44
51:3:1071:G:N1	51:3:1072:A:C5	2.86	0.44
51:3:1160:G:H8	51:3:1160:G:O5'	2.00	0.44
51:3:1188:C:C2	51:3:1189:G:C8	3.06	0.44
51:3:1220:A:C8	51:3:1221:G:C8	3.05	0.44
51:3:1386:G:H2'	51:3:1399:G:H22	1.82	0.44
51:3:1697:C:H5'	51:3:2695:U:OP1	2.17	0.44
51:3:1832:G:C4	51:3:1833:G:C8	3.06	0.44
51:3:1929:G:C6	51:3:1930:U:C4	3.06	0.44
51:3:2155:G:H2'	51:3:2156:G:O4'	2.18	0.44
51:3:2214:A:H2'	51:3:2215:C:C6	2.53	0.44
51:3:2290:G:C4	51:3:2433:A:N6	2.86	0.44
51:3:2315:G:C4	51:3:2319:A:N7	2.86	0.44
51:3:2356:U:H2'	51:3:2357:G:C8	2.52	0.44
51:3:2399:G:O2'	51:3:2432:C:N4	2.40	0.44
51:3:2407:G:C6	51:3:2426:A:C6	3.06	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:3:2643:A:N1	51:3:2792:C:N3	2.66	0.44
51:3:2701:A:H2'	51:3:2702:G:C8	2.53	0.44
51:3:2757:A:H62	51:3:2761:A:H62	1.66	0.44
52:4:4:G:C6	52:4:105:A:N6	2.86	0.44
52:4:52:G:H2'	52:4:53:U:H6	1.83	0.44
53:5:14:U:H3	53:5:909:A:H62	1.65	0.44
53:5:87:G:H21	53:5:157:A:H2	1.63	0.44
53:5:101:A:H3'	53:5:101:A:OP2	2.18	0.44
53:5:283:U:O4	53:5:284:A:N6	2.51	0.44
53:5:586:G:H2'	53:5:587:A:C8	2.52	0.44
53:5:679:U:H2'	53:5:680:G:C8	2.53	0.44
53:5:941:A:O2'	53:5:1307:A:N3	2.33	0.44
53:5:1016:A:C2	53:5:1017:A:N7	2.86	0.44
53:5:1145:A:H8	53:5:1145:A:O5'	2.01	0.44
53:5:1169:U:H2'	53:5:1170:C:C6	2.52	0.44
53:5:1217:G:H2'	53:5:1218:C:C6	2.52	0.44
53:5:1284:A:H2'	53:5:1285:G:C8	2.53	0.44
53:5:1361:G:O2'	53:5:1362:G:O5'	2.32	0.44
53:5:1489:C:C2	53:5:1490:G:C8	3.06	0.44
54:7:67:C:H2'	54:7:68:G:C8	2.52	0.44
4:9:210:PRO:O	4:9:211:PHE:HB2	2.17	0.44
5:A:198:VAL:HG23	5:A:212:ASP:N	2.32	0.44
6:B:152:ILE:HD12	6:B:204:TRP:O	2.18	0.44
6:B:191:LYS:HE2	53:5:1049:G:H5'	1.98	0.44
10:F:86:VAL:HG23	10:F:151:ALA:HA	1.99	0.44
12:H:46:VAL:O	12:H:50:MET:HG3	2.18	0.44
20:P:68:PRO:O	53:5:261:G:H5'	2.17	0.44
20:P:74:ARG:NE	53:5:230:G:H4'	2.33	0.44
24:T:26:ARG:O	24:T:30:GLN:HG2	2.18	0.44
25:a:256:THR:HB	25:a:257:PRO:HD2	1.99	0.44
27:c:32:GLN:HB3	27:c:33:PRO:HD3	2.00	0.44
27:c:113:HIS:HA	27:c:116:TRP:CD1	2.53	0.44
29:e:142:GLU:OE1	51:3:2768:U:H1'	2.17	0.44
33:i:7:LEU:HG	40:p:60:TRP:HE1	1.82	0.44
36:l:80:GLU:HB3	45:u:17:SER:N	2.33	0.44
36:l:109:ILE:CG2	36:l:114:MET:HG3	2.48	0.44
37:m:107:ARG:NE	51:3:1314:A:H5'	2.33	0.44
41:q:39:LEU:HD23	41:q:39:LEU:C	2.42	0.44
41:q:55:VAL:HG23	41:q:97:PHE:HB3	1.99	0.44
46:v:27:ARG:NH2	51:3:418:G:H4'	2.33	0.44
51:3:122:G:H2'	51:3:123:G:C8	2.51	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:3:192:U:H2'	51:3:193:G:O4'	2.18	0.44
51:3:237:A:H61	51:3:465:A:H2	1.66	0.44
51:3:366:A:OP1	51:3:366:A:H3'	2.18	0.44
51:3:437:A:C5	51:3:438:A:C5	3.06	0.44
51:3:442:G:C2'	51:3:443:C:H5'	2.48	0.44
51:3:525:A:C5	51:3:526:G:N1	2.85	0.44
51:3:648:G:O6	51:3:650:G:N2	2.50	0.44
51:3:853:G:C6	51:3:1218:G:C5	3.06	0.44
51:3:895:G:O4'	51:3:2276:A:H1'	2.17	0.44
51:3:912:A:C6	51:3:940:A:C6	3.06	0.44
51:3:1120:A:H1'	51:3:1140:U:H1'	1.99	0.44
51:3:1163:G:C5	51:3:2526:A:C6	3.06	0.44
51:3:1192:U:H3'	51:3:1193:U:C6	2.53	0.44
51:3:1200:U:O3'	51:3:1201:A:H8	2.01	0.44
51:3:1300:C:H5''	51:3:1301:G:C5'	2.43	0.44
51:3:1402:G:C4	51:3:1403:G:C8	3.06	0.44
51:3:1547:G:C6	51:3:1548:A:C6	3.06	0.44
51:3:1583:G:H2'	51:3:1584:U:C6	2.52	0.44
51:3:1596:U:H2'	51:3:1597:U:H6	1.81	0.44
51:3:1702:A:H8	51:3:1702:A:P	2.41	0.44
51:3:1995:G:H2'	51:3:1996:A:H8	1.83	0.44
51:3:2079:G:H2'	51:3:2080:C:C6	2.53	0.44
51:3:2101:A:H2'	51:3:2102:U:C6	2.53	0.44
51:3:2126:A:O2'	51:3:2127:G:H5''	2.18	0.44
51:3:2529:C:H1'	51:3:2573:A:N3	2.32	0.44
51:3:2557:G:C6	51:3:2568:G:N1	2.86	0.44
51:3:2823:A:C6	51:3:2832:G:C6	3.06	0.44
53:5:144:U:H1'	53:5:150:A:C2	2.52	0.44
53:5:302:A:H3'	53:5:303:A:C8	2.52	0.44
53:5:314:G:C6	53:5:315:G:N7	2.86	0.44
53:5:319:U:H3	53:5:323:A:H8	1.60	0.44
53:5:361:U:H5''	53:5:362:U:OP1	2.17	0.44
53:5:483:U:C2	53:5:484:A:C8	3.06	0.44
53:5:585:G:N1	53:5:751:C:OP2	2.48	0.44
53:5:648:C:H2'	53:5:649:U:C6	2.53	0.44
53:5:658:G:C6	53:5:659:U:C2	3.06	0.44
53:5:678:A:C6	53:5:707:G:N1	2.85	0.44
53:5:688:G:H2'	53:5:689:U:C5	2.52	0.44
53:5:959:A:C5	53:5:960:C:H5	2.35	0.44
53:5:1111:G:C4	53:5:1112:U:C5	3.06	0.44
53:5:1137:C:H2'	53:5:1138:U:O4'	2.18	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:5:1244:A:N3	53:5:1300:C:H1'	2.32	0.44
53:5:1289:U:C4	53:5:1297:G:N1	2.86	0.44
53:5:1295:U:P	53:5:1296:C:H3'	2.57	0.44
54:7:22:A:H2'	54:7:47:G:C2	2.53	0.44
1:0:24:THR:HG23	1:0:27:GLY:HA3	2.00	0.44
4:9:259:ILE:HD11	4:9:275:ALA:HB1	1.99	0.44
6:B:193:GLN:OE1	6:B:197:GLY:HA2	2.18	0.44
7:C:9:LYS:O	7:C:12:ARG:HB2	2.18	0.44
7:C:114:ARG:NH1	53:5:400:G:OP2	2.51	0.44
8:D:101:ILE:HD11	8:D:173:ALA:CA	2.47	0.44
9:E:11:GLY:H	9:E:52:GLN:CB	2.19	0.44
11:G:4:THR:O	11:G:5:THR:HG22	2.18	0.44
13:I:20:ASP:CG	13:I:23:LEU:H	2.26	0.44
15:K:79:TYR:O	15:K:110:ILE:HG22	2.18	0.44
16:L:28:SER:OG	16:L:29:ARG:N	2.51	0.44
18:N:21:SER:O	18:N:24:VAL:HG22	2.17	0.44
19:O:27:ILE:HG22	19:O:52:TRP:CZ2	2.52	0.44
20:P:30:PHE:O	20:P:38:SER:HA	2.18	0.44
20:P:63:ILE:HG13	20:P:77:ILE:CD1	2.46	0.44
25:a:38:LEU:CD2	25:a:67:ARG:HG3	2.48	0.44
25:a:155:LYS:O	51:3:2213:A:H5'	2.17	0.44
25:a:185:LEU:HD12	25:a:185:LEU:HA	1.79	0.44
25:a:227:THR:O	51:3:1796:A:H5''	2.18	0.44
26:b:180:ARG:CD	26:b:218:LYS:HG2	2.47	0.44
28:d:48:LYS:HE3	28:d:146:ILE:HA	1.99	0.44
29:e:11:LEU:HB3	29:e:52:ASN:N	2.33	0.44
36:l:131:ILE:C	36:l:132:LEU:HD22	2.43	0.44
37:m:51:LEU:HD13	37:m:54:VAL:HG21	2.00	0.44
38:n:100:GLY:HA3	52:4:47:C:O5'	2.18	0.44
39:o:68:LYS:O	39:o:74:PRO:HA	2.18	0.44
44:t:28:MET:HE3	44:t:29:PRO:HD2	2.00	0.44
51:3:83:G:H2'	51:3:84:G:O4'	2.18	0.44
51:3:90:G:C2	51:3:91:G:C5	3.06	0.44
51:3:109:G:H1'	51:3:380:A:N1	2.33	0.44
51:3:273:C:C4	51:3:460:G:N1	2.86	0.44
51:3:286:A:C4'	51:3:287:G:H2'	2.48	0.44
51:3:386:U:C2	51:3:387:U:C5	3.05	0.44
51:3:483:A:C4	51:3:509:G:N7	2.86	0.44
51:3:625:G:C6	51:3:626:A:N7	2.86	0.44
51:3:641:U:O4	51:3:655:G:H3'	2.17	0.44
51:3:691:G:H2'	51:3:692:U:H6	1.82	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:3:741:A:C6	51:3:742:G:C4	3.06	0.44
51:3:993:A:H4'	51:3:994:U:OP1	2.17	0.44
51:3:1153:U:H2'	51:3:1154:U:O4'	2.17	0.44
51:3:1309:G:N1	51:3:1318:U:C4	2.86	0.44
51:3:1406:A:O2'	51:3:1408:G:N7	2.39	0.44
51:3:1520:A:H2	51:3:1612:U:H1'	1.82	0.44
51:3:1701:G:H22	51:3:1998:U:H3'	1.83	0.44
51:3:2004:G:H2'	51:3:2005:G:H8	1.80	0.44
51:3:2210:G:O2'	51:3:2212:U:OP1	2.28	0.44
51:3:2392:U:H5''	51:3:2394:A:P	2.58	0.44
51:3:2476:A:H2	51:3:2490:A:N7	2.16	0.44
51:3:2596:A:C6	51:3:2597:A:N7	2.86	0.44
51:3:2604:U:HO2'	51:3:2605:G:P	2.38	0.44
51:3:2638:G:C4	51:3:2897:G:C2	3.05	0.44
51:3:2757:A:H62	51:3:2761:A:N6	2.16	0.44
52:4:67:G:C2	52:4:68:C:H1'	2.53	0.44
53:5:24:C:P	53:5:559:U:H3	2.41	0.44
53:5:179:U:C2	53:5:187:A:C2	3.06	0.44
53:5:210:G:H2'	53:5:211:G:C8	2.53	0.44
53:5:292:U:H2'	53:5:293:G:H8	1.81	0.44
53:5:303:A:H2'	53:5:304:U:O4'	2.18	0.44
53:5:367:A:C2	53:5:369:A:N6	2.85	0.44
53:5:397:C:C2	53:5:398:G:C8	3.05	0.44
53:5:595:G:C2'	53:5:596:U:H5'	2.48	0.44
53:5:665:G:C2'	53:5:666:U:H5'	2.48	0.44
53:5:868:G:H8	53:5:868:G:O5'	2.00	0.44
53:5:885:U:C2	53:5:886:A:C8	3.06	0.44
53:5:928:G:C4	53:5:930:A:C8	3.06	0.44
53:5:980:C:C4	53:5:1196:G:N1	2.86	0.44
53:5:1014:A:C6	53:5:1015:U:C4	3.06	0.44
53:5:1042:G:C6	53:5:1043:U:C2	3.05	0.44
53:5:1065:G:O6	53:5:1074:U:C2	2.70	0.44
53:5:1136:G:C2	53:5:1137:C:C4	3.05	0.44
53:5:1303:A:C6	53:5:1304:U:C5	3.05	0.44
1:0:3:ARG:HH21	51:3:1647:A:HO2'	1.61	0.44
2:1:1:MET:C	51:3:246:G:H8	2.26	0.44
2:1:22:LYS:HG2	35:k:65:PHE:CE2	2.53	0.44
4:9:141:ALA:O	4:9:142:THR:OG1	2.34	0.44
5:A:119:ASN:OD1	5:A:119:ASN:N	2.51	0.44
5:A:210:LEU:H	5:A:210:LEU:HD12	1.82	0.44
6:B:151:GLY:HA3	6:B:175:ASN:O	2.18	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:D:101:ILE:O	8:D:127:HIS:N	2.49	0.44
10:F:24:ARG:O	10:F:28:VAL:HG22	2.18	0.44
10:F:94:ARG:NH1	53:5:933:A:H4'	2.30	0.44
11:G:134:GLY:HA3	53:5:597:C:H4'	2.00	0.44
12:H:56:LEU:HB2	12:H:103:LYS:HZ3	1.83	0.44
13:I:16:LEU:HD23	13:I:16:LEU:H	1.82	0.44
15:K:52:THR:HG22	15:K:64:LYS:HA	2.00	0.44
16:L:104:THR:OG1	53:5:946:G:O6	2.26	0.44
17:M:9:LYS:NZ	53:5:1192:C:OP1	2.33	0.44
23:S:66:ARG:HA	23:S:69:LYS:HE2	2.00	0.44
24:T:42:LEU:HD13	24:T:42:LEU:HA	1.86	0.44
25:a:147:VAL:HG22	25:a:148:HIS:N	2.32	0.44
26:b:201:GLU:HB3	51:3:2824:A:C2	2.52	0.44
27:c:139:LYS:HG3	51:3:354:C:P	2.57	0.44
27:c:147:LEU:O	27:c:151:LYS:N	2.51	0.44
28:d:125:ARG:NH2	51:3:2324:A:H1'	2.33	0.44
29:e:43:PRO:HB2	29:e:59:ASN:OD1	2.17	0.44
34:j:28:THR:HG23	51:3:2571:U:H5'	2.00	0.44
35:k:31:THR:OG1	35:k:32:SER:N	2.51	0.44
35:k:55:GLN:HB2	51:3:2436:G:C2'	2.47	0.44
35:k:115:ILE:HD11	51:3:672:G:N2	2.32	0.44
39:o:94:GLY:HA2	39:o:116:GLU:N	2.32	0.44
43:s:53:LEU:HA	47:w:87:TRP:HH2	1.82	0.44
44:t:31:ARG:O	44:t:33:GLN:HG2	2.17	0.44
47:w:22:LEU:HA	47:w:25:GLU:CD	2.42	0.44
47:w:102:ARG:O	47:w:106:GLU:HG2	2.18	0.44
49:y:52:ARG:NE	49:y:52:ARG:C	2.76	0.44
50:z:9:LEU:HD23	50:z:19:TYR:CD2	2.53	0.44
51:3:62:G:N3	51:3:64:U:C2	2.86	0.44
51:3:217:A:H2'	51:3:218:G:O4'	2.18	0.44
51:3:273:C:H3'	51:3:295:U:O4	2.18	0.44
51:3:359:G:C4	51:3:360:G:C8	3.06	0.44
51:3:535:G:N1	51:3:538:A:OP2	2.39	0.44
51:3:650:G:H2'	51:3:651:A:C8	2.52	0.44
51:3:680:A:H61	51:3:2357:G:N2	2.15	0.44
51:3:750:A:H2'	51:3:751:A:O4'	2.18	0.44
51:3:757:A:H2'	51:3:758:C:H6	1.83	0.44
51:3:1081:A:O2'	51:3:1082:A:H5'	2.18	0.44
51:3:1119:A:N7	51:3:1120:A:C5	2.86	0.44
51:3:1125:U:O2	51:3:1137:C:H1'	2.18	0.44
51:3:1295:A:C8	51:3:2021:A:N6	2.83	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:3:1296:G:C2	51:3:2019:G:C4	3.05	0.44
51:3:1469:C:H2'	51:3:1470:C:H6	1.83	0.44
51:3:1622:C:H2'	51:3:1623:U:C6	2.53	0.44
51:3:1624:A:H2'	51:3:1625:G:H8	1.83	0.44
51:3:1640:G:H5'	51:3:1641:A:H5''	2.00	0.44
51:3:1775:G:N1	51:3:1992:C:C4	2.86	0.44
51:3:1874:G:C6	51:3:1882:G:C2	3.06	0.44
51:3:1917:G:C2	51:3:1928:G:C5	3.06	0.44
51:3:1918:U:H2'	51:3:1925:A:C2	2.53	0.44
51:3:1918:U:H3	51:3:1925:A:H2'	1.83	0.44
51:3:2025:C:C2	51:3:2026:A:C8	3.06	0.44
51:3:2053:G:C4	51:3:2631:G:C2	3.06	0.44
51:3:2081:U:H2'	51:3:2082:U:C6	2.52	0.44
51:3:2236:G:C5	51:3:2237:U:C4	3.06	0.44
51:3:2384:A:C6	51:3:2385:A:N1	2.85	0.44
51:3:2416:U:H2'	51:3:2417:G:C8	2.53	0.44
51:3:2473:C:C2	51:3:2474:C:C5	3.06	0.44
51:3:2539:A:C4	51:3:2540:G:C8	3.06	0.44
51:3:2667:G:N1	51:3:2671:G:C6	2.86	0.44
51:3:2679:G:H2'	51:3:2680:C:C6	2.52	0.44
51:3:2820:G:C2	51:3:2835:G:N3	2.86	0.44
52:4:48:A:C6	52:4:49:G:C5	3.06	0.44
53:5:173:U:C4	53:5:174:U:C4	3.05	0.44
53:5:509:C:H2'	53:5:532:U:H1'	1.99	0.44
53:5:589:U:H2'	53:5:590:G:H8	1.83	0.44
53:5:607:A:H2'	53:5:608:G:O4'	2.18	0.44
53:5:1046:A:N6	53:5:1175:C:C4	2.85	0.44
53:5:1211:A:H2'	53:5:1212:C:C6	2.52	0.44
53:5:1256:U:H6	53:5:1256:U:H2'	1.65	0.44
53:5:1273:A:C8	53:5:1275:U:H1'	2.52	0.44
53:5:1287:G:C2	53:5:1299:C:C2	3.05	0.44
53:5:1390:G:C5	53:5:1461:G:C2	3.06	0.44
54:7:23:G:C2	54:7:24:A:C5	3.05	0.44
4:9:109:THR:HG21	4:9:137:LYS:HE2	2.00	0.43
5:A:114:GLY:HA3	53:5:1093:A:H1'	2.00	0.43
5:A:158:ARG:HE	5:A:162:PHE:HE1	1.66	0.43
5:A:199:VAL:HA	5:A:213:PHE:O	2.18	0.43
6:B:185:ILE:HG12	6:B:206:ASN:CG	2.43	0.43
7:C:49:GLY:O	7:C:53:GLN:NE2	2.51	0.43
8:D:166:ILE:HD13	53:5:10:G:OP1	2.18	0.43
9:E:13:LEU:HD12	9:E:81:GLN:HG3	2.00	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:J:47:GLY:HA2	53:5:688:G:O6	2.18	0.43
15:K:12:ARG:HD2	53:5:560:U:H1'	2.00	0.43
25:a:143:GLU:HA	25:a:170:ILE:HG21	2.00	0.43
25:a:150:ILE:HD12	25:a:150:ILE:HA	1.86	0.43
26:b:186:GLU:H	26:b:186:GLU:CD	2.25	0.43
27:c:90:VAL:HG13	27:c:91:PHE:CD2	2.54	0.43
27:c:97:ARG:CZ	51:3:622:U:H5''	2.48	0.43
27:c:115:VAL:HA	27:c:118:GLU:HG2	1.99	0.43
27:c:201:LYS:O	27:c:205:LYS:NZ	2.47	0.43
28:d:8:TYR:HA	28:d:12:ILE:HG12	2.00	0.43
28:d:27:GLN:CD	52:4:55:A:H1'	2.43	0.43
31:g:32:MET:O	51:3:1090:G:H4'	2.18	0.43
34:j:71:ARG:NE	34:j:77:LEU:H	2.16	0.43
37:m:109:ASP:CG	51:3:1683:G:HO2'	2.21	0.43
38:n:57:SER:HB3	38:n:64:ASN:CB	2.44	0.43
43:s:26:LYS:CA	43:s:83:ILE:O	2.54	0.43
43:s:62:PRO:HA	43:s:75:SER:OG	2.17	0.43
48:x:43:HIS:HB3	48:x:46:TYR:HB3	1.99	0.43
49:y:27:LEU:HB3	49:y:36:LYS:HE3	1.99	0.43
50:z:5:ARG:HH12	50:z:26:LYS:NZ	2.15	0.43
51:3:60:G:C6	51:3:72:G:N1	2.86	0.43
51:3:225:A:O4'	51:3:237:A:O2'	2.33	0.43
51:3:244:G:H3'	51:3:245:U:C6	2.53	0.43
51:3:349:G:C2	51:3:350:C:C2	3.06	0.43
51:3:421:A:H2'	51:3:423:C:N4	2.31	0.43
51:3:432:G:C6	51:3:433:A:C5	3.06	0.43
51:3:432:G:C2	51:3:433:A:C4	3.05	0.43
51:3:680:A:H61	51:3:2357:G:H21	1.66	0.43
51:3:807:U:H2'	51:3:808:U:C6	2.53	0.43
51:3:819:U:C2	51:3:827:G:C8	3.06	0.43
51:3:896:U:H1'	51:3:2276:A:H5''	2.00	0.43
51:3:1047:A:C4	51:3:1048:A:C5	3.06	0.43
51:3:1095:U:C4	51:3:1123:A:N7	2.86	0.43
51:3:1213:U:H2'	51:3:1214:U:N1	2.33	0.43
51:3:1554:A:C5	51:3:1577:A:C8	3.06	0.43
51:3:1630:A:H2'	51:3:1631:A:O4'	2.18	0.43
51:3:1718:C:N3	51:3:1739:G:N1	2.65	0.43
51:3:1865:A:N6	51:3:1891:A:H2'	2.32	0.43
51:3:1928:G:H2'	51:3:1929:G:C8	2.53	0.43
51:3:2039:G:H1	51:3:2580:A:H5'	1.82	0.43
51:3:2043:C:H2'	51:3:2044:C:C5	2.53	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:3:2237:U:O2'	51:3:2238:G:H5'	2.18	0.43
51:3:2368:A:H3'	51:3:2369:G:H8	1.83	0.43
51:3:2513:G:C2	51:3:2584:G:C5	3.06	0.43
51:3:2608:A:H2'	51:3:2609:C:C6	2.53	0.43
51:3:2629:G:C2	51:3:2630:U:C2	3.06	0.43
51:3:2685:A:H2'	51:3:2686:C:H6	1.79	0.43
51:3:2747:U:O2	51:3:2772:A:C5	2.71	0.43
51:3:2863:G:H2'	51:3:2864:A:C8	2.53	0.43
52:4:71:A:C6	52:4:72:A:C6	3.06	0.43
53:5:26:C:H2'	53:5:27:A:C8	2.53	0.43
53:5:66:A:H4'	53:5:67:U:C5'	2.48	0.43
53:5:98:G:C2	53:5:311:A:N1	2.86	0.43
53:5:404:A:H2'	53:5:405:C:O4'	2.18	0.43
53:5:681:U:N3	53:5:682:G:N2	2.66	0.43
53:5:683:G:C2	53:5:700:G:H1'	2.53	0.43
53:5:737:U:O2'	53:5:738:A:O4'	2.34	0.43
53:5:795:U:H2'	53:5:796:A:H8	1.83	0.43
53:5:810:U:P	53:5:813:A:H61	2.41	0.43
53:5:973:A:OP1	53:5:1334:A:N6	2.50	0.43
53:5:974:C:C4	53:5:975:C:C4	3.06	0.43
53:5:1391:A:C4	53:5:1392:A:C8	3.05	0.43
53:5:1476:C:H3'	53:5:1479:G:N7	2.33	0.43
54:6:22:A:C8	54:6:49:C:C4	3.06	0.43
54:7:15:A:C8	54:7:23:G:C6	3.07	0.43
54:7:24:A:H3'	54:7:25:G:H8	1.83	0.43
3:2:31:LYS:HE3	51:3:2536:U:H4'	2.00	0.43
4:9:41:LYS:O	4:9:71:SER:OG	2.35	0.43
4:9:380:GLY:HA2	54:6:65:C:O4'	2.17	0.43
5:A:120:PHE:CD1	5:A:123:LEU:HB2	2.53	0.43
6:B:12:PHE:HA	6:B:16:LYS:HG2	2.00	0.43
7:C:13:ARG:NH1	53:5:540:U:O3'	2.51	0.43
7:C:36:GLY:HA3	53:5:540:U:H5'	2.00	0.43
7:C:199:TRP:CG	7:C:202:ARG:HH21	2.35	0.43
8:D:92:VAL:HG12	8:D:118:ALA:HB1	2.00	0.43
8:D:96:ASN:OD1	8:D:96:ASN:N	2.52	0.43
16:L:14:ARG:CZ	16:L:41:PRO:HG2	2.48	0.43
16:L:25:ILE:HD12	16:L:29:ARG:HD2	2.00	0.43
20:P:42:HIS:N	53:5:276:U:O2	2.52	0.43
23:S:60:ILE:CG2	23:S:65:ALA:HB2	2.48	0.43
24:T:19:LYS:O	24:T:22:SER:OG	2.31	0.43
25:a:34:GLU:CD	25:a:37:LEU:HB2	2.42	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:a:218:ARG:HG3	51:3:1600:A:N7	2.33	0.43
26:b:140:PRO:CD	51:3:2587:U:H5'	2.48	0.43
27:c:75:ARG:HD3	27:c:75:ARG:N	2.30	0.43
28:d:88:LYS:HD3	28:d:88:LYS:HA	1.69	0.43
30:f:47:ARG:NH1	30:f:51:LEU:HB2	2.33	0.43
34:j:32:TYR:HB3	34:j:34:PHE:CE2	2.53	0.43
34:j:57:VAL:HG13	51:3:1959:A:H1'	2.00	0.43
34:j:64:ARG:NH2	34:j:99:PHE:O	2.52	0.43
35:k:77:TRP:CE3	35:k:113:LYS:HB2	2.53	0.43
36:l:12:PRO:C	51:3:947:A:H62	2.26	0.43
38:n:85:LYS:HE3	38:n:85:LYS:HB3	1.79	0.43
38:n:107:GLU:OE2	38:n:111:GLU:HB3	2.19	0.43
42:r:35:ILE:HD11	49:y:25:GLN:H	1.83	0.43
44:t:44:ARG:HA	51:3:516:A:O3'	2.18	0.43
47:w:27:LEU:HG	47:w:31:PHE:CE2	2.53	0.43
51:3:122:G:H2'	51:3:123:G:H8	1.81	0.43
51:3:127:A:O2'	51:3:128:A:O4'	2.26	0.43
51:3:182:C:H3'	51:3:183:A:C8	2.53	0.43
51:3:190:G:N1	51:3:191:G:C5	2.86	0.43
51:3:277:C:N4	51:3:293:G:H21	2.16	0.43
51:3:305:U:C2	51:3:306:G:C8	3.06	0.43
51:3:348:A:C2	51:3:349:G:C5	3.06	0.43
51:3:446:A:C6	51:3:454:G:C6	3.06	0.43
51:3:494:G:N2	51:3:495:U:O4	2.50	0.43
51:3:578:A:H1'	51:3:579:U:H5	1.81	0.43
51:3:677:U:H2'	51:3:678:U:C6	2.53	0.43
51:3:687:G:C5	51:3:688:U:C4	3.07	0.43
51:3:858:A:C4	51:3:859:G:C8	3.06	0.43
51:3:892:G:C6	51:3:893:A:N6	2.86	0.43
51:3:920:G:C2	51:3:921:C:H1'	2.53	0.43
51:3:965:U:C2	51:3:966:U:C5	3.06	0.43
51:3:1475:C:C2	51:3:1491:G:C2	3.06	0.43
51:3:1610:U:H2'	51:3:1611:C:C6	2.50	0.43
51:3:1782:U:N3	51:3:1783:G:H1'	2.32	0.43
51:3:1943:A:H5'	51:3:1947:U:C5	2.53	0.43
51:3:1955:G:N1	51:3:1966:G:C6	2.87	0.43
51:3:2097:A:C5	51:3:2238:G:C6	3.06	0.43
51:3:2297:G:C2	51:3:2352:U:C2	3.06	0.43
51:3:2300:A:H2'	51:3:2301:C:C6	2.53	0.43
51:3:2339:G:N2	51:3:2393:C:C4	2.86	0.43
51:3:2646:G:C2	51:3:2784:A:C8	3.05	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:3:2670:A:C8	51:3:2671:G:C8	3.05	0.43
51:3:2687:A:N1	51:3:2737:G:C6	2.86	0.43
51:3:2753:C:H2'	51:3:2754:U:C6	2.53	0.43
53:5:39:G:H2'	53:5:39:G:N3	2.32	0.43
53:5:351:C:H2'	53:5:352:A:C8	2.53	0.43
53:5:431:U:H2'	53:5:432:U:C6	2.53	0.43
53:5:448:A:N6	53:5:478:G:OP2	2.47	0.43
53:5:576:A:H2'	53:5:577:G:H8	1.82	0.43
53:5:609:G:C2	53:5:610:C:C2	3.06	0.43
53:5:787:A:H2'	53:5:788:G:C8	2.53	0.43
53:5:962:G:H8	53:5:962:G:O5'	2.01	0.43
53:5:974:C:H3'	53:5:975:C:C6	2.54	0.43
53:5:1207:U:O5'	53:5:1207:U:H6	2.01	0.43
53:5:1286:G:N1	53:5:1300:C:N3	2.66	0.43
4:9:23:HIS:HB3	4:9:107:SER:HB2	2.00	0.43
4:9:173:GLY:HA2	4:9:185:TRP:HZ3	1.84	0.43
4:9:248:LEU:HD12	4:9:367:ILE:HD13	1.99	0.43
4:9:301:PRO:HA	4:9:368:ALA:N	2.33	0.43
4:9:317:GLY:O	4:9:382:ARG:HB2	2.18	0.43
5:A:69:TYR:HE1	5:A:231:LEU:HG	1.83	0.43
7:C:53:GLN:HG2	7:C:195:TYR:CG	2.53	0.43
9:E:65:ASP:OD2	9:E:68:SER:N	2.50	0.43
9:E:151:LYS:C	11:G:56:ASN:HD22	2.26	0.43
10:F:5:ARG:HG3	53:5:1353:C:P	2.59	0.43
13:I:60:SER:HB2	53:5:1051:U:O2'	2.18	0.43
14:J:22:ASN:OD1	14:J:40:SER:HB3	2.18	0.43
15:K:133:LYS:HB3	53:5:38:U:OP1	2.18	0.43
16:L:34:LEU:HD11	16:L:41:PRO:HD3	2.00	0.43
21:Q:91:LYS:NZ	53:5:732:A:OP1	2.32	0.43
26:b:163:LYS:O	26:b:165:MET:N	2.51	0.43
27:c:157:VAL:HG13	27:c:197:LEU:HA	1.99	0.43
28:d:16:LEU:HD23	28:d:16:LEU:HA	1.87	0.43
28:d:74:ILE:N	28:d:79:LEU:O	2.31	0.43
28:d:133:LYS:HA	51:3:2313:U:O2	2.18	0.43
29:e:159:PRO:HA	29:e:172:ILE:HB	1.98	0.43
35:k:13:ARG:HD3	35:k:14:ASN:N	2.32	0.43
35:k:26:SER:HB3	51:3:848:U:C5	2.50	0.43
38:n:79:ASP:O	38:n:80:LYS:C	2.60	0.43
42:r:9:ARG:HG3	42:r:100:SER:CB	2.45	0.43
45:u:71:ASP:OD2	51:3:2394:A:H1'	2.17	0.43
51:3:29:G:N2	51:3:548:A:C8	2.86	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:3:38:G:H2'	51:3:38:G:N3	2.32	0.43
51:3:139:G:C6	51:3:140:G:C5	3.07	0.43
51:3:163:A:C6	51:3:164:A:C6	3.07	0.43
51:3:239:U:H2'	51:3:240:C:C6	2.53	0.43
51:3:247:U:O2	51:3:248:A:C8	2.71	0.43
51:3:403:U:OP1	51:3:403:U:H3'	2.17	0.43
51:3:464:A:N6	51:3:465:A:C2	2.86	0.43
51:3:538:A:H5'	51:3:540:A:H8	1.83	0.43
51:3:568:G:C6	51:3:594:G:N1	2.87	0.43
51:3:642:A:H2'	51:3:643:A:H8	1.84	0.43
51:3:739:G:H8	51:3:739:G:OP2	2.01	0.43
51:3:816:A:H2	51:3:1783:G:N3	2.15	0.43
51:3:907:A:H3'	51:3:908:A:C8	2.54	0.43
51:3:939:U:H2'	51:3:940:A:C8	2.54	0.43
51:3:1134:G:H2'	51:3:1135:C:O4'	2.18	0.43
51:3:1150:U:O2'	51:3:1151:U:O5'	2.33	0.43
51:3:1155:G:C5	51:3:1156:C:C4	3.06	0.43
51:3:1310:U:H2'	51:3:1311:G:O4'	2.19	0.43
51:3:1320:C:C2	51:3:1321:C:C6	3.06	0.43
51:3:1442:G:C4	51:3:1443:A:C8	3.07	0.43
51:3:1500:A:C6	51:3:1544:G:N1	2.86	0.43
51:3:1508:G:C2	51:3:1534:A:N6	2.84	0.43
51:3:1581:U:O5'	51:3:1581:U:H6	2.02	0.43
51:3:1609:U:H2'	51:3:1610:U:H6	1.83	0.43
51:3:1688:A:H2'	51:3:1689:A:C8	2.52	0.43
51:3:1830:G:C6	51:3:1831:G:C6	3.06	0.43
51:3:1875:C:H3'	51:3:1876:G:H8	1.83	0.43
51:3:2067:A:H1'	51:3:2510:G:O4'	2.17	0.43
51:3:2205:U:H1'	51:3:2206:A:C8	2.54	0.43
51:3:2255:A:C6	51:3:2256:C:N4	2.86	0.43
51:3:2327:U:H6	51:3:2327:U:OP2	2.02	0.43
51:3:2347:G:O2'	52:4:39:U:O4	2.31	0.43
51:3:2787:U:OP1	51:3:2788:U:H2'	2.18	0.43
51:3:2790:A:C2'	51:3:2791:U:H5'	2.49	0.43
51:3:2878:G:C2	51:3:2879:U:C5	3.06	0.43
53:5:97:G:H2'	53:5:98:G:O4'	2.18	0.43
53:5:106:C:O3'	53:5:107:A:C8	2.72	0.43
53:5:118:C:H2'	53:5:119:U:O4'	2.18	0.43
53:5:135:A:H4'	53:5:1421:A:C2	2.53	0.43
53:5:215:C:C4	53:5:216:G:C5	3.06	0.43
53:5:305:A:C2	53:5:306:G:C5	3.06	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:5:551:A:H2'	53:5:552:U:C6	2.53	0.43
53:5:584:C:O2'	53:5:872:C:O2'	2.23	0.43
53:5:649:U:O4	53:5:749:G:H1'	2.19	0.43
53:5:835:G:C5	53:5:836:C:C4	3.06	0.43
53:5:982:A:N3	53:5:983:G:C8	2.87	0.43
53:5:1149:G:H2'	53:5:1150:G:O4'	2.18	0.43
53:5:1153:G:H2'	53:5:1155:A:OP2	2.18	0.43
53:5:1210:U:H2'	53:5:1211:A:O4'	2.18	0.43
53:5:1381:U:O2	53:5:1492:G:N2	2.51	0.43
53:5:1388:A:C6	53:5:1389:U:C2	3.06	0.43
53:5:1469:G:H5'	54:6:38:G:O6	2.18	0.43
54:6:19:G:N1	54:6:59:A:N3	2.66	0.43
54:7:54:G:O6	54:7:62:C:N4	2.35	0.43
1:0:5:TYR:CD1	51:3:823:A:H2	2.36	0.43
1:0:10:LEU:O	1:0:14:LYS:HG3	2.18	0.43
4:9:20:HIS:CE1	4:9:21:ILE:HG12	2.53	0.43
4:9:28:LEU:HD12	4:9:28:LEU:HA	1.81	0.43
4:9:134:PHE:HB2	4:9:192:LEU:CD1	2.47	0.43
4:9:139:ASP:N	4:9:174:SER:HB3	2.33	0.43
4:9:305:PHE:CE1	4:9:361:VAL:HB	2.53	0.43
6:B:19:ILE:HD11	6:B:56:VAL:O	2.18	0.43
12:H:89:LEU:HA	12:H:92:PHE:HB3	1.99	0.43
12:H:97:LYS:HD2	12:H:100:LEU:HB3	1.98	0.43
12:H:116:LYS:HB2	12:H:120:LEU:HB2	2.01	0.43
15:K:25:HIS:CB	15:K:37:ASN:HB2	2.47	0.43
15:K:44:ARG:NH1	53:5:358:G:C8	2.86	0.43
22:R:34:TRP:CG	53:5:1010:A:C4	3.06	0.43
25:a:2:PRO:CG	25:a:25:LEU:HD21	2.48	0.43
25:a:164:ALA:HB1	25:a:205:ASN:O	2.18	0.43
25:a:171:LEU:O	25:a:181:ILE:HB	2.17	0.43
28:d:16:LEU:O	28:d:20:PHE:N	2.42	0.43
30:f:47:ARG:HH22	30:f:51:LEU:HB2	1.83	0.43
30:f:67:LYS:HA	30:f:70:GLU:OE1	2.17	0.43
36:l:72:MET:HB2	36:l:94:VAL:O	2.18	0.43
36:l:91:GLU:HB2	36:l:92:PHE:CD2	2.53	0.43
37:m:59:ASN:HA	37:m:62:GLN:OE1	2.17	0.43
37:m:90:TYR:CZ	37:m:120:ASP:HA	2.54	0.43
40:p:47:ARG:HH12	51:3:594:G:C4'	2.31	0.43
43:s:70:ARG:NH2	51:3:492:C:H2'	2.32	0.43
44:t:1:MET:HE3	44:t:1:MET:HB2	1.86	0.43
50:z:7:THR:HG21	50:z:23:LYS:HB3	2.01	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:z:8:ARG:HB2	50:z:50:VAL:O	2.17	0.43
51:3:69:U:H2'	51:3:70:G:O4'	2.18	0.43
51:3:314:G:H3'	51:3:316:C:C5	2.53	0.43
51:3:379:A:H4'	51:3:380:A:H8	1.83	0.43
51:3:483:A:N6	51:3:490:A:C4	2.86	0.43
51:3:493:A:N7	51:3:508:A:N6	2.66	0.43
51:3:500:U:H3	51:3:719:G:H4'	1.83	0.43
51:3:562:C:H1'	51:3:563:A:C5	2.53	0.43
51:3:612:G:H2'	51:3:613:C:C6	2.53	0.43
51:3:639:G:C6	51:3:640:U:C2	3.06	0.43
51:3:666:G:N1	51:3:670:G:C6	2.86	0.43
51:3:675:U:C4	51:3:685:G:O6	2.71	0.43
51:3:689:U:H3'	51:3:690:U:C6	2.53	0.43
51:3:861:U:H5''	51:3:2437:G:OP1	2.18	0.43
51:3:875:G:N1	51:3:876:A:C5	2.87	0.43
51:3:883:A:O2'	51:3:969:A:N1	2.46	0.43
51:3:889:G:C6	51:3:890:U:C4	3.07	0.43
51:3:1137:C:H2'	51:3:1137:C:O2	2.18	0.43
51:3:1338:G:C8	51:3:1339:U:C2	3.07	0.43
51:3:1457:A:H8	51:3:1457:A:P	2.42	0.43
51:3:1646:G:H2'	51:3:1647:A:O4'	2.19	0.43
51:3:1651:C:H4'	51:3:1651:C:OP1	2.18	0.43
51:3:1676:G:C2	51:3:1677:G:C2	3.06	0.43
51:3:1692:A:C6	51:3:1693:U:C4	3.06	0.43
51:3:1723:A:OP2	51:3:1732:A:N6	2.42	0.43
51:3:1822:A:C6	51:3:1824:G:C6	3.06	0.43
51:3:1959:A:C8	51:3:1960:A:C8	3.07	0.43
51:3:1962:U:O5'	51:3:2559:C:O2'	2.29	0.43
51:3:1993:U:H2'	51:3:1994:U:C6	2.53	0.43
51:3:2088:U:H2'	51:3:2245:G:N2	2.33	0.43
51:3:2205:U:O3'	51:3:2206:A:H2'	2.19	0.43
51:3:2381:G:C6	51:3:2389:A:N1	2.86	0.43
51:3:2468:U:H1'	51:3:2501:U:O2	2.17	0.43
51:3:2498:G:H1'	51:3:2499:U:C2	2.53	0.43
51:3:2600:G:C6	51:3:2601:U:C4	3.07	0.43
51:3:2796:C:C2	51:3:2797:C:C5	3.06	0.43
52:4:65:G:H3'	52:4:66:A:H8	1.83	0.43
53:5:82:C:H2'	53:5:83:U:C6	2.53	0.43
53:5:154:G:H2'	53:5:155:C:H6	1.83	0.43
53:5:215:C:N4	53:5:216:G:C6	2.86	0.43
53:5:276:U:H4'	53:5:277:G:OP2	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:5:323:A:C5	53:5:325:A:C5	3.06	0.43
53:5:365:U:C2	53:5:389:A:C2	3.07	0.43
53:5:412:G:H2'	53:5:413:G:N7	2.33	0.43
53:5:602:G:H2'	53:5:603:U:C6	2.54	0.43
53:5:615:G:N1	53:5:622:A:C6	2.87	0.43
53:5:670:G:H2'	53:5:671:G:C8	2.54	0.43
53:5:853:A:H2'	53:5:854:A:C8	2.52	0.43
53:5:1056:U:P	53:5:1165:G:H22	2.41	0.43
53:5:1322:U:H2'	53:5:1323:A:C8	2.52	0.43
53:5:1431:A:H3'	53:5:1432:A:C8	2.53	0.43
54:7:18:C:H5''	54:7:19:G:C4'	2.49	0.43
2:1:34:THR:HG23	2:1:37:GLN:NE2	2.33	0.43
4:9:5:LYS:HD3	4:9:265:GLU:C	2.43	0.43
4:9:126:VAL:HA	4:9:374:LYS:HG2	2.01	0.43
4:9:207:VAL:HG12	4:9:207:VAL:O	2.18	0.43
5:A:95:LEU:O	5:A:99:ILE:HG12	2.18	0.43
7:C:109:THR:HB	7:C:112:SER:H	1.83	0.43
7:C:155:LYS:O	7:C:159:GLU:HB2	2.19	0.43
8:D:81:LYS:NZ	53:5:918:A:O3'	2.41	0.43
10:F:73:GLU:HG2	10:F:74:LEU:N	2.33	0.43
11:G:6:LYS:NZ	11:G:8:ILE:HA	2.32	0.43
16:L:53:PHE:O	16:L:57:ARG:N	2.35	0.43
16:L:101:ARG:HE	16:L:104:THR:HG22	1.83	0.43
17:M:29:ARG:NH1	53:5:1177:U:O5'	2.52	0.43
18:N:78:LEU:O	18:N:80:LYS:N	2.52	0.43
22:R:3:ARG:HB2	22:R:4:SER:H	1.59	0.43
23:S:66:ARG:HD3	53:5:171:A:H4'	2.01	0.43
24:T:44:GLU:O	24:T:48:ILE:HG22	2.19	0.43
25:a:52:LYS:HZ3	51:3:1814:G:P	2.41	0.43
25:a:121:ILE:HG21	25:a:133:GLY:HA3	2.00	0.43
26:b:79:LYS:HG2	26:b:80:HIS:CD2	2.54	0.43
27:c:54:THR:N	27:c:57:GLU:HB2	2.33	0.43
27:c:97:ARG:HA	51:3:623:A:H5''	2.01	0.43
28:d:66:VAL:HB	52:4:40:U:H5'	2.01	0.43
28:d:126:GLY:HA3	28:d:160:THR:C	2.44	0.43
31:g:50:LYS:O	31:g:84:VAL:N	2.51	0.43
32:h:19:ALA:HB1	32:h:39:PHE:HB3	2.01	0.43
33:i:10:GLU:OE2	33:i:13:ASN:N	2.52	0.43
33:i:15:ARG:HD3	33:i:15:ARG:H	1.82	0.43
33:i:105:TYR:HD1	33:i:106:ASN:OD1	2.01	0.43
33:i:116:ARG:NE	51:3:590:U:H3'	2.33	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:j:9:ASN:HA	34:j:18:GLN:OE1	2.18	0.43
34:j:43:VAL:HB	34:j:55:GLY:H	1.83	0.43
36:l:70:PRO:HB3	36:l:94:VAL:O	2.18	0.43
38:n:5:THR:OG1	52:4:28:C:OP1	2.27	0.43
39:o:10:ILE:HA	39:o:13:VAL:HG22	1.99	0.43
39:o:13:VAL:HA	39:o:16:LYS:NZ	2.34	0.43
39:o:66:VAL:O	39:o:76:GLU:HA	2.19	0.43
40:p:83:LYS:NZ	51:3:1187:C:OP1	2.44	0.43
42:r:88:ARG:HB2	42:r:93:SER:HA	2.00	0.43
44:t:95:PRO:HB2	44:t:98:ASN:H	1.84	0.43
45:u:30:SER:HB3	51:3:2269:C:C6	2.53	0.43
51:3:53:G:C1'	51:3:119:A:N6	2.81	0.43
51:3:188:G:C5	51:3:217:A:N6	2.87	0.43
51:3:319:G:H2'	51:3:320:A:C8	2.53	0.43
51:3:513:A:O2'	51:3:514:A:O4'	2.35	0.43
51:3:705:A:H8	51:3:705:A:OP2	2.02	0.43
51:3:740:A:C2	51:3:741:A:C4	3.07	0.43
51:3:741:A:C8	51:3:760:G:N2	2.72	0.43
51:3:830:A:C5	51:3:831:U:C4	3.06	0.43
51:3:942:A:N3	51:3:943:A:H1'	2.33	0.43
51:3:966:U:H2'	51:3:967:U:H6	1.84	0.43
51:3:1077:G:C8	51:3:1149:G:N1	2.86	0.43
51:3:1170:C:H3'	51:3:1172:G:OP1	2.17	0.43
51:3:1364:A:C6	51:3:1365:G:C6	3.06	0.43
51:3:1557:G:H3'	51:3:1571:G:N2	2.27	0.43
51:3:1786:U:C2	51:3:1791:A:N6	2.86	0.43
51:3:1854:A:C2'	51:3:1855:A:H8	2.32	0.43
51:3:1969:C:O2'	51:3:1971:G:OP1	2.33	0.43
51:3:2157:A:H2'	51:3:2158:C:H6	1.83	0.43
51:3:2176:G:N2	51:3:2179:A:O5'	2.34	0.43
51:3:2181:A:H2'	51:3:2181:A:N3	2.33	0.43
51:3:2233:A:H4'	51:3:2234:C:H6	1.83	0.43
51:3:2295:A:C5	51:3:2297:G:C8	3.06	0.43
51:3:2414:U:O2'	51:3:2415:A:P	2.76	0.43
51:3:2820:G:H2'	51:3:2821:U:C6	2.54	0.43
51:3:2849:G:C2	51:3:2875:U:O2	2.70	0.43
52:4:19:G:N1	52:4:61:A:C6	2.87	0.43
52:4:70:G:C2	52:4:93:U:C4	3.07	0.43
52:4:71:A:N6	52:4:72:A:N1	2.67	0.43
52:4:107:G:C6	52:4:108:C:C2	3.06	0.43
53:5:197:A:O2'	53:5:198:A:O5'	2.36	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:5:208:A:H2'	53:5:209:A:C8	2.54	0.43
53:5:226:G:C4	53:5:227:A:C8	3.07	0.43
53:5:285:G:N1	53:5:308:C:N3	2.65	0.43
53:5:372:G:C2	53:5:383:U:O2	2.71	0.43
53:5:407:A:C4	53:5:409:G:O4'	2.71	0.43
53:5:447:G:C5'	53:5:449:A:H62	2.27	0.43
53:5:603:U:H2'	53:5:604:U:C6	2.53	0.43
53:5:634:U:C2	53:5:635:G:C8	3.06	0.43
53:5:683:G:C8	53:5:700:G:C2	3.06	0.43
53:5:684:A:C8	53:5:698:U:C4	3.06	0.43
53:5:968:G:H2'	53:5:969:A:C8	2.54	0.43
53:5:1135:U:C4	53:5:1157:G:C6	3.06	0.43
53:5:1283:G:N2	53:5:1303:A:H1'	2.33	0.43
53:5:1344:C:H2'	53:5:1345:G:C8	2.53	0.43
53:5:1363:U:O2'	53:5:1364:C:H5'	2.19	0.43
53:5:1485:C:C4	53:5:1501:G:N1	2.87	0.43
53:5:1496:G:C4	53:5:1497:U:C5	3.07	0.43
53:5:1507:U:OP2	53:5:1508:C:N4	2.42	0.43
54:7:15:A:C6	54:7:16:G:C4	3.07	0.43
54:7:28:A:H2'	54:7:29:C:N3	2.32	0.43
3:2:22:ILE:HB	3:2:24:ARG:HE	1.83	0.43
4:9:147:GLN:HA	4:9:150:VAL:CG2	2.49	0.43
6:B:17:ASN:HD21	6:B:217:ARG:C	2.27	0.43
6:B:33:TRP:C	6:B:60:ARG:HH12	2.20	0.43
6:B:40:ILE:HG22	6:B:44:PHE:CE1	2.53	0.43
7:C:37:GLN:HG2	53:5:539:G:H4'	2.00	0.43
7:C:86:ALA:HB1	7:C:193:GLU:CD	2.43	0.43
7:C:164:SER:HB2	7:C:166:PHE:CE2	2.54	0.43
8:D:185:ARG:HG3	8:D:187:THR:HG23	2.01	0.43
12:H:42:PRO:HG3	53:5:1264:G:N2	2.33	0.43
13:I:43:LYS:HD3	13:I:46:LEU:HD21	2.01	0.43
14:J:28:SER:HA	14:J:34:VAL:HA	2.00	0.43
16:L:5:LEU:HD12	16:L:6:GLY:N	2.33	0.43
16:L:16:GLU:CD	16:L:34:LEU:HD13	2.44	0.43
18:N:71:ASP:HB3	18:N:74:ALA:HB2	2.01	0.43
21:Q:88:LYS:HB3	21:Q:92:ARG:HH22	1.82	0.43
24:T:28:LEU:HA	24:T:31:ARG:HE	1.84	0.43
25:a:182:LEU:O	25:a:189:THR:HA	2.19	0.43
26:b:124:LYS:HA	26:b:124:LYS:HD3	1.76	0.43
27:c:129:ASP:CG	27:c:131:ASN:HB3	2.43	0.43
28:d:152:PHE:HB3	28:d:154:VAL:HG13	2.00	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:d:162:LYS:HB2	28:d:162:LYS:HE3	1.83	0.43
30:f:140:VAL:HG22	30:f:142:VAL:HG23	1.99	0.43
34:j:23:LYS:NZ	51:3:2570:U:H1'	2.33	0.43
37:m:74:ASP:HB3	37:m:77:GLN:HB2	2.01	0.43
43:s:66:ARG:HH12	43:s:71:PHE:HB2	1.84	0.43
45:u:87:GLY:CA	52:4:10:C:H5'	2.48	0.43
51:3:19:G:H2'	51:3:19:G:N3	2.34	0.43
51:3:32:G:C5	51:3:33:C:C5	3.07	0.43
51:3:79:U:H2'	51:3:80:U:C6	2.54	0.43
51:3:160:A:H2'	51:3:161:U:O4'	2.19	0.43
51:3:437:A:H2'	51:3:438:A:O4'	2.19	0.43
51:3:473:U:H6	51:3:473:U:O5'	2.02	0.43
51:3:531:G:C4	51:3:532:A:C8	3.06	0.43
51:3:584:G:C2	51:3:585:U:C2	3.06	0.43
51:3:611:A:O2'	51:3:613:C:OP2	2.30	0.43
51:3:638:A:H3'	51:3:638:A:N3	2.33	0.43
51:3:708:C:C4	51:3:843:G:C6	3.06	0.43
51:3:719:G:H2'	51:3:809:A:N6	2.33	0.43
51:3:773:G:H2'	51:3:774:A:O4'	2.18	0.43
51:3:1052:A:N6	51:3:1181:A:H61	2.17	0.43
51:3:1350:A:H2'	51:3:1351:G:H8	1.83	0.43
51:3:1359:C:H3'	51:3:1361:U:H5	1.84	0.43
51:3:1371:G:C2	51:3:1433:U:C2	3.07	0.43
51:3:1532:A:H8	51:3:1532:A:OP2	2.01	0.43
51:3:1594:G:C4	51:3:1595:C:C6	3.07	0.43
51:3:1777:G:C2	51:3:1778:G:C4	3.06	0.43
51:3:1824:G:C6	51:3:1825:U:C4	3.06	0.43
51:3:1858:U:N3	51:3:1898:G:C6	2.80	0.43
51:3:1989:U:C2	51:3:1990:C:C5	3.07	0.43
51:3:2010:A:C6	51:3:2011:G:C5	3.06	0.43
51:3:2051:G:N1	51:3:2633:C:C2	2.87	0.43
51:3:2105:G:C2	51:3:2106:G:C4	3.06	0.43
51:3:2225:G:H2'	51:3:2226:U:H6	1.84	0.43
51:3:2259:G:C5	51:3:2260:G:C5	3.06	0.43
51:3:2274:A:H1'	51:3:2275:A:N1	2.34	0.43
51:3:2599:C:C2	51:3:2612:G:C2	3.06	0.43
51:3:2793:U:C2'	51:3:2794:U:H5'	2.47	0.43
52:4:38:U:O2	52:4:41:C:O2'	2.23	0.43
53:5:200:G:C6	53:5:216:G:C2	3.07	0.43
53:5:223:G:C6	53:5:224:A:C5	3.07	0.43
53:5:400:G:H3'	53:5:401:U:C6	2.54	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:5:454:U:C2	53:5:474:G:N2	2.76	0.43
53:5:772:G:H2'	53:5:773:G:O4'	2.19	0.43
53:5:949:G:C6	53:5:950:C:N4	2.86	0.43
53:5:983:G:H2'	53:5:984:A:C8	2.53	0.43
53:5:1044:G:H5''	53:5:1175:C:H5	1.83	0.43
53:5:1054:C:C4	53:5:1055:G:C5	3.07	0.43
53:5:1216:G:C2	53:5:1217:G:N7	2.87	0.43
53:5:1280:A:C5	53:5:1306:A:C4	3.07	0.43
53:5:1390:G:C6	53:5:1461:G:C5	3.07	0.43
4:9:55:GLU:OE1	54:6:74:A:H5'	2.18	0.43
4:9:155:ARG:CZ	4:9:166:LYS:HA	2.48	0.43
4:9:227:VAL:HG13	4:9:278:LEU:N	2.34	0.43
4:9:232:VAL:N	4:9:273:ASP:O	2.41	0.43
4:9:313:LYS:HG3	4:9:316:GLU:OE2	2.18	0.43
6:B:11:ARG:H	6:B:16:LYS:NZ	2.16	0.43
6:B:121:ARG:HG3	6:B:125:ASN:HD21	1.83	0.43
6:B:153:LYS:NZ	6:B:154:VAL:O	2.45	0.43
7:C:60:MET:HG2	7:C:64:TYR:CD2	2.53	0.43
8:D:72:LYS:HZ2	8:D:74:LYS:HB2	1.83	0.43
14:J:45:PHE:CZ	14:J:55:SER:HA	2.54	0.43
14:J:52:THR:CG2	14:J:55:SER:H	2.28	0.43
19:O:58:LYS:HD3	19:O:58:LYS:HA	1.68	0.43
22:R:11:VAL:HB	22:R:16:LEU:HD21	1.99	0.43
25:a:146:GLN:C	25:a:201:GLY:H	2.26	0.43
26:b:156:ALA:HA	51:3:1165:U:C4	2.53	0.43
27:c:97:ARG:HE	51:3:623:A:P	2.42	0.43
30:f:65:SER:O	30:f:69:LYS:HG2	2.18	0.43
33:i:10:GLU:HG2	33:i:11:GLN:N	2.33	0.43
33:i:119:ARG:O	33:i:122:ILE:HG22	2.17	0.43
34:j:2:VAL:HB	34:j:33:ALA:O	2.18	0.43
34:j:66:LYS:NZ	51:3:1699:A:OP1	2.42	0.43
34:j:80:ASP:OD1	34:j:80:ASP:N	2.51	0.43
36:l:65:TRP:HZ3	36:l:107:ALA:N	2.16	0.43
37:m:43:LYS:HG2	51:3:2842:G:O3'	2.18	0.43
37:m:90:TYR:HB3	37:m:97:TYR:CD1	2.53	0.43
42:r:14:PRO:HA	42:r:17:ALA:HB3	2.00	0.43
50:z:5:ARG:NE	50:z:24:ASN:HA	2.33	0.43
50:z:15:ARG:HD2	50:z:15:ARG:N	2.34	0.43
51:3:40:A:C4	51:3:478:G:C2	3.07	0.43
51:3:51:A:C8	51:3:53:G:C2	3.06	0.43
51:3:82:G:H3'	51:3:83:G:H8	1.83	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:3:138:U:C2	51:3:139:G:N7	2.87	0.43
51:3:226:A:N6	51:3:235:U:O2	2.51	0.43
51:3:254:G:H2'	51:3:255:A:H8	1.82	0.43
51:3:314:G:H1	51:3:393:C:H42	1.67	0.43
51:3:497:C:N4	51:3:505:G:N2	2.66	0.43
51:3:635:G:N3	51:3:636:U:N3	2.66	0.43
51:3:638:A:C6	51:3:639:G:O6	2.71	0.43
51:3:914:G:N2	51:3:936:G:H2'	2.23	0.43
51:3:1010:G:O4'	51:3:1026:A:N6	2.50	0.43
51:3:1098:G:O6	51:3:1111:C:N4	2.51	0.43
51:3:1160:G:O5'	51:3:1161:A:H2'	2.19	0.43
51:3:1303:U:P	51:3:1680:A:H5''	2.58	0.43
51:3:1361:U:C2	51:3:1362:C:C5	3.06	0.43
51:3:1525:G:H2'	51:3:1526:U:C6	2.54	0.43
51:3:1542:G:C4	51:3:1543:U:C5	3.05	0.43
51:3:1576:G:O2'	51:3:1577:A:H5''	2.18	0.43
51:3:1728:A:H8	51:3:1728:A:OP2	2.01	0.43
51:3:1775:G:C6	51:3:1992:C:N4	2.86	0.43
51:3:1874:G:N2	51:3:1882:G:H1'	2.34	0.43
51:3:1946:U:H3	51:3:1974:U:H4'	1.84	0.43
51:3:1950:U:H4'	51:3:1951:A:H3'	2.00	0.43
51:3:2105:G:H2'	51:3:2106:G:C1'	2.48	0.43
51:3:2305:C:N4	51:3:2327:U:O4'	2.51	0.43
51:3:2338:G:C6	51:3:2339:G:C5	3.06	0.43
51:3:2506:C:H2'	51:3:2507:C:C6	2.53	0.43
51:3:2645:U:C2	51:3:2784:A:N7	2.86	0.43
51:3:2795:C:C2	51:3:2796:C:C5	3.07	0.43
52:4:19:G:C6	52:4:61:A:N6	2.87	0.43
52:4:71:A:H2'	52:4:72:A:C8	2.53	0.43
52:4:104:C:O2'	52:4:105:A:H5'	2.19	0.43
53:5:73:G:N1	53:5:83:U:C4	2.86	0.43
53:5:101:A:H2'	53:5:102:G:O4'	2.18	0.43
53:5:197:A:H2'	53:5:198:A:C8	2.53	0.43
53:5:226:G:H2'	53:5:227:A:C8	2.53	0.43
53:5:246:A:N6	53:5:271:G:O6	2.51	0.43
53:5:314:G:N1	53:5:332:A:C6	2.87	0.43
53:5:413:G:C6	53:5:424:U:O2	2.72	0.43
53:5:487:A:H3'	53:5:489:U:C5	2.54	0.43
53:5:529:U:H4'	53:5:530:A:O5'	2.18	0.43
53:5:680:G:H3'	53:5:681:U:H6	1.84	0.43
53:5:902:A:C5	53:5:903:A:C5	3.07	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:5:924:A:C6	53:5:925:C:C4	3.07	0.43
53:5:1125:C:H2'	53:5:1126:U:C2	2.53	0.43
53:5:1161:G:H2'	53:5:1162:G:C8	2.53	0.43
53:5:1178:C:H2'	53:5:1179:A:O4'	2.19	0.43
54:6:16:G:N2	54:6:60:U:C2	2.87	0.43
2:1:29:LEU:HD11	51:3:2399:G:H3'	2.00	0.43
3:2:7:VAL:C	3:2:8:LYS:HD3	2.43	0.43
8:D:196:MET:O	8:D:199:ILE:HG12	2.19	0.43
9:E:19:ASN:HA	9:E:22:ASN:OD1	2.19	0.43
14:J:115:LYS:NZ	53:5:776:C:H4'	2.34	0.43
15:K:96:ARG:HB2	15:K:111:VAL:HG13	2.00	0.43
18:N:30:THR:O	18:N:34:LYS:HE2	2.19	0.43
24:T:29:ALA:O	24:T:33:GLU:HG3	2.18	0.43
26:b:7:PHE:CD1	26:b:206:LEU:HD13	2.54	0.43
26:b:59:ASN:HA	26:b:62:LEU:HB3	2.00	0.43
26:b:142:ARG:HD3	51:3:1690:C:OP1	2.18	0.43
26:b:225:GLN:NE2	39:o:19:LYS:HD3	2.34	0.43
27:c:112:LEU:O	27:c:115:VAL:HG22	2.18	0.43
28:d:33:LYS:HG2	28:d:157:VAL:CG1	2.49	0.43
28:d:39:GLY:HA3	51:3:2315:G:N2	2.34	0.43
28:d:74:ILE:HG21	28:d:77:TYR:CD2	2.53	0.43
34:j:46:ALA:HB3	34:j:54:LYS:N	2.34	0.43
34:j:71:ARG:CZ	34:j:77:LEU:H	2.32	0.43
35:k:55:GLN:OE1	51:3:2436:G:H2'	2.18	0.43
37:m:105:PRO:HB2	37:m:110:ALA:HA	2.01	0.43
39:o:29:ASP:OD2	39:o:93:ARG:NH1	2.51	0.43
39:o:95:LYS:N	39:o:113:LYS:HZ1	2.16	0.43
40:p:12:ARG:NH1	51:3:1281:A:H3'	2.33	0.43
41:q:33:ILE:HG13	41:q:57:CYS:HB2	2.01	0.43
42:r:24:ILE:O	42:r:27:LYS:HG3	2.19	0.43
42:r:70:TYR:HE1	42:r:110:ASN:N	2.17	0.43
44:t:88:LYS:O	44:t:104:PHE:HA	2.19	0.43
46:v:55:LEU:HG	46:v:59:LYS:HE3	2.00	0.43
51:3:26:G:C5	51:3:27:U:C4	3.07	0.43
51:3:56:G:H2'	51:3:57:G:C8	2.53	0.43
51:3:57:G:C2	51:3:58:A:C5	3.07	0.43
51:3:57:G:N2	51:3:117:C:C2	2.87	0.43
51:3:219:G:H5''	51:3:219:G:H8	1.82	0.43
51:3:312:U:H3'	51:3:313:G:H8	1.82	0.43
51:3:315:A:N3	51:3:315:A:H2'	2.33	0.43
51:3:329:G:H1	51:3:377:U:H3	1.67	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:3:349:G:C6	51:3:350:C:C4	3.07	0.43
51:3:349:G:H2'	51:3:350:C:C6	2.53	0.43
51:3:421:A:C8	51:3:423:C:OP2	2.71	0.43
51:3:666:G:H22	51:3:668:A:H3'	1.84	0.43
51:3:697:U:H2'	51:3:698:A:C8	2.53	0.43
51:3:783:G:N2	51:3:785:A:N1	2.67	0.43
51:3:891:G:C2	51:3:892:G:C4	3.06	0.43
51:3:893:A:N6	51:3:957:G:H1	2.17	0.43
51:3:1026:A:C2'	51:3:1027:U:H5'	2.49	0.43
51:3:1158:C:O2'	51:3:1159:C:H5'	2.19	0.43
51:3:1185:U:H2'	51:3:1186:A:H5''	2.00	0.43
51:3:1251:G:C6	51:3:1252:C:C4	3.07	0.43
51:3:1493:A:H2'	51:3:1494:U:C6	2.54	0.43
51:3:1495:A:C8	51:3:1548:A:N6	2.85	0.43
51:3:1555:G:C6	51:3:1576:G:C2	3.07	0.43
51:3:1766:A:C6	51:3:2705:G:H1'	2.54	0.43
51:3:1827:U:H4'	51:3:1828:A:OP2	2.18	0.43
51:3:1829:U:C2	51:3:1830:G:C8	3.07	0.43
51:3:2051:G:C2	51:3:2633:C:C2	3.07	0.43
51:3:2121:A:C2	51:3:2122:G:H1'	2.54	0.43
51:3:2161:G:H2'	51:3:2162:U:C6	2.54	0.43
51:3:2286:A:N6	51:3:2287:G:C5	2.86	0.43
51:3:2302:C:N4	51:3:2347:G:O6	2.52	0.43
51:3:2316:G:H5'	51:3:2318:A:OP2	2.18	0.43
51:3:2836:U:H1'	51:3:2838:G:N3	2.34	0.43
52:4:30:U:H3'	52:4:31:G:H5''	2.00	0.43
53:5:70:A:C2	53:5:86:A:N6	2.86	0.43
53:5:120:A:C6	53:5:321:A:C6	3.06	0.43
53:5:145:G:O2'	53:5:147:A:N7	2.41	0.43
53:5:165:A:C6	53:5:166:U:C4	3.07	0.43
53:5:201:G:C2	53:5:202:A:C4	3.07	0.43
53:5:354:U:H2'	53:5:355:A:C8	2.50	0.43
53:5:414:U:H2'	53:5:415:C:C6	2.54	0.43
53:5:571:A:H3'	53:5:571:A:H8	1.84	0.43
53:5:705:A:C6	53:5:706:U:C4	3.07	0.43
53:5:778:A:H5'	53:5:1497:U:O2'	2.19	0.43
53:5:868:G:C6	53:5:869:U:C2	3.06	0.43
53:5:1127:A:O2'	53:5:1128:G:H8	2.01	0.43
53:5:1221:A:H3'	53:5:1222:U:C6	2.54	0.43
53:5:1252:C:H1'	53:5:1257:C:O2	2.18	0.43
53:5:1275:U:H2'	53:5:1277:C:C5	2.53	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:5:1402:U:H3'	53:5:1403:A:H8	1.83	0.43
53:5:1490:G:C2	53:5:1496:G:C4	3.07	0.43
54:7:9:U:C4	54:7:14:C:C4	3.07	0.43
3:2:2:LYS:HE2	3:2:31:LYS:O	2.18	0.43
4:9:12:HIS:CE1	4:9:78:ALA:HB2	2.54	0.43
4:9:331:PHE:CE2	4:9:361:VAL:HG11	2.53	0.43
4:9:344:LEU:HD13	4:9:348:THR:HG22	2.01	0.43
6:B:181:LEU:HG	53:5:1103:C:N1	2.34	0.43
6:B:198:VAL:O	6:B:199:ILE:HD13	2.19	0.43
9:E:49:ILE:HG23	9:E:50:LYS:N	2.29	0.43
9:E:67:GLN:HA	9:E:70:LYS:HZ3	1.83	0.43
9:E:71:ASP:OD1	9:E:71:ASP:N	2.50	0.43
10:F:49:ILE:HD11	10:F:123:ILE:CG2	2.49	0.43
11:G:26:ARG:HD3	11:G:84:ILE:HB	2.01	0.43
11:G:62:ASN:HB2	11:G:67:LYS:HB2	2.01	0.43
20:P:30:PHE:CE2	20:P:39:VAL:HG23	2.54	0.43
22:R:78:ARG:HD3	53:5:1200:G:H5''	2.01	0.43
24:T:51:LYS:HG3	53:5:1509:A:O2'	2.19	0.43
27:c:185:LYS:HD2	51:3:650:G:N1	2.30	0.43
28:d:39:GLY:C	51:3:2315:G:H1	2.26	0.43
34:j:1:MET:SD	34:j:1:MET:N	2.86	0.43
34:j:88:LYS:O	34:j:90:ASP:N	2.51	0.43
36:l:86:GLY:HA2	45:u:25:LYS:HG2	2.01	0.43
41:q:82:LYS:NZ	51:3:1255:G:H4'	2.34	0.43
46:v:18:ARG:NH2	46:v:24:ILE:HB	2.33	0.43
49:y:11:HIS:HD2	51:3:18:G:O3'	2.02	0.43
49:y:36:LYS:HZ3	51:3:2891:C:H5'	1.84	0.43
51:3:194:A:H2'	51:3:195:A:C8	2.53	0.43
51:3:200:A:C6	51:3:840:G:C2	3.07	0.43
51:3:223:A:O2'	51:3:238:U:O3'	2.31	0.43
51:3:242:G:C6	51:3:264:G:C6	3.07	0.43
51:3:353:G:H2'	51:3:354:C:C5	2.53	0.43
51:3:405:C:H2'	51:3:406:C:C6	2.48	0.43
51:3:420:A:N1	51:3:429:U:C4	2.87	0.43
51:3:999:U:C2	51:3:1000:U:C5	3.06	0.43
51:3:1042:C:O5'	51:3:1042:C:H6	2.01	0.43
51:3:1048:A:H4'	51:3:1049:U:OP1	2.19	0.43
51:3:1140:U:H2'	51:3:1141:U:C6	2.54	0.43
51:3:1163:G:N2	51:3:2526:A:O2'	2.52	0.43
51:3:1172:G:C2'	51:3:1173:G:H5'	2.48	0.43
51:3:1306:G:H2'	51:3:1307:G:C8	2.54	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:3:1471:A:C6	51:3:1472:C:C4	3.06	0.43
51:3:1513:A:H2'	51:3:1514:U:O4'	2.17	0.43
51:3:1553:G:N2	51:3:1577:A:H5'	2.33	0.43
51:3:1594:G:C2'	51:3:1595:C:H5'	2.49	0.43
51:3:1731:G:C8	51:3:1732:A:H2'	2.53	0.43
51:3:2009:U:H2'	51:3:2010:A:C8	2.53	0.43
51:3:2023:U:H5'	51:3:2064:G:O3'	2.19	0.43
51:3:2033:G:C6	51:3:2034:G:C5	3.07	0.43
51:3:2065:A:H8	51:3:2065:A:OP2	2.02	0.43
51:3:2247:G:H2'	51:3:2248:C:O4'	2.19	0.43
51:3:2289:C:H5'	51:3:2396:A:C6	2.54	0.43
51:3:2551:G:C8	51:3:2774:A:H5''	2.53	0.43
51:3:2671:G:C2	51:3:2672:G:H1'	2.54	0.43
53:5:75:A:H2'	53:5:76:G:C8	2.54	0.43
53:5:82:C:C2	53:5:83:U:C5	3.07	0.43
53:5:122:C:C4	53:5:123:U:C4	3.07	0.43
53:5:123:U:C2	53:5:124:U:C5	3.07	0.43
53:5:201:G:C6	53:5:202:A:C6	3.07	0.43
53:5:267:C:H2'	53:5:268:C:C6	2.54	0.43
53:5:320:G:N2	53:5:322:G:H3'	2.33	0.43
53:5:409:G:N2	53:5:425:G:H1'	2.25	0.43
53:5:421:G:H2'	53:5:422:A:O4'	2.19	0.43
53:5:679:U:C2	53:5:680:G:N7	2.87	0.43
53:5:834:G:C2	53:5:835:G:C5	3.06	0.43
53:5:874:C:C2	53:5:875:G:N7	2.87	0.43
53:5:922:G:C6	53:5:923:G:C5	3.07	0.43
53:5:972:A:H4'	53:5:976:U:O2	2.18	0.43
53:5:1236:A:O4'	53:5:1258:U:H4'	2.18	0.43
53:5:1394:G:C5	53:5:1395:C:C5	3.07	0.43
53:5:1464:G:C2	53:5:1465:U:C2	3.06	0.43
54:6:43:G:H3'	54:6:44:U:C4'	2.48	0.43
54:7:53:A:C6	54:7:54:G:C5	3.07	0.43
4:9:195:ALA:HA	4:9:198:GLU:HG2	2.01	0.43
4:9:209:LYS:HB2	4:9:234:ARG:HB2	2.00	0.43
5:A:136:LYS:O	5:A:139:GLU:HB3	2.19	0.43
6:B:159:ARG:N	6:B:165:ILE:HA	2.34	0.43
8:D:181:LYS:HD2	8:D:181:LYS:HA	1.63	0.43
9:E:146:THR:CA	11:G:60:LEU:HG	2.47	0.43
10:F:36:GLY:O	10:F:39:GLN:HB2	2.19	0.43
11:G:26:ARG:O	11:G:76:TYR:OH	2.37	0.43
17:M:41:ARG:HD3	17:M:41:ARG:H	1.83	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:R:10:PHE:H	22:R:39:THR:CG2	2.32	0.43
23:S:76:LEU:C	23:S:78:LYS:H	2.26	0.43
25:a:215:LYS:HG3	25:a:217:GLY:N	2.34	0.43
26:b:11:VAL:HG11	39:o:9:LEU:HD11	2.00	0.43
26:b:45:ASP:C	26:b:47:TYR:H	2.26	0.43
27:c:129:ASP:OD1	27:c:132:LEU:HG	2.19	0.43
29:e:67:PHE:HB3	29:e:71:TYR:CD2	2.54	0.43
30:f:6:LYS:HE2	30:f:35:LEU:CB	2.48	0.43
30:f:11:ASN:ND2	30:f:27:ILE:CD1	2.74	0.43
33:i:102:LYS:HG3	33:i:106:ASN:HD21	1.84	0.43
35:k:67:ASN:C	51:3:2423:G:H4'	2.44	0.43
35:k:113:LYS:HG2	35:k:114:LEU:N	2.34	0.43
36:l:109:ILE:HG22	36:l:114:MET:HG3	2.01	0.43
37:m:106:ARG:HD3	37:m:109:ASP:HB2	2.01	0.43
39:o:57:GLY:HA3	39:o:62:GLU:OE1	2.19	0.43
39:o:95:LYS:NZ	39:o:115:LYS:O	2.52	0.43
42:r:77:ASN:CB	42:r:102:ASN:HB2	2.47	0.43
46:v:7:LEU:HD21	46:v:50:VAL:HG13	2.01	0.43
49:y:26:ALA:HB2	51:3:2819:C:H5'	2.01	0.43
49:y:30:CYS:O	49:y:34:GLY:HA2	2.19	0.43
49:y:51:LEU:O	49:y:51:LEU:HG	2.16	0.43
51:3:30:A:H1'	51:3:548:A:N3	2.34	0.43
51:3:49:C:C2	51:3:50:G:C8	3.07	0.43
51:3:220:A:C8	51:3:468:A:C6	3.07	0.43
51:3:229:C:H3'	51:3:230:G:C8	2.54	0.43
51:3:276:A:H1'	51:3:406:C:C1'	2.49	0.43
51:3:305:U:H2'	51:3:306:G:C8	2.54	0.43
51:3:409:A:C8	51:3:438:A:N6	2.85	0.43
51:3:460:G:C6	51:3:461:C:C4	3.06	0.43
51:3:512:G:N3	51:3:514:A:C8	2.87	0.43
51:3:616:G:C2	51:3:1288:C:C2	3.07	0.43
51:3:746:G:C6	51:3:756:A:N1	2.87	0.43
51:3:810:G:C4	51:3:829:A:C8	3.07	0.43
51:3:894:G:H22	51:3:956:U:H3	1.67	0.43
51:3:901:C:H42	51:3:949:C:N4	2.16	0.43
51:3:996:A:C6	51:3:998:C:H1'	2.54	0.43
51:3:1050:A:N7	51:3:1183:A:N1	2.67	0.43
51:3:1075:G:H3'	51:3:1076:U:H6	1.84	0.43
51:3:1132:C:C4	51:3:1133:A:H1'	2.54	0.43
51:3:1174:G:O2'	51:3:1178:A:N6	2.51	0.43
51:3:1254:U:H2'	51:3:1255:G:N7	2.34	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:3:1300:C:O2	51:3:1353:G:O2'	2.36	0.43
51:3:1355:C:C2	51:3:1356:G:N2	2.87	0.43
51:3:1374:U:C2	51:3:1635:G:N2	2.87	0.43
51:3:1503:A:C8	51:3:1540:G:N2	2.84	0.43
51:3:1508:G:H3'	51:3:1509:U:C6	2.54	0.43
51:3:1522:U:OP2	51:3:1523:C:N4	2.47	0.43
51:3:1543:U:H2'	51:3:1544:G:C8	2.54	0.43
51:3:1615:G:C2	51:3:1616:G:C2	3.07	0.43
51:3:1673:U:P	51:3:2717:G:H21	2.42	0.43
51:3:1696:C:H2'	51:3:1697:C:C6	2.54	0.43
51:3:1845:C:C2	51:3:1908:A:N6	2.86	0.43
51:3:1947:U:H1'	51:3:1949:C:N4	2.33	0.43
51:3:2101:A:H2'	51:3:2102:U:O4'	2.19	0.43
51:3:2106:G:C2	51:3:2107:A:C5	3.07	0.43
51:3:2123:A:P	51:3:2174:G:H21	2.41	0.43
51:3:2193:U:O4	51:3:2194:G:C2	2.72	0.43
51:3:2359:G:C2	51:3:2373:G:C2	3.07	0.43
51:3:2400:A:N6	51:3:2432:C:O2	2.52	0.43
51:3:2505:A:H4'	51:3:2506:C:O5'	2.19	0.43
51:3:2575:G:C6	51:3:2576:A:C6	3.07	0.43
51:3:2590:G:H2'	51:3:2591:G:C8	2.52	0.43
51:3:2668:A:C5	51:3:2669:G:C5	3.06	0.43
51:3:2679:G:H2'	51:3:2680:C:H6	1.84	0.43
51:3:2747:U:C2	51:3:2748:A:N7	2.87	0.43
53:5:109:G:C2	53:5:234:G:N1	2.87	0.43
53:5:110:U:H2'	53:5:111:A:C8	2.54	0.43
53:5:369:A:C4	53:5:370:A:C8	3.07	0.43
53:5:457:A:N1	53:5:471:A:C6	2.87	0.43
53:5:672:A:H2'	53:5:673:A:H8	1.83	0.43
53:5:711:G:N3	53:5:774:A:H1'	2.34	0.43
53:5:846:G:C6	53:5:847:G:C5	3.07	0.43
53:5:871:U:H2'	53:5:872:C:C6	2.54	0.43
53:5:1239:U:C4	53:5:1247:G:N1	2.87	0.43
53:5:1329:G:C2	53:5:1330:A:C5	3.07	0.43
53:5:1337:U:O2'	53:5:1339:U:O4	2.32	0.43
54:7:16:G:H22	54:7:60:U:H3	1.65	0.43
1:0:33:LEU:O	1:0:37:LYS:HG3	2.19	0.42
4:9:21:ILE:HA	4:9:25:LYS:HD2	2.00	0.42
4:9:212:LEU:HB3	4:9:233:GLU:HB3	2.01	0.42
5:A:38:ASN:N	5:A:204:THR:O	2.45	0.42
5:A:181:PRO:O	5:A:185:LYS:N	2.52	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:D:207:ARG:HA	8:D:207:ARG:HD2	1.66	0.42
11:G:31:MET:HE1	11:G:80:ARG:HH12	1.84	0.42
12:H:5:SER:OG	12:H:21:LEU:O	2.24	0.42
12:H:24:THR:OG1	12:H:26:ASP:O	2.37	0.42
13:I:43:LYS:HZ2	13:I:81:ILE:CD1	2.29	0.42
14:J:28:SER:OG	14:J:33:ASN:O	2.36	0.42
14:J:113:GLY:C	53:5:713:A:H1'	2.43	0.42
15:K:101:LYS:HD2	53:5:524:C:OP2	2.19	0.42
19:O:53:LEU:HG	19:O:76:PHE:CE1	2.54	0.42
22:R:39:THR:HA	22:R:69:HIS:O	2.18	0.42
23:S:3:ASN:HA	53:5:328:G:P	2.59	0.42
24:T:28:LEU:HG	24:T:31:ARG:HH21	1.83	0.42
25:a:43:LYS:HE2	25:a:61:ARG:NH2	2.33	0.42
25:a:69:ILE:HG23	25:a:109:ILE:HA	2.01	0.42
26:b:16:VAL:HG23	26:b:26:ILE:HG13	2.01	0.42
26:b:22:GLU:OE2	34:j:72:LYS:HD3	2.19	0.42
26:b:120:THR:O	26:b:125:ARG:HB2	2.19	0.42
27:c:60:GLY:HA3	27:c:80:ARG:NH2	2.33	0.42
27:c:152:LEU:HD22	27:c:155:LYS:HG3	2.01	0.42
27:c:176:LYS:HD3	51:3:358:A:OP1	2.19	0.42
28:d:57:LEU:HD12	28:d:57:LEU:HA	1.77	0.42
29:e:107:ASN:O	29:e:108:LEU:HD23	2.19	0.42
29:e:158:GLU:N	29:e:162:GLY:HA2	2.26	0.42
33:i:9:LYS:HE2	33:i:50:ASN:HD21	1.83	0.42
35:k:59:TYR:CE2	35:k:60:ARG:HG2	2.54	0.42
37:m:103:LEU:HG	37:m:114:ALA:HA	2.01	0.42
38:n:11:ARG:HH12	52:4:45:C:H5''	1.84	0.42
39:o:53:LEU:HD23	39:o:54:ARG:H	1.84	0.42
39:o:53:LEU:HB2	39:o:101:ILE:HG13	2.01	0.42
40:p:77:VAL:O	40:p:81:LEU:HG	2.19	0.42
41:q:7:CYS:HB3	41:q:12:TYR:OH	2.19	0.42
41:q:24:LYS:HE3	41:q:24:LYS:HB3	1.94	0.42
43:s:58:LEU:HD12	43:s:80:LEU:HD21	2.01	0.42
45:u:43:GLN:OE1	51:3:960:A:O2'	2.28	0.42
45:u:87:GLY:HA2	52:4:10:C:H5'	2.01	0.42
50:z:33:ALA:HA	50:z:48:LYS:HG2	2.00	0.42
51:3:14:U:C4	51:3:561:A:N7	2.86	0.42
51:3:42:U:C2	51:3:476:G:C2	3.07	0.42
51:3:62:G:N1	51:3:90:G:O6	2.36	0.42
51:3:167:A:C2'	51:3:168:A:H5'	2.49	0.42
51:3:223:A:H3'	51:3:224:G:H8	1.84	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:3:225:A:C4	51:3:270:G:N7	2.87	0.42
51:3:235:U:C4	51:3:236:G:C6	3.06	0.42
51:3:252:G:N7	51:3:254:G:N2	2.65	0.42
51:3:329:G:C8	51:3:378:G:C2	3.07	0.42
51:3:425:U:H4'	51:3:426:U:OP2	2.15	0.42
51:3:431:U:H1'	51:3:432:G:N7	2.34	0.42
51:3:716:G:OP2	51:3:811:G:N2	2.31	0.42
51:3:1015:G:C2	51:3:1018:G:C8	3.06	0.42
51:3:1186:A:C6	51:3:1187:C:C4	3.07	0.42
51:3:1296:G:O2'	51:3:1297:U:P	2.77	0.42
51:3:1307:G:C2	51:3:1320:C:C2	3.07	0.42
51:3:1406:A:H4'	51:3:1407:U:C5	2.54	0.42
51:3:1490:G:C4	51:3:1491:G:C8	3.07	0.42
51:3:1675:A:N6	51:3:1676:G:N1	2.67	0.42
51:3:1692:A:C6	51:3:2010:A:C6	3.07	0.42
51:3:1737:G:N3	51:3:1738:G:C8	2.87	0.42
51:3:1793:A:N7	51:3:2614:U:H4'	2.33	0.42
51:3:1855:A:N7	53:5:699:A:N6	2.66	0.42
51:3:2460:C:H2'	51:3:2461:A:C8	2.54	0.42
51:3:2621:U:O2'	51:3:2622:A:OP1	2.36	0.42
51:3:2722:G:H2'	51:3:2723:C:H6	1.84	0.42
51:3:2799:U:H3	51:3:2810:A:H2'	1.83	0.42
52:4:57:G:H3'	52:4:58:C:H6	1.84	0.42
53:5:283:U:H2'	53:5:284:A:C8	2.54	0.42
53:5:321:A:H2'	53:5:322:G:N9	2.34	0.42
53:5:324:C:H4'	53:5:325:A:C5'	2.49	0.42
53:5:328:G:C6	53:5:329:C:C4	3.07	0.42
53:5:461:G:C6	53:5:462:G:N3	2.87	0.42
53:5:769:U:C2	53:5:770:G:C8	3.07	0.42
53:5:772:G:N2	53:5:802:C:C2	2.87	0.42
53:5:859:A:H8	53:5:859:A:P	2.42	0.42
53:5:921:G:C5	53:5:1480:G:C5	3.07	0.42
53:5:928:G:H1	53:5:1359:C:N4	2.15	0.42
53:5:1099:G:C6	53:5:1100:C:C4	3.07	0.42
53:5:1331:A:H3'	53:5:1332:U:C6	2.53	0.42
53:5:1334:A:H3'	53:5:1335:G:H8	1.84	0.42
54:6:38:G:C8	54:6:39:A:C8	3.07	0.42
5:A:173:PRO:HG2	5:A:196:ILE:HD13	2.01	0.42
7:C:97:LEU:HG	7:C:134:ILE:H	1.83	0.42
7:C:131:THR:HG21	53:5:618:U:N3	2.27	0.42
8:D:87:ARG:HH12	53:5:1072:G:H8	1.63	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:H:125:ARG:CG	53:5:1323:A:H5''	2.48	0.42
16:L:95:LEU:C	16:L:109:ARG:HD3	2.43	0.42
19:O:61:ASP:O	19:O:64:ARG:HG2	2.19	0.42
22:R:47:ASN:O	22:R:61:TYR:HA	2.19	0.42
25:a:131:LYS:HD2	25:a:131:LYS:H	1.84	0.42
25:a:164:ALA:HB3	25:a:208:HIS:HD2	1.83	0.42
28:d:130:ILE:HB	28:d:154:VAL:CG2	2.50	0.42
29:e:66:ILE:HG12	51:3:2757:A:O4'	2.19	0.42
30:f:27:ILE:HD13	51:3:2206:A:C6	2.54	0.42
35:k:16:LYS:NZ	51:3:1224:G:C8	2.87	0.42
35:k:58:LEU:HA	35:k:61:ARG:NE	2.34	0.42
35:k:139:VAL:HA	35:k:142:ALA:HB3	2.00	0.42
36:l:46:ALA:O	36:l:49:SER:OG	2.32	0.42
37:m:102:LYS:O	49:y:42:VAL:HG13	2.19	0.42
38:n:10:LEU:HA	38:n:13:LYS:HB2	2.00	0.42
40:p:4:LYS:HB3	40:p:4:LYS:HE3	1.82	0.42
41:q:64:LEU:HD22	41:q:86:ARG:O	2.20	0.42
42:r:1:MET:HA	42:r:64:MET:HE1	2.01	0.42
42:r:79:GLY:H	42:r:101:SER:CA	2.32	0.42
43:s:92:SER:O	43:s:92:SER:OG	2.35	0.42
45:u:25:LYS:HD3	45:u:25:LYS:HA	1.72	0.42
45:u:30:SER:CB	51:3:2269:C:H3'	2.48	0.42
45:u:46:ARG:NE	51:3:2361:G:O3'	2.52	0.42
50:z:27:LYS:C	50:z:29:PRO:HD3	2.44	0.42
51:3:35:U:C4	51:3:482:G:O2'	2.64	0.42
51:3:133:G:C2	51:3:151:C:C2	3.07	0.42
51:3:155:A:H61	51:3:178:A:N6	2.18	0.42
51:3:293:G:H8	51:3:293:G:OP2	2.02	0.42
51:3:536:A:P	51:3:536:A:H8	2.42	0.42
51:3:740:A:C2	51:3:741:A:C5	3.06	0.42
51:3:763:G:C4	51:3:765:A:C8	3.07	0.42
51:3:1071:G:C6	51:3:1154:U:N3	2.79	0.42
51:3:1082:A:H2'	51:3:1145:G:N1	2.33	0.42
51:3:1156:C:H2'	51:3:1157:G:C8	2.52	0.42
51:3:1179:G:H2'	51:3:1180:U:O4'	2.19	0.42
51:3:1235:U:C5	51:3:1271:A:N1	2.87	0.42
51:3:1296:G:O2'	51:3:1297:U:OP1	2.37	0.42
51:3:1402:G:C6	51:3:1403:G:C5	3.07	0.42
51:3:1527:U:H2'	51:3:1528:G:H8	1.82	0.42
51:3:1609:U:H2'	51:3:1610:U:O4'	2.18	0.42
51:3:1611:C:H3'	51:3:1612:U:H6	1.80	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:3:1724:A:H2'	51:3:1725:G:H8	1.78	0.42
51:3:1838:A:C6	51:3:1839:C:N4	2.87	0.42
51:3:2006:C:H2'	51:3:2007:U:C6	2.53	0.42
51:3:2032:G:C2	51:3:2033:G:C4	3.07	0.42
51:3:2216:U:C2	51:3:2225:G:C2	3.07	0.42
51:3:2296:A:C6	51:3:2333:G:H1'	2.54	0.42
51:3:2297:G:H2'	51:3:2298:G:O4'	2.19	0.42
51:3:2302:C:H2'	51:3:2303:U:H6	1.84	0.42
51:3:2356:U:O4	51:3:2390:G:C6	2.72	0.42
51:3:2487:U:H2'	51:3:2488:C:O4'	2.19	0.42
51:3:2503:G:C6	51:3:2504:C:C4	3.07	0.42
51:3:2686:C:H2'	51:3:2687:A:H8	1.81	0.42
51:3:2696:G:H5''	51:3:2697:C:O2	2.19	0.42
51:3:2741:A:C5	51:3:2742:U:C4	3.07	0.42
51:3:2888:U:H1'	51:3:2889:U:H5	1.80	0.42
53:5:97:G:C4	53:5:98:G:C8	3.07	0.42
53:5:257:U:N3	53:5:259:A:H3'	2.33	0.42
53:5:293:G:N1	53:5:297:A:C6	2.87	0.42
53:5:295:G:H8	53:5:295:G:O5'	2.01	0.42
53:5:314:G:O2'	53:5:1443:A:O3'	2.38	0.42
53:5:473:A:H3'	53:5:474:G:C8	2.54	0.42
53:5:522:G:H2'	53:5:523:U:C6	2.53	0.42
53:5:578:C:H2'	53:5:579:G:O4'	2.19	0.42
53:5:635:G:N1	53:5:636:G:C5	2.87	0.42
53:5:711:G:C4	53:5:712:A:C8	3.07	0.42
53:5:759:C:H2'	53:5:760:U:C6	2.54	0.42
53:5:895:A:N7	53:5:896:G:H1'	2.34	0.42
53:5:957:C:H2'	53:5:958:G:H8	1.84	0.42
53:5:1065:G:C2	53:5:1093:A:C5	3.07	0.42
53:5:1113:U:C2	53:5:1128:G:N2	2.87	0.42
53:5:1133:A:H4'	53:5:1134:C:O4'	2.19	0.42
53:5:1172:A:H3'	53:5:1173:A:H8	1.83	0.42
53:5:1250:A:C5	53:5:1251:G:C5	3.07	0.42
53:5:1264:G:C5	53:5:1265:U:C5	3.07	0.42
53:5:1381:U:H1'	53:5:1492:G:H21	1.84	0.42
53:5:1495:C:H2'	53:5:1496:G:H8	1.83	0.42
4:9:248:LEU:CD1	4:9:367:ILE:HD13	2.49	0.42
5:A:162:PHE:HB2	5:A:163:PHE:CE2	2.54	0.42
6:B:18:TRP:CD1	17:M:53:ILE:O	2.72	0.42
6:B:65:VAL:HG22	6:B:100:THR:HB	2.02	0.42
8:D:66:PHE:CE2	8:D:96:ASN:HB3	2.55	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:D:97:ARG:HB2	8:D:98:LYS:NZ	2.34	0.42
8:D:150:LEU:O	8:D:180:THR:HA	2.19	0.42
9:E:9:VAL:HA	9:E:81:GLN:HG2	2.00	0.42
10:F:37:LEU:HG	10:F:40:ARG:CZ	2.49	0.42
15:K:30:LEU:HB2	53:5:51:A:N6	2.34	0.42
15:K:85:HIS:HD2	15:K:87:LEU:HB2	1.85	0.42
21:Q:65:SER:HB3	21:Q:69:LYS:HB3	2.00	0.42
26:b:107:TYR:HA	26:b:179:LEU:O	2.19	0.42
31:g:41:ARG:HA	31:g:44:LEU:HB2	1.99	0.42
35:k:84:LYS:HE3	51:3:637:U:C4	2.54	0.42
37:m:36:LYS:NZ	51:3:1686:U:H5'	2.34	0.42
38:n:99:HIS:CG	52:4:46:C:H4'	2.54	0.42
40:p:104:LYS:O	40:p:107:LEU:HB3	2.18	0.42
42:r:35:ILE:HA	42:r:38:ASN:HB2	2.00	0.42
42:r:36:LEU:HA	42:r:39:THR:HG22	2.01	0.42
42:r:89:ALA:HB3	51:3:783:G:OP2	2.20	0.42
43:s:20:GLN:NE2	43:s:21:MET:HG3	2.34	0.42
43:s:68:GLY:HA2	43:s:72:PRO:HG3	2.00	0.42
49:y:10:LYS:HB3	49:y:13:ARG:HH11	1.83	0.42
50:z:6:SER:OG	50:z:21:THR:O	2.24	0.42
50:z:12:ASN:ND2	50:z:48:LYS:HG3	2.28	0.42
51:3:47:G:N3	51:3:471:A:N6	2.67	0.42
51:3:123:G:C2	51:3:124:A:C4	3.07	0.42
51:3:139:G:C6	51:3:145:A:N1	2.87	0.42
51:3:207:C:C6	51:3:208:A:C8	3.07	0.42
51:3:220:A:H3'	51:3:221:A:C8	2.51	0.42
51:3:345:A:H5''	51:3:366:A:C2	2.54	0.42
51:3:355:A:N9	51:3:375:U:H4'	2.33	0.42
51:3:372:G:H2'	51:3:373:U:H5'	2.00	0.42
51:3:427:A:C5	51:3:447:G:C5	3.07	0.42
51:3:442:G:H2'	51:3:443:C:O4'	2.19	0.42
51:3:444:C:H2'	51:3:445:C:H6	1.84	0.42
51:3:586:G:C2'	51:3:587:U:H5'	2.50	0.42
51:3:699:U:H2'	51:3:700:U:O4'	2.19	0.42
51:3:790:U:H2'	51:3:791:A:H8	1.77	0.42
51:3:869:U:C2	51:3:870:A:C8	3.06	0.42
51:3:1032:A:C4	51:3:1033:A:C8	3.07	0.42
51:3:1038:G:C6	51:3:1189:G:C2	3.07	0.42
51:3:1067:A:N6	51:3:1158:C:N4	2.67	0.42
51:3:1109:G:C5	51:3:1110:C:C5	3.06	0.42
51:3:1228:G:C6	51:3:1229:U:C4	3.07	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:3:1228:G:C5	51:3:1280:G:C6	3.07	0.42
51:3:1243:A:N6	51:3:1266:G:H1'	2.34	0.42
51:3:1275:C:O2'	51:3:1276:A:H5'	2.19	0.42
51:3:1318:U:H2'	51:3:1319:C:H6	1.83	0.42
51:3:1381:A:C5	51:3:1406:A:C5	3.07	0.42
51:3:1447:A:O2'	51:3:1449:G:N7	2.34	0.42
51:3:1605:A:H2'	51:3:1606:A:H8	1.80	0.42
51:3:1814:G:C2	51:3:1816:A:H5''	2.54	0.42
51:3:1884:A:C4	51:3:1885:G:C8	3.07	0.42
51:3:2094:A:C2	51:3:2095:A:C5	3.07	0.42
51:3:2115:A:C6	51:3:2190:G:C6	3.07	0.42
51:3:2175:U:H2'	51:3:2176:G:C8	2.55	0.42
51:3:2278:G:C6	51:3:2279:G:C2	3.08	0.42
51:3:2461:A:H2'	51:3:2462:G:O4'	2.19	0.42
51:3:2499:U:OP1	51:3:2578:A:H5''	2.20	0.42
51:3:2527:U:P	51:3:2550:A:H62	2.42	0.42
51:3:2563:U:H3'	51:3:2564:C:H6	1.84	0.42
51:3:2676:G:H2'	51:3:2677:A:H8	1.83	0.42
53:5:10:G:C2	53:5:11:A:C5	3.07	0.42
53:5:58:G:C5	53:5:59:C:N3	2.87	0.42
53:5:103:U:H3'	53:5:284:A:C6	2.55	0.42
53:5:179:U:O2	53:5:187:A:H2	2.02	0.42
53:5:219:A:HO2'	53:5:220:U:P	2.40	0.42
53:5:240:U:C2	53:5:888:A:H1'	2.53	0.42
53:5:271:G:C2	53:5:272:G:C5	3.07	0.42
53:5:375:C:H2'	53:5:376:G:O4'	2.18	0.42
53:5:450:U:H5	53:5:477:U:O4	2.01	0.42
53:5:462:G:H2'	53:5:463:U:H1'	2.01	0.42
53:5:600:G:O6	53:5:633:U:O4	2.37	0.42
53:5:686:C:H2'	53:5:687:G:O4'	2.19	0.42
53:5:741:C:O2'	53:5:742:C:H5'	2.20	0.42
53:5:1130:G:C6	53:5:1131:A:C5	3.07	0.42
53:5:1156:G:H4'	53:5:1157:G:H5'	2.01	0.42
53:5:1214:A:H62	53:5:1273:A:H62	1.67	0.42
53:5:1236:A:C8	53:5:1237:G:C8	3.07	0.42
53:5:1457:G:H5''	53:5:1458:A:OP1	2.19	0.42
53:5:1488:A:H2'	53:5:1489:C:C6	2.55	0.42
54:6:12:C:H2'	54:6:13:U:O4'	2.20	0.42
54:7:4:U:H2'	54:7:5:C:C5	2.53	0.42
54:7:5:C:C4	54:7:71:A:N1	2.87	0.42
3:2:19:ARG:HH21	51:3:2763:C:H3'	1.84	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:9:121:LEU:HD11	4:9:312:LEU:CD2	2.49	0.42
4:9:211:PHE:H	4:9:234:ARG:HE	1.68	0.42
4:9:345:PRO:HD3	4:9:359:ILE:N	2.34	0.42
5:A:131:ASN:HB2	5:A:132:LYS:NZ	2.33	0.42
6:B:78:ILE:HG23	6:B:82:ASN:HD22	1.85	0.42
7:C:67:THR:HG1	7:C:68:ASP:H	1.67	0.42
7:C:72:ARG:C	7:C:76:ARG:HE	2.27	0.42
9:E:7:LEU:HD13	9:E:7:LEU:HA	1.93	0.42
9:E:47:TYR:HA	9:E:48:PRO:HD2	1.93	0.42
9:E:105:GLN:HE21	9:E:106:GLN:NE2	2.16	0.42
11:G:134:GLY:CA	53:5:597:C:H4'	2.50	0.42
12:H:32:VAL:HA	12:H:67:VAL:CG1	2.49	0.42
13:I:62:HIS:ND1	13:I:63:VAL:HG22	2.34	0.42
14:J:110:PRO:HA	53:5:672:A:C2	2.53	0.42
20:P:61:VAL:HB	20:P:77:ILE:HD11	2.00	0.42
22:R:40:ILE:N	22:R:69:HIS:O	2.49	0.42
22:R:81:LYS:HG2	22:R:83:HIS:CE1	2.55	0.42
25:a:100:THR:HA	25:a:105:ALA:O	2.19	0.42
26:b:110:VAL:O	26:b:175:THR:HA	2.19	0.42
28:d:25:ILE:HG21	52:4:52:G:H1'	2.01	0.42
28:d:104:ILE:O	48:x:40:GLY:HA3	2.19	0.42
31:g:100:VAL:HA	31:g:106:MET:CB	2.46	0.42
33:i:26:LEU:HD12	33:i:31:LEU:HB2	2.02	0.42
36:l:65:TRP:HZ3	36:l:106:VAL:C	2.28	0.42
37:m:42:GLN:NE2	37:m:46:ASP:OD2	2.47	0.42
44:t:1:MET:CG	51:3:85:U:H5'	2.45	0.42
47:w:54:ILE:HA	47:w:57:ILE:HD12	2.02	0.42
51:3:26:G:C2'	51:3:27:U:H5'	2.50	0.42
51:3:95:G:H3'	51:3:95:G:OP2	2.19	0.42
51:3:109:G:N1	51:3:110:A:C5	2.87	0.42
51:3:117:C:H3'	51:3:118:G:H8	1.82	0.42
51:3:121:U:C2	51:3:152:A:C6	3.07	0.42
51:3:239:U:H2'	51:3:240:C:O4'	2.19	0.42
51:3:408:G:C6	51:3:460:G:C5	3.07	0.42
51:3:410:G:H1'	51:3:411:U:OP2	2.19	0.42
51:3:515:A:N7	51:3:517:G:C6	2.86	0.42
51:3:522:C:H2'	51:3:523:A:C8	2.55	0.42
51:3:601:U:H4'	51:3:981:A:N6	2.34	0.42
51:3:788:G:O2'	51:3:789:A:H5'	2.20	0.42
51:3:794:G:H2'	51:3:795:G:C8	2.55	0.42
51:3:939:U:H2'	51:3:940:A:O4'	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:3:1048:A:C5	51:3:1049:U:C4	3.08	0.42
51:3:1287:C:H2'	51:3:1288:C:H6	1.83	0.42
51:3:1379:C:N3	51:3:1409:G:N1	2.67	0.42
51:3:1476:C:H5'	51:3:1577:A:H1'	2.01	0.42
51:3:1503:A:C6	51:3:1504:G:H1'	2.53	0.42
51:3:1627:U:C2	51:3:1628:G:C8	3.08	0.42
51:3:1724:A:H62	51:3:1732:A:N6	2.13	0.42
51:3:1935:A:H2'	51:3:1936:G:H4'	2.01	0.42
51:3:2008:A:H2'	51:3:2009:U:H6	1.84	0.42
51:3:2058:G:N2	51:3:2626:A:C6	2.88	0.42
51:3:2091:C:H2'	51:3:2092:U:O4'	2.20	0.42
51:3:2105:G:C4	51:3:2106:G:C8	3.07	0.42
51:3:2120:G:H3'	51:3:2121:A:C8	2.54	0.42
51:3:2122:G:O2'	51:3:2179:A:N6	2.52	0.42
51:3:2242:G:C4	51:3:2243:G:C8	3.07	0.42
51:3:2244:U:C2	51:3:2245:G:C8	3.08	0.42
51:3:2348:U:H2'	51:3:2349:G:C8	2.55	0.42
51:3:2507:C:C4	51:3:2508:U:C4	3.07	0.42
51:3:2528:C:N4	51:3:2550:A:C2	2.86	0.42
51:3:2677:A:C2	51:3:2678:A:C5	3.08	0.42
51:3:2691:C:H2'	51:3:2692:U:C6	2.54	0.42
52:4:22:G:C2	52:4:58:C:O2	2.73	0.42
53:5:28:G:C4	53:5:29:G:C8	3.07	0.42
53:5:98:G:O2'	53:5:349:A:H4'	2.19	0.42
53:5:201:G:H2'	53:5:202:A:C8	2.54	0.42
53:5:409:G:H4'	53:5:410:A:O5'	2.19	0.42
53:5:424:U:H3'	53:5:425:G:C8	2.53	0.42
53:5:446:A:H2'	53:5:447:G:O4'	2.20	0.42
53:5:472:G:H2'	53:5:473:A:H8	1.81	0.42
53:5:727:G:H8	53:5:727:G:P	2.43	0.42
53:5:762:G:C6	53:5:809:G:C4	3.07	0.42
53:5:946:G:C4	53:5:947:U:C6	3.07	0.42
53:5:958:G:C2	53:5:959:A:C4	3.07	0.42
53:5:983:G:C2	53:5:984:A:C5	3.07	0.42
53:5:986:U:C6	53:5:1187:U:H1'	2.55	0.42
53:5:1066:U:H2'	53:5:1067:C:H6	1.83	0.42
53:5:1287:G:H2'	53:5:1288:C:H6	1.85	0.42
53:5:1430:G:H3'	53:5:1431:A:H8	1.84	0.42
53:5:1482:A:C6	53:5:1505:G:C6	3.08	0.42
54:6:55:U:H3'	54:6:55:U:O2	2.18	0.42
54:7:4:U:C6	54:7:5:C:N4	2.88	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:7:19:G:H3'	54:7:20:G:C4	2.54	0.42
3:2:4:ARG:O	3:2:36:GLN:HB3	2.19	0.42
3:2:23:VAL:O	3:2:24:ARG:HG3	2.18	0.42
4:9:46:ARG:NH2	4:9:50:ILE:HD13	2.35	0.42
4:9:125:GLN:HB3	4:9:386:ALA:HB3	2.02	0.42
4:9:135:LEU:HD23	4:9:147:GLN:NE2	2.34	0.42
4:9:194:ASN:O	4:9:198:GLU:HG2	2.19	0.42
7:C:121:HIS:HA	7:C:145:LYS:HD2	2.02	0.42
8:D:81:LYS:HB2	53:5:918:A:P	2.59	0.42
8:D:111:VAL:O	8:D:115:ILE:HG12	2.19	0.42
9:E:145:ARG:HA	11:G:2:ILE:N	2.34	0.42
11:G:125:ASP:OD1	11:G:126:LYS:N	2.53	0.42
12:H:50:MET:HA	12:H:82:ARG:NE	2.34	0.42
12:H:98:LYS:HB3	12:H:98:LYS:HE2	1.80	0.42
12:H:111:ARG:HG2	53:5:1321:G:O5'	2.19	0.42
13:I:24:LEU:HD12	13:I:76:HIS:HB3	2.01	0.42
15:K:42:LEU:O	15:K:43:LYS:HD3	2.20	0.42
15:K:50:VAL:HA	15:K:66:ALA:HA	2.02	0.42
18:N:39:HIS:CE1	53:5:736:U:O2'	2.72	0.42
19:O:53:LEU:HG	19:O:76:PHE:CZ	2.54	0.42
20:P:79:LYS:HD2	20:P:79:LYS:HA	1.76	0.42
21:Q:102:VAL:CG2	53:5:672:A:H4'	2.49	0.42
22:R:36:ARG:HA	22:R:71:LEU:HB3	2.01	0.42
25:a:17:SER:OG	25:a:212:VAL:O	2.36	0.42
26:b:150:GLY:HA3	26:b:157:GLN:N	2.33	0.42
27:c:58:VAL:CG1	27:c:80:ARG:HG2	2.50	0.42
27:c:126:HIS:HB2	27:c:198:LEU:HD22	2.01	0.42
30:f:26:ALA:HB1	51:3:2206:A:C2	2.54	0.42
30:f:100:GLN:HG3	30:f:104:LYS:HZ2	1.84	0.42
33:i:58:ILE:HG21	33:i:133:HIS:HE1	1.85	0.42
34:j:120:GLU:CD	39:o:70:THR:HG21	2.44	0.42
36:l:54:ILE:HA	36:l:57:CYS:SG	2.59	0.42
37:m:35:LEU:O	37:m:39:LYS:HG3	2.19	0.42
38:n:80:LYS:O	38:n:84:LEU:HG	2.20	0.42
40:p:10:ARG:O	40:p:14:LYS:HE3	2.18	0.42
47:w:85:ASN:HA	47:w:88:LYS:CE	2.40	0.42
49:y:5:GLN:NE2	51:3:2062:C:OP1	2.53	0.42
50:z:9:LEU:HD23	50:z:19:TYR:HD2	1.84	0.42
51:3:38:G:N1	51:3:481:C:N4	2.67	0.42
51:3:60:G:H2'	51:3:61:U:H6	1.85	0.42
51:3:60:G:N3	51:3:75:A:C2	2.87	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:3:107:C:H2'	51:3:108:G:C8	2.54	0.42
51:3:483:A:O2'	51:3:509:G:N7	2.48	0.42
51:3:501:G:H21	51:3:718:U:C2'	2.33	0.42
51:3:589:A:H2'	51:3:590:U:O4'	2.19	0.42
51:3:614:C:C2	51:3:1290:G:N1	2.88	0.42
51:3:785:A:O2'	51:3:786:A:O3'	2.35	0.42
51:3:813:G:N2	51:3:822:C:C2	2.87	0.42
51:3:829:A:C2	51:3:830:A:C4	3.07	0.42
51:3:945:U:O4	51:3:946:A:N6	2.52	0.42
51:3:1041:C:C2	51:3:1042:C:C5	3.07	0.42
51:3:1056:A:H3'	51:3:1056:A:N3	2.35	0.42
51:3:1071:G:O6	51:3:1154:U:C4	2.71	0.42
51:3:1121:A:H4'	51:3:1138:A:H2	1.85	0.42
51:3:1131:A:H8	51:3:1131:A:O5'	2.02	0.42
51:3:1161:A:H8	51:3:1161:A:O5'	2.02	0.42
51:3:1311:G:O2'	51:3:1313:G:N7	2.49	0.42
51:3:1401:A:H1'	51:3:2220:A:C5	2.54	0.42
51:3:1422:U:H5''	51:3:1638:C:OP1	2.20	0.42
51:3:1463:G:H2'	51:3:1464:G:C8	2.55	0.42
51:3:1550:G:H2'	51:3:1551:U:O4'	2.19	0.42
51:3:1634:A:N6	51:3:1635:G:C6	2.88	0.42
51:3:1725:G:O6	51:3:1731:G:C2	2.72	0.42
51:3:1876:G:C2	51:3:1880:G:C6	3.08	0.42
51:3:2038:A:C5	51:3:2506:C:H1'	2.54	0.42
51:3:2054:C:H2'	51:3:2055:A:C8	2.54	0.42
51:3:2056:A:H2'	51:3:2057:C:C5	2.54	0.42
51:3:2249:A:C6	51:3:2250:G:C6	3.08	0.42
51:3:2291:U:C6	51:3:2397:G:H2'	2.55	0.42
51:3:2298:G:C2'	51:3:2299:U:H5'	2.49	0.42
51:3:2360:A:C8	51:3:2374:A:C6	3.07	0.42
51:3:2467:A:H3'	51:3:2468:U:C6	2.53	0.42
51:3:2600:G:C6	51:3:2611:G:C6	3.08	0.42
51:3:2661:U:H3'	51:3:2662:A:C8	2.50	0.42
51:3:2841:A:H2'	51:3:2842:G:O4'	2.20	0.42
51:3:2848:A:C5	51:3:2878:G:C6	3.08	0.42
51:3:2854:A:C8	51:3:2872:A:N3	2.88	0.42
52:4:4:G:C6	52:4:105:A:C6	3.08	0.42
53:5:83:U:C2	53:5:84:U:C5	3.07	0.42
53:5:177:G:H2'	53:5:177:G:N3	2.35	0.42
53:5:186:A:H2'	53:5:187:A:C5	2.54	0.42
53:5:357:G:H3'	53:5:358:G:C8	2.55	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:5:472:G:C2	53:5:473:A:C5	3.07	0.42
53:5:519:G:O2'	53:5:534:C:O2'	2.35	0.42
53:5:538:G:C6	53:5:539:G:C5	3.08	0.42
53:5:649:U:O2	53:5:650:A:O2'	2.37	0.42
53:5:670:G:N1	53:5:671:G:C6	2.87	0.42
53:5:717:C:N4	53:5:718:A:N1	2.68	0.42
53:5:1015:U:O4	53:5:1016:A:N6	2.52	0.42
53:5:1050:U:H2'	53:5:1051:U:O4'	2.19	0.42
53:5:1080:G:C2	53:5:1088:C:C2	3.07	0.42
53:5:1160:G:C4	53:5:1161:G:C8	3.08	0.42
53:5:1196:G:C6	53:5:1197:G:C2	3.07	0.42
53:5:1304:U:H2'	53:5:1305:G:O4'	2.18	0.42
53:5:1322:U:N3	53:5:1323:A:C5	2.88	0.42
53:5:1385:A:N1	53:5:1465:U:C2	2.87	0.42
53:5:1390:G:C5	53:5:1391:A:C5	3.07	0.42
53:5:1414:U:H2'	53:5:1415:G:C1'	2.50	0.42
53:5:1482:A:C2	53:5:1505:G:C4	3.07	0.42
53:5:1495:C:H2'	53:5:1496:G:C8	2.54	0.42
54:7:27:A:N6	54:7:45:G:C6	2.86	0.42
4:9:20:HIS:HB3	4:9:23:HIS:CD2	2.55	0.42
4:9:32:ILE:O	4:9:36:LEU:HG	2.20	0.42
4:9:288:GLU:H	4:9:291:GLN:NE2	2.16	0.42
5:A:124:SER:O	5:A:127:ILE:HG12	2.20	0.42
6:B:26:SER:C	6:B:27:HIS:CG	2.97	0.42
7:C:72:ARG:HG2	7:C:200:TYR:HE2	1.84	0.42
7:C:100:ILE:HG13	7:C:136:LEU:CD1	2.50	0.42
7:C:137:ASN:O	7:C:178:TYR:HD2	2.03	0.42
12:H:64:ASP:OD1	12:H:65:ILE:N	2.53	0.42
12:H:115:ARG:HD2	17:M:61:TRP:CD2	2.55	0.42
13:I:45:PRO:O	13:I:47:PRO:HD3	2.20	0.42
16:L:26:GLY:N	53:5:1303:A:H5''	2.29	0.42
18:N:76:ARG:CZ	18:N:76:ARG:HA	2.50	0.42
20:P:9:LEU:HB2	20:P:63:ILE:HB	2.01	0.42
21:Q:78:ASN:O	21:Q:80:GLN:N	2.52	0.42
25:a:61:ARG:HB2	25:a:64:ARG:HH22	1.85	0.42
25:a:138:LEU:HB2	25:a:194:LYS:O	2.19	0.42
26:b:36:VAL:HA	26:b:52:LEU:HD23	2.01	0.42
26:b:47:TYR:CE2	51:3:2645:U:H4'	2.55	0.42
26:b:111:SER:O	26:b:205:VAL:HG13	2.19	0.42
27:c:42:GLN:HA	27:c:45:TRP:CZ2	2.55	0.42
27:c:124:ASN:O	27:c:126:HIS:ND1	2.53	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:i:70:ASN:CG	33:i:74:ASN:HB2	2.44	0.42
36:l:17:TYR:HD2	36:l:41:TRP:CE2	2.38	0.42
36:l:25:SER:OG	36:l:101:THR:HG22	2.19	0.42
41:q:67:LYS:HG2	41:q:69:ASN:ND2	2.35	0.42
41:q:83:TYR:HE2	51:3:1028:C:O2'	2.02	0.42
46:v:52:THR:O	46:v:56:ARG:HG3	2.19	0.42
51:3:39:C:C2	51:3:40:A:C8	3.08	0.42
51:3:122:G:C4	51:3:132:G:C2	3.07	0.42
51:3:242:G:N2	51:3:657:A:O2'	2.53	0.42
51:3:325:G:N1	51:3:383:U:N3	2.51	0.42
51:3:369:C:H2'	51:3:370:C:C6	2.55	0.42
51:3:411:U:H2'	51:3:412:A:O4'	2.20	0.42
51:3:576:A:C6	51:3:586:G:C6	3.08	0.42
51:3:842:U:HO2'	51:3:2067:A:H2	1.62	0.42
51:3:887:A:C6	51:3:964:A:N1	2.88	0.42
51:3:1050:A:C6	51:3:1183:A:C6	3.07	0.42
51:3:1055:A:H8	51:3:1055:A:OP2	2.03	0.42
51:3:1190:A:O3'	51:3:1191:A:H8	2.03	0.42
51:3:1467:U:C2	51:3:1468:U:C6	3.07	0.42
51:3:1676:G:H8	51:3:1676:G:OP2	2.02	0.42
51:3:1685:G:H2'	51:3:1686:U:O4'	2.20	0.42
51:3:1713:U:C2	51:3:1714:U:C5	3.08	0.42
51:3:1744:U:C4'	51:3:2863:G:H21	2.29	0.42
51:3:1773:A:H2'	51:3:1774:G:C8	2.54	0.42
51:3:1855:A:C4	51:3:1856:G:C8	3.07	0.42
51:3:1927:C:H2'	51:3:1928:G:C8	2.39	0.42
51:3:2065:A:H2'	51:3:2066:A:C2	2.52	0.42
51:3:2089:A:C8	51:3:2090:G:C8	3.08	0.42
51:3:2291:U:C5'	51:3:2397:G:HO2'	2.33	0.42
51:3:2301:C:H2'	51:3:2302:C:H6	1.81	0.42
51:3:2341:G:H4'	51:3:2342:U:OP2	2.20	0.42
51:3:2405:G:C6	51:3:2428:C:C4	3.08	0.42
51:3:2629:G:C6	51:3:2630:U:C4	3.07	0.42
51:3:2630:U:C2	51:3:2631:G:C8	3.08	0.42
51:3:2748:A:C4	51:3:2749:A:C8	3.07	0.42
52:4:64:G:H2'	52:4:64:G:OP1	2.19	0.42
52:4:76:A:H2'	52:4:77:G:O4'	2.19	0.42
52:4:76:A:C6	52:4:77:G:C4	3.08	0.42
52:4:77:G:O6	52:4:88:G:N2	2.53	0.42
53:5:81:A:C5	53:5:82:C:C5	3.07	0.42
53:5:382:U:H2'	53:5:383:U:O4'	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:5:389:A:H2'	53:5:390:G:H8	1.84	0.42
53:5:594:A:H3'	53:5:594:A:OP2	2.19	0.42
53:5:602:G:C6	53:5:632:A:N1	2.86	0.42
53:5:614:U:C2	53:5:623:G:N2	2.88	0.42
53:5:933:A:C2	53:5:1351:U:H1'	2.55	0.42
53:5:1114:A:H2'	53:5:1115:G:C8	2.55	0.42
53:5:1226:A:N1	53:5:1328:C:H1'	2.34	0.42
53:5:1262:A:H2'	53:5:1263:A:C8	2.54	0.42
53:5:1371:A:H4'	53:5:1372:C:H3'	2.02	0.42
53:5:1382:C:C2	53:5:1383:A:C8	3.07	0.42
53:5:1390:G:C6	53:5:1391:A:C5	3.08	0.42
53:5:1394:G:C6	53:5:1395:C:C4	3.07	0.42
53:5:1410:A:H61	53:5:1441:C:N4	2.17	0.42
53:5:1423:C:C2	53:5:1424:C:C5	3.07	0.42
53:5:1426:U:H3'	53:5:1427:U:C6	2.55	0.42
54:6:12:C:C4	54:6:13:U:C4	3.08	0.42
54:6:56:U:O4	54:6:58:G:C5	2.73	0.42
5:A:198:VAL:HG23	5:A:211:VAL:HA	2.01	0.42
6:B:117:ARG:CZ	6:B:188:ALA:HB1	2.49	0.42
6:B:151:GLY:H	6:B:175:ASN:HD21	1.68	0.42
9:E:6:ILE:O	9:E:85:GLU:HA	2.19	0.42
9:E:21:VAL:HG22	9:E:24:LYS:HZ3	1.84	0.42
10:F:8:LYS:HD3	53:5:1351:U:H3'	2.01	0.42
11:G:9:LYS:NZ	53:5:821:U:O2'	2.52	0.42
13:I:46:LEU:O	13:I:78:ARG:HA	2.20	0.42
15:K:41:PRO:HD2	53:5:359:A:H61	1.85	0.42
15:K:85:HIS:HA	15:K:112:ARG:CZ	2.49	0.42
15:K:98:GLY:C	15:K:109:HIS:HD2	2.28	0.42
16:L:15:ILE:O	16:L:19:LEU:HD23	2.19	0.42
21:Q:53:LEU:O	21:Q:53:LEU:HD23	2.20	0.42
21:Q:62:ARG:CZ	21:Q:62:ARG:HB2	2.49	0.42
22:R:34:TRP:HB3	53:5:1194:A:O2'	2.19	0.42
23:S:55:ALA:N	23:S:60:ILE:HB	2.34	0.42
25:a:126:HIS:O	25:a:128:ILE:HG23	2.20	0.42
26:b:101:LEU:HD23	26:b:101:LEU:HA	1.87	0.42
26:b:165:MET:HB2	51:3:2628:U:C4'	2.47	0.42
27:c:32:GLN:NE2	35:k:11:LYS:HG2	2.34	0.42
27:c:77:GLY:N	51:3:709:G:H5''	2.35	0.42
27:c:202:GLU:CD	27:c:202:GLU:N	2.78	0.42
28:d:49:PHE:CE1	28:d:50:LEU:HG	2.54	0.42
28:d:128:TYR:CG	28:d:129:THR:N	2.88	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:e:150:GLU:O	29:e:153:LYS:HG2	2.20	0.42
33:i:17:GLN:H	33:i:55:ASP:CG	2.28	0.42
33:i:100:SER:HA	33:i:103:LEU:HB3	2.01	0.42
36:l:123:HIS:HB3	51:3:2475:C:H4'	2.02	0.42
37:m:100:VAL:HG22	37:m:116:LEU:HD13	2.01	0.42
39:o:77:LYS:HB3	39:o:79:PHE:CE1	2.54	0.42
42:r:5:ALA:O	42:r:104:VAL:HA	2.18	0.42
42:r:6:LYS:HE2	42:r:8:PHE:HB2	2.01	0.42
42:r:51:LEU:O	42:r:55:ILE:HG12	2.20	0.42
44:t:76:LEU:O	44:t:86:ILE:HD12	2.19	0.42
44:t:95:PRO:C	44:t:97:THR:H	2.28	0.42
45:u:52:TYR:OH	45:u:58:ARG:NH1	2.44	0.42
47:w:10:LYS:HB3	47:w:14:GLU:CB	2.50	0.42
47:w:92:GLU:O	47:w:93:ALA:C	2.62	0.42
50:z:25:VAL:CG1	50:z:29:PRO:HA	2.44	0.42
51:3:67:C:H2'	51:3:68:C:H6	1.85	0.42
51:3:165:U:H1'	51:3:167:A:H62	1.84	0.42
51:3:167:A:C4	51:3:168:A:C8	3.08	0.42
51:3:211:A:H3'	51:3:212:G:C8	2.50	0.42
51:3:226:A:C6	51:3:228:A:C2	3.08	0.42
51:3:317:U:N3	51:3:392:A:N7	2.67	0.42
51:3:319:G:H2'	51:3:320:A:H8	1.85	0.42
51:3:335:G:C4	51:3:351:G:C2	3.08	0.42
51:3:480:C:C2	51:3:481:C:C5	3.07	0.42
51:3:521:C:H2'	51:3:522:C:C6	2.53	0.42
51:3:535:G:C1'	51:3:540:A:H61	2.29	0.42
51:3:828:A:N1	51:3:2079:G:O3'	2.53	0.42
51:3:856:A:H2'	51:3:982:G:O4'	2.20	0.42
51:3:874:U:H3	51:3:975:G:H1	1.67	0.42
51:3:888:A:C2	51:3:889:G:C8	3.08	0.42
51:3:899:A:C6	51:3:900:G:C6	3.07	0.42
51:3:915:A:H2'	51:3:916:U:O4'	2.19	0.42
51:3:974:C:C2	51:3:975:G:C8	3.08	0.42
51:3:983:A:C2	51:3:1020:G:C8	3.08	0.42
51:3:1151:U:H2'	51:3:1152:U:H6	1.85	0.42
51:3:1286:G:H2'	51:3:1287:C:C6	2.54	0.42
51:3:1402:G:H3'	51:3:1403:G:C8	2.38	0.42
51:3:1429:G:C5	51:3:1430:U:C4	3.07	0.42
51:3:1765:G:P	51:3:1767:A:H62	2.36	0.42
51:3:1789:C:C4	51:3:2617:U:C4	3.08	0.42
51:3:1812:C:O2	51:3:1812:C:H2'	2.20	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:3:1873:A:N6	51:3:1882:G:H1'	2.35	0.42
51:3:1979:G:C2	51:3:1980:G:C5	3.07	0.42
51:3:2072:C:C2	51:3:2073:C:C5	3.08	0.42
51:3:2088:U:C4	51:3:2247:G:O6	2.73	0.42
51:3:2145:A:H2'	51:3:2146:A:H8	1.84	0.42
51:3:2171:A:C6	51:3:2172:A:C2	3.08	0.42
51:3:2275:A:C6	51:3:2280:U:N3	2.88	0.42
51:3:2317:A:H2'	51:3:2318:A:O4'	2.19	0.42
51:3:2354:A:H4'	51:3:2391:G:P	2.60	0.42
51:3:2357:G:O6	51:3:2377:A:N6	2.53	0.42
51:3:2561:G:C6	51:3:2562:U:C2	3.07	0.42
51:3:2566:C:H2'	51:3:2567:C:H6	1.83	0.42
51:3:2729:A:C2	51:3:2730:G:H1'	2.55	0.42
51:3:2814:A:N1	51:3:2894:G:O2'	2.36	0.42
52:4:70:G:C2	52:4:95:G:C6	3.07	0.42
52:4:94:A:H2'	52:4:95:G:O4'	2.19	0.42
53:5:94:A:H62	53:5:320:G:N2	2.16	0.42
53:5:98:G:C6	53:5:99:U:C4	3.08	0.42
53:5:204:C:C2	53:5:212:G:N2	2.88	0.42
53:5:312:A:C6	53:5:334:A:N6	2.88	0.42
53:5:477:U:H5''	53:5:478:G:P	2.59	0.42
53:5:570:A:N3	53:5:912:G:H1'	2.35	0.42
53:5:571:A:H3'	53:5:571:A:C8	2.54	0.42
53:5:881:G:N1	53:5:882:U:O2	2.53	0.42
53:5:946:G:C4	53:5:1206:G:C2	3.07	0.42
53:5:992:U:C2	53:5:993:C:C6	3.08	0.42
53:5:1112:U:H3	53:5:1128:G:H1	0.62	0.42
53:5:1237:G:N2	53:5:1249:G:H1'	2.35	0.42
53:5:1264:G:C4	53:5:1265:U:C5	3.08	0.42
53:5:1401:A:H2'	53:5:1402:U:C6	2.55	0.42
54:6:28:A:H1'	54:6:44:U:O4	2.20	0.42
54:6:71:A:C2	54:6:72:C:C2	3.08	0.42
4:9:330:GLN:O	4:9:377:ILE:HA	2.18	0.42
4:9:339:THR:CB	54:6:67:C:H5'	2.50	0.42
5:A:74:GLU:OE2	9:E:166:PHE:HB3	2.19	0.42
5:A:125:ILE:O	5:A:129:LYS:HG2	2.20	0.42
7:C:85:LEU:HD23	7:C:88:ASN:HD22	1.85	0.42
14:J:65:LYS:O	14:J:68:LYS:HB2	2.20	0.42
14:J:100:ILE:HG12	14:J:102:GLU:N	2.34	0.42
16:L:29:ARG:NE	53:5:1302:C:O2'	2.49	0.42
16:L:42:ASP:HB3	16:L:45:VAL:HB	2.02	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:P:48:HIS:CE1	20:P:66:THR:HG21	2.53	0.42
21:Q:69:LYS:HD2	21:Q:70:ILE:C	2.45	0.42
22:R:34:TRP:CD1	53:5:1010:A:C8	3.07	0.42
24:T:37:ARG:HD2	53:5:1501:G:OP2	2.20	0.42
25:a:61:ARG:HB2	25:a:64:ARG:HH12	1.85	0.42
25:a:218:ARG:O	51:3:1600:A:H8	2.03	0.42
29:e:44:LEU:HD13	29:e:57:ARG:N	2.34	0.42
29:e:112:TYR:HB3	29:e:114:HIS:HB3	2.01	0.42
33:i:23:ALA:O	33:i:64:GLN:HB2	2.19	0.42
37:m:29:GLY:O	37:m:118:LEU:HD13	2.20	0.42
37:m:57:PHE:HA	37:m:60:ARG:HG3	2.02	0.42
39:o:103:TYR:CZ	39:o:104:MET:HG2	2.54	0.42
41:q:64:LEU:CB	41:q:86:ARG:HE	2.31	0.42
43:s:7:LEU:O	47:w:27:LEU:HD11	2.20	0.42
43:s:54:LYS:N	43:s:84:THR:OG1	2.52	0.42
45:u:55:ARG:HA	45:u:71:ASP:OD2	2.19	0.42
46:v:50:VAL:HG11	46:v:55:LEU:HD13	2.02	0.42
49:y:38:LEU:O	49:y:41:ARG:HB2	2.20	0.42
50:z:35:ASN:HD21	51:3:2352:U:H5''	1.85	0.42
51:3:24:U:H2'	51:3:25:G:C8	2.55	0.42
51:3:79:U:H2'	51:3:80:U:H6	1.85	0.42
51:3:86:A:H2'	51:3:101:C:O2	2.20	0.42
51:3:101:C:H5''	51:3:102:A:O5'	2.20	0.42
51:3:158:U:C2	51:3:175:A:C2	3.08	0.42
51:3:193:G:H3'	51:3:209:G:H1	1.84	0.42
51:3:310:U:C6	51:3:311:G:C6	3.07	0.42
51:3:452:U:H2'	51:3:453:U:C6	2.54	0.42
51:3:474:U:H2'	51:3:475:A:C8	2.55	0.42
51:3:723:U:H2'	51:3:724:A:O4'	2.19	0.42
51:3:880:C:H5'	51:3:882:C:H41	1.84	0.42
51:3:1006:U:O2	51:3:1020:G:H1'	2.19	0.42
51:3:1075:G:C6	51:3:1151:U:C4	3.08	0.42
51:3:1122:G:H2'	51:3:1124:G:O4'	2.20	0.42
51:3:1155:G:C6	51:3:1156:C:C4	3.08	0.42
51:3:1265:G:C6	51:3:1266:G:N1	2.88	0.42
51:3:1375:G:C2	51:3:1376:G:H1'	2.55	0.42
51:3:1439:U:H2'	51:3:1440:U:H6	1.82	0.42
51:3:1454:G:C8	51:3:1455:A:H2'	2.54	0.42
51:3:1742:C:H2'	51:3:1743:U:H6	1.82	0.42
51:3:1768:G:H5''	51:3:1769:A:OP2	2.19	0.42
51:3:1836:A:H3'	51:3:1837:C:C5	2.54	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:3:1854:A:H1'	53:5:699:A:C2	2.55	0.42
51:3:1856:G:H2'	51:3:1857:G:C8	2.55	0.42
51:3:1885:G:C5	51:3:1886:C:N4	2.88	0.42
51:3:1914:G:H2'	51:3:1915:C:C6	2.55	0.42
51:3:2005:G:H4'	51:3:2732:A:O2'	2.20	0.42
51:3:2050:G:H2'	51:3:2051:G:C8	2.54	0.42
51:3:2066:A:C4'	51:3:2069:A:H61	2.32	0.42
51:3:2079:G:C6	51:3:2080:C:C4	3.08	0.42
51:3:2121:A:H2'	51:3:2122:G:O4'	2.20	0.42
51:3:2197:U:H3'	51:3:2198:G:H8	1.84	0.42
51:3:2403:C:O5'	51:3:2403:C:H6	2.03	0.42
51:3:2478:G:O6	51:3:2489:G:C2	2.73	0.42
51:3:2532:G:C2	51:3:2548:G:C2	3.08	0.42
51:3:2577:G:C2'	51:3:2578:A:H5'	2.49	0.42
51:3:2638:G:C6	51:3:2897:G:C6	3.08	0.42
51:3:2696:G:H1'	51:3:2729:A:N6	2.34	0.42
51:3:2798:A:H4'	51:3:2896:G:N3	2.35	0.42
52:4:2:U:C2	52:4:107:G:C2	3.08	0.42
52:4:49:G:C6	52:4:50:C:N4	2.88	0.42
53:5:101:A:N6	53:5:102:G:C2	2.88	0.42
53:5:109:G:C2	53:5:234:G:C2	3.07	0.42
53:5:285:G:H2'	53:5:286:C:H6	1.85	0.42
53:5:435:U:O2'	53:5:492:G:N1	2.42	0.42
53:5:505:C:H3'	53:5:506:U:H6	1.85	0.42
53:5:518:A:N6	53:5:527:G:H1'	2.34	0.42
53:5:524:C:H2'	53:5:525:G:H4'	2.02	0.42
53:5:925:C:H2'	53:5:926:C:H6	1.85	0.42
53:5:946:G:C5	53:5:947:U:C4	3.07	0.42
53:5:970:A:H2	53:5:1341:U:H1'	1.81	0.42
53:5:1178:C:C2	53:5:1179:A:C8	3.07	0.42
53:5:1286:G:C2	53:5:1287:G:C8	3.08	0.42
53:5:1314:A:O2'	54:7:33:C:H5''	2.20	0.42
53:5:1354:G:C6	53:5:1355:U:C4	3.07	0.42
53:5:1359:C:H2'	53:5:1360:G:H8	1.83	0.42
53:5:1429:G:H2'	53:5:1430:G:C8	2.55	0.42
53:5:1501:G:N1	53:5:1502:G:C5	2.88	0.42
54:7:57:C:C5	54:7:58:G:N1	2.88	0.42
1:0:6:GLN:HG2	51:3:722:C:O5'	2.20	0.42
4:9:126:VAL:O	4:9:374:LYS:HG2	2.19	0.42
4:9:212:LEU:HD22	4:9:233:GLU:CD	2.45	0.42
4:9:259:ILE:HA	4:9:276:GLY:O	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:A:174:ASN:O	5:A:197:PRO:HD2	2.20	0.42
6:B:169:LYS:HD3	6:B:170:MET:N	2.35	0.42
9:E:2:GLN:HE21	9:E:89:ASN:C	2.28	0.42
9:E:82:VAL:HG12	9:E:85:GLU:HG3	2.02	0.42
9:E:84:ARG:HH12	53:5:670:G:H4'	1.84	0.42
10:F:92:GLN:NE2	10:F:96:ILE:HD13	2.35	0.42
10:F:115:MET:HE3	10:F:119:ILE:HD12	2.01	0.42
11:G:99:ARG:NH1	11:G:103:LYS:HD3	2.35	0.42
12:H:8:GLY:HA3	12:H:84:GLY:O	2.20	0.42
12:H:12:ARG:HB3	12:H:76:GLY:O	2.19	0.42
12:H:13:LYS:HB3	53:5:1346:G:OP1	2.19	0.42
12:H:89:LEU:HD11	12:H:100:LEU:HD22	2.02	0.42
20:P:74:ARG:NH1	53:5:230:G:H5''	2.35	0.42
25:a:171:LEU:HD11	25:a:183:GLN:HB2	2.01	0.42
26:b:83:GLU:HB2	51:3:2643:A:O2'	2.20	0.42
26:b:142:ARG:HD2	51:3:1691:U:OP2	2.18	0.42
28:d:109:PRO:HA	48:x:43:HIS:HB2	2.01	0.42
30:f:103:THR:HA	51:3:166:A:O4'	2.20	0.42
31:g:56:ASN:HB2	31:g:75:ALA:HA	2.01	0.42
33:i:15:ARG:HE	33:i:17:GLN:CD	2.28	0.42
35:k:43:LYS:NZ	51:3:839:A:H3'	2.35	0.42
35:k:83:ASN:HA	35:k:86:ALA:HB3	2.01	0.42
36:l:3:GLN:NE2	36:l:5:LYS:HA	2.35	0.42
38:n:78:ALA:HB1	38:n:112:ARG:HG2	2.02	0.42
41:q:3:ALA:HA	41:q:41:LEU:O	2.19	0.42
42:r:38:ASN:O	49:y:25:GLN:NE2	2.42	0.42
43:s:29:PHE:HD2	43:s:31:VAL:HG12	1.84	0.42
46:v:30:ASN:HB2	51:3:2238:G:C5'	2.47	0.42
49:y:2:ALA:N	51:3:2585:A:H1'	2.35	0.42
50:z:38:CYS:O	50:z:42:ARG:CA	2.68	0.42
51:3:76:A:H5'	51:3:77:G:O4'	2.20	0.42
51:3:159:G:C6	51:3:174:A:N6	2.87	0.42
51:3:225:A:H1'	51:3:237:A:H1'	2.01	0.42
51:3:333:A:C8	51:3:356:A:C6	3.07	0.42
51:3:722:C:H2'	51:3:723:U:C6	2.55	0.42
51:3:856:A:H5''	51:3:857:U:C5'	2.50	0.42
51:3:995:A:H1'	51:3:2465:U:O2'	2.20	0.42
51:3:1075:G:H3'	51:3:1076:U:C6	2.54	0.42
51:3:1309:G:C4	51:3:1310:U:C5	3.08	0.42
51:3:1369:U:H3	51:3:1423:A:H2	1.66	0.42
51:3:1391:U:C2	51:3:1392:G:C8	3.08	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:3:2191:G:C6	51:3:2192:U:C2	3.08	0.42
51:3:2271:C:N4	51:3:2286:A:C6	2.88	0.42
51:3:2587:U:H2'	51:3:2588:U:C6	2.55	0.42
51:3:2631:G:C2	51:3:2632:C:C2	3.08	0.42
51:3:2642:G:N1	51:3:2793:U:N3	2.67	0.42
51:3:2642:G:N2	51:3:2793:U:O2	2.53	0.42
51:3:2752:G:N7	51:3:2769:G:C6	2.88	0.42
51:3:2841:A:C5	51:3:2842:G:N7	2.88	0.42
51:3:2861:G:N2	51:3:2863:G:H3'	2.35	0.42
51:3:2893:C:H2'	51:3:2894:G:O4'	2.19	0.42
52:4:38:U:N3	52:4:42:G:OP2	2.52	0.42
52:4:55:A:H2'	52:4:56:A:O4'	2.20	0.42
53:5:119:U:C2	53:5:226:G:C6	3.08	0.42
53:5:130:G:C2	53:5:131:G:C8	3.08	0.42
53:5:196:G:HO2'	53:5:197:A:P	2.42	0.42
53:5:229:G:C2	53:5:230:G:C5	3.08	0.42
53:5:316:G:C2	53:5:330:C:C2	3.08	0.42
53:5:672:A:H2'	53:5:673:A:O4'	2.20	0.42
53:5:753:C:O5'	53:5:753:C:H6	2.02	0.42
53:5:846:G:N1	53:5:847:G:C5	2.87	0.42
53:5:917:G:C2	53:5:1371:A:C2	3.08	0.42
53:5:949:G:N2	53:5:1202:A:H62	2.08	0.42
53:5:1000:A:H2'	53:5:1001:A:N3	2.35	0.42
53:5:1078:G:H2'	53:5:1079:G:C8	2.54	0.42
53:5:1116:U:C2	53:5:1118:A:C2	3.08	0.42
53:5:1216:G:H2'	53:5:1217:G:C8	2.55	0.42
53:5:1359:C:C2	53:5:1360:G:C8	3.07	0.42
53:5:1407:A:H2	53:5:1443:A:N7	2.17	0.42
53:5:1448:A:C6	53:5:1449:G:C6	3.08	0.42
2:1:33:LYS:HB2	2:1:38:LYS:HE2	2.02	0.42
4:9:227:VAL:HA	4:9:278:LEU:HA	2.01	0.42
4:9:300:LYS:O	4:9:302:HIS:HD2	2.03	0.42
4:9:323:PHE:HB2	4:9:327:TYR:CD2	2.55	0.42
4:9:331:PHE:O	4:9:338:VAL:HG22	2.20	0.42
5:A:135:GLU:O	5:A:139:GLU:N	2.51	0.42
7:C:73:ARG:NH2	53:5:398:G:OP1	2.53	0.42
7:C:146:ALA:HA	7:C:149:ILE:HG22	2.02	0.42
8:D:167:ARG:HB3	8:D:171:GLU:OE2	2.19	0.42
10:F:12:LEU:O	10:F:20:THR:HG23	2.20	0.42
10:F:68:VAL:O	10:F:137:LYS:HG3	2.19	0.42
12:H:41:PHE:HD1	12:H:42:PRO:O	2.02	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:H:128:GLN:NE2	53:5:1316:C:O2	2.53	0.42
14:J:21:ASN:C	14:J:51:LYS:HB3	2.44	0.42
15:K:16:LYS:NZ	15:K:17:VAL:O	2.37	0.42
25:a:134:PHE:O	25:a:200:VAL:HG12	2.20	0.42
30:f:78:HIS:HE1	30:f:143:THR:OG1	2.02	0.42
32:h:33:GLY:HA2	32:h:36:THR:HB	2.02	0.42
35:k:121:GLU:O	35:k:121:GLU:HG3	2.20	0.42
38:n:37:ASN:ND2	38:n:38:HIS:HD2	2.17	0.42
41:q:8:GLY:HA2	51:3:1196:U:H4'	2.01	0.42
41:q:36:ASP:C	41:q:37:LYS:HD2	2.45	0.42
43:s:26:LYS:HE2	43:s:26:LYS:HB2	1.93	0.42
50:z:8:ARG:HE	50:z:17:ILE:HG21	1.85	0.42
50:z:34:LEU:O	50:z:46:VAL:CA	2.61	0.42
51:3:51:A:H61	51:3:181:G:H1'	1.85	0.42
51:3:60:G:N3	51:3:75:A:H2	2.17	0.42
51:3:105:U:H2'	51:3:106:C:O4'	2.20	0.42
51:3:353:G:O2'	51:3:354:C:O4'	2.35	0.42
51:3:408:G:C6	51:3:460:G:N7	2.88	0.42
51:3:419:A:C8	51:3:425:U:C4	3.08	0.42
51:3:512:G:H2'	51:3:513:A:H3'	2.02	0.42
51:3:714:G:O2'	51:3:715:G:H5'	2.20	0.42
51:3:882:C:H2'	51:3:882:C:O2	2.19	0.42
51:3:905:U:C2	51:3:906:G:C8	3.08	0.42
51:3:952:U:C4	51:3:953:G:C5	3.08	0.42
51:3:1047:A:C6	51:3:1048:A:C6	3.08	0.42
51:3:1208:A:H2'	51:3:1209:U:H4'	2.01	0.42
51:3:1215:G:H3'	51:3:1216:U:C6	2.55	0.42
51:3:1251:G:C2	51:3:1259:A:C5	3.08	0.42
51:3:1257:G:C6	51:3:1258:C:C4	3.07	0.42
51:3:1484:G:O6	51:3:2711:C:N4	2.39	0.42
51:3:1504:G:H2'	51:3:1505:G:O4'	2.20	0.42
51:3:1594:G:H2'	51:3:1595:C:O4'	2.20	0.42
51:3:1623:U:C2	51:3:1624:A:C8	3.08	0.42
51:3:1641:A:N3	51:3:1642:G:N7	2.68	0.42
51:3:1661:A:C2	51:3:1674:A:C8	3.07	0.42
51:3:1691:U:O2'	51:3:1692:A:H5'	2.20	0.42
51:3:1741:G:C8	51:3:1763:G:C5	3.08	0.42
51:3:1775:G:C2	51:3:1776:G:C4	3.08	0.42
51:3:1865:A:N6	51:3:1891:A:C8	2.88	0.42
51:3:1876:G:C4	51:3:1878:A:OP2	2.73	0.42
51:3:2050:G:C2	51:3:2051:G:C5	3.07	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:3:2151:G:O3'	51:3:2152:C:H6	2.02	0.42
51:3:2225:G:C6	51:3:2226:U:C4	3.08	0.42
51:3:2292:A:H2'	51:3:2293:C:H6	1.85	0.42
51:3:2331:G:H2'	51:3:2332:U:C6	2.53	0.42
51:3:2515:C:H2'	51:3:2516:G:H8	1.85	0.42
51:3:2604:U:H2'	51:3:2605:G:C8	2.55	0.42
51:3:2747:U:O2	51:3:2748:A:C8	2.73	0.42
51:3:2811:G:H4'	51:3:2812:U:C5'	2.49	0.42
51:3:2836:U:H1'	51:3:2838:G:C2	2.55	0.42
51:3:2863:G:C5	51:3:2864:A:N6	2.88	0.42
52:4:90:G:C4	52:4:91:A:C8	3.08	0.42
53:5:213:U:H4'	53:5:466:U:O4	2.19	0.42
53:5:259:A:H2'	53:5:260:C:C5	2.55	0.42
53:5:320:G:C8	53:5:322:G:OP2	2.73	0.42
53:5:370:A:H2	53:5:386:U:HO2'	1.66	0.42
53:5:380:G:C6	53:5:381:C:N4	2.88	0.42
53:5:429:A:C5	53:5:430:G:N7	2.88	0.42
53:5:474:G:C2	53:5:475:U:N3	2.88	0.42
53:5:491:U:H3'	53:5:492:G:C8	2.50	0.42
53:5:494:A:H2'	53:5:495:U:C5	2.55	0.42
53:5:650:A:O2'	53:5:651:G:C8	2.72	0.42
53:5:778:A:H4'	53:5:1498:G:O4'	2.19	0.42
53:5:974:C:H3'	53:5:975:C:C5	2.54	0.42
53:5:976:U:H3'	53:5:977:U:H6	1.85	0.42
53:5:982:A:H3'	53:5:983:G:H8	1.85	0.42
53:5:1407:A:C2	53:5:1442:A:C5	3.08	0.42
54:6:21:U:N3	54:6:22:A:H1'	2.34	0.42
54:6:53:A:C2	54:6:64:G:C6	3.08	0.42
2:1:21:ARG:HD2	2:1:22:LYS:O	2.19	0.41
4:9:36:LEU:O	4:9:40:GLY:N	2.52	0.41
4:9:146:VAL:O	4:9:150:VAL:HG22	2.20	0.41
5:A:32:MET:HE2	5:A:203:ASN:HD21	1.84	0.41
7:C:38:HIS:CD2	53:5:509:C:H1'	2.55	0.41
7:C:78:VAL:HG11	7:C:89:LEU:HB2	2.01	0.41
8:D:96:ASN:HD21	8:D:100:LYS:HG3	1.85	0.41
8:D:113:ASN:O	8:D:117:LYS:HG3	2.19	0.41
9:E:2:GLN:H	9:E:90:LEU:HB2	1.84	0.41
9:E:124:ASN:O	9:E:126:GLU:N	2.53	0.41
9:E:125:PRO:HB3	53:5:838:A:H61	1.84	0.41
11:G:123:MET:HE1	11:G:131:LYS:HD2	2.01	0.41
13:I:23:LEU:HD12	13:I:23:LEU:HA	1.80	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:K:55:PRO:HG2	15:K:59:ASN:O	2.20	0.41
15:K:85:HIS:HD2	15:K:87:LEU:CB	2.33	0.41
15:K:86:ASN:O	15:K:117:THR:HG22	2.20	0.41
15:K:93:THR:HA	15:K:115:LEU:HD12	2.01	0.41
15:K:127:ARG:HG2	15:K:135:PRO:HD3	2.01	0.41
16:L:19:LEU:O	16:L:22:ILE:HG12	2.20	0.41
16:L:53:PHE:HA	16:L:56:ILE:HB	2.02	0.41
19:O:2:ARG:HG2	53:5:387:G:H5''	2.01	0.41
20:P:16:THR:C	20:P:18:ASN:H	2.27	0.41
20:P:16:THR:HB	20:P:55:ALA:O	2.20	0.41
22:R:36:ARG:NH2	53:5:1294:U:H3	2.18	0.41
23:S:64:ARG:NH2	53:5:257:U:OP2	2.52	0.41
25:a:184:LEU:HD13	51:3:1806:G:C5	2.55	0.41
25:a:266:LYS:HD3	51:3:1805:U:OP1	2.20	0.41
26:b:69:PHE:HD1	26:b:72:LYS:HB3	1.84	0.41
26:b:84:ILE:HG21	26:b:87:MET:HE3	2.01	0.41
27:c:81:ASN:HB2	27:c:84:PHE:CG	2.54	0.41
27:c:83:HIS:HB3	51:3:618:G:O2'	2.20	0.41
27:c:174:ASN:C	51:3:357:A:H2'	2.45	0.41
28:d:14:LYS:O	28:d:18:LYS:HG3	2.20	0.41
28:d:70:ALA:O	28:d:72:ASN:N	2.53	0.41
30:f:6:LYS:C	30:f:34:LYS:HG3	2.45	0.41
33:i:29:GLY:HA2	33:i:111:MET:HE1	2.02	0.41
33:i:31:LEU:HD11	33:i:145:TRP:HB3	2.02	0.41
33:i:117:LEU:O	33:i:120:ARG:N	2.53	0.41
35:k:62:LEU:O	51:3:2401:U:H4'	2.20	0.41
36:l:87:LYS:HD3	51:3:2285:G:H5'	2.01	0.41
36:l:87:LYS:H	45:u:25:LYS:HE2	1.84	0.41
40:p:36:GLN:O	40:p:40:GLN:HG2	2.20	0.41
41:q:83:TYR:OH	51:3:1028:C:H1'	2.19	0.41
42:r:128:ARG:NH1	51:3:1248:A:N3	2.67	0.41
47:w:66:GLN:NE2	51:3:148:U:O5'	2.53	0.41
50:z:6:SER:HA	50:z:22:PHE:CD1	2.55	0.41
51:3:30:A:N6	51:3:547:G:H1'	2.35	0.41
51:3:37:G:C6	51:3:482:G:C2	3.08	0.41
51:3:67:C:H2'	51:3:68:C:O4'	2.20	0.41
51:3:95:G:H2'	51:3:96:A:C8	2.55	0.41
51:3:332:G:C2	51:3:373:U:C5	3.07	0.41
51:3:333:A:C5	51:3:356:A:C4	3.08	0.41
51:3:363:G:C2	51:3:513:A:C2	3.08	0.41
51:3:374:A:C2'	51:3:375:U:H5'	2.49	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:3:397:G:C6	51:3:398:C:C4	3.08	0.41
51:3:464:A:C6	51:3:465:A:C2	3.08	0.41
51:3:509:G:O2'	51:3:510:G:H5'	2.20	0.41
51:3:612:G:N2	51:3:1292:A:H1'	2.34	0.41
51:3:619:A:H8	51:3:846:U:O4	2.03	0.41
51:3:638:A:C5	51:3:661:G:C6	3.08	0.41
51:3:915:A:C6	51:3:916:U:C2	3.08	0.41
51:3:964:A:C6	51:3:965:U:C4	3.07	0.41
51:3:986:G:C2	51:3:1004:U:C2	3.09	0.41
51:3:1027:U:C4	51:3:1199:A:N6	2.88	0.41
51:3:1255:G:C5	51:3:1256:A:C6	3.08	0.41
51:3:1372:U:H1'	51:3:1412:A:C8	2.55	0.41
51:3:1450:G:C6	51:3:1611:C:C4	3.08	0.41
51:3:1470:C:H2'	51:3:1471:A:H8	1.85	0.41
51:3:1481:U:O2	51:3:1482:U:H3'	2.20	0.41
51:3:1616:G:H2'	51:3:1617:U:C2	2.55	0.41
51:3:1692:A:C6	51:3:2010:A:N6	2.88	0.41
51:3:1723:A:C5	51:3:1734:A:C4	3.08	0.41
51:3:1737:G:C2	51:3:1738:G:C8	3.07	0.41
51:3:1855:A:H1'	53:5:699:A:C8	2.55	0.41
51:3:1879:A:C4	51:3:1880:G:H1'	2.55	0.41
51:3:2066:A:H4'	51:3:2069:A:H61	1.86	0.41
51:3:2121:A:H2	51:3:2176:G:C1'	2.33	0.41
51:3:2145:A:C6	51:3:2161:G:N1	2.88	0.41
51:3:2149:U:C4	51:3:2150:C:C4	3.08	0.41
51:3:2213:A:C2	51:3:2228:U:C2	3.08	0.41
51:3:2243:G:C6	51:3:2244:U:C4	3.08	0.41
51:3:2475:C:H42	51:3:2491:C:N4	2.18	0.41
51:3:2558:G:H2'	51:3:2559:C:O4'	2.20	0.41
51:3:2595:A:C8	51:3:2596:A:C8	3.08	0.41
51:3:2599:C:N3	51:3:2612:G:N1	2.68	0.41
51:3:2625:U:H2'	51:3:2626:A:H8	1.85	0.41
51:3:2729:A:C8	51:3:2730:G:C8	3.08	0.41
51:3:2752:G:C5	51:3:2769:G:C5	3.08	0.41
52:4:1:U:H2'	52:4:2:U:C6	2.56	0.41
52:4:62:G:H2'	52:4:63:U:O4'	2.20	0.41
53:5:105:A:O2'	53:5:106:C:H4'	2.20	0.41
53:5:116:A:H2	53:5:259:A:N3	2.18	0.41
53:5:240:U:O4	53:5:887:C:C4	2.72	0.41
53:5:319:U:C2	53:5:323:A:N7	2.87	0.41
53:5:437:U:C4	53:5:438:A:N7	2.88	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:5:484:A:H3'	53:5:485:C:H6	1.85	0.41
53:5:609:G:N1	53:5:628:A:C2	2.88	0.41
53:5:734:A:H2'	53:5:735:C:H6	1.85	0.41
53:5:897:A:H3'	53:5:898:A:H8	1.84	0.41
53:5:994:C:N3	53:5:1033:U:H1'	2.35	0.41
53:5:1049:G:C6	53:5:1050:U:C4	3.07	0.41
53:5:1113:U:C4	53:5:1114:A:N6	2.88	0.41
53:5:1199:U:H4'	53:5:1200:G:OP2	2.20	0.41
53:5:1289:U:C4	53:5:1290:G:N7	2.88	0.41
54:7:38:G:H3'	54:7:39:A:H8	1.84	0.41
4:9:138:CYS:SG	4:9:147:GLN:NE2	2.93	0.41
4:9:198:GLU:HG3	4:9:199:TRP:HD1	1.83	0.41
4:9:304:LYS:HA	4:9:362:GLU:HA	2.02	0.41
4:9:327:TYR:HD1	54:6:52:C:O2'	2.04	0.41
5:A:84:PHE:CD1	5:A:177:ILE:HG12	2.54	0.41
5:A:132:LYS:HA	5:A:132:LYS:HD3	1.84	0.41
6:B:19:ILE:HD11	6:B:57:GLU:HA	2.02	0.41
7:C:135:ILE:HD13	7:C:135:ILE:HA	1.88	0.41
7:C:184:ARG:NH1	7:C:188:PRO:O	2.52	0.41
8:D:112:PRO:O	8:D:115:ILE:HB	2.19	0.41
9:E:49:ILE:HD11	9:E:84:ARG:CZ	2.49	0.41
10:F:31:GLU:HB2	53:5:1215:U:N3	2.34	0.41
10:F:91:PRO:HB2	10:F:93:ASP:OD1	2.20	0.41
11:G:101:PHE:CG	11:G:132:LYS:HA	2.55	0.41
21:Q:44:CYS:HB3	21:Q:82:HIS:CE1	2.55	0.41
22:R:10:PHE:H	22:R:39:THR:HG21	1.84	0.41
27:c:53:LEU:HA	27:c:57:GLU:CD	2.44	0.41
27:c:207:LEU:O	27:c:211:PHE:N	2.53	0.41
28:d:39:GLY:HA3	51:3:2320:U:H1'	2.02	0.41
28:d:53:ALA:O	28:d:56:GLU:HG3	2.20	0.41
30:f:8:ASP:OD1	30:f:9:VAL:HG23	2.20	0.41
30:f:41:LYS:HA	30:f:45:GLN:CD	2.45	0.41
33:i:40:ARG:CZ	51:3:1043:C:H5'	2.50	0.41
35:k:55:GLN:HB3	51:3:861:U:H4'	2.02	0.41
36:l:54:ILE:HG13	36:l:121:ALA:HB2	2.01	0.41
37:m:94:PRO:HD2	51:3:2884:C:O4'	2.20	0.41
39:o:83:ASN:HB3	39:o:86:ILE:HG13	2.01	0.41
41:q:28:PRO:HB2	41:q:31:LYS:CE	2.50	0.41
41:q:67:LYS:HB2	41:q:86:ARG:HH21	1.85	0.41
44:t:11:VAL:HG13	44:t:77:PHE:HB2	2.02	0.41
49:y:13:ARG:HD2	49:y:17:ARG:HH12	1.84	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:z:42:ARG:HD2	50:z:42:ARG:HA	1.87	0.41
51:3:55:A:C6	51:3:56:G:C4	3.08	0.41
51:3:93:A:H1'	51:3:94:A:N7	2.35	0.41
51:3:138:U:C2	51:3:146:G:C2	3.08	0.41
51:3:191:G:H2'	51:3:192:U:O4'	2.20	0.41
51:3:446:A:N1	51:3:454:G:C6	2.88	0.41
51:3:471:A:H8	51:3:471:A:P	2.43	0.41
51:3:476:G:H2'	51:3:477:U:C6	2.56	0.41
51:3:491:A:H2	51:3:508:A:H3'	1.84	0.41
51:3:523:A:N1	51:3:529:G:N1	2.68	0.41
51:3:531:G:C5	51:3:532:A:N7	2.88	0.41
51:3:531:G:H2'	51:3:531:G:N3	2.35	0.41
51:3:685:G:H2'	51:3:686:C:C6	2.55	0.41
51:3:769:A:H3'	51:3:770:A:H8	1.85	0.41
51:3:818:A:H2'	51:3:819:U:H4'	2.01	0.41
51:3:985:A:C2	51:3:986:G:C8	3.08	0.41
51:3:996:A:N6	51:3:998:C:O2	2.53	0.41
51:3:1070:U:O2	51:3:1155:G:C2	2.72	0.41
51:3:1294:G:OP2	51:3:1295:A:O2'	2.38	0.41
51:3:1326:C:H2'	51:3:1327:G:H5'	2.01	0.41
51:3:1390:C:O2'	51:3:1391:U:H5'	2.19	0.41
51:3:1400:U:C2	51:3:1401:A:C8	3.08	0.41
51:3:1678:U:H2'	51:3:1679:U:C6	2.55	0.41
51:3:1702:A:N6	51:3:1710:A:H61	2.19	0.41
51:3:1762:A:C8	51:3:1765:G:N7	2.88	0.41
51:3:1772:G:N1	51:3:1995:G:C5	2.88	0.41
51:3:1841:U:N3	51:3:1979:G:C6	2.88	0.41
51:3:1857:G:H2'	51:3:1858:U:C6	2.54	0.41
51:3:1878:A:H3'	51:3:1879:A:C8	2.55	0.41
51:3:1921:C:H2'	51:3:1922:U:O4'	2.20	0.41
51:3:1962:U:H3'	51:3:1963:U:C5	2.55	0.41
51:3:2059:G:C4	51:3:2060:G:C8	3.08	0.41
51:3:2063:G:C2	51:3:2064:G:C5	3.08	0.41
51:3:2081:U:C2'	51:3:2605:G:H21	2.33	0.41
51:3:2085:C:H2'	51:3:2086:U:O4'	2.20	0.41
51:3:2130:A:C2	51:3:2131:G:C5	3.08	0.41
51:3:2149:U:O2	51:3:2156:G:N2	2.41	0.41
51:3:2154:A:H8	51:3:2154:A:O5'	2.03	0.41
51:3:2278:G:H3'	51:3:2279:G:H8	1.84	0.41
51:3:2387:U:H2'	51:3:2388:C:H6	1.83	0.41
51:3:2471:U:H2'	51:3:2472:G:O4'	2.19	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:3:2548:G:C6	51:3:2549:A:C4	3.08	0.41
51:3:2671:G:H2'	51:3:2672:G:O4'	2.20	0.41
51:3:2706:U:C2	51:3:2707:A:C8	3.08	0.41
51:3:2736:U:HO2'	51:3:2737:G:H8	1.60	0.41
51:3:2801:U:OP1	51:3:2807:G:N1	2.53	0.41
51:3:2840:U:C2	51:3:2841:A:C8	3.07	0.41
52:4:95:G:C4	52:4:96:G:C8	3.09	0.41
53:5:86:A:H2	53:5:138:A:O2'	2.03	0.41
53:5:111:A:H2'	53:5:112:U:O4'	2.20	0.41
53:5:175:U:H2'	53:5:176:G:O4'	2.20	0.41
53:5:222:U:C4	53:5:223:G:N7	2.89	0.41
53:5:226:G:H2'	53:5:227:A:H8	1.84	0.41
53:5:240:U:H4'	53:5:241:C:C5'	2.48	0.41
53:5:278:A:C6	53:5:279:C:C2	3.08	0.41
53:5:359:A:OP1	53:5:359:A:C8	2.73	0.41
53:5:611:A:C2	53:5:626:G:C2	3.08	0.41
53:5:668:U:C2	53:5:733:A:C2	3.08	0.41
53:5:741:C:C2	53:5:742:C:C5	3.07	0.41
53:5:920:G:C2	53:5:1367:G:C2	3.08	0.41
53:5:931:C:N4	53:5:1355:U:H3	2.18	0.41
53:5:971:A:C2	53:5:1336:C:H2'	2.55	0.41
53:5:1015:U:H3'	53:5:1016:A:C8	2.53	0.41
53:5:1138:U:O4	53:5:1149:G:O6	2.38	0.41
53:5:1443:A:C8	53:5:1444:G:C8	3.08	0.41
53:5:1448:A:H3'	53:5:1449:G:H8	1.84	0.41
54:7:19:G:O2'	54:7:58:G:H1'	2.20	0.41
3:2:7:VAL:HG13	3:2:37:GLY:HA3	2.01	0.41
5:A:59:GLU:HA	5:A:62:ARG:NH2	2.35	0.41
5:A:122:THR:O	5:A:126:SER:HB3	2.19	0.41
7:C:123:LEU:HD12	7:C:123:LEU:HA	1.89	0.41
8:D:96:ASN:HD21	8:D:100:LYS:CG	2.32	0.41
11:G:90:ILE:HG12	11:G:139:ALA:HA	2.01	0.41
12:H:22:THR:O	12:H:64:ASP:N	2.49	0.41
12:H:109:ASP:C	12:H:110:LYS:HG3	2.45	0.41
23:S:28:LEU:CD1	23:S:31:ASN:HD22	2.32	0.41
23:S:55:ALA:HA	23:S:60:ILE:C	2.45	0.41
23:S:56:ARG:NH2	53:5:218:U:O2'	2.51	0.41
25:a:282:ARG:NH2	51:3:1804:A:H3'	2.36	0.41
26:b:115:LYS:HE3	26:b:117:ARG:HG2	2.02	0.41
26:b:161:LYS:HD2	26:b:161:LYS:HA	1.81	0.41
26:b:217:VAL:O	26:b:219:PRO:HD3	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:b:223:ALA:H	39:o:17:GLN:NE2	2.17	0.41
27:c:37:ALA:HB1	27:c:188:VAL:HG11	2.02	0.41
27:c:81:ASN:OD1	51:3:708:C:H5''	2.20	0.41
27:c:182:HIS:HB3	27:c:185:LYS:HG2	2.02	0.41
30:f:56:GLU:O	30:f:60:ILE:HG23	2.21	0.41
30:f:76:GLU:OE2	30:f:141:LYS:HB2	2.20	0.41
33:i:19:TYR:CE2	33:i:38:LEU:HD11	2.55	0.41
33:i:102:LYS:HE3	33:i:105:TYR:CE1	2.55	0.41
33:i:132:LYS:HA	33:i:136:GLU:OE1	2.21	0.41
34:j:106:LEU:HD12	34:j:111:TYR:CD2	2.55	0.41
36:l:63:LYS:HD3	36:l:65:TRP:CZ2	2.56	0.41
37:m:72:LEU:HG	37:m:73:PHE:CZ	2.56	0.41
37:m:117:GLN:HE22	49:y:51:LEU:HD11	1.84	0.41
39:o:53:LEU:HG	39:o:100:TYR:HE1	1.85	0.41
42:r:46:LEU:HD12	42:r:46:LEU:H	1.85	0.41
43:s:3:VAL:HG13	47:w:65:TRP:CZ2	2.54	0.41
44:t:72:SER:O	51:3:369:C:O2'	2.36	0.41
45:u:64:ASN:HA	45:u:76:LEU:HB3	2.01	0.41
46:v:15:GLY:HA3	46:v:29:TRP:CH2	2.55	0.41
47:w:10:LYS:NZ	47:w:12:SER:HB2	2.35	0.41
47:w:46:GLN:HG3	47:w:49:ARG:NH2	2.35	0.41
49:y:13:ARG:HB2	49:y:17:ARG:CZ	2.50	0.41
51:3:71:C:N4	51:3:72:G:O6	2.53	0.41
51:3:101:C:H5''	51:3:102:A:H5'	2.03	0.41
51:3:161:U:H2'	51:3:162:G:O4'	2.20	0.41
51:3:190:G:N3	51:3:191:G:C8	2.88	0.41
51:3:271:G:H4'	51:3:315:A:N6	2.35	0.41
51:3:356:A:H5''	51:3:374:A:O2'	2.21	0.41
51:3:584:G:C6	51:3:585:U:C4	3.08	0.41
51:3:606:G:O3'	51:3:607:U:H3'	2.20	0.41
51:3:654:G:H2'	51:3:655:G:C8	2.55	0.41
51:3:674:G:C2	51:3:675:U:C4	3.09	0.41
51:3:792:G:H2'	51:3:792:G:N3	2.36	0.41
51:3:1017:A:H3'	51:3:1018:G:C8	2.55	0.41
51:3:1052:A:N1	51:3:1181:A:C6	2.88	0.41
51:3:1133:A:C4	51:3:1134:G:C8	3.07	0.41
51:3:1201:A:C5	51:3:1215:G:C6	3.08	0.41
51:3:1248:A:C5	51:3:1262:G:C6	3.09	0.41
51:3:1286:G:C4	51:3:1287:C:C5	3.07	0.41
51:3:1300:C:O2'	51:3:1353:G:H2'	2.21	0.41
51:3:1371:G:H2'	51:3:1371:G:N3	2.36	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:3:1393:A:H5'	51:3:1394:A:OP2	2.20	0.41
51:3:1418:U:H3	51:3:1423:A:N6	2.05	0.41
51:3:1502:A:H1'	51:3:1542:G:N1	2.35	0.41
51:3:1720:C:C4	51:3:1737:G:O6	2.73	0.41
51:3:1844:C:C2	51:3:1911:G:N2	2.88	0.41
51:3:1879:A:C2	51:3:1880:G:H1'	2.55	0.41
51:3:1959:A:OP1	51:3:1959:A:H8	2.01	0.41
51:3:1995:G:N1	51:3:1996:A:C5	2.88	0.41
51:3:2106:G:N2	51:3:2199:C:C2	2.88	0.41
51:3:2113:U:N3	51:3:2191:G:N1	2.37	0.41
51:3:2156:G:C2	51:3:2157:A:N7	2.88	0.41
51:3:2171:A:H2'	51:3:2172:A:C8	2.55	0.41
51:3:2213:A:C2	51:3:2214:A:C5	3.07	0.41
51:3:2292:A:O2'	51:3:2296:A:N1	2.46	0.41
51:3:2300:A:H2'	51:3:2301:C:H6	1.84	0.41
51:3:2412:A:C5	51:3:2422:G:C2	3.08	0.41
51:3:2461:A:C6	51:3:2507:C:N4	2.89	0.41
51:3:2513:G:H1'	51:3:2514:U:C4	2.55	0.41
51:3:2571:U:O2	51:3:2573:A:H3'	2.20	0.41
51:3:2625:U:H2'	51:3:2626:A:O4'	2.20	0.41
51:3:2700:C:C2	51:3:2701:A:C8	3.08	0.41
51:3:2764:U:O2	51:3:2765:A:H3'	2.20	0.41
52:4:7:G:C2	52:4:8:C:C5	3.08	0.41
52:4:62:G:C6	52:4:63:U:C2	3.08	0.41
53:5:30:A:C6	53:5:31:U:C4	3.08	0.41
53:5:331:C:O2'	53:5:332:A:H5'	2.20	0.41
53:5:378:A:OP2	53:5:378:A:H8	2.02	0.41
53:5:438:A:C6	53:5:439:U:C2	3.08	0.41
53:5:471:A:H2'	53:5:472:G:H8	1.85	0.41
53:5:616:C:H5'	53:5:617:U:O5'	2.21	0.41
53:5:644:U:C2	53:5:645:A:C8	3.09	0.41
53:5:690:G:H2'	53:5:691:A:H8	1.84	0.41
53:5:844:U:C2	53:5:845:C:C5	3.08	0.41
53:5:913:A:H3'	53:5:914:A:H8	1.85	0.41
53:5:928:G:N1	53:5:1360:G:C6	2.87	0.41
53:5:1234:C:N3	53:5:1235:C:H1'	2.35	0.41
53:5:1261:A:C2	53:5:1262:A:C5	3.08	0.41
53:5:1262:A:H2	53:5:1326:C:H1'	1.85	0.41
53:5:1334:A:C6	53:5:1335:G:C5	3.09	0.41
53:5:1415:G:C2	53:5:1416:U:C6	3.08	0.41
53:5:1459:U:H2'	53:5:1460:U:C6	2.55	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:5:1467:A:N6	54:6:36:A:O2'	2.52	0.41
54:7:26:C:H2'	54:7:27:A:C8	2.55	0.41
54:7:71:A:H8	54:7:71:A:OP2	2.04	0.41
3:2:24:ARG:HA	3:2:34:GLN:O	2.21	0.41
3:2:34:GLN:O	3:2:34:GLN:HG3	2.19	0.41
4:9:196:VAL:HG13	4:9:200:ILE:HD12	2.02	0.41
5:A:20:LEU:HD23	5:A:66:GLN:NE2	2.35	0.41
5:A:152:LEU:O	5:A:155:GLU:HG2	2.21	0.41
7:C:12:ARG:C	7:C:34:ILE:HA	2.46	0.41
10:F:110:ARG:HH22	10:F:122:GLU:N	2.19	0.41
11:G:86:GLY:HA3	11:G:142:TRP:CE2	2.55	0.41
12:H:114:GLU:CD	53:5:1321:G:H3'	2.45	0.41
13:I:53:GLU:HG2	13:I:73:LYS:O	2.21	0.41
14:J:34:VAL:HG23	53:5:682:G:H5'	2.03	0.41
15:K:12:ARG:HH11	53:5:561:A:C3'	2.31	0.41
15:K:49:ARG:HH11	15:K:67:LYS:HB2	1.84	0.41
15:K:59:ASN:CG	53:5:526:C:H41	2.29	0.41
21:Q:61:LYS:HB2	21:Q:61:LYS:HE2	1.88	0.41
26:b:19:THR:OG1	26:b:222:LEU:O	2.39	0.41
26:b:54:PHE:C	26:b:78:THR:HB	2.45	0.41
27:c:52:ILE:HD12	27:c:52:ILE:HA	1.91	0.41
27:c:116:TRP:O	27:c:120:LEU:HG	2.21	0.41
27:c:116:TRP:CD1	27:c:207:LEU:HD21	2.55	0.41
31:g:97:ASP:HB2	31:g:127:ALA:HB1	2.02	0.41
33:i:70:ASN:O	33:i:73:GLU:N	2.53	0.41
33:i:93:ARG:NH1	51:3:2746:A:H5''	2.35	0.41
33:i:117:LEU:HA	33:i:120:ARG:HG2	2.02	0.41
34:j:45:ASP:CA	34:j:54:LYS:HG3	2.49	0.41
34:j:90:ASP:C	34:j:92:SER:H	2.27	0.41
35:k:101:LYS:HD2	35:k:101:LYS:H	1.85	0.41
36:l:68:ILE:HG12	36:l:103:MET:HA	2.02	0.41
37:m:65:LYS:HG2	51:3:2715:C:O2'	2.21	0.41
38:n:8:ARG:HB2	38:n:11:ARG:HH21	1.86	0.41
40:p:39:ILE:HG22	40:p:43:LYS:NZ	2.35	0.41
41:q:36:ASP:OD1	41:q:54:ARG:HG2	2.20	0.41
41:q:55:VAL:HG22	41:q:57:CYS:SG	2.60	0.41
42:r:9:ARG:H	42:r:102:ASN:CA	2.28	0.41
43:s:27:TYR:CE1	43:s:90:ALA:HB1	2.55	0.41
44:t:49:ASP:HB3	51:3:519:A:H4'	2.01	0.41
45:u:40:ALA:HB3	51:3:960:A:H1'	2.03	0.41
45:u:82:LYS:HD2	45:u:82:LYS:HA	1.76	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:u:88:PRO:HA	52:4:10:C:H3'	2.03	0.41
49:y:6:ARG:HD2	51:3:2024:C:O2'	2.20	0.41
49:y:29:VAL:HG22	49:y:36:LYS:CD	2.50	0.41
49:y:40:HIS:HA	51:3:2888:U:C4	2.55	0.41
51:3:16:A:C2	51:3:2051:G:H1'	2.56	0.41
51:3:18:G:H3'	51:3:19:G:H8	1.85	0.41
51:3:54:A:OP2	51:3:120:A:N6	2.50	0.41
51:3:60:G:N1	51:3:72:G:C6	2.89	0.41
51:3:122:G:C4	51:3:123:G:C8	3.08	0.41
51:3:145:A:N6	51:3:146:G:O6	2.54	0.41
51:3:215:A:H2'	51:3:216:C:C6	2.55	0.41
51:3:265:G:H4'	51:3:643:A:H2	1.85	0.41
51:3:296:U:O2'	51:3:297:G:P	2.77	0.41
51:3:409:A:O2'	51:3:410:G:OP2	2.27	0.41
51:3:419:A:N7	51:3:425:U:N3	2.68	0.41
51:3:438:A:C2	51:3:443:C:H5''	2.56	0.41
51:3:682:A:C3'	51:3:683:G:H8	2.30	0.41
51:3:709:G:C2	51:3:842:U:C4	3.08	0.41
51:3:874:U:O2'	51:3:1222:A:H1'	2.21	0.41
51:3:889:G:C2	51:3:890:U:C2	3.09	0.41
51:3:985:A:C6	51:3:1005:G:N1	2.88	0.41
51:3:1203:G:O6	51:3:1204:A:N6	2.53	0.41
51:3:1203:G:C6	51:3:1204:A:C6	3.07	0.41
51:3:1248:A:H2'	51:3:1249:A:C8	2.56	0.41
51:3:1313:G:H2'	51:3:1357:U:O4	2.20	0.41
51:3:1437:A:C6	51:3:1628:G:C6	3.09	0.41
51:3:1508:G:O2'	51:3:1535:A:N6	2.53	0.41
51:3:1521:A:H1'	51:3:1612:U:H1'	2.02	0.41
51:3:1582:G:C2	51:3:1583:G:C5	3.08	0.41
51:3:1626:C:H2'	51:3:1627:U:H6	1.85	0.41
51:3:1649:C:H2'	51:3:1651:C:C6	2.56	0.41
51:3:1661:A:C6	51:3:1662:G:N7	2.88	0.41
51:3:1704:C:N4	51:3:1705:U:O2	2.53	0.41
51:3:1721:G:H2'	51:3:1722:U:C6	2.56	0.41
51:3:1762:A:OP2	51:3:1762:A:C8	2.73	0.41
51:3:1796:A:H2'	51:3:1797:C:O4'	2.21	0.41
51:3:1814:G:C6	51:3:1818:G:O6	2.73	0.41
51:3:1903:A:H3'	51:3:1904:G:H8	1.85	0.41
51:3:1917:G:C2	51:3:1918:U:C2	3.08	0.41
51:3:1961:A:H61	51:3:1993:U:H5'	1.85	0.41
51:3:2017:G:H2'	51:3:2018:U:C6	2.55	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:3:2021:A:H2	51:3:2621:U:N3	2.18	0.41
51:3:2023:U:H2'	51:3:2024:C:C6	2.55	0.41
51:3:2070:C:N3	51:3:2458:A:N1	2.69	0.41
51:3:2084:A:P	51:3:2246:G:H22	2.43	0.41
51:3:2128:G:C2	51:3:2129:U:C4	3.08	0.41
51:3:2140:G:O2'	51:3:2141:A:C8	2.70	0.41
51:3:2454:G:C2	51:3:2509:C:N4	2.89	0.41
51:3:2561:G:N3	51:3:2591:G:H1'	2.35	0.41
51:3:2599:C:C2	51:3:2612:G:N2	2.88	0.41
51:3:2689:C:N4	51:3:2732:A:H3'	2.34	0.41
51:3:2702:G:C2	51:3:2703:U:H1'	2.55	0.41
51:3:2855:A:H2'	51:3:2856:G:O4'	2.20	0.41
52:4:5:G:C5	52:4:6:U:C4	3.09	0.41
52:4:32:G:C6	52:4:42:G:C4	3.09	0.41
52:4:58:C:C2	52:4:59:A:C8	3.08	0.41
52:4:89:A:C5	52:4:90:G:C5	3.09	0.41
53:5:29:G:C5	53:5:30:A:N7	2.89	0.41
53:5:51:A:H1'	53:5:53:U:C6	2.55	0.41
53:5:134:G:C2	53:5:161:C:C2	3.08	0.41
53:5:165:A:H2'	53:5:166:U:C6	2.56	0.41
53:5:190:A:H2'	53:5:191:A:C8	2.55	0.41
53:5:294:A:H2'	53:5:295:G:N9	2.35	0.41
53:5:352:A:O2'	53:5:365:U:OP2	2.38	0.41
53:5:370:A:C6	53:5:371:U:C4	3.08	0.41
53:5:435:U:O2'	53:5:436:U:OP2	2.38	0.41
53:5:540:U:H2'	53:5:541:C:O4'	2.20	0.41
53:5:657:G:C6	53:5:743:A:C6	3.09	0.41
53:5:658:G:C6	53:5:659:U:N3	2.88	0.41
53:5:756:A:H2'	53:5:757:G:O4'	2.20	0.41
53:5:835:G:N1	53:5:843:C:N3	2.68	0.41
53:5:898:A:H3'	53:5:899:U:C6	2.55	0.41
53:5:952:U:O3'	53:5:953:A:C8	2.73	0.41
53:5:1039:G:O6	53:5:1185:C:N4	2.52	0.41
53:5:1063:G:C2	53:5:1095:G:C2	3.08	0.41
53:5:1078:G:C6	53:5:1090:G:N1	2.88	0.41
53:5:1111:G:C2	53:5:1130:G:C2	3.08	0.41
53:5:1115:G:N2	53:5:1116:U:O4	2.51	0.41
53:5:1128:G:C2	53:5:1129:C:C2	3.08	0.41
53:5:1241:G:H2'	53:5:1243:A:N7	2.35	0.41
53:5:1241:G:C6	53:5:1245:A:C6	3.08	0.41
53:5:1413:G:C6	53:5:1439:G:C5	3.09	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:6:10:A:H5'	54:6:22:A:N6	2.32	0.41
1:0:34:ARG:NH2	51:3:502:A:OP1	2.54	0.41
4:9:118:GLU:OE2	4:9:122:LEU:HD11	2.20	0.41
4:9:128:VAL:O	4:9:131:MET:HE3	2.20	0.41
4:9:205:ARG:HH12	4:9:231:ARG:NH1	2.17	0.41
4:9:211:PHE:HB3	4:9:295:LYS:N	2.27	0.41
4:9:212:LEU:HA	4:9:293:LEU:O	2.20	0.41
4:9:379:GLU:HG2	54:6:65:C:O2'	2.20	0.41
4:9:379:GLU:O	4:9:382:ARG:HG2	2.21	0.41
5:A:22:LYS:HA	5:A:22:LYS:HD3	1.76	0.41
6:B:155:LEU:HB3	6:B:202:LYS:HB2	2.03	0.41
9:E:51:LYS:HA	9:E:51:LYS:HD3	1.79	0.41
12:H:108:ARG:HD3	12:H:110:LYS:N	2.31	0.41
15:K:94:LEU:O	15:K:111:VAL:HG22	2.20	0.41
22:R:70:LYS:HB2	22:R:73:GLU:HG2	2.01	0.41
25:a:89:ASP:OD1	25:a:91:ASN:ND2	2.54	0.41
26:b:108:VAL:HB	26:b:208:ARG:O	2.21	0.41
26:b:144:GLN:OE1	26:b:147:VAL:HG12	2.21	0.41
28:d:47:SER:OG	28:d:49:PHE:HB3	2.21	0.41
31:g:56:ASN:CB	51:3:1142:G:H5''	2.51	0.41
33:i:76:PHE:HA	33:i:90:VAL:O	2.20	0.41
33:i:116:ARG:CZ	51:3:590:U:H3'	2.51	0.41
35:k:42:ARG:NE	51:3:841:C:C4	2.88	0.41
35:k:129:HIS:CE1	35:k:149:LEU:HD23	2.56	0.41
36:l:48:GLU:O	36:l:52:ILE:HG12	2.20	0.41
38:n:2:LYS:HB3	38:n:7:GLN:HB2	2.02	0.41
39:o:33:VAL:CG1	39:o:48:PHE:HB3	2.49	0.41
43:s:9:LYS:HE2	47:w:34:ALA:HB2	2.01	0.41
43:s:17:TYR:O	43:s:21:MET:HG3	2.21	0.41
46:v:27:ARG:NH1	51:3:417:G:O3'	2.53	0.41
49:y:13:ARG:HH21	49:y:17:ARG:NH1	2.19	0.41
51:3:29:G:H8	51:3:29:G:OP2	2.02	0.41
51:3:137:U:H2'	51:3:146:G:N2	2.29	0.41
51:3:166:A:C6	51:3:167:A:C5	3.08	0.41
51:3:313:G:C6	51:3:314:G:C6	3.08	0.41
51:3:343:A:H2'	51:3:364:A:C2	2.55	0.41
51:3:473:U:H2'	51:3:474:U:O4'	2.21	0.41
51:3:567:U:H1'	51:3:2028:G:O6	2.20	0.41
51:3:573:A:C2	51:3:589:A:C8	3.09	0.41
51:3:625:G:N1	51:3:701:A:C6	2.88	0.41
51:3:632:A:C4	51:3:633:G:C8	3.08	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:3:653:G:H2'	51:3:654:G:O4'	2.20	0.41
51:3:670:G:C6	51:3:671:C:C4	3.08	0.41
51:3:879:U:H3'	51:3:880:C:C6	2.55	0.41
51:3:889:G:H2'	51:3:890:U:O4'	2.19	0.41
51:3:1005:G:C4	51:3:1006:U:C5	3.08	0.41
51:3:1086:G:H2'	51:3:1087:C:C6	2.56	0.41
51:3:1284:A:N7	51:3:1286:G:C8	2.89	0.41
51:3:1349:C:H2'	51:3:1350:A:H5'	2.02	0.41
51:3:1354:U:O2'	51:3:2017:G:O2'	2.31	0.41
51:3:1447:A:C8	51:3:1449:G:C6	3.09	0.41
51:3:1471:A:H2'	51:3:1472:C:C6	2.54	0.41
51:3:1510:A:C6	51:3:1530:G:C6	3.08	0.41
51:3:1661:A:C4	51:3:1662:G:C8	3.08	0.41
51:3:1746:U:C4	51:3:1753:G:O6	2.72	0.41
51:3:1753:G:C6	51:3:1754:U:C4	3.08	0.41
51:3:1779:G:H2'	51:3:1780:A:O3'	2.21	0.41
51:3:1983:U:H2'	51:3:1984:A:C8	2.56	0.41
51:3:2072:C:C2	51:3:2454:G:N2	2.89	0.41
51:3:2076:G:C4	51:3:2077:A:C8	3.09	0.41
51:3:2100:G:C5	51:3:2233:A:C8	3.09	0.41
51:3:2157:A:C6	51:3:2158:C:C4	3.09	0.41
51:3:2258:G:N7	51:3:2504:C:H5''	2.35	0.41
51:3:2432:C:H2'	51:3:2437:G:H1'	2.02	0.41
51:3:2599:C:C2	51:3:2600:G:N7	2.89	0.41
51:3:2601:U:H2'	51:3:2602:C:C6	2.55	0.41
51:3:2855:A:C5	51:3:2856:G:C5	3.09	0.41
52:4:34:U:O2	52:4:48:A:H5'	2.20	0.41
53:5:72:A:H2'	53:5:73:G:O4'	2.21	0.41
53:5:111:A:H1'	53:5:232:G:N2	2.35	0.41
53:5:368:C:N4	53:5:385:A:N6	2.39	0.41
53:5:416:U:O2	53:5:421:G:C2	2.74	0.41
53:5:436:U:H3'	53:5:437:U:C6	2.55	0.41
53:5:599:G:C6	53:5:635:G:N1	2.88	0.41
53:5:781:A:H2'	53:5:782:G:O4'	2.20	0.41
53:5:795:U:C2	53:5:796:A:C8	3.08	0.41
53:5:818:A:C4	53:5:819:G:C8	3.09	0.41
53:5:823:C:H2'	53:5:824:U:H6	1.86	0.41
53:5:826:G:H2'	53:5:827:C:H6	1.84	0.41
53:5:932:A:H2'	53:5:1353:C:H42	1.85	0.41
53:5:943:C:H2'	53:5:944:A:C8	2.55	0.41
53:5:1051:U:C2	53:5:1052:G:C8	3.07	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:5:1075:G:H1'	53:5:1094:C:H41	1.85	0.41
53:5:1084:A:N1	53:5:1101:A:H1'	2.35	0.41
53:5:1159:A:OP1	53:5:1159:A:H3'	2.21	0.41
53:5:1188:A:C4	53:5:1190:G:C8	3.08	0.41
53:5:1217:G:N2	53:5:1276:U:H3	2.16	0.41
53:5:1302:C:N3	53:5:1303:A:C8	2.88	0.41
53:5:1430:G:C4	53:5:1431:A:C8	3.07	0.41
53:5:1439:G:H2'	53:5:1440:U:C5	2.55	0.41
53:5:1442:A:H8	53:5:1442:A:OP2	2.02	0.41
53:5:1464:G:O2'	53:5:1465:U:H5'	2.20	0.41
54:6:36:A:C6	54:6:37:A:C6	3.08	0.41
1:0:38:GLN:C	1:0:39:ARG:HD2	2.45	0.41
4:9:65:SER:HA	4:9:81:ASP:O	2.20	0.41
4:9:300:LYS:HD3	4:9:300:LYS:HA	1.76	0.41
5:A:33:VAL:HG22	5:A:34:LYS:H	1.85	0.41
5:A:107:PHE:CE1	5:A:165:GLY:HA3	2.56	0.41
6:B:11:ARG:HB2	6:B:16:LYS:HE3	2.03	0.41
7:C:73:ARG:HA	7:C:76:ARG:NE	2.34	0.41
7:C:118:ASN:HA	7:C:130:ASP:O	2.21	0.41
8:D:182:ASN:C	8:D:183:LEU:HD22	2.46	0.41
10:F:62:GLU:HA	10:F:65:VAL:HG22	2.02	0.41
10:F:132:ALA:O	10:F:136:LYS:HG2	2.21	0.41
10:F:140:THR:HA	10:F:143:MET:HE3	2.03	0.41
12:H:34:ARG:HG3	53:5:1121:U:N3	2.35	0.41
12:H:41:PHE:CE1	12:H:43:ASN:HA	2.56	0.41
12:H:101:LYS:HE3	53:5:1153:G:P	2.60	0.41
13:I:43:LYS:NZ	13:I:81:ILE:HD12	2.34	0.41
13:I:53:GLU:O	13:I:72:GLU:HB2	2.21	0.41
14:J:66:THR:O	14:J:69:GLU:HB2	2.21	0.41
15:K:96:ARG:HE	15:K:96:ARG:HB3	1.68	0.41
16:L:14:ARG:HB2	16:L:17:ILE:HG22	2.02	0.41
23:S:4:ILE:HG23	23:S:7:ASN:H	1.84	0.41
23:S:5:LYS:HZ1	53:5:62:G:H5''	1.84	0.41
25:a:178:LYS:HA	25:a:194:LYS:HB3	2.02	0.41
25:a:271:LYS:HE2	51:3:2236:G:OP1	2.19	0.41
26:b:7:PHE:HE2	26:b:54:PHE:CE2	2.39	0.41
27:c:73:LYS:HE2	27:c:73:LYS:HB3	1.63	0.41
27:c:140:THR:HG21	27:c:173:SER:H	1.86	0.41
27:c:185:LYS:C	51:3:650:G:H22	2.29	0.41
29:e:105:THR:HG22	29:e:106:LEU:N	2.35	0.41
30:f:95:LYS:HA	30:f:95:LYS:HD2	1.81	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:f:100:GLN:O	30:f:104:LYS:HD2	2.21	0.41
34:j:54:LYS:HG2	34:j:55:GLY:N	2.35	0.41
34:j:88:LYS:N	34:j:92:SER:O	2.53	0.41
38:n:97:LYS:HE2	52:4:46:C:H5'	2.01	0.41
40:p:22:GLY:HA2	51:3:21:U:P	2.60	0.41
40:p:60:TRP:CZ3	40:p:93:VAL:HB	2.55	0.41
42:r:28:LYS:HA	42:r:70:TYR:HA	2.02	0.41
43:s:59:ILE:HD12	43:s:77:LEU:HD11	2.02	0.41
45:u:59:VAL:HG13	45:u:93:THR:O	2.21	0.41
47:w:59:THR:OG1	51:3:74:U:O4	2.38	0.41
51:3:82:G:C6	51:3:108:G:N1	2.88	0.41
51:3:83:G:C2	51:3:107:C:C2	3.09	0.41
51:3:108:G:C6	51:3:109:G:N7	2.88	0.41
51:3:188:G:C4	51:3:217:A:N1	2.88	0.41
51:3:207:C:H5''	51:3:208:A:O5'	2.21	0.41
51:3:224:G:H22	51:3:463:U:H2'	1.84	0.41
51:3:261:A:C5	51:3:262:G:C5	3.09	0.41
51:3:314:G:H1	51:3:393:C:N4	2.19	0.41
51:3:470:U:O2	51:3:471:A:N6	2.34	0.41
51:3:500:U:O2'	51:3:501:G:O4'	2.37	0.41
51:3:576:A:H2'	51:3:577:C:O4'	2.20	0.41
51:3:666:G:N2	51:3:669:A:OP2	2.36	0.41
51:3:725:G:H3'	51:3:725:G:OP2	2.20	0.41
51:3:798:G:C2	51:3:800:C:C2	3.08	0.41
51:3:809:A:H1'	51:3:810:G:H8	1.85	0.41
51:3:810:G:H1'	51:3:812:G:C5	2.54	0.41
51:3:947:A:N1	51:3:2285:G:H1'	2.36	0.41
51:3:1047:A:N1	51:3:1186:A:C8	2.89	0.41
51:3:1108:A:H61	54:6:57:C:H42	1.69	0.41
51:3:1286:G:C6	51:3:1287:C:N4	2.89	0.41
51:3:1365:G:C2	51:3:1366:G:C8	3.09	0.41
51:3:1397:G:H1'	51:3:1816:A:H61	1.86	0.41
51:3:1578:A:C6	51:3:1579:G:C4	3.08	0.41
51:3:1594:G:C6	51:3:1595:C:C4	3.09	0.41
51:3:1654:G:C6	51:3:1655:U:C4	3.09	0.41
51:3:1726:U:H3'	51:3:1728:A:H62	1.85	0.41
51:3:1829:U:H2'	51:3:1830:G:O4'	2.20	0.41
51:3:1916:C:N4	51:3:1929:G:O6	2.54	0.41
51:3:2032:G:C6	51:3:2033:G:C6	3.09	0.41
51:3:2078:A:H2	51:3:2448:C:N4	2.19	0.41
51:3:2081:U:H2'	51:3:2082:U:H6	1.86	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:3:2181:A:H3'	51:3:2182:C:C5	2.56	0.41
51:3:2449:U:H2'	51:3:2450:C:C6	2.55	0.41
51:3:2452:G:C6	51:3:2453:G:C5	3.09	0.41
51:3:2492:G:H2'	51:3:2493:G:O4'	2.20	0.41
51:3:2536:U:H2'	51:3:2538:A:C8	2.55	0.41
51:3:2667:G:C2	51:3:2670:A:OP2	2.73	0.41
51:3:2713:A:C5	51:3:2714:G:C5	3.09	0.41
51:3:2729:A:H2'	51:3:2730:G:O4'	2.20	0.41
51:3:2745:G:C4	51:3:2746:A:C8	3.09	0.41
51:3:2881:A:H2'	51:3:2882:U:O4'	2.19	0.41
52:4:45:C:C4	52:4:46:C:C4	3.08	0.41
52:4:102:A:N3	52:4:102:A:H2'	2.36	0.41
53:5:28:G:C6	53:5:29:G:C5	3.09	0.41
53:5:58:G:N1	53:5:352:A:C6	2.82	0.41
53:5:59:C:H2'	53:5:60:A:C8	2.44	0.41
53:5:108:C:H4'	53:5:286:C:H1'	2.01	0.41
53:5:169:G:C3'	53:5:170:A:H8	2.33	0.41
53:5:257:U:H2'	53:5:259:A:C8	2.55	0.41
53:5:260:C:H2'	53:5:261:G:C8	2.56	0.41
53:5:370:A:H2'	53:5:371:U:C6	2.56	0.41
53:5:442:G:C2	53:5:443:G:C8	3.09	0.41
53:5:570:A:H5''	53:5:912:G:H4'	2.01	0.41
53:5:586:G:C4	53:5:587:A:C8	3.08	0.41
53:5:687:G:H2'	53:5:687:G:N3	2.35	0.41
53:5:902:A:C4	53:5:903:A:C8	3.08	0.41
53:5:963:U:C6	53:5:1053:U:H4'	2.55	0.41
53:5:1134:C:C5	53:5:1136:G:H1'	2.56	0.41
53:5:1136:G:C6	53:5:1137:C:N4	2.88	0.41
53:5:1147:U:H2'	53:5:1148:U:H6	1.81	0.41
53:5:1196:G:C5	53:5:1197:G:C5	3.09	0.41
53:5:1196:G:H2'	53:5:1197:G:O4'	2.20	0.41
53:5:1205:C:H2'	53:5:1206:G:H8	1.85	0.41
53:5:1241:G:C2	53:5:1243:A:C8	3.09	0.41
53:5:1262:A:C6	53:5:1263:A:C5	3.09	0.41
53:5:1400:A:H8	53:5:1400:A:OP2	2.03	0.41
54:7:14:C:N3	54:7:24:A:N6	2.68	0.41
54:7:43:G:H3'	54:7:44:U:H5''	2.02	0.41
54:7:67:C:C2	54:7:68:G:C8	3.08	0.41
54:7:75:C:H3'	54:7:76:C:C4'	2.48	0.41
4:9:106:VAL:HG23	4:9:135:LEU:HA	2.02	0.41
4:9:310:TYR:CZ	4:9:354:GLY:HA2	2.56	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:9:348:THR:HG21	4:9:357:THR:HG21	2.03	0.41
5:A:65:LEU:HG	5:A:231:LEU:HD11	2.02	0.41
6:B:159:ARG:NH2	6:B:163:ALA:HA	2.36	0.41
7:C:49:GLY:HA2	7:C:52:GLN:NE2	2.36	0.41
9:E:71:ASP:CG	9:E:72:PHE:H	2.29	0.41
11:G:47:ILE:HA	11:G:50:LYS:HB2	2.03	0.41
11:G:99:ARG:HB2	11:G:137:ILE:HD11	2.01	0.41
12:H:75:THR:HB	53:5:1347:U:OP1	2.20	0.41
12:H:93:ASN:CG	12:H:96:LEU:HD23	2.45	0.41
16:L:49:THR:OG1	16:L:51:GLU:HG2	2.20	0.41
16:L:99:GLY:O	53:5:1199:U:N3	2.54	0.41
18:N:9:ILE:HA	18:N:12:ALA:HB3	2.03	0.41
18:N:30:THR:C	18:N:34:LYS:HE2	2.45	0.41
20:P:20:LYS:HZ1	53:5:252:U:P	2.43	0.41
20:P:32:HIS:CE1	20:P:34:LEU:H	2.39	0.41
22:R:36:ARG:HG2	22:R:72:GLY:HA3	2.01	0.41
23:S:31:ASN:HA	23:S:34:ASN:HD22	1.85	0.41
25:a:244:GLU:HB2	51:3:2608:A:N7	2.35	0.41
26:b:36:VAL:HA	26:b:52:LEU:CD2	2.50	0.41
26:b:73:ASN:ND2	26:b:75:LEU:HD22	2.36	0.41
30:f:27:ILE:HA	30:f:30:LEU:HB3	2.03	0.41
31:g:56:ASN:O	31:g:59:LEU:HB3	2.21	0.41
35:k:69:ARG:NE	35:k:74:LYS:HB2	2.36	0.41
36:l:73:SER:N	36:l:94:VAL:HG12	2.36	0.41
41:q:9:SER:O	51:3:1032:A:H1'	2.21	0.41
42:r:131:GLY:HA2	42:r:134:LYS:HE2	2.03	0.41
43:s:39:ARG:NH2	43:s:42:LEU:HB3	2.36	0.41
43:s:58:LEU:O	43:s:80:LEU:HG	2.20	0.41
51:3:79:U:C4	51:3:111:G:N1	2.88	0.41
51:3:131:C:H4'	51:3:1377:A:O2'	2.21	0.41
51:3:164:A:H1'	51:3:2216:U:C1'	2.50	0.41
51:3:248:A:C5	51:3:249:G:H1'	2.54	0.41
51:3:250:U:H3	51:3:256:G:H1	1.69	0.41
51:3:280:A:N1	51:3:290:A:C6	2.89	0.41
51:3:314:G:H5'	51:3:315:A:OP1	2.20	0.41
51:3:568:G:C6	51:3:569:U:C4	3.08	0.41
51:3:569:U:O2	51:3:592:G:N2	2.36	0.41
51:3:570:C:C2	51:3:592:G:C2	3.09	0.41
51:3:603:G:N2	51:3:2037:A:C4	2.88	0.41
51:3:642:A:OP2	51:3:655:G:N2	2.54	0.41
51:3:709:G:C2	51:3:839:A:C2	3.08	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:3:734:A:C6	51:3:735:G:C5	3.09	0.41
51:3:750:A:H3'	51:3:751:A:H8	1.86	0.41
51:3:840:G:P	51:3:841:C:H41	2.37	0.41
51:3:875:G:C6	51:3:975:G:C6	3.08	0.41
51:3:891:G:N1	51:3:960:A:N1	2.69	0.41
51:3:895:G:H1'	51:3:896:U:H5	1.86	0.41
51:3:982:G:C2	51:3:983:A:C5	3.09	0.41
51:3:989:G:H22	51:3:1000:U:H3	1.69	0.41
51:3:1023:C:O2	51:3:1036:A:H2	2.04	0.41
51:3:1172:G:C4	51:3:1173:G:C8	3.08	0.41
51:3:1375:G:C2	51:3:1634:A:C4	3.08	0.41
51:3:1774:G:H2'	51:3:1775:G:O4'	2.21	0.41
51:3:1913:G:H8	51:3:1936:G:H2'	1.84	0.41
51:3:2009:U:C2	51:3:2010:A:N7	2.89	0.41
51:3:2354:A:H5''	51:3:2390:G:H4'	2.02	0.41
51:3:2355:C:C2	51:3:2379:G:N2	2.88	0.41
51:3:2531:C:C2	51:3:2532:G:C8	3.09	0.41
51:3:2550:A:H5''	51:3:2551:G:N7	2.35	0.41
51:3:2557:G:C6	51:3:2568:G:C6	3.08	0.41
51:3:2558:G:C6	51:3:2559:C:C4	3.09	0.41
51:3:2657:C:H2'	51:3:2658:U:C6	2.55	0.41
51:3:2759:G:H2'	51:3:2760:C:C4	2.53	0.41
51:3:2817:G:H2'	51:3:2817:G:N3	2.36	0.41
51:3:2876:G:C8	51:3:2877:A:N7	2.89	0.41
52:4:42:G:N2	52:4:45:C:N3	2.59	0.41
52:4:71:A:N6	52:4:94:A:H1'	2.36	0.41
53:5:33:A:N6	53:5:551:A:N6	2.69	0.41
53:5:87:G:O2'	53:5:137:A:H2'	2.20	0.41
53:5:107:A:C2'	53:5:108:C:H5'	2.50	0.41
53:5:234:G:C5	53:5:235:C:N3	2.88	0.41
53:5:279:C:C4	53:5:280:G:N7	2.89	0.41
53:5:321:A:OP1	53:5:321:A:H8	2.03	0.41
53:5:491:U:C4	53:5:492:G:C5	3.08	0.41
53:5:498:G:H2'	53:5:499:U:O4'	2.20	0.41
53:5:551:A:C6	53:5:552:U:C4	3.09	0.41
53:5:678:A:C6	53:5:679:U:C4	3.09	0.41
53:5:761:U:C3'	53:5:762:G:H8	2.29	0.41
53:5:1010:A:C6	53:5:1011:A:C6	3.09	0.41
53:5:1241:G:N2	53:5:1244:A:OP2	2.48	0.41
53:5:1330:A:C2	53:5:1331:A:C5	3.09	0.41
53:5:1442:A:C2'	53:5:1443:A:C8	3.03	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:6:35:G:H3'	54:6:36:A:N7	2.35	0.41
54:6:51:G:N2	54:6:66:C:O2	2.54	0.41
54:6:72:C:N3	54:6:73:C:N4	2.68	0.41
1:0:10:LEU:HG	1:0:14:LYS:HE3	2.03	0.41
3:2:23:VAL:C	3:2:24:ARG:HG3	2.46	0.41
4:9:210:PRO:HB2	4:9:295:LYS:HB2	2.02	0.41
5:A:121:LYS:HE2	5:A:121:LYS:H	1.85	0.41
6:B:4:LYS:HB3	53:5:1166:A:OP1	2.21	0.41
6:B:37:ASP:OD1	6:B:38:GLU:N	2.53	0.41
7:C:106:PHE:CE1	7:C:169:THR:HG21	2.55	0.41
8:D:97:ARG:HB2	8:D:98:LYS:HZ1	1.85	0.41
9:E:5:ILE:HB	9:E:60:TRP:CD1	2.55	0.41
9:E:54:SER:OG	9:E:55:ALA:N	2.53	0.41
10:F:78:ARG:NH2	53:5:1356:U:O2	2.53	0.41
13:I:46:LEU:H	13:I:79:LEU:H	1.69	0.41
13:I:59:ARG:HB2	13:I:67:SER:OG	2.21	0.41
15:K:27:ASN:CG	15:K:28:LEU:H	2.29	0.41
25:a:81:ALA:O	25:a:120:LYS:HG3	2.20	0.41
25:a:213:ILE:HD12	51:3:1798:A:H5''	2.01	0.41
25:a:238:HIS:HE1	25:a:240:HIS:HB2	1.85	0.41
28:d:64:LYS:C	52:4:40:U:H4'	2.46	0.41
29:e:133:GLU:OE2	29:e:135:THR:OG1	2.16	0.41
31:g:56:ASN:HB2	31:g:75:ALA:HB1	2.03	0.41
32:h:31:ASN:HB3	32:h:34:GLU:HB2	2.01	0.41
32:h:73:SER:HA	32:h:76:LEU:HB2	2.03	0.41
34:j:77:LEU:CD1	39:o:77:LYS:HB2	2.49	0.41
38:n:12:HIS:HB2	38:n:94:GLY:HA2	2.02	0.41
39:o:80:GLN:H	39:o:83:ASN:ND2	2.19	0.41
42:r:128:ARG:HD3	51:3:1262:G:C1'	2.51	0.41
44:t:18:LYS:HE2	44:t:18:LYS:HB3	1.80	0.41
46:v:36:CYS:H	46:v:48:ILE:H	1.68	0.41
47:w:57:ILE:HG22	47:w:61:ARG:HH22	1.86	0.41
51:3:42:U:C2	51:3:43:A:N7	2.88	0.41
51:3:101:C:H4'	51:3:103:G:N3	2.35	0.41
51:3:242:G:H1'	51:3:642:A:N3	2.35	0.41
51:3:243:U:C4	51:3:262:G:O6	2.74	0.41
51:3:317:U:C2	51:3:392:A:C5	3.09	0.41
51:3:329:G:C6	51:3:378:G:C5	3.08	0.41
51:3:355:A:C8	51:3:375:U:H4'	2.56	0.41
51:3:394:C:H2'	51:3:395:U:O4'	2.21	0.41
51:3:481:C:N4	51:3:482:G:O6	2.54	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:3:563:A:N7	51:3:2049:A:H2'	2.35	0.41
51:3:572:G:N1	51:3:588:G:C4	2.88	0.41
51:3:576:A:N1	51:3:586:G:C6	2.89	0.41
51:3:674:G:N1	51:3:675:U:C4	2.89	0.41
51:3:713:C:C2	51:3:714:G:C8	3.09	0.41
51:3:783:G:C5	51:3:785:A:H2'	2.56	0.41
51:3:784:A:O4'	51:3:1301:G:H1'	2.21	0.41
51:3:878:A:C6	51:3:972:C:C4	3.09	0.41
51:3:954:A:C2	52:4:78:C:H1'	2.56	0.41
51:3:1048:A:H2'	51:3:1049:U:H6	1.83	0.41
51:3:1064:A:N6	51:3:1065:G:C2	2.89	0.41
51:3:1073:A:C2	51:3:1153:U:C2	3.09	0.41
51:3:1082:A:C2	51:3:1145:G:H2'	2.55	0.41
51:3:1130:A:H4'	54:6:57:C:OP1	2.20	0.41
51:3:1265:G:N7	51:3:1266:G:C6	2.89	0.41
51:3:1295:A:H4'	51:3:1296:G:H4'	2.03	0.41
51:3:1410:A:H2'	51:3:1411:C:C2	2.55	0.41
51:3:1420:A:O2'	51:3:1421:A:H5'	2.21	0.41
51:3:1464:G:N1	51:3:1590:U:C4	2.89	0.41
51:3:1502:A:N3	51:3:1502:A:H2'	2.36	0.41
51:3:1639:C:H2'	51:3:1642:G:N2	2.35	0.41
51:3:1792:A:C5	51:3:1794:A:C2	3.08	0.41
51:3:1822:A:C8	51:3:1824:G:C4	3.09	0.41
51:3:1846:A:N3	51:3:1847:G:N7	2.69	0.41
51:3:2012:A:OP2	51:3:2013:C:N4	2.53	0.41
51:3:2090:G:H2'	51:3:2091:C:C6	2.56	0.41
51:3:2117:G:O2'	51:3:2127:G:OP1	2.38	0.41
51:3:2243:G:H2'	51:3:2244:U:C6	2.56	0.41
51:3:2311:G:N1	51:3:2322:G:C6	2.88	0.41
51:3:2349:G:H2'	51:3:2350:C:C6	2.55	0.41
51:3:2360:A:C8	51:3:2361:G:C8	3.09	0.41
51:3:2513:G:C5	51:3:2584:G:C2	3.09	0.41
51:3:2565:G:C6	51:3:2566:C:C4	3.09	0.41
51:3:2655:U:O2	51:3:2681:G:C2	2.73	0.41
51:3:2842:G:C5	51:3:2843:G:N7	2.89	0.41
52:4:44:A:C5	52:4:45:C:C5	3.08	0.41
53:5:25:U:H2'	53:5:26:C:O4'	2.21	0.41
53:5:88:A:N3	53:5:88:A:H2'	2.36	0.41
53:5:283:U:N3	53:5:284:A:C5	2.89	0.41
53:5:316:G:O2'	53:5:1410:A:H1'	2.21	0.41
53:5:363:U:O2'	53:5:364:U:O3'	2.39	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:5:537:A:C2	53:5:538:G:C4	3.08	0.41
53:5:595:G:H2'	53:5:595:G:N3	2.34	0.41
53:5:609:G:C5	53:5:610:C:C4	3.09	0.41
53:5:1011:A:H3'	53:5:1012:A:H2	1.86	0.41
53:5:1072:G:C5	53:5:1073:A:N7	2.89	0.41
53:5:1100:C:H2'	53:5:1101:A:C8	2.47	0.41
53:5:1102:A:N7	53:5:1103:C:N4	2.68	0.41
53:5:1129:C:H2'	53:5:1130:G:H8	1.86	0.41
53:5:1204:A:H2'	53:5:1205:C:H6	1.86	0.41
53:5:1320:A:N6	53:5:1350:A:OP2	2.54	0.41
53:5:1327:G:C2	53:5:1345:G:C2	3.09	0.41
53:5:1374:C:C2	53:5:1376:G:C6	3.09	0.41
53:5:1380:G:N2	53:5:1492:G:H22	2.19	0.41
53:5:1393:A:C5	53:5:1457:G:N2	2.87	0.41
53:5:1485:C:H2'	53:5:1486:C:C6	2.56	0.41
1:0:38:GLN:HE21	51:3:494:G:C5'	2.33	0.41
2:1:28:HIS:NE2	51:3:2428:C:H3'	2.36	0.41
2:1:55:ILE:HD13	2:1:55:ILE:HA	1.88	0.41
3:2:19:ARG:NH2	51:3:2762:U:O3'	2.54	0.41
5:A:32:MET:HG2	5:A:220:HIS:H	1.86	0.41
5:A:111:ARG:HH11	53:5:1091:C:P	2.42	0.41
5:A:178:VAL:HG22	5:A:179:ASP:N	2.36	0.41
6:B:20:SER:HB3	6:B:22:TRP:NE1	2.35	0.41
6:B:185:ILE:HA	6:B:206:ASN:HA	2.02	0.41
7:C:13:ARG:HH12	53:5:540:U:H4'	1.85	0.41
7:C:134:ILE:HG23	53:5:618:U:C5'	2.40	0.41
7:C:172:LYS:H	7:C:172:LYS:HG3	1.65	0.41
8:D:69:ARG:N	8:D:93:VAL:O	2.54	0.41
8:D:80:THR:O	53:5:917:G:O2'	2.39	0.41
8:D:212:ARG:HH21	11:G:51:GLU:CD	2.27	0.41
9:E:24:LYS:O	9:E:28:THR:HG23	2.21	0.41
9:E:67:GLN:HA	9:E:70:LYS:HZ1	1.85	0.41
10:F:110:ARG:NH1	10:F:122:GLU:OE1	2.54	0.41
11:G:91:SER:OG	11:G:96:ARG:HA	2.21	0.41
12:H:50:MET:SD	12:H:81:ILE:HD11	2.61	0.41
12:H:55:ASP:HA	12:H:59:LEU:HB2	2.03	0.41
12:H:115:ARG:HE	12:H:117:LYS:HZ3	1.69	0.41
12:H:121:TYR:N	12:H:125:ARG:O	2.54	0.41
14:J:33:ASN:OD1	14:J:33:ASN:N	2.53	0.41
15:K:26:TYR:CD1	15:K:37:ASN:HB3	2.52	0.41
15:K:47:CYS:N	15:K:91:SER:O	2.42	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:K:70:LEU:HD23	15:K:72:ASN:ND2	2.35	0.41
15:K:96:ARG:HB2	15:K:111:VAL:CG1	2.51	0.41
16:L:10:PRO:HD2	16:L:18:ALA:O	2.20	0.41
18:N:19:VAL:HB	53:5:655:G:O4'	2.21	0.41
20:P:17:LYS:HD3	53:5:271:G:H5'	2.03	0.41
21:Q:40:TYR:CD2	21:Q:42:ARG:HB3	2.56	0.41
23:S:17:ARG:HA	23:S:20:ASN:ND2	2.32	0.41
23:S:31:ASN:HB3	23:S:47:VAL:HG22	2.02	0.41
23:S:52:ASP:HB3	53:5:196:G:H4'	2.01	0.41
23:S:64:ARG:HH22	23:S:67:ARG:NH1	2.03	0.41
25:a:40:THR:HB	25:a:65:LYS:NZ	2.36	0.41
25:a:163:SER:OG	25:a:166:SER:OG	2.37	0.41
26:b:1:MET:HE2	26:b:3:ILE:HD11	2.01	0.41
26:b:65:PRO:HB3	51:3:2795:C:C1'	2.44	0.41
26:b:139:TYR:HA	51:3:779:C:OP1	2.21	0.41
26:b:196:ALA:HB1	51:3:2688:C:O2'	2.20	0.41
27:c:55:LYS:HE2	51:3:836:G:H4'	2.03	0.41
27:c:93:PRO:O	27:c:94:LYS:HD2	2.21	0.41
27:c:101:LEU:HD22	51:3:695:G:O5'	2.21	0.41
27:c:156:ASN:HB2	27:c:193:LEU:O	2.21	0.41
27:c:201:LYS:O	27:c:201:LYS:HG2	2.20	0.41
28:d:28:VAL:O	28:d:30:ARG:HG3	2.21	0.41
28:d:34:ILE:HG12	28:d:156:LEU:HD23	2.03	0.41
28:d:100:LEU:O	28:d:104:ILE:N	2.41	0.41
28:d:170:LEU:HD12	28:d:173:LEU:HB2	2.03	0.41
29:e:155:ARG:C	29:e:156:LYS:HD2	2.46	0.41
30:f:52:LYS:HE3	30:f:52:LYS:HB3	1.71	0.41
32:h:77:LYS:HB2	32:h:83:GLU:HA	2.02	0.41
33:i:78:TYR:HB3	33:i:87:ILE:HD12	2.03	0.41
34:j:3:SER:OG	34:j:4:PHE:N	2.52	0.41
36:l:56:LYS:HE3	51:3:2477:A:H4'	2.03	0.41
36:l:56:LYS:CE	51:3:2477:A:H4'	2.51	0.41
39:o:25:PHE:HB3	39:o:90:LEU:CD1	2.51	0.41
39:o:68:LYS:HG2	39:o:69:THR:H	1.86	0.41
39:o:97:ARG:HH12	51:3:2853:U:H6	1.69	0.41
40:p:57:ARG:NE	51:3:1033:A:OP2	2.46	0.41
40:p:87:ILE:H	40:p:87:ILE:HD12	1.85	0.41
41:q:9:SER:HB2	51:3:1195:A:O2'	2.20	0.41
45:u:87:GLY:C	52:4:10:C:H5'	2.46	0.41
46:v:21:SER:HB2	46:v:23:THR:HG23	2.02	0.41
46:v:53:ARG:NH1	51:3:435:U:H5	2.19	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:w:25:GLU:HA	47:w:28:GLU:OE2	2.21	0.41
49:y:3:VAL:HG22	51:3:2063:G:N3	2.36	0.41
49:y:15:LYS:HB3	51:3:2052:C:H4'	2.01	0.41
51:3:37:G:O2'	51:3:487:C:N4	2.49	0.41
51:3:51:A:N1	51:3:180:A:N7	2.69	0.41
51:3:82:G:H2'	51:3:82:G:N3	2.36	0.41
51:3:196:G:H5'	51:3:713:C:H1'	2.03	0.41
51:3:229:C:H3'	51:3:230:G:H8	1.84	0.41
51:3:244:G:C1'	51:3:261:A:H61	2.33	0.41
51:3:250:U:O3'	51:3:423:C:O2'	2.38	0.41
51:3:309:A:H3'	51:3:310:U:C2	2.56	0.41
51:3:353:G:N1	51:3:367:G:C2	2.89	0.41
51:3:373:U:C2'	51:3:374:A:H8	2.32	0.41
51:3:373:U:C2	51:3:374:A:C8	3.09	0.41
51:3:406:C:H2'	51:3:407:U:H6	1.85	0.41
51:3:437:A:C2'	51:3:438:A:H5'	2.51	0.41
51:3:499:G:H5''	51:3:500:U:OP2	2.20	0.41
51:3:525:A:C6	51:3:1312:A:N1	2.89	0.41
51:3:634:C:H2'	51:3:635:G:C8	2.56	0.41
51:3:663:A:C4	51:3:672:G:N2	2.89	0.41
51:3:673:A:H2	51:3:687:G:O2'	2.03	0.41
51:3:682:A:C5	51:3:683:G:C5	3.08	0.41
51:3:685:G:C6	51:3:686:C:N3	2.88	0.41
51:3:734:A:N1	51:3:768:G:O2'	2.51	0.41
51:3:748:G:N2	51:3:753:A:N6	2.48	0.41
51:3:812:G:C6	51:3:813:G:C6	3.08	0.41
51:3:817:A:H8	51:3:817:A:OP1	2.04	0.41
51:3:838:U:H2'	51:3:839:A:O4'	2.20	0.41
51:3:848:U:H1'	51:3:1256:A:N3	2.36	0.41
51:3:851:U:H2'	51:3:852:C:C6	2.56	0.41
51:3:875:G:C2	51:3:876:A:C5	3.09	0.41
51:3:893:A:O2'	51:3:894:G:H5'	2.21	0.41
51:3:902:U:H5'	51:3:903:A:OP1	2.20	0.41
51:3:922:C:H1'	51:3:929:G:N2	2.36	0.41
51:3:996:A:N7	51:3:998:C:C2	2.89	0.41
51:3:1012:G:H2'	51:3:1013:G:C8	2.56	0.41
51:3:1039:G:H2'	51:3:1040:U:C6	2.56	0.41
51:3:1063:A:H2'	51:3:1064:A:O4'	2.21	0.41
51:3:1090:G:C5	51:3:1091:G:C8	3.08	0.41
51:3:1166:G:H1	51:3:2046:G:H21	1.68	0.41
51:3:1210:A:H8	51:3:1210:A:OP1	2.02	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:3:1259:A:C2	51:3:1260:U:C4	3.09	0.41
51:3:1334:U:C2'	51:3:1656:A:H61	2.34	0.41
51:3:1403:G:C2	51:3:1404:C:C5	3.09	0.41
51:3:1460:G:C6	51:3:1461:A:C6	3.09	0.41
51:3:1540:G:H8	51:3:1540:G:OP2	2.04	0.41
51:3:1642:G:C8	51:3:1645:C:C4	3.08	0.41
51:3:1690:C:H2'	51:3:1691:U:H6	1.85	0.41
51:3:1733:G:C2	51:3:1770:A:C5	3.08	0.41
51:3:1754:U:H3'	51:3:1755:A:H8	1.86	0.41
51:3:1757:G:O2'	51:3:1758:C:H5'	2.21	0.41
51:3:1764:U:O2'	51:3:1765:G:P	2.79	0.41
51:3:1816:A:H3'	51:3:1817:A:C8	2.56	0.41
51:3:1862:A:C2	51:3:1863:G:C5	3.09	0.41
51:3:1902:C:C2	51:3:1903:A:C8	3.08	0.41
51:3:1984:A:H3'	51:3:1985:A:H8	1.85	0.41
51:3:2057:C:H2'	51:3:2058:G:N9	2.36	0.41
51:3:2066:A:H1'	51:3:2511:A:C6	2.56	0.41
51:3:2104:A:C6	51:3:2201:G:C6	3.08	0.41
51:3:2156:G:O2'	51:3:2157:A:H5'	2.19	0.41
51:3:2189:U:H2'	51:3:2190:G:H8	1.83	0.41
51:3:2263:G:C5	51:3:2264:G:C5	3.09	0.41
51:3:2304:U:H2'	51:3:2342:U:C4	2.56	0.41
51:3:2311:G:C6	51:3:2322:G:C6	3.08	0.41
51:3:2331:G:C6	51:3:2332:U:C4	3.09	0.41
51:3:2384:A:C5	51:3:2385:A:C6	3.09	0.41
51:3:2391:G:C2	51:3:2392:U:C2	3.08	0.41
51:3:2472:G:C4	51:3:2473:C:C6	3.09	0.41
51:3:2479:A:H2'	51:3:2480:G:O4'	2.21	0.41
51:3:2495:A:C2	51:3:2496:G:C4	3.08	0.41
51:3:2523:C:C2	51:3:2578:A:C2	3.08	0.41
51:3:2531:C:H2'	51:3:2532:G:H8	1.86	0.41
51:3:2555:U:H2'	51:3:2556:C:C6	2.55	0.41
51:3:2645:U:C4	51:3:2646:G:C6	3.09	0.41
51:3:2660:C:N3	51:3:2677:A:C2	2.88	0.41
51:3:2660:C:N3	51:3:2677:A:N1	2.69	0.41
51:3:2692:U:C2	51:3:2735:G:H1'	2.56	0.41
51:3:2844:U:H2'	51:3:2845:U:H6	1.85	0.41
51:3:2858:A:N1	51:3:2868:G:C6	2.89	0.41
52:4:40:U:H6	52:4:40:U:H2'	1.73	0.41
52:4:57:G:OP2	52:4:58:C:N4	2.35	0.41
52:4:84:C:H1'	52:4:85:A:C8	2.56	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:4:107:G:OP2	52:4:108:C:N4	2.45	0.41
53:5:28:G:H8	53:5:28:G:O5'	2.03	0.41
53:5:58:G:C8	53:5:59:C:C4	3.08	0.41
53:5:86:A:C5	53:5:87:G:C8	3.09	0.41
53:5:148:A:H8	53:5:148:A:O5'	2.04	0.41
53:5:163:G:N2	53:5:163:G:OP2	2.54	0.41
53:5:209:A:C6	53:5:210:G:C4	3.09	0.41
53:5:249:U:C2	53:5:250:G:C8	3.09	0.41
53:5:266:A:C5	53:5:267:C:C5	3.08	0.41
53:5:280:G:H2'	53:5:281:U:C6	2.55	0.41
53:5:288:A:N7	53:5:289:U:H1'	2.35	0.41
53:5:291:C:H2'	53:5:292:U:C6	2.56	0.41
53:5:312:A:C2	53:5:334:A:C5	3.08	0.41
53:5:320:G:N3	53:5:322:G:C8	2.89	0.41
53:5:325:A:N7	53:5:328:G:C6	2.88	0.41
53:5:391:C:H2'	53:5:392:A:C8	2.56	0.41
53:5:410:A:H3'	53:5:411:A:H8	1.86	0.41
53:5:434:U:H6	53:5:434:U:OP2	2.04	0.41
53:5:481:U:O3'	53:5:482:G:H2'	2.21	0.41
53:5:498:G:C5	53:5:499:U:C4	3.09	0.41
53:5:518:A:H8	53:5:518:A:O5'	2.03	0.41
53:5:524:C:C4	53:5:525:G:H1'	2.55	0.41
53:5:573:G:C6	53:5:818:A:C5	3.08	0.41
53:5:579:G:C5	53:5:755:U:C4	3.08	0.41
53:5:604:U:H3	53:5:629:U:H5	1.68	0.41
53:5:608:G:H2'	53:5:609:G:H8	1.85	0.41
53:5:609:G:C6	53:5:610:C:C4	3.09	0.41
53:5:618:U:P	53:5:618:U:H3'	2.61	0.41
53:5:622:A:C6	53:5:623:G:C5	3.09	0.41
53:5:655:G:H2'	53:5:656:U:H6	1.83	0.41
53:5:670:G:C2	53:5:671:G:C4	3.09	0.41
53:5:713:A:H2'	53:5:714:C:H6	1.86	0.41
53:5:748:U:C5	53:5:749:G:C6	3.09	0.41
53:5:779:A:H62	53:5:797:G:H21	1.68	0.41
53:5:811:A:H2'	53:5:813:A:O5'	2.21	0.41
53:5:819:G:H2'	53:5:820:A:C8	2.56	0.41
53:5:820:A:C6	53:5:821:U:C4	3.09	0.41
53:5:829:G:C6	53:5:830:U:C4	3.09	0.41
53:5:841:C:C5	53:5:842:C:H5	2.39	0.41
53:5:851:U:H3'	53:5:852:G:C8	2.54	0.41
53:5:879:G:C4	53:5:880:G:C8	3.09	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:5:884:G:H1'	53:5:885:U:H5	1.85	0.41
53:5:914:A:C2	53:5:915:U:C5	3.09	0.41
53:5:928:G:H5''	53:5:929:C:OP2	2.21	0.41
53:5:957:C:N4	53:5:958:G:O6	2.54	0.41
53:5:1039:G:C6	53:5:1185:C:N3	2.89	0.41
53:5:1056:U:H1'	53:5:1057:C:C5	2.46	0.41
53:5:1136:G:C2	53:5:1151:A:N1	2.89	0.41
53:5:1242:U:H2'	53:5:1243:A:C5	2.55	0.41
53:5:1331:A:N6	53:5:1340:G:H1	2.19	0.41
53:5:1331:A:N1	53:5:1340:G:N2	2.67	0.41
53:5:1331:A:C4	53:5:1332:U:C2	3.09	0.41
53:5:1346:G:H2'	53:5:1347:U:O4'	2.21	0.41
53:5:1356:U:H2'	53:5:1357:C:C6	2.56	0.41
53:5:1361:G:C2	53:5:1362:G:C5	3.09	0.41
53:5:1376:G:C6	53:5:1377:C:C4	3.08	0.41
53:5:1468:A:C8	54:6:38:G:C2	3.09	0.41
53:5:1500:G:C2	53:5:1501:G:C8	3.09	0.41
53:5:1507:U:H3'	53:5:1508:C:C6	2.55	0.41
54:6:8:G:N1	54:6:50:G:C6	2.89	0.41
54:7:31:G:N2	54:7:42:C:C2	2.89	0.41
1:0:24:THR:HG23	1:0:27:GLY:CA	2.51	0.41
1:0:34:ARG:HG2	1:0:37:LYS:HZ3	1.84	0.41
2:1:2:LYS:HZ2	51:3:257:C:H3'	1.86	0.41
2:1:10:ARG:NH1	35:k:62:LEU:O	2.51	0.41
3:2:13:ASP:HA	3:2:15:LYS:HZ3	1.85	0.41
3:2:19:ARG:NE	51:3:2764:U:OP2	2.54	0.41
4:9:63:ILE:HA	4:9:88:TYR:CD2	2.56	0.41
4:9:227:VAL:HG13	4:9:277:VAL:C	2.45	0.41
4:9:283:ASP:HB2	4:9:286:GLU:HG3	2.02	0.41
4:9:314:LYS:HE2	4:9:320:HIS:HA	2.02	0.41
4:9:328:ARG:HD2	54:6:51:G:O2'	2.21	0.41
5:A:28:THR:O	5:A:224:SER:HB2	2.21	0.41
5:A:228:LEU:O	5:A:232:LEU:HG	2.21	0.41
7:C:58:GLN:OE1	7:C:61:GLN:NE2	2.54	0.41
7:C:148:THR:HB	7:C:154:VAL:HG21	2.03	0.41
8:D:69:ARG:HH12	8:D:168:ALA:C	2.25	0.41
8:D:178:ILE:HG13	8:D:179:TYR:N	2.36	0.41
9:E:48:PRO:HB3	9:E:53:LEU:HD13	2.02	0.41
9:E:50:LYS:NZ	53:5:670:G:H5''	2.36	0.41
9:E:74:ARG:O	9:E:78:ILE:HG23	2.21	0.41
13:I:57:ILE:HA	13:I:68:ARG:HH11	1.86	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:J:50:LYS:NZ	53:5:687:G:OP2	2.46	0.41
18:N:53:LEU:HA	18:N:56:LYS:HD2	2.03	0.41
19:O:64:ARG:HA	19:O:67:PHE:HB2	2.03	0.41
21:Q:70:ILE:HG13	53:5:716:C:C2	2.56	0.41
22:R:29:ARG:N	22:R:29:ARG:HD2	2.35	0.41
23:S:74:ALA:HA	23:S:77:ASN:HD22	1.85	0.41
26:b:79:LYS:HD3	26:b:80:HIS:CE1	2.56	0.41
26:b:82:GLN:HG3	51:3:2644:U:OP1	2.21	0.41
27:c:97:ARG:HB2	27:c:99:TYR:CE2	2.55	0.41
27:c:174:ASN:O	51:3:357:A:H2'	2.20	0.41
27:c:185:LYS:HB3	51:3:648:G:N1	2.36	0.41
28:d:34:ILE:HA	28:d:155:THR:O	2.21	0.41
28:d:118:SER:C	28:d:121:SER:H	2.29	0.41
28:d:157:VAL:O	28:d:157:VAL:HG13	2.20	0.41
29:e:169:ASP:O	29:e:169:ASP:CG	2.64	0.41
30:f:128:LEU:HD13	30:f:138:LEU:HD12	2.03	0.41
31:g:123:LEU:HA	31:g:126:ILE:HB	2.03	0.41
35:k:42:ARG:NH2	51:3:842:U:O4	2.54	0.41
35:k:78:VAL:N	35:k:111:PRO:O	2.46	0.41
38:n:2:LYS:HG3	38:n:7:GLN:OE1	2.21	0.41
39:o:24:GLU:OE1	39:o:24:GLU:N	2.54	0.41
39:o:56:ARG:HH12	39:o:58:LYS:HG2	1.85	0.41
43:s:17:TYR:HA	43:s:20:GLN:HE21	1.86	0.41
45:u:83:TYR:CD2	51:3:892:G:H4'	2.56	0.41
45:u:85:LYS:HE2	45:u:92:LYS:O	2.20	0.41
51:3:203:A:C6	51:3:2441:A:H2'	2.55	0.41
51:3:227:A:H1'	51:3:457:U:H1'	2.02	0.41
51:3:341:G:C2	51:3:344:A:C8	3.09	0.41
51:3:372:G:C2'	51:3:373:U:H5'	2.51	0.41
51:3:413:G:H2'	51:3:414:C:C6	2.56	0.41
51:3:453:U:C2	51:3:454:G:C8	3.09	0.41
51:3:481:C:N4	51:3:482:G:C6	2.88	0.41
51:3:563:A:N3	51:3:563:A:H3'	2.35	0.41
51:3:610:G:O2'	51:3:611:A:O4'	2.38	0.41
51:3:631:A:N1	51:3:695:G:C6	2.89	0.41
51:3:724:A:O2'	51:3:725:G:H5'	2.21	0.41
51:3:835:U:H4'	51:3:836:G:H3'	2.03	0.41
51:3:962:U:H2'	51:3:963:U:H6	1.87	0.41
51:3:995:A:H61	51:3:2503:G:HO2'	1.59	0.41
51:3:1016:A:H2'	51:3:1017:A:N9	2.34	0.41
51:3:1028:C:N3	51:3:1198:G:C6	2.89	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:3:1065:G:H2'	51:3:1066:G:H8	1.86	0.41
51:3:1158:C:H2'	51:3:1159:C:H6	1.81	0.41
51:3:1219:U:P	51:3:1219:U:H3'	2.61	0.41
51:3:1257:G:H2'	51:3:1258:C:C6	2.56	0.41
51:3:1397:G:C2	51:3:1398:C:C2	3.09	0.41
51:3:1484:G:N1	51:3:2712:C:C2	2.89	0.41
51:3:1492:G:N2	51:3:1580:G:C4	2.89	0.41
51:3:1671:C:H2'	51:3:1672:C:H6	1.85	0.41
51:3:1703:A:N1	51:3:2001:C:C2	2.88	0.41
51:3:1716:A:C8	51:3:1764:U:C4	3.09	0.41
51:3:1721:G:H1'	51:3:1735:A:H61	1.85	0.41
51:3:1844:C:O2'	51:3:1846:A:N7	2.49	0.41
51:3:1868:A:H2	51:3:1889:U:H3	1.68	0.41
51:3:2205:U:O2	51:3:2206:A:O2'	2.27	0.41
51:3:2291:U:H6	51:3:2397:G:H2'	1.86	0.41
51:3:2364:A:H8	51:3:2364:A:P	2.45	0.41
51:3:2378:G:H2'	51:3:2379:G:C8	2.56	0.41
51:3:2525:C:H1'	51:3:2526:A:C2'	2.51	0.41
51:3:2545:U:H2'	51:3:2546:U:H6	1.86	0.41
51:3:2695:U:C4	51:3:2696:G:C6	3.09	0.41
51:3:2735:G:C2	51:3:2736:U:C4	3.09	0.41
53:5:19:C:C1'	53:5:1070:G:H21	2.34	0.41
53:5:81:A:H2'	53:5:82:C:O4'	2.22	0.41
53:5:169:G:O6	53:5:196:G:C6	2.74	0.41
53:5:258:A:H2'	53:5:259:A:C8	2.56	0.41
53:5:412:G:C2	53:5:413:G:C6	3.10	0.41
53:5:448:A:H4'	53:5:449:A:OP2	2.20	0.41
53:5:558:U:H2'	53:5:558:U:OP1	2.21	0.41
53:5:663:G:C2	53:5:738:A:C5	3.08	0.41
53:5:718:A:H61	53:5:730:G:H1'	1.85	0.41
53:5:757:G:C4	53:5:758:G:C8	3.09	0.41
53:5:775:G:C5	53:5:776:C:C4	3.09	0.41
53:5:922:G:C6	53:5:1366:U:C2	3.09	0.41
53:5:948:U:C2	53:5:949:G:N7	2.89	0.41
53:5:971:A:C8	53:5:1336:C:C4	3.09	0.41
53:5:977:U:O4'	53:5:978:A:C5	2.74	0.41
53:5:1116:U:C4	53:5:1118:A:C4	3.09	0.41
53:5:1313:A:H1'	54:7:42:C:O4'	2.21	0.41
53:5:1323:A:C5	53:5:1324:A:C5	3.09	0.41
53:5:1335:G:C5	53:5:1336:C:C4	3.09	0.41
53:5:1375:C:C2	54:7:35:G:C2	3.08	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:5:1375:C:C2	54:7:35:G:N1	2.89	0.41
53:5:1499:G:C4	53:5:1500:G:C8	3.09	0.41
54:6:19:G:HO2'	54:6:58:G:H1	1.41	0.41
54:7:8:G:C6	54:7:68:G:C6	3.09	0.41
1:0:43:THR:H	1:0:46:SER:HG	1.68	0.40
3:2:19:ARG:HA	51:3:2764:U:H5''	2.03	0.40
4:9:21:ILE:HB	4:9:26:THR:HG23	2.03	0.40
4:9:143:ASP:HB3	4:9:147:GLN:CD	2.46	0.40
4:9:319:ARG:HA	4:9:382:ARG:CD	2.51	0.40
4:9:324:LEU:O	4:9:342:ILE:HG21	2.22	0.40
4:9:351:VAL:HA	4:9:355:ASP:OD2	2.20	0.40
6:B:5:VAL:H	53:5:1165:G:P	2.41	0.40
8:D:90:VAL:HG12	8:D:91:LEU:N	2.37	0.40
8:D:130:GLU:HG3	8:D:137:TYR:CE2	2.55	0.40
8:D:192:ILE:C	8:D:195:THR:HG1	2.24	0.40
10:F:14:ASP:O	10:F:16:VAL:N	2.51	0.40
10:F:21:LEU:HD23	10:F:21:LEU:HA	1.91	0.40
15:K:134:LYS:NZ	53:5:38:U:H4'	2.36	0.40
23:S:65:ALA:O	23:S:68:LEU:HG	2.21	0.40
25:a:233:MET:O	25:a:241:GLY:HA3	2.21	0.40
25:a:254:PRO:C	25:a:255:ARG:HD3	2.47	0.40
26:b:116:GLY:N	26:b:171:HIS:HB2	2.37	0.40
26:b:176:VAL:HG12	26:b:177:GLN:H	1.85	0.40
27:c:140:THR:HG21	27:c:174:ASN:H	1.86	0.40
28:d:50:LEU:HA	28:d:50:LEU:HD23	1.76	0.40
29:e:34:ILE:HG13	29:e:35:GLU:N	2.35	0.40
30:f:69:LYS:HA	30:f:72:ILE:HG12	2.03	0.40
33:i:20:ILE:HD13	33:i:20:ILE:HA	1.88	0.40
34:j:13:ASN:O	34:j:96:THR:HG22	2.21	0.40
34:j:86:LEU:HD12	34:j:94:ARG:HH12	1.86	0.40
36:l:41:TRP:HH2	51:3:994:U:H6	1.69	0.40
37:m:10:THR:O	37:m:13:TRP:HB3	2.21	0.40
37:m:46:ASP:HA	37:m:49:ILE:HD12	2.03	0.40
37:m:105:PRO:C	37:m:113:MET:HG2	2.46	0.40
37:m:107:ARG:HE	51:3:1314:A:H4'	1.86	0.40
38:n:31:MET:O	38:n:41:VAL:HA	2.21	0.40
38:n:84:LEU:C	38:n:85:LYS:HG2	2.46	0.40
39:o:91:LYS:HB2	39:o:91:LYS:HE3	1.91	0.40
41:q:67:LYS:CE	51:3:1254:U:H5''	2.51	0.40
42:r:15:GLN:O	42:r:19:LEU:HG	2.20	0.40
43:s:8:LEU:HB2	43:s:31:VAL:HA	2.03	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:s:48:TYR:CB	43:s:50:ILE:HG12	2.51	0.40
44:t:3:ARG:HD3	51:3:371:C:OP1	2.21	0.40
46:v:5:ASP:HB3	46:v:33:LEU:HD22	2.03	0.40
46:v:29:TRP:CD1	51:3:432:G:H1'	2.56	0.40
50:z:34:LEU:HA	50:z:34:LEU:HD23	1.80	0.40
51:3:101:C:H5''	51:3:102:A:C5'	2.51	0.40
51:3:122:G:C2	51:3:123:G:C4	3.08	0.40
51:3:301:G:H2'	51:3:302:G:C8	2.55	0.40
51:3:341:G:N2	51:3:344:A:C8	2.89	0.40
51:3:401:G:H3'	51:3:402:A:C5'	2.42	0.40
51:3:529:G:C2	51:3:530:G:C5	3.10	0.40
51:3:545:C:H2'	51:3:546:U:C6	2.56	0.40
51:3:591:G:C4	51:3:592:G:C8	3.09	0.40
51:3:602:U:H2'	51:3:603:G:C8	2.55	0.40
51:3:629:G:C6	51:3:630:C:C4	3.09	0.40
51:3:650:G:O5'	51:3:650:G:H8	2.04	0.40
51:3:658:G:H8	51:3:658:G:OP2	2.04	0.40
51:3:714:G:C6	51:3:834:G:N1	2.88	0.40
51:3:954:A:OP1	51:3:954:A:H4'	2.21	0.40
51:3:1046:A:P	51:3:1046:A:H8	2.44	0.40
51:3:1065:G:H2'	51:3:1066:G:C8	2.57	0.40
51:3:1104:A:H5''	51:3:1105:A:N6	2.36	0.40
51:3:1106:G:H3'	51:3:1107:C:C5	2.55	0.40
51:3:1220:A:C8	51:3:1221:G:N7	2.89	0.40
51:3:1343:C:H1'	51:3:1421:A:C2	2.56	0.40
51:3:1417:G:N1	51:3:1427:C:C4	2.89	0.40
51:3:1417:G:C2	51:3:1427:C:N3	2.89	0.40
51:3:1480:A:N3	51:3:1480:A:H2'	2.35	0.40
51:3:1605:A:OP2	51:3:1605:A:H8	2.04	0.40
51:3:1605:A:H2'	51:3:1606:A:O4'	2.21	0.40
51:3:1706:C:H5''	51:3:2562:U:OP1	2.21	0.40
51:3:1717:C:H2'	51:3:1718:C:C6	2.57	0.40
51:3:1721:G:C2	51:3:1736:G:O6	2.75	0.40
51:3:1797:C:H3'	51:3:1835:G:H22	1.86	0.40
51:3:1866:G:C6	51:3:1891:A:N6	2.85	0.40
51:3:1870:G:H2'	51:3:1871:U:H6	1.82	0.40
51:3:1963:U:H1'	51:3:2560:U:OP1	2.21	0.40
51:3:1992:C:H2'	51:3:1993:U:C6	2.56	0.40
51:3:2145:A:H2'	51:3:2146:A:C8	2.56	0.40
51:3:2148:U:C4	51:3:2149:U:C4	3.09	0.40
51:3:2249:A:N1	51:3:2250:G:C6	2.89	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:3:2278:G:C6	51:3:2279:G:C4	3.10	0.40
51:3:2311:G:C6	51:3:2312:G:C6	3.09	0.40
51:3:2558:G:C2	51:3:2567:C:C2	3.08	0.40
51:3:2638:G:C5	51:3:2897:G:C6	3.09	0.40
51:3:2658:U:C2	51:3:2659:U:C5	3.09	0.40
51:3:2691:C:H2'	51:3:2692:U:H6	1.85	0.40
51:3:2723:C:H2'	51:3:2724:U:C6	2.55	0.40
51:3:2747:U:N3	51:3:2748:A:N7	2.70	0.40
51:3:2823:A:N6	51:3:2832:G:O6	2.54	0.40
52:4:7:G:O6	52:4:102:A:C5	2.74	0.40
52:4:9:C:C5	52:4:10:C:N4	2.89	0.40
52:4:37:A:H8	52:4:37:A:OP2	2.04	0.40
52:4:37:A:O2'	52:4:38:U:O4'	2.39	0.40
53:5:98:G:C2	53:5:99:U:C2	3.08	0.40
53:5:153:A:C2	53:5:154:G:C5	3.09	0.40
53:5:216:G:C6	53:5:217:U:C4	3.09	0.40
53:5:254:G:C2	53:5:265:U:C2	3.10	0.40
53:5:314:G:C2	53:5:315:G:C8	3.09	0.40
53:5:315:G:C6	53:5:331:C:C4	3.09	0.40
53:5:369:A:H2'	53:5:370:A:C8	2.56	0.40
53:5:407:A:N1	53:5:425:G:N2	2.70	0.40
53:5:419:A:H5''	53:5:420:A:C2	2.56	0.40
53:5:497:A:O3'	53:5:498:G:C8	2.74	0.40
53:5:579:G:H1	53:5:755:U:H3'	1.85	0.40
53:5:602:G:H2'	53:5:603:U:H6	1.85	0.40
53:5:651:G:C4	53:5:750:A:C2	3.09	0.40
53:5:706:U:C2	53:5:707:G:C8	3.09	0.40
53:5:868:G:C6	53:5:869:U:N3	2.88	0.40
53:5:892:G:C4	53:5:894:A:OP2	2.74	0.40
53:5:947:U:C2	53:5:948:U:C5	3.09	0.40
53:5:976:U:O5'	53:5:977:U:H2'	2.21	0.40
53:5:990:C:O2'	53:5:991:A:H5'	2.21	0.40
53:5:1000:A:O2'	53:5:1029:C:O2'	2.28	0.40
53:5:1159:A:C6	53:5:1160:G:N7	2.89	0.40
53:5:1197:G:OP1	53:5:1295:U:O2'	2.28	0.40
53:5:1265:U:C2	53:5:1266:U:C5	3.10	0.40
53:5:1290:G:C2	53:5:1293:A:C8	3.10	0.40
53:5:1293:A:C4	53:5:1297:G:C8	3.09	0.40
53:5:1351:U:H2'	53:5:1352:A:H8	1.82	0.40
53:5:1363:U:C2'	53:5:1364:C:H5'	2.50	0.40
53:5:1415:G:O2'	53:5:1416:U:H5'	2.20	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:5:1491:A:N3	53:5:1491:A:H2'	2.35	0.40
54:6:9:U:H5'	54:6:50:G:H5'	2.01	0.40
54:7:10:A:N3	54:7:46:U:H2'	2.35	0.40
3:2:11:CYS:HB2	3:2:32:HIS:HE1	1.85	0.40
5:A:83:LEU:HB3	5:A:176:LEU:CB	2.50	0.40
6:B:59:GLU:OE1	13:I:100:VAL:HG21	2.20	0.40
6:B:110:GLY:O	6:B:111:SER:OG	2.30	0.40
6:B:172:ILE:HD11	6:B:175:ASN:O	2.21	0.40
7:C:193:GLU:O	7:C:194:SER:C	2.64	0.40
8:D:156:GLN:HA	8:D:177:ASP:OD2	2.21	0.40
9:E:24:LYS:O	9:E:27:GLN:HB2	2.21	0.40
9:E:42:LEU:HD12	9:E:55:ALA:C	2.47	0.40
11:G:38:SER:OG	53:5:587:A:H5''	2.21	0.40
12:H:12:ARG:NH1	12:H:13:LYS:HZ1	2.15	0.40
12:H:65:ILE:HG21	12:H:85:ILE:HD11	2.02	0.40
12:H:112:VAL:C	53:5:1321:G:H2'	2.46	0.40
13:I:55:ILE:HD12	13:I:72:GLU:HA	2.03	0.40
14:J:84:ARG:C	14:J:86:LYS:H	2.29	0.40
15:K:86:ASN:ND2	15:K:118:VAL:HB	2.37	0.40
16:L:23:PHE:HB3	16:L:66:GLU:HB2	2.03	0.40
19:O:48:VAL:HA	19:O:51:GLU:HB3	2.02	0.40
20:P:13:VAL:O	20:P:14:LYS:HD2	2.21	0.40
20:P:15:SER:HA	20:P:57:ASP:CG	2.47	0.40
20:P:19:ALA:HB3	53:5:250:G:O2'	2.21	0.40
25:a:37:LEU:O	25:a:38:LEU:HD23	2.21	0.40
25:a:208:HIS:O	25:a:208:HIS:ND1	2.54	0.40
26:b:220:ILE:HG22	26:b:221:GLU:N	2.36	0.40
27:c:139:LYS:HE3	51:3:354:C:OP1	2.21	0.40
27:c:183:LEU:O	27:c:186:VAL:HG13	2.20	0.40
29:e:15:LYS:O	29:e:29:GLY:HA2	2.22	0.40
30:f:10:SER:C	30:f:12:LEU:H	2.28	0.40
35:k:116:GLY:CA	51:3:663:A:H62	2.33	0.40
36:l:74:LYS:HB2	36:l:92:PHE:HZ	1.86	0.40
37:m:14:ARG:NH2	51:3:2009:U:OP1	2.55	0.40
38:n:17:LYS:HG2	38:n:18:LYS:N	2.36	0.40
39:o:21:TYR:HD2	39:o:23:PRO:HD3	1.86	0.40
40:p:106:ASN:O	40:p:107:LEU:C	2.64	0.40
44:t:89:ILE:C	44:t:105:LYS:HG3	2.47	0.40
47:w:28:GLU:O	47:w:32:LYS:HG2	2.22	0.40
51:3:60:G:C6	51:3:72:G:C6	3.08	0.40
51:3:87:G:N2	51:3:100:U:H1'	2.37	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:3:129:U:H2'	51:3:130:C:C6	2.55	0.40
51:3:195:A:C8	51:3:208:A:N6	2.87	0.40
51:3:249:G:H2'	51:3:250:U:O4'	2.22	0.40
51:3:303:C:H2'	51:3:304:U:O4'	2.21	0.40
51:3:343:A:H1'	51:3:363:G:N3	2.35	0.40
51:3:389:C:H2'	51:3:390:A:C8	2.56	0.40
51:3:499:G:N2	51:3:501:G:H3'	2.36	0.40
51:3:511:U:N3	51:3:515:A:C4	2.89	0.40
51:3:647:G:OP2	51:3:647:G:H8	2.03	0.40
51:3:770:A:C6	51:3:771:C:C2	3.09	0.40
51:3:780:G:H2'	51:3:781:U:O4'	2.21	0.40
51:3:842:U:O2'	51:3:2067:A:H2	2.04	0.40
51:3:850:G:C5	51:3:1224:G:C6	3.08	0.40
51:3:901:C:HO2'	51:3:902:U:P	2.44	0.40
51:3:917:G:C2	51:3:918:G:C8	3.08	0.40
51:3:941:C:H2'	51:3:942:A:H8	1.81	0.40
51:3:1027:U:N3	51:3:1199:A:C6	2.88	0.40
51:3:1116:U:H6	51:3:1116:U:O5'	2.04	0.40
51:3:1274:A:C4	51:3:1275:C:C5	3.09	0.40
51:3:1386:G:C2	51:3:1402:G:C6	3.10	0.40
51:3:1502:A:O2'	51:3:1541:A:N6	2.53	0.40
51:3:1643:A:O2'	51:3:1644:A:O5'	2.34	0.40
51:3:1665:G:H1'	51:3:1669:A:H61	1.84	0.40
51:3:1669:A:C5	51:3:1670:U:C5	3.09	0.40
51:3:1737:G:H2'	51:3:1738:G:C8	2.57	0.40
51:3:1784:U:H2'	51:3:1785:U:C6	2.55	0.40
51:3:1797:C:H3'	51:3:1798:A:H8	1.86	0.40
51:3:1866:G:C2'	51:3:1867:G:H5'	2.51	0.40
51:3:2046:G:C6	51:3:2047:U:C4	3.09	0.40
51:3:2271:C:C2	51:3:2272:C:C5	3.10	0.40
51:3:2703:U:O2	51:3:2722:G:C6	2.75	0.40
51:3:2764:U:C2	51:3:2765:A:C8	3.10	0.40
51:3:2815:G:H2'	51:3:2816:A:H8	1.85	0.40
51:3:2820:G:H2'	51:3:2821:U:H6	1.87	0.40
52:4:5:G:H2'	52:4:6:U:O4'	2.22	0.40
52:4:105:A:C6	52:4:106:A:C5	3.09	0.40
53:5:47:G:N2	53:5:362:U:O4'	2.54	0.40
53:5:97:G:C6	53:5:326:C:N4	2.89	0.40
53:5:125:A:N1	53:5:220:U:N3	2.70	0.40
53:5:158:A:C5	53:5:160:A:C8	3.09	0.40
53:5:193:G:H2'	53:5:194:U:H6	1.87	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:5:352:A:N3	53:5:364:U:O2'	2.24	0.40
53:5:365:U:O2	53:5:388:G:C2	2.72	0.40
53:5:398:G:C6	53:5:399:C:N3	2.90	0.40
53:5:676:U:H2'	53:5:677:C:H6	1.86	0.40
53:5:983:G:C6	53:5:984:A:N6	2.89	0.40
53:5:1236:A:N6	53:5:1249:G:H21	2.18	0.40
54:7:7:U:C2	54:7:69:A:C2	3.10	0.40
54:7:15:A:N6	54:7:49:C:C2	2.90	0.40
54:7:28:A:H2	54:7:45:G:O6	2.04	0.40
2:1:10:ARG:NH2	35:k:62:LEU:O	2.55	0.40
4:9:11:PRO:O	4:9:202:THR:HG21	2.20	0.40
4:9:121:LEU:HB2	4:9:161:TYR:CZ	2.56	0.40
4:9:207:VAL:CG1	4:9:236:GLU:HB3	2.51	0.40
4:9:300:LYS:HD2	4:9:301:PRO:HD2	2.03	0.40
5:A:69:TYR:CE1	5:A:231:LEU:HG	2.56	0.40
5:A:74:GLU:CD	9:E:166:PHE:HB3	2.46	0.40
8:D:189:ILE:HG23	8:D:190:ASN:H	1.85	0.40
9:E:39:TYR:HA	9:E:58:TYR:HA	2.04	0.40
10:F:105:MET:O	10:F:108:ARG:HG3	2.21	0.40
12:H:112:VAL:H	53:5:1321:G:H5''	1.86	0.40
13:I:30:LYS:O	13:I:33:GLU:HG3	2.21	0.40
13:I:65:LYS:CE	13:I:65:LYS:HA	2.51	0.40
16:L:93:LYS:HD2	16:L:95:LEU:HD22	2.02	0.40
19:O:33:LEU:HD13	19:O:41:LYS:H	1.87	0.40
20:P:54:LEU:HG	20:P:56:LYS:HG2	2.03	0.40
25:a:129:ASP:HB3	25:a:131:LYS:HD3	2.04	0.40
25:a:159:GLN:HB3	51:3:1825:U:C4	2.56	0.40
26:b:178:ASN:O	51:3:2738:U:H4'	2.21	0.40
26:b:211:LYS:NZ	51:3:2780:U:OP1	2.43	0.40
27:c:159:PHE:HE2	27:c:178:VAL:HG23	1.85	0.40
28:d:15:GLU:O	28:d:18:LYS:HB2	2.20	0.40
30:f:5:LEU:CG	30:f:6:LYS:N	2.57	0.40
31:g:109:VAL:O	31:g:110:CYS:HB2	2.21	0.40
40:p:108:ILE:H	40:p:108:ILE:HD12	1.87	0.40
41:q:82:LYS:HD2	51:3:1255:G:H5''	2.03	0.40
44:t:10:VAL:HG13	44:t:75:ALA:C	2.47	0.40
45:u:26:ASN:O	51:3:2286:A:H8	2.05	0.40
45:u:40:ALA:O	45:u:43:GLN:HG2	2.22	0.40
46:v:53:ARG:HH12	51:3:434:G:H3'	1.86	0.40
49:y:30:CYS:N	49:y:35:LYS:O	2.52	0.40
51:3:106:C:H2'	51:3:107:C:C6	2.56	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:3:107:C:C2	51:3:108:G:C8	3.09	0.40
51:3:119:A:OP2	51:3:120:A:H8	2.03	0.40
51:3:164:A:C5	51:3:165:U:C4	3.09	0.40
51:3:167:A:H2'	51:3:168:A:O4'	2.21	0.40
51:3:274:A:C6	51:3:408:G:C5	3.10	0.40
51:3:401:G:C5	51:3:402:A:C6	3.10	0.40
51:3:448:A:C6	51:3:449:C:N3	2.89	0.40
51:3:488:G:C4	51:3:489:A:C8	3.09	0.40
51:3:815:G:C2	51:3:817:A:C2	3.09	0.40
51:3:873:G:O2'	51:3:874:U:H5'	2.20	0.40
51:3:874:U:H1'	51:3:1222:A:H1'	2.03	0.40
51:3:880:C:O2'	51:3:881:A:C8	2.75	0.40
51:3:952:U:H2'	51:3:953:G:H8	1.85	0.40
51:3:1021:C:C2	51:3:1022:C:C5	3.08	0.40
51:3:1053:C:H2'	51:3:1054:U:C6	2.57	0.40
51:3:1054:U:H2'	51:3:1055:A:C5	2.56	0.40
51:3:1089:A:N3	51:3:1089:A:H2'	2.36	0.40
51:3:1121:A:O2'	51:3:1138:A:N1	2.39	0.40
51:3:1205:U:H3'	51:3:1206:U:H6	1.85	0.40
51:3:1316:U:C4	51:3:1355:C:H1'	2.56	0.40
51:3:1371:G:N3	51:3:1412:A:C2	2.89	0.40
51:3:1404:C:H2'	51:3:1405:G:H8	1.86	0.40
51:3:1450:G:C6	51:3:1451:A:C5	3.10	0.40
51:3:1458:A:H2'	51:3:1459:A:C8	2.57	0.40
51:3:1459:A:C2	51:3:1597:U:C2	3.09	0.40
51:3:1467:U:H2'	51:3:1468:U:C6	2.57	0.40
51:3:1470:C:C2	51:3:1583:G:C2	3.09	0.40
51:3:1519:A:H3'	51:3:1520:A:H8	1.85	0.40
51:3:1757:G:C2	51:3:1758:C:C2	3.09	0.40
51:3:1782:U:C5	51:3:1783:G:C8	3.09	0.40
51:3:1965:C:C2	51:3:1966:G:N7	2.89	0.40
51:3:2050:G:N2	51:3:2634:C:H1'	2.36	0.40
51:3:2057:C:O5'	51:3:2057:C:H6	2.04	0.40
51:3:2162:U:O2'	51:3:2163:U:H5'	2.21	0.40
51:3:2249:A:OP2	51:3:2249:A:H8	2.04	0.40
51:3:2305:C:C5	51:3:2326:G:H2'	2.57	0.40
51:3:2360:A:C5	51:3:2374:A:C5	3.08	0.40
51:3:2423:G:C4	51:3:2424:C:C5	3.10	0.40
51:3:2826:G:H1'	51:3:2829:G:H1	1.85	0.40
52:4:57:G:C8	52:4:58:C:C5	3.10	0.40
52:4:69:C:H3'	52:4:70:G:C8	2.55	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:5:59:C:N3	53:5:350:G:N1	2.44	0.40
53:5:97:G:H21	53:5:350:G:C5'	2.24	0.40
53:5:167:A:H2'	53:5:196:G:H1	1.86	0.40
53:5:226:G:N3	53:5:227:A:C8	2.89	0.40
53:5:239:A:H5'	53:5:241:C:C5	2.56	0.40
53:5:405:C:H2'	53:5:406:G:O4'	2.21	0.40
53:5:452:A:H2'	53:5:452:A:N3	2.36	0.40
53:5:493:A:O4'	53:5:494:A:O4'	2.39	0.40
53:5:500:G:C2	53:5:501:A:C5	3.09	0.40
53:5:553:C:H3'	53:5:553:C:OP2	2.22	0.40
53:5:600:G:C6	53:5:601:U:C4	3.10	0.40
53:5:605:A:H2'	53:5:606:A:H8	1.85	0.40
53:5:657:G:N1	53:5:743:A:N1	2.69	0.40
53:5:708:A:C4	53:5:709:A:C8	3.10	0.40
53:5:718:A:C6	53:5:730:G:N3	2.90	0.40
53:5:764:A:H2'	53:5:765:A:O4'	2.21	0.40
53:5:853:A:H61	53:5:863:A:H2'	1.84	0.40
53:5:883:A:O3'	53:5:884:G:H4'	2.21	0.40
53:5:992:U:C4	53:5:1035:A:N6	2.90	0.40
53:5:1106:U:H2'	53:5:1107:U:H6	1.84	0.40
53:5:1142:G:N3	53:5:1144:A:OP2	2.55	0.40
53:5:1214:A:H61	53:5:1270:C:H2'	1.86	0.40
53:5:1262:A:C2	53:5:1263:A:C4	3.09	0.40
53:5:1393:A:C8	53:5:1457:G:N2	2.88	0.40
53:5:1492:G:C2	53:5:1493:A:C4	3.09	0.40
54:6:7:U:H2'	54:6:8:G:C8	2.56	0.40
54:6:63:U:H2'	54:6:64:G:C8	2.57	0.40
54:7:19:G:N3	54:7:58:G:H2'	2.36	0.40
4:9:312:LEU:HB2	4:9:384:VAL:HA	2.02	0.40
5:A:33:VAL:O	5:A:53:ASN:HA	2.21	0.40
5:A:88:LYS:O	5:A:89:ASN:C	2.64	0.40
7:C:104:MET:HE1	7:C:177:THR:N	2.37	0.40
8:D:71:VAL:HG22	8:D:91:LEU:O	2.21	0.40
8:D:165:ALA:O	8:D:169:ILE:HG12	2.20	0.40
8:D:168:ALA:HA	8:D:171:GLU:OE1	2.21	0.40
11:G:48:LEU:HD13	11:G:51:GLU:HB3	2.03	0.40
11:G:53:TYR:CD1	11:G:84:ILE:HD13	2.56	0.40
12:H:123:ALA:H	53:5:1323:A:P	2.43	0.40
13:I:20:ASP:OD1	13:I:22:THR:N	2.54	0.40
13:I:70:GLN:CG	17:M:59:ALA:HB2	2.51	0.40
16:L:73:ILE:HD12	16:L:76:ASN:HB2	2.03	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:N:8:ILE:HD11	18:N:27:SER:HB2	2.04	0.40
19:O:22:ARG:C	19:O:24:GLY:H	2.29	0.40
21:Q:84:ARG:NH1	21:Q:85:HIS:HE1	2.18	0.40
22:R:34:TRP:CE2	22:R:57:PHE:HZ	2.40	0.40
25:a:100:THR:HG23	25:a:106:LYS:HG2	2.04	0.40
27:c:143:MET:C	27:c:147:LEU:HG	2.46	0.40
29:e:89:LYS:HG2	29:e:135:THR:HG23	2.04	0.40
30:f:138:LEU:C	30:f:139:LYS:HD3	2.47	0.40
31:g:24:PHE:O	31:g:111:GLY:HA2	2.21	0.40
32:h:87:LYS:HB3	51:3:1111:C:O2	2.21	0.40
34:j:13:ASN:HD22	34:j:97:ARG:HB3	1.87	0.40
36:l:12:PRO:HA	51:3:947:A:H62	1.86	0.40
36:l:52:ILE:HA	36:l:55:SER:OG	2.22	0.40
39:o:54:ARG:CZ	39:o:65:ILE:HD11	2.51	0.40
47:w:63:LEU:HB2	47:w:66:GLN:NE2	2.32	0.40
51:3:286:A:H8	51:3:288:A:H1'	1.87	0.40
51:3:495:U:C5	51:3:505:G:N2	2.89	0.40
51:3:586:G:C4	51:3:587:U:C5	3.09	0.40
51:3:635:G:H2'	51:3:636:U:C2	2.57	0.40
51:3:639:G:N3	51:3:692:U:O2'	2.54	0.40
51:3:640:U:O2	51:3:658:G:C6	2.73	0.40
51:3:735:G:HO2'	51:3:1666:A:HO2'	1.62	0.40
51:3:776:U:H2'	51:3:777:C:H6	1.85	0.40
51:3:827:G:H4'	51:3:828:A:O4'	2.21	0.40
51:3:914:G:N2	51:3:937:A:C8	2.88	0.40
51:3:1242:G:C5	51:3:1266:G:N2	2.90	0.40
51:3:1456:C:C4	51:3:1603:A:H5''	2.57	0.40
51:3:1462:A:O2'	51:3:1463:G:O4'	2.38	0.40
51:3:1485:A:N1	51:3:2710:G:C6	2.89	0.40
51:3:1529:U:O2'	51:3:1530:G:H5'	2.21	0.40
51:3:1583:G:C2	51:3:1584:U:C2	3.10	0.40
51:3:1671:C:H2'	51:3:1672:C:C6	2.56	0.40
51:3:1955:G:C6	51:3:1966:G:C6	3.10	0.40
51:3:2060:G:O6	51:3:2622:A:H2	2.05	0.40
51:3:2212:U:O4	51:3:2213:A:N6	2.55	0.40
51:3:2223:C:H2'	51:3:2224:A:C8	2.56	0.40
51:3:2306:A:H1'	51:3:2330:A:O4'	2.22	0.40
51:3:2381:G:C2	51:3:2382:A:C5	3.10	0.40
51:3:2609:C:H5''	54:7:76:C:N4	2.37	0.40
53:5:153:A:N3	53:5:154:G:N7	2.69	0.40
53:5:548:G:C2	53:5:549:U:C6	3.09	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:5:575:A:C2	53:5:762:G:H1'	2.56	0.40
53:5:649:U:O4	53:5:750:A:H8	2.04	0.40
53:5:772:G:N2	53:5:802:C:N3	2.69	0.40
53:5:783:G:C4	53:5:784:A:C8	3.09	0.40
53:5:828:U:C2	53:5:850:G:C2	3.09	0.40
53:5:852:G:C6	53:5:863:A:C8	3.08	0.40
53:5:894:A:H2'	53:5:895:A:C8	2.56	0.40
53:5:1058:A:H1'	53:5:1059:G:C1'	2.52	0.40
53:5:1065:G:C6	53:5:1093:A:N6	2.90	0.40
53:5:1156:G:H1'	53:5:1157:G:C4	2.57	0.40
53:5:1167:C:C2	53:5:1168:G:H1'	2.56	0.40
53:5:1434:C:N3	53:5:1435:G:C8	2.90	0.40
4:9:96:ALA:HA	4:9:99:MET:SD	2.61	0.40
4:9:109:THR:HG23	4:9:137:LYS:HB3	2.03	0.40
4:9:113:MET:HE2	4:9:113:MET:HA	2.02	0.40
6:B:8:ASN:CA	6:B:187:TYR:HB3	2.51	0.40
6:B:83:LYS:HE3	6:B:83:LYS:HB2	1.83	0.40
7:C:95:SER:HB2	7:C:136:LEU:H	1.87	0.40
8:D:75:ARG:HH21	8:D:75:ARG:HG2	1.85	0.40
8:D:96:ASN:C	8:D:98:LYS:H	2.29	0.40
11:G:32:THR:HA	11:G:73:ASN:HA	2.03	0.40
11:G:49:VAL:HG21	11:G:57:PHE:CG	2.57	0.40
12:H:20:TYR:HB2	12:H:66:ASN:HB3	2.04	0.40
13:I:51:LYS:HE3	53:5:1228:C:C6	2.56	0.40
14:J:25:VAL:HG23	14:J:38:ALA:HB3	2.04	0.40
17:M:10:GLN:HG3	17:M:23:ARG:HB2	2.03	0.40
21:Q:92:ARG:O	21:Q:95:TYR:HB3	2.21	0.40
25:a:154:PRO:HG3	25:a:196:CYS:SG	2.61	0.40
26:b:106:GLU:CA	26:b:217:VAL:HA	2.49	0.40
27:c:103:LEU:HD22	51:3:652:U:OP1	2.22	0.40
27:c:114:THR:O	27:c:117:SER:OG	2.33	0.40
29:e:157:PRO:HA	29:e:163:LYS:H	1.85	0.40
33:i:18:TRP:CD1	33:i:138:GLN:HB3	2.56	0.40
35:k:72:PHE:CE2	51:3:2413:G:H4'	2.57	0.40
39:o:54:ARG:HB2	39:o:100:TYR:HE1	1.86	0.40
40:p:53:LYS:HD3	51:3:1031:U:H5'	2.04	0.40
40:p:102:PRO:C	40:p:104:LYS:H	2.30	0.40
42:r:8:PHE:O	42:r:9:ARG:HB3	2.22	0.40
42:r:98:LYS:HA	42:r:98:LYS:HD3	1.89	0.40
43:s:9:LYS:HG2	47:w:34:ALA:HB2	2.02	0.40
51:3:58:A:C5	51:3:59:C:C5	3.10	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:3:161:U:O2	51:3:171:G:N2	2.54	0.40
51:3:162:G:H1'	51:3:171:G:N2	2.37	0.40
51:3:230:G:H1	51:3:454:G:N2	2.19	0.40
51:3:241:C:C4	51:3:265:G:C2	3.09	0.40
51:3:515:A:H2	51:3:538:A:H61	1.69	0.40
51:3:665:C:H2'	51:3:666:G:C8	2.56	0.40
51:3:699:U:H2'	51:3:700:U:C6	2.57	0.40
51:3:1065:G:O6	51:3:1160:G:N2	2.54	0.40
51:3:1069:G:N2	51:3:1070:U:C2	2.90	0.40
51:3:1084:C:C2	51:3:1085:A:C8	3.09	0.40
51:3:1217:G:C6	51:3:1218:G:C5	3.09	0.40
51:3:1298:A:C2	51:3:1299:A:H1'	2.56	0.40
51:3:1312:A:C6	51:3:1313:G:C5	3.10	0.40
51:3:1683:G:C6	51:3:2016:G:C6	3.09	0.40
51:3:1806:G:H5''	51:3:1809:A:O2'	2.21	0.40
51:3:1857:G:C2	51:3:1858:U:C5	3.10	0.40
51:3:1860:A:H2'	51:3:1861:A:N9	2.36	0.40
51:3:1876:G:N1	51:3:1880:G:C6	2.89	0.40
51:3:2053:G:O6	51:3:2630:U:C4	2.72	0.40
51:3:2210:G:O3'	51:3:2211:G:H8	2.05	0.40
51:3:2260:G:C4	51:3:2261:G:C8	3.09	0.40
51:3:2326:G:H3'	51:3:2327:U:C6	2.56	0.40
51:3:2482:U:C2'	51:3:2483:C:H5'	2.52	0.40
51:3:2662:A:C4'	51:3:2663:G:H4'	2.52	0.40
51:3:2675:C:H2'	51:3:2676:G:C8	2.57	0.40
51:3:2692:U:H3'	51:3:2693:U:H6	1.86	0.40
51:3:2699:C:H6	51:3:2699:C:P	2.45	0.40
51:3:2753:C:N4	51:3:2768:U:H3	2.18	0.40
51:3:2779:C:C2	51:3:2780:U:C5	3.10	0.40
51:3:2840:U:N3	51:3:2841:A:N7	2.70	0.40
52:4:10:C:H4'	52:4:11:A:OP2	2.20	0.40
53:5:69:G:H3'	53:5:70:A:C8	2.56	0.40
53:5:152:U:C2	53:5:153:A:C8	3.09	0.40
53:5:209:A:N6	53:5:210:G:C2	2.89	0.40
53:5:368:C:H4'	53:5:369:A:OP1	2.21	0.40
53:5:463:U:O2'	53:5:464:A:H3'	2.21	0.40
53:5:575:A:H2'	53:5:576:A:O4'	2.22	0.40
53:5:688:G:N2	53:5:692:A:H3'	2.37	0.40
53:5:934:G:H1'	53:5:1351:U:H1'	2.03	0.40
53:5:980:C:N3	53:5:1196:G:C2	2.89	0.40
53:5:1080:G:N2	53:5:1088:C:C2	2.89	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:5:1119:C:O2'	53:5:1122:U:O2'	2.16	0.40
53:5:1168:G:H2'	53:5:1168:G:N3	2.36	0.40
53:5:1418:G:C6	53:5:1419:C:C4	3.10	0.40
53:5:1467:A:N1	54:6:36:A:H1'	2.36	0.40
53:5:1502:G:C2	53:5:1503:U:C4	3.10	0.40
54:7:36:A:N6	54:7:37:A:H62	2.20	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 PDB entries followed by that with respect to all EM entries.

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	
1	0	45/48 (94%)	44 (98%)	1 (2%)	0	100	100
2	1	57/59 (97%)	44 (77%)	13 (23%)	0	100	100
3	2	35/37 (95%)	33 (94%)	2 (6%)	0	100	100
4	9	391/394 (99%)	347 (89%)	42 (11%)	2 (0%)	24	63
5	A	238/294 (81%)	202 (85%)	35 (15%)	1 (0%)	30	67
6	B	213/273 (78%)	182 (85%)	31 (15%)	0	100	100
7	C	201/205 (98%)	170 (85%)	30 (15%)	1 (0%)	24	63
8	D	151/219 (69%)	132 (87%)	19 (13%)	0	100	100
9	E	165/215 (77%)	126 (76%)	39 (24%)	0	100	100
10	F	152/155 (98%)	126 (83%)	25 (16%)	1 (1%)	18	56
11	G	139/142 (98%)	113 (81%)	25 (18%)	1 (1%)	18	56
12	H	126/132 (96%)	110 (87%)	15 (12%)	1 (1%)	16	54
13	I	99/108 (92%)	84 (85%)	15 (15%)	0	100	100
14	J	112/121 (93%)	100 (89%)	12 (11%)	0	100	100
15	K	134/139 (96%)	107 (80%)	26 (19%)	1 (1%)	18	56

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
16	L	116/124 (94%)	102 (88%)	14 (12%)	0	100	100
17	M	58/61 (95%)	49 (84%)	9 (16%)	0	100	100
18	N	81/86 (94%)	76 (94%)	5 (6%)	0	100	100
19	O	78/94 (83%)	67 (86%)	11 (14%)	0	100	100
20	P	81/85 (95%)	71 (88%)	10 (12%)	0	100	100
21	Q	63/104 (61%)	45 (71%)	16 (25%)	2 (3%)	3	21
22	R	82/87 (94%)	62 (76%)	19 (23%)	1 (1%)	10	44
23	S	75/87 (86%)	68 (91%)	7 (9%)	0	100	100
24	T	51/60 (85%)	47 (92%)	4 (8%)	0	100	100
25	a	283/287 (99%)	231 (82%)	52 (18%)	0	100	100
26	b	227/287 (79%)	196 (86%)	31 (14%)	0	100	100
27	c	208/212 (98%)	182 (88%)	24 (12%)	2 (1%)	12	49
28	d	173/180 (96%)	141 (82%)	32 (18%)	0	100	100
29	e	174/184 (95%)	156 (90%)	17 (10%)	1 (1%)	21	59
30	f	143/149 (96%)	120 (84%)	21 (15%)	2 (1%)	9	40
31	g	119/161 (74%)	102 (86%)	16 (13%)	1 (1%)	16	54
32	h	126/137 (92%)	114 (90%)	12 (10%)	0	100	100
33	i	142/146 (97%)	119 (84%)	23 (16%)	0	100	100
34	j	120/122 (98%)	107 (89%)	12 (10%)	1 (1%)	16	54
35	k	146/151 (97%)	124 (85%)	22 (15%)	0	100	100
36	l	134/139 (96%)	111 (83%)	22 (16%)	1 (1%)	18	56
37	m	117/124 (94%)	103 (88%)	13 (11%)	1 (1%)	14	51
38	n	108/116 (93%)	88 (82%)	20 (18%)	0	100	100
39	o	113/119 (95%)	100 (88%)	13 (12%)	0	100	100
40	p	112/127 (88%)	98 (88%)	14 (12%)	0	100	100
41	q	97/100 (97%)	76 (78%)	19 (20%)	2 (2%)	5	30
42	r	137/159 (86%)	116 (85%)	21 (15%)	0	100	100
43	s	90/237 (38%)	74 (82%)	16 (18%)	0	100	100
44	t	109/111 (98%)	94 (86%)	15 (14%)	0	100	100
45	u	84/104 (81%)	72 (86%)	12 (14%)	0	100	100
46	v	61/65 (94%)	52 (85%)	9 (15%)	0	100	100

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
47	w	96/111 (86%)	79 (82%)	17 (18%)	0	100	100
48	x	42/97 (43%)	37 (88%)	5 (12%)	0	100	100
49	y	54/57 (95%)	46 (85%)	8 (15%)	0	100	100
50	z	48/53 (91%)	40 (83%)	8 (17%)	0	100	100
All	All	6206/7064 (88%)	5285 (85%)	899 (14%)	22 (0%)	31	67

All (22) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
11	G	109	ASN
12	H	62	ASN
21	Q	79	CYS
21	Q	80	GLN
27	c	76	GLN
30	f	7	GLN
41	q	42	ASP
5	A	89	ASN
41	q	40	MET
4	9	334	ARG
7	C	125	ASN
15	K	90	HIS
31	g	30	THR
34	j	89	GLU
36	l	14	ASN
10	F	145	GLU
37	m	7	PRO
27	c	82	PRO
29	e	167	TYR
30	f	6	LYS
22	R	8	GLY
4	9	210	PRO

5.3.2 Protein sidechains [i](#)

In the following table, the Percentiles column shows the percent sidechain outliers of the chain as a percentile score with respect to all PDB entries followed by that with respect to all EM entries.

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	
1	0	40/41 (98%)	40 (100%)	0	100	100
2	1	51/51 (100%)	51 (100%)	0	100	100
3	2	35/35 (100%)	34 (97%)	1 (3%)	37	58
4	9	324/325 (100%)	323 (100%)	1 (0%)	86	86
5	A	212/262 (81%)	212 (100%)	0	100	100
6	B	180/232 (78%)	178 (99%)	2 (1%)	65	76
7	C	181/183 (99%)	181 (100%)	0	100	100
8	D	123/178 (69%)	122 (99%)	1 (1%)	73	80
9	E	150/196 (76%)	149 (99%)	1 (1%)	76	81
10	F	131/132 (99%)	131 (100%)	0	100	100
11	G	123/124 (99%)	123 (100%)	0	100	100
12	H	111/115 (96%)	109 (98%)	2 (2%)	51	68
13	I	95/99 (96%)	94 (99%)	1 (1%)	65	76
14	J	91/97 (94%)	91 (100%)	0	100	100
15	K	117/120 (98%)	116 (99%)	1 (1%)	70	79
16	L	100/105 (95%)	99 (99%)	1 (1%)	68	78
17	M	47/48 (98%)	47 (100%)	0	100	100
18	N	76/78 (97%)	75 (99%)	1 (1%)	61	74
19	O	69/82 (84%)	69 (100%)	0	100	100
20	P	73/75 (97%)	73 (100%)	0	100	100
21	Q	56/94 (60%)	55 (98%)	1 (2%)	51	68
22	R	74/77 (96%)	74 (100%)	0	100	100
23	S	70/77 (91%)	70 (100%)	0	100	100
24	T	49/56 (88%)	49 (100%)	0	100	100
25	a	241/243 (99%)	240 (100%)	1 (0%)	84	84
26	b	186/233 (80%)	186 (100%)	0	100	100
27	c	182/184 (99%)	176 (97%)	6 (3%)	33	55
28	d	150/154 (97%)	150 (100%)	0	100	100
29	e	153/159 (96%)	151 (99%)	2 (1%)	61	74
30	f	131/134 (98%)	131 (100%)	0	100	100
31	g	99/129 (77%)	94 (95%)	5 (5%)	21	42
32	h	102/110 (93%)	102 (100%)	0	100	100

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
33	i	126/128 (98%)	126 (100%)	0	100	100
34	j	103/103 (100%)	98 (95%)	5 (5%)	22	43
35	k	123/126 (98%)	123 (100%)	0	100	100
36	l	113/115 (98%)	111 (98%)	2 (2%)	51	68
37	m	105/109 (96%)	102 (97%)	3 (3%)	37	58
38	n	96/99 (97%)	95 (99%)	1 (1%)	68	78
39	o	101/105 (96%)	101 (100%)	0	100	100
40	p	100/108 (93%)	100 (100%)	0	100	100
41	q	90/91 (99%)	88 (98%)	2 (2%)	45	64
42	r	116/132 (88%)	116 (100%)	0	100	100
43	s	82/208 (39%)	82 (100%)	0	100	100
44	t	96/96 (100%)	96 (100%)	0	100	100
45	u	69/85 (81%)	69 (100%)	0	100	100
46	v	58/60 (97%)	58 (100%)	0	100	100
47	w	87/98 (89%)	87 (100%)	0	100	100
48	x	41/86 (48%)	41 (100%)	0	100	100
49	y	48/49 (98%)	44 (92%)	4 (8%)	10	30
50	z	47/50 (94%)	47 (100%)	0	100	100
All	All	5423/6076 (89%)	5379 (99%)	44 (1%)	70	80

All (44) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
3	2	36	GLN
4	9	334	ARG
6	B	141	LEU
6	B	165	ILE
8	D	113	ASN
9	E	101	ASN
12	H	64	ASP
12	H	65	ILE
13	I	64	ASP
15	K	121	GLU
16	L	91	HIS
18	N	15	HIS
21	Q	80	GLN

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Mol	Chain	Res	Type
25	a	71	PHE
27	c	66	TYR
27	c	67	LYS
27	c	76	GLN
27	c	125	THR
27	c	142	VAL
27	c	199	VAL
29	e	106	LEU
29	e	168	PHE
31	g	43	LYS
31	g	44	LEU
31	g	46	LYS
31	g	88	GLU
31	g	90	VAL
34	j	19	VAL
34	j	80	ASP
34	j	87	ILE
34	j	88	LYS
34	j	89	GLU
36	l	13	HIS
36	l	14	ASN
37	m	4	ILE
37	m	6	LYS
37	m	75	VAL
38	n	12	HIS
41	q	40	MET
41	q	41	LEU
49	y	47	MET
49	y	50	ASP
49	y	51	LEU
49	y	52	ARG

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (148) such sidechains are listed below:

Mol	Chain	Res	Type
1	0	38	GLN
2	1	32	HIS
4	9	12	HIS
4	9	20	HIS
4	9	79	HIS
4	9	91	ASN
4	9	147	GLN

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Mol	Chain	Res	Type
5	A	53	ASN
5	A	63	GLN
5	A	70	ASN
5	A	77	GLN
5	A	79	ASN
5	A	98	ASN
5	A	128	ASN
5	A	137	GLN
5	A	149	ASN
6	B	17	ASN
6	B	27	HIS
6	B	82	ASN
6	B	125	ASN
7	C	52	GLN
7	C	58	GLN
7	C	61	GLN
7	C	70	GLN
7	C	81	GLN
7	C	118	ASN
7	C	121	HIS
8	D	85	ASN
8	D	113	ASN
8	D	127	HIS
8	D	202	GLN
9	E	2	GLN
9	E	4	ASN
9	E	17	GLN
9	E	26	GLN
9	E	56	HIS
9	E	66	ASN
9	E	67	GLN
9	E	77	ASN
9	E	89	ASN
9	E	105	GLN
10	F	39	GLN
10	F	51	GLN
10	F	67	ASN
10	F	141	HIS
11	G	11	HIS
11	G	58	GLN
11	G	73	ASN
11	G	109	ASN

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Mol	Chain	Res	Type
12	H	91	GLN
13	I	62	HIS
13	I	70	GLN
13	I	87	GLN
14	J	15	HIS
15	K	59	ASN
15	K	85	HIS
15	K	86	ASN
15	K	125	GLN
16	L	38	ASN
18	N	15	HIS
18	N	32	GLN
18	N	39	HIS
18	N	43	ASN
19	O	32	HIS
20	P	18	ASN
20	P	42	HIS
20	P	62	GLN
22	R	79	ASN
23	S	13	GLN
23	S	20	ASN
23	S	21	ASN
23	S	31	ASN
23	S	34	ASN
23	S	46	ASN
23	S	50	GLN
23	S	63	ASN
25	a	11	ASN
25	a	31	ASN
25	a	62	ASN
25	a	91	ASN
25	a	183	GLN
25	a	208	HIS
25	a	209	ASN
25	a	238	HIS
25	a	240	HIS
26	b	34	ASN
26	b	63	ASN
26	b	135	HIS
26	b	225	GLN
27	c	31	GLN
27	c	32	GLN

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Mol	Chain	Res	Type
27	c	126	HIS
27	c	130	GLN
27	c	134	ASN
27	c	145	GLN
28	d	55	ASN
28	d	58	HIS
29	e	6	ASN
29	e	17	ASN
29	e	33	GLN
29	e	63	GLN
30	f	7	GLN
30	f	28	HIS
30	f	85	ASN
33	i	17	GLN
33	i	43	ASN
33	i	51	GLN
34	j	13	ASN
34	j	18	GLN
34	j	69	GLN
34	j	112	ASN
35	k	36	GLN
35	k	117	HIS
35	k	129	HIS
35	k	141	ASN
35	k	143	ASN
36	l	13	HIS
36	l	71	HIS
36	l	113	GLN
36	l	123	HIS
37	m	59	ASN
38	n	37	ASN
38	n	49	ASN
38	n	99	HIS
39	o	15	GLN
39	o	17	GLN
40	p	19	GLN
40	p	40	GLN
40	p	85	HIS
41	q	62	HIS
41	q	73	HIS
41	q	99	HIS
42	r	15	GLN

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Mol	Chain	Res	Type
42	r	60	ASN
42	r	94	ASN
42	r	102	ASN
42	r	112	ASN
42	r	121	GLN
43	s	20	GLN
44	t	79	GLN
46	v	6	GLN
46	v	30	ASN
47	w	42	HIS
47	w	45	ASN
47	w	46	GLN
47	w	66	GLN
47	w	90	HIS
50	z	12	ASN

5.3.3 RNA [i](#)

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
51	3	2875/2907 (98%)	1332 (46%)	45 (1%)
52	4	103/108 (95%)	62 (60%)	4 (3%)
53	5	1490/1520 (98%)	615 (41%)	14 (0%)
54	6	75/76 (98%)	32 (42%)	2 (2%)
54	7	75/76 (98%)	48 (64%)	5 (6%)
All	All	4618/4687 (98%)	2089 (45%)	70 (1%)

All (2089) RNA backbone outliers are listed below:

Mol	Chain	Res	Type
51	3	14	U
51	3	15	A
51	3	16	A
51	3	17	G
51	3	20	C
51	3	21	U
51	3	27	U
51	3	29	G
51	3	33	C
51	3	35	U
51	3	36	U
51	3	37	G

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Mol	Chain	Res	Type
51	3	38	G
51	3	39	C
51	3	41	C
51	3	44	A
51	3	48	G
51	3	49	C
51	3	52	U
51	3	53	G
51	3	56	G
51	3	58	A
51	3	59	C
51	3	61	U
51	3	62	G
51	3	64	U
51	3	65	A
51	3	72	G
51	3	73	A
51	3	74	U
51	3	76	A
51	3	77	G
51	3	82	G
51	3	84	G
51	3	86	A
51	3	87	G
51	3	89	U
51	3	90	G
51	3	91	G
51	3	93	A
51	3	94	A
51	3	95	G
51	3	98	C
51	3	101	C
51	3	102	A
51	3	103	G
51	3	112	A
51	3	115	U
51	3	119	A
51	3	120	A
51	3	121	U
51	3	122	G
51	3	126	C
51	3	128	A

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Mol	Chain	Res	Type
51	3	132	G
51	3	134	U
51	3	136	G
51	3	137	U
51	3	146	G
51	3	148	U
51	3	149	A
51	3	156	A
51	3	160	A
51	3	162	G
51	3	163	A
51	3	165	U
51	3	168	A
51	3	171	G
51	3	172	U
51	3	174	A
51	3	178	A
51	3	179	A
51	3	181	G
51	3	183	A
51	3	184	A
51	3	185	U
51	3	188	G
51	3	189	U
51	3	191	G
51	3	193	G
51	3	197	U
51	3	200	A
51	3	202	C
51	3	203	A
51	3	207	C
51	3	210	U
51	3	212	G
51	3	219	G
51	3	220	A
51	3	223	A
51	3	225	A
51	3	226	A
51	3	227	A
51	3	228	A
51	3	230	G
51	3	232	A

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Mol	Chain	Res	Type
51	3	233	U
51	3	234	G
51	3	237	A
51	3	243	U
51	3	245	U
51	3	246	G
51	3	247	U
51	3	250	U
51	3	252	G
51	3	254	G
51	3	255	A
51	3	256	G
51	3	262	G
51	3	265	G
51	3	269	A
51	3	270	G
51	3	274	A
51	3	276	A
51	3	277	C
51	3	279	U
51	3	280	A
51	3	282	C
51	3	284	U
51	3	285	U
51	3	287	G
51	3	293	G
51	3	295	U
51	3	296	U
51	3	297	G
51	3	298	U
51	3	299	A
51	3	303	C
51	3	305	U
51	3	306	G
51	3	309	A
51	3	310	U
51	3	312	U
51	3	314	G
51	3	315	A
51	3	316	C
51	3	318	U
51	3	319	G

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Mol	Chain	Res	Type
51	3	320	A
51	3	321	A
51	3	323	A
51	3	326	A
51	3	328	A
51	3	329	G
51	3	333	A
51	3	336	C
51	3	339	U
51	3	342	G
51	3	345	A
51	3	347	C
51	3	351	G
51	3	353	G
51	3	355	A
51	3	356	A
51	3	357	A
51	3	361	G
51	3	363	G
51	3	364	A
51	3	369	C
51	3	372	G
51	3	373	U
51	3	375	U
51	3	379	A
51	3	380	A
51	3	382	U
51	3	383	U
51	3	384	G
51	3	385	U
51	3	387	U
51	3	389	C
51	3	391	U
51	3	392	A
51	3	393	C
51	3	396	A
51	3	401	G
51	3	402	A
51	3	403	U
51	3	404	C
51	3	407	U
51	3	408	G

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Mol	Chain	Res	Type
51	3	409	A
51	3	410	G
51	3	411	U
51	3	413	G
51	3	414	C
51	3	418	G
51	3	419	A
51	3	422	A
51	3	424	G
51	3	425	U
51	3	426	U
51	3	430	U
51	3	431	U
51	3	432	G
51	3	437	A
51	3	438	A
51	3	439	U
51	3	440	C
51	3	441	U
51	3	442	G
51	3	443	C
51	3	447	G
51	3	448	A
51	3	457	U
51	3	460	G
51	3	461	C
51	3	465	A
51	3	466	A
51	3	478	G
51	3	479	A
51	3	480	C
51	3	481	C
51	3	483	A
51	3	484	U
51	3	485	A
51	3	487	C
51	3	488	G
51	3	490	A
51	3	491	A
51	3	493	A
51	3	494	G
51	3	495	U

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Mol	Chain	Res	Type
51	3	501	G
51	3	504	G
51	3	505	G
51	3	509	G
51	3	511	U
51	3	513	A
51	3	514	A
51	3	515	A
51	3	516	A
51	3	517	G
51	3	519	A
51	3	520	C
51	3	521	C
51	3	530	G
51	3	531	G
51	3	532	A
51	3	539	U
51	3	540	A
51	3	543	U
51	3	551	C
51	3	553	A
51	3	554	U
51	3	558	C
51	3	562	C
51	3	563	A
51	3	566	G
51	3	567	U
51	3	568	G
51	3	569	U
51	3	571	A
51	3	575	C
51	3	577	C
51	3	578	A
51	3	581	A
51	3	582	A
51	3	583	U
51	3	584	G
51	3	586	G
51	3	587	U
51	3	588	G
51	3	595	U
51	3	596	G

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Mol	Chain	Res	Type
51	3	598	G
51	3	599	U
51	3	605	A
51	3	606	G
51	3	607	U
51	3	608	A
51	3	610	G
51	3	611	A
51	3	618	G
51	3	620	G
51	3	623	A
51	3	625	G
51	3	628	A
51	3	630	C
51	3	631	A
51	3	633	G
51	3	634	C
51	3	636	U
51	3	637	U
51	3	638	A
51	3	641	U
51	3	647	G
51	3	648	G
51	3	649	A
51	3	650	G
51	3	656	G
51	3	657	A
51	3	658	G
51	3	660	U
51	3	661	G
51	3	666	G
51	3	673	A
51	3	678	U
51	3	679	A
51	3	681	A
51	3	682	A
51	3	684	A
51	3	688	U
51	3	689	U
51	3	690	U
51	3	691	G
51	3	695	G

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Mol	Chain	Res	Type
51	3	696	U
51	3	697	U
51	3	703	A
51	3	705	A
51	3	706	C
51	3	710	A
51	3	711	A
51	3	712	A
51	3	713	C
51	3	715	G
51	3	717	U
51	3	720	A
51	3	721	G
51	3	722	C
51	3	725	G
51	3	729	U
51	3	732	G
51	3	734	A
51	3	735	G
51	3	736	G
51	3	738	U
51	3	739	G
51	3	740	A
51	3	741	A
51	3	744	U
51	3	747	A
51	3	749	U
51	3	760	G
51	3	761	G
51	3	763	G
51	3	765	A
51	3	767	C
51	3	769	A
51	3	782	U
51	3	787	C
51	3	789	A
51	3	792	G
51	3	797	U
51	3	799	A
51	3	806	A
51	3	810	G
51	3	811	G

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Mol	Chain	Res	Type
51	3	812	G
51	3	816	A
51	3	817	A
51	3	818	A
51	3	819	U
51	3	820	U
51	3	823	A
51	3	824	A
51	3	825	U
51	3	826	C
51	3	827	G
51	3	828	A
51	3	829	A
51	3	833	C
51	3	835	U
51	3	837	A
51	3	838	U
51	3	840	G
51	3	841	C
51	3	842	U
51	3	844	G
51	3	847	C
51	3	850	G
51	3	854	A
51	3	856	A
51	3	858	A
51	3	859	G
51	3	860	C
51	3	862	U
51	3	863	U
51	3	865	A
51	3	866	G
51	3	874	U
51	3	881	A
51	3	882	C
51	3	883	A
51	3	885	A
51	3	887	A
51	3	890	U
51	3	893	A
51	3	894	G
51	3	895	G

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Mol	Chain	Res	Type
51	3	896	U
51	3	902	U
51	3	903	A
51	3	904	C
51	3	906	G
51	3	907	A
51	3	911	U
51	3	912	A
51	3	913	U
51	3	914	G
51	3	915	A
51	3	917	G
51	3	929	G
51	3	930	C
51	3	932	U
51	3	933	A
51	3	934	C
51	3	936	G
51	3	937	A
51	3	939	U
51	3	942	A
51	3	943	A
51	3	944	U
51	3	946	A
51	3	947	A
51	3	949	C
51	3	952	U
51	3	953	G
51	3	959	C
51	3	966	U
51	3	968	U
51	3	970	U
51	3	971	U
51	3	973	U
51	3	975	G
51	3	978	G
51	3	981	A
51	3	982	G
51	3	989	G
51	3	990	G
51	3	993	A
51	3	994	U

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Mol	Chain	Res	Type
51	3	995	A
51	3	997	G
51	3	1005	G
51	3	1006	U
51	3	1007	C
51	3	1008	A
51	3	1009	A
51	3	1010	G
51	3	1011	A
51	3	1013	G
51	3	1016	A
51	3	1017	A
51	3	1018	G
51	3	1019	A
51	3	1021	C
51	3	1023	C
51	3	1025	G
51	3	1026	A
51	3	1027	U
51	3	1028	C
51	3	1029	A
51	3	1032	A
51	3	1035	U
51	3	1036	A
51	3	1040	U
51	3	1042	C
51	3	1044	C
51	3	1046	A
51	3	1047	A
51	3	1049	U
51	3	1052	A
51	3	1053	C
51	3	1054	U
51	3	1055	A
51	3	1057	G
51	3	1058	U
51	3	1061	A
51	3	1063	A
51	3	1066	G
51	3	1068	U
51	3	1073	A
51	3	1075	G

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Mol	Chain	Res	Type
51	3	1076	U
51	3	1080	A
51	3	1081	A
51	3	1082	A
51	3	1085	A
51	3	1089	A
51	3	1095	U
51	3	1097	G
51	3	1098	G
51	3	1099	C
51	3	1101	U
51	3	1102	A
51	3	1103	G
51	3	1105	A
51	3	1107	C
51	3	1115	G
51	3	1116	U
51	3	1119	A
51	3	1123	A
51	3	1124	G
51	3	1125	U
51	3	1132	C
51	3	1144	C
51	3	1145	G
51	3	1147	G
51	3	1149	G
51	3	1151	U
51	3	1154	U
51	3	1156	C
51	3	1159	C
51	3	1163	G
51	3	1164	A
51	3	1165	U
51	3	1168	A
51	3	1170	C
51	3	1171	G
51	3	1173	G
51	3	1175	C
51	3	1176	U
51	3	1177	A
51	3	1178	A
51	3	1180	U

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Mol	Chain	Res	Type
51	3	1181	A
51	3	1186	A
51	3	1188	C
51	3	1193	U
51	3	1196	U
51	3	1199	A
51	3	1203	G
51	3	1204	A
51	3	1206	U
51	3	1208	A
51	3	1209	U
51	3	1210	A
51	3	1211	U
51	3	1212	C
51	3	1215	G
51	3	1216	U
51	3	1217	G
51	3	1219	U
51	3	1221	G
51	3	1227	C
51	3	1233	A
51	3	1234	U
51	3	1236	G
51	3	1240	U
51	3	1243	A
51	3	1250	A
51	3	1251	G
51	3	1253	G
51	3	1254	U
51	3	1255	G
51	3	1256	A
51	3	1257	G
51	3	1259	A
51	3	1260	U
51	3	1262	G
51	3	1264	U
51	3	1268	U
51	3	1276	A
51	3	1277	A
51	3	1278	G
51	3	1279	U
51	3	1281	A

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Mol	Chain	Res	Type
51	3	1282	G
51	3	1283	A
51	3	1284	A
51	3	1285	U
51	3	1286	G
51	3	1290	G
51	3	1292	A
51	3	1293	U
51	3	1297	U
51	3	1298	A
51	3	1301	G
51	3	1303	U
51	3	1304	U
51	3	1307	G
51	3	1308	A
51	3	1309	G
51	3	1310	U
51	3	1311	G
51	3	1312	A
51	3	1314	A
51	3	1315	A
51	3	1317	C
51	3	1318	U
51	3	1322	A
51	3	1323	A
51	3	1324	A
51	3	1326	C
51	3	1327	G
51	3	1328	A
51	3	1329	U
51	3	1330	U
51	3	1337	G
51	3	1340	U
51	3	1342	C
51	3	1349	C
51	3	1351	G
51	3	1356	G
51	3	1360	U
51	3	1361	U
51	3	1362	C
51	3	1369	U
51	3	1372	U

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Mol	Chain	Res	Type
51	3	1374	U
51	3	1376	G
51	3	1377	A
51	3	1378	C
51	3	1380	U
51	3	1388	G
51	3	1389	G
51	3	1391	U
51	3	1393	A
51	3	1402	G
51	3	1403	G
51	3	1406	A
51	3	1407	U
51	3	1408	G
51	3	1412	A
51	3	1413	A
51	3	1414	C
51	3	1420	A
51	3	1421	A
51	3	1423	A
51	3	1424	U
51	3	1426	C
51	3	1431	A
51	3	1436	C
51	3	1437	A
51	3	1439	U
51	3	1441	A
51	3	1442	G
51	3	1444	C
51	3	1445	U
51	3	1447	A
51	3	1448	U
51	3	1449	G
51	3	1456	C
51	3	1457	A
51	3	1458	A
51	3	1460	G
51	3	1462	A
51	3	1463	G
51	3	1464	G
51	3	1466	U
51	3	1467	U

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Mol	Chain	Res	Type
51	3	1470	C
51	3	1474	C
51	3	1478	U
51	3	1480	A
51	3	1481	U
51	3	1482	U
51	3	1483	G
51	3	1485	A
51	3	1486	U
51	3	1487	U
51	3	1488	U
51	3	1489	G
51	3	1493	A
51	3	1495	A
51	3	1497	A
51	3	1498	U
51	3	1502	A
51	3	1504	G
51	3	1506	U
51	3	1507	G
51	3	1508	G
51	3	1510	A
51	3	1511	C
51	3	1513	A
51	3	1514	U
51	3	1515	A
51	3	1516	G
51	3	1518	C
51	3	1520	A
51	3	1522	U
51	3	1523	C
51	3	1526	U
51	3	1527	U
51	3	1529	U
51	3	1530	G
51	3	1532	A
51	3	1534	A
51	3	1535	A
51	3	1538	U
51	3	1540	G
51	3	1541	A
51	3	1542	G

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Mol	Chain	Res	Type
51	3	1543	U
51	3	1545	A
51	3	1548	A
51	3	1549	U
51	3	1550	G
51	3	1555	G
51	3	1557	G
51	3	1558	A
51	3	1559	A
51	3	1571	G
51	3	1575	C
51	3	1577	A
51	3	1580	G
51	3	1581	U
51	3	1584	U
51	3	1585	A
51	3	1586	U
51	3	1587	U
51	3	1588	A
51	3	1589	A
51	3	1592	A
51	3	1594	G
51	3	1595	C
51	3	1597	U
51	3	1598	U
51	3	1600	A
51	3	1603	A
51	3	1605	A
51	3	1608	C
51	3	1609	U
51	3	1612	U
51	3	1614	G
51	3	1615	G
51	3	1617	U
51	3	1618	U
51	3	1619	A
51	3	1622	C
51	3	1625	G
51	3	1630	A
51	3	1631	A
51	3	1632	C
51	3	1635	G

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Mol	Chain	Res	Type
51	3	1636	U
51	3	1637	A
51	3	1639	C
51	3	1640	G
51	3	1641	A
51	3	1642	G
51	3	1643	A
51	3	1644	A
51	3	1648	A
51	3	1650	A
51	3	1651	C
51	3	1652	A
51	3	1653	C
51	3	1656	A
51	3	1664	A
51	3	1668	G
51	3	1669	A
51	3	1671	C
51	3	1676	G
51	3	1678	U
51	3	1679	U
51	3	1680	A
51	3	1681	G
51	3	1682	C
51	3	1683	G
51	3	1687	G
51	3	1688	A
51	3	1692	A
51	3	1694	A
51	3	1695	G
51	3	1698	A
51	3	1701	G
51	3	1702	A
51	3	1703	A
51	3	1704	C
51	3	1705	U
51	3	1706	C
51	3	1707	U
51	3	1708	G
51	3	1709	C
51	3	1720	C
51	3	1723	A

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Mol	Chain	Res	Type
51	3	1725	G
51	3	1727	U
51	3	1728	A
51	3	1733	G
51	3	1734	A
51	3	1735	A
51	3	1737	G
51	3	1738	G
51	3	1740	U
51	3	1741	G
51	3	1748	U
51	3	1750	A
51	3	1751	A
51	3	1752	A
51	3	1758	C
51	3	1759	C
51	3	1761	C
51	3	1762	A
51	3	1763	G
51	3	1764	U
51	3	1765	G
51	3	1766	A
51	3	1767	A
51	3	1769	A
51	3	1770	A
51	3	1771	C
51	3	1772	G
51	3	1777	G
51	3	1778	G
51	3	1780	A
51	3	1784	U
51	3	1787	A
51	3	1788	A
51	3	1789	C
51	3	1791	A
51	3	1792	A
51	3	1794	A
51	3	1802	C
51	3	1807	C
51	3	1808	C
51	3	1812	C
51	3	1813	C

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Mol	Chain	Res	Type
51	3	1815	U
51	3	1816	A
51	3	1821	G
51	3	1822	A
51	3	1823	U
51	3	1824	G
51	3	1826	A
51	3	1827	U
51	3	1828	A
51	3	1830	G
51	3	1831	G
51	3	1834	U
51	3	1835	G
51	3	1836	A
51	3	1838	A
51	3	1842	G
51	3	1843	C
51	3	1844	C
51	3	1845	C
51	3	1847	G
51	3	1851	U
51	3	1853	G
51	3	1854	A
51	3	1855	A
51	3	1856	G
51	3	1858	U
51	3	1859	U
51	3	1860	A
51	3	1863	G
51	3	1865	A
51	3	1867	G
51	3	1870	G
51	3	1872	U
51	3	1876	G
51	3	1877	C
51	3	1881	C
51	3	1882	G
51	3	1883	A
51	3	1884	A
51	3	1885	G
51	3	1887	U
51	3	1888	U

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Mol	Chain	Res	Type
51	3	1889	U
51	3	1890	U
51	3	1891	A
51	3	1892	A
51	3	1896	A
51	3	1899	C
51	3	1905	U
51	3	1906	G
51	3	1907	A
51	3	1908	A
51	3	1910	G
51	3	1913	G
51	3	1914	G
51	3	1919	A
51	3	1920	A
51	3	1921	C
51	3	1927	C
51	3	1930	U
51	3	1934	A
51	3	1936	G
51	3	1937	G
51	3	1938	U
51	3	1944	A
51	3	1945	A
51	3	1946	U
51	3	1947	U
51	3	1949	C
51	3	1952	G
51	3	1953	U
51	3	1955	G
51	3	1958	U
51	3	1959	A
51	3	1962	U
51	3	1968	C
51	3	1970	C
51	3	1971	G
51	3	1972	C
51	3	1974	U
51	3	1977	A
51	3	1978	U
51	3	1979	G
51	3	1982	G

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Mol	Chain	Res	Type
51	3	1984	A
51	3	1985	A
51	3	1988	A
51	3	1989	U
51	3	1996	A
51	3	1998	U
51	3	2000	U
51	3	2001	C
51	3	2002	U
51	3	2003	C
51	3	2004	G
51	3	2005	G
51	3	2008	A
51	3	2009	U
51	3	2011	G
51	3	2013	C
51	3	2020	A
51	3	2021	A
51	3	2025	C
51	3	2028	G
51	3	2029	U
51	3	2030	A
51	3	2031	C
51	3	2032	G
51	3	2037	A
51	3	2038	A
51	3	2039	G
51	3	2040	A
51	3	2041	C
51	3	2045	C
51	3	2050	G
51	3	2051	G
51	3	2052	C
51	3	2055	A
51	3	2056	A
51	3	2057	C
51	3	2060	G
51	3	2062	C
51	3	2063	G
51	3	2065	A
51	3	2066	A
51	3	2067	A

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Mol	Chain	Res	Type
51	3	2068	G
51	3	2069	A
51	3	2070	C
51	3	2071	C
51	3	2075	U
51	3	2076	G
51	3	2077	A
51	3	2082	U
51	3	2083	U
51	3	2084	A
51	3	2085	C
51	3	2086	U
51	3	2087	G
51	3	2090	G
51	3	2091	C
51	3	2092	U
51	3	2093	U
51	3	2100	G
51	3	2104	A
51	3	2106	G
51	3	2107	A
51	3	2108	C
51	3	2109	A
51	3	2110	U
51	3	2111	U
51	3	2112	A
51	3	2114	C
51	3	2115	A
51	3	2117	G
51	3	2118	U
51	3	2119	A
51	3	2120	G
51	3	2123	A
51	3	2124	A
51	3	2125	U
51	3	2126	A
51	3	2127	G
51	3	2131	G
51	3	2132	G
51	3	2133	A
51	3	2134	G
51	3	2138	U

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Mol	Chain	Res	Type
51	3	2140	G
51	3	2144	C
51	3	2151	G
51	3	2152	C
51	3	2153	U
51	3	2155	G
51	3	2156	G
51	3	2157	A
51	3	2163	U
51	3	2167	G
51	3	2168	C
51	3	2170	A
51	3	2171	A
51	3	2172	A
51	3	2174	G
51	3	2178	A
51	3	2180	U
51	3	2182	C
51	3	2187	C
51	3	2189	U
51	3	2193	U
51	3	2194	G
51	3	2195	U
51	3	2196	G
51	3	2198	G
51	3	2200	U
51	3	2201	G
51	3	2202	U
51	3	2203	U
51	3	2204	C
51	3	2205	U
51	3	2206	A
51	3	2209	U
51	3	2210	G
51	3	2211	G
51	3	2212	U
51	3	2219	U
51	3	2220	A
51	3	2221	U
51	3	2222	C
51	3	2229	C
51	3	2231	A

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Mol	Chain	Res	Type
51	3	2233	A
51	3	2243	G
51	3	2244	U
51	3	2246	G
51	3	2249	A
51	3	2252	U
51	3	2254	G
51	3	2257	U
51	3	2259	G
51	3	2263	G
51	3	2265	U
51	3	2267	G
51	3	2274	A
51	3	2275	A
51	3	2276	A
51	3	2278	G
51	3	2280	U
51	3	2283	C
51	3	2284	G
51	3	2285	G
51	3	2286	A
51	3	2291	U
51	3	2294	A
51	3	2295	A
51	3	2296	A
51	3	2299	U
51	3	2304	U
51	3	2305	C
51	3	2309	A
51	3	2310	C
51	3	2312	G
51	3	2313	U
51	3	2315	G
51	3	2316	G
51	3	2317	A
51	3	2319	A
51	3	2320	U
51	3	2322	G
51	3	2327	U
51	3	2328	A
51	3	2329	G
51	3	2330	A

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Mol	Chain	Res	Type
51	3	2333	G
51	3	2334	U
51	3	2335	A
51	3	2337	U
51	3	2339	G
51	3	2341	G
51	3	2342	U
51	3	2343	A
51	3	2344	A
51	3	2351	U
51	3	2352	U
51	3	2353	G
51	3	2355	C
51	3	2356	U
51	3	2358	U
51	3	2362	A
51	3	2363	C
51	3	2365	U
51	3	2366	A
51	3	2367	C
51	3	2369	G
51	3	2371	U
51	3	2375	A
51	3	2376	C
51	3	2377	A
51	3	2378	G
51	3	2379	G
51	3	2380	U
51	3	2382	A
51	3	2385	A
51	3	2387	U
51	3	2388	C
51	3	2389	A
51	3	2391	G
51	3	2393	C
51	3	2394	A
51	3	2395	U
51	3	2396	A
51	3	2401	U
51	3	2402	C
51	3	2411	C
51	3	2412	A

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Mol	Chain	Res	Type
51	3	2414	U
51	3	2415	A
51	3	2416	U
51	3	2418	G
51	3	2422	G
51	3	2423	G
51	3	2429	G
51	3	2430	C
51	3	2431	U
51	3	2432	C
51	3	2433	A
51	3	2434	A
51	3	2435	C
51	3	2436	G
51	3	2437	G
51	3	2438	A
51	3	2439	U
51	3	2442	A
51	3	2445	C
51	3	2448	C
51	3	2449	U
51	3	2451	C
51	3	2455	G
51	3	2456	A
51	3	2457	U
51	3	2466	G
51	3	2468	U
51	3	2470	C
51	3	2474	C
51	3	2477	A
51	3	2478	G
51	3	2479	A
51	3	2481	U
51	3	2483	C
51	3	2484	A
51	3	2485	U
51	3	2486	A
51	3	2487	U
51	3	2488	C
51	3	2492	G
51	3	2494	C
51	3	2495	A

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Mol	Chain	Res	Type
51	3	2497	U
51	3	2498	G
51	3	2499	U
51	3	2502	G
51	3	2504	C
51	3	2505	A
51	3	2506	C
51	3	2507	C
51	3	2509	C
51	3	2512	U
51	3	2513	G
51	3	2514	U
51	3	2518	C
51	3	2519	U
51	3	2521	A
51	3	2526	A
51	3	2527	U
51	3	2528	C
51	3	2534	G
51	3	2538	A
51	3	2539	A
51	3	2545	U
51	3	2548	G
51	3	2550	A
51	3	2555	U
51	3	2557	G
51	3	2560	U
51	3	2561	G
51	3	2562	U
51	3	2566	C
51	3	2567	C
51	3	2568	G
51	3	2570	U
51	3	2571	U
51	3	2572	A
51	3	2574	A
51	3	2575	G
51	3	2577	G
51	3	2578	A
51	3	2580	A
51	3	2581	C
51	3	2582	G

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Mol	Chain	Res	Type
51	3	2583	U
51	3	2584	G
51	3	2586	G
51	3	2587	U
51	3	2588	U
51	3	2590	G
51	3	2591	G
51	3	2592	U
51	3	2593	U
51	3	2594	C
51	3	2596	A
51	3	2600	G
51	3	2605	G
51	3	2607	G
51	3	2608	A
51	3	2610	A
51	3	2611	G
51	3	2612	G
51	3	2615	G
51	3	2617	U
51	3	2618	C
51	3	2619	C
51	3	2622	A
51	3	2623	U
51	3	2625	U
51	3	2628	U
51	3	2629	G
51	3	2632	C
51	3	2633	C
51	3	2635	G
51	3	2637	A
51	3	2638	G
51	3	2639	G
51	3	2642	G
51	3	2643	A
51	3	2644	U
51	3	2647	A
51	3	2649	G
51	3	2653	G
51	3	2655	U
51	3	2662	A
51	3	2664	U

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Mol	Chain	Res	Type
51	3	2668	A
51	3	2669	G
51	3	2679	G
51	3	2681	G
51	3	2683	G
51	3	2686	C
51	3	2689	C
51	3	2690	U
51	3	2693	U
51	3	2694	A
51	3	2697	C
51	3	2698	U
51	3	2699	C
51	3	2703	U
51	3	2706	U
51	3	2708	G
51	3	2710	G
51	3	2711	C
51	3	2714	G
51	3	2715	C
51	3	2720	C
51	3	2721	C
51	3	2726	G
51	3	2730	G
51	3	2731	U
51	3	2733	A
51	3	2734	C
51	3	2735	G
51	3	2736	U
51	3	2737	G
51	3	2739	C
51	3	2740	U
51	3	2741	A
51	3	2742	U
51	3	2746	A
51	3	2747	U
51	3	2752	G
51	3	2756	A
51	3	2757	A
51	3	2759	G
51	3	2760	C
51	3	2761	A

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Mol	Chain	Res	Type
51	3	2765	A
51	3	2766	A
51	3	2773	A
51	3	2774	A
51	3	2777	A
51	3	2780	U
51	3	2786	A
51	3	2789	A
51	3	2791	U
51	3	2792	C
51	3	2794	U
51	3	2795	C
51	3	2799	U
51	3	2800	U
51	3	2805	A
51	3	2807	G
51	3	2809	A
51	3	2810	A
51	3	2811	G
51	3	2812	U
51	3	2813	A
51	3	2815	G
51	3	2817	G
51	3	2822	C
51	3	2824	A
51	3	2825	A
51	3	2827	A
51	3	2828	C
51	3	2829	G
51	3	2830	A
51	3	2834	C
51	3	2837	U
51	3	2838	G
51	3	2839	A
51	3	2844	U
51	3	2846	A
51	3	2849	G
51	3	2850	G
51	3	2853	U
51	3	2854	A
51	3	2855	A
51	3	2863	G

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Mol	Chain	Res	Type
51	3	2864	A
51	3	2870	U
51	3	2871	G
51	3	2873	G
51	3	2876	G
51	3	2878	G
51	3	2881	A
51	3	2883	A
51	3	2884	C
51	3	2886	A
51	3	2888	U
51	3	2889	U
51	3	2890	G
51	3	2891	C
51	3	2895	A
51	3	2897	G
51	3	2898	A
51	3	2899	C
52	4	6	U
52	4	9	C
52	4	10	C
52	4	11	A
52	4	12	U
52	4	13	G
52	4	14	U
52	4	18	U
52	4	19	G
52	4	22	G
52	4	23	A
52	4	25	A
52	4	26	C
52	4	27	A
52	4	28	C
52	4	29	C
52	4	31	G
52	4	32	G
52	4	33	U
52	4	34	U
52	4	37	A
52	4	38	U
52	4	39	U
52	4	40	U

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Mol	Chain	Res	Type
52	4	41	C
52	4	42	G
52	4	43	A
52	4	44	A
52	4	45	C
52	4	47	C
52	4	50	C
52	4	51	A
52	4	53	U
52	4	54	U
52	4	55	A
52	4	56	A
52	4	59	A
52	4	60	C
52	4	63	U
52	4	65	G
52	4	66	A
52	4	67	G
52	4	68	C
52	4	71	A
52	4	73	U
52	4	76	A
52	4	77	G
52	4	78	C
52	4	79	U
52	4	80	G
52	4	85	A
52	4	86	G
52	4	87	U
52	4	88	G
52	4	89	A
52	4	96	G
52	4	97	A
52	4	98	A
52	4	99	A
52	4	102	A
52	4	105	A
52	4	106	A
53	5	7	U
53	5	8	G
53	5	9	A
53	5	10	G

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Mol	Chain	Res	Type
53	5	15	U
53	5	16	G
53	5	21	U
53	5	24	C
53	5	25	U
53	5	27	A
53	5	30	A
53	5	32	U
53	5	33	A
53	5	36	G
53	5	38	U
53	5	40	G
53	5	42	G
53	5	44	C
53	5	48	C
53	5	49	C
53	5	50	U
53	5	51	A
53	5	52	A
53	5	58	G
53	5	60	A
53	5	63	U
53	5	66	A
53	5	67	U
53	5	71	A
53	5	72	A
53	5	73	G
53	5	75	A
53	5	82	C
53	5	84	U
53	5	86	A
53	5	93	A
53	5	95	C
53	5	98	G
53	5	99	U
53	5	101	A
53	5	103	U
53	5	106	C
53	5	107	A
53	5	108	C
53	5	112	U
53	5	114	C

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Mol	Chain	Res	Type
53	5	115	A
53	5	116	A
53	5	117	U
53	5	120	A
53	5	122	C
53	5	124	U
53	5	125	A
53	5	126	U
53	5	127	A
53	5	128	A
53	5	130	G
53	5	132	G
53	5	134	G
53	5	135	A
53	5	137	A
53	5	139	C
53	5	149	G
53	5	154	G
53	5	155	C
53	5	159	U
53	5	160	A
53	5	161	C
53	5	163	G
53	5	167	A
53	5	168	A
53	5	169	G
53	5	170	A
53	5	171	A
53	5	180	C
53	5	186	A
53	5	188	U
53	5	194	U
53	5	196	G
53	5	197	A
53	5	198	A
53	5	199	A
53	5	212	G
53	5	217	U
53	5	218	U
53	5	220	U
53	5	221	U
53	5	222	U

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Mol	Chain	Res	Type
53	5	223	G
53	5	224	A
53	5	227	A
53	5	228	G
53	5	230	G
53	5	234	G
53	5	236	C
53	5	239	A
53	5	240	U
53	5	241	C
53	5	243	G
53	5	247	G
53	5	253	G
53	5	257	U
53	5	258	A
53	5	260	C
53	5	262	G
53	5	263	C
53	5	267	C
53	5	268	C
53	5	273	C
53	5	275	A
53	5	276	U
53	5	282	G
53	5	285	G
53	5	288	A
53	5	290	G
53	5	292	U
53	5	294	A
53	5	300	A
53	5	301	G
53	5	302	A
53	5	303	A
53	5	307	C
53	5	310	C
53	5	312	A
53	5	319	U
53	5	321	A
53	5	323	A
53	5	324	C
53	5	325	A
53	5	326	C

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Mol	Chain	Res	Type
53	5	328	G
53	5	332	A
53	5	335	C
53	5	338	C
53	5	341	C
53	5	342	G
53	5	343	G
53	5	344	G
53	5	346	G
53	5	347	G
53	5	348	C
53	5	350	G
53	5	352	A
53	5	354	U
53	5	355	A
53	5	359	A
53	5	363	U
53	5	364	U
53	5	366	C
53	5	368	C
53	5	369	A
53	5	370	A
53	5	371	U
53	5	373	A
53	5	375	C
53	5	377	A
53	5	378	A
53	5	381	C
53	5	383	U
53	5	384	G
53	5	386	U
53	5	388	G
53	5	389	A
53	5	392	A
53	5	396	C
53	5	398	G
53	5	401	U
53	5	402	G
53	5	408	U
53	5	409	G
53	5	410	A
53	5	411	A

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Mol	Chain	Res	Type
53	5	412	G
53	5	414	U
53	5	417	U
53	5	419	A
53	5	420	A
53	5	421	G
53	5	423	U
53	5	425	G
53	5	426	U
53	5	427	A
53	5	430	G
53	5	434	U
53	5	435	U
53	5	439	U
53	5	440	U
53	5	442	G
53	5	443	G
53	5	449	A
53	5	450	U
53	5	452	A
53	5	453	C
53	5	455	U
53	5	461	G
53	5	462	G
53	5	463	U
53	5	464	A
53	5	465	A
53	5	467	G
53	5	468	G
53	5	469	C
53	5	471	A
53	5	472	G
53	5	473	A
53	5	476	U
53	5	478	G
53	5	480	C
53	5	481	U
53	5	482	G
53	5	483	U
53	5	485	C
53	5	488	U
53	5	489	U

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Mol	Chain	Res	Type
53	5	490	U
53	5	493	A
53	5	494	A
53	5	497	A
53	5	502	C
53	5	508	A
53	5	509	C
53	5	513	G
53	5	514	U
53	5	516	C
53	5	517	C
53	5	519	G
53	5	522	G
53	5	523	U
53	5	525	G
53	5	529	U
53	5	530	A
53	5	531	A
53	5	533	A
53	5	534	C
53	5	543	C
53	5	545	A
53	5	547	C
53	5	549	U
53	5	550	U
53	5	551	A
53	5	553	C
53	5	558	U
53	5	559	U
53	5	560	U
53	5	561	A
53	5	562	U
53	5	564	G
53	5	565	G
53	5	567	C
53	5	570	A
53	5	572	A
53	5	573	G
53	5	574	C
53	5	575	A
53	5	578	C
53	5	585	G

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Mol	Chain	Res	Type
53	5	586	G
53	5	594	A
53	5	596	U
53	5	597	C
53	5	599	G
53	5	607	A
53	5	610	C
53	5	614	U
53	5	616	C
53	5	617	U
53	5	618	U
53	5	620	A
53	5	622	A
53	5	628	A
53	5	629	U
53	5	631	C
53	5	632	A
53	5	636	G
53	5	637	A
53	5	638	A
53	5	639	A
53	5	646	A
53	5	647	U
53	5	648	C
53	5	649	U
53	5	651	G
53	5	652	A
53	5	653	G
53	5	661	G
53	5	662	G
53	5	666	U
53	5	667	U
53	5	668	U
53	5	669	U
53	5	670	G
53	5	672	A
53	5	673	A
53	5	680	G
53	5	681	U
53	5	684	A
53	5	686	C
53	5	688	G

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Mol	Chain	Res	Type
53	5	690	G
53	5	695	G
53	5	696	C
53	5	698	U
53	5	699	A
53	5	700	G
53	5	703	A
53	5	707	G
53	5	709	A
53	5	712	A
53	5	715	A
53	5	717	C
53	5	718	A
53	5	719	G
53	5	720	U
53	5	721	G
53	5	728	G
53	5	729	C
53	5	731	A
53	5	735	C
53	5	740	G
53	5	741	C
53	5	744	U
53	5	745	U
53	5	749	G
53	5	751	C
53	5	752	G
53	5	753	C
53	5	756	A
53	5	763	A
53	5	766	G
53	5	768	G
53	5	770	G
53	5	774	A
53	5	775	G
53	5	777	A
53	5	783	G
53	5	784	A
53	5	787	A
53	5	790	U
53	5	792	C
53	5	797	G

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Mol	Chain	Res	Type
53	5	812	A
53	5	814	C
53	5	815	G
53	5	818	A
53	5	821	U
53	5	824	U
53	5	825	A
53	5	829	G
53	5	830	U
53	5	838	A
53	5	842	C
53	5	848	U
53	5	849	A
53	5	853	A
53	5	862	C
53	5	863	A
53	5	865	U
53	5	867	A
53	5	868	G
53	5	870	A
53	5	878	U
53	5	879	G
53	5	881	G
53	5	882	U
53	5	883	A
53	5	884	G
53	5	885	U
53	5	890	U
53	5	896	G
53	5	898	A
53	5	907	A
53	5	908	A
53	5	910	C
53	5	911	G
53	5	916	U
53	5	917	G
53	5	918	A
53	5	921	G
53	5	922	G
53	5	929	C
53	5	930	A
53	5	934	G

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Mol	Chain	Res	Type
53	5	937	G
53	5	939	G
53	5	940	G
53	5	941	A
53	5	946	G
53	5	953	A
53	5	954	A
53	5	955	U
53	5	956	U
53	5	957	C
53	5	961	G
53	5	963	U
53	5	964	A
53	5	966	A
53	5	967	C
53	5	969	A
53	5	970	A
53	5	971	A
53	5	972	A
53	5	983	G
53	5	987	U
53	5	988	G
53	5	989	A
53	5	990	C
53	5	999	C
53	5	1000	A
53	5	1001	A
53	5	1002	A
53	5	1003	G
53	5	1014	A
53	5	1031	A
53	5	1041	G
53	5	1044	G
53	5	1045	C
53	5	1046	A
53	5	1047	U
53	5	1050	U
53	5	1053	U
53	5	1055	G
53	5	1056	U
53	5	1058	A
53	5	1061	U

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Mol	Chain	Res	Type
53	5	1062	C
53	5	1063	G
53	5	1065	G
53	5	1067	C
53	5	1069	U
53	5	1071	A
53	5	1072	G
53	5	1075	G
53	5	1077	U
53	5	1079	G
53	5	1083	A
53	5	1085	G
53	5	1086	U
53	5	1089	C
53	5	1091	C
53	5	1092	A
53	5	1096	A
53	5	1098	C
53	5	1100	C
53	5	1101	A
53	5	1102	A
53	5	1104	C
53	5	1109	U
53	5	1111	G
53	5	1112	U
53	5	1113	U
53	5	1116	U
53	5	1119	C
53	5	1122	U
53	5	1123	G
53	5	1124	U
53	5	1125	C
53	5	1127	A
53	5	1132	G
53	5	1133	A
53	5	1134	C
53	5	1135	U
53	5	1136	G
53	5	1140	A
53	5	1141	U
53	5	1142	G
53	5	1143	C

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Mol	Chain	Res	Type
53	5	1144	A
53	5	1152	G
53	5	1154	A
53	5	1155	A
53	5	1156	G
53	5	1157	G
53	5	1158	A
53	5	1159	A
53	5	1162	G
53	5	1163	A
53	5	1165	G
53	5	1166	A
53	5	1168	G
53	5	1169	U
53	5	1171	A
53	5	1173	A
53	5	1175	C
53	5	1176	A
53	5	1177	U
53	5	1178	C
53	5	1180	U
53	5	1187	U
53	5	1188	A
53	5	1189	U
53	5	1198	C
53	5	1199	U
53	5	1200	G
53	5	1201	C
53	5	1203	A
53	5	1204	A
53	5	1208	G
53	5	1211	A
53	5	1213	A
53	5	1216	G
53	5	1217	G
53	5	1218	C
53	5	1222	U
53	5	1225	A
53	5	1226	A
53	5	1233	G
53	5	1234	C
53	5	1235	C

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Mol	Chain	Res	Type
53	5	1241	G
53	5	1242	U
53	5	1255	A
53	5	1256	U
53	5	1257	C
53	5	1260	U
53	5	1261	A
53	5	1268	G
53	5	1269	U
53	5	1271	U
53	5	1272	C
53	5	1273	A
53	5	1274	G
53	5	1276	U
53	5	1277	C
53	5	1279	G
53	5	1281	U
53	5	1284	A
53	5	1285	G
53	5	1286	G
53	5	1287	G
53	5	1291	C
53	5	1294	U
53	5	1296	C
53	5	1297	G
53	5	1308	G
53	5	1310	C
53	5	1311	G
53	5	1312	G
53	5	1314	A
53	5	1315	U
53	5	1316	C
53	5	1318	C
53	5	1322	U
53	5	1325	U
53	5	1326	C
53	5	1330	A
53	5	1331	A
53	5	1335	G
53	5	1337	U
53	5	1338	A
53	5	1339	U

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Mol	Chain	Res	Type
53	5	1341	U
53	5	1343	G
53	5	1353	C
53	5	1354	G
53	5	1356	U
53	5	1357	C
53	5	1359	C
53	5	1360	G
53	5	1362	G
53	5	1364	C
53	5	1365	U
53	5	1369	A
53	5	1370	C
53	5	1372	C
53	5	1373	A
53	5	1374	C
53	5	1375	C
53	5	1381	U
53	5	1385	A
53	5	1391	A
53	5	1394	G
53	5	1395	C
53	5	1397	G
53	5	1399	U
53	5	1400	A
53	5	1404	U
53	5	1405	U
53	5	1407	A
53	5	1411	A
53	5	1415	G
53	5	1417	U
53	5	1421	A
53	5	1425	A
53	5	1426	U
53	5	1427	U
53	5	1429	G
53	5	1431	A
53	5	1435	G
53	5	1439	G
53	5	1440	U
53	5	1441	C
53	5	1443	A

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Mol	Chain	Res	Type
53	5	1445	G
53	5	1447	U
53	5	1449	G
53	5	1450	C
53	5	1461	G
53	5	1464	G
53	5	1465	U
53	5	1466	U
53	5	1467	A
53	5	1474	A
53	5	1476	C
53	5	1477	A
53	5	1478	A
53	5	1480	G
53	5	1481	U
53	5	1482	A
53	5	1483	C
53	5	1492	G
53	5	1495	C
53	5	1497	U
53	5	1502	G
53	5	1504	G
53	5	1505	G
54	6	5	C
54	6	12	C
54	6	14	C
54	6	17	U
54	6	19	G
54	6	20	G
54	6	21	U
54	6	23	G
54	6	24	A
54	6	25	G
54	6	27	A
54	6	28	A
54	6	32	U
54	6	35	G
54	6	36	A
54	6	38	G
54	6	43	G
54	6	44	U
54	6	49	C

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Mol	Chain	Res	Type
54	6	52	C
54	6	54	G
54	6	56	U
54	6	57	C
54	6	58	G
54	6	59	A
54	6	60	U
54	6	62	C
54	6	63	U
54	6	72	C
54	6	73	C
54	6	75	C
54	6	76	C
54	7	3	G
54	7	5	C
54	7	8	G
54	7	9	U
54	7	11	G
54	7	12	C
54	7	14	C
54	7	15	A
54	7	17	U
54	7	19	G
54	7	20	G
54	7	21	U
54	7	22	A
54	7	24	A
54	7	25	G
54	7	28	A
54	7	31	G
54	7	32	U
54	7	35	G
54	7	37	A
54	7	38	G
54	7	39	A
54	7	40	A
54	7	42	C
54	7	43	G
54	7	44	U
54	7	45	G
54	7	47	G
54	7	48	U

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Mol	Chain	Res	Type
54	7	49	C
54	7	50	G
54	7	52	C
54	7	53	A
54	7	54	G
54	7	57	C
54	7	58	G
54	7	60	U
54	7	61	U
54	7	62	C
54	7	63	U
54	7	64	G
54	7	70	G
54	7	71	A
54	7	72	C
54	7	73	C
54	7	75	C
54	7	76	C
54	7	77	A

All (70) RNA pucker outliers are listed below:

Mol	Chain	Res	Type
51	3	184	A
51	3	311	G
51	3	315	A
51	3	410	G
51	3	425	U
51	3	431	U
51	3	500	U
51	3	513	A
51	3	605	A
51	3	636	U
51	3	688	U
51	3	824	A
51	3	880	C
51	3	901	C
51	3	936	G
51	3	952	U
51	3	993	A
51	3	1048	A
51	3	1124	G

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Mol	Chain	Res	Type
51	3	1209	U
51	3	1218	G
51	3	1297	U
51	3	1465	U
51	3	1481	U
51	3	1507	G
51	3	1583	G
51	3	1585	A
51	3	1587	U
51	3	1588	A
51	3	1706	C
51	3	1764	U
51	3	1820	U
51	3	1827	U
51	3	2290	G
51	3	2414	U
51	3	2484	A
51	3	2506	C
51	3	2604	U
51	3	2637	A
51	3	2668	A
51	3	2764	U
51	3	2788	U
51	3	2823	A
51	3	2862	U
51	3	2897	G
52	4	10	C
52	4	21	G
52	4	54	U
52	4	59	A
53	5	167	A
53	5	168	A
53	5	196	G
53	5	197	A
53	5	219	A
53	5	425	G
53	5	448	A
53	5	481	U
53	5	928	G
53	5	1123	G
53	5	1133	A
53	5	1199	U

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Mol	Chain	Res	Type
53	5	1338	A
53	5	1466	U
54	6	16	G
54	6	22	A
54	7	4	U
54	7	16	G
54	7	37	A
54	7	48	U
54	7	71	A

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](#)

There are no ligands in this entry.

5.7 Other polymers [i](#)

There are no such residues in this entry.

5.8 Polymer linkage issues [i](#)

There are no chain breaks in this entry.

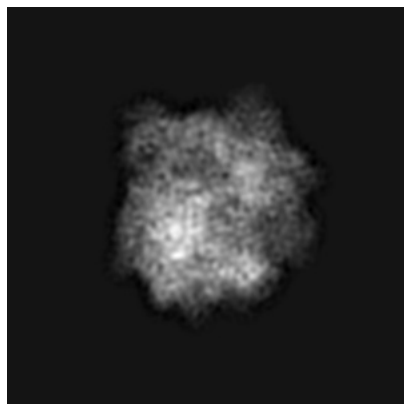
6 Map visualisation [i](#)

This section contains visualisations of the EMDB entry EMD-13411. These allow visual inspection of the internal detail of the map and identification of artifacts.

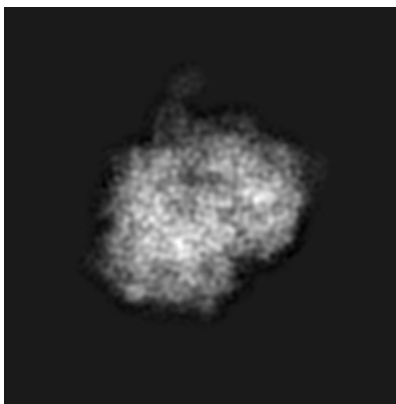
Images derived from a raw map, generated by summing the deposited half-maps, are presented below the corresponding image components of the primary map to allow further visual inspection and comparison with those of the primary map.

6.1 Orthogonal projections [i](#)

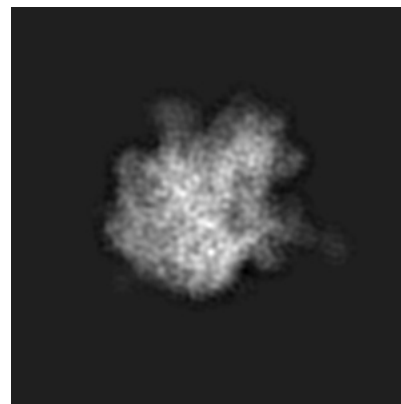
6.1.1 Primary map



X

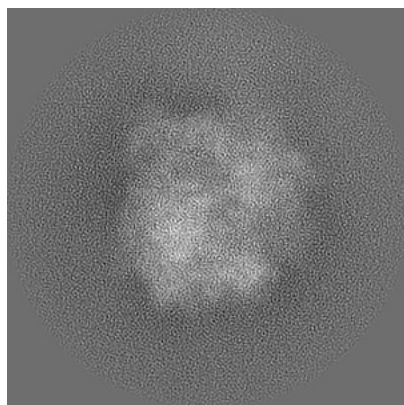


Y

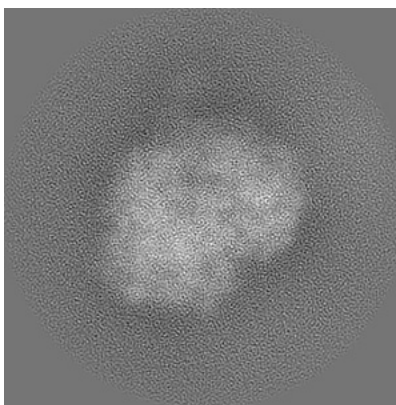


Z

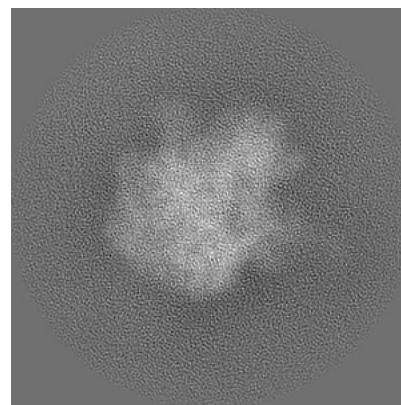
6.1.2 Raw map



X



Y

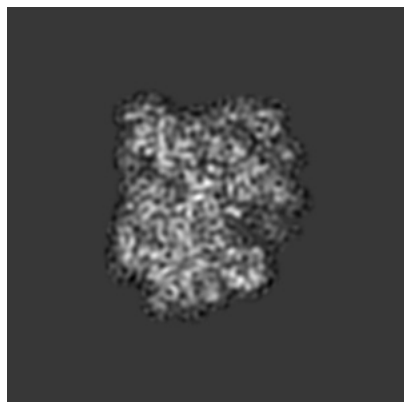


Z

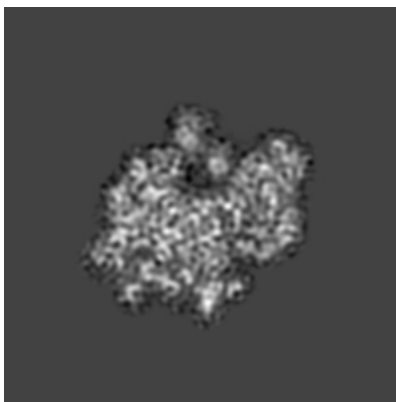
The images above show the map projected in three orthogonal directions.

6.2 Central slices [i](#)

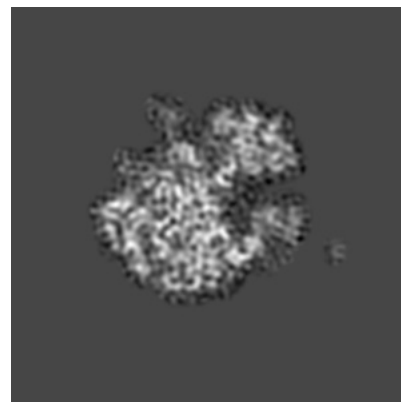
6.2.1 Primary map



X Index: 128

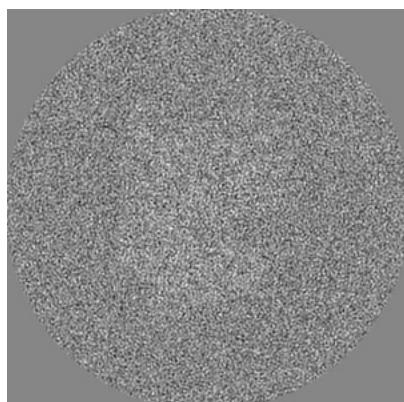


Y Index: 128

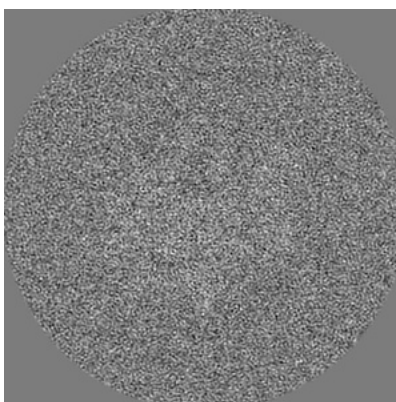


Z Index: 128

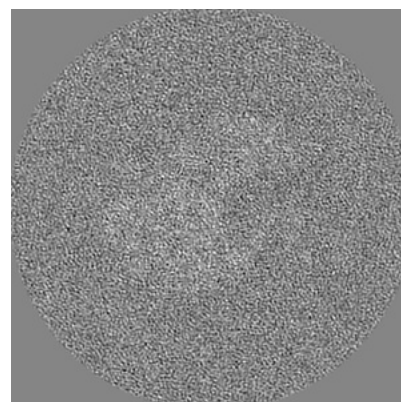
6.2.2 Raw map



X Index: 128



Y Index: 128

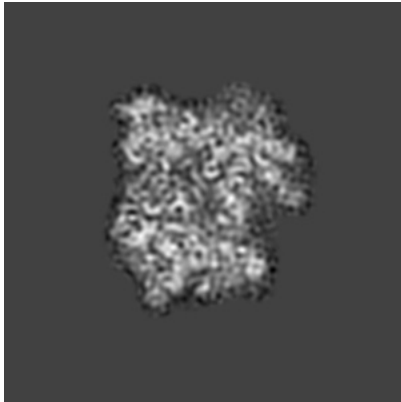


Z Index: 128

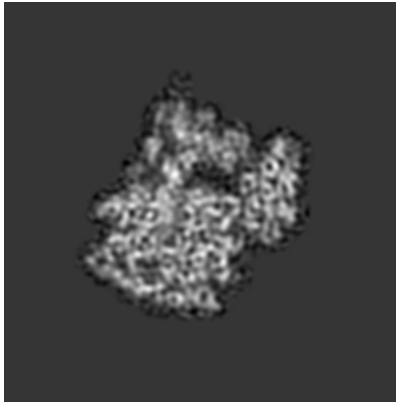
The images above show central slices of the map in three orthogonal directions.

6.3 Largest variance slices [i](#)

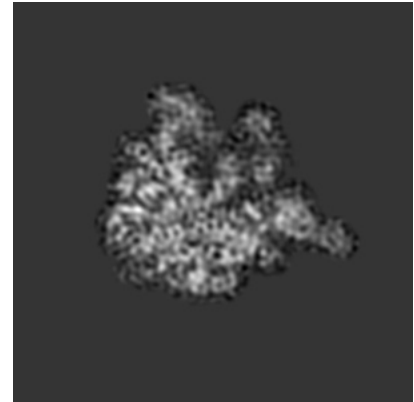
6.3.1 Primary map



X Index: 134

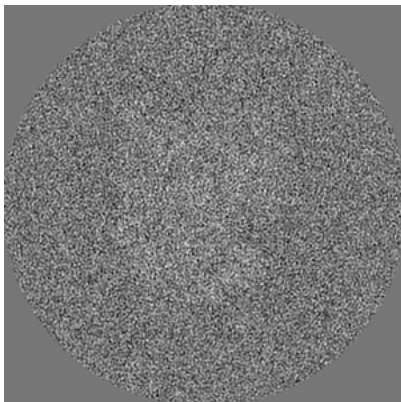


Y Index: 117

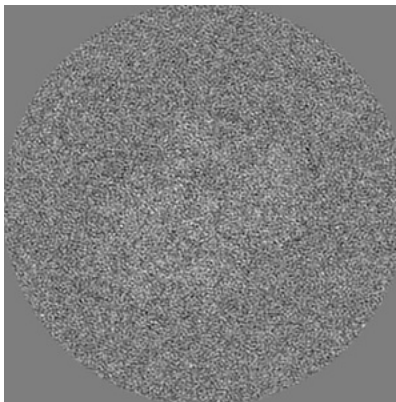


Z Index: 113

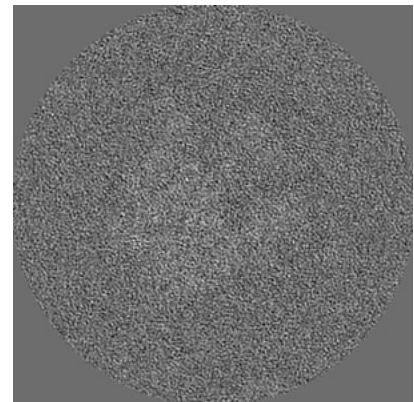
6.3.2 Raw map



X Index: 130



Y Index: 120

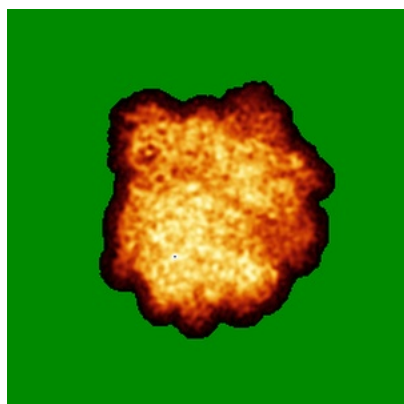


Z Index: 120

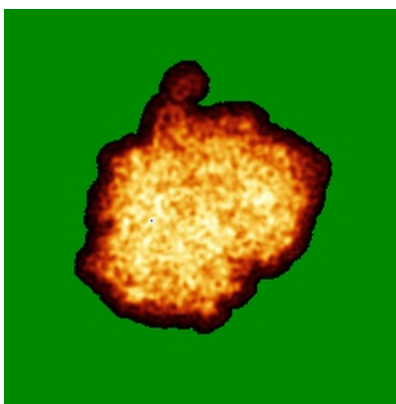
The images above show the largest variance slices of the map in three orthogonal directions.

6.4 Orthogonal standard-deviation projections (False-color) [i](#)

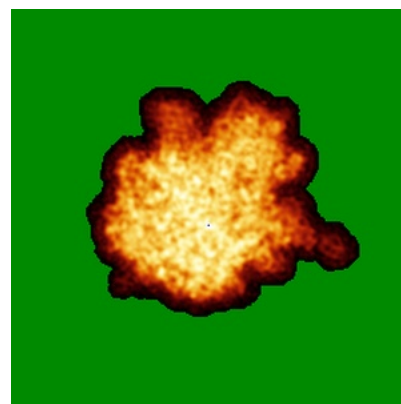
6.4.1 Primary map



X

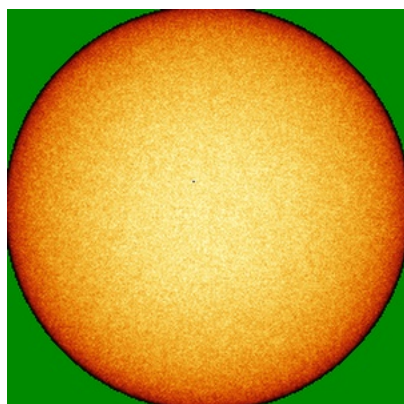


Y

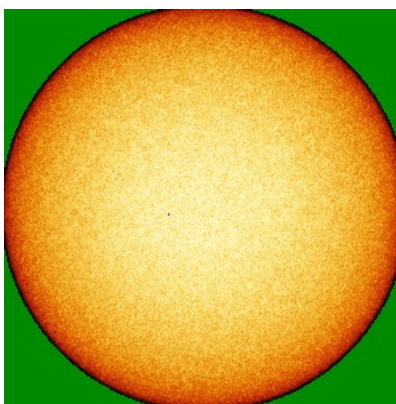


Z

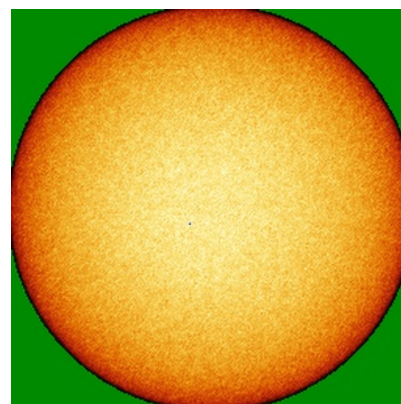
6.4.2 Raw map



X



Y

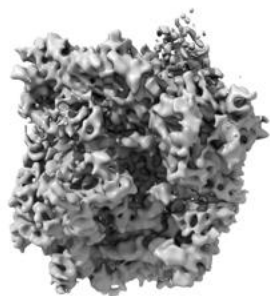


Z

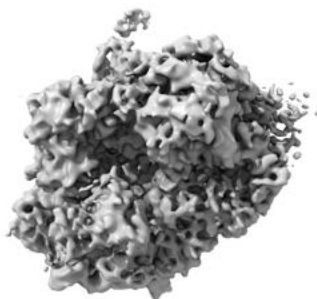
The images above show the map standard deviation projections with false color in three orthogonal directions. Minimum values are shown in green, max in blue, and dark to light orange shades represent small to large values respectively.

6.5 Orthogonal surface views [i](#)

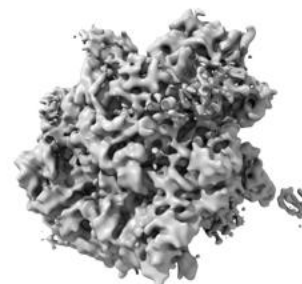
6.5.1 Primary map



X



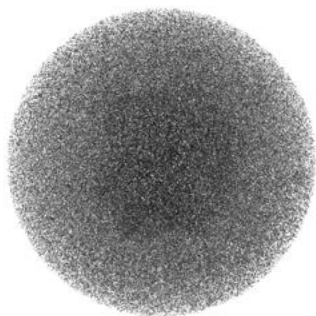
Y



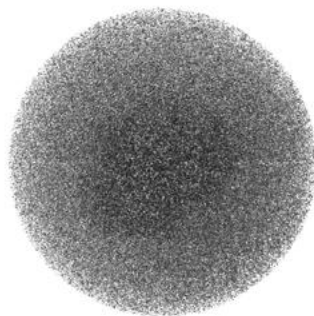
Z

The images above show the 3D surface view of the map at the recommended contour level 0.4. These images, in conjunction with the slice images, may facilitate assessment of whether an appropriate contour level has been provided.

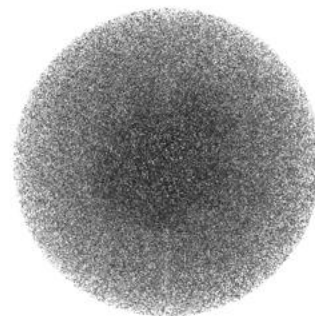
6.5.2 Raw map



X



Y



Z

These images show the 3D surface of the raw map. The raw map's contour level was selected so that its surface encloses the same volume as the primary map does at its recommended contour level.

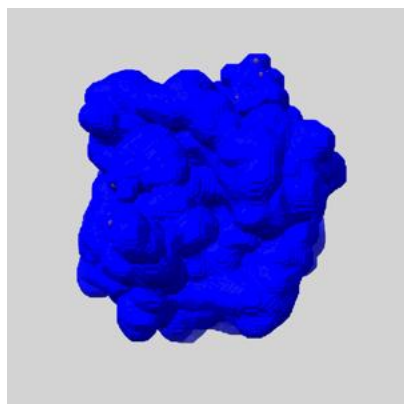
6.6 Mask visualisation [i](#)

This section shows the 3D surface view of the primary map at 50% transparency overlaid with the specified mask at 0% transparency

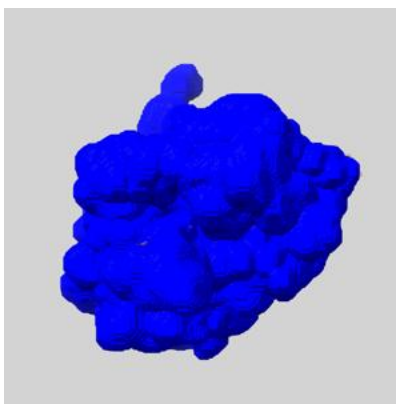
A mask typically either:

- Encompasses the whole structure
- Separates out a domain, a functional unit, a monomer or an area of interest from a larger structure

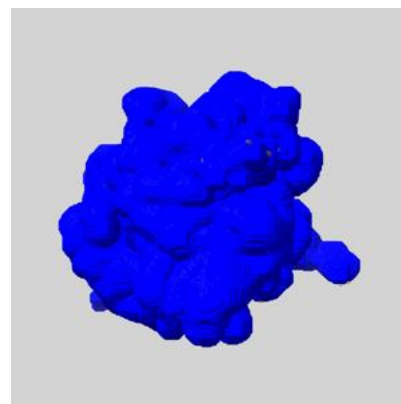
6.6.1 emd_13411_msk_1.map [i](#)



X



Y

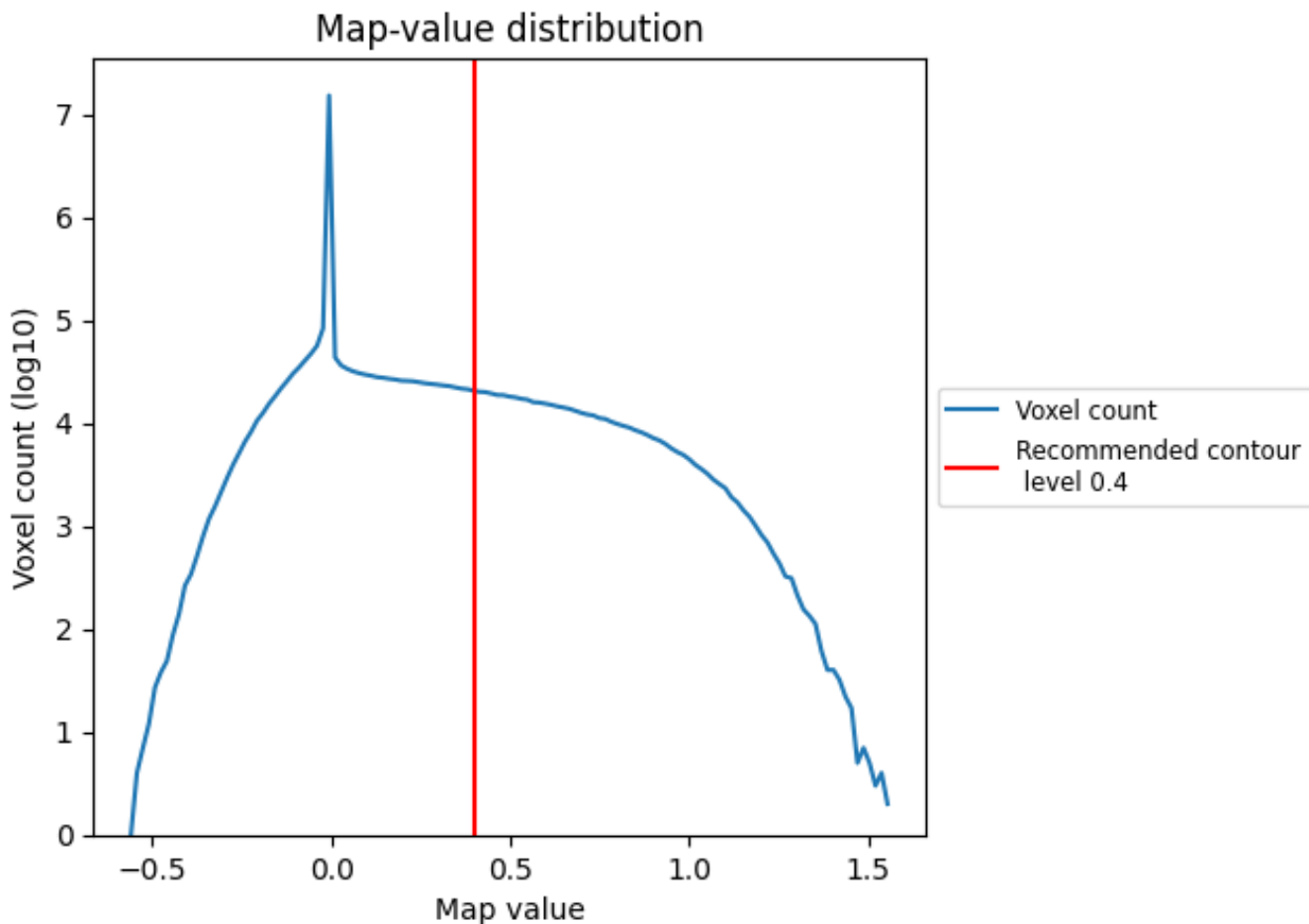


Z

7 Map analysis [i](#)

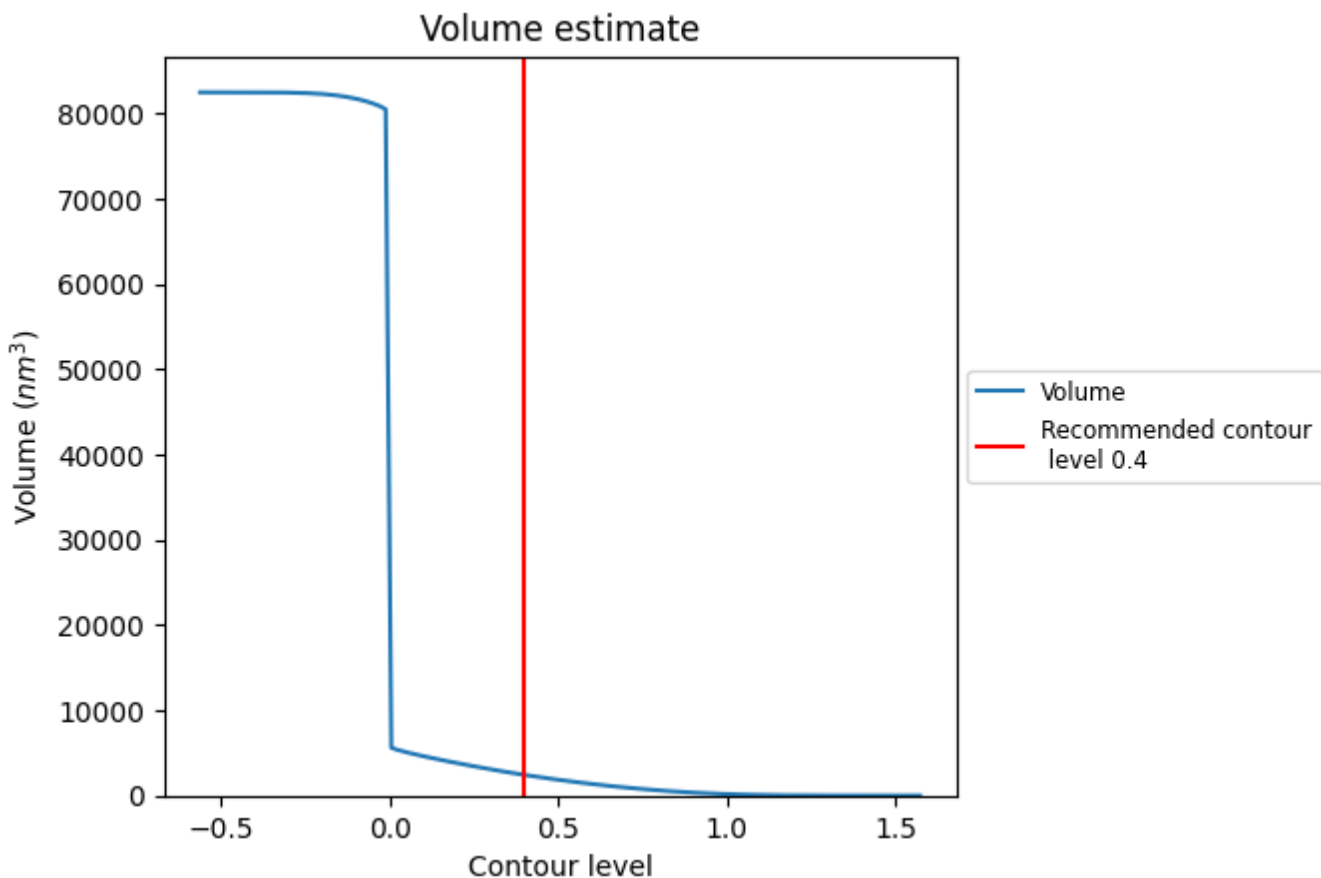
This section contains the results of statistical analysis of the map.

7.1 Map-value distribution [i](#)



The map-value distribution is plotted in 128 intervals along the x-axis. The y-axis is logarithmic. A spike in this graph at zero usually indicates that the volume has been masked.

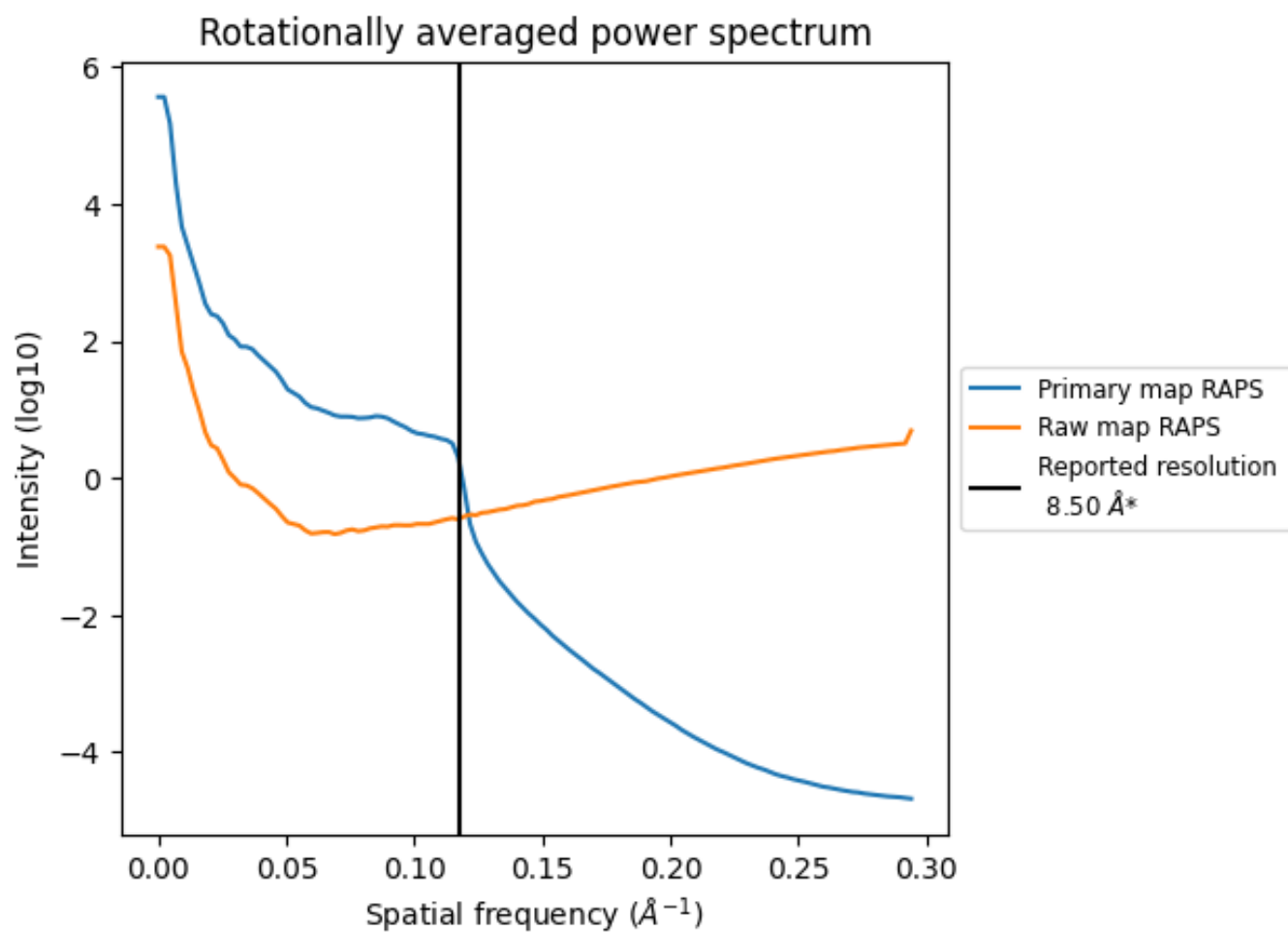
7.2 Volume estimate [\(i\)](#)



The volume at the recommended contour level is 2426 nm³; this corresponds to an approximate mass of 2192 kDa.

The volume estimate graph shows how the enclosed volume varies with the contour level. The recommended contour level is shown as a vertical line and the intersection between the line and the curve gives the volume of the enclosed surface at the given level.

7.3 Rotationally averaged power spectrum i

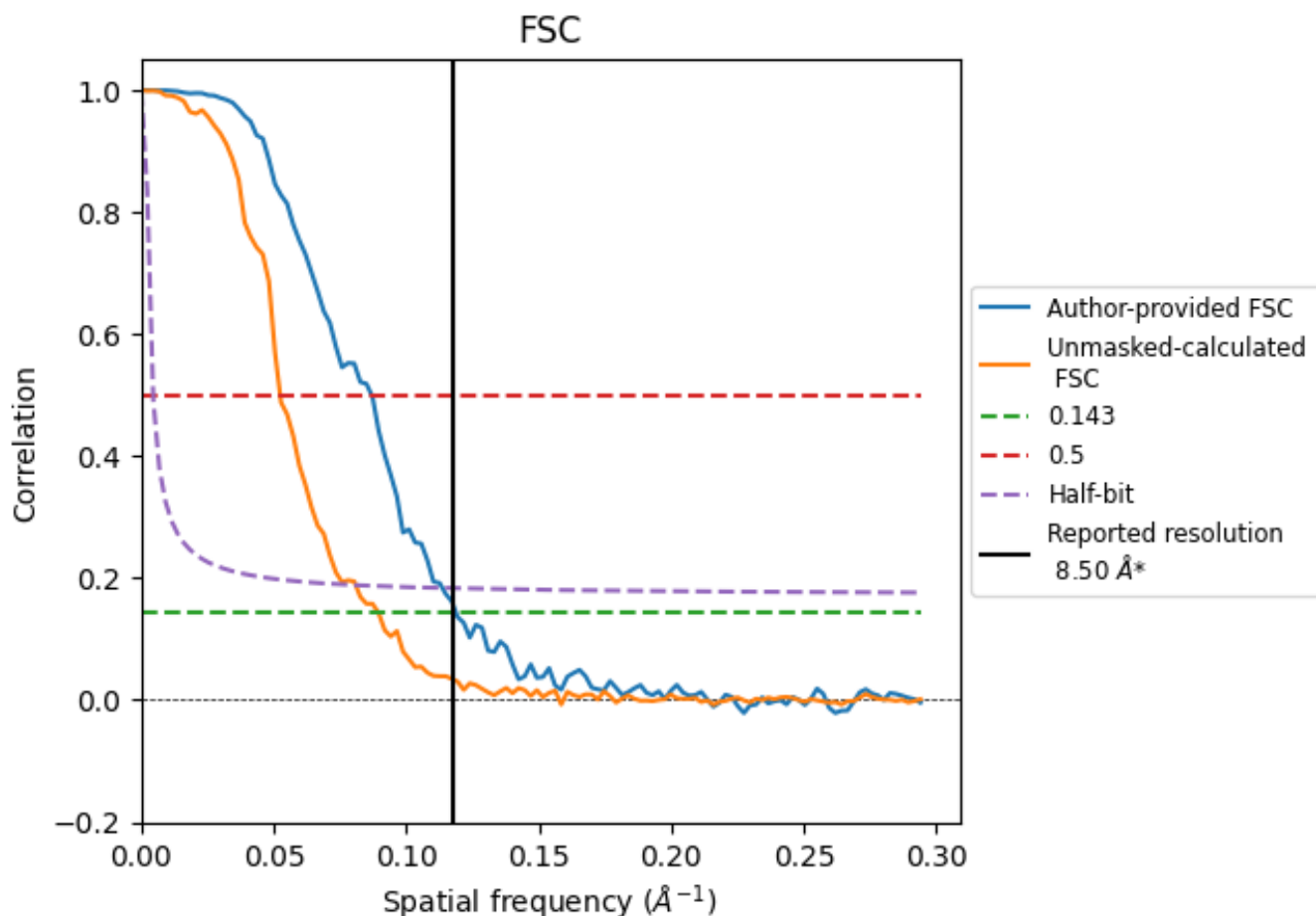


*Reported resolution corresponds to spatial frequency of 0.118 Å⁻¹

8 Fourier-Shell correlation [i](#)

Fourier-Shell Correlation (FSC) is the most commonly used method to estimate the resolution of single-particle and subtomogram-averaged maps. The shape of the curve depends on the imposed symmetry, mask and whether or not the two 3D reconstructions used were processed from a common reference. The reported resolution is shown as a black line. A curve is displayed for the half-bit criterion in addition to lines showing the 0.143 gold standard cut-off and 0.5 cut-off.

8.1 FSC [i](#)



*Reported resolution corresponds to spatial frequency of 0.118 Å⁻¹

8.2 Resolution estimates [i](#)

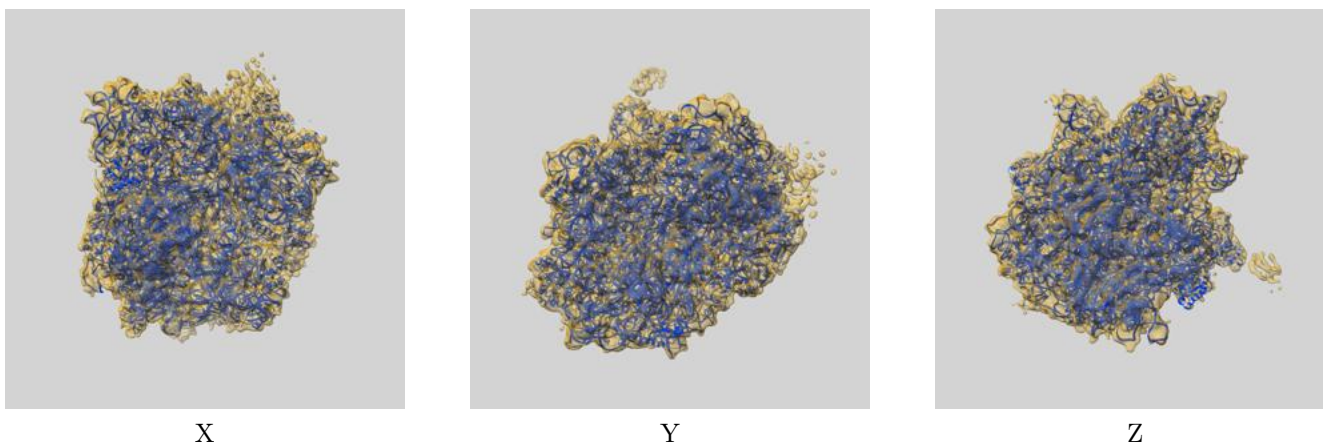
Resolution estimate (Å)	Estimation criterion (FSC cut-off)		
	0.143	0.5	Half-bit
Reported by author	8.50	-	-
Author-provided FSC curve	8.42	11.49	8.80
Unmasked-calculated*	11.17	19.05	12.36

*Resolution estimate based on FSC curve calculated by comparison of deposited half-maps. The value from deposited half-maps intersecting FSC 0.143 CUT-OFF 11.17 differs from the reported value 8.5 by more than 10 %

9 Map-model fit [i](#)

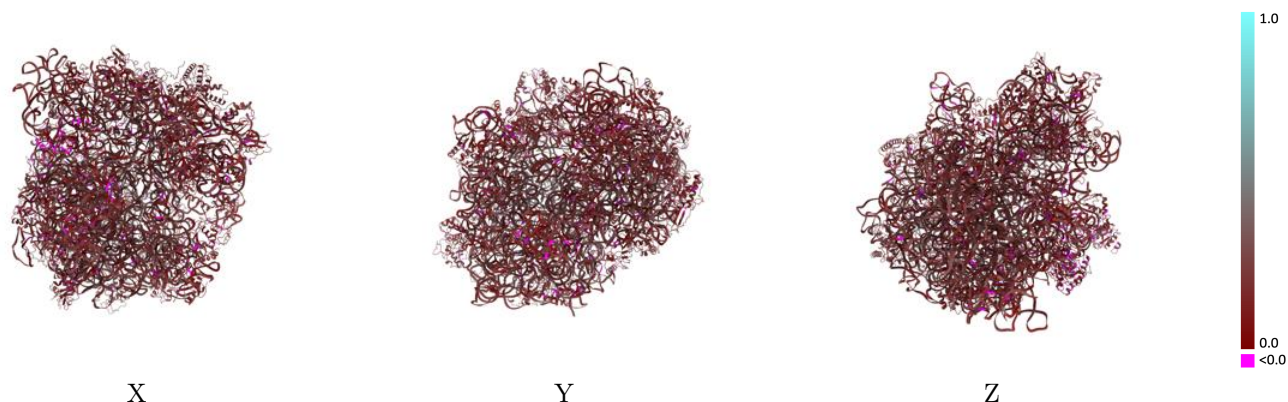
This section contains information regarding the fit between EMDB map EMD-13411 and PDB model 7PHA. Per-residue inclusion information can be found in section 3 on page 14.

9.1 Map-model overlay [i](#)



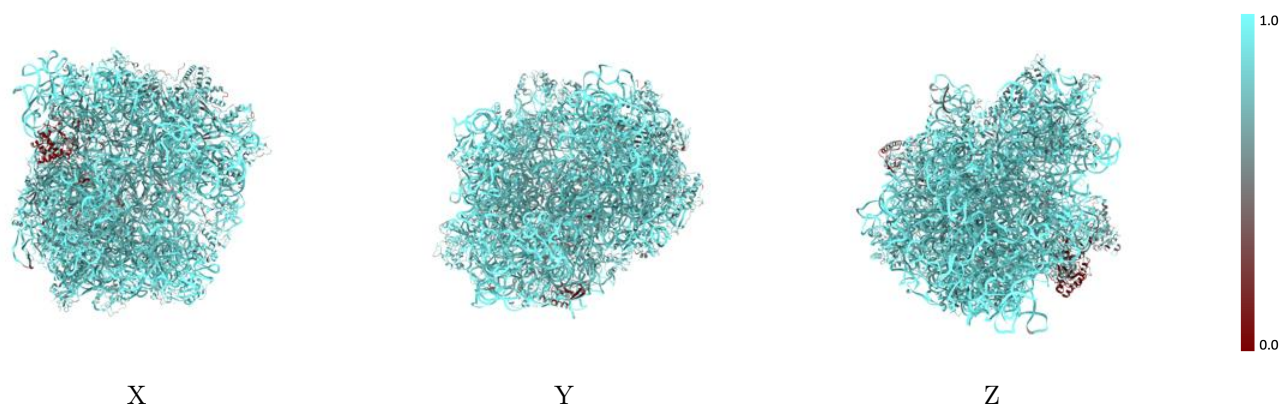
The images above show the 3D surface view of the map at the recommended contour level 0.4 at 50% transparency in yellow overlaid with a ribbon representation of the model coloured in blue. These images allow for the visual assessment of the quality of fit between the atomic model and the map.

9.2 Q-score mapped to coordinate model [i](#)



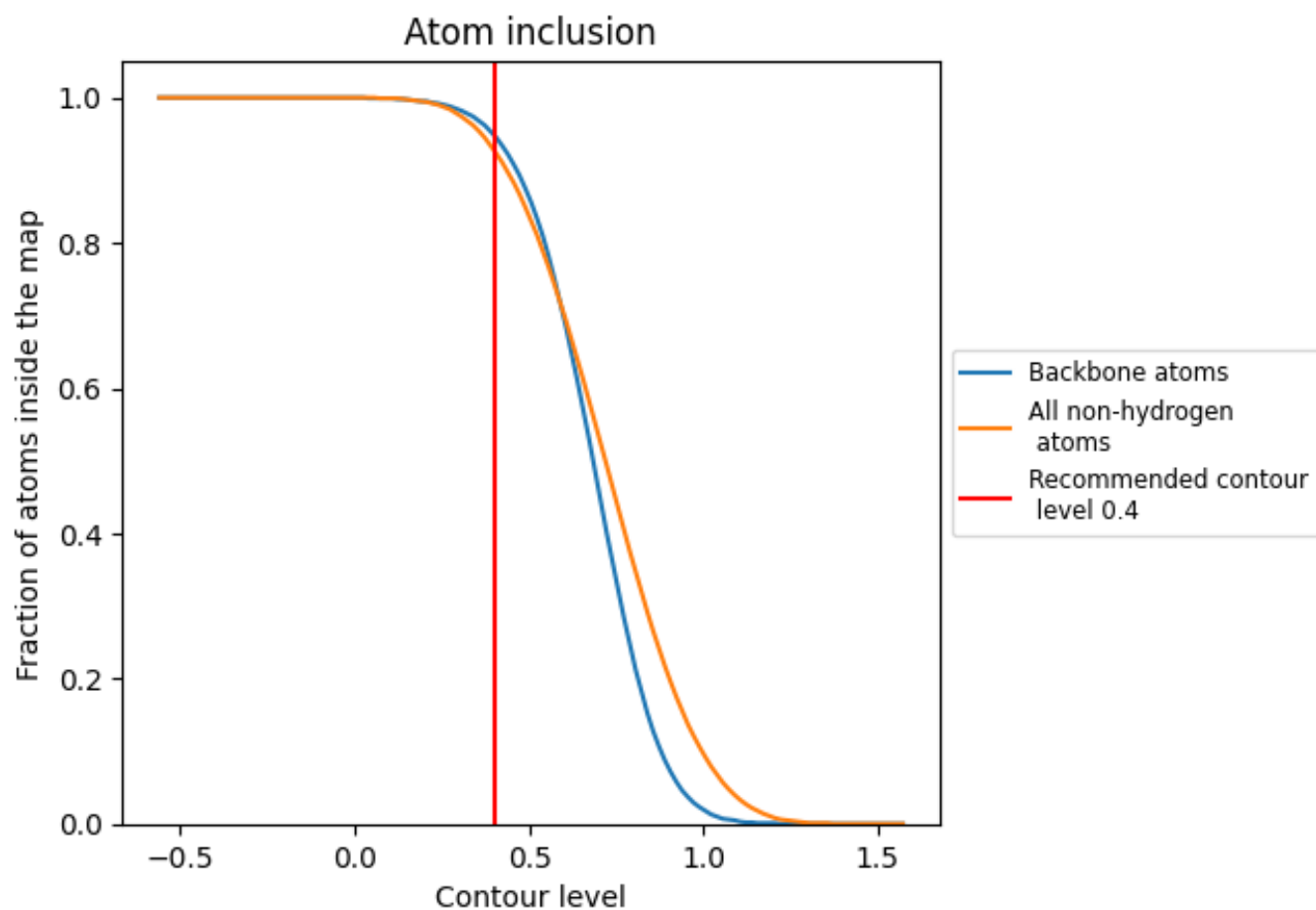
The images above show the model with each residue coloured according to its Q-score. This shows their resolvability in the map with higher Q-score values reflecting better resolvability. Please note: Q-score is calculating the resolvability of atoms, and thus high values are only expected at resolutions at which atoms can be resolved. Low Q-score values may therefore be expected for many entries.

9.3 Atom inclusion mapped to coordinate model [i](#)



The images above show the model with each residue coloured according to its atom inclusion. This shows to what extent they are inside the map at the recommended contour level (0.4).







































































9.4 Atom inclusion [i](#)



At the recommended contour level, 95% of all backbone atoms, 93% of all non-hydrogen atoms, are inside the map.

9.5 Map-model fit summary











































The table lists the average atom inclusion at the recommended contour level (0.4) and Q-score for the entire model and for each chain.

Chain	Atom inclusion	Q-score
All	 0.9270	 0.1960
0	 0.9200	 0.1720
1	 0.9030	 0.1840
2	 0.8550	 0.1370
3	 0.9860	 0.2050
4	 0.9920	 0.2070
5	 0.9890	 0.2070
6	 0.9250	 0.1850
7	 0.9820	 0.1980
9	 0.4360	 0.1500
A	 0.7930	 0.1990
B	 0.8220	 0.1960
C	 0.8350	 0.1790
D	 0.8090	 0.1730
E	 0.7780	 0.2010
F	 0.7950	 0.1730
G	 0.8190	 0.1700
H	 0.8700	 0.1730
I	 0.7800	 0.1650
J	 0.8320	 0.1610
K	 0.8750	 0.1840
L	 0.8480	 0.1860
M	 0.8920	 0.1450
N	 0.8140	 0.1920
O	 0.9050	 0.1770
P	 0.8540	 0.1810
Q	 0.8860	 0.1890
R	 0.8840	 0.1650
S	 0.9080	 0.1900
T	 0.8880	 0.2210
a	 0.8800	 0.1690
b	 0.8540	 0.1650
c	 0.8520	 0.1840
d	 0.8260	 0.1760
e	 0.8230	 0.1930



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Chain	Atom inclusion	Q-score
f	 0.4380	 0.1740
g	 0.7380	 0.1570
h	 0.6830	 0.1800
i	 0.9030	 0.1820
j	 0.8210	 0.1850
k	 0.8760	 0.1700
l	 0.8730	 0.1700
m	 0.8570	 0.1760
n	 0.8820	 0.1820
o	 0.7980	 0.1830
p	 0.9070	 0.1740
q	 0.8410	 0.1860
r	 0.9070	 0.1850
s	 0.8520	 0.1960
t	 0.7680	 0.1820
u	 0.8950	 0.1700
v	 0.9090	 0.1650
w	 0.8760	 0.2150
x	 0.8600	 0.2100
y	 0.9010	 0.1730
z	 0.9240	 0.1940